



NEW SOUTH WALES
INDUSTRIAL GAZETTE

Printed by the authority of the
Industrial Registrar
47 Bridge Street, Sydney, N.S.W.

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Vol. 399, Part 1

11 March 2026

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CROWN EMPLOYEES (FIRE AND RESCUE NSW PERMANENT FIREFIGHTING STAFF) AWARD 2024

INDUSTRIAL RELATIONS COMMISSION OF NEW SOUTH WALES

Application by Industrial Relations Secretary.

(Case No. 68961 & 301353 of 2024)

Before The Honourable Justice Taylor, President
The Honourable Justice Chin, Vice President
Commissioner McDonald

19 December 2025

AWARD

PART A - Conditions Applying to all employees

A1 - STRUCTURE, OPERATION AND APPLICATION

1. Title

- 1.1 This Award shall be known as the "Crown Employees (Fire and Rescue NSW Permanent Firefighting Staff) Award 2024".

2. Application

- 2.1 This Award regulates the rates of pay and conditions of employment for employees covered by this Award.
- 2.2 This Award covers all employees employed in a permanent firefighter classification as defined at clause 7 of this Award employed by Fire and Rescue New South Wales.

3. Structure

- 3.1 This Award is in 2 Parts as follows:

Part A - Conditions Applying to all Employees

- A1 - Structure, Operation and Application
- A2 - Productivity, Consultation & Change and Extra Claims
- A3 - Wages, Allowances and Remuneration
- A4 - Staffing, System Conditions and Rosters
- A5 - Leave Entitlements
- A6 - Classifications, Career Paths & Promotions
- A7 - Employment Relationship
- A8 - Health and Wellbeing
- A9 - Workplaces, Appliances, Uniforms and Equipment

Part B - Additional Conditions for Specific Groups of Employees

- B1 - Additional Conditions for Instructors / Training Staff
- B2 - Additional Conditions for Fire Investigation Unit
- B3 - Additional Conditions for Fire Safety Department
- B4 - Additional Conditions for Communications

B5 - Additional Conditions for Superintendents and Chief Superintendents

- 3.2 This Award is structured into Parts A & B as listed above with the intention that the more specific parts add specific conditions to the more general conditions. Where multiple parts apply to an employee, all conditions in those parts will apply. However, where there is an inconsistency between the general provision in Part A and a relevant provision in Part B then the specific provision in Part B applies to the extent of the inconsistency.
- 3.3 The only exceptions to subclause 3.2 are that the provisions contained in clause 23 Overtime, clause 17 Meals and Refreshments, clause 25 Relieving Provisions, clause 51 Training Course Attendance Entitlements, clause 36 Examination and Assessment Leave, clause 53 Court Attendance Entitlements, clause 27 Notice of Transfer and clause 28 Transfers Outside of the GSA, will not apply to Executive Officers. Payment of additional hours to Executive Officers will be in accordance with clause 85, Executive Officer Hours of Work. For the avoidance of doubt Executive Officers are also entitled to claim payments in accordance with clause 24 On Call / Disturbance Allowance.

4. Area, Incidence and Duration

- 4.1 This Award rescinds and replaces the Crown Employees (Fire and Rescue NSW Permanent Firefighting Staff) Award 2023 published 10 November 2023 (395 I.G. 633) and Award Reprint published 16 May 2025 (397 I.G. 1414).
- 4.2 This Award and shall take effect on and from 26 February 2024 and shall remain in force until 25 February 2027.

5. Renegotiation

- 5.1 The FRNSW and the FBEU Agree to Commence Negotiations on a New Award Nine Months prior to the nominal expiry date of this agreement.

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"Accredited Rescue Unit Station" means a station that has been accredited by the State Rescue Board to perform the rescue operations associated with that accreditation in NSW.

"Agreed Distance" means the relevant distance set out within the Matrices which appeared at Part E of the Crown Employees (NSW Fire Brigades Firefighting Staff) Award 2001, or as subsequently amended pursuant to subclause 25.10, copies of which shall be provided by the Department to employees in the manner agreed between the Department and the Union.

"Commissioner" means Commissioner of the Department holding office as such under the *Government Sector Employment Act 2013*.

"Competency" means the training competencies developed by the Department following consultation between the Department and the Union providing the appropriate level of training, or part thereof, for the skill required to undertake the work for each classification covered by this Award.

"Deemed fortnightly salary" means the "Per Week" rate of pay of a Qualified Firefighter as set out at Table 1 of Part C of the Crown Employees (Fire and Rescue NSW Permanent Firefighting Staff) Award multiplied by 2.

"Department" means Fire and Rescue NSW established by the *Fire and Rescue NSW Act 1989* and as a Public Service Executive Agency under Schedule 1 of the *Government Sector Employment Act 2013*.

"Domestic Violence" means domestic violence as defined in the *Crimes (Domestic and Personal Violence) Act 2007*.

"Employee" means a person, other than an employee covered by the Crown Employees (Fire and Rescue NSW Retained Firefighting Staff) Award, employed in one of the classifications covered by this Award, as a member of Fire and Rescue NSW in terms of the provisions of the *Fire and Rescue NSW Act 1989*. Provided that where "employee" is referred to in the provisions of this Award which apply exclusively to either Operational Firefighters, Non-Station Based Position or to Executive Officers, "employee" shall mean only those classifications to which the exclusive conditions are intended to apply.

"Emergency Meal" means a Long Life Meal Pack supplied when the provision of a Substantial Meal is not practicable, the basis of which shall be a self-heating 320g meal that is generally meat based (except for special diet packs such as vegetarian or vegan packs) and shall also include one dried fruit or fruit and nut mix (Sunbeam Fruit and Nut 40g, Fruit on the Go 50g, or similar) and one cheese and biscuits (Uncle Tobys Le Snak Cheddar Cheese 20g, or similar) or one fruit pack (Goulburn Valley no added sugar 220 g, or similar) and one 100% fruit juice box (Just Juice 250 ml, or similar).

"Executive Officer" means an employee having the rank of Chief Superintendent or Superintendent.

"Fire District" has the same meaning as in the *Fire and Rescue NSW Act 1989*.

"GSA" (Greater Sydney Area) means within the area bounded by the Local Government areas of Northern Beaches, Hornsby, Baulkham Hills, Hawkesbury, Penrith, Liverpool, Wollondilly, Campbelltown and Sutherland.

"Incident" means a fire call, or any other emergency incident attended by Fire and Rescue NSW.

"Major Aerial Appliance" means a firefighting vehicle equipped with a motorised boom and/or ladder extension with a reach of more than 18 metres.

"Merit Selection" means a fair, transparent, impartial process that assesses the merit of all applicants so that the employee selected is the applicant who is the most suitable to perform the duties of the vacant position.

"Minor Aerial Appliance" means a firefighting vehicle equipped with a motorised boom and/or ladder extension with a reach of up to and including 18 metres.

"Non-Officer" means an employee classified as a Recruit, Firefighter, Qualified Firefighter, Senior Firefighter or Leading Firefighter.

"Non- Station Based Positions" are all positions which are or can be held by employees covered under this Award that do not meet the definition of "Station Based Positions" (including those previously known as Operational Support Positions).

"Officer" means any employee having the rank of Station Officer or Leading Station Officer.

"Operational Firefighter" means a firefighter classified as one of the following: Recruit Firefighter; Firefighter; Qualified Firefighter; Senior Firefighter; Leading Firefighter; Station Officer; Leading Station Officer; or Inspector.

"Outduty" means a period of relief duty performed by a Non-Officer or Officer, not being a Relieving Employee or the occupant of a Non-Station Based position, where the Non-Officer or Officer either commences and/or ceases their rostered shift at a station/location other than the station where the Non-Officer or Officer normally reports for duty, or where the Non-Officer or Officer both commences and ceases their rostered shift at their own station but performs Stand By duties elsewhere for more than four hours, but does not include an employee on suitable duties.

"Overtime" means for an Operational Firefighter all time worked with approval or direction in excess of the employee's rostered shift.

"Parties" means the Department and the Fire Brigade Employees Union.

"Platoon" means a group of employees assigned to a shift.

"Refreshments" means tea bags, instant coffee, boiling water, sugar, long life milk, two biscuits and one cereal bar (any bar from the following list: K Time Twists 37 g bar, All-Bran Baked Bars 40g bar, Uncle Tobys Crunchy Muesli Bars Apricot, Uncle Tobys Fruit Twist - Apple and Pear, or similar) or one Goulburn Valley or similar fruit pack 220 g (no added sugar) and one liquid meal drink (any drink from the following list: Sustagen Sport 250 ml, Up and Go 250 ml, or similar) or one carbohydrate/electrolyte beverage (Sqwincher Qwik Serv 42g sachet, or similar).

"Relieving Employee" means an employee serving at a station while not being permanently attached to any one station.

"Senior Officer" means an employee having the rank of Inspector.

"Stand By" means a period of relief duty performed by a Non-Officer or Officer, not being a Relieving Employee or the occupant of a Non-Station Based position, where the Non-Officer or Officer both commences and ceases their rostered shift at their own station but is temporarily assigned to one or more other stations in the interim for a total of four or less hours. For the avoidance of doubt a Stand By cannot be used to fill a part of either planned or unplanned absences where that absence is for a full shift.

"Standard Roster" means the roster prescribed in subclause 21.3 of clause 21 of this Award.

"Station Based Positions" are those that are located generally at fire stations or zone where the primary role of the position is operational and emergency response or the management of operational and emergency response including employees employed in Communications Positions.

"Substantial Meal" means a meal identified in the Department's Incident Ground Meals Guide, as published at the date of the making of this Award, or a meal of a similar nutritional and sensory quality standard.

"Union" means the Fire Brigade Employees' Union of New South Wales.

A2 - PRODUCTIVITY, CONSULTATION AND CHANGE AND EXTRA CLAIMS**8. Productivity**

- 8.1 The parties accept that during the life of the Award, there may be productivity initiatives and benefits. Where such productivity and/or efficiencies are identified during the life of the Award, FRNSW acknowledges that any savings as a result of such productivity/efficiency can be discussed by employees/FBEU as part of future Award negotiations and through the forums established under clause 9.
- 8.2 Prior to the introduction of any change which may impact employees and which may have a productivity/efficiency associated with it or provide any cost saving, FRNSW must provide to the Union as part of the consultation process, information sufficient to allow the Union to quantify the productivity, efficiency and or cost saving for the purposes of making a future claim in accordance with subclause 8.1.

9. Consultation

- 9.1 This clause recognises the capacity of the Commissioner to make decisions to effect change within the Department. This clause also recognises that where the employer seeks to introduce or implement any change that affects employees, provisions of this Award and/or the employment relationship such change will be the subject of consultation with the FBEU.
- 9.2 Consultation as defined for the purposes of this Award means the full, meaningful and candid disclosure and discussion of issues and proposals with a genuine consideration of each party's views. It also requires full disclosure of the proposed change including relevant information pertaining to it, and a full and proper opportunity for the Union to consider and respond to the proposed change, along with an opportunity to provide an alternative proposal. Consultation shall provide a genuine opportunity to affect the outcome of any proposal prior to the making of a final decision.
- 9.3 No change pertaining to the employment relationship, this Award and/or matters which affect employees will be implemented prior to full consultation in accordance with this clause.
- 9.4 The parties agree to implement these consultative provisions via the consultative mechanism contained at Schedule 5 of this Award.
- 9.5 If, following the consultation process outlined in Schedule 5 there is a reasonable basis for the Commissioner/FRNSW to conclude that the consultation process has been exhausted, the Commissioner/FRNSW shall advise the Union accordingly and the following procedures shall then operate.
- 9.6 The Commissioner/FRNSW will notify the Union and the workforce affected by the proposed change of their decision in relation to the subject of the proposed change as well as the process and timetable for its implementation.
- 9.7 If the matter remains in dispute, the Union may refer the decision to the Industrial Relations Commission (IRC). Such referral should normally take place within 7 days however the parties recognise that at times, such a referral may take longer. In this case, a reasonable time frame will be appropriate. For the avoidance of doubt, the subject matter of the dispute may be in relation to either the consultation process, or the subject matter of the change, or both.
- 9.8 Where the Union exercises its rights under clause 9.7 to refer a matter to the IRC there will be no implementation of the change until either the parties agree, or the IRC determines the matter or orders otherwise.

10. Climate

- 10.1 FRNSW will consult in accordance with clause 9 in relation to any researching, considering, planning and preparing for changes in Emergency Management impacting on the work of or conditions under

which work is performed by employees as a result of changes to climate. Response to changes to climate shall be a standing item on the Joint Consultation Committee.

11. Disputes Procedure

11.1 The parties recognise the need to promote prompt and genuine resolution of disputes as they arise.

11.2 Where a dispute has been notified, and while the dispute process as outlined below is continuing and remains unresolved, status quo will remain in place in accordance with the existing situation or practice that existed immediately prior to the subject matter of the dispute occurring or arising. No party shall be prejudice as to final settlement by the continuance of work in accordance with the status quo.

11.3 Disputes Process

11.3.1 Step One

Employee(s) and/or Union representatives will place the matter before the relevant Senior Employer Representative and/or immediate supervisor. The relevant senior employer representative and/or immediate supervisor will take all reasonable steps to reply to the employee(s) and/or Union representatives as soon as possible, and will at least provide a progress report before the close of ordinary business on the next working day.

11.3.2 Step 2

Failing agreement, employee(s) and/or Union representatives will place the claim, issue or dispute before the next higher officer in charge of the relevant zone or region or other relevant Senior Employer Representative. That officer will take all reasonable steps to reply to the employee(s) and/or Union representatives as soon as possible, and will at least provide a progress report before the close of ordinary business on the next working day.

11.3.3 Step 3

Failing agreement, employee(s) and/or Union representatives will place the claim, issue or dispute before the Executive Director People and Culture. The Executive Director People and Culture will take all reasonable steps to reply to the employee(s) and/or Union representatives as soon as possible, and will at least provide a progress report before the close of ordinary business on the next working day.

11.3.4 Step 4

Failing agreement, employee(s) and/or Union representatives will place the claim, issue or dispute before the Commissioner. The claim, issue or dispute and all relevant circumstances relating to it will be fully reviewed by the Commissioner and the Union and all reasonable steps shall be taken in an attempt to resolve the matter.

11.3.5 Step 5

Failing agreement, the claim, issue or dispute may be referred to the appropriate Industrial Tribunal and or Court where all powers of such Tribunal/Court can be exercised including any appeal rights in order to determine the dispute.

11.4 It is the intention of the parties that Steps 1-4 of the disputes process should take no longer than twenty-eight days allowing seven days total for each step to be completed. At any time during the disputes process the parties may agree to meet to discuss the dispute.

A3 - WAGES, ALLOWANCES AND REMUNERATION**12. Basic Wage**

- 12.1 This Award, in so far as it fixes rates of wages, is made by reference and in relation to the adult basic wage currently in force under clause 15 of Division 4 of Part 2 of Schedule 4, Savings, transitional and other provisions, of the *Industrial Relations Act 1996*.

13. Rates of Pay

- 13.1 An employee shall be paid the rate of pay prescribed for the employee's classification in Tables 1 & 2 of Schedule 1, Rates of Pay, of this Award.
- 13.2 Each "Per Week" rate of pay shown in Tables 1 & 2 of Schedule 1 is a composite rate which incorporates:
- 13.2.1 the basic wage, margin, loading, shift allowance and industry allowance previously prescribed separately in the Fire Brigade Employees (State) Award (as varied from time to time), published in the NSW Industrial Gazette on 28 June 1991; and
- 13.2.2 with the exception of the Recruit Firefighter classification, the Roster Allowance previously prescribed separately in the Crown Employees (Fire and Rescue NSW Permanent Firefighting Staff) Award 2011, published in the NSW Industrial Gazette on 25 March 2011.
- 13.3
- 13.3.1 The "shift allowance" referred to in subclause 13.2.1 is an amount to compensate for shiftwork.
- 13.3.2 The 'loading' referred to in subclause 13.2.1 is an amount which is in compensation for the incidence, as a result of the normal roster arrangements, of work on weekends and public holidays. Employees who work on Easter Sunday or on any additional public holiday that is Gazetted or otherwise confirmed by the NSW Government shall be credited with the same number of hours of consolidated leave as those hours actually worked on each such day. For the purposes of this clause additional public holidays shall not include local public holidays.
- 13.3.3 The "industry allowance" referred to in subclause 13.2.1 is an amount which is in consideration of conditions particular to working in the Firefighting Industry.
- 13.3.4 The "Roster Allowance" referred to in subclause 13.2.2 is an amount equivalent to an employee's hourly rate of pay multiplied by 1.75 in compensation for working a 42-hour week. This amount is a residual of the two hours of 10/14 Rostered Overtime that was paid to employees working a 38-hour week until the Crown Employees (NSW Fire Brigades Firefighting Staff) Award 2000 incorporated this overtime within the total weekly rate of pay and introduced the Roster Allowance and a 40 hour week.
- 13.4 Employees rates of pay will increase annually by the following percentage increase:

26 February 2024	26 February 2025	26 February 2026
4%	4%	6%

14. Allowances and Reimbursements**Allowances**

- 14.1 Unless otherwise provided for in this Award, in addition to the rates of pay prescribed in Tables 1 & 2 of Schedule 1, employees, where applicable, shall be paid the following Allowance:

- 14.1.2 An amount not exceeding the Laundry Expenses set at Item 1 of Table 1 of Schedule 2, for all reasonable laundry expenses incurred by an employee who performs duty on a temporary basis outside the GSA. Accounts for such laundry expenses are to be submitted when a claim is made.
- 14.2.2 The Kilometre Allowance set at Item 2 of Table 1 of Schedule 2, per kilometre:
 - 14.2.2.1 for Non-Officers or Officers who perform a "Stand By" and who are required to use their private vehicle to perform such "Stand By". The distance shall be the agreed distance or, if the return distance travelled by the employee from the station at which duty commenced to the station at which the "Stand By" is performed is not contained in the Matrices, the actual distance necessarily and reasonably travelled; and
 - 14.2.2.2 for Firefighters who travel between stations pursuant to clause 25, Relieving Provisions; and
 - 14.2.2.3 for Officers who are required to use their own vehicle to attend an incident whilst off duty.
- 14.2.3 The Major Aerial Allowance set at Item 3 of Table 1 of Schedule 2, per week, for Non-Officers who are qualified to operate a Major Aerial Appliance who are attached to a station with this equipment and for Officers who are qualified to operate a Combined Aerial Pumper Appliance and who are attached to a station with this equipment.
- 14.2.4 The Minor Aerial Allowance set at Item 4 of Table 1 of Schedule 2, per week, for Non-Officers and Officers who are qualified to operate a Minor Aerial Appliance and who are attached to a station with this equipment.
- 14.2.5 The Hazmat Allowance set at Item 5 of Table 1 of Schedule 2, per week for Non-Officers and Officers who are qualified in Hazmat and attached to a Hazmat station within Sydney, Newcastle, Wollongong or the Central Coast.
- 14.2.6 The Country Allowance set at Item 9 of Table 1 of Schedule 2 for Officers and Senior Officers who are attached to a station or workplace located outside the GSA and outside the areas specified in subclause 28.2.2 of this Award, which shall be paid for all purposes.
- 14.2.7 The Remote Area Allowance set at Item 10 of Table 1 of Schedule 2, per week, for Non-Officers and Officers who are attached to a station at Broken Hill or Moree, which shall be paid for all purposes.
- 14.2.8 The Rescue Allowance set at Item 11 of Table 1 Schedule 2 for Non-Officers and Officers who are recognised as qualified rescue operators by the State Rescue Board and who are attached to an Accredited Rescue Unit Station. The Rescue Allowance set at Item 11 of Table 1 Schedule 2 is only payable under this award until 26 February 2026, whereby it shall cease to be payable and be replaced by Clause 14.2.11 General Land Rescue Allowance.
- 14.2.9 The Service Allowance set at Item 13 of Table 1 of Schedule 2 for Non-Officers who have completed the requisite period of service as an employee.
- 14.2.10 The Marine Allowance set at Item 12 of Table 1 of Schedule 2, per week, for Non-Officers and Officers who are qualified for and attached to a designated marine station.
- 14.2.11 The General Land Rescue Allowance set at Item 1 of Table 1A of Schedule 2, subject to the following sub-clauses:
 - 14.2.11.1 The General Land Rescue Allowance comes into effect and is payable under this award from 26 February 2026. The General Land Rescue Allowance is payable to

Non-Officers and Officers who are recognised as a General Land Rescue qualified rescue operator by the State Rescue Board, who must be attached to an Accredited Rescue Unit Station that is accredited for General Land Rescue, and are required by FRNSW to hold, maintain and update their General Land Rescue qualification.

- 14.2.11.2 Where an Officer or Non-Officer is entitled to the General Land Rescue Allowance pursuant to subclause 14.2.11.1, they shall be paid a 25% loading upon the base General Land Rescue Allowance at the rate set out in Item 2 of Table 1A of Schedule 2 if they satisfy just one (1) of the following criteria:
- (a) they hold and maintain a qualification for In Water Flood Rescue and are attached to a station that is accredited by the State Rescue Board for In Water Flood Rescue;
 - (b) they hold and maintain a qualification for Trench Rescue and are attached to a Technical Rescue Station with a Technical Rescue Vehicle;
 - (c) they hold and maintain a qualification for Partial Structural Collapse and are attached to a Technical Rescue Station with a Technical Rescue Vehicle; or
 - (d) they hold and maintain a qualification for Large Animal Rescue and are attached to a Technical Rescue Station with a Technical Rescue Vehicle.
- 14.2.11.3 Where an Officer or Non-Officer is entitled to the General Land Rescue Allowance pursuant to subclause 14.2.11.1 and that employee satisfies two (2) or more of the criteria listed in subclauses 14.2.11.2(a, b, c, d) above, that employee shall be paid a 50% loading upon the base General Land Rescue Allowance set out in Item 3 of Table 1A of Schedule 2.
- 14.2.11.4 Where an Officer or Non-Officer is entitled to the General Land Rescue Allowance pursuant to subclause 14.2.11, that employee shall be paid a 50% loading upon the base General Land Rescue Allowance set out in Item 4 of Table 1A of Schedule 2 if they satisfy one or both of the following criteria:
- (a) they are directed by FRNSW to hold and maintain a qualification for Vertical Rescue and are attached to a station that is accredited by the State Rescue Board for Vertical Rescue;
 - (b) they are directed by FRNSW to hold and maintain a qualification for Urban Search and Rescue (category 2).
- 14.2.11.5 The maximum loading on the General Land Rescue Allowance available at subclauses 14.2.11.2, 14.2.11.3 and 14.2.11.4 is 50%.
- 14.2.12 The Qualification Allowance set at Table 1B of Schedule 2 for a Non-Officer or Officer who, at the request of the Commissioner, becomes qualified in any of the following qualifications, and who at the time the qualification is completed is not attached to a station which would otherwise entitle them to the corresponding weekly allowance in accordance with subclauses 14.2.3, 14.2.4, 14.2.5 or 14.2.11:
- Hazmat
 - Major Aerial
 - Minor Aerial
 - General Land Rescue
 - In Water Flood Rescue
 - Trench Rescue
 - Partial Structural Collapse
 - Large Animal Rescue
 - Vertical Rescue
 - Urban Search and Rescue (Category 2).

14.2.13 Unattached Skill Use Allowance

14.2.13.1 An amount equivalent to 25% of the corresponding weekly allowance as provided for in accordance with subclauses 14.2.3 (Major Aerial), 14.2.4(Minor Aerial), 14.2.5 (Hazmat) or 14.2.11(General Land Rescue), per shift worked by a Non-Officer or Officer who obtains and maintains any of the qualifications listed in subclause 14.2.12, who are not attached to a station which would otherwise entitle them to the corresponding weekly allowance in accordance with subclauses 14.2.3, 14.2.4, 14.2.5 or 14.2.11 and who are directed to perform duties during the shift which utilise the specialist skills associated with the relevant qualification, provided that only one such allowance is payable, regardless of how many qualifications are held and utilised by the employee during the shift.

14.2.13.2 If the allowance payable under subclause 14.2.13.1 relates to a qualification other than Hazmat, Major Aerial or Minor Aerial, the maximum allowance payable shall be 25% of the General Land Rescue Allowance set at Item 1 of Table 1A Schedule 2, regardless of how many qualifications are held and utilised by the employee during the shift.

14.2.14 The Remotely Piloted Aircraft Systems Allowance set at Item 21 of Table 1 of Schedule 2, for Officer and Non-Officers who have obtained a qualification in Remotely Piloted Aircraft Systems, and have maintained this qualification, with the exception of already qualified Non-Station Based staff from the Bushfire and Aviation Branch.

14.3 Exceptions, Explanations and Method of Adjustment

14.3.1 Subject to subclause 22.8, the allowances set at subclauses 14.2.3 - 14.2.14 (inclusive) shall not be payable to the occupants of Non-Station Based Positions.

14.3.2 The allowances set at subclauses 13.3 - 13.3.3 and 14.2.3 - 14.2.14 (inclusive) shall be paid in full, regardless of the number of shifts actually worked by an employee within that week.

14.3.3 The term "attached to" within this clause shall include employees who are permanently assigned to the relevant station or section but who are performing an Outduty at some other location and Relieving Employees whose base station is the relevant station or section and who are performing relief duty at some other location, but shall not include employees who perform duty at the relevant station or section pursuant to clause 23, Overtime, except as provided for the Communication Allowances provided for at clause 79, the Country Allowance at subclause 14.2.6 and the Remote Area Allowance at subclause 14.2.7.

14.3.4 The allowances set at subclause 14.2.9 shall in future be adjusted by firstly calculating the increase for 5-10 years' service to the nearest cent to arrive at a new base rate and then doubling that new base rate to arrive at the new 10-15 years' service amount and tripling that new base rate to arrive at the new 15-plus years' service amount.

14.3.5 The Major and Minor Aerial allowances set at subclauses 14.2.3 and 14.2.4 respectively, shall not be paid concurrently. In situations where both allowances would otherwise apply pursuant to this clause, the Major Aerial Allowance only shall be paid.

14.3.6 The Qualification Allowance set at subclause 14.2.12 shall be paid for each qualification obtained, unless obtained concurrently.

14.4 Executive Officers

14.4.1 The salaries for Executive Officers are as specified in Schedule 1 Table 1. Such salaries are all incidence rates of pay unless otherwise specified in this Award and includes compensation for the non-payment of an annual leave loading.

15. Relativities

15.1 The FRNSW agrees to maintain the below relativities between classifications for the life of this Award:

- a. Recruit Firefighter 78% of Qualified Firefighter Rate
- b. Firefighter 90% of Qualified Firefighter Rate
- c. Qualified Firefighter (100% of existing Qualified Firefighter Rate)
- d. Senior Firefighter 106% of Qualified Firefighter Rate
- e. Leading Firefighter 112% of Qualified Firefighter Rate
- f. Station Officer 127% of Qualified Firefighter Rate
- g. Leading Station Officer 130% of Qualified Firefighter Rate
- h. Inspector 150% of Qualified Firefighter Rate
- i. Superintendent (multiplied by the percentage increase)
- j. Chief Superintendent (multiplied by the percentage increase)

16. Payment of Wages and Allowances

- 16.1 Employees shall be paid fortnightly, and payment shall be made into a bank account or accounts specified by the employee, or other financial institutions acceptable to the Department and the Union.
- 16.2 Employees shall be paid not later than Thursday in any pay week. Provided that an employee who performs overtime shall be paid within two pay periods of the date upon which such overtime was worked.
- 16.3 An employee shall not be entitled to payment in respect of any unwarranted absence from duty or in respect of leave granted without pay.
- 16.5 Where a portion of a week is worked in a higher classification immediately following promotion, payment for that portion shall be ascertained, on an hourly basis, by dividing the minimum rate of pay applicable to the new classification by forty. Such entitlement shall be calculated to the nearest five minutes.
- 16.6 In the event of the death of an employee, all monies due to the employee pursuant to the provisions of this Award shall be paid to the employee's estate.
- 16.7 Payroll Deductions:
- 16.7.1 Except as provided for in subclause 16.7.2, all salary deductions shall be made in accordance with the Treasury Guidelines.
 - 16.7.2 Upon application by an employee, the Department shall make deductions from the employee's pay for Union subscriptions and shall forward the amount so deducted to the Union as soon as possible thereafter.
- 16.8 Overpayments:
- 16.8.1 In cases where an employee has been overpaid, the Department shall be entitled to recover such overpayment in full. Unless the employee agrees otherwise, the maximum rate at which the overpayment can be recovered is an amount, calculated on a per fortnight basis, equivalent to 10% of the employee's gross fortnightly pay.

- 16.8.2 In all cases where overpayments have occurred, the Department shall as soon as possible advise the employee concerned of both the circumstances surrounding the overpayment and the amount involved. The Department will also advise the employee of the pay period from which the recovery of the overpayment is to commence.
- 16.8.3 The recovery rate of 10% of an employee's gross fortnightly pay referred to in subclause 16.8.1 may be reduced by approval of the Commissioner if the Commissioner is satisfied that such a rate of recovery would cause undue hardship to the employee concerned.
- 16.8.4 Where an employee's remaining period of service does not permit the full recovery of any overpayment to be achieved on the fortnightly basis prescribed in subclause 16.8.1, the Department shall have the right to deduct any balance of such overpayment from monies owing to the employee on the employee's date of termination, resignation or retirement, as the case may be.

17. Meals and Refreshments

17.1 Attendance at an Incident

- 17.1.1 For the purposes of this clause, an "incident" also includes hazard reduction or any similar situation where facilities comparable to those provided at fire stations are not available to partake of a meal.
- 17.1.2 Where an employee attends an incident which extends for two hours or more; Refreshments shall be provided no later than two hours after the start of the incident.
- 17.1.3 Where such an incident extends for four hours or more, the employee shall be provided with a Substantial Meal. After every subsequent four hours of attendance at such an incident, a further Substantial Meal shall be provided.

17.2 Payment in Lieu of the Provision of Refreshments/Meals

- 17.2.1 Where Refreshments are not provided in terms of subclause 17.1.2, the Refreshment Allowance set at Item 15 of Table 1 of Schedule 2, shall be paid.
- 17.2.2 Where an Emergency Meal is supplied in lieu of a Substantial Meal, the Refreshment Allowance set at Item 15 of Table 1 of Schedule 2, shall be paid.
- 17.2.3 Where a Substantial Meal or Emergency Meal is not provided in terms of subclause 17.1.3, the Meal Allowance set at Item 14 of Table 1 of Schedule 2, shall be paid.

17.3 During Overtime

- 17.3.1 An employee who works overtime which:
 - 17.3.1.1 involves the attendance at an incident shall be provided with refreshments/meals in terms of subclauses 17.1.2 and 17.1.3 or the payment in lieu thereof as prescribed in subclause 17.2;
 - 17.3.1.2 does not involve attendance at an incident shall, if such overtime extends for more than two hours, be paid the Meal Allowance set out at Item 14 of Table 1 of Schedule 2. After every subsequent four hours of such overtime worked, the Refreshment Allowance set out at Item 15 of Table 1 of Schedule 2, shall be paid.

17.4 Method of Payment and Calculation of Allowances in Lieu of Refreshments/Meals

- 17.4.1 The payments referred to in subclause 17.3.1.2 (only) shall, unless the Officer-in-Charge is not available to make such payment, be made prior to or at the cessation of the shift or

overtime as the case may be. In cases where the Officer-in-Charge is not available to make payment, the employee shall be paid at the earliest opportunity thereafter.

17.4.2 The allowances referred to in this clause shall be calculated as follows:

- 17.4.2.1 The Meal Allowance at Item 14 of Table 1 of Schedule 2, is the average, rounded to the nearest five cents of the amounts prescribed for the overtime meal allowances for breakfast, lunch and dinner at Item 19 of Table 1 Part B of the Crown Employees (Public Service Conditions of Employment) Award 2002.
- 17.4.2.2 The Refreshment Allowance in Item 15 of Table 1 of Schedule 2 is half, rounded to the nearest five cents of the Meal Allowance in Item 14 of Table 1 of Schedule 2.
- 17.4.2.3 The amounts specified at 17.4.2.1 and 17.4.2.2 shall be adjusted on 1 July in line with the corresponding reasonable allowance amount for overtime meals for the appropriate financial year as published by the Australian Taxation Office (ATO).

18. Transport

- 18.1 Where an employee has been rostered for duty and works from 0800 hours to 1800 hours and is retained on overtime and ceases duty after 2000 hours and public transport or other normal means of transport is not reasonably available, arrangements may be made by the Department to provide transport (by taxi or otherwise) to ensure that the employee obtains reasonable transport home.

19. Travelling Compensation

19.1 Excess Travelling Time

When an employee is required to travel outside their normal hours of duty the employee may apply for payment for excess time spent travelling, subject to the following:

- 19.1.1 If the travel is on a non-working day and is undertaken by direction of the Commissioner or an authorised officer, the employee is entitled to the benefit of subclause 19.1.
- 19.1.2 Where the travel is on a working day, the excess time spent travelling before the normal commencing time or after the normal ceasing time, rounded to the lower quarter hour, shall be counted for the benefit of subclause 19.1.
- 19.1.3 Payment for excess travelling time on both a working day and a non-working day shall be at the employee's ordinary rate of pay on an hourly basis (calculated by dividing the "Per Week" rate of pay by 40) subject to a ceiling of the hourly rate of pay of a Station Officer.
- 19.1.4 Where the employee has travelled overnight but has been provided with sleeping facilities, the travelling time shall not include travel between 2300 hours on one day and 0730 hours on the next day.
- 19.1.5 Travelling time does not include time spent:
 - 19.1.5.1 travelling on permanent transfer where the transfer involves promotion with increased salary; or as a consequence of a breach of discipline by the employee; or is at the employee's request; or is under an arrangement between employees to exchange positions;
 - 19.1.5.2 travelling by ship on which meals and accommodation are provided; or
 - 19.1.5.3 taking a meal when the employee stops a journey to take the meal.

19.1.6 Travelling time shall be calculated by reference to the use of the most practical and economic means of transport.

19.1.7 Payment will not be made or allowed for more than eight (8) hours in any period of twenty-four (24) hours.

19.2 Waiting Time

When an employee qualifies for the benefit of Excess Travelling Time, necessary waiting time is to be counted as Travelling Time calculated as follows:

19.2.1 Where there is no overnight stay with accommodation at a centre away from the employee's residence or normal work location, one hour shall be deducted from:

19.2.1.1 the time between arrival at the centre and the commencement of duty; and

19.2.1.2 the time between ceasing duty and the time of departure from the centre.

19.2.2 Where overnight accommodation is provided, any time from arrival until departure shall not count as waiting time except as follows:

19.2.2.1 if duty is performed on the day of arrival, the time less one hour between arrival and the commencement of duty; and

19.2.2.2 if duty is performed on the day of departure, the time less one hour from the completion of duty to departure; or

19.2.2.3 if no duty is performed on day of departure the time after 0830 hours until departure.

19.3 Meal Allowances

19.3.1 When an employee is required to perform official duty at a temporary work location and is not required to reside away from home (a one day journey), the employee shall be eligible to be paid the following meal allowances subject to the following conditions:

19.3.1.1 For breakfast when required to commence travel at/or before 0600 hours and at least one and a half hours before the normal commencing time, the amount set at Item 4 of Table 2 of Schedule 2.

19.3.1.2 For lunch when, by reason of the journey, an employee is unable to take lunch at the place or in the manner in which the employee ordinarily takes lunch and is put to additional expense, the amount set at Item 5 of Table 2 of Schedule 2 or an amount equivalent to the additional expense, whichever is the lesser.

19.3.1.3 For an evening meal when required to work or travel until or beyond 1830 hours and at least one and a half hours after the ordinary ceasing time, an amount set at Item 6 of Table 2 of Schedule 2.

19.3.1.4 Meal Allowances shall not be paid where the employee is provided with an adequate meal.

19.4 Accommodation Allowances

When an employee is required to perform official duty at a temporary work location which requires the employee to reside away from home and the employee is not provided with accommodation by the Government, the employee shall be eligible to be paid the following accommodation (sustenance) allowances subject to the conditions set out below:

- 19.4.1 For the first 35 calendar days, the appropriate amounts set at Item 7 of Table 2 of Schedule 2; or
- 19.4.2 The actual necessary expenses for meals and accommodation (actuals), together with incidental expenses as appropriate, set at Item 8 of Table 2 of Schedule 2. The necessary expenses do not include morning and afternoon tea.
- 19.4.3 After the first 35 calendar days and for up to six months an employee shall be paid an allowance at the rate set at Item 9 of Table 2 of Schedule 2 provided the allowance paid to an employee, temporarily located in Broken Hill, shall be increased by 20%. The allowance is not payable in respect of:
 - 19.4.3.1 Any period during which the employee returns home on weekends or public holidays commencing with the time of arrival at the residence and ending at the time of departure from the residence; or
 - 19.4.3.2 Any other period during which the employee is absent from the temporary work location (including leave) otherwise than on official duty, unless approved by the Commissioner.
- 19.4.4 The capital city rate shall apply to Sydney as bounded by the GSA.
- 19.4.5
 - 19.4.5.1 Where an employee proceeds directly to a temporary work location in a Capital city and returns direct, the Capital city rate applies to the whole absence.
 - 19.4.5.2 Where an employee breaks the journey, other than for a meal, in a centre that is not a capital city, the capital city rate applies only in respect of the time spent in the capital city, the elsewhere rate applies to the remainder of the absence.

19.5 Incidental Expenses Allowances - Government Provided Accommodation

When an employee is required to perform official duty at a temporary work location which requires that the employee reside away from home and is provided with accommodation by the Government, the employee shall be eligible to be reimbursed expenses properly and reasonably incurred during the time actually spent away from the employee's residence in order to perform that duty and in addition be paid an allowance at the rate set at Item 10 of Table 2, of Schedule 2 as appropriate. Such expenses are limited to costs in relation to food, laundry and accommodation that exceed what would normally have been incurred at home. Any meal taken at a Government establishment is to be paid for and appropriate reimbursement sought.

19.6 Additional Provisions

- 19.6.1 Unless specifically provided for in clause 25, Relieving Provisions, clause 51, Training Course Attendance Entitlements or clause 53, Court Attendance Entitlements, the provisions of this clause shall not apply in the circumstances provided for by those clauses. Nor do they apply to Recruits undertaking College training.
- 19.6.2 When an employee is required to travel to a temporary work location or to attend a training course or conference on what would normally be regarded as a one day journey and the time of travel will exceed four hours on any one day in addition to the normal hours of work, the employee may be directed or may request that the employee reside temporarily at a place other than the employee's residence to avoid such travel time on any day and in such case shall be entitled to the accommodation allowances as appropriate.

- 19.6.3 The claim for an accommodation allowance or reimbursement of expenses shall be for the whole of the period of absence and cannot be dissected into part of the time of the absence by way of allowance and part of the absence being compensated by reimbursement.
- 19.6.4 When an employee in receipt of an accommodation allowance is granted special leave to return home from a temporary work location, the employee shall be reimbursed for the cost of the return rail fare or if a first class rail service is reasonably available, the cost of a first class return rail fare, or a motor vehicle allowance at the appropriate specified journey rate set at Item 1 of Table 2 of Schedule 2 to the value of the rail fares. No taxi fares or other incidental expenses are payable.

19.7 Travel Cost Reimbursement

- 19.7.1 An employee shall be entitled to the option of using public transport or reimbursement for use of the employee's private vehicle on the following basis:
 - 19.7.1.1 Reimbursement is not to be paid for a journey if an official motor vehicle is available for the journey.
 - 19.7.1.2 If an official motor vehicle was not available but public transport was reasonably available and practicable for the journey, the amount of any reimbursement is not to exceed the cost of the journey by public transport.
 - 19.7.1.3 Where the employee elects to use a private vehicle the employee shall be reimbursed at the specified journey rate prescribed from time to time or the cost of public transport, whichever, unless the Commissioner approves otherwise, is the lesser.
 - 19.7.1.4 Where an official motor vehicle is not available, and public transport was not reasonably available and practicable for the journey, if the employee agrees to use the employee's private vehicle, reimbursement shall be at the appropriate official business rate set at Item 11 of Table 2 of Schedule 2.
 - 19.7.1.5 Where the meal allowance or the accommodation allowance is insufficient to adequately reimburse the employee for expenses properly and reasonably incurred a further amount may be paid so as to reimburse the employee for the additional expenses incurred subject to the following:
 - 19.7.1.5.1 The Commissioner may require the production of receipts or other proof that expenditure was incurred.
 - 19.7.1.5.2 If any expense in respect of which an allowance is payable was not properly and reasonably incurred by the employee in the performance of official duties, payment of the allowance may be refused or the amount of the allowance may be reduced.
 - 19.7.1.5.3 If any purported expense was not incurred by the employee, payment of the allowance may be refused or the amount of the allowance may be reduced.
 - 19.7.1.6 The Commissioner is to consider the convenience of the employee when an employee is required to travel to a temporary work location.
 - 19.7.1.7 Unless special circumstances exist, the employee's work, the mode of transport used and the employee's travel itineraries are to be organised by the employer and approved in advance so that compensation for excess travel time and payment of allowances is reasonably minimised.

19.8 Claims

- 19.8.1 Claims should be submitted promptly, i.e., within one month from the completion of work or within such time as the Commissioner determines.
- 19.8.2 The Commissioner may approve applications for advance payments of travelling and sustenance allowances. Such applications should detail the appropriate expenditure anticipated in accordance with Commissioner's Orders 2015/13.
- 19.8.3 In assessing claims for excess travelling time and payment of allowances reference should be made to the time that might reasonably have been taken by the particular mode of transport used. Provided that where an employee can demonstrate that the use of the means of transport proposed by the Department is unreasonable in the circumstances, the employee may apply to the Commissioner for a review of the Department's decision. Where an employee does not wish to use the means of transport proposed by the Department e.g. air travel as against train or car travel, travelling time and allowances should be assessed on the basis that the most practical and economical means of transport is used.
- 19.8.4 Where an allowance is payable at a daily rate and a claim is made for a portion of the day, the amount to be paid is to be calculated to the nearest half hour.

19.9

- 19.9.1 The meal, accommodation, and incidental allowances in Items 4 to 10 of Table 2 of Schedule 2, shall be adjusted on 1 July in line with the corresponding reasonable allowance amounts for the appropriate financial year as published by the Australian Taxation Office (ATO).
- 19.9.2 The per kilometre rates in Items 1 & 11 of Table 2 of Schedule 2, shall be adjusted on 1 July each year in line with the increases in the Consumer Price Index for Sydney during the preceding year (March quarter figures).

20. Salary Packaging Arrangements, Including Salary Sacrifice to Superannuation

- 20.1 The entitlement to salary package in accordance with this clause is available to permanent full-time employees.
- 20.2 For the purposes of this clause:
 - 20.2.1 "salary" means the salary or rate of pay prescribed for the employee's classification by clause 13 Rates of Pay and clause 14 Allowances and Schedules 1 and 2 of this Award, and any other payment that can be salary packaged in accordance with Australian taxation law.
 - 20.2.2 "post compulsory deduction salary" means the amount of salary available to be packaged after payroll deductions required by legislation or order have been taken into account. Such payroll deductions may include, but are not limited to, taxes, compulsory superannuation payments, HECS payments, child support payments, and judgement debtor/garnishee orders.
- 20.3 By mutual agreement with the Commissioner, an employee may elect to package a part or all of their post compulsory deduction salary in order to obtain:
 - 20.3.1 a benefit or benefits selected from those approved by the Industrial Relations Secretary; and

- 20.3.2 an amount equal to the difference between the employee's salary, and the amount specified by the Industrial Relations Secretary for the benefit provided to or in respect of the employee in accordance with such agreement.
- 20.4 An election to salary package must be made prior to the commencement of the period of service to which the earnings relate.
- 20.5 The agreement shall be known as a Salary Packaging Agreement.
- 20.6 Except in accordance with subclause 20.7, a Salary Packaging Agreement shall be recorded in writing and shall be for a period of time as mutually agreed between the employee and the Commissioner at the time of signing the Salary Packaging Agreement.
- 20.7 Where an employee makes an election to sacrifice a part or all of their post compulsory deduction salary as additional employer superannuation contributions, the employee may elect to have the amount sacrificed:
- 20.7.1 paid into the superannuation fund established under the *Aware Super Act 1992*; or
- 20.7.2 where the Department is making compulsory employer superannuation contributions to another complying superannuation fund, paid into the same complying fund; or
- 20.7.3 subject to the Department's agreement, paid into another complying superannuation fund.
- 20.8 Where the employee makes an election to salary sacrifice, the Department shall pay the amount of post compulsory deduction salary, the subject of election, to the relevant superannuation fund.
- 20.9 Where the employee makes an election to salary package and where the employee is a member of a superannuation scheme established under the:
- 20.9.1 *Police Regulation (Superannuation) Act 1906*;
- 20.9.2 *Superannuation Act 1916*;
- 20.9.3 *State Authorities Superannuation Act 1987*; or
- 20.9.4 *State Authorities Non-contributory Superannuation Act 1987*,
- the Department must ensure that the employee's superable salary for the purposes of the above Acts, as notified to the SAS Trustee Corporation, is calculated as if the Salary Packaging Agreement had not been entered into.
- 20.10 Where the employee makes an election to salary package, and where the employee is a member of a superannuation fund other than a fund established under legislation listed in subclause 20.9 of this clause, the Department must continue to base contributions to that fund on the salary payable as if the Salary Packaging Agreement had not been entered into. This clause applies even though the superannuation contributions made by the Department may be in excess of superannuation guarantee requirements after the salary packaging is implemented.
- 20.11 Where the employee makes an election to salary package:
- 20.11.1 subject to Australian Taxation law, the amount of salary packaged will reduce the salary subject to appropriate PAYG taxation deductions by the amount packaged; and
- 20.11.2 any allowance, penalty rate, payment for unused leave entitlements, weekly worker's compensation or other payment, other than any payments for leave taken in service, to which an employee is entitled under this Award or any applicable Award, Act or statute which is expressed to be determined by reference to the employee's rate of pay, shall be calculated by reference to the rate of pay which would have applied to the employee under

clause 13, Rates of Pay and clause 14 Allowances, of Schedules 1 and 2 of this Award if the Salary Packaging Agreement had not been entered into.

- 20.12 The Industrial Relations Secretary may vary the range and type of benefits available from time to time following discussion with the Union. Such variations shall apply to any existing or future Salary Packaging Agreement from date of such variation.
- 20.13 The Industrial Relations Secretary will determine from time to time the value of the benefits provided following discussion with the Union. Such variations shall apply to any existing or future Salary Packaging Agreement from the date of such variation. In this circumstance, the employee may elect to terminate the Salary Packaging Agreement.

A4 - STAFFING, SYSTEM CONDITIONS AND ROSTERS

21. Hours of Work

- 21.1 Subject to subclauses 21.2.2 and 21.2.3, the average ordinary working hours of Operational Firefighters shall be forty hours per week over the cycle of weeks for which the rosters of ordinary hours of duty and leave operate. All rosters include, in addition to the average forty ordinary hours per week, an average per week of two hours of thirty-eight hour week leave accrual which shall be accumulated and added to annual leave accrual and taken in accordance with clause 34, Annual Leave.
- 21.2 Arrangement of Rosters
- 21.2.1 Subject to subclause 21.9, Operational Firefighters shall work the roster in operation at the station/location to which they are permanently attached and this roster shall be known as their default roster. No default roster shall allow rostered shifts in excess of fourteen hours duration. Any proposed change at any location from one roster system to another, or to a new roster system, shall only occur following agreement between the Department and the Union.
- 21.2.2 Operational Firefighters may, with the Department's agreement, elect to work alternative rosters to their default roster, provided that any such alternative roster:
- 21.2.2.1 must operate over an eight-week cycle and be drawn up and provided to both the Operational Firefighter and the Union not less than fourteen days prior to commencement;
 - 21.2.2.2 must allow at least eight consecutive hours between the cessation of one rostered shift and the commencement of the next rostered shift;
 - 21.2.2.3 must operate within the hours of the Operational Firefighter's default roster, provided that employees whose default roster is the Special Roster may apply to work alternative rosters that commence and cease up to two hours earlier or later than provided by the Special Roster.
 - 21.2.2.4 must not allow split or broken shifts;
 - 21.2.2.5 must not allow a reduction in the minimum Operational Firefighter staffing required at the station/location in question;
 - 21.2.2.6 must not allow more than five days' work, or more than five rostered shifts, in any seven day period; and
 - 21.2.2.7 must not average more than forty two ordinary working hours per week over the eight-week cycle.

- 21.2.3 An Operational Firefighter who elects to work an alternative roster that allows fewer average ordinary working hours than allowed for by subclause 21.1 shall be paid and accrue leave on a pro-rata basis.
- 21.2.4 Notwithstanding anything to the contrary elsewhere in this Award, an Operational Firefighter who elects to work an alternative roster that allows one or more 24 hour shifts shall:
 - 21.2.4.1 be paid the Relieving Allowance, if payable, twice for each rostered 24 hour shift so worked; and
 - 21.2.4.2 have any Outduty performed during a rostered 24 hour shift counted as two Outduties for the purposes of subclause 25.17; and
 - 21.2.4.3 have the period before a Stand By becomes an Outduty during a rostered 24 hour shift doubled, but only if the Stand By is performed to cover the absence of another employee who was rostered to work a 24 hour shift; and
 - 21.2.4.4 have any compassionate leave taken during a rostered 24 hour shift counted as two shifts for the purposes of subclause 35.1; and
 - 21.2.4.5 have any unsupported sick leave absence taken during a rostered 24 hour shift counted as two separate occasions for the purposes of subclause 39.8 except;
 - 21.2.4.5.1 a part shift sick leave absence falling between 0800 and 1800 hours or a part shift sick leave absence between 1800 and 0800 will be counted as one occasion for the purposes of subclause 39.6.
 - 21.2.4.5.2 The arrangements in subclause 21.2.4.5.1 will cease on the expiration of this Award unless either party terminates these arrangements sooner
- 21.2.4 a In all cases, the Relieving Allowance paid at subclause 21.2.4.1 and the Outduties and leave counted at subclauses 21.2.4.2, 21.2.4.4 and 21.2.4.5 shall not be paid or counted either less or more than twice during a 24 hour rostered shift.
- 21.2.5 Subject to subclause 21.2.6, the Department shall return an Operational Firefighter who is working an alternative roster to their default roster within fourteen days of receipt of a written request from the Operational Firefighter.
- 21.2.6 Where the Department's agreement to the working of an alternative roster was conditional upon one or more Operational Firefighters working an alternative roster in concert with each other and one or more of those Operational Firefighters submits a written request to return to their default roster, the Department:
 - 21.2.6.1 shall return the Operational Firefighter(s) who requested to return to their default roster within 28 days; and
 - 21.2.6.2 shall notify the remaining Operational Firefighters, in writing, of that request within 7 days; and
 - 21.2.6.3 may return the Operational Firefighters to their default rosters not less than 21 days following their receipt of notification at subclause 21.2.6.2.
- 21.3 Standard 10/14 Roster System

	1st Week	2nd Week	3rd Week	4th Week
Platoon	<i>F S S M T</i> <i>W T</i>	<i>F S S M T</i> <i>W T</i>	<i>F S S M T</i> <i>W T</i>	<i>F S S M T</i> <i>W T</i>
A HOURS	D D N N 48	D D N N 48	N D D N 48	N N D D 48
B HOURS	N N D 38	D N N 38	N D D N 48	N N D D 48
C HOURS	D N D 34	N D D 34	N N D 38	D N N 38
D HOURS	N D D N 48	N N D D 48	D N D 34	N D D 34

	5th Week	6th Week	7th Week	8th Week
Platoon	<i>F S S M T</i> <i>W T</i>	<i>F S S M T</i> <i>W T</i>	<i>F S S M T</i> <i>W T</i>	<i>F S S M T</i> <i>W T</i>
A HOURS	D N D 34	N D D 34	N N D 38	D N N 38
B HOURS	D D N N 48	N N D D 48	D N D 34	N D D 34
C HOURS	D D N N 48	D D N N 48	N D D N 48	N N D D 48
D HOURS	N N D 38	D N N 38	D D N N 48	D D N N 48

21.3.1 The Standard 10/14 roster system is based on four platoons over an 8-week cycle.

21.3.2 The shifts within the Standard 10/14 roster cycle shall be as set out in the Table at subclause 21.3 where: D = 0800 hours to 1800 hours; and N = 1800 hours to 0800 hours.

21.4 Back to Back Roster System

	1st Week	2nd Week	3rd Week	4th Week
Platoon	<i>F S S M T</i> <i>W T</i>	<i>F S S M T</i> <i>W T</i>	<i>F S S M T</i> <i>W T</i>	<i>F S S M T</i> <i>W T</i>
E HOURS	D D D D 48	D D D D 48	D D D D 48	D D D D 48
F HOURS	D D D 36	D D D 36	D D D 36	D D D 36

	5th Week	6th Week	7th Week	8th Week
Platoon	<i>F S S M T</i> <i>W T</i>	<i>F S S M T</i> <i>W T</i>	<i>F S S M T</i> <i>W T</i>	<i>F S S M T</i> <i>W T</i>
E HOURS	D D D 36	D D D 36	D D D 36	D D D 36
F HOURS	D D D D 48	D D D D 48	D D D D 48	D D D D 48

- 21.4.1 The Back to Back roster is based on two platoons over an 8-week cycle.
- 21.4.2 The shifts within the Back-to-Back roster cycle shall be as set out in the Table at subclause 21.4 where: D = 0600 hours to 1800 hours.

21.5 Overlap Roster System

	1st Week					2nd Week					3rd Week					4th Week				
Platoon	F	S	S	M	T	F	S	S	M	T	F	S	S	M	T	F	S	S	M	T
	W T					W T					W T					W T				
G HOURS	D			D	D					D	D			D	D					D
			D	D		D	D				D	D				D	D			
			52.5					31.5					52.5					31.5		
H HOURS					D	D			D	D				D		D			D	D
	D	D					D	D			D	D				D	D			
			31.5					52.5					31.5					52.5		
	5th Week					6th Week					7th Week					8th Week				
Platoon	F	S	S	M	T	F	S	S	M	T	F	S	S	M	T	F	S	S	M	T
	W T					W T					W T					W T				
G HOURS	D			D	D					D	D			D	D					D
			D	D		D	D						D	D		D	D			
			52.5					31.5					52.5					31.5		
H HOURS					D	D			D	D				D		D			D	D
	D	D					D	D			D	D				D	D			
			31.5					52.5					31.5					52.5		

- 21.5.1 The Overlap roster system is based on two platoons over an 8-week cycle.
- 21.5.2 The shifts within the Overlap roster cycle shall be as set out in the Table at subclause 21.5 where: D = 0700 hours to 1730 hours.
- 21.6 Special Roster System
- 21.6.1 The Special Roster System is a Monday to Friday day shift roster with the commencing and ceasing times for Monday to Thursday being 0800 hours to 1630 hours, respectively and for Friday 0800 hours to 1600 hours respectively.
- 21.7 Except for fire stations operating the Standard 10/14 roster system on the date of the making of this Award, the roster prescribed in subclause 21.3 of this clause shall not apply to fire stations which the Department determines shall be staffed by employees on a full-time basis for less than 168 hours per week and by Retained Firefighters for the balance of the week where the ordinary hours not exceeding 40 per week shall be worked as directed by the Department from time to time.
- 21.8 The average ordinary working hours of employees holding the classification of Recruit Firefighter shall be 40 hours per week. The rostered hours of work for Recruit Firefighters shall be arranged so that they shall not accrue 38 hour leave. The hourly rate of pay of an employee holding the classification of Recruit Firefighter shall be determined by dividing the weekly rate of pay for a Recruit Firefighter by 40.
- 21.9 Irrespective of which roster is for the time being applicable, the following general conditions shall apply:
- 21.9.1 In the event of an alarm, requiring any station to stand by or respond to an incident, being received at the station during roll call, the oncoming platoon shall, if required, respond to the incident. The off-going platoon shall remain on duty, if required, or until otherwise directed. Roll calls shall be conducted by the station bell being rung two minutes before rostered time to change shift.

- 21.9.2 The oncoming shift available in the station may attend roll call without any overtime penalty being incurred, but on completion of the roll call and the Officer-in-Charge being satisfied that there are adequate staff for the shift, the off-going shift shall then be dismissed.
- 21.9.3 No employee shall be charged with being absent from duty who misses the roll call at two minutes in the time set for the change of shift, provided that the employee is on station premises by the rostered time for the shift to commence. An employee retained beyond the ceasing time of the shift shall be paid overtime.
- 21.9.4 If, when the oncoming platoon reports at a station at the time prescribed for the change of shift, the other platoon is proceeding to or attending an incident or alarm, the oncoming platoon, if so ordered, shall after roll call, proceed to the incident and the Officer or senior members of the platoon shall report, without delay, the arrival of the platoon to the Officer-in-Charge of the incident. The off-going platoon shall remain on duty at the incident until relieved.
- 21.9.5 The Officer-in-Charge of the incident may, if in that Officer's judgment it is expedient, hold both the oncoming and off-going platoons for duty at the incident. If the off-going platoon is not held at the incident or is not detained at the incident for duty elsewhere, it shall report back to the station and shall remain available until the other platoon returns or until otherwise directed, when it shall be dismissed.
- 21.9.6 In the event of one or more members of the ongoing platoon being absent an equal number of members in the platoon on duty shall be liable to be detained on duty until such time as they may be relieved. Nothing herein contained shall be deemed to sanction an unauthorised absence or to relieve the absent member from a liability to be charged with being absent without leave and dealt with accordingly.
- 21.10 The rosters provide for an amount of residual leave of 7.25 hours per annum, which is to be credited as consolidated leave, on the anniversary of the employee's date of commencement of employment by the Department notwithstanding the provisions of subclause 21.8.
- 21.11 Employees shall not work in excess of sixteen (16) hours straight except in the case of a call to an incident or other emergency circumstances, or by agreement pursuant to subclause 21.12.
- 21.12 Employees may elect, but not be directed, to work in excess of sixteen (16) hours straight by way of overtime, an alternative roster or a change of shift agreement provided:
- 21.12.1 that such employees have the Department's approval to do so; and
- 21.12.2 that such employees have at least eight consecutive hours off duty between the cessation and recommencement of duty; and
- 21.12.3 that no employee shall be permitted to work in excess of twenty four (24) hours straight except in the case of a call to an incident or other emergency circumstances, or a staff shortage pursuant to subclause 21.9.6.
- 21.13 Executive Officers
- Executive Officers shall work an average of forty ordinary hours per week, on a flexible basis according to the needs of the organisation on any day of the week or at any time of the day on a self-directed rostering basis in accordance with the provisions of clause 85 of this Award.
- 21.14 Change of Shift Agreements
- Notwithstanding anything to the contrary elsewhere within this Award, two or more Non-Officers, Officers or Senior Officers (as the case may be) may enter into a full or part change of shift agreement with each other subject to the following conditions:

- 21.14.1 Employees shall apply in writing at least 24 hours prior to performing a full or part change of shift. This application, which may provide for multiple and/or recurring changes of shift, shall include the number of hours, the relevant times and date(s) and the names and signatures of both the employee(s) seeking the change and the employee(s) who shall be working in their stead.
- 21.14.2 An approved change of shift agreement shall operate so that:
- 21.14.2.1 The employee who was originally rostered to work, but did not do so (Employee A) shall:
- 21.14.2.1.1 be paid the wages they would otherwise have been paid pursuant to clauses 13 and 14 for that shift or part shift; and
- 21.14.2.1.2 accrue the leave they would otherwise have accrued pursuant to clauses 34, 37 and 39 for that shift or part shift; and
- 21.14.2.1.3 subject to subclauses 25.6 and 21.14.2.2.2, be paid the Relieving Allowance as if they had worked that shift or part shift.
- 21.14.2.2 The off-duty employee who works in Employee A's stead (Employee B) shall:
- 21.14.2.2.1 be recognised for and paid for all purposes other than those listed at subclauses 21.14.2.1 as if they had been rostered to work those hours, provided that any time so worked by Employee B in excess of Employee A's originally rostered hours will be paid as overtime pursuant to clause 23; and
- 21.14.2.2.2 subject to subclause 25.6, be paid the Relieving Allowance provided: firstly; that Employee B shall always assume Employee A's base station for the purposes of clause 25; and secondly; if Employee A and Employee B satisfy the requirements of subclause 25.6 then only Employee B shall be paid the Relieving Allowance and, if applicable, only Employee B shall be considered to have performed an Outduty.
- 21.14.2.3 Employees may take leave (including annual and long service leave) during an operative change of shift agreement. Such employees shall not be required to make alternative arrangements (which, if necessary, shall be made instead by the Department) in the event that they or any other employee who is party to that agreement takes leave, scheduled or otherwise.
- 21.14.2.4 If Employee A takes annual leave or long service leave during an operative change of shift agreement then Employee A shall have both the hours they were rostered to work and the change of shift hours they had agreed to work for any other employee(s) deducted from Employee A's annual leave balance or long service leave balance.
- 21.14.2.5 If Employee B works an agreed change of shift for Employee A while Employee A is on annual leave or long service leave then Employee A shall be credited with the same number of annual leave or long service leave hours as worked by Employee B for Employee A.
- 21.14.2.6 If Employee B takes any form of leave (including, for example, sick leave) when scheduled to work an agreed change of shift for Employee A then those leave hours shall be deducted (but not paid for) from Employee B's relevant leave balance, unless it is a part change of shift agreement pursuant to 21.14.2.7.
- 21.14.2.7 Employee B may elect to enter into a change of shift agreement while on annual leave. In these circumstances, Employee B's entire annual leave period shall be debited for the hours they were rostered off on annual leave.

- 21.14.3 Employees shall not be permitted to perform full or part changes of shift immediately prior to or following their own rostered shift unless that full or part change of shift is to be worked at the same station as that rostered shift.
- 21.14.4 An on duty employee who has arranged a part change of shift shall not be permitted to leave duty until properly relieved by the employee who has agreed to work in their stead.
- 21.14.5 If there is a call of fire or any other emergency that disturbs or prevents a previously arranged part change of shift, no arrangement shall be made, or be expected to be made, to recall another employee. Any inconvenience shall be borne by the employees concerned without redress.
- 21.14.6 The Department shall not refuse an application to perform a full or part change of shift without good and proper reason, but may cancel a previously approved change of shift on the same basis provided sufficient notice is given to the affected employees.
- 21.14.7 Subject to subclause 21.14.2.3, an employee who has entered into a change of shift agreement will remain bound by that agreement unless and until such time as the other employee(s) concerned agrees, in writing, to terminate that agreement, or a change of shift is cancelled by the Department pursuant to subclause 21.14.6.

22. Higher Duties

- 22.1 Subject to the provisions of this clause, an employee shall not be permitted to perform higher duties unless, firstly, the employee is qualified to perform such duties and, secondly, where a rank or classification structure applies, the employee is at the rank or classification immediately below the rank or classification of the position in which the relief is to be performed.
- 22.2 In the case of station based positions, where a Station Officer is temporarily absent (as described below), that Station Officer's position may be filled by a Leading Firefighter performing higher duties, in the following circumstances:
 - (a) Where the Station Officer is on Annual Leave for a period not exceeding three months.
 - (b) Where the Station Officer is on Long Service Leave for a period not exceeding three months.
 - (c) Where the Station Officer is on Sick, Carers Leave, Workcover or other Medical Leave for a period not exceeding three months.
 - (d) Where the Station Officer is temporarily performing alternative/lights duties for a period not exceeding three months.
 - (e) Where the Station Officer is on Parental Leave for a period of not exceeding three months.
- 22.3 Where an Inspector is temporarily absent (as described below), that Inspector's position may be filled by a Leading Station Officer performing higher duties in the following circumstances:
 - (a) Where the Inspector is on Annual Leave for a period not exceeding three months.
 - (b) Where the Inspector is on Long Service Leave for a period not exceeding three months.
 - (c) Where the Inspector is on Sick, Carers Leave, Workcover or other Medical Leave for a period not exceeding three months.
 - (d) Where the Inspector is temporarily performing alternative/lights duties for a period not exceeding three months.
 - (e) Where the Inspector is on Parental Leave for a period of not exceeding three months.
- 22.4 For the avoidance of doubt, a Leading Firefighter or Leading Station Officer can only act up the circumstances outline in subclauses 22.2(a)-(e) and 22.3(a)-(e) where the period of leave planned and actually taken by the substantive employee does not exceed a total of three months in any of the circumstances prescribed or due to a combination of any of the circumstances prescribed.
- 22.5 Leading Firefighters and Leading Station Officers may elect and/or be directed to temporarily perform higher duties in the circumstances described in subclauses 22.2, 22.3 and 22.4, subject to subclause 22.6 and 22.7 and 25.12, and shall not perform higher duties otherwise.

- 22.6 Leading Firefighters and Leading Station Officer's attached to a work location and/or fire station within the Greater Sydney Area may only be directed to perform higher duties in the circumstances described in subclauses 22.2, 22.3 and 22.4 where such direction would not result in the employee being required to perform such higher duties on an alternative platoon and or roster to that they are working to in their substantive role or a work location outside of the Greater Sydney Area. Leading Firefighters and Leading Station Officer's attached to work location and/or fire station outside the Greater Sydney Area may only be directed to perform higher duties in the circumstances described in subclauses 22.2, 22.3 and 22.4 where such direction would not result in the employee being required to perform such higher duties on an alternative platoon and/or roster to that they are working to in their substantive role and/or, an alternative work location and/or fire station to their normal work location. No Leading Firefighter can be directed to perform higher duties in circumstances where such performance would result in the employee having worked in excess of the maximum stipulated Outduties per employee as specified at subclause 25.17.
- 22.7 For the avoidance of doubt, the intention of subclauses 22.2-22.5 is to ensure that Station Officer positions are ordinarily filled by employees holding the rank of Station Officer or Leading Station Officer, and that Inspector positions are ordinarily filled by employees holding the rank of Inspector. No employee may perform higher duties in a vacant position unless such vacant position is a regional location and the position has been advertised within 28 days of vacancy occurring.
- 22.8 An employee performing higher duties shall be paid the difference between the employee's usual rate of pay and the minimum rate of pay for the rank or classification in which the higher duties are performed. An employee who is ordinarily entitled to an allowance under clause 14 and clause 79 shall continue to be paid such allowance while they are performing higher duties.
- 22.9 An employee performing higher duties who proceeds on any form of leave shall be paid during such leave at the employee's usual rate of pay and not at the rate of pay of the rank or classification in which the higher duties were being performed.
- 22.10 While a Senior Officer who relieves an Executive Officer shall be remunerated for the period of relief in terms of subclause 22.7, such employee shall, with the exception of provisions relating to hours of work and overtime, retain the conditions of employment applicable to a Senior Officer. In relation to hours of work and excess hours such an employee shall, for the period of relief, be covered by subclause 21.13 of clause 21, Hours of Work.
- 22.11 In selecting employees to perform higher duties the following procedures shall apply:
- 22.11.1 Where the period of relief is to be less than one month, merit selection need not be applied. However, the Department shall have regard to the principles of equitably sharing career development opportunities.
 - 22.11.2 Where the period of relief of an Executive Officer or a Non-Station Based position is one month or more and the need for the relief is known in advance, expressions of interest shall be called for and determined by merit selection.
 - 22.11.3 Where the need for the relief of an Executive Officer or a Non-Station Based position is not known in advance, but it subsequently becomes known that the duration of the relief is anticipated to be for two months or more, the initial appointment shall be made in accordance with subclause 22.11.1. However, immediately following that initial appointment expressions of interest are to be called for and determined by merit selection.
- 22.12 The limitations of this clause shall not apply where:
- 22.12.1 A vacancy in a Country position arises and is advertised in Commissioner's Orders pursuant to subclause 28.7 within 28 days of such vacancy occurring, in which case a Leading Firefighter or Leading Station Officer (as the case may be) may elect or be directed to perform the duties of the vacant position until the position is filled, or the expiration of three months, whichever occurs first.

- 22.12.2 A Leading Firefighter or Senior Firefighter successfully applies for a Country Officer pursuant to subclause 28.7.2, in which case the Leading Firefighter or, subject to subclause 28.7.2.3, Senior Firefighter shall be transferred to that station/location and shall perform the duties of the vacant position until such time as he or she is either promoted, or ceases to be eligible for such promotion. An employee who ceases to be eligible for such promotion shall cease to hold that position and be transferred to the GSA.
- 22.12.3 A Leading Station Officer or Station Officer successfully applies for a Country Senior Officer position pursuant to subclause 28.7.3, in which case the Leading Station Officer or, subject to subclause 28.7.3.3, Station Officer shall be transferred to that station/location and shall perform the duties of the vacant position until such time as he or she is either promoted, or ceases to be eligible for such promotion. An employee who ceases to be eligible for such promotion shall cease to hold that position and be transferred to the GSA.

23. Overtime

- 23.1 Subject to subclause 23.2, overtime shall be paid for at the rate of time and a half for the first two hours and at the rate of double time thereafter, provided that an employee who is required to work overtime shall be entitled to payment for at least 15 minutes of overtime on each occasion that the employee is called upon to work overtime. To avoid doubt, where work commences prior to the start of an employee's rostered shift and continues beyond the conclusion of that shift then the relevant rate of pay shall be determined by having regard to the entire period of overtime worked, so that any and all of the overtime worked in excess of two hours is paid at the double time rate.
- 23.2 Any time worked by an employee in excess of 24 consecutive hours shall be paid for at the rate of double time, regardless of that employee's roster.
- 23.3 For meal allowance entitlements where an employee works overtime, see clause 17, Meals and Refreshments.
- 23.4 When it is reasonably necessary for an employee who has returned to the station either before or after the ceasing hour of the shift to clean up before leaving the station, and thereby justifiably leaves the station after the ceasing hour, the time so reasonably and necessarily occupied beyond the ceasing hour shall be paid for as overtime.
- 23.5 The hourly rate of pay for an employee in the classification of Firefighter, Qualified Firefighter, Senior Firefighter, Leading Firefighter, Station Officer, Leading Station Officer, Non-Station Based Team Member and Non-Station Based Team Leader shall be ascertained for the purpose of this clause by dividing the employee's "Per Week" rate of pay by 41.75. The hourly rate of pay for an employee in the classification of Recruit Firefighter, Operational Support Level 2a and Operational Support Level 3a, shall be ascertained for the purpose of this clause by dividing the employee's "Per Week" rate of pay by 40.
- 23.6 Recall to Incident
- 23.6.1 An employee who is off duty and who is called upon pursuant to subclause 23.6.2, to report for duty to attend an incident shall be entitled to a minimum payment equal to two hours at overtime rates.
- 23.6.2 Notwithstanding anything elsewhere contained in this clause, in the case of an incident, all employees off duty shall be liable to be called upon to report for duty and if called upon shall report immediately for duty.
- 23.6.3 An employee who is on annual leave or long service leave and who reports for duty to attend an incident shall, in addition to payment pursuant to subclause 23.1, be credited with consolidated leave equal to the amount of time so worked.

- 23.6.4 For meal allowance entitlements when the employee remains on duty for a period of four hours or more in connection with a recall pursuant to subclause 23.6.1, see clause 17, Meals and Refreshments.
- 23.7 Recall to maintain Required Staffing Levels
- 23.7.1 An employee off duty who is required to report for duty for the purposes of maintaining required staffing levels shall, on so reporting, be entitled to a minimum payment equal to four hours at overtime rates.
- 23.8 Where an employee recalled pursuant to subclause 23.6.1 or 23.7.1:
- 23.8.1 Is required to transport the employee's gear from the station/location at which the gear is located to another station/location in order to perform the duties of the recall, such employee shall be paid the Kilometre Allowance set at Item 2 of Table 1 of Schedule 2, for the distance travelled on the forward journey between the two locations, provided that employees who are placed upon a transfer register pursuant to clause 28, Transfers Outside of the GSA, and are claiming residential priority shall instead be paid the Kilometre Allowance for the distance between the permanently staffed station closest to their primary residence and the station/location where the duties of the recall are to be performed.
- 23.8.2 Is required to transport the employee's gear back to the station/location at which the gear was located because the Department is unable to do so, the employee shall also be entitled to be paid kilometres equal to the forward journey at subclause 23.8.1. For the purpose of this subclause "distance travelled" means the agreed distance or, if the distance is not covered by a Matrix, the actual kilometres between the two stations/locations.
- 23.8.3 Incurs a toll as a consequence of using a bridge, tunnel or motorway when travelling to perform the recall, such employee shall be reimbursed for the cost of the toll.
- 23.9 On such nights as may be fixed by the Department or by the Commissioner on reasonable notice in the circumstances not exceeding two nights in any week, an employee shall work such overtime as is reasonably necessary for usual Brigade inspections, or for giving instructions to Retained Firefighters.
- 23.10 When overtime work is necessary it shall, except in the case of an emergency, be so arranged that employees have at least eight consecutive hours off duty between the work of successive shifts. Where an employee works so much overtime between the termination of the employee's ordinary work on any day or shift, and the commencement of the employee's ordinary work on the next day or shift, that the employee has not had at least eight consecutive hours off duty between these times, the employee shall be released after completion of such overtime until the employee has had eight consecutive hours off duty without loss of pay for ordinary working time occurring during such absence.
- 23.10.1 If on the direction of the employee's authorised supervisor, such employee resumes or continues work without having had such eight consecutive hours off duty, the employee shall be paid at the rate of double time until the employee is released from duty for such period, and the employee shall be entitled to be absent until the employee has had eight consecutive hours off duty without loss of pay for ordinary working time occurring during such absence.
- 23.10.2 Provided that while recalls shall be paid for at overtime rates in accordance with this Award, where the actual total time worked on a recall or recalls is less than 3 hours it shall not count for the purpose of determining whether an employee has had an eight hour break pursuant to this subclause.

24. On Call / Disturbance Allowance

- 24.1 "On Call" refers to any period during which an employee is rostered by the Commissioner to be on call outside of ordinary working hours to be available to receive calls or other forms of communication, and if requested perform work tasks from home and/or return to duty.
- 24.2 Employees who are rostered by the Commissioner to be On Call will be paid the On Call allowance prescribed at Item 22 of Table 1 of Schedule 2 - Allowances. These allowances will increase in accordance with any increases to wages/salary.
- 24.3 Where an employee is rostered to be On Call and is contacted outside their ordinary hours of work and is required to perform work whether from home, by attending a FRNSW workplace, or responding to an incident, the employee will be entitled to a minimum payment of two hours at the applicable overtime rates as prescribed by subclause 23.1 except for Executive Officers who will be paid in accordance with clause 85, Executive Officer Hours of Work.
- 24.3.1 The minimum two-hour payment applies regardless of the actual duration of work performed. If multiple calls or tasks occur within this two-hour period, only one minimum payment will apply.
- 24.3.2 Where an employee is required to respond to an incident or return to a FRNSW workplace the two-hour minimum payment period will commence from the time the employee received the call, including reasonable travel time to the incident or workplace.
- 24.3.3 If the work performed extends beyond the initial two-hour minimum period, the employee will be paid for the additional time worked at the applicable overtime rate.
- 24.4 Where an employee is rostered On Call and required to perform work, either from home, attending a FRNSW workplace, or by responding to an incident, the provision of subclause 23.10 will apply in relation to relevant stand down and rest break periods.
- 24.5 The Commissioner is to consult with the Union before publishing business rules for the management of On Call arrangements, which are to include reasonable limits on the frequency of On Call rostering.

25. Relieving Provisions

- 25.1 The provisions of this clause shall only apply to:
- 25.1.1 Relieving Employees, as defined in Clause 7, when such employees work a rostered shift at either the employee's base station/location or performs a relief duty at another station/location; and
- 25.1.2 Other employees when such employees perform an "Outduty", as defined in Clause 7.
- 25.2 Relieving Employees shall be assigned to a base station/location which, as far as is practicable having regard to the Department's operational requirements, is in the employee's stated preferred Zone, or in the Zone closest to the employee's residence.
- 25.3 Relieving Employees shall report for duty at their base station/location unless otherwise directed.
- 25.4 Subject to the exceptions in subclause 25.4.1, employees cannot be directed to perform relief duty outside the Fire District to which they are attached.
- 25.4.1 Exceptions
- 25.4.1.1 Relieving Employees (pursuant to subclause 25.1.1);

- 25.4.1.2 Employees (pursuant to subclause 25.1.2) who are placed upon a transfer register pursuant to clause 28, Transfers Outside of the GSA, and are claiming residential priority may be directed to relieve in an area to which that transfer register applies.
- 25.5 Notwithstanding the provisions of subclause 25.4, any employee may elect to perform relief duty outside the Fire District to which they are attached.
- 25.6 Relieving Allowance
 - 25.6.1 The Relieving Allowance set at Item 16 of Table 1 of Schedule 2 shall be paid to:
 - 25.6.1.1 a Relieving Employee for each rostered shift worked by the employee at the employee's base station and, except as provided for by subclause 25.6.2 or as otherwise provided by this Award, for each rostered shift on which the employee performs a relief duty at another station/location.
 - 25.6.1.2 other employees on each occasion, except as provided for by subclause 25.6.2 or as otherwise provided by this Award, when such employees perform an Outduty in terms of subclause 25.1.2.
 - 25.6.2 Unless otherwise provided in this Award, the Relieving Allowance prescribed in subclause 25.6.1 shall not be paid to either a Relieving Employee (or other employee pursuant to subclause 25.1.2) in cases where the employee is compensated for excess travelling time and/or payment for travel/accommodation expenses in accordance with the provisions of clause 19, Travelling Compensation.
- 25.7 Unless specifically provided for elsewhere in this clause, when a Relieving Employee (or other employee pursuant to subclause 25.1.2) is required to perform relief duty on a rostered shift at another station/location:
 - 25.7.1 included within a Matrix and for which an agreed distance therefore exists, the employee shall be entitled to, in addition to the relieving allowance, payment of the Kilometre Allowance set out at Item 2 of Table 1 of Schedule 2, for that agreed distance.
 - 25.7.2 not included within a Matrix or where the base station/location and other stations/locations are in separate Matrices and therefore not covered by subclause 25.7.1:
 - 25.7.2.1 with prior notice, the employee shall be entitled to payment of:
 - 25.7.2.1.1 the Relieving Allowance; and
 - 25.7.2.1.2 if required to transport the employee's gear in order to perform the relief duty, the Kilometre Allowance set out at Item 2 of Table 1 of Schedule 2, for the distance travelled on the forward journey from the station/location at which the gear is located to the relief station/location; and
 - 25.7.2.1.3 for travel other than for the transport of the employee's gear, the Kilometre Allowance set out at Item 2 of Table 1 of Schedule 2 for any excess distance travelled. For the purposes of this subclause, excess distance shall be any distance actually and reasonably travelled by the employee to the relief station/location in excess of that normally travelled by the employee to report for duty at the employee's base station/location; and
 - 25.7.2.1.4 if the Department is unable to transport the employee's gear back to the station/location at which the gear was located, the Kilometre Allowance set out at Item 2 of Table 1 of Schedule 2, for the return kilometres equal to the forward journey.

- 25.7.2.2 without prior notice, the employee shall be entitled to, in addition to the relieving allowance, payment of the Kilometre Allowance set out at Item 2 of Table 1 of Schedule 2, for the distance actually travelled.
 - 25.7.2.3 For the purpose of this subclause "prior notice" means notice given whilst the employee was on duty, either during their rostered hours of work or whilst on overtime.
 - 25.7.2.4 For the purposes of subclauses 25.7.2.1.2 and 25.7.2.1.4 only, if an employee elects to perform relief duty outside of the fire district to which they are attached then the employee's base station/location shall be the closest permanently staffed station to their primary residence.
 - 25.7.2.5 the provisions of subclause 25.7.2.1 are to be read in conjunction with the provisions of subclause 25.8.
- 25.8 If, in a particular case, an employee considers that the presumed "no disadvantage" envisaged in the provisions of 25.7.2.1 is in fact not the case, the employee may submit a claim for the total compensation that the employee considers to be reasonable in the circumstances. All such claims must be supported with written reasons.
- 25.9 For the purpose of this Clause, "distance" shall mean the agreed return distance prescribed between two stations/locations in a Matrix. Each Matrix shall stand alone for the purpose of calculating the relevant distance. If the distance between two stations/locations is not prescribed in a Matrix, then "distance" shall mean the actual distance necessarily and reasonably travelled.
- 25.10 The parties acknowledge that the majority of the distances contained in the Matrices have been calculated using an electronic measuring device. In the event that a discrepancy is identified, the distance in question shall first be rechecked using the electronic measuring device. If the discrepancy still exists then the distance in question shall be checked using, if practicable, a motor vehicle, and if not, some other method agreed to by the Department and the Union.
- 25.10.1 If a distance in the Matrices is found to be incorrect, then a new agreed distance will be determined. Any new distance and its effective date will be published in the next available Commissioner's Orders.
 - 25.10.2 In cases where the corrected distance is more than that shown in the Matrices, it will take effect from the beginning of the pay period in which the discrepancy was first notified in writing by an employee.
 - 25.10.3 In cases where the revised distance is less than that contained in the Matrices, the new distance will operate prospectively from the beginning of the first pay period to commence on or after the date that the new distance is published in Commissioner's Orders.
- 25.11 Multiple Reliefs During a Rostered Shift.
- 25.11.1 Where a Relieving Employee (or other employee pursuant to subclause 25.1.2) performs relief duties during a rostered shift at more than one station/location, payment shall be made for kilometres for the forward journey/journeys between the station at which duty commenced and the subsequent station/s and between the station at which duty ceased and the station at which duty commenced. Provided that this provision shall not reduce any entitlement that the employee may have in relation to commencing duty at the station at which duty commenced.
 - 25.11.2 The provisions of subclause 25.11.1 shall not apply in cases where the provisions of clause 19, Travelling Compensation, apply.

25.12 Provision of Transport

- 25.12.1 Where a Relieving Employee (or other employee pursuant to subclause 25.1.2) is directed without prior notice after the commencement of a rostered shift, to perform relief duty at another station/location, the employee may request the provision of transport by the Department.
- 25.12.2 Where an employee requests the provision of transport in terms of subclause 25.12.1, the employee shall be entitled to the following provisions. Apart from these provisions, no other provisions of this clause shall apply.
- 25.12.2.1 Payment of the Relieving Allowance.
- 25.12.2.2 Except if the employee makes an election in terms of subclause 25.12.2.3, the employee shall be entitled to transport back to the station/location at which duty commenced and to travelling time as prescribed in clause 19, Travelling Compensation, for the time actually taken, from the completion of duty, to return to the station at which duty commenced.
- 25.12.2.3 Where an employee elects to return to the station/location after completion of duty to the station at which duty commenced by the employee's own means, the employee shall be entitled to be paid the Kilometre Allowance set at Item 2 of Table 1 of Schedule 2, for half the distance prescribed in the relevant Matrix. If no distance is prescribed, the distance shall be the actual distance necessarily and reasonably travelled by the employee to return to the station at which duty commenced.
- 25.13 Where a Relieving Employee (or other employee pursuant to subclause 25.1.2) incurs a toll as a consequence of using a bridge, tunnel or motorway when travelling to perform a relief duty, such employee shall be reimbursed for the cost of the toll.
- 25.14 A Relieving Employee (or other employee pursuant to subclause 25.1.2), who is directed to perform a relief duty on a rostered shift at a station/location which requires the employee to reside at a place other than the employee's residence, shall be entitled to the relevant provisions of clause 19, Travelling Compensation, in lieu of the provisions of this clause.
- 25.15 Where a Relieving Employee (or other employee pursuant to subclause 25.1.2) performs a relief at a station/location which, under normal circumstances would not require the employee to reside at a place other than the employee's residence, but because of special circumstances the employee is given approval by the Department for accommodation in order to have sufficient rest before returning home, the employee shall be entitled to the following:
- 25.15.1 Appropriate accommodation provided or arranged by the Department.
- 25.15.2 Retention of the Relieving Allowance.
- 25.15.3 With the exception of travelling time and costs for travel, the relevant provisions of clause 19, Travelling Compensation.
- 25.15.4 The Kilometre Allowance set at Item 2 of Table 1 of Schedule 2, as if the employee had not stayed in the accommodation.
- 25.16 The Relieving Allowance set at Item 16 of Table 1 of Schedule 2 and the Kilometre Allowance set at Item 2 of Table 1 of Schedule 2 include compensation for excess travelling time and the cost of excess travel to and from the station/locations at which relief duties are performed on a rostered shift.
- 25.17 Performance of Outduties

- 25.17.1 An employee cannot be directed to perform more than twelve (12) Outduties in any Calendar year, unless the employee is a Leading Station Officer who is performing higher duties pursuant to clause 22.
- 25.17.2 Notwithstanding the provisions of subclause 25.17.1, an employee may elect to perform more than twelve (12) Outduties in any Calendar year.
- 25.18 The provisions of this clause do not apply in cases where an employee acts up in a position following an expression of interest pursuant to subclause 22.11.2 or where an employee acts up as an Executive Officer, or where an employee, not being a Relieving Employee, acts up at the employee's base station/location.
- 25.19 Unless specifically provided for by this Clause, the provisions of this clause and clause 19, Travelling Compensation, shall be mutually exclusive. That is, an employee shall be entitled to claim, in relation to a particular situation, under either this clause, or clause 19, and shall not be entitled to claim under both.
- 25.20 Notwithstanding subclause 25.19, a relieving employee who:
 - 25.20.1 is directed to perform relief duty outside the fire district to which they are attached and who is entitled to claim the provisions of subclause 25.4.1; and/or
 - 25.20.2 is directed to perform overtime at a temporary work location before the normal commencing time of their rostered shift and who is entitled to claim the provisions of subclause 19.3.1.1;
 shall be paid such entitlements and retain the entitlements of clause 19.
- 25.21 Where an employee is required to use the employee's private vehicle to perform a Stand By, compensation shall only be in terms of subclause 19.2.2.1.
- 25.22 The parties agree to review this clause of the Award during the life of the Award to consider models of relief in both metropolitan and regional operations. Such a review will be conducted in accordance with clause 9 Consultation. No changes in relation to the operation of this clause or relieving will be introduced without agreement of the employer and the Union.

26. Intrastate, Interstate and International Deployments

- 26.1 The provisions of this Clause shall apply to employees who are invited and who elect to respond to an extended (over 48 hours total duration) interstate or international emergency as part of a deployment.
- 26.2 All employees who are invited and elect to respond to an extended (over 48 hours total duration) intrastate, interstate or international emergency as part of a deployment, along with the Union, will be made aware of the arrangements for that deployment including the following:
 - 26.2.1 the location of the deployment.
 - 26.2.2 the time frame of the deployment.
 - 26.2.2 the expected amenities, meals and accommodation available throughout the deployment.
- 26.3 In the case of routine cross-border incidents, intrastate deployments and interstate or international deployments of less than 48 hours, employees shall remain entitled to the general provisions of this Award and the special provisions of this Cause shall not apply except for the provisions of clause 26.2, and 26.6, 26.7 and 26.9.
- 26.4 Employees who are invited and elect to respond to an interstate or international emergency as part of deployment shall be paid for travelling time to and from the emergency:

- 26.4.1 on the day of departure until midnight Sydney time, in accordance with clause 19, provided that subclauses 19.1.4, 19.1.7 and 19.2 shall not apply; and
 - 26.4.2 on any day between the day of departure to and the day of return from the deployment, in accordance with subclause 26.4.3; and
 - 26.4.3 on the day of return, in accordance with clause 19, provided that subclauses 19.1.4, 19.1.7 and 19.2 shall not apply.
- 26.5 Employees shall be paid for work performed:
- 26.5.1 on the day of departure until midnight Sydney time, at single time during their rostered hours of work pursuant to clause 21, and at overtime rates otherwise; and
 - 26.5.2 for each day between the day of departure to and the day of return from the deployment, all time at single time, provided that:
 - 26.5.2.1 employees shall receive a minimum payment for each day equal to 16 hours per day, regardless of the hours actually worked; and
 - 26.5.2.2 any time actually worked at the direction of an employee's authorised supervisor in excess of 16 hours shall be paid at double time; and
 - 26.5.2.3 employees on double time pursuant to subclause 26.5.2.2 who resume or continue work without having had 8 consecutive hours off duty shall continue to be paid at the rate of double time until released from duty for such period, and such employees shall be entitled to remain off duty for eight consecutive hours without loss of pay at subclause 26.5.2.1; and
 - 26.5.3 from midnight Sydney time on the day of return, at single time during their rostered hours of work pursuant to clause 21, and at overtime rates otherwise.
- 26.6 Accommodation for Intrastate, Interstate and International Deployments
- 26.6.1 Employees on deployment who are not provided accommodation shall be paid the relevant accommodation allowance set at Item 7 of Table 2 of Schedule 2 or, if the deployment location is not listed in Table 2, the reasonable accommodation allowance for that location as published by Australian Taxation Office (ATO).
 - 26.6.2 Employees who are provided with accommodation as described in subclause 26.6.1 shall be paid the Incidental Expenses Allowance set at Item 8 of Table 2 of Schedule 2, for each day of attendance.
- 26.7 Meals for Interstate Deployments
- 26.7.1 Employees on interstate deployment shall be provided with substantial meals for breakfast, lunch and dinner throughout the period of deployment.
 - 26.7.2 For each meal not provided in accordance with subclause 26.7.1, the Meal Allowance set at Item 14 of Table 1 of Schedule 2 shall be paid.
 - 26.7.3 Where employees are required to work between the meals provided for in subclause 26.7.1, such employees shall be entitled to the refreshments and meals prescribed by subclause 17.1.
- 26.8 Deployment Allowance for International Deployments

- 26.8.1 Employees on international deployment shall be paid the Deployment Allowance set at Item 17 of Table 1 of Schedule 2 for each calendar day, or part thereof, from the day of departure until the day of return, inclusive.

26.9 Deployment Allowance for Intrastate and Interstate Deployments

- 26.9.1 Employees on an Intrastate or Interstate Deployment who are provided with accommodation that is either not indoors and/or has no and/or bathroom facilities which are for the private use of that employee are entitled to be paid the Deployment Allowance set at Item 17 of Table 1 of Schedule 2 for each calendar day, or part thereof, from the day of departure until the day of return, inclusive.
- 26.9.2 For the avoidance of doubt, employees on an Intrastate or Interstate Deployment who are in receipt of an accommodation allowance in accordance with subclause 26.6 will not be entitled to the Deployment allowance outlined at subclause 26.9.1.

26.10 Additional Provisions

- 26.10.1 While an intrastate, interstate or international deployment does not in itself attract the relieving allowance, a Relieving Employee shall continue to be paid the relieving allowance for those days on which the Relieving Employee would normally have been rostered for duty.
- 26.10.2 An employee in receipt of any of the allowances set at subclause 14.2.3-14.2.14 (inclusive) and/or the allowances provided for in clause 79, immediately prior to their deployment shall continue to be paid those allowances.
- 26.10.3 An employee who was performing higher duties immediately prior to their deployment shall continue to be paid at that rate of pay of the rank or classification in which the higher duties were being performed.
- 26.10.4 Any time worked pursuant to subclause 26.5.2 shall only be compensated for by subclause 26.5.2, provided that an employee shall continue to accrue leave as if they had worked their rostered hours of work pursuant to clause 21.
- 26.10.5 Despite anything contrary in the provisions of this Award, the Commissioner may approve an additional payment for an Executive Officer who, while on interstate or international deployment, worked additional hours to those contemplated by subclause 21.13.
- 26.10.6 Any stand off period shall be determined by the Commissioner having regard to each of the employee's actual hours of work prior to and during their deployment, and to their rostered hours of work following their deployment. Employees who are granted stand off time shall do so without loss of pay for ordinary working time during such absence.

- 26.11 Employees that complete the Urban Search and Rescue Category 2 Course are entitled to claim the Deployment Allowance in accordance with clause 26.9.

27. Notice of Transfer

- 27.1 An employee may only be permanently transferred, when the employee has provided by the employer the following written notice -
- 27.1.1 Seven (7) days notice when the transfer is within the same fire district or within the GSA and on the same platoon,
- 27.1.2 Fourteen (14) days notice when the transfer is within the same fire district or within the GSA but to a different platoon,

- 27.1.3 Twenty eight (28) days notice when the transfer is outside the GSA or the employee's current fire district, and such notice shall be confirmed in writing.
- 27.2 An employee may elect to waive, in whole or in part, the notice requirements of subclause 27.1
- 27.3 An employee may only be temporarily transferred where the notice and time frame requirements outlined in clause 27.1 have been met and only in the following circumstances:
 - 27.3.1 for the purposes of completion of a promotional course/program which cannot be completed at the employee's current work location and/or platoon and will result in additional pay to the employee on completion; or
 - 27.3.2 for the purposes of completion of a course/program for the acquisition of specialist skills which cannot be completed at the employee's current work location and/or platoon and will result in additional pay to the employee on completion.
- 27.4 For the avoidance of doubt, no employee may be temporarily transferred to a new work location and/or to a different platoon/roster in any circumstances than that prescribed for in subclause 27.3 unless otherwise agreed between the Department and the Union.

28. Transfers Outside of the Gsa

This Clause prescribes the transfer arrangements which shall apply in the case of all Operational Firefighter vacancies which arise outside of the GSA.

28.1 Transfer Register Applications

- 28.1.1 Applications for placement on any Transfer Register shall be made by way of report to the Manager Operational Personnel. Such reports shall clearly state the Transfer Register on which the employee seeks to be placed, the employee's current classification, the employee's current address and whether or not the employee is claiming residential priority pursuant to subclause 28.4.
- 28.1.2 With the exception of Recruit Firefighters, all Non-Officers, shall be eligible to apply for placement on any one or more of the Country Transfer Registers or Regional Transfer Registers listed at subclause 28.2.
- 28.1.3 With the exception of Inspectors with regards to the Blue Mountains area (only), all Station Officers and Inspectors shall be eligible to apply for placement on any one or more of the Regional Transfer Registers listed at subclause 28.2.2.
- 28.1.4 Leading Firefighters shall be entitled to apply for placement on any Officer Transfer Register but shall not be entitled to a transfer as a consequence of that placement unless and until such time as they have been promoted to Station Officer rank. Similarly, Leading Station Officers shall be entitled to apply for placement on any Senior Officer Transfer Register but shall not be entitled to a transfer as a consequence of that placement unless and until such time as they have been promoted to Inspector rank.
- 28.1.5 The Manager Operational Personnel shall acknowledge receipt of all applications within 14 days of the day upon which they are received. This receipt shall confirm the employee's service number, name, date of application, Transfer Register for which the employee has applied and, if applicable, whether or not the employee's claim for residential priority has been accepted. Applications for placement on a Transfer Register shall only be valid upon the issuing of this receipt, which shall serve as proof of an employee's application.
- 28.1.6 Employees may be removed from a Transfer Register by submitting a further report to that effect to the Manager Operational Personnel, who shall in turn issue a receipt as proof of that withdrawal.

28.2 Transfer Registers

28.2.1 Country Transfer Registers:

Transfer Register	Local Government Area
Albury	Albury City Council
Armidale	Armidale City Council
Batemans Bay	Eurobodalla Shire Council
Bathurst	Bathurst City Council
Broken Hill	Broken Hill City Council
Coffs Harbour	Coffs Harbour City Council
Dubbo	Dubbo City Council
Goulburn	Goulburn City Council
Moree	Moree Plains Shire Council
Nowra	Shoalhaven City Council
Orange	Orange City Council
Port Macquarie	Hastings Council
Queanbeyan	Queanbeyan City Council
Tamworth	Tamworth City Council
Wagga Wagga	Wagga Wagga City Council

28.2.2 Regional Transfer Registers:

Transfer Register	Local Government Area
Blue Mountains	Blue Mountains City Council
Central Coast	Central Coast Council
Illawarra	Wollongong City Council and Shellharbour City Council
Maitland	Cessnock City Council, Maitland City Council and Port Stephens Council
Newcastle	Lake Macquarie City Council and Newcastle City Council
Northern Rivers	Tweed Shire Council, Lismore City Council, Byron Shire Council and Ballina Shire Council

28.2.3 The parties agree that where permanent firefighters are to be introduced in an area outside the GSA for which no Transfer Register exists, a new Transfer Register will be established. Where a new transfer register is to be established, the Department shall advertise the establishment of that register and invite initial applications for a period of six weeks. Any applications received within the six week period shall be deemed to have been received on the date of creation of the register and placed on that register in accordance with the following provisions:

28.2.3.1 Notwithstanding the provisions of subclause 28.4.2, an applicant who satisfies the provisions of subclause 28.4.3 and has done so for a period of 2 or more consecutive years leading up to the date of creation of a Transfer Register shall be placed at the top of that Residential Transfer Register. Where more than one applicant satisfies this provision, placement on that Residential Transfer Register shall be determined by a ballot conducted by the Manager Operational Personnel; and

28.2.3.2 Applicants who are unable to satisfy the provisions of subclause 28.2.3.1 shall be placed at the top of the relevant General Transfer Register. Where more than one such application is received, the order of placement shall be determined by way of a ballot conducted by the Manager Operational Personnel.

28.3 Operation of Transfer Registers

- 28.3.1 The Department shall establish and maintain a General Transfer Register and a Residential Transfer Register for each category of Operational Firefighter employees as follows:
- 28.3.1.1 in the case of Non-Officers, for each of the Country Transfer Register areas and Regional Transfer Register areas listed at subclauses 28.2.1 and 28.2.2;
 - 28.3.1.2 in the case of Officers, Regional Transfer Register areas listed at subclauses and 28.2.2; and
 - 28.3.1.3 in the case of Senior Officers, for each of the Regional Transfer Register areas listed at subclause 28.2.2. Provided that there shall not be a Blue Mountains Regional Transfer Register, a Maitland Transfer Register or a Northern Rivers Regional Transfer Register for Senior Officers, and that vacancies which occur within those areas shall be filled in accordance with subclause 28.7.
- 28.3.2
- 28.3.2.1 Each General Transfer Register shall detail each applicant's employee service number, their name (and in the case of Officer and Senior Officer transfer registers only, their rank), the date of their original application for transfer and, if applicable, the date their application for residential priority status was accepted, the date they were elevated to that area's Residential Transfer Register and/or the date of their eventual transfer to the area in question.
 - 28.3.2.2 Each Residential Transfer Register shall detail each applicant's employee service number, their name (and in the case of Officer and Senior Officer transfer registers only, their rank), the date of their original application for transfer, the date their application for residential priority status was accepted, the date they were elevated to that area's Residential Transfer Register and, if applicable, the date of their eventual transfer to the area in question.
- 28.3.3 The order of placement of each employee upon each Transfer Register shall be determined:
- 28.3.3.1 in the case of General Transfer Registers, by order of the date upon which the employee made application for placement upon that Transfer Register. Where more than one application for the same Transfer Register is submitted on the same day, the Manager Operational Personnel shall determine the order of placement of those multiple applicants by way of ballot; and
 - 28.3.3.2 in the case of Residential Transfer Registers, by order of the date upon which the employee was elevated to that Residential Transfer Register. Subject to the provisions of 28.4.3, 28.4.7.1 and 28.4.7.2, an employee's elevation to a Residential Transfer Register shall be subject to: firstly, the employee having held a position on the relevant General Transfer Register for at least two years; and secondly, the employee having been recognised as having met and maintained residential priority status for that Transfer Register's area for at least two years.
- 28.3.4 Subject to the arrangements applying to Leading Firefighters and Leading Station Officers at subclauses 28.1.4 and 28.3.5, transfers shall be offered to employees upon the occurrence of a vacancy in the following order:
- 28.3.4.1 Firstly, by reference to the relevant Residential Transfer Register, with the first offer to be made to the highest placed employee on that Register and, if declined, to the next highest placed employee and so on until such time as the vacancy is filled.
 - 28.3.4.2 In the event that no employee exists on the relevant Residential Transfer Register, or that all employees on that Residential Transfer Register decline the offer of

transfer, the vacancy shall then be offered to all employees on the relevant General Transfer Register, with the first offer to be made to the highest placed employee on that Register and, if declined, to the next highest placed employee and so on until such time as the vacancy is filled.

28.3.4.3 In the event that no employee exists on the relevant General Transfer Register and/or all employees on that General Transfer Register decline the offer of transfer, the vacancy shall then be advertised for and open to all eligible employees.

28.3.5 An employee who accepts an offer of transfer pursuant to subclause 28.3.4 shall be released from their current position within twenty eight (28) days and transferred to that Transfer Register area. Declining an offer of transfer shall result in an employee's removal from the relevant Transfer Register. Employees who are so removed and who subsequently re-apply for placement on that Transfer Register will be required pursuant to subclause 28.4.6 to seek and hold residential priority for two years following their re-application in order to be elevated to that Residential Transfer Register.

28.3.6 The Department shall make available copies of all Transfer Registers to employees in the manner agreed between the Department and the Union.

28.4 Residential Priority

28.4.1 All employees seeking residential priority for any Transfer Register area shall be required to submit a report to the Manager Operational Personnel setting out the grounds for their claim. Such employees shall be required to provide evidence of their claim for primary residence prior to being placed on the Transfer Register with Statutory Declarations, electoral enrolment forms, rates notices, bills and/or such other documentation or evidence which it would be reasonable for the Department to request of the employee in order to verify their claim. Vacant blocks of land, Post Office boxes, investment properties, holiday homes or the addresses of relatives or friends, when in fact the employee has primarily resided elsewhere, shall therefore be unacceptable. This report may be either the same report as that of the employee's original application made pursuant to subclause 29.1.1, or a subsequent report which is submitted due to an employee's transfer or a change of primary residence.

28.4.2 An employee shall not be entitled to recognition of residential priority on any Transfer Register prior to the date of their report making application for that recognition pursuant to subclause 28.4.1.

28.4.3 In order to recognise an employee's claim for residential priority for a particular Transfer Register, the Manager Operational Personnel must first be satisfied that the primary residence in question is located either:

28.4.3.1 within the Transfer Register area in question, or

28.4.3.2 in such a location that any permanently staffed fire station within the Transfer Register area for which the applicant is claiming residential priority is closer to their primary residence than any permanently staffed fire station within the GSA or Transfer Register area, as the case may be, to which the applicant is currently attached. For the purposes of this subclause, distances shall be determined by drawing a straight line between both locations and calculating that distance, i.e. in a straight line.

28.4.4 Employees holding residential priority status on any Transfer Register will be removed from that Transfer Register if they fail to submit a further report pursuant to subclause 28.4.1 within three months of their:

28.4.4.1 change in the location of their primary residence, even where the change did not affect the employee's residential priority status; or

- 28.4.4.2 transfer from the GSA to a Country or Regional Transfer Register area; or
- 29.4.4.3 transfer from one Country or Regional Transfer Register area to another Country or Regional Transfer Register area.
- 28.4.5 The Manager Operational Personnel shall acknowledge and review all reports submitted pursuant to subclause 28.4.4. If an employee's transfer or revised primary residence location means that the employee no longer satisfies the residential priority requirements of subclause 28.4.3, then the employee's records upon the relevant Transfer Register(s) shall be adjusted accordingly. It shall remain the responsibility of employees to apply for any additional residential priority status which may arise as a result of their transfer or revised primary residence.
- 28.4.6 Subject to the provisions of subclause 28.4.7, an employee who has held and continually maintained residential priority status upon a General Transfer Register for two years shall then be elevated to the relevant Residential Transfer Register in accordance with subclause 28.3.3.2. Provided that employees who are elevated to a Residential Transfer Register and who are later found to no longer meet the criteria for residential priority shall be returned to and placed upon the relevant General Transfer Register by order of the date of their original application.
- 28.4.7 In the case of Senior Firefighters who are progressed to Leading Firefighter:
- 28.4.7.1 if stationed within a Regional Transfer Register area at the time of their progression then such employees who make application pursuant to subclause 28.1 within three months of the date of their progression shall be placed on the corresponding Residential Transfer Register for Officers as of the date of that progression;
- 28.4.7.2 if holding a position on a Regional area's Residential Transfer Register for Firefighters at the time of their progression then such employees shall be entitled within three months of the date of their progression to submit a further report pursuant to subclause 28.1, following which they shall also be placed on the corresponding Residential Transfer Register for Officers as of the date of that progression;
- 28.4.7.3 if holding a position on a Regional area's General Transfer Register for Firefighters at the time of their progression, and holding residential priority status for that area, then such employees shall be entitled within three months of the date of their progression to submit a further report pursuant to subclause 28.1, following which they shall also be placed on the corresponding General Transfer Register for Officers as of the date of that progression and recognised for the purposes of subclause 28.4.6 for that period of residential qualification already accrued.
- 28.4.7.4 if holding a position on a Regional area's General Transfer Register for Firefighters at the time of their progression, but without holding residential priority status for that area, then such employees shall be entitled within three months of the date of their progression to submit a further report pursuant to subclause 28.1, following which they shall also be placed on the corresponding General Transfer Register for Officers as of the date of that progression.
- 28.4.8 In the case of Station Officers who are progressed to Leading Station Officer:
- 28.4.8.1 if stationed within a Regional Transfer Register area at the time of their progression then subject to subclause 28.3.1.3, such employees who make application pursuant to subclause 28.1 within three months of the date of their progression shall be placed on the corresponding Residential Transfer Register for Senior Officers as of the date of that progression;

- 28.4.8.2 if holding a position on a Regional area's Residential Transfer Register for Officers at the time of their progression then subject to subclause 28.3.1.3, such employees shall be entitled within three months of the date of their progression to submit a further report pursuant to subclause 28.1, following which they shall also be placed on the corresponding Residential Transfer Register for Senior Officers as of the date of that progression;
- 28.4.8.3 if holding a position on a Regional area's General Transfer Register for Officers at the time of their progression, and holding residential priority status for that area, then subject to subclause 28.3.1.3, such employees shall be entitled within three months of the date of their progression to submit a further report pursuant to subclause 28.1, following which they shall also be placed on the corresponding General Transfer Register for Senior Officers as of the date of that progression and recognised for the purposes of subclause 28.4.6 for that period of residential qualification already accrued;
- 28.4.8.4 if holding a position on a Regional area's General Transfer Register for Officers at the time of their progression, but without holding residential priority status for that area, then subject to subclause 28.3.1.3, such employees shall be entitled within three months of the date of their progression to submit a further report pursuant to subclause 28.1, following which they shall also be placed on the corresponding General Transfer Register for Senior Officers as of the date of that progression.
- 28.4.9 Employees who are stationed within a Transfer Register area at the time of their appointment to a Non-Station Based position and who make application pursuant to subclause 28.1 within three months of the date of their appointment shall be placed on that area's Residential Transfer Register as of the date of that appointment.
- 28.4.10 Subject to clause 47, 49 and 28.7, employees who are promoted to either Station Officer or Inspector and who are not stationed within the GSA at the time of their promotion shall be transferred to and remain within the GSA until such time as they are again transferred outside of the GSA in accordance with the other provisions of this Clause unless otherwise specified in this Award.
- 28.5 Appeals concerning Residential Priority
 - 28.5.1 An employee seeking to challenge either the Department's determination of their residential priority status, or the Department's determination of the residential priority status of another employee may appeal in the first instance by way of report to the Assistant Director Operational Personnel. Such reports shall provide all relevant details and may be supported by any documentation or evidence which the employee considers relevant to their claim. An anonymous appeal against an employee shall not be investigated.
 - 28.5.2 Where an appeal concerns the employee's own residential status, the Assistant Director Operational Personnel shall provide the employee with a written determination of that appeal, setting out the reasons for same, within 14 days of receipt of the employee's report.
 - 28.5.3 Where an appeal concerns the residential status of another employee, the Assistant Director Operational Personnel shall forward a copy of the said report to the employee who is the subject of the challenge. The employee under challenge shall be allowed no less than 28 days to reply by way of report to the Assistant Director Operational Personnel who shall thereafter provide both employees with a written determination of the appeal, setting out the reasons for same, within 14 days of receipt of the second employee's report.
 - 28.5.4 An employee may appeal a determination of the Assistant Director Operational Personnel by way of report to the Commissioner. The Commissioner shall consider all previous

reports and documentation relating to the matter, together with any additional information which the employee or employees concerned may supply, following which the Commissioner shall provide the employee or employees concerned with a written and final determination of the matter.

28.6 Newcastle Communication Centre

28.6.1 Vacancies in the Newcastle Communication Centre shall initially be advertised in Commissioner's Orders and open to all eligible employees (Non-Officers or Officers, as the case may be) who are stationed within the Newcastle Transfer Register area. Where there are more applicants than positions available, merit selection shall determine the successful applicant.

28.2 In the event that no suitable applications are received at subclause 28.6.1, or that the merit selection process finds those who did apply unsuitable, the vacancy shall then be re-advertised in Commissioner's Orders and open to all eligible employees.

28.6.3 Successful applicants will be required to successfully complete the required training, and on appointment, to serve in the Newcastle Communication Centre for a minimum period of three years. Provided that if the transfer is made in accordance with subclause 28.6.2 then:

28.6.3.1 an employee who accepts an offer of transfer in the interim will be released pursuant to subclause 28.3.5; and

28.6.3.2 any subsequent transfer from the Newcastle Communication Centre will be to the GSA unless provided otherwise by this Clause.

28.7 Country Officers, Country Senior Officers and Non-Station Based Positions

28.7.1 Vacancies which occur amongst any of the positions listed at subclauses 28.7.2, 28.7.3 and 28.7.4 shall be advertised through Commissioner's Orders and filled by merit selection.

28.7.2 Country Officers

28.7.2.1 Country Officers, being all Station Officer positions located in areas outside of the GSA and the Regional areas listed at subclause 28.2.2, for which Leading Station Officers, Station Officers and Leading Firefighters shall be eligible to apply.

28.7.2.2 In the event that no employees apply for a Country Officer position at subclause 28.7.2.1, or that the merit selection process finds those who did apply unsuitable for the Country Officer position in question, the vacancy shall be readvertised through Commissioner's Orders and filled by merit selection from all Senior Firefighters with at least 36 months service with Fire and Rescue NSW as a Senior Firefighter as of the closing date for applications.

28.7.2.3 A Senior Firefighter who successfully applies for a Country Officer vacancy pursuant to subclause 28.7.2.2 shall be required to satisfactorily complete the Leading Firefighter Program prior to their transfer to the station/location and performance of the duties of the vacant Country Officer position pursuant to subclause 22.12.2, provided that a Senior Firefighter who successfully applies for a Country Officer vacancy pursuant to subclause 28.7.2.2 and who then satisfactorily completes the Leading Firefighter Program shall not be progressed to Leading Firefighter and/or promoted to Station Officer until they also satisfactorily complete the Station Officer Program.

28.7.3 Country Senior Officers

- 28.7.3.1 Country Senior Officers, being all Inspector positions located outside the GSA and the Newcastle, Central Coast and Illawarra Transfer Register areas, for which Inspectors and Leading Station Officers shall be eligible to apply.
- 28.7.3.2 In the event that no Inspectors or Leading Station Officers apply for a Country Senior Officer position at subclause 28.7.3.1, or that the merit selection process finds those who did apply unsuitable for the Country Senior Officer position in question, the vacancy shall be readvertised through Commissioner's Orders and filled by merit selection from all Station Officers with at least 24 months service with Fire and Rescue NSW as a Station Officer as of the closing date for applications.
- 28.7.3.3 A Station Officer who successfully applies for a Country Senior Officer vacancy pursuant to subclause 28.7.3.2 shall be required to satisfactorily complete the Leading Station Officer Program prior to their transfer to the station/location and performance of the duties of the vacant Country Senior Officer position pursuant to subclause 22.12.3, provided that a Station Officer who successfully applies for a Country Senior Officer vacancy pursuant to subclause 28.7.3.2 and who then satisfactorily completes the Leading Station Officer Program shall not be progressed to Leading Station Officer and/or promoted to Inspector until they also satisfactorily complete the Inspector Program.

29. Transferred Employee's Compensation

- 29.1 When an employee has been given notice of transfer to work in a new location and the Commissioner requires that the employee move to new accommodation, and the transfer is not subject to the exceptions set out below, the employee shall be eligible for leave or credit of leave, reimbursement of costs, and to be paid allowances set out herein.
- 29.2 Exceptions
- 29.2.1 Unless special and exceptional circumstances exist, the exceptions exclude from the benefit of this clause employees who are transferred:
- (a) at their own request;
 - (b) under an arrangement between employees to exchange positions;
 - (c) on account of the employee's breach of discipline;
 - (d) from one station/location within the Metropolitan Area to another station/location within the Metropolitan Area, or within the same Zone.
- 29.2.2 For purposes of this clause, Metropolitan Area means and includes the Sydney Region as defined by the Department of Planning but also including the area referred to as the Central Coast on the Northern Line as far as Gosford, the area on the Western Line as far as Mt. Victoria and on the Illawarra Line as far as Wollongong.
- 29.2.3 Employees who are transferred as a result of inclusion in a transfer list established in accordance with clause 28 of this Award shall, for the purposes of this Clause, be deemed to have been transferred "at their own request" and shall not be eligible for the entitlements set out in this Clause.
- 29.2.4 Notwithstanding the provisions of subclause 29.2.1, employees who are transferred by way of a merit selection process, including employees promoted to a rank that necessitates a transfer, shall attract the relevant entitlements of this Clause.

29.2.5 Notwithstanding the provisions of subclause 29.2.1, employees who received compensation for transferring to a particular station/location shall, after a period of not less than 2 years service at that location, be entitled to the provisions of this Clause upon transfer to the GSA.

29.3 This clause does not alter the transfer procedures, as at the date of making of this Award, set out in Standing Orders. Any variation to the transfer procedures shall occur only after consultation between the Department and the Union in accordance with clause 9.

29.4 Leave

When an employee has been given notice of transfer and is required to move to new accommodation the employee shall be eligible for leave and/or to apply for payment at the ordinary rate of pay in lieu of the granting of leave or the Commissioner may credit such leave as consolidated leave as follows to a maximum of:

29.4.1 Sixteen (16) working hours to visit the new location with a view to obtaining accommodation,

29.4.2 Sixteen (16) working hours to prepare and pack personal and household effects prior to removal or for the purpose of arranging storage,

29.4.3 Such leave as is necessary to travel to the new location for the purposes of obtaining suitable accommodation and/or to commence duty,

29.4.4 Eight (8) hours for the combined purpose of cleaning the premises being vacated and/or occupying and settling into the new premises.

Where an employee is eligible for, and takes leave, for part of a shift the Commissioner may direct the employee to take consolidated leave to credit for the remainder of the shift and if the employee does not have sufficient leave to credit, the shortfall may be taken as an advance against consolidated leave that may accrue or as leave without pay.

29.4.5 Provided suitable arrangements can be made for a performance of duties, an employee working a special roster who has been unable to secure accommodation for the family at the new location is entitled to sufficient special leave to permit a return home on weekends once each month to spend two consecutive days and nights with the family, together with an additional day and night in respect of each public holiday occurring in conjunction with the weekend and on which the employee would not normally be rostered for duty. This leave is limited to the time necessarily required in travelling on the day preceding and the day following such weekend.

29.4.6 Where a transferred employee working a special roster is located in a district where a return home once each month is not possible, such employee, after four weeks at the new location, will be entitled to sufficient leave to allow the transferred employee two consecutive days and nights at a weekend with the family. Following that four weeks, the employee will be allowed to accumulate special leave at the rate of sixteen (16) working hours per month until sufficient leave is available to allow the return home at a weekend for a similar period.

29.4.7 Special Roster is the roster specified at subclause 21.6 of this Award.

29.5 Cost of Temporary Accommodation

For the purposes of this subclause, temporary accommodation does not include a house or a flat, whether owned by the Government or privately owned, but relates to what is commonly termed board and lodging.

- 29.5.1 Transferred employees maintaining dependant relatives at home who are required to vacate the existing residence prior to departure for the new location and/or who find it necessary to secure board and lodging for themselves and dependant relatives at the new location pending permanent accommodation (a residence) becoming available shall be allowed up to the amount set at Item 12 of Table 2 of Schedule 2, per week calculated as the actual cost of the temporary accommodation less an excess contribution calculated as per the following table:

Salary of Officer and Spouse Rate of Pay	Per Week	Each dependent child aged 6 years and over (maximum contribution of \$54 per week) Per Week
\$453.62	\$164	\$11

- 29.5.2 Where a transferred employee maintaining dependant relatives moves to the new location ahead of dependants, and permanent accommodation is not available, necessary board and lodging expenses in excess of the amount set at Item 13 of Table 2 of Schedule 2, per week to a maximum allowance of the amount set at Item 12 of Table 2 of Schedule 2, per week shall be payable.

- 29.5.3 Where a transferred employee not maintaining dependant relatives in the home is unable to secure permanent accommodation at the new location, the employee is to be paid an allowance of up to 50% of the total cost of board and lodging for a maximum period of four (4) weeks subject to a maximum the amount set at Item 12 of Table 2 of Schedule 2, per week. Where the period of four (4) weeks is not sufficient for the employee to find suitable permanent accommodation, full particulars should be provided to allow the DPE to consider the extension of this provision.

- 29.5.4 An employee receiving an allowance for temporary accommodation as set out above is entitled to a laundry (not dry cleaning) allowance as set out at:

- 29.5.4.1 Item 14 of Table 2 of Schedule 2, per week if the employee only is in temporary accommodation;

- 29.5.4.2 Actual expenses to a maximum as set at Item 15 of Table 2 of Schedule 2, per week if the employee and dependants are in temporary accommodation.

- 29.5.5 Where an employee, together with dependants are in temporary accommodation the allowances may be paid until either

- 29.5.5.1 a suitable residence becomes available; or

- 29.5.5.2 up to twenty six (26) weeks if the transfer is to the country; or

- 29.5.5.3 up to thirteen (13) weeks if the transfer is to the Sydney Metropolitan Area,

whichever is the sooner. The payment of allowances in all cases is subject to:

- 29.5.5.4 the production of receipts;

- 29.5.5.5 a written undertaking that any reasonable offer of accommodation will be accepted;

- 29.5.5.6 evidence that the employee is taking all reasonable steps to secure a residence.

When the Commissioner considers that a transferred employee has refused to accept reasonable accommodation and as a result the payment of an allowance has been discontinued, the matter may be referred by the employee or the Union to a Committee comprising two representatives of the Union and two representatives of the DPE. If no mutual decision is arrived at by the Committee the matter may be referred to the Industrial Relations Commission of NSW.

- 29.5.6 Extension of assistance beyond the twenty six (26)/thirteen (13) week period may be approved only if the application for assistance is supported by acceptable evidence of unsuccessful attempts to obtain accommodation which constitutes reasonably suitable accommodation.

29.6 Removal Costs

- 29.6.1 A transferred employee is entitled to reimbursement for the costs actually and necessarily incurred in removing personal and household effects to the new location. Provided that the journey is travelled by the shortest practicable route and completed within a reasonable time, these costs will include the actual and reasonable expenses incurred by the employee and dependants for meals and accommodation during the course of the journey.
- 29.6.2 Removal expenses allowed under this clause includes the costs of insuring furniture and effects whilst in transit up to an amount set at Item 16 of Table 2 of Schedule 2. Where the insured value exceeds amount, the case should be referred to the DPE for consideration. They should be provided with an inventory of items to be transferred together with a declaration that all items included in that policy are being removed or stored, or, a certificate of valuation from a registered valuer certifying the value of furniture and effects being removed or stored.
- 29.6.3 Where, due to circumstances beyond the control of the transferred employee, the furniture and effects of the employee arrive late at the new location or are moved before the employee's departure from the previous location, reimbursement of expenses for meals and accommodation properly and reasonably incurred by the employee and any dependants shall be paid.
- 29.6.3.1 A transferred employee shall be entitled to compensation for the accelerated depreciation of personal and/or household effects removed to a new location.
- 29.6.3.2 This entitlement is the amount set at Item 17 of Table 2 of Schedule 2, where the Commissioner is satisfied that the employee has removed a substantial portion of what is normal household furniture, furnishing and fittings of not less value than the amount set at Item 18 of Table 2 of Schedule 2. If the value is less than this amount, a pro rata amount is payable.
- 29.6.4 Where a transferred employee is required to remove the employee's furniture from temporary accommodation the employee is entitled to be reimbursed removal costs and the compensation for depreciation and disturbance in respect of each such move, notwithstanding that the employee may not be changing the location of work.
- 29.6.5 When an employee uses a private vehicle for the purposes of official business and finds it necessary to transport another private vehicle, normally used by a dependant relative maintained in the household, the cost of transporting or driving that second vehicle to the employee's new location shall be part of the removal costs and the employee may be paid either the cost of transportation by road or rail or, if the vehicle is driven to the new location, a car allowance at the specified journey rate set at Item 1 of Table 2 of Schedule 2.
- 29.6.6 The reimbursement for the costs actually and necessarily incurred in removing personal and household effects to the new location shall be the equivalent to the lowest of three competitive quotes where practicable.
- 29.6.7 An advance to cover the whole or part of removal expenses allowed under this subclause is available. The amount of the advance is to be adjusted by the employee within one month of the expenditure being incurred.

29.7 Storage of Furniture

Where an employee is unable to secure suitable accommodation at the new location and is required to store the furniture while waiting to secure a residence, the cost of storage and cartage to the store, and from the store to the new residence shall be reimbursed. The employee shall also be reimbursed the cost of insurance for furniture and effects while in storage on the same basis as for insuring whilst in transit.

The maximum period of storage under this Clause is twenty six (26) weeks in the country and thirteen (13) weeks in the Metropolitan Area.

29.8 Costs of Personal Transport

29.8.1 The transferred employee and one member of the household, when proceeding on leave for the purpose of visiting the new location with a view to obtaining suitable accommodation, shall be entitled to the option of return rail fares, or if a first class rail service is reasonably available, first-class return rail fares, or reimbursement at the specified journey rate as set at Item 1 of Table 2 of Schedule 2, for the use of a private vehicle up to the cost of rail fares.

29.8.2 The transferred employee and all members of the household, when travelling to the new location for the purpose of commencing duty, shall be entitled to rail fares or reimbursement for the use of the private vehicle, as set out in subclause 29.8.1, provided that, where the members of the employee's household do not travel on the same occasion as the employee, the entitlement for their personal transport shall be deferred until such time as travel to take up residence at the employee's new location occurs.

29.8.3 A transferred employee working the special roster specified at subclause 21.6, who has been unable to secure accommodation for the family at the new location, who is entitled to special leave to permit a return home at weekends, shall be entitled to the option of rail fares or reimbursement for the use of a private vehicle as set out in subclause 29.8.1 when proceeding on leave.

29.8.4 Car allowance in respect of travel by the employee involved in taking up duty at the new location shall be at the official business rate as set at Item 11 of Table 2 of Schedule 2.

29.8.5 When an overall saving to the Department would eventuate, an employee and one member of the household, when proceeding to visit the new location with a view to obtaining suitable accommodation, shall be entitled to economy class air fares in lieu of rail fares or reimbursement of the use of a private motor vehicle.

29.8.6 When an employee travels to the new location with a view to obtaining suitable accommodation and incurs expenses in relation to overnight accommodation, the employee shall be reimbursed the reasonable and actual cost of accommodation and meals for self and a member of the household provided the amount to be reimbursed does not exceed sustenance allowances allowed under clause 19, Travelling Compensation.

29.9 Education of Children

29.9.1 A transferred employee who has dependant children will be entitled to the cost of essential school clothing that is required to be replaced or purchased as a direct result of the employee's transfer to a new location requiring the changing of schools. No provision is made for reimbursement of additional school fees, text books or other similar items. The basic list of school clothing is as follows:

Basic Items	
Male winter uniforms	Summer uniforms
1 Suit coat	3 shirts
2 pairs of winter trousers	3 pairs of trousers (short)
1 tie	3 pairs of long socks

3 shirts	
1 jumper/cardigan	
3 pairs of socks	
1 pair of shoes	
1 track suit/sports uniform	
(but not both)	
1 pair of sandshoes	
Female winter uniforms	Summer uniforms
1 hat	3 blouses
2 tunics	2 tunics
1 blazer	3 pairs stockings/socks
3 blouses	
1 tie	
3 pairs stockings/socks	
1 pair of gloves	
1 pair of shoes	
1 track suit/sports uniform	
(but not both)	
1 pair of sandshoes	
1 jumper/cardigan	

When an item of clothing required at the new school is not included in the basic list the DPE will consider reimbursing the cost of same but will require full particulars and circumstances surrounding the requirement to purchase.

- 29.9.2 In respect of dependant children undergoing secondary education in Year 12 at a school in the employee's old location, where the elected subjects are not available at a school in the employee's new location, the cost of board and lodging for these children may be reimbursed to the transferred employee. In such case the employee, on production of receipts for payment and a certificate from the Department of School Education that the elected subjects are not available at the school at the employee's new location, shall be granted the allowance. In these cases, the parent/guardian will be required to pay the first amount as set at Item 19 of Table 2 of Schedule 2, of the board and lodging expenses and the Department will reimburse further costs up to a maximum of the amount as set at Item 20 of Table 2 of Schedule 2, per week for each child.

29.10 Conveyancing and Other Costs

A transferred employee who, as a consequence of the transfer to a new location, sells a residence at the former location and buys a residence or land upon which to erect a residence at the new location shall be entitled to reimbursement of expenses incurred in such transactions subject to the following:

- 29.10.1 Where a solicitor or a registered conveyancing company has been engaged to act on behalf of the employee in those transactions, the professional costs and disbursements by the solicitor or a registered conveyancing company in respect of such transactions.
- 29.10.2 Where an employee is entitled to reimbursement, the following expenses shall be covered:
- 29.10.2.1 Stamp Duty;
- 29.10.2.2 Where the employee has engaged a Real Estate Agent to sell the residence at the former location, the commission due to the Estate Agent.
- 29.10.3 Reimbursement of expenses shall be made where the sale of the employee's former residence and the purchase of either a residence or land is effected within a period commencing not earlier than six (6) months prior to the employee's transfer and ending not more than four (4) years after such transfer. The Department will be prepared to consider individual cases where the four (4) year period has been exceeded but will

require full details of why sale and/or purchase of the transferred employee's residence could not be completed in the four (4) year period.

- 29.10.4 Where a transferred employee owns a residence at a former location and has taken up rented accommodation on transfer, the employee shall be regarded as covered by these provisions relating to the reimbursement of conveyancing and incidental costs on the current transfer or on a subsequent transfer provided the period of not more than four (4) years has elapsed since the employee's immediately preceding transfer.
- 29.10.5 Where it is not practicable for the transferred employee to purchase residence in the new location and such employee has disposed of the former residence, such employee is not to be excluded from the benefit of this clause when subsequently purchasing a residence in the new location on a current or subsequent transfer within the four (4) year period.
- 29.10.6 There is an upper ceiling, as set at Item 21 of Table 2 of Schedule 2, on prices of the properties involved in either the sale or the purchase. This limit applies where employees are relocated from a Metropolitan Area to the country irrespective of the size, the value and the commerciality of the property being purchased provided transferred employees are not entitled to the reimbursement of costs involved in transactions where the sale or purchase of a large rural property or commercial premises might be involved.
- 29.10.7 Where a transferred employee dies before completion of either or both the sale or purchase transactions, the expenses incurred in such transactions, up to and including the finalisation of such transactions shall be payable by the Department and the family of the deceased employee is not required to reimburse the Department such expenses.

29.11 Stamp Duty and Other Charges

A transferred employee, who, as a consequence of the transfer, sells a residence at the former location and buys a residence or land upon which to erect a residence at the new location is entitled to be reimbursed:

- 29.11.1 Stamp Duty in respect of the purchase of the residence or the land and the house erected thereon at the new location;
- 29.11.2 Stamp Duty paid in respect of any mortgage entered into or the discharge of a mortgage in connection with the sale or purchase;
- 29.11.3 Registration fees on transfers and mortgages on the residence or the land and the house erected on the land on the following basis -
 - 29.11.3.1 where the purchase is completed and the employee enters into occupation of the residence within 15 months of transfer, the reimbursement of Stamp Duty in full;
 - 29.11.3.2 where the occupation of the residence purchased or erected is not completed within fifteen (15) months but is completed within four years of transfer, reimbursement of Stamp Duty is not to exceed the amount which would have been payable had the sale and purchase prices of the properties been the amount set at Item 21 of Table 2 of Schedule 2, in each case.
- 29.11.4 A transferred employee who, as a consequence of the transfer to a new location, does not sell a residence at the former location but buys a residence or land upon which to erect a residence at a new location, is entitled to be reimbursed:
 - 29.11.4.1 Stamp Duty in respect of the purchase of the residence or the land and a house erected on that land;
 - 29.11.4.2 Stamp Duty paid on any mortgage entered into in connection with the purchase; and

- 29.11.4.3 Registration fees on transfer and mortgages on the residence or the land and a house erected on the land,

provided the employee enters into occupation of the residence within fifteen (15) months of transfer to the new location.

29.12 Incidental Costs

- 29.12.1 A transferred employee who is entitled to the reimbursement of conveyancing and other costs for a purchase at the new location prior to the sale of the former residence is entitled to the reimbursement of any Council or any other Local Government rates levied in respect of the former residence while such former residence remains untenanted provided the employee can furnish acceptable evidence that reasonable efforts are being made to sell the former residence at a fair market price.

- 29.12.2 A transferred employee will be entitled to reimbursement of non-refundable costs in respect of the connection of gas and electricity supplies and of telephone installation at the new residence provided that:

29.12.2.1 the connection of gas and electricity supplies were available to the land at the time of purchase and/or

29.12.2.2 the cost of the telephone installation is to be reimbursed only where a telephone was installed at the former residence.

- 29.12.3 A transferred employee entitled to the reimbursement of conveyancing and other costs is entitled to reimbursement of the cost of survey certificates, pest certificates and/or Building Society registration fees reasonably incurred in seeking financial accommodation to purchase the new residence or the land upon which to erect a new residence and the fees associated with discharging the mortgage on the former residence.

- 29.12.4 A transferred employee shall be entitled to reimbursement for the fees charged by Australia Post for re-direction of mail for the first month following vacation of the former residence.

29.13 Relocation on Retirement

- 29.13.1 Upon retirement at a place other than the place of original recruitment to the Department, an employee is entitled to be reimbursed the costs actually and necessarily incurred in removing personal household effects to a location of the employee's choice together with the cost of insuring the same against damage in transit provided -

29.13.1.1 the maximum amount of such reimbursement shall be limited to that payable had the employee moved to the place of original recruitment; and

29.13.1.2 the employee's relocation is effected within twelve (12) months following retirement.

- 29.13.2 The above provision shall apply to any claims made by the widow or widower within a period of twelve (12) months of the transferred employee's death. In such cases the Commissioner will also be prepared to consider claims made by children or dependent relatives of the deceased in similar circumstances but will require full particulars as to the reasons.

29.14 Additional Provisions

- 29.14.1 Nothing contained in the provisions of this clause pertaining to leave shall deprive the employee of compensation for time spent in travelling.

- 29.14.2 Where the spouse of a transferred employee is also employed in the NSW Public Service and is also transferred, the assistance payable under this clause or under the Crown Employee's general provisions is to be paid to one partner only. This does not operate to restrict the leave entitlement of the transferred employee.
- 29.14.3 An employee whose appointment to a position may be subject to appeals action shall not move to the new location until the period during which appeals may be lodged has expired or all appeals action has been finalised. An employee may be directed to take up duty in the new location before appeals action is finalised but will be entitled to the leave provisions set out in this clause, in which case the following will apply:
- 29.14.3.1 Where the employee has dependants they may claim sustenance allowance under clause 19, Travelling Compensation, until appeals action has been finalised;
- 29.14.3.2 Employees with dependants have a further period of up to twenty one (21) days immediately after all appeals action has been finalised to find suitable accommodation before such travelling compensation entitlements cease. Such period may be extended by the Commissioner if the Commissioner is satisfied that twenty one (21) days is insufficient time to find such accommodation.
- 29.14.3.3 The Commissioner shall not approve the movement of the employee's dependants or furniture and effects before all appeals action has been finalised unless exceptional or particularly difficult circumstances exist.
- 29.14.3.4 Employees without dependants may be given assistance with temporary accommodation pending the completion of any appeals action but are not to move their furniture and effects until appeals action has been finalised.

29.15 Adjustment of Entitlements

- 29.15.1 The entitlements provided by this clause, shall be adjusted in line with, and from the same effective dates, as the corresponding entitlements prescribed in the Crown Employees (Transferred Officers' Compensation) Award.

30. Rental of Premises

30.1 For the purpose of this clause only:

- 30.1.1 "accommodation" means quarters or premises, including a fire station, owned or leased by the Department.
- 30.1.2 "employee" means a Station Officer or an Inspector.
- 30.1.3 "market rental" means the market rental of the property as determined by the Commissioner in accordance with the Guidelines issued by the DPE.

30.2 Except as provided for in subclauses 30.3, 30.4 and 30.5, where an employee is required to and does occupy accommodation, the Department shall deduct from the rate of pay of the employee concerned an amount per week equal to 4% of the employee's "Per Week" rate of pay as prescribed in Table 1 of Schedule 1, Rates of Pay, or 50% of the market rental of the accommodation, whichever is the lesser.

30.3 Where an employee was, on 19 August 1994, entitled to and occupying subsidised accommodation:

- 30.3.1 Such employee, subject to subclause 30.3.2, shall continue to pay the amount set at Item 19 of Table 1 of Schedule 2 (as adjusted from time to time in accordance with 30.4) per week unless the employee subsequently elects to move from that accommodation to different accommodation. If such an employee so elects, then the Department shall deduct from the rate of pay of the employee concerned an amount per week as prescribed in subclause 30.2.

- 30.3.2 And has exercised, or who has, a right of return transfer pursuant to Clause 30 (i) of the Fire Brigade Employees' (State) Award as published in NSW Industrial Gazette Volume 263 of 1991, such employee shall retain the right of return transfer. Provided that the continued entitlement to subsidised accommodation shall expire after a period of 2.5 years from the date of return transfer.
- 30.3.3 And is transferred by the Department from one country location to another country location, such employee shall retain the benefits of the provisions of subclause 30.3 as if the employee had not been so transferred.
- 30.4 The amount set at Item 19 of Table 1 of Schedule 2, shall be increased from the same date and by the same percentage of any increase to the rate of pay prescribed for a Station Officer. All such increases shall be rounded off to the nearest 10 cents.
- 30.5 Employees who have entered into, or subsequently entered into, private tenancy arrangements with the Department are not entitled to the provisions of this clause.

Executive Officers

- 30.6 Except as provided for in subclause 30.8, where an Executive Officer is required to and does occupy accommodation, the Department shall deduct from the rate of pay of the Executive Officer an amount per week equal to 4% of the weekly equivalent of the Executive Officer's annual salary as prescribed in Table 1 of Schedule 1 or 50% of the market rental of the accommodation, whichever is the lesser.
- 30.7 The weekly equivalent referred to in subclause 30.6 shall be derived by multiplying the annual salary by 7 and dividing the result by 365.25.
- 30.8 An Executive Officer who has entered into, or subsequently enters into private tenancy arrangements with the Department is not entitled to the provisions of this clause.

31. Security, Safety of Work and Classifications

- 31.1 The Department does not intend to use contractors to reduce the utilisation of employees covered under this Award or to perform work ordinarily performed by, or which could be performed by, employees covered under this Award.
- 31.2 The use of contractor services by the Department which may reduce the utilisation of employees covered under this Award or to perform work ordinarily by, or which could be performed by, employees covered under this Award may only occur following full consultation in accordance with clause 9.

32. Safe Staffing and Systems of Work

- 32.1 The parties have agreed for reasons including employee health, safety and welfare, Table 1 of Schedule 3 outlines the minimum safe staffing arrangements for all Station Based Positions in relation to the number, qualification and rank of employees allocated to an appliance.
- 32.2 Except in the event of an emergency situation, any alteration to the number, qualification and rank of employees required to be allocated under this clause and Table 1 of Schedule 3, may be implemented for a period not exceeding 7 days by agreement between the parties, and can be extended by further agreement, which will not be unreasonably withheld. Any such agreement or dispensation shall be confirmed in writing.
- 32.3 Safe Staffing Promotions
- 32.3.1 The parties have agreed that, for the purpose of ensuring projected safe staffing requirements, FRNSW will, on at least a quarterly basis (and more regularly where requested by the Union) provide to the Union (at the Joint Consultative Committee) the established number for station based Leading Firefighters, Station Officers, Leading

Station Officers, and Inspectors at the time along with the actual numbers of employees at each of those ranks and the overall unavailability across than rank.

32.3.2 The current total minimum established number for Firefighters, Station Officers and Inspectors for Station Based positions are as follows:

- I. Firefighters (including Firefighters, Qualified Firefighters and Senior Firefighters) - 2242
- II. Leading Firefighters - 160
- III. Station Officers - 591
- IV. Leading Station Officers - 40
- V. Inspectors - 74

32.3.3 The parties have agreed that in order to ensure the above station based staffing numbers are maintained as a minimum at each of the groups/ranks of employees specified in subclause 32.3.2, the Department will advertise for recruitment/promotion to a specific group/rank at any time the actual number of employees at that rank is one less than the total number provided for at each group/rank of employees specified in subclause 32.3.2. This advertisement will call for the total number of positions necessary to ensure that the number of employees at the substantive group/rank as a minimum is equivalent to the total number provided for at each group/rank of employees specified in subclause 32.3.2 taking into account workforce planning and projected staffing requirements.

32.3.4 The Department and the Union will consult in accordance with clause 9 Consultation prior to the advertisement being released to discuss the number of positions to be advertised based on the requirements of 32.3.2.

32.4 Further Additional Staffing

32.4.1 The parties have agreed that by no later than the expiry of this Award and as a matter of priority, they will meet and consult in accordance with clause 9, Consultation regarding the numbers specified as subclause 32.3.2. Such consultation will be to ensure that these numbers and total staffing numbers across the organisation accurately reflect the needs of the Department in both Station Based and Non-Station Based roles and in order to develop agreed minimum safe staffing numbers for inclusion in the next Award. For the avoidance of doubt, no work undertaken in accordance with this clause will reduce the numbers provided for in either Schedule 3 or 32.3.2.

32.4.2 It has been agreed between the parties that the deployment of any additional employees and/or positions will be via consultation in accordance with clause 9.

32.5 Safe Systems of Work

32.5.1 In the absence of exceptional circumstances, the Department agrees that in order to meet its duty of care in maintaining safe firefighter operations in responding to structure fires, FRNSW will ensure a minimum of eight FRNSW firefighters respond to structural fires to enable safe firefighting operations. The parties agree that during the life of this Award, response protocols to incidents which provide the number and type of appliance and number, rank and qualifications of firefighters will be reviewed and considered to ensure such protocols meet necessary safe staffing levels for incidents. There will be no change to response protocols currently in place at the time of making this Award unless specifically provided for in this Award or following consultation between the parties in accordance with clause 9 and agreement.

33. Medical First Responder Program

33.1 The parties agree that during the life of this Award, should FRNSW wish to implement any change which would result in any employee covered under this Award performing any form of medical

response work, such change may only be implemented in accordance with the provisions of this Award and specifically this clause.

33.2 Medical First Response (MFR) Program Working Party will be established comprising equal numbers of FBEU nominated representative and representatives of Fire and Rescue NSW. This working party will operate as a subcommittee of the Joint Consultative Committee and consultation regarding Medical First Response will be in accordance with this clause and the provisions of clause 9, Consultation.

33.2 The purpose of this working party will be to investigate the viability and parameters of a MFR program to be performed by Fire and Rescue NSW permanent firefighters.

33.3 This program is not intended to replace or interfere with the current or expanded Community First Response (CFR) Program as undertaken by Fire and Rescue NSW.

33.4 MFR Program Working Party

34.4.1 The working party will engage relevant subject matter experts to consider the following:

- a. Participation
- b. Response Criteria
- c. Communications implications
- d. Training
- e. Equipment
- f. PPE/PPC
- g. Welfare / support to employees
- h. Health and Safety including additional risks/hazards to employees.
- i. Remuneration

33.5 The working party will make recommendations by consensus on all matters. Where consensus cannot be reached between the members of the working party, alternative recommendations may be made clearly indicating what the alternative recommendations are, which member supports which recommendation, and their reason for the recommendation.

33.6 The recommendations of the working party will be provided to both the FBEU and Fire and Rescue NSW management. Any other information used or developed by the working party will also be provided where requested by either party.

33.7 The working party will make such recommendations by no later than the expiry of this Award.

33.8 Implementation of a MFR program will be by agreement only following consideration of the recommendations of the working party.

33.9 Remuneration

33.9.1 As implementation of any MFR program is new work, members who participate must be appropriately remunerated for such work in addition to current remuneration.

33.9.2 If an MFR program is performed by any employee covered by this Award, the Department recognises that the position of the Union at the time of making this Award is that such employees should receive an MFR allowance of at least 12.5% of their total rate of pay and that such allowance is paid for all purposes inclusive of any periods of leave and will form part of ordinary time earnings for the purposes of superannuation.

A5 - LEAVE ENTITLEMENTS**34. Annual Leave**

- 34.1 The provisions of subclauses 34.2 to 34.11 inclusive shall not apply to Executive Officers. The provisions of subclauses 34.12 to 34.16 inclusive shall not apply to Operational Firefighters. The provisions of subclause 34.17 shall apply to all employees.

Operational Firefighters

- 34.2 Annual leave to the extent of 190 hours full pay shall accrue to each employee in respect of each completed year of service. This annual leave shall be added to the 91.2 hours on full pay of thirty-eight hour week leave referred to at subclause 21.1, resulting in a combined entitlement of 281.2 hours leave which shall be known as "Annual Leave." Employees shall over a 64 week cycle accrue 344.91 hours of this combined "Annual Leave", 336 hours of which shall be taken in accordance with the leave roster at subclause 34.3, and the residual 8.91 hours of which shall be converted to an annual amount of 7.25 hours per annum which shall be credited to each employee as consolidated leave on the anniversary of the employee's date of commencement of employment as an Operational Firefighter.
- 34.3 The leave roster shall require each employee to be allocated a leave group which shall operate over a 64 week cycle, during which time each employee shall, depending on their particular leave group, either:
- 34.3.1 work 1344 hours over a 32 week period, then take 192 hours of combined annual leave and 38 hour leave over a four week period, then work 1008 hours over a 24 week period, followed by 144 hours of combined annual leave and 38 hours leave over a four week period; or
 - 34.3.2 work 1008 hours over a 24 week period, then take 192 hours of combined annual leave and 38 hour leave over a four week period, then work 1344 hours over a 32 week period, followed by 144 hours of combined annual leave and 38 hours leave over a four week period.
- 34.4 The Department may change an employee's leave group with reasonable notice provided that the following leave adjustments are made in order to ensure that employees conclude each period of "Annual Leave" neither in deficit nor credit for the thirty-eight hour week leave component (only) of their "Annual Leave" balance:
- 34.4.1 If the change of leave group delays the taking of annual leave and would therefore result in the accrual of additional thirty-eight hour week leave then the employee will not accrue that additional leave and will instead be credited with an equal number of hours of consolidated leave; and
 - 34.4.2 If the change of leave group causes annual leave to be taken earlier, and before the employee would have accrued sufficient "Annual Leave", then the thirty-eight hour week leave component (only) of the employee's "Annual Leave" balance shall be zeroed at the conclusion of that annual leave period.
- 34.5 Where the commencing date of the rostered period of annual leave occurs whilst an employee is on sick leave and does not return to duty within seven days of such date, the employee concerned shall be entitled to elect whether to proceed immediately on annual leave or to commence annual leave on one of the next six succeeding Fridays.
- 34.6 Employees other than those stationed at Broken Hill or Moree shall on each anniversary of their appointment to the service be credited with 16 hours consolidated leave in addition to the period of annual leave prescribed by subclause 34.2.
- 34.7 Employees stationed at Broken Hill or Moree shall on each anniversary of their appointment to the service be credited with 38.75 hours consolidated leave in addition to the period of annual leave prescribed by subclause 34.2.

- 34.8 The taking of annual leave is subject to Departmental requirements and, when unforeseen circumstances arise, may be rescheduled by agreement with the employee, provided that the adjustment mechanism set out at subclause 34.4 shall then apply.
- 34.9 In the event of the termination of the employment of any employee for any cause with less than twelve months' service from the date of the last leave accrued, the employee shall be paid pro rata for leave for each month of service.
- 34.10 Occupants of Non-Station Based positions may apply in writing to take their annual leave at some other time and, if approved, such leave shall be deemed to have been taken in accordance with the leave roster, provided that:
- 34.10.1 employees' leave balances shall always be adjusted in accordance with the actual hours taken; and
 - 34.10.2 employees must take at least four weeks annual leave in each twelve month period; and
 - 34.10.3 annual leave taken under this subclause shall be taken either in one consecutive period or two periods which shall be of three weeks and one week respectively, or if the employee and the Department so agree, in either two, three or four separate periods and not otherwise; and
 - 34.10.4 up to 410 hours of annual leave may be accrued before the Commissioner may direct an employee to take annual leave at a time convenient to the Department, in which case the Commissioner shall provide the employee at least 28 days notice.
- 34.11 Employees may apply in writing to swap one or more sets of shifts within their next three leave periods, and, if approved, the swapped leave shall be deemed to have been taken in accordance with the employee's own leave group.

Executive Officers

- 34.12 Executive Officers shall accrue annual leave on full pay at the rate of twenty five (25) working days per year.
- 34.13 Executive Officers shall accrue annual leave from month to month only, but for the purpose of calculating annual leave which may be due on the cessation of employment, credit shall be given for periods of service of less than one (1) month.
- 34.14 Executive Officers may accrue annual leave up to a maximum of forty (40) working days.
- 34.15 Executive Officers shall not be granted annual leave for any period of less than a quarter day or in other than multiples of a quarter day.
- 34.16 Where application is made by an employee in writing to the Commissioner that, by reasons of special circumstances, which shall be specified, the Commissioner may authorise, in writing, the taking of annual leave at some other time to be determined by the Commissioner for the purpose of this Award, such leave shall be deemed to have been taken in accordance with the leave roster.

All Employees

- 34.17 Prior to an employee entering upon a period of annual leave, the employee may elect to be paid with respect of the period of leave in one of the following ways:
- 34.17.1 in full when the employee commences the period of leave; or
 - 34.17.2 at the same time as the employee's normal pay would have been paid if the worker had remained on duty.

35. Compassionate Leave

- 35.1 In no way restricting the right of the Commissioner to approve leave for compassionate reasons in other circumstances, an employee other than a casual employee, shall be entitled to up to two shifts (or two days in the case of day workers) compassionate leave without deduction of pay, up to and including the day of the funeral, on each occasion of the death of a person as prescribed in subclause 35.3 of this clause.
- 35.2 The employee must notify the employer as soon as practicable of the intention to take compassionate leave and will, if requested by the employer, provide to the satisfaction of the employer proof of death.
- 35.3 Compassionate leave shall be available to the employee in respect to the death of a person being:
- 35.3.1 a spouse of the employee; or
 - 35.3.2 a de facto spouse who, in relation to a person, is a person of the same or opposite sex to the first mentioned person and who lives with the first mentioned person as the husband or wife of that person on a bona fide domestic basis, although not legally married to that person; or
 - 35.3.3 a child or an adult child (including an adopted child, a stepchild, a foster child or an ex-nuptial child), parent (including a foster parent and legal guardian), grandparent, grandchild or sibling of the employee or spouse or de facto spouse of the employee; or
 - 35.3.4 a relative of the employee who is a member of the same household where, for the purposes of this subclause:
 - 35.3.4.1 "relative" means a person related by blood, marriage or affinity;
 - 35.3.4.2 "affinity" means a relationship that one spouse, because of marriage, has to blood relatives of the other; and
 - 35.3.4.3 "household" means a family group living in the same domestic dwelling.
- 35.4 An employee shall not be entitled to compassionate leave under this clause during any period in respect of which the employee has been granted other leave.
- 35.5 Compassionate leave may be taken in conjunction with other leave available under clause 39 and/or clause 40. In determining such a request, the employer will give consideration to the circumstances of the employee and the reasonable operational requirements of the Department.

36. Examination and Assessment Leave

- 36.1 All examinations and/or assessments required for progression or promotion shall be arranged so that they take place when the employee is normally rostered for duty on day shift.
- 36.2 Where the Department is unable to make the necessary arrangements for an employee to sit an examination/assessment on shift as per subclause 36.1 within two months from the date the employee makes application for assessment, the employee may make arrangements to sit the examination/assessment externally. In such cases, employees shall be entitled to the conditions provided for by clause 51, Training Course Attendance Entitlements, of this Award. The Department shall notify the employee as early as practicable of its inability to make such necessary arrangements.
- 36.3 An employee sitting for an examination or assessment as per subclause 36.1 shall be granted, prior to the examination or assessment, such paid leave as might reasonably be necessary for attendance at the examination or assessment, including travel.

37. Long Service Leave

37.1 Subject also to the provisions of subclause 37.8, Long Service Leave calculated from the date of appointment to the service shall accrue to employees in accordance with the following entitlements:

37.1.1 After service for ten years, leave for two months on full pay or four months on half pay.

37.1.2 After service in excess of ten years:

37.1.2.1 Leave pursuant to subclause 37.1.1; and

37.1.2.2 In addition, an amount of leave proportionate to the length of service after ten years, calculated on the basis of five months on full pay or ten months on half pay, for ten years served after service for ten years.

37.1.2.3 Long Service Leave shall not include annual leave.

37.2 Where the services of an employee with at least five years but less than seven years service are terminated by the Department for any reason other than the employee's serious and wilful misconduct, or by the employee on account of illness, incapacity or domestic or other pressing necessity, or by reason of the death of the employee, the employee shall, for five years' service be entitled to one month's leave on full pay and for service after five years to a proportionate amount of leave on full pay calculated on the basis of three months' leave for fifteen years' service.

37.3 In the event of the termination of the employment of the employee other than by death, the monetary value of Long Service Leave due, if any, shall be paid to such employee.

37.4

37.4.1 Approval to take Long Service Leave as provided by this clause shall, subject to the exigencies of the Department, be granted by the Department as and when such leave becomes due (i.e. after seven years) or any time thereafter. Provided that an employee shall give notice, in writing, to the Department of their intention to take such leave. The period of notice required prior to the leave being taken is set out in subclause 37.6.1.

37.4.2 Notwithstanding the provisions of subclause 37.6.1, the period of notice referred to in subclause 37.6.1 may be reduced on a case by case basis, subject to the discretion of the Commissioner.

37.5 Approval to take Long Service Leave may be deferred by the Commissioner due to Departmental requirements.

37.6 An employee may apply to access long service leave for a minimum of their single rostered shift as follows:

37.6.1 on full pay having provided one week's notice:

37.6.2 on half pay having provided two weeks' notice; or

37.6.3 on double pay having provided two weeks' notice.

37.7 When an employee takes long service leave, such leave will be deducted as follows:

37.7.1 the number of days taken on full pay;

37.7.2 half the number of days taken on half pay; or

37.7.3 twice the number of days taken on double pay.

37.8 Prior to an employee entering upon a period of Long Service Leave, the employee may elect to be paid with respect of the period of leave in one of the following ways:

37.8.1 in full when the employee commences the period of leave; or

37.8.2 at the same time as the employee's normal pay would have been paid if the worker had remained on duty.

37.9 Notwithstanding anything elsewhere provided by this clause, effective on and from the date of operation of this Award:

37.9.1 employees may apply to take pro-rata Long Service Leave after the completion of seven (7) years of service. Additionally employees with such service shall be entitled to pro-rata Long Service Leave on resignation or termination.

37.9.2 employees may apply to take a period of Long Service Leave at double pay provided that:

37.9.2.1 The additional payment will be made as a non-superable taxable allowance payable for the period of the absence from work.

37.9.2.2 The employee's leave balance will be debited for the actual period of the absence from work and an equivalent number of days as are necessary to pay the allowance.

37.9.2.3 Other leave entitlements, e.g., recreation leave, sick leave and Long Service Leave will accrue at the single time rate where an employee takes Long Service Leave at double time.

37.9.2.4 Superannuation contributions will only be made on the basis of the actual absence from work, i.e., at the single time rate.

37.9.2.5 Where an employee other than an Executive Officer elects to take Long Service Leave at double pay, the minimum & multiple periods of actual absence as prescribed in 37.7 shall apply. Where an Executive Officer elects to take Long Service Leave at double pay, the minimum period of actual absence should be not less than one day.

37.9.3 where a public holiday falls during a period of Long Service Leave the employee shall be paid for that day and additionally it shall not be deducted from the period of the leave.

37.9.3.1 In respect of public holidays that fall during a period of double pay Long Service leave an employee will not be debited in respect of the leave on a public holiday. The employees leave balance will however be reduced by an additional day to fund the non-superable taxable allowance.

37.10 Entitlements to Extended Leave (Long Service Leave) pursuant to the *Public Sector Employment and Management Act* 2002 shall take effect on and from 5 October 1993, provided that the total years of service will count for the determination of entitlements accruing from that date.

37.11 Access to Long Service Leave

37.11.1 The parties agree that subject to the provisions of subclause 37.11.2 any quotas for access to long service leave applicable from time to time are abolished and no new quotas will be established or applied without consultation in accordance with clause 9. Access to long service leave will be granted to employees as it becomes due in accordance with subclause 37.4 and approval of such claims by the Department will not be unreasonably refused.

37.11.2 Quotas for Holiday Peak Periods

- 37.11.2.1 Quotas for numbers of employees who can access Long Service Leave during holiday peak periods and special events can, however, be applied for all Station-Based positions up to the rank of Inspector for the following periods:
 - (a) All NSW school holidays
 - (b) Good Friday through to Easter Tuesday
 - (c) Christmas Eve through to New Years Eve
 - (d) Other special event periods as agreed between the Department and the FBEU.
 - 37.11.2.2 During these times each Zone/Directorate may implement a quota for the number of employees per platoon able to access leave for the period listed and applications for leave during such periods will be called annually for the following year. Applications will be open for a period of six weeks and where the number of applications exceed the applicable quota a ballot will be conducted to determine the successful applicants. The FBEU will be invited to nominate representatives to observe the ballots.
 - 37.11.2.3. Where a ballot is necessary, it will extend to all applicants who made an application in the 6 weeks period and are eligible for the period of long service leave at the time it is proposed to be taken by the employee. The ballot will draw each employee and create a list of all employees in the ballot. Employees who are not successful in being granted Long Service Leave through the ballot process will be put on a reserve list in the order they are drawn from the ballot.
 - 37.11.2.4 Where an employee who is successful in the ballot subsequently withdraws their application, the next applicant on the reserve list will be offered the leave period for which they applied.
 - 37.11.2.5 The ballot system and related six week application period for peak periods does not apply to firefighters who are seeking extended periods of long service leave. For the purposes of this subclause 'extended' means any period in excess of two consecutive months on full pay or four consecutive months of half pay.
 - 37.11.2.6 The current practice of approving genuine emergency long service leave applications when quotas are full will be maintained with approval of such leave at the discretion of the Area Commander/Assistant Director.
- 37.12 The parties will, in accordance with the consultation provisions at clause 9, review the current allocation of Long Service Leave during the life of this Award to ensure Long Service Leave is being allocated in an equitable and transparent manner across all employees.

38. Parental Leave

- 38.1 Definitions - for the purposes of this clause, the following definitions apply.
- 38.1.1 Parental Leave includes birth, adoption, altruistic surrogacy, and permanent out-of-home care.
 - 38.1.2 "Partner" includes a spouse, de facto partner, former partner or former de facto partner. The bona fide domestic basis, although not legally married to the Employee.
 - 38.1.3 "Continuous service" includes any period of authorised leave or absence, any period of part-time work, or any full or part-time service within the public sector.
- 38.2 Entitlement to Parental Leave
- 38.2.1 An employee is entitled to Paid Parental Leave on the following terms:

38.2.1.1 An employee who has, or will have completed not less than 40 weeks continuous service (at the expected date of birth, time of adoption, time of altruistic surrogacy or permanent out-of-home care placement), is entitled to up to 14 weeks paid parental leave if the leave is associated with:

38.2.1.1.1 The birth of a child (or children from a multiple birth) of the employee, the employee's partner or the employee's legal surrogate, the adoption of a child (or children) under 18 years of age by the employee or the employee's partner or the placement of a child (or children) under 18 years of age in permanent out-of-home care with the employee or the employee's partner, and

38.2.1.1.2 The employee has or will have responsibility for the care of the child.

38.2.1.2 Paid parental leave must be taken in a single continuous period within the first 24 months from the date of birth, adoption, altruistic surrogacy or permanent out-of-home care placement, subject to the provisions in clause 38.7. Pregnant employees may commence leave up to 9 weeks prior to the expected date of birth.

38.2.1.3 Parental leave may be taken at half pay from the date the leave commences for a period of 28 weeks.

38.2.1.4 Payment for parental leave may be made in advance in a lump sum, or on a normal fortnightly basis.

38.3 Bonus Paid Parental Leave

38.3.1 An employee who has, or will have, completed not less than 40 weeks continuous service (at the expected date of birth, time of adoption, time of altruistic surrogacy, or placement of a child in permanent out-of-home care) is entitled to an additional two-week bonus paid parental leave where each parent has exhausted any paid parental leave offered by their employer.

38.3.2 Employees who are single parents or whose partners do not have access to or are ineligible for employer paid parental leave will receive the full two weeks of bonus paid parental leave.

38.3.3 The two weeks bonus parental leave is in addition to the 14 weeks paid parental leave outlined in 38.2.1.1.

38.4 Notice requirements

38.4.1 To access paid parental leave, including bonus parental leave, the employee must provide notice to the Department, stating:

38.4.1.1 The period of leave being sought, including the anticipated date of return to duty, and

38.4.1.2 That the employee will have responsibility for the care of their child for the period during which they are seeking the paid parental leave.

38.4.2 The employee must notify the Department as soon as possible of any changes to their circumstances that will or is likely to affect their eligibility for paid parental leave prior, or throughout the period of payment.

38.4.3 An employee does not fail to comply with this clause if the failure was caused by the child being born before the expected date of birth, the child being placed for adoption before the expected date of placement, or any other compelling circumstance as determined by the Commissioner.

38.5 Evidence requirements

38.5.1 To access paid parental leave, the employee must provide evidence of the birth, adoption, altruistic surrogacy, or permanent out-of-home care placement:

- 38.5.1.1 For birth-related leave - a medical certificate or birth certificate showing the expected birth date of the child; or
- 38.5.1.2 For adoption-related leave - An integrated birth certificate, or certificate of adoption; or
- 38.5.1.3 For altruistic surrogacy-related leave - Provision of documentary evidence of the altruistic surrogacy agreement and a statutory declaration advising of the intention to make application for a parentage order as required under the *Surrogacy Act* 2010. A copy of the parentage order must be provided as soon as it is obtained; or
- 38.5.1.4 For permanent out-of-home-care related leave - provision of a guardianship or permanent placement order for a child or young person.

38.5.2 To access bonus paid parental leave, the Department needs to be satisfied that an employee's partner has or will have either exhausted paid parental leave provided by their employer or does not have access to employer paid parental leave. The Department may require evidence such as:

- 38.5.2.1 A letter from the partner's employer confirming paid parental leave has or will have been exhausted or confirming the partner does not have an entitlement to employer funded paid parental leave; or
- 38.5.2.2 A statutory declaration from the employee confirming their partner has or will have exhausted paid parental leave or the partner does not have an entitlement or access to employer funded paid parental leave.

38.6 Concurrency of Paid Parental Leave

- 38.6.1 All paid parental leave may be taken concurrently except in circumstances where both parents are employed by the Department and operational requirements may prevent concurrent leave.
- 38.6.2 Employees where both parents are employed by the Department may take up to 4 weeks paid parental leave concurrently with their partner.

38.7 Flexibility for taking Paid Parental Leave

- 38.7.1 Where an employee's eligibility for paid parental leave is determined at the time of birth, adoption, altruistic surrogacy or permanent out-of-home care placement, the employee and the Department may agree for the employee to use paid parental leave entitlements at any time within the first 24 months from the date of birth, adoption, altruistic surrogacy, or permanent out-of-home care placement.
- 38.7.2 An employee may request:
 - 38.7.2.1 To use their paid parental leave entitlement in a manner other than a single continuous period; or
 - 38.7.2.2 To take more than 4 weeks of paid parental leave concurrently.
- 38.7.3 The Department will consider their operational requirements and the employee's personal and family circumstances in considering requests and may refuse the request on reasonable business grounds related to the impact of the Department's workplace

including but not limited to excessive cost, lack of adequate replacement staff, loss of productivity or impact on service delivery. The Department will provide their response to the employee's request within 21 days.

- 38.7.3.1 Any refusal to consider the flexibility clauses in 38.7 may be appealed through the same terms as appear in the Disputes Procedure at clause 11, with determination of the above criteria able to be resolved by the Industrial Relations Commission if the employee and the Department are not in agreement.

- 38.7.4 Should the Department agree to paid parental leave in a manner other than a single continuous period, the period of leave must not extend beyond the first 24 months from the date of birth, adoption, altruistic surrogacy or permanent out-of-home care placement and will not be extended by any periods of public holidays that fall within the paid parental leave period.

38.8 Additional Provisions for Altruistic Surrogacy and Permanent Out-of-Home Care Arrangements

- 38.8.1 Employees in altruistic surrogacy arrangements and permanent out-of-home care arrangements have an entitlement to take 12 months unpaid parental leave, similar to entitlements available to employees who give birth to or adopt a child (12 months' leave of which up to 16 weeks is paid leave available in accordance with this Clause and the remained unpaid).
- 38.8.2 The right to request extended parental leave and return to work on a part time basis is available to employees granted parental leave for altruistic surrogacy and permanent out-of-home care arrangements.
- 38.8.3 Where an employee takes paid parental leave in respect of a permanent out-of-home care arrangement and later adopts the child (or children), the employee is not entitled to access a further period of paid parental leave in connection with the adoption.

38.9 Cancellation of leave

- 38.9.1 Parental leave may be cancelled prior to starting the leave if the employee withdraws the application by written notice to the Commissioner, or if the pregnancy concerned terminates other than by the birth of a living child or the placement of the child concerned does not proceed.
- 38.9.2 Parental leave may be cancelled after starting the leave in the event of a miscarriage, at which point clause 38.14 will take over, or if the child dies, or if adopted placement does not proceed or continue.
- 38.9.3 A parent may break the period of leave and return to work by agreement between the Commissioner and the employee on the following conditions:
- 38.9.3.1 A birthing parent who gives birth to a living child shall not resume duty until 6 weeks after the birth of the child, unless special arrangements for early return are made at the request of the employee and supported by a medical certificate.
- 38.9.3.2 A birthing parent who has returned to full-time duty after less than their full entitlement to parental leave, shall be entitled to revert to parental leave either on a full-time or part-time basis if they so elect. This election may be exercised only once, and a minimum of 4 weeks' notice (or less if agreed to by the Commissioner) must be given.

38.10 Additional Provisions

- 38.10.1 All parents who do not have the necessary service as outlined in 38.2.1.1 shall be entitled to unpaid leave for the period of time as outlined in that clause.

- 38.10.2 In addition to the Parental Leave outlined in 38.2, birthing parents shall be entitled to a further period of unpaid leave, provided that the total period of absence on leave shall not exceed a period of 2 years.
- 38.10.3 In addition to the Parental Leave outlined in 38.2, non-birthing parents shall be entitled to a further period of unpaid leave, provided that the total period of absence on leave shall not exceed 52 weeks.
- 38.10.4 The unpaid leave arrangements in 38.10.2 and 38.10.3 may be substituted for any combination of accrued annual, long service, or consolidated leave up to the time periods outlined.
- 38.10.5 Any period of parental leave will count as full service for all purposes, including for continuity of service, promotion, and accrual of leave.
- 38.10.6 Parental leave may be extended beyond what was originally planned by giving the Commissioner notice in writing of the extended period at least 14 days before the start of the extended period. The period of leave cannot be extended beyond the maximum period of leave authorised by clause 38.10.
- 38.10.7 The maximum periods of leave can be extended at any time with agreement between the employee and the Commissioner.
- 38.10.8 An employee returning to work after parental leave will return to work in the same classification and location held by the employee immediately prior to proceeding on that leave. If the employee was in a safe job prior to proceeding on parental leave, they will return to the classification and location held immediately before the safe job.
- 38.10.9 The Commissioner must not terminate or threaten to terminate the employment of an employee due to any action taken, or leave used or planned to be used, under clause 38.
- 38.10.10 Upon being informed of an impending birth, adoption, altruistic surrogacy, or permanent out-of-home care arrangement, the Commissioner must inform the employee of their entitlements to parental leave and their obligations under this clause.
- 38.10.11 Any employee seeking to adopt a child is entitled to up to two days paid leave per calendar year if the employee requires that in connection with the adoption process, and includes but is not limited to interviews, meetings, or examinations.

38.11 Replacement Employees

- 38.11.1 A replacement employee is a person who is specifically employed because of an employee proceeding on parental leave, including as a replacement for an employee who has been temporarily promoted or transferred in order to replace the employee proceeding on parental leave.
- 38.11.2 Before a replacement employee is employed, the Commissioner must inform the person of the temporary nature of the employment and the rights of the employee on parental leave to return to work.
- 38.11.3 A reference in this clause to an employee proceeding on leave includes a reference to a pregnant employee exercising a right to be transferred to a safe job under clause 38.12.

38.12 Transfer to a Safe Job

- 38.12.1 This subclause applies whenever the present work of a birthing employee is, because of the pregnancy or breastfeeding, a risk to the health or safety of the employee or of the unborn or newborn child. The assessment of such a risk is to be made based on a medical

certificate supplied by the employee and of the obligations of the Commissioner under the *Work Health and Safety Act 2011*.

38.12.2 The Commissioner is required to temporarily adjust the employee's working conditions or hours of work to avoid exposure to risk as follows:

38.12.2.1 Where a birthing parent is confirmed pregnant, they are to notify their Superintendent and Station Commander as soon as possible who will, in turn, direct that they be withdrawn from operational firefighting duties.

38.12.2.2 Upon withdrawal from operational firefighting duties alternate work of a suitable nature is to be provided.

38.12.2.3 Allocation of duties will be determined by the Department following consultation between the employee's medical practitioner, the employee's Station Commander and the employee.

38.12.2.4 If such an adjustment is not feasible or cannot reasonably be accommodated, the Commissioner is to transfer the employee to other work where they will not be exposed to that risk.

38.12.2.5 If such a transfer is not feasible or cannot reasonably be required to be made, the Commissioner is to grant the employee special parental leave under this clause for as long as is necessary to avoid exposure to that risk, as certified by a medical practitioner.

38.12.2.6 Any period of special parental leave due to a safe job not being provided is not counted towards the employee's maximum period of leave and is to be paid at full pay without any deduction from any leave balances.

38.12.3 Employees will be provided with a maternity uniform for use when appropriate.

38.12.4 The standard issue uniform is to be worn by employees until the pregnancy becomes apparent prior to the birth and from the tenth week, if practicable, following the birth.

38.12.5 An employee on maternity leave who gives birth to a living child shall not resume operational firefighting duties until thirteen weeks have elapsed after the birth of the child, unless a special request for early return is made by the employee supported by a medical certificate.

38.12.6 Duties other than firefighting may be undertaken after six weeks following the birth of the child, if supported by a medical certificate.

38.13 Transitional Arrangements

38.13.1 The provisions of Clause 38 are taken to have been in effect since 1 October 2022, in line with the 27 September 2022 s52(1) Determination no 4 of 2022, by the Secretary of the Department of Premier and Cabinet.

38.14 Other Parental Leave & Provisions

38.14.1 Definitions - for the purposes of this clause, the following definitions apply:

38.14.1.1 Other Parental Leave includes the provisions available to employees in the event of a miscarriage, still birth, pre-term birth or when undergoing fertility treatment.

38.14.1.2 "Partner" includes a spouse, de facto partner, former partner or former de facto partner. The employee's de facto partner means a person who is the employee's partner, who lives with the employee on a bona fide domestic basis.

- 38.14.1.3 "Miscarriage" means a pregnancy that ceases prior to 20 weeks gestation or, where the number of weeks is unknown, the baby weighed less than 400g.
- 38.14.1.4 "Stillbirth" means the birth of a baby who has died any time from 20 weeks into a pregnancy and includes death during pregnancy or during birth.
- 38.14.1.5 "Pre-Term Birth" means the birth of a live child prior to 37 weeks gestation.
- 38.14.1.6 "Full-Term Birth" means the birth of a live child at 37 weeks onwards.
- 38.14.1.7 "Fertility Treatment" means the following assisted reproductive treatments: Intrauterine insemination (IUI), In vitro fertilization (IVF) and Intracytoplasmic sperm injection (ICSI).
- 38.14.1.8 "Continuous service" includes any period of authorised leave of absence, any period of part-time work, or any full or part-time service within the public sector.
- 38.14.2 Entitlement to Leave for Other Parental Leave occurrences
 - 38.14.2.1 Leave in the event of a miscarriage
 - 38.14.2.1.1 Where an employee or the partner of an employee miscarries, the employee is entitled to five days special miscarriage leave on each occasion a pregnancy ceases by way of miscarriage up to 20 weeks' gestation.
 - 38.14.2.1.2 Leave as defined above will commence from the date the miscarriage occurs and is to be taken in one continuous block of leave at full pay. Paid special miscarriage leave must not be taken concurrently with any other form of leave available to the employee.
 - 38.14.2.1.3 When accessing paid special miscarriage leave, the employee must provide notice as soon as reasonably practicable stating:
 - (a) The period of leave being sought, and
 - (b) The anticipated date of return to duty.
 - 38.14.2.1.4 To access paid special miscarriage leave, the Department needs to be satisfied that a miscarriage has occurred and may require evidence such as:
 - (a) A medical certificate; or
 - (b) Early loss certificate issued by NSW Registry of Births, Deaths & Marriages or equivalent State agency
 - 38.14.2.2 Leave in the event of a stillbirth
 - 38.14.2.2.1 Where an employee has an entitlement to parental leave and they suffer a stillbirth the employee may elect at their absolute discretion to either take their parental leave entitlement or to take available sick leave.
 - 38.14.2.3 Leave in the event of a pre-term birth
 - 38.14.2.3.1 Where an employee or the partner of an employee gives birth to a pre-term child (prior to 37 weeks), the parent with the caring responsibility is entitled to paid special pre-term parental leave from the date of birth of the child (or children from a multiple birth) up to the end of 36 weeks.

- 38.14.2.3.2 Immediately following the period of paid special pre-term parental leave and at commencement of 37 weeks, paid parental leave will be in accordance with Clause 38.
- 38.14.2.3.3 Eligible employees are those who have or would have, if not for the pre-term birth, completed 40 weeks continuous service at the expected due date. Where employees are in a couple, only one parent may access paid special pre-term birth leave.
- 38.14.2.3.4 Leave as defined above will commence from the date the pre-term birth occurs and must be taken in one continuous block up to the end of 36 weeks. Paid special pre-term parental leave must not be taken concurrently with any other form of leave available to the employee.
- 38.14.2.3.5 In the event of a death of a pre-term child (or children) during a period of paid special pre-term parental leave, the remaining portion of that leave ceases and paid parental leave in accordance with Clause 38 will commence.
- 38.14.2.3.6 When accessing paid special pre-term parental leave in the event of a pre-term birth, the employee must provide notice as soon as reasonably practicable stating:
 - (a) The period of paid special pre-term parental leave being sought up to the end of 36 weeks; and
 - (b) The details of all other types of leave (paid or unpaid) to be taken or proposed to be taken or applied for by the employee following the period of paid special pre-term parental leave including Parental Leave.
- 38.14.2.3.7 To access special pre-term parental leave in the event of a pre-term birth, the employee may be required to provide evidence such as:
 - (a) A medical certificate showing the expected due date; and
 - (b) A statutory declaration or medical certificate confirming caring responsibility; and
 - (c) medical certificate showing the actual date of birth of the child; or
 - (d) Birth certificate showing the date of birth of the child.
- 38.14.2.4 Leave for employees undergoing fertility treatment
 - 38.14.2.4.1 Where an employee is absent from work to undergo fertility treatment, the employee is entitled to up to five days paid special fertility treatment leave per calendar year.
 - 38.14.2.4.2 Leave as defined above is non-cumulative and can be taken in part-days, single days, or consecutive days. Paid special fertility treatment leave must not be taken concurrently with any other form of leave. Paid special fertility treatment leave is not available to a partner of a person undergoing fertility treatment.
 - 38.14.2.4.3 To access paid special fertility treatment leave, the employee may be required to provide a medical certificate confirming the fertility treatment.
- 38.14.3 Additional Provisions

38.14.3.1 Any period of parental leave will count as full service for all purposes, including for continuity of service, promotion, and accrual of leave.

38.14.3.2 The Commissioner must not terminate or threaten to terminate the employment of an employee due to any action taken, or leave used or planned to be used, under subclause 38.14.

38.14.4 Transitional Arrangements

38.14.4.1 The provisions of Clause 38.14 are taken to have been in effect since 1 October 2022, in line with the 28 September 2022 s52(1) Determination no 3 of 2022, by the Secretary of the Department of Premier and Cabinet.

38.15 Lactation Policy

38.15.1 Within three months of the making of this Award, the Parties will negotiate and agree to a Lactation and Work Policy via the Consultation process prescribed at clause 9 to support employees who seek to breastfeed and/or express milk while at work.

39. Sick Leave

39.1 The management of sick leave by the Department will be underpinned by an Attendance Management System that seeks to support employees in maintaining their health and recovering from illness or incapacity and ensuring that sick leave is used only for legitimate purposes.

39.2 In every case of illness or incapacity sustained by an employee whilst off duty, the following conditions shall apply.

39.3 Such employee shall, as soon as practicable, inform their immediate supervisor of such inability to attend for duty and, as far as possible, shall state the estimated duration of their absence.

39.4 Subject to the provisions of subclause 39.6 and 39.7, such employee shall forward to the Department's Health and Safety Branch by Electronic Self Service (ESS), a medical certificate stating that the employee is unfit for duty, if known, the date the employee is fit to resume duty. If a medical certificate does not specify the date the employee is fit to resume duty, the employee must, before being entitled to resume duty, forward a further medical certificate to the effect that the employee has recovered from the illness or incapacity and is fit for duty, unless the employer dispenses with this requirement. The Health and Safety Branch shall ensure that personal medical information provided pursuant to this clause is not disclosed to any employees of the Department outside of the Health and Safety Branch.

39.5 The granting of sick leave, the duration thereof and the pay, if any, for the same shall be on the following basis:

39.5.1 One hundred and forty-four hours on full pay in any one year.

39.5.2 Effective 17 February 1997, the sick leave prescribed in 39.5.1 shall be fully cumulative less any sick leave taken.

39.5.3 Sick leave beyond the scale provided for shall be sick leave without pay.

39.5.4 Sick leave is intended to be allowed in respect of absences from duty caused by ordinary illness or incapacity for duty as the result of an illness or injury sustained whilst off duty. When the incapacity is due to organised sporting activity or paid work, unconnected with the Department, any sick leave payment shall take into account any benefit in the nature of sick leave or workers compensation payments the employee concerned receives from the body organising the sporting activity or paid work, but to the extent of such benefit, the employee's sick leave entitlement shall not be affected.

- 39.5.5 Where payment has been made for sick leave, under this clause, to an employee whose sick leave entitlement previously has been exhausted, or whose right to sick leave is not established, the Department may deduct the amount overpaid from the salary of the employee concerned in the next pay period or, if such a deduction would cause hardship, in accordance with the provisions of subclause 16.7 of this Award.
- 39.5.6 Recruit Firefighters shall be eligible for sick leave. However, such employees shall only be entitled to use up to and including 72 hours of sick leave.
- 39.5.7 When the incapacity is due to a cause which would entitle an employee to workers' compensation, the Department shall pay the difference between the amount of workers' compensation payment and the ordinary rate of pay of the employee concerned. The employee's entitlement for sick leave arising from ordinary illness shall not be affected.
- 39.5.8 The employee shall prove to the satisfaction of the Department, or, in the event of a dispute, to the satisfaction of the Industrial Relations Commission, that the employee was unable, on account of such illness or incapacity, to attend for duty on that day or days for which sick leave is claimed. Payment shall not be allowed for such leave until this condition is fulfilled. A medical certificate tendered in support of such claim shall state the illness or incapacity, and that the employee was prevented by such illness or incapacity from attending for duty on the day or days for which sick leave is claimed.
- 39.6 Employees are entitled to take unsupported sick leave absences, where no medical certificate is required, subject to the following provisions:
 - 39.6.1 Such absences may not exceed 4 separate occasions in any calendar year, where an 'occasion' shall be a shift or part of a shift (or in the case of Executive Officers, 4 separate days in any calendar year; and
 - 39.6.2 Such absences may not be taken on consecutive days; and
 - 39.6.3 Such absences may not be taken on public holidays; and
 - 39.6.4 Such absences may not be taken in relation to any matter that may be covered by workers' compensation.
- 39.7 Where an employee is absent for more than two consecutively rostered instances employee may be required by the Department to forward to the Department's Health and Safety Branch by Electronic Self Service (ESS), a medical certificate stating the nature of the illness or incapacity.

Commitment to Reduction in Sick Leave Levels

- 39.8 The Parties to this Award are committed to ensuring a reduction in the cost associated with sick leave.
- 39.9 To ensure that sick leave levels are reduced, the Parties have agreed to implement a policy for the management of employee absence relating to personal illness and injury.
- 39.10 It is accepted that the Attendance Management Policy for Permanent Firefighters will place the Parties to this Award, including all employees covered by the Award, under an obligation to effectively manage sick leave in order to achieve the targeted reduction. To that end, the Parties will work co-operatively to ensure the implementation and success of the Attendance Management Policy for Permanent Firefighters.

Review Mechanisms

- 39.11 During the life of the Award, the Department and the Union will, at regular intervals, monitor and review the operation of the Attendance Management Policy for Permanent Firefighters and the data on reduction in average sick leave levels.

- 39.12 At each review the Department and the Union will assess progress against sick leave reduction targets.
- 39.13 Subject to clause 39.14, if targets are not being met the Department will, after consultation with the Union, identify and implement the additional measures required to meet the targets and will vary the Attendance Management Policy for Permanent Firefighters accordingly.
- 39.14 In the event of a dispute as to a proposed variation, then provided the Union notifies a dispute within 7 days, the issue as to any proposed variation will be dealt with by the Industrial Relations Commission and during that process the status quo in regards to sick leave then applying will operate unless otherwise varied or altered by the Commission.

Executive Officer entitlements

- 39.15 Sick Leave on full pay accumulates at the rate of fifteen (15) days each calendar year, and any such accrued leave not taken is fully cumulative.
- 39.16 For the purpose of subclause 39.15 "service" means continuous service.

Recredit of Annual and/or Long Service Leave

- 39.17 Where an employee who is eligible for sick leave produces a satisfactory medical certificate to the effect that they have been sick, injured or ill on annual or long service leave, they will be recredited with their annual leave and/or long service leave for the period they were sick, injured or ill.

40. Carer's Leave

40.1 Use of Sick Leave -

- 40.1.1 An employee, other than a casual employee, with responsibilities in relation to a class of person set out in subclause 40.1.3.2, who needs the employee's care and support shall be entitled to use, in accordance with this clause, any current or accrued sick leave entitlement, provided for at clause 39 of this Award, for absences to provide care and support for such persons when they are ill. Such leave may be taken for part of a single day.

- 40.1.2 The employee shall, if required, establish, by production of a medical certificate or statutory declaration, the illness of the person concerned and that the illness is such as to require care by another person. In normal circumstances an employee must not take carer's leave under this clause where another person has taken leave to care for the same person.

- 40.1.3 The entitlement to use sick leave in accordance with this clause is subject to:

40.1.3.1 the employee being responsible for the care of the person concerned; and

40.1.3.2 the person concerned being:

40.1.3.2.1 a spouse of the employee; or

40.1.3.2.2 a de facto spouse who, in relation to a person, is a person of the same or opposite sex to the first mentioned person and who lives with the first mentioned person as the husband or wife of that person on a bona fide domestic basis, although not legally married to that person; or

40.1.3.2.3 a child or an adult child (including an adopted child, a stepchild, a foster child or an ex-nuptial child), parent (including a foster parent and legal guardian), grandparent, grandchild or sibling of the employee or spouse or de facto spouse of the employee; or

40.1.3.2.4 a relative of the employee who is a member of the same household where, for the purposes of this subclause:

40.1.3.2.4.1 "relative" means a person related by blood, marriage or affinity;

40.1.3.2.4.2 "affinity" means a relationship that one spouse, because of marriage, has to blood relatives of the other; and

40.1.3.2.4.3 "household" means a family group living in the same domestic dwelling.

40.1.4 An employee shall, wherever practicable, give the Department notice, prior to the absence, of the intention to take leave, the name of the person requiring care and their relationship to the employee, the reasons for taking such leave and the estimated length of absence. If it is not practicable for the employee to give prior notice of absence, the employee shall notify the Department by telephone of such absence at the first opportunity on the day of absence.

40.2 Unpaid Leave for Family Purpose -

40.2.1 An employee may elect, with the consent of the Department, to take unpaid leave for the purpose of providing care and support to a class of person, as set out in subclause 40.1.3.2, who is ill.

40.3 Use of Annual Leave -

41.3.1 An employee may elect, with the consent of the Department, subject to the *Annual Holidays Act* 1944, to take annual leave not exceeding five (5) days in any calendar year at a time or times agreed upon by the Department and the Union where they have provided care in accordance with this clause for (5) five days or more during a period of annual and long service leave.

40.4 Time Off in Lieu of Payment for Overtime -

40.4.1 An employee may elect, with the consent of the Department, to take time off in lieu of payment for overtime at a time or times agreed upon with the Department within twelve (12) months of the said election.

40.4.2 Overtime taken as time off during ordinary-time hours shall be taken at the ordinary-time rate, that is, an hour for each hour worked.

40.4.3 If having elected to take time as leave, in accordance with subclause 40.4.1 above, the leave is not taken for whatever reason, payment for time accrued at overtime rates shall be made at the expiry of the (twelve) 12 month period or on termination.

40.4.4 Where no election is made in accordance with subclause 40.4.1, the employee shall be paid their overtime in accordance with this Award.

40.5 Make-up Time -

40.5.1 An employee may elect, with the consent of the Department, to work "make-up time", under which the employee takes time off ordinary hours and works those hours at a later time during the spread of ordinary hours provided in this Award, at the ordinary rate of pay.

40.5.2 An employee on shift work may elect, with the consent of the Department, to work "make-up time", under which the employee takes time off ordinary hours and works those hours at a later time, at the shift work rate which would have been applicable to the hours taken off.

41. Domestic and Family Violence Leave

41.1 The definition of domestic violence is found in clause 7, Definitions of this Award;

- 41.2 Employees experiencing domestic violence are entitled to 10 days paid domestic and family violence leave per calendar year (non-cumulative and able to be taken in part-days, single days, or consecutive days). The leave is to be available for employees experiencing domestic and family violence, for purposes including:
- 41.2.1 seeking safe accommodation;
 - 41.2.2 attending medical, legal, police or counselling appointments relating to their experience of domestic and family violence;
 - 41.2.3 attending court and other legal proceedings relating to their experience of domestic and family violence;
 - 41.2.4 organising alternative care or education arrangements for their children; or
 - 41.2.5 other related purposes approved by the employer.
- 41.3 The leave entitlement can be accessed without the need to exhaust other existing leave entitlements first.
- 41.4 When approving leave, the Department needs to be satisfied, on reasonable grounds, that domestic and family violence has occurred, and may require proof such as:
- 41.4.1 an agreed document issued by the Police Force, a court, a domestic violence support service or a member of the legal profession;
 - 41.4.2 a provisional, interim or final Apprehended Violence Order (AVO), certificate of conviction or family law injunction; or
 - 41.4.3 a medical certificate.
- 41.5 Part-time employees will be entitled to the leave on a pro-rata basis.
- 41.6 Where the entitlements provided by this clause have been exhausted, other available leave entitlements provided for under this Award may be applied for by employees experiencing domestic and family violence.
- 41.7 Personal information concerning domestic violence will be kept confidential by the Department.
- 41.8 The Department, where appropriate, may facilitate flexible working arrangements subject to operational requirements, including changes to working times and changes to work location, telephone number and email address.

42. Special Leave for Union Activities

- 42.1 Attendance at Union Training, Conferences/Meetings
- 42.1.1 Employees who are members of the Union and accredited by the Union as a delegate (including an employee elected to hold office within the Union), and/or members of the State Committee of Management (SCOM) are entitled to special leave with pay to attend the following:
 - 42.1.1.1 annual or bi-annual conferences of the Union; and
 - 42.1.1.2 conferences of the United Firefighters Union of Australia; and
 - 42.1.1.3 meetings of the Union's Executive/Committee of Management; and
 - 42.1.1.4 annual conference of Unions NSW; and

- 42.1.1.5 bi-annual conference of the Australian Council of Trade Unions; and
- 42.1.1.6 meetings of the Death and Disability Board of directors.
- 42.1.2 While there is no limit on special leave for Union activities, such leave is to be kept to a minimum and is subject to the employee:
 - 42.1.2.1 establishing accreditation as a delegate with the Union or other position as outlined in clause 42.1.1; and
 - 42.1.2.2 providing sufficient notice of absence to the Department; and
 - 42.1.2.3 lodging a formal application for special leave.
- 42.1.3 Such leave is also subject to the Union:
 - 42.1.3.1 providing documentary evidence to the Department about an accredited delegate in sufficient time to enable the Department to make arrangements for performance of duties; and
 - 42.1.3.2 meeting all travelling, accommodation and any other costs incurred for the employee; and
 - 42.1.3.3 providing the Department with confirmation of attendance of the employee.
- 42.1.4 Providing the provisions of this clause are satisfied by both the employee and the Union, the Department shall:
 - 42.1.4.1 release the employee for the duration of the training, conference or meeting;
 - 42.1.4.2 grant special leave (with pay); and
 - 42.1.4.3 ensure that the duties of the absent employee are performed in his/her absence, if appropriate.
- 42.1.5 Period of Notice
 - 42.1.5.1 Generally, dates of training, conferences or meetings are known well in advance and it is expected that the Department would be notified as soon as accreditation has been given to a delegate or at least two weeks before the date of attendance.
 - 42.1.5.2 Where extraordinary meetings are called at short notice, a shorter period of notice would be acceptable, provided such notice is given to the Department as soon as advice of the meeting is received by the employee.
- 42.1.6 Travel Time
 - 42.1.6.1. Where an employee has to travel to Sydney, inter or intra State, or international to attend a conference or meeting, special leave will also apply to reasonable travelling time to and from the venue of the conference or meeting.
 - 42.1.6.2 No compensation is to be provided if travel can be and is undertaken on an accredited delegate's non-working day or before or after his/her normal hours of work.
- 42.1.7 Payment
 - 42.1.7.1 Employees entitled to special leave in terms of this clause shall, for such special leave, receive their full rate of pay as if they worked during the period of the leave. Provided that for the purposes of this clause "normal rate of pay" will include

allowances except for the Relieving Allowance set at Item 16 of Table 1 of Schedule 2.

42.1.8 Special leave in terms of this clause shall count as service for all purposes.

42.1.9 Special Leave shall not be available to employees whilst they are rostered off duty or on any period of other leave.

43. Cultural and Ceremonial Leave

43.1 The parties to this Award recognise the value and cultural diversity of all employees and therefore shall provide the opportunity to participate in activities of cultural, ceremonial, or religious significance for employees who are required to observe such days. This includes the opportunity for employees who identify as Aboriginal or a Torres Strait Islander to attend National Aborigines and Islanders Day of Observance Committee events.

43.2 Where attendance requires time away from work, Employees may apply for any accrued leave (excluding sick and carers leave) to which they may be entitled.

44. Military Leave

44.1 Employees who are members of the Australian Defence Force Reserves are entitled to military leave on full pay for compulsory annual training, schools, classes, courses of instruction, or compulsory parades on the following basis:

44.1.1 184 hours per financial year for the Navy;

44.1.2 184 hours per financial year for the Army;

44.1.3 206 hours per financial year for the Air Force;

44.2 If a public holiday falls within a period of military leave, employees will be allowed an additional 8 hours military leave provided the public holiday coincides with a rostered working shift.

44.3 The Department may also grant special leave of up to one full shift or one full day depending on the employees' roster to attend medical examinations and tests required for acceptance as a Reservist.

44.4 Further military leave may also be taken from an employee's consolidated, annual or long service leave balance or as leave without pay.

44.5 Where operational requirements dictate that it would not be in the public interest for the Department to grant military leave at a particular time, leave will be made available to attend an equivalent training opportunity at another time.

44.6 Employees must provide 24 hours notice of their intention to take Military leave before commencement of the leave and earlier if possible so that relieving arrangements can be made.

45. Jury Duty Leave

45.1 Employees who attend jury duty will be granted special leave on full pay provided that:

45.1.1 The jury duty is at a time when they would otherwise be on duty; and

45.1.2 The Employee has a certificate of attendance from the Sheriff or Registrar of the court setting out the date of attendance and certifying that the Employee was not paid any jury fees other than out-of-pocket expenses.

45.2 If an Employee has accepted jury fees, the Employee can choose to take either annual leave on full pay or leave without pay.

- 45.3 If special leave for jury duty is granted for part of a day shift, an Employee may choose to return to work and complete the rest of the day shift or apply for annual or consolidated leave for the balance of the shift.
- 45.4 If an Employee is rostered for night shift after attending jury duty, an Employee must have at least eight hours off duty between the finish of jury duty and the commencement of their night shift.
- 45.5 If an Employee attends jury duty while on annual leave or another form of authorised leave, the Employee can apply for special leave and a recredit of the annual leave or other authorised leave.

A6 - CLASSIFICATIONS, CAREER PATHS & PROMOTIONS

46. Classifications

- 46.1 All employees covered by this Award will be employed in one of the following ranks and will be provided by FRNSW the opportunity to complete and hold all the qualifications and competencies for the rank as determined by the Commissioner following consultation with the Union in accordance with clause 9.
- 46.2 All employees covered under this Award will be employed at one of the following ranks/classifications specified below:
 - 46.2.1 Recruit Firefighter
 - 46.2.2 Firefighter (who will hold a Certificate II in Public Safety (Firefighting and Emergency Operations)).
 - 46.2.3 Qualified Firefighter (who will hold a Certificate III in Public Safety (Firefighting and Emergency Operations)).
 - 46.2.4 Senior Firefighter
 - 46.2.5 Leading Firefighter
 - 46.2.6 Station Officer (who will hold a Certificate IV in Public Safety (Firefighting and Emergency Operations)).
 - 46.2.7 Leading Station Officer
 - 46.2.8 Inspector
 - 46.2.9 Superintendent
 - 46.2.10 Chief Superintendent
- 46.3 Progression and promotion through the ranks will be in accordance with clause 47. Where an employee is eligible for promotion Fire and Rescue New South Wales will, in accordance with the provisions of this Award, ensure employees are provided the opportunity to attain the necessary qualifications for that rank.
- 46.4 The parties agree that during the life of this Award the Training Subcommittee will develop an agreed framework for inclusion in any future Award which will specify the specific qualifications and competencies required for each rank.

47. Progression and Promotion

Progression and Promotion Provisions

- 47.1 All employees shall commence and remain on probation until the expiration of six weeks following their progression to Firefighter and shall thereafter be required to satisfy and maintain the competencies specified for their rank in accordance with clause 46.2.

Recruit Firefighter to Firefighter

- 47.2 Progression from Recruit Firefighter to Firefighter shall be subject to the satisfactory completion of the training and/or training competencies in accordance with clause 46.2.

Firefighter to Qualified Firefighter

- 47.3 Progression from Firefighter to Qualified Firefighter shall be subject to twenty four (24) months service from the date of commencement as a Recruit Firefighter and the satisfactory completion of the training and/or training competencies in accordance with clause 46.2.
- 47.4 Progression to Qualified Firefighter is a mandatory achievement required for all Firefighters.

Qualified Firefighter to Senior Firefighter

- 47.5 Progression from Qualified Firefighter to Senior Firefighter shall be subject to at least seventy two (72) months service from the date of commencement as a Recruit Firefighter and the satisfactory completion of the training and/or training competencies in accordance with clause 46.1.

Senior Firefighter to Leading Firefighter

- 47.6 Progression from Senior Firefighter to Leading Firefighter shall be subject to the satisfactory completion of the Leading Firefighter Program in accordance with clause 46.1.
- 47.6.1 Applications for Leading Firefighter Program positions shall be called for from eligible applicants in Commissioner's Orders, with the closing date for applications to follow four weeks thereafter. The number and location of Leading Firefighter Program positions available shall be specified in the same Commissioner's Orders.
- 47.6.2 An eligible applicant for the purposes of subclauses 47.6.1 and 47.6.3 shall be a Senior Firefighter who: firstly, has completed at least twenty four (24) months service with Fire and Rescue NSW at Senior Firefighter rank as of the closing date for applications; secondly, has already taken the tests referred in subclause 47.6.3; and thirdly, is permanently attached to a station within the Transfer Register area in which the Leading Firefighter Program position is available. For the purposes of subclause 47.6 only, the GSA shall be considered a Transfer Register area and a permanent occupant of a Non-Station Based position shall be considered to be permanently attached to a station within the GSA regardless of their actual work location.
- 47.6.3 The successful applicants for Leading Firefighter Program positions shall be determined by order of the results achieved by eligible applicants in tests specified by the Commissioner following consultation between the Department and the Union in accordance with clause 9 of this Award. The Department shall accept the same number of eligible applicants as there were positions advertised for that location in accordance with subclause 47.6.1, provided that for each Non-Station Based applicant who is initially accepted the Department shall also accept one further Non-Station based applicant, so that the final number of Non-Station based applicants accepted within the GSA shall be equal to the number of positions advertised.
- 47.6.4 Senior Firefighters accepted onto the Leading Firefighter Program who subsequently fail to satisfactorily complete the Program within a reasonable time shall be removed from the

Program and shall not be readmitted to the Program unless and until such time as they successfully re-apply pursuant to subclauses 47.6.1, 47.6.2 and 47.6.3.

Leading Firefighter to Station Officer

47.7 Promotion from Leading Firefighter to Station Officer shall be determined by the merit selection process specified by the Commissioner following consultation between the Department and the Union and shall be subject to successful application for an advertised Station Officer vacancy and the satisfactory completion of the training and/or training competencies in accordance with 46.1.

47.7.1 Subject to subclause 28.7, applications for promotion to Station Officer shall be called for from Leading Firefighters with at least twelve (12) months service with Fire and Rescue NSW at that rank as of the closing date for applications, in Commissioner's Orders, with the closing date for applications to follow four weeks thereafter. The number (and, if located outside of the GSA and Regional Transfer Register areas listed at subclause 28.2.2, both the number and the location) of Station Officer positions available shall be specified in the same Commissioner's Orders.

47.7.2 Leading Firefighters who successfully apply pursuant to subclause 47.7.1 (or Senior Firefighters who successfully apply pursuant to subclause 28.7.2) and who subsequently fail to satisfactorily complete the Station Officer Program within a reasonable time shall be removed from the Program and shall cease to be eligible for such promotion. Nothing shall prevent such employees from re-applying pursuant to subclause 47.7.1.

Station Officer to Leading Station Officer

47.8 Progression from Station Officer to Leading Station Officer shall be subject to the satisfactory completion of the Leading Station Officer Program specified at clause 46.1 and, in the case of a Station Officer who is a permanent occupant of a Non-Station based team member position or who applies pursuant to subclause 47.8.2.1.2, transfer to a station within the GSA.

47.8.1 Applications for Leading Station Officer Program positions shall be called for from eligible applicants in Commissioner's Orders, with the closing date for applications to follow four weeks thereafter. The number and location of Leading Station Officer Program positions available shall be specified in the same Commissioner's Orders.

47.8.2 An eligible applicant for the purposes of subclauses 47.8.1 and 47.8.3 shall be a Station Officer who has completed at least twelve (12) months service with Fire and Rescue NSW at Station Officer rank as of the closing date for applications, provided that:

47.8.2.1 if the Leading Station Officer Program position available is located within the GSA, the applicant must also be either:

47.8.2.1.1 permanently attached to a station within the GSA; or

47.8.2.1.2 permanently attached to a station located both outside of the GSA and outside of a Regional Transfer Register Area; or

47.8.2.1.3 the permanent occupant of a non-station based position; or

47.8.2.2 if the Leading Station Officer Program position available is located outside of the GSA but within a Regional Transfer Register Area, the applicant must also be permanently attached to a station within that Regional Transfer Register area; or

47.8.2.3 if the Leading Station Officer Program position available is at a Country Officer station (as defined by subclause 28.7.2.1) and there is no Station Officer vacancy at that station, the applicant must also be permanently attached to that station.

- 47.8.3 The successful applicants for a Leading Station Officer Program position shall be selected from the eligible applicants using the selection process specified by the Commissioner following consultation between the Department and the Union. The Department shall accept the same number of suitable eligible applicants as there were positions advertised for that location in accordance with subclause 47.8.1.
- 47.8.4 Station Officers accepted onto the Leading Station Officer Program who subsequently fail to satisfactorily complete the Program within a reasonable time shall be removed from the Program and shall not be readmitted to the Program unless and until such time as they successfully re-apply pursuant to subclauses 47.8.1, 47.8.2 and 47.8.3.

Leading Station Officer to Inspector

- 47.9 Promotion from Leading Station Officer to Inspector shall be determined by the merit selection process specified by the Commissioner following consultation between the Department and the Union and shall be subject to successful application for an advertised Inspector vacancy and the subsequent satisfactory completion of the Inspector Program in accordance with clause 46.1.
- 47.9.1 Subject to subclause 28.7, applications for promotion to Inspector shall be called for from Leading Station Officers with at least twelve (12) months service with Fire and Rescue NSW at that rank as of the closing date of applications, in Commissioner's Orders, with the closing dates of applications to follow four weeks thereafter. The number (and, if located in areas outside of the GSA and the Newcastle, Central Coast and Illawarra Transfer Register areas, both the number and the location) of Inspector and/or Non-Station Based Team Leader positions available shall be specified in the same Commissioner's Orders.
- 47.9.2 Leading Station Officers who successfully apply pursuant to subclause 47.9.1 (or Station Officers who successfully apply pursuant to subclause 28.7.3) and who subsequently fail to satisfactorily complete the Inspector Program within a reasonable time shall be removed from the Program and shall cease to be eligible for such promotion. Nothing shall prevent such employees from re-applying pursuant to subclause 47.9.1.

Inspector to Superintendent

- 47.10 Promotion from Inspector to Superintendent shall be determined by the merit selection process specified by the Commissioner following consultation between the Department and the Union in accordance with clause 9.

Chief Superintendent

- 47.11 Promotion from Inspector or Superintendent to Chief Superintendent shall be determined by the merit selection process specified by the Commissioner following consultation between the Department and the Union in accordance with clause 9.

General Provisions

- 47.12 While the progression/promotion provisions specified in this clause refer to minimum periods of service as one of the requirements for such progression/promotion, the Department and the Union acknowledge and accept that:
- 47.12.1 Minimum periods of service for each rank may only be varied by agreement with the Union following consultation in accordance with clause 9.
- 47.12.2 Further, any variance to the qualifications, training and/or training competencies shall be reviewed by the Training Subcommittee who will make recommendation to the Joint Consultation Committee outlined at clause 9.

- 47.12.3 An employee with prior employment in the firefighting industry may apply to have the minimum periods of service reduced and/or qualifications recognised required for their progression to Qualified Firefighter and/or to Senior Firefighter and/or recognition of specialist qualification(s). The extent of any reduction in minimum period of service, which shall not be retrospective, and or/recognition of any qualifications, shall be determined by the Training Subcommittee after taking into account all of the circumstances of the employee's prior employment and equivalent units of competency required by FRNSW.
- 47.12.4 The date that an employee satisfactorily completes the required training and/or training competencies shall be the date that the employee applied to be assessed and not the actual date of their assessment. Where an employee is assessed as not yet competent in any of the required training and/or training competencies then, provided the firefighter requests re-assessment within one month of the 'not yet competent' assessment, the date of satisfactory completion will be set back by one month after the date the firefighter first applied to be assessed.
- 47.13 The reference to "reasonable time" in this clause means, in each instance, a period in excess of twelve (12) months. The excess time to be allowed shall be determined by the Commissioner after taking into account all of the circumstances of the case of the employee concerned.
- 47.14 New Promotional Pathways
- 47.14.1 The parties agree that by no later than three months of the making of this Award, a new promotional pathway will be implemented for promotions from:
- (a) Senior Firefighter to Leading Firefighter
 - (b) Leading Firefighter to Station Officer
 - (c) Station Officer to Leading Station Officer
 - (d) Leading Station Officer to Inspector
- 47.14.2 These new promotional pathways will be developed via a promotional working group that will comprise of equal number of representatives of Fire and Rescue New South Wales and the Fire Brigade Employee's Union with such working group to operate as a subcommittee of the Joint Consultative Committee established at clause 9.
- 47.14.3 The development and implementation of the new promotional pathways will only occur in accordance with the consultative arrangements of this Award.
- 47.14.4 The parties agree that the new promotional pathways will include the following elements:
- (a) Agreed minimum periods of service at a below rank prior to being able to seek promotion;
 - (b) A requirement for employees to pass a standard knowledge based pre-qualifying assessment prior to being able to seek promotion;
 - (c) A structured promotional development program that is capability based with nationally accredited units of competency and qualifications awarded as a result;
 - (d) Multiple pathways of promotion by merit inclusive of selection on a promotional program, merit selection into a non-station based role and merit selection into second round advertisements/hard to fill roles;
 - (e) clear and defined pathways for promotion with relevant and agreed tenures applied where necessary;
 - (f) Streamlining of promotional programs to deliver full qualification at the leading ranks;
 - (g) Transfers into substantive operational roles via an agreed promotional register;

- (h) other matter the Joint Consultative Committee determines are relevant.

47.14.5 The working party will make recommendation to the Joint Consultative Committee on the new promotional programs by no later than three months of the making of this Award.

48. Training Subcommittee

48.1 The parties have agreed to rename the current previous training Review Committee to the training subcommittee which will be an agreed subcommittee of the Joint Consultative Committee outlined at clause 9.

48.2 The Training Subcommittee shall provide advice and recommendation to the Joint Consultative Committee on all items referred to it by the Joint Consultative Committee along with matters relating to establishing and/or maintaining an effective and equitable system of training in Fire and Rescue NSW using the principles of Competency Based Training.

48.3 The role of the Training Subcommittee will include (but not be limited to):

48.3.1 advising on the further development of training throughout Fire and Rescue NSW;

48.3.2 advising on the implementation of a Competency Based Training regime throughout Fire and Rescue NSW;

48.3.3 considering Recognised Prior Learning (RPL) policy generally and in particular, the consideration of individual applications for RPL.

48.3.4 any other matters referred to it by the Joint Consultative Committee in accordance with clause 9.

48.4 Procedure

48.4.1 The Training Subcommittee will meet at least once every four weeks, or as otherwise agreed between the parties;

48.4.2 Union Representatives on the Subcommittee will attend in accordance with clause 52.

48.4.3 The Subcommittee will be adequately resourced by the Department so that it can effectively fulfil the above roles.

49. Station Based and Non-Station Based Positions

49.1 All employees covered under this Award, along with their substantive rank, will occupy either a Station Based or Non-Station Based position.

49.2 Station Based Positions are those that are located generally at fire stations or zone where the primary role of the position is operational and emergency response or the management of operational and emergency response including employees employed in Communications Positions.

49.3 Non-Station Based Positions are all other substantive positions which are or can be held by employees covered under this Award including those previously known as Operational Support Positions.

49.4 Non-Station Based Roles

49.4.1 All Non-Station Based Roles will be advertised for a minimum period of 6 weeks and open to any eligible employee to apply. Selection to Non-Station Based Roles will be via a merit process which will be consulted on with the Union in accordance with clause 9 by no later than three months following the making of this Award.

- 49.4.2 Eligible employees to apply for Non-Station Based Roles up to the Rank of Inspector will be as follows:
- 49.4.2.1 Non-Station Based Role (Team Member) - open to all employees who have attained the rank Station Officer, Leading Firefighter, Senior Firefighter or Qualified Firefighter (with a minimum of 24 months service at the rank of Qualified Firefighter as of closing date for applications).
 - 49.4.2.2 Non-Station Based Roles (Team Leader) - open to all employees who have obtained the rank of Inspector, Leading Station Officer and Station Officer (with a minimum of 24 months service at the rank of Station Officer as of the closing date for applications).
 - 49.4.2.3 Where a Non-Station Based Team (Team Leader) Role is advertised, a Leading Station Officer (with less than 12 months service at the rank of Leading Station Officer as of the closing date for applications) and Station Officer (with a minimum of 24 months service at the rank of Station Officer as of the closing date for applications) will only be selected for the role if there are no applicants deemed suitable following a merit based selection process from either the rank of Inspector or Leading Station Officer (with a minimum of 12 months service at the rank of Leading Station Officer as of the closing date for applications).
- 49.4.3 Where an employee is successfully appointed to a Non-Station Based role they will be remunerated as follows:
- 49.4.3.1 For Non-Station Based (Team Member) positions, employees will be paid the weekly rate of pay for their substantive rank at Table 1 of Schedule 1 of this Award, plus 15% of that weekly substantive rank rate of pay in a weekly allowance at Table 1 of Schedule 1 of this Award, and any other allowances at Table 1 of Schedule 2 of this Award they are eligible to attract. The 15% weekly allowance will be payable for all purposes and form part of their ordinary time earnings for the purposes of superannuation.
 - 49.4.3.2 For Non-Station Based (Team Leader) positions, employees will be paid the weekly rate of pay for their substantive rank at Table 1 of Schedule 1 of this Award, plus 20% of that weekly substantive rank rate of pay in a weekly allowance at Table 1 of Schedule 1 of this Award, and any other allowances at Table 1 of Schedule 2 of this Award they are eligible to attract. The 20% weekly allowance will be payable for all purposes and form part of their ordinary time earnings for the purposes of superannuation.
- 49.4.4 All Non-Station Based positions will have a Position Description (which will be consulted on with the Union in accordance with clause 9) which will be provided as part of any advertisement of the position and shall include:
- 49.4.4.1 Title;
 - 49.4.4.2 Statement of duties;
 - 49.4.4.3 Hours of work, specifying which roster is to be worked pursuant to clause 21 of this Award; and
 - 49.4.4.4 Any tenure attached to the role which a successful application would be required to serve in that role.
- 49.4.5 A register of established Non-Station Based Positions along with their Position Descriptions shall be maintained by the Department and provided to the Union on their request.

- 49.4.6 Unless expressly provided elsewhere within this Award, the general conditions of employment for occupants of Non-Station Based Positions will be the same as those for employees occupying Station-Based positions.
- 49.4.7 Time spent in a Non-Station Based position shall count for the minimum periods of service as required by clause 48 Progression and Promotion.
- 49.4.8 Occupants of Non-Station Based positions who are temporarily directed to undertake operational firefighting duties and/or attend an incident in the capacity of their substantive operational rank, not their Non-Station Based position, shall continue to be paid at their Non-Station Based position's rate of pay.
- 49.4.9 Occupants of Non-Station Based positions may request to return to a Station Based Positions for a minimum of one month each year. No such request will be unreasonably refused. During such period in a Station Based position the employee will be paid at the rate of their substantive rank for the duration along with any other eligible conditions however will not receive their additional payment for occupying a Non-Station based role.
- 49.4.10 Urban Search and Rescue Training (only) may be delivered by "casual" instructors, who will be paid at the Non-Station Based (Team Leader) rate of pay (plus applicable allowances) while performing USAR instructor duties and at their substantive rank's rate of pay (plus applicable allowances) at all other times. For the avoidance of doubt, an employee performing the role of a casual instructor remains entitled to other conditions contained in this Award while performing those duties, to which they are entitled.
- 49.4.11 Non-Station Based Position Promotion Pathways
- 49.4.11.1 In the event that no eligible employees apply, or all applicants are deemed unsuitable following a merit selection process for a Non-Station Based (Team Member) position, the position may be re-advertised for a further period of 6 weeks with offering a promotional pathway for applicants from the rank of Leading Firefighter and Senior Firefighter (with a minimum of 24 months service at the rank of Senior Firefighter as of closing date for applications):
- 49.4.11.1.1 In the case of a Leading Firefighter, the employee successfully appointed to the role may commence in the position immediately and will be provided the opportunity to complete any necessary training and achieve any necessary qualifications (in accordance with clause 46) for promotion to Station Officer. On promotion of Station Officer the employee will be paid in accordance with subclause 49.4.3.1 as a Station Officer.
- 49.4.11.1.2 Should there be no applications from the rank of Leading Firefighter, or no applicants at that rank are deemed suitable following a merit selection process, Senior Firefighters applicants (with a minimum of 24 months service at the rank of Senior Firefighter as of closing date for applications), may be considered. If a Senior Firefighters (with a minimum of 24 months service at the rank of Senior Firefighter as of closing date for applications), is appointed to the role, they may commence in the position immediately and will be provided the opportunity to complete any necessary training and achieve any necessary qualifications (in accordance with clause 46) for promotion to Leading Firefighter and subsequently Station Officer. When an employee in these circumstances completes the necessary training and achieve the necessary qualifications (in accordance with clause 46) for promotion to Leading Firefighter, they will not be promoted to that rank but will be paid in accordance with subclause 49.4.3.1 as if they were a Leading Firefighter. The employee will be substantively promoted Station Officer when they complete the necessary training and achieve the necessary qualifications (in accordance with clause 46) to attain the rank of Station

Officer. At that time the employee will be promoted to Station Officer and will be paid in accordance with subclause 49.4.3.1 as a Station Officer.

49.4.11.2 A Non-Station Based (Team Leader) position advertised in accordance with subclause 49.4.1 and 49.4.2 can be advertised initially offering a promotional pathway for applicants from the rank of Leading Station Officer and Station Officer (with a minimum of 24 months service at the rank of Station Officer as of the closing date for applications) as follows:

49.4.11.2.1 In the case of a Leading Station Officer (with a minimum of 12 months service at the rank of Leading Station Officer as of the closing date for applications), the employee may commence in the position immediately and will be paid in accordance with subclause 49.4.3.1 as a Leading Station Officer. Such employee will then be provided with the opportunity complete any necessary training and achieve any necessary qualifications (in accordance with clause 46) for promotion to Inspector at which point they will be promoted to Inspector and will be paid in accordance with subclause 49.4.3.1 as an Inspector.

49.4.11.2.2 In the case of a Leading Station Officer (with less than 12 months service at the rank of Leading Station Officer as of the closing date for applications) the employee may commence in the position immediately and will on commencement be paid in accordance with subclause 49.4.3.1 as a Leading Station Officer. On completion of 12 months service at the rank of Leading Station Officer the employee will be provided the opportunity to complete the necessary training and achieve the necessary qualifications for promotion to Inspector. On promotion to Inspector the employee will commence in the vacant position and will be paid in accordance with subclause 49.4.3.1 as an Inspector.

49.4.11.2.3 In the case of a Station Officer (with a minimum of 24 months service at the rank of Station Officer as of closing date for applications) the employee may commence in the position immediately and will, on commencement in the position, be paid in accordance with subclause 49.4.3.1 as a Station Officer, and they will be provided with the opportunity to complete any necessary training and achieve any necessary qualifications (in accordance with clause 46) for promotion to Leading Station Officer. When an employee in these circumstances completes the necessary training and achieve the necessary qualifications (in accordance with clause 46) for promotion to Leading Station Officer, they will not be promoted to that rank but will be paid in accordance with subclause 49.4.3.1 as if they were a Leading Station Officer. Following the completion of 12 months service at the rank of Leading Station Officer, the employee will be provided with the opportunity to complete any necessary training and achieve any necessary qualifications (in accordance with clause 46) for promotion to Inspector. The employee will be substantively promoted Inspector when they complete the necessary training and achieve the necessary qualifications (in accordance with clause 46) to attain the rank of Inspector. At that time the employee is promoted to Inspector they will be paid in accordance with subclause 49.4.3.1 as an Inspector.

49.4.12 Ad Hoc ComSafe Duties

49.4.12.1 Off duty employees who are not occupying a Non-Station Based position in ComSafe and who elect to perform ComSafe duties shall be paid the hourly rate set at Item 20 of Table 1 of Schedule 2 of this Award. It is expressly provided that an off duty employee who is not occupying a Non-Station Based position in ComSafe cannot be directed to perform ComSafe duties.

49.4.12.2 The hourly rate prescribed at subclause 49.4.12.1 is an all inclusive rate and, notwithstanding anything else prescribed in this Award, employees receiving such rate shall:

- (a) only be paid for the time actually worked, subject to a minimum payment equivalent to three hours pay on each occasion and to continuous payment for work performed on any calendar day;
- (b) be paid the accommodation allowances set at Item 7 of Table 2 of Schedule 2 for each day that the distance travelled between the employee's residence and the furthest location where the work is performed exceeds 100 kms and the employee resides away from home (evidence of which may be required prior to payment), and shall not otherwise be entitled to payment or compensation for travelling time or travelling costs or meals and/or accommodation in connection with the work performed;
- (c) not be entitled to the payment of overtime in connection with the work performed

49.5 Additional Non-Station Based Positions

49.5.1 The parties will consult in accordance with clause 9 regarding the viability of establishing a team of Non-Station Based position in each of the Area Commands (Regional North, West and South and Metro North, West, South and East).

49.6 Additional Alternate Duties Positions

49.6.1 The parties will consult in accordance with clause 9 regarding the viability of establishing additional alternate duties Station Based position on each platoon and on the roster worked at a particular station in recognition of the need to provide appropriate alternate duties roles where required by employees taking into account employee's circumstances.

49.7 Savings

49.7.1 Employees who at the time of making this Award occupy positions previously known as "Operational Support" will translate to the structure provided for in this clause and be placed into either Non-Station Based (Team Member) positions or Non-Station Based (Team Leader) positions. Non-Station Based (Team Member) positions will be those initially advertised at the rank Operational Support Level 2 and Non-Station Based (Team Leader) positions will be those advertised at Operational Support Level 3.

49.7.2 Employees referenced in subclause 49.7.1 will either continue to receive their current rate of pay or the rate of pay applicable in this clause, whichever is the greater.

50. Training and Staff Development

50.1 Employees covered by this Award will complete appropriate training, as specified by the Commissioner following consultation with the Union under clause 9, to maintain their skills and improve the productivity and efficiency of the Department's operations.

50.2 Upon request by an employee, the Department will consider an application by an employee to attend a course which is appropriate, relevant and recognised by the Department but is not essential for promotion. If approval is granted by the Department for the employee to attend such a course, the employee shall be entitled to the provisions of clause 51 of this Award.

51. Training Course Attendance Entitlements

51.1 The provisions of this Clause shall apply to employees who participate, with Departmental approval, in training programs, examinations or assessments conducted by, on behalf of, or approved by the

Department. For the purposes of this Clause, references to "training" or "course" shall be taken to include such examinations or assessments.

51.2 Accommodation

- 51.2.1 The Commissioner (or delegate) shall approve appropriate accommodation for an employee, if it can be demonstrated that an unreasonable amount of travelling time and/or distance is involved when travelling to and from the employee's residence to the training venue.
- 51.2.2 Where an employee attends a course within the Greater Sydney Area (GSA), and if the travelling time to and from the training venue exceeds two (2) hours each way (by the approved mode of transport) or if the return distance from the employee's residence to the training venue exceeds 175 kilometres, the employee shall be entitled to appropriate accommodation.
- 51.2.3 Where Departmental accommodation is not provided to an employee with an entitlement to accommodation, the relevant accommodation allowance prescribed by clause 19, Travelling Compensation shall be paid.
- 51.2.4 Where it is not possible for an employee to travel to the training venue on the first day of the course or where the travelling time would be unreasonable to travel on the first day of the course, the employee shall be entitled to appropriate accommodation on the evening prior to the start of the course. If it is not possible for an employee to travel from the training venue to his or her residence at the conclusion of the course or if the travelling time would be unreasonable, the employee shall be entitled to appropriate accommodation on the evening of the last day of the course. Approval must be obtained from the Commissioner (or delegate) prior to bookings being made.
- 51.2.5 Appropriate accommodation for employees who attend courses outside the GSA shall be determined by the Commissioner (or delegate) having regard to the above criteria.
- 51.2.6 Where the training program requires evening attendance the employee shall be granted appropriate accommodation irrespective of the employee's work location or residential address.
- 51.2.7 Notwithstanding the above, any employee who considers that these criteria would cause undue hardship etc. may make application for special consideration. All such applications will be considered on their individual merits according to the program content and the starting and completion times, on a daily basis.

51.3 Meals

- 51.3.1 Excluding the Recruit Firefighters Program and Departmental training programs/courses which are conducted at Departmental premises which have meal room facilities comparable to those provided at fire stations, all employees attending training programs which extend for a whole day shall be provided with morning/afternoon tea and lunch.
- 51.3.2 Where employees have been granted approval for overnight accommodation and when such accommodation is provided by the Department, expenses reasonably and properly incurred shall be reimbursed in accordance with clause 19, Travelling Compensation.
- 51.3.3 Employees who are not required to accommodate themselves overnight shall, where appropriate, be paid the relevant meal allowances prescribed by clause 19, Travelling Compensation.
- 51.3.4 Meal allowances are not payable during times at which an accommodation allowance (as prescribed in subclause 51.2.3 above) has been claimed. A component of the

accommodation allowance compensates for the costs associated with breakfast, lunch and evening meals.

51.4 Incidentals

51.4.1 Employees who are provided with Departmental accommodation shall be entitled to claim the appropriate incidentals allowance as prescribed by clause 19, Travelling Compensation.

51.4.2 The incidental allowance cannot be claimed for any day during which an accommodation allowance referred to in subclause 51.2.3 above is paid. The incidental allowance forms a component of the accommodation allowance and, amongst other things, recognises the cost associated with personal telephone calls, etc.

51.5 Excess Fares

51.5.1 Any employee who incurs additional transport costs while travelling to and from the training venue shall be entitled to have the additional expenses reimbursed. The additional expenses will be calculated on the basis of public transport costs.

51.5.2 Where an employee is granted approval to utilise the employee's private vehicle in lieu of public transport, the appropriate specified journey rate, set at Item 1 of Table 2 of Schedule 2, shall be paid in respect of the kilometres travelled in excess of the employee's normal journey to and from work.

51.5.3 Where a first class rail service (or its equivalent) is reasonably available, an employee may utilise this service and be reimbursed for the cost of the fare.

51.6 Excess Travelling Time

51.6.1 Employees without an accommodation entitlement shall be entitled to compensation for excess travelling time for each day of the course.

51.6.2 Employees who accept accommodation shall be entitled to compensation for excess travelling time in respect of the first forward journey to and the last journey from the course venue. Where the course extends beyond one (1) week, employees who return to their residences on weekends shall be entitled to excess travelling time and excess fares for the additional forward and return journeys.

51.6.3 Unless special circumstances exist, employees who have an accommodation entitlement, but who decline accommodation, shall only be entitled to compensation for excess travelling time in respect of the first forward journey to and the last journey from the training venue.

51.6.4 Compensation shall be in accordance with clause 19, Travelling Compensation.

51.7 Mode of Transport

51.7.1 Employees shall be advised of the approved transport arrangements prior to the commencement of the training program. Such approval shall be based on the most practical and economic means of transport having regard to the entitlements contained in this clause, provided that an employee cannot be directed by the Department to use the employee's private vehicle.

51.7.2 Any employee who wishes to use alternative means of transport may only do so with the approval of the Commissioner (or delegate). Such approval must be obtained before travel commences.

- 51.7.3 If approval is granted to travel by an alternative means of transport any entitlements shall be based on the arrangements approved under subclause 51.7.1.

51.8 Relieving Allowances and Other Allowances

- 51.8.1 Attendance at a training program does not in itself attract the payment of relieving allowances. However, any employee in receipt of relieving allowances or other allowances relating to qualifications or work performed at the time the program commences, shall continue to be paid the allowances which would normally be paid. Provided that such allowances shall only be paid for those days on which the employee would normally have been rostered for duty.
- 51.8.2 Relieving employees shall not be paid any additional relieving allowances as a consequence of undertaking a training program.

51.9 Kilometre Allowance

- 51.9.1 The kilometre allowance prescribed by clause 25, Relieving Provisions, is not payable to employees when they attend a training program.
- 51.9.2 The provisions of subclause 51.5.2 above shall apply to any employee who is granted approval to utilise his or her private vehicle for transport to and from the training venue.

51.10 Attendance at Courses Whilst on Annual or Long Service Leave or Rostered Off Duty

- 51.10.1 Subject to approval by the Department:
- 51.10.1.1 Where an employee elects to attend a course whilst on annual leave or long service leave, he or she will be re-credited with the appropriate leave for the hours spent attending the training course.
- 51.10.1.2 Where an employee elects to attend a course whilst rostered off duty, he or she shall be paid at overtime rates for the hours spent attending the course.
- 51.10.2 Where an employee is directed to attend a course while rostered off duty, he or she may choose to either be paid at overtime rates or be credited with consolidated leave for the hours spent attending the course.
- 51.10.3 All travelling time shall be compensated in accordance with clause 19, Travelling Compensation.

51.11 Stand Off

- 51.11.1 Where an employee is required by the Department to attend a course, any necessary stand off period shall be granted.

51.12 Payments in Advance

- 51.12.1 Employees attending a training course may, where reasonable and appropriate, elect to be advanced the following payments:
- I. accommodation allowance (subclause 51.2.3)
- II. meal allowances (subclause 51.3.3)
- III. incidental allowances (subclause 51.4.1)

- 51.12.2 The advice to employees of course arrangements shall be conveyed in writing and include details of the Centre at which claims for advance payments should be submitted. Submitted claims must include a copy of the relevant approval.
- 51.12.3 Accommodation allowances are only payable when approval is given for an employee to make his or her own accommodation arrangements.

A7 - EMPLOYMENT RELATIONSHIP

52. Attendance and Participation in Union Consultation Activities

- 52.1 The parties recognise the rights of employees to participate in Union including ensuring employees are appropriately represented by Union representatives and maintaining a healthy and safe workplace.
- 52.2 In recognition of this right an employee who is accredited by the Union to represent it in any consultative process under this Award including the Joint Consultative Committee and/or its subcommittees will be granted the necessary time off during working hours without loss of pay to attend meetings and/or participate in relevant activities required to carry out their functions subject to the employee reaching agreement on a local level with the relevant officer in charge so as to enable the employee to perform the activities.
- 52.3 Where such meetings/activities occur on an employees rostered day off, the employee will be paid at their single time rate of pay as if they were working during those hours for all time spent attending or participating in the relevant activities.
- 52.4 Where such meetings/activities occur during a period of annual or long service leave, the employee will be reccredited with hours of the relevant leave type without loss of pay for all time spent attending or participating in the relevant activities.

53. Court Attendance Entitlements

- 53.1 The provisions of this clause shall apply to employees attending Court and related conferences as a:
 - 53.1.1 result of the duties performed by the employee in the employee's position with the Department, including attendance at an incident.
 - 53.1.2 witness for the Crown but not as a result of the duties performed by the employee in the employee's position with the Department.
 - 53.1.3 witness in a private capacity.
- 53.2
 - 53.2.1 Any reference in this clause to "Court" is taken to also mean the "Industrial Relations Commission" (IRC) or any Court which arises out of the Industrial Relations Act (NSW) 1996, provided that an employee is only covered by this clause when:
 - 53.2.1.1 The Department requires them to attend to be cross examined;
 - 53.2.1.2 The Union requires them to attend to give evidence; or
 - 53.2.1.3 The matter in question is one that relates to one individual employee and is not a collective dispute, or
 - 53.2.1.4 The matter in question has been lodged in the name of an employee - that employee will be covered for all work performed in advancing their matter; or
 - 53.2.1.5 Any other circumstances which are agreed between the parties on a case-by-case basis.

- 53.2.2 The provisions of Clause 53.3 will apply to IRC matters where the employee meets one of the criteria at clause 53.2.1.
- 53.3 Where an employee attends at Court as a result of the duties performed by an employee in the employee's position with the Department, including attendance at an incident:
- 53.3.1 Such attendance shall be regarded as attendance in an Official Capacity and uniform must be worn.
- 53.3.2 The employee is entitled to be reimbursed for all expenses reasonably and necessarily incurred in excess of any reimbursement for expenses paid by the Court. Any such claim shall be in accordance with clause 19, Travelling Compensation. Other than as provided by subclause 53.3, employees are not entitled to claim nor retain any monies as witness' expenses. Any monies received, other than reimbursement of expenses actually and necessarily incurred, shall be paid to the Department.
- 53.3.3 Where the employee is required to attend while off duty, overtime shall be paid from the time of arrival at the Court to the time of departure from the Court. Travelling time shall be compensated in accordance with clause 19, Travelling Compensation. Where approval has been given to the employee to use the employee's private vehicle, employees shall be entitled to receive the appropriate Specified Journey Rate prescribed at Item 1 of Table 2 of Schedule 2. All public transport costs, reasonably and necessarily incurred, shall be fully reimbursed.
- 53.3.4 Where the employee receives a subpoena or notification of a requirement to attend Court, the employee must ensure that the Officer-in-Charge is informed of those commitments immediately. As far as is practicable, employees who are required to attend Court in an Official Capacity shall do so free from their ordinary duties and responsibilities.
- 53.3.5 The following provisions are to apply to ensure that employees attending Court are given adequate time free from duty to meet Court commitments:-
- 53.3.5.1 Day Shift
- Where an employee is rostered to work a day shift arrangements must be made within the normal protocol for the employee to be relieved whilst attending Court.
- 53.3.5.2 Night Shift
- An employee required to attend Court shall not be rostered for duty on the night shift which ceases on the day of the Court proceedings. When the employee is released from duty at the Court, and if required to report for duty that evening, such duty shall not commence until an eight hour break has been taken, pursuant to subclause 23.10 of clause 23, Overtime.
- 53.3.6 Where the employee is recalled to duty to attend Court while on Annual or Long Service Leave:
- 53.3.6.1 For each day or part thereof, such employee may elect to be reccredited with a full days leave or to be paid a minimum of eight hours at the rate of time and one half (i.e., half time in addition) for the first two hours and double time (i.e., time in addition) thereafter.
- 53.3.6.2 Time worked in excess of eight hours on any recall to duty during annual or long service leave shall be compensated at the rate of double time. The calculation of time worked for the purpose of calculating double time shall commence from the time duty commences at Court until the employee is excused from the Court.

- 53.3.6.3 Where the combined period of travelling time and Court attendance is less than or equal to eight hours, travelling time is included in the minimum payment prescribed in subclause 53.3.6.1. Where the combined period of Court attendance and travelling time exceeds eight hours, the excess travelling time shall be compensated for in terms of clause 19, Travelling Compensation.
- 53.3.7 Where an employee is subpoenaed to attend Court while on Sick Leave it is the responsibility of the employee to ensure that the circumstances are communicated to the Court. If the employee is still required to and does attend Court, the sick leave debited for that period will be recredited and the entitlement to reimbursement of expenses referred to above shall apply.
- 53.3.8 "Stand-By"
- 53.3.8.1 "Stand-By" for the purposes of this clause only, means a period when an employee is required to be immediately available, upon notice, to attend Court.
- 53.3.8.2 Where an employee is required to be on stand-by during a shift or, during any period when the employee is rostered off duty, the employee must, as soon as the requirement is known, advise his/her Officer-in-Charge.
- 53.3.8.3 Written confirmation from the Court of such necessity to be on Stand-By must also be provided.
- 53.3.8.4 Where an employee is rostered off-duty and is on Stand-By, the employee shall be entitled to be paid the appropriate amounts set at Item 18 of Table 1 of Schedule 2.
- 53.4 Where an Employee Attends Court as a Witness for the Crown but not as a result of the duties performed by the employee in the employee's position with the Department.
- 53.4.1 Employees shall be granted special leave of absence with pay for the period they are necessarily absent from duty, and shall pay to the Department all monies paid to them as witnesses, other than monies paid as a reimbursement of out of pocket expenses incurred by them in consequence of being so subpoenaed.
- 53.5 Where an Employee Attends Court in a Private Capacity, (i.e., not subpoenaed by the Crown).
- 53.5.1 Employees shall be granted leave of absence without pay for the period they are necessarily absent from duty or, if they so desire, may apply for consolidated leave and, in either case, may retain monies paid to them as witnesses.

54. Acknowledgment of Applications and Reports

- 54.1 When an employee makes an application or a report in writing, to the proper officer, the employee shall be sent a memorandum or email acknowledging its receipt and noting the matter contained therein.
- 54.2 The result of an application shall be communicated to the employee no later than fourteen days after a decision has been reached. In cases where no decision has been reached within one month the reason for the delay shall be communicated in writing, by memorandum or email, to the employee.
- 54.3 The provisions of this clause shall not apply in cases where other procedures are specifically stipulated (e.g., in Standing Orders or Commissioner's Orders).

55. Procedures, Reports and Charges

- 55.1 When an employee is summoned to appear before the employee's Senior Officer or before the department on a charge, appeal or formal inquiry, the employee shall be given particulars in writing of the charge or allegation, if any, against the employee, at least forty-eight hours before the hearing of the charge or appeal or the opening of the said inquiry. The employee shall be allowed access personally or

by a representative duly authorised in writing by the employee, to all or any of the official papers, correspondence or reports of the Department relating to the charge, appeal or subject of the said inquiry.

- 55.2 The employee shall also be allowed to give and to call evidence on the employee's own behalf and to hear all evidence given.
- 55.3 If an employee so requests the employee may be represented by an officer of the Union before the employee's Senior Officer or the Department on all such occasions.
- 55.4
- 55.4.1 No report about an employee shall be placed on the records or papers relating to that employee unless the employee concerned has been shown the said report.
- 55.4.2 If the employee disagrees with the report, the employee shall be entitled to make such a notation on the report.
- 55.4.3 Evidence that the employee has been shown the report will be by either the employee's signature thereon, or in accordance with subclause 55.4.4.
- 55.4.4 Where an employee refuses to sign the report, such refusal shall be immediately be noted upon the report by the Senior Officer handling the report, in such cases the Senior Officer will advise the employee that the refusal to sign will be noted on the report and that the report, together with such notation, will be placed on the records or papers relating to that employee.
- 55.4.5 Further to subclause 55.4.4, in such circumstances, the Department will notify the Union, in writing, within seven days of such refusal and the Union shall be given an opportunity of replying to the report.
- 55.4.6 If the employee so desires, any written response from either the employee or the Union shall also be placed amongst the records or papers relating to the employee or noted thereon.
- 55.5. Where the Department has, for its own purposes, arranged for a transcript to be taken of proceedings on a charge appeal or formal inquiry, a copy of such transcript shall be supplied, free of cost, to the employee and or employee representative concerned if, during the hearing or at the termination of the proceedings, a request therefore, in writing, is made by the employee and/or the employee representative.
- 55.6 After the Senior Officer has announced the recommendation or when the Department has made its decision as the result of a charge or an appeal, the employee concerned shall be informed thereof, in writing, within seven days after such announcement or decision has been made or has been given, as the case may be.
- 55.7 For the purposes of this clause "Senior Officer" means the employee's Senior Officer or an Officer of a higher rank.

56. Alcohol and Other Drugs

- 56.1 The joint Protocol on Drug and Alcohol Safety and Rehabilitation in the Workplace, signed by the Department and the Union on 18 March 1998, shall apply to all employees covered by this Award until 4 September 2013, when it will be replaced by the FRNSW Alcohol and Other Drugs Policy and associated FRNSW Alcohol and Other Drugs Testing Procedures which shall thereafter then apply to all employees covered by this Award.
- 56.2 The Department may develop a new Protocol, or revised Policy or Procedures following consultation between the Department and the Union in accordance with clause 9.

57. Anti-Discrimination

- 57.1 It is the intention of the parties bound by this Award to seek to achieve the object in 3(f) of the *Industrial Relations Act* 1996 to prevent and eliminate discrimination in the workplace. This includes discrimination on the grounds of race, sex, marital status, disability, homosexuality, transgender identity, age and responsibilities as a carer.
- 57.2 It follows that in fulfilling their obligations under the Disputes Procedures prescribed by clause 11 of this Award the parties have obligations to take all reasonable steps to ensure that the operation of the provisions of this Award are not directly or indirectly discriminatory in their effects. It will be consistent with the fulfilment of these obligations for the parties to make application to vary any provision of the Award which, by its terms or operation, has a direct or indirect discriminatory effect.
- 57.3 Under the *Anti-Discrimination Act* 1977, it is unlawful to victimise an employee because the employee has made or may make or has been involved in a complaint of unlawful discrimination or harassment.
- 57.4 Nothing in this Clause is taken to affect:
- 57.4.1 any conduct or act which is specifically exempted from anti-discrimination legislation;
 - 57.4.2 offering or providing junior rates of pay to persons under 21 years of age;
 - 57.4.3 any act or practice of a body established to propagate religion which is exempted under section 56(d) of the *Anti-Discrimination Act* 1977;
 - 57.4.4 a party to this Award from pursuing matters of unlawful discrimination in any State or Federal jurisdiction.
- 57.5 This Clause does not create legal rights or obligations in addition to those imposed upon the parties by legislation referred to in this Clause.

58. Right of Union Representatives

- 58.1 The parties recognise the importance of freedom of association and the right to Union representation in the workplace.
- 58.2 As such, no employee will be dismissed or injured in their employment, or have their position altered to their prejudice or be subject to any act by the employer to their prejudice solely for reasons of:
- 58.2.1 Their status as a Union member, Union employee or accredited representative; and/or
 - 58.2.2 Their participation or any proposal to participate in Union activities including but not limited to, consultation processes, disputes processes, campaigns and/or legal proceedings.
- 58.3 Accredited representatives of the Union will also have rights to freedom of communication both in the workplace and outside of the workplace in order to express the views of the Union without fear of dismissal, injury of their employment or any act of prejudice by the employer. Where accredited representatives express such views, the accredited representative will be clear that in expressing the view they are doing so as a Union accredited representative with the authority of the Union and not as an employee of the Department.

59. Employees' Duties

- 59.1 An employee may be directed to carry out duties which are within the limits of his or her skills, competence, and training, in such a manner, as may be required by the Department, provided that:
- 59.1.1 the direction is reasonable,

- 59.1.2 an employee who elects to relinquish a rank or qualification shall cease to be considered to be capable of carrying out the duties associated with that former rank or qualification, and
- 59.1.3 the direction is not otherwise inconsistent with a provision of this Award.
- 59.2 Any direction issued by the Department pursuant to subclause 59.1 shall be consistent with:
 - 59.2.1 the provision of a safe and health working environment,
 - 59.2.2 ensuring that the Department responds to relevant technological changes and changes in its operating environment in a timely and effective manner.
- 59.3 The parties to this Award shall work collaboratively to ensure the effective and reasonable operation of this clause.

A8 - HEALTH AND WELLBEING

60. Health Screening

- 60.1 The parties agree that the current system of health checks under the Crown Employees (Fire and Rescue NSW Firefighting Staff Death and Disability) Award 2022 will be replaced with a health screening program for all employees. The health screening program will operate as a trial for a period of 36 months, commencing on a date agreed between the parties. The trial will be reviewed after 12 months.
- 60.2 The key objectives of the health screening program are to promote the health and fitness of firefighters and ensure employees are screened for relevant occupational illness and injuries.
- 60.3 The health screening model and process, as described in this clause, is also the agreed, and only process for the Department to assess an employee's fitness for duty as against the inherent requirements of the role of a firefighter.
- 60.4 Employees will be assessed against an agreed health standard. The current agreed health standard is contained at Schedule 6 of this Award however the parties agree that the current health standard will be reviewed in line with the consultation provisions of clause 9 of this Award, during the life of this Award, with a view to developing as new health standard specific to the firefighting industry which is intended to replace the current agreed health standard in any future Award.
- 60.5 The health screening program will include:
 - (a) Medical examination by a general practitioner (primary focus on cardiovascular, respiratory and musculoskeletal systems);
 - (b) Pathology testing (general health markers; e.g. lipid profile, blood glucose level);
 - (c) Urinalysis;
 - (d) Twelve lead ECG;
 - (e) Cardiac Risk Profile (risk score based on Framingham study);
 - (f) Spirometry (lung function), if recommended by the firefighters nominated general practitioner;
 - (g) Vision;
 - (h) Audiometry (hearing), if recommended by the firefighters nominated general practitioner;
 - (i) Voluntary PFAS/PFOA blood testing and voluntary comprehensive cancer screening including PET scans which will be implemented within 6 months of the commencement of the trial.
- 60.6 Health Screening
 - 60.6.1 A health screen will be undertaken by each employee at every five year anniversary of their employment with the Department.
 - 60.6.2 It is the sole responsibility of the Department to contact the employee in writing at least 12 months prior to each five year anniversary of the employee and advise them of the requirement to

complete a Health Screen by no later than the date of the relevant five year anniversary of employment. This contact will be in writing and must include:

- (a) a full list of agreed tests (based on the agreed health standard and agreed tests as per clause 60.5) required to be completed;
- (b) a copy of the agreed health standard;
- (c) an agreed checklist and clearance form to be developed between the parties in accordance with clause 9 of this Award to be completed by the employee's nominated medical practitioner.

60.6.3 Where the Department fails to meet each of their obligations as outlined in clause 60.6.2, the employee is not required to complete the health screen at that five year anniversary and cannot be required to do so until their next five year anniversary, unless the employee elects to do so or otherwise in accordance with subclause 60.6.4.

60.6.4 The only circumstances where an employee may be required to undergo a health screen at more frequent intervals than each five year anniversary are in circumstances where the Department has formed a reasonable belief, based on direct evidence, that, should the employee remain on duty or perform duties, they may endanger themselves, their colleagues or the public, and the employee disagrees with this belief. In these circumstances the Department may require the employee to undergo either a full health screen or a component(s) of the health screen, in accordance with this clause to assess their fitness for duty. Where the employer exercises their right in accordance with this subclause, an employee will be provided alternative duties on the basis of no disadvantage to the employee in terms of pay, location and roster until such time as the health screen process, in accordance with the clause, is complete or, alternatively, if the employee is unable to perform any duties, or alternative duties are not able to be provided by the Department, the employee will be released from duty without loss of any pay, entitlements or leave of the employee.

60.6.5 Health Screening Process

60.6.5.1 Step One

- 60.6.5.1.1 On notification to an employee of the need to complete a health screen either in accordance with subclause 60.6.2 or 60.6.4, the employee will attend their own nominated health practitioner to complete the screen. The employee may elect for the Brigade Medical Officer to be their nominated health practitioner.
- 60.6.5.1.2 The employee's nominated health practitioner will perform the agreed tests and medical assessments listed in subclause 60.5 and assess the results against the agreed health standard before completing the agreed checklist and clearance form.
- 60.6.5.1.3 All results, information, discussions etc between the employee and their nominated health practitioner are strictly confidential as between the employee and the nominated health practitioner.
- 60.6.5.1.4 On completion of the health screen, the employee's nominated health practitioner will complete the agreed clearance form which the employee is to provide to the Department. This clearance form will certify that the employee's nominated health practitioner has undertaken all agreed tests and medical assessments, has been provided with a copy of the agreed health standard and has completed the health screen with the employee. The employee's nominated health practitioner will then declare further on the form one of the following:

- (a) that the employee is fit to perform the firefighter's ordinary duties without any requirements or restrictions; or
- (b) that the employee is fit to perform the firefighter's ordinary duties with specified requirements or restrictions; or
- (c) that the employee is temporarily unfit to perform the firefighter's ordinary duties but fit to perform alternative duties; or
- (d) that the employee is temporarily unfit to perform any FRNSW duties; or
- (e) that the employee is permanently unfit to perform the firefighter's ordinary duties but fit to perform alternative duties; or
- (f) that the employee is permanently unfit to perform the firefighter's ordinary duties.

60.6.5.1.5 The Department will provide the employees nominated health practitioner access to their nominated health practitioner (the Brigade Medical Officer) during the health screen process should the employee's nominated health practitioner require advice/assistance in completing the health screen however any such discussion will be deidentified and strictly confidential between the Brigade Medical Officer and the employee's nominated health practitioner.

60.6.5.2 Step Two

60.6.5.2.1 Where an employee submits an agreed clearance form to the Department in accordance with step one and the employee's nominated medical practitioner has declared that the employee is fit to perform ordinary duties without any requirement or restrictions, the health screen is complete and no further action will be taken by the employee or the Department.

60.6.5.2.2 Where an employee submits an agreed clearance form in accordance with step one and the employee's nominated medical practitioner has declared that the employee is fit to perform the firefighter's ordinary duties with specified requirements or restrictions the Department will accommodate the specified requirements or restrictions and the employee will agree to abide by the specified requirements and or restrictions at all times whilst performing duties unless updated medical advice is provided (i.e. if the employee is required to wear glasses to meet vision standards the employee will do so while at work).

60.6.5.2.3 Where an employee submits an agreed clearance form in accordance with step one and the employee's nominated medical practitioner has declared that the employee is temporarily unfit to perform the firefighter's ordinary duties but fit to perform alternative duties, the Department will take all reasonable action to provide the employee with alternative duties taking into consideration the employee's personal circumstances including but not limited to:

- the location of the employee's residence;
- the employee's usual hours of work;
- care and other family arrangements of the employee;
- any relevant financial considerations.

Where alternative duties are not able to be provided by the Department, the employee will be released from duty and entitled to access any leave balance they may have or leave without pay for the temporary period.

60.6.5.2.4 Where an employee submits an agreed clearance form in accordance with step one and the employee's nominated medical practitioner has declared that the employee is temporarily unfit to perform any FRNSW duties, the employee will be directed to utilise their own leave entitlements and/or other compensations where applicable such as workers compensation. Where the employee has no paid leave entitlements available and is not entitled, or is not yet accessing other compensation, the Department will provide the employee with leave without pay for the relevant period.

60.6.5.2.5 Where an employee submits an agreed clearance form in accordance with step one and the employee's nominated medical practitioner has declared that the employee is permanently unfit to perform the firefighter's ordinary duties but fit to perform alternative duties, the Department will take all reasonable action provide the employee with alternative duties taking into consideration the employee's personal circumstances including but not limited to:

- the location of the employee's residence;
- the employee's usual hours of work;
- care and other family arrangements of the employee;
- any relevant financial considerations.

Where the Department has offered alternative duties following a consideration of the above matters but the employee does not accept the alternative duties as offered by the Department the employee is entitled to exercise all their rights in accordance with clause 11, Disputes Procedure. No action will be taken in relation to the employee's employment by the Department until such time as the steps in accordance with clause 11 are complete. For any period where the employee is not provided with alternative duties agreed to by the employee including for any period where the matter is in dispute, the employee will be released from duty without loss of any pay, entitlements or leave of the employee. A dispute issued under clause 11 in relation to an offer of alternative duties by the Department will determine whether the duties offered are suitable to the employee concerned taking into consideration primarily the items listed in this subclause along with:

- the employee's relevant medical restrictions requiring them to access alternative duties.
- the employer's capacity to offer such suitable alternative duties.

If it is ultimately determined that the employer is unable to provide the employee with alternative duties to which the employee can agree, the employee will be directed to access their entitlements in accordance with clause 8 of the Crown Employees (Fire and Rescue New South Wales) Death and Disability Award 2024

60.6.5.2.6 Where an employee submits an agreed clearance form in accordance with step one and the employee's nominated medical practitioner has declared that the employee is permanently unfit to perform the firefighter's ordinary duties and any other alternative role within FRNSW, the employee will be directed to access their entitlements in accordance with the Crown Employees (Fire and Rescue New South Wales) Death and Disability Award 2024.

60.6.5.3 Should an employee's health screen result in any of the outcomes described in subclauses 60.6.5.2.3-60.6.5.2.6 the Department may, within 7 days of receipt of the employee's health screen, direct the employee to provide the results of the tests undertaken in accordance with 60.5 (with the exception of the voluntary tests) to

the Brigade Medical Officer for a review of such results. If the Brigade Medical Officer deems it necessary, they may, within a further 7 days, require the employee to present for an appointment with them to further discuss the results of Health Screen. The Brigade Medical Officer will, by no later than a further 7 days from any appointment with the employee, or, if no appointment is required, within 7 days of receipt of the employee's test results, determine to either affirm the outcome as specified by the employees nominated health practitioner or, add to/vary the outcome. Where the Brigade Medical Officer does not affirm the outcome as specified by the employees nominated health practitioner the employee is entitled to exercise all their rights in accordance with clause 11, Disputes Procedure. No action will be taken in relation to the employee's employment by the Department until such time as the steps in accordance with clause 11 are complete. For any period where the employee is required by the Brigade Medical Officer and/or the Department to not continue to work in their usual role, including for any period where the matter is in dispute, the employee will be released from duty without loss of any pay, entitlements or leave of the employee.

- 60.7 The Department, will on receipt of evidence from the employee, reimburse the employee all costs associated with the health screening process by no later than the next full pay cycle following receipt of the employee's evidence.
- 60.8 Employees who are off duty will be compensated by the Department for all time spent participating in the Health Screening process by way of a payment equivalent to 4% of the Awards deemed fortnightly salary for each incident of participation. Unless transport is provided by FRNSW, payment at the Official Business rate will also be made for the actual return distance necessarily and reasonably travelled between the firefighter's normal residence or place of work and the location(s) travelled to for the Health Screen.

A9 - WORKPLACES, APPLIANCES, UNIFORMS AND EQUIPMENT

61. Personal Protective Clothing and Equipment and Uniforms

- 61.1 Recognising the inherently dangerous nature of firefighting work, and the uncontrolled environment firefighters work in, the Department shall supply to all employees appropriate personal protective clothing and equipment (PPE/PPC) and uniforms required to maintain the best possible standards of health and safety for operational and other duties required to be undertaken.
- 61.2 Such PPE/PPC and uniforms will meet relevant national and/or international Standards or as otherwise agreed to with the Union.
- 61.3 No new PPE/PPC or uniform shall be implemented or introduced without full consultation in accordance with clause 9. There will be no changes to any existing PPE/PPC or uniforms without full consultation under clause 9.
- 61.4 Where any new PPE/PPC or uniform is introduced which requires training in its use, consultation will occur in accordance with clause 9 in relation to the training and implementation will not occur until the completion of the relevant training.
- 61.5 Employees supplied with the all the items of clothing and PPE/PPC listed at Schedule 4 shall wear it in accordance with Departmental instructions. No employee outside of those covered under this Award will be entitled to be issued with or wear any of the items listed at Schedule 4 outside of Fire and Rescue New South Wales Commissioner, Deputy Commissioners and Assistant Commissioners.
- 61.6 The provision of wet weather gear shall be in accordance with existing practice, or as otherwise agreed between the parties.

62. Clothes Drying Facility

- 62.1 A drying closet for artificially drying clothing shall be provided by the Department at all fire stations to which employees are attached.

63. Cleaning of Clothes

- 63.1 For the purposes of this clause:

63.1.1 "Personal Protective Equipment" means external clothing designed for personal protection at an incident.

63.1.2 "Duty wear" means duty wear trousers and duty wear shirt.

63.1.3 "Dress uniform" is limited to Dress Trousers, Slacks, Culottes, Skirts, Galatea and Pullover.

- 63.2 Where any Personal Protective Equipment or Duty wear is supplied by the Department and is required to be worn by its employees, and such Personal Protective Equipment or Duty wear becomes soiled or damaged in the execution of duty as to require cleaning or repairs, such cleaning or repairs shall be done at the expense of the Department. Provided that the above Dress Uniform items shall also be cleaned or repaired at the expense of the Department.

64. Vehicles, Appliances and Equipment

- 64.1 Recognising the inherently dangerous nature of firefighting work, and the uncontrolled environment firefighters work in, the parties agree that all vehicles, appliances and equipment to be used by firefighters must be fit for purpose and maintain the highest possible safety standards.
- 64.2 No new appliance, vehicle or equipment shall be implemented or introduced without full consultation in accordance with clause 9. There will be no changes to any existing appliance, vehicle or equipment without full consultation under clause 9. Where any new appliance, vehicle or equipment is introduced which requires training in its use, consultation in accordance with clause 9 will occur in relation to the training and, implementation will not occur until the completion of the relevant training.
- 64.3 The parties agree that there will be a subcommittee of the Joint Consultative Committee which will be called the Vehicle and Equipment Subcommittee. This committee will have three representatives of the Department and three representatives of the FBEU and will be established to consult on all matters relating to vehicles and equipment in accordance with Clause 9.

65. Safety Belts

- 65.1 Safety belts shall be fitted to all seats on all vehicles operated by the Department which employees are called upon to drive or to ride upon on a public road. Employees are required to wear safety belts at all times while driving or a passenger in a vehicle operated by the Department.

66. Station Design, Infrastructure and Amenities

- 66.1 The parties acknowledge that Fire Stations are unique workplaces which require specific infrastructure and amenities.
- 66.2 The parties agree to work towards the development of a guideline prior to the expiry of this Award to ensure standard and appropriate amenities in all new Fire Stations or in the case of modifications to existing Fire Stations.
- 66.3 The parties agree that no new Fire Stations or modifications to existing Fire Stations will occur without full consultation in accordance with clause 9. It is not the intention of the parties to decrease the number of overall Fire Stations, appliances or crewing as a result of this clause.

- 66.4 The parties agree that there will be a subcommittee of the Joint Consultative Committee which will be called the Infrastructure Subcommittee. This committee will have three representatives of the Department and three representatives of the FBEU and will be established to consult on all matters relating to Infrastructure in accordance with Clause 9.

67. Station Relocation, Redevelopments and Renovations

- 67.1 The following arrangements shall apply whenever the Department is considering a relocation, redevelopment, or renovation of a fire station/work location staffed by employees covered by this Award. It is not the intention of the parties to decrease the overall number of Fire Stations, appliances or crewing as a result of this clause.
- 67.2 All aspects of any station/work location relocation, redevelopment and renovation will be in accordance with clause 9 along with the provisions of this clause.
- 67.3 Where relocation, redevelopment or renovation work results in the temporary relocation of the workplace/station within the station's area, then the temporary location will be considered the station's ordinary location for all purposes (e.g. relieving). Where temporary relocation within the workplace/station's area is not practicable then the status of the station's temporary location (ordinary or not) will be determined on a case-by-case basis with agreement with the Union.
- 67.4 Fire Station Relocation, redevelopment and/or renovation additional consultation process:
- 67.5 Where the Department are proposing a permanent relocation of a Fire Station or work location staffed by employees (whether this be to an entirely new premises or an alternative currently existing FRNSW premises); or redevelopment and/or renovation of an existing premises, the Department will notify the Union health and safety representative and all affected staff in writing including a full proposal. This proposal will include but not be limited to the following:
- Reasons for the proposed relocation, redevelopment and/or renovation.
 - Indicative timelines for the project.
 - Clear information as to how crewing numbers, current appliances and services will be maintained during any redevelopment and/or renovation works including any period of temporary relocation and/or following the occupation to the relocated premises.
 - The proposed design and amenities for any temporary premises where temporary premises are required, (including where this is in temporary facilities on site at the relocated premises).
 - The proposed design and amenities for the redeveloped and/or renovated fire or any new station/work location.
 - Any other matters deemed relevant and requested by affected staff or the Union.

Affected staff, and the Union will have full consultation regarding the above proposal prior to any action by the Department to commence the redevelopment, renovation or relocation process.

- 67.6 All redeveloped, renovated, temporary and/or permanently relocated Fire Stations/ Work locations will at a minimum provide the following facilities/amenities:
- Facilities for the preparation and consumption of meals, recreation and rest and recline.
 - Facilities to ensure privacy for all employees.
 - Any other items agreed between the Department, the Union and affected employees.
- 67.7 Prior to occupation of any redeveloped, renovated, temporary and/or permanently relocated facilities, the Department will arrange an inspection of the premises. The inspection party will include, as a minimum, a representative of the Department capable of explaining in detail what work will be done and answering questions about the work, and a Union-nominated representative and the relevant Health and Safety Representative.

PART B - ADDITIONAL CONDITIONS FOR SPECIFIC GROUPS OF EMPLOYEES**B1 - ADDITIONAL CONDITIONS FOR INSTRUCTORS / TRAINING STAFF****68. Certificate Iv Training and Assessment**

- 68.1 All employees appointed to an Instructor and/or Training Staff role will be provided, by the Department with the opportunity to obtain the current industry level Certificate IV in Training and Assessment or equivalent.

69. Security, Safety of Work and Classifications

- 69.1 Unless otherwise agreed between the parties, the development and delivery of all training for employees covered under this Award will be provided by employees employed at one of the classifications of this Award.

70. Safe Staffing and Systems of Work

- 70.1 The parties agree that, and in accordance with clause 9, Consultation, the parties will, during the life of this Award, consult regarding minimum safe staffing numbers and instructor ratios for each training program delivered by FRNSW.
- 70.2 For an instructor work on a course, the instructor shall have all the vocational competencies being delivered.

71. Classification of Instructor / Training Staff Roles

- 71.1 All Instructor and or Training staff roles will be appointed on merit be classified at Non-Station based positions in accordance with clause 49 and will receive payment in accordance with that clause.

B2 - ADDITIONAL CONDITIONS FOR FIRE INVESTIGATION AND RESEARCH UNIT**72. Security, Safety of Work and Classifications**

- 72.1 Unless otherwise agreed between the parties, all the roles within the Fire Investigation and Research Unit will be filled by employees employed at one of the classifications of this Award.

73. Safe Staffing and Systems of Work

- 73.1 The parties agree that, in accordance with clause 9, Consultation, the parties will, during the life of this Award, consult regarding minimum safe staffing numbers for the Fire Investigation and Research Unit.

74. Classification of Fire Investigation Roles

- 74.1 All Fire Investigation roles will be appointed on merit and be classified at Non-Station based positions in accordance with clause 49 and will receive payment in accordance with that clause.

B3 - ADDITIONAL PROVISIONS FOR FIRE SAFETY DEPARTMENT**75. Fire Safety Qualification**

- 75.1 All employees appointed to role in Fire Safety will be provided, by the Department with the opportunity to complete the Advanced Building Regulation Training Program or equivalent and the following units of competency or equivalent if not already held by the employee:
- PUAFIR403 Assess Building Plans
 - PUAFIR405 Collect Analyse and Provide Regulatory Information.

76. Security, Safety of Work and Classifications

- 76.1 Unless otherwise agreed between the parties, all Fire Safety roles will be filled by employees employed at one of the classifications of this Award.

77. Safe Staffing and Systems of Work

- 77.1 The parties agree that in accordance with clause 9, Consultation, the parties will, during the life of this Award, consult regarding minimum safe staffing numbers for the Fire Safety Department.

78. Classification of Fire Safety Roles

- 78.1 All Fire Safety roles will be appointed on merit and be classified at Non-Station based positions in accordance with clause 49 and will receive payment in accordance with that clause.

B4 - ADDITIONAL CONDITIONS FOR COMMUNICATIONS OPERATORS**79. Communication Allowances**

- 79.1 Employees appointed to a role within Communications shall be paid the following allowances:

- (a) Non-Officers - \$206.91 per week
- (b) Officers - \$224.35 per week
- (c) Senior Officers - \$261.60 per week

These allowances are specified at Items 6-8 of Table 1 of Schedule 2.

- 79.2 The Communication Allowance specified at subclause 79.1 will be payable for all purposes inclusive of periods of leave and form part of an employee's ordinary time earnings for the purposes of superannuation.
- 79.3 Communications Allowance provided for in subclause 79.1 will increase in line with percentage increases to the rates of pay.

80. Security, Safety of Work and Classifications

- 80.1 Unless otherwise agreed between the parties, all Communications roles will be filled by employees employed at one of the classifications of this Award.

81. Location of Employees

- 81.1 All employees employed in Communications will be selected on merit and will be employed to work from either the Sydney Communications Centre or the Newcastle Communications Centre.

82. Safe Staffing and Systems of Work

- 82.1 The parties agree during the life of this Award to investigate and consult on minimum staffing numbers and appropriate relief models for Communications Centres. Such consultation will be in accordance with clause.
- 82.2 Fire and Rescue will also maintain as a minimum 1 Training Officer Operational Communications role.
- 82.3 The parties agree during the life of this Award to investigate and consult on appropriate relief models for Communications. Such consultation will be in accordance with clause 9.

83. Classification of Communications Roles

- 83.1 All employees employed in a Communications role will be considered to be occupying Station Based Roles for the purposes of this Award.

84. Additional Provisions

- 84.1 Time spent in a Communications position shall count for the minimum periods of service as required by clause 47 Progression and Promotion.
- 84.2 Occupants of Communications positions who are temporarily directed to undertake operational firefighting duties and/or attend an incident in the capacity of their substantive operational rank, not their Communications position, shall continue to be paid all relevant allowances prescribed at clause 79.
- 84.3 Occupants of Communications positions may request to return to another Station Based Position for a minimum of one month each year. No such request will be unreasonably refused. During such period the employee shall continue to be paid all relevant allowances prescribed at clause 79.

B5 - ADDITIONAL CONDITIONS FOR SUPERINTENDENTS AND CHIEF SUPERINTENDENTS

85. Executive Officer Hours of Work

- 85.1 Superintendents and Chief Superintendents are required to work a 40-hour week. The 40 hours are to be performed on a flexible basis according to the needs of the organisation on weekdays between 0600 hours and 1800 hours on a self-directed rostering basis.
- 85.2 All hours worked by Superintendents and Chief Superintendents must be recorded in a manner determined by FRNSW in accordance with the Executive Officer Hours of Work Policy. This policy will be the subject of consultation in accordance with clause 9 Consultation.
- 85.3 Where a Superintendent or Chief Superintendent works more than 40 hours in a week within the hours specified in subclause 85.1, such additional hours will be accrued by the employee as time off in lieu at equal numbers of hours to the additional hours worked and be taken in accordance with the Executive Officer Hours of Work Policy.
- 85.4 Superintendents or Chief Superintendents that are required or directed to perform duties relating to:
- incident response; and/or
 - emergency response; and/or
 - emergency management

outside the hours specified in 85.1 on weekdays, and at any time on weekends or on public holidays, may elect to either be paid for such time worked at their single hourly rate of pay, or accrue as time off in lieu. In these instances, regardless of time worked, payment for duties, or accrued time off in lieu will be a minimum of 2 hours. An Executive Officer should, where practicable, inform the employee's manager/supervisor of the intention to work such additional hours out of hours and obtain approval to do so. A failure to do so however does not disentitle the employee from electing to be paid for such hours if they are worked in accordance with this subclause.

- 85.5 Where an Executive Officer is directed or required to work on a weekend or before 0600 hours or after 1800 hours on a weekday, such as to attend a special event, the Executive Officer may elect to either accrue the worked hours as time off in lieu or have them paid at their single hourly rate of pay. However, outside of the circumstances contemplated by clause 85.4, the entitlement to elect to be paid does not arise where the Executive Officer determined for themselves when to do the particular work in question and elected to do it out of hours. Nothing in this clause prevents the Commissioner exercising a discretion to pay out additional time worked at the single hourly rate of pay.
- 85.6 Where a Superintendent or Chief Superintendent is rostered to be On Call in accordance with clause 24 and is subsequently required to perform work at home, physically return to a FRNSW workplace, or respond to an incident the employee will be entitled to a two-hour minimum payment. Employees may elect to either be paid for such time at their single hourly rate of pay or accrue time off in lieu.

- 85.6.1 The minimum two-hour payment applies regardless of the actual duration of work performed. If multiple calls or tasks occur within this two-hour period, only one minimum payment will apply.
- 85.6.2 If the work performed extends beyond the initial two-hour minimum period, the Superintendent or Chief Superintendent will be entitled to payment for all additional time worked in excess of the two-hour minimum payment at the single hourly rate of pay or accrued time in lieu.

86. Superintendent and Chief Superintendent Professional Development

- 86.1 Fire and Rescue New South Wales may upon application by a Superintendent or Chief Superintendent assist such to undertake additional professional development activities through the provision of such financial assistance or leave with or without pay as determined by the Commissioner.
- 86.2 This clause shall not be used punitively or for disciplinary purposes.
- 86.3 Professional development opportunities will be shared equitably amongst Executive Officers.

SCHEDULE 1 - RATES OF PAY

Table 1 - Rates of Pay -

Station Based Wages

Classification	26-Feb-24 Station Based \$ Per Week Wage	26-Feb-25 Station Based \$ Per Week Wage	26-Feb-26 Station Based \$ Per Week Wage
Recruit Firefighter	\$1,411.18	\$1,467.63	\$1,555.69
Firefighter	\$1,628.28	\$1,693.41	\$1,795.01
Qualified Firefighter	\$1,809.19	\$1,881.56	\$1,994.45
Senior Firefighter	\$1,917.75	\$1,994.46	\$2,114.13
Leading Firefighter	\$2,026.29	\$2,107.34	\$2,233.78
Station Officer (Team Member)	\$2,297.67	\$2,389.58	\$2,532.95
Station Officer (Team Leader)	\$2,297.67	\$2,389.58	\$2,532.95
Leading Station Officer	\$2,351.95	\$2,446.03	\$2,592.79
Inspector	\$2,713.80	\$2,822.35	\$2,991.69
Classification	\$ Per Annum	\$ Per Annum	\$ Per Annum
Superintendent	\$176,139	\$183,184	\$194,176
Chief Superintendent	\$190,311	\$197,923	\$209,798

Non-Station Based Team Member

Classification	26-Feb-24 Non-Station Based (Team Member) \$ Per week Allowance	26-Feb-25 Non-Station Based (Team Member) \$ Per week Allowance	26-Feb-26 Non-Station Based (Team Member) \$ Per week Allowance	26-Feb-24 Non-Station Based (Team Member) 15% \$ Total Per Week Wage	26-Feb-25 Non-Station Based (Team Member) 15% \$ Total Per Week Wage	26-Feb-26 Non-Station Based (Team Member) 15% \$ Total Per Week Wage
Qualified Firefighter	\$271.38	\$282.24	\$299.17	\$2,080.57	\$2,163.79	\$2,293.62
Senior Firefighter	\$287.66	\$299.17	\$317.12	\$2,205.41	\$2,293.63	\$2,431.25
Leading Firefighter	\$303.94	\$316.10	\$335.07	\$2,330.23	\$2,423.44	\$2,568.85
Station Officer (Team Member)	\$344.66	\$358.45	\$379.96	\$2,642.33	\$2,748.02	\$2,912.90

Non-Station Based Team Leader

Classification	26-Feb-24 Non-Station Based (Team Leader) \$ Per week Allowance	26-Feb-25 Non-Station Based (Team Leader) \$ Per week Allowance	26-Feb-26 Non-Station Based (Team Leader) \$ Per week Allowance	26-Feb-24 Non-Station Based (Team Leader) 20% \$ Total Per Week Wage	26-Feb-25 Non-Station Based (Team Leader) 20% \$ Total Per Week Wage	26-Feb-26 Non-Station Based (Team Leader) 20% \$ Total Per Week Wage
Station Officer (Team Leader)	\$459.53	\$477.91	\$506.58	\$2,757.21	\$2,867.50	\$3,039.55
Leading Station Officer	\$470.39	\$489.21	\$518.56	\$2,822.34	\$2,935.23	\$3,111.34
Inspector	\$542.76	\$564.47	\$598.34	\$3,256.55	\$3,386.81	\$3,590.02

Table 2 - Rates of Pay Operational Support (grandfathered rates only)

Classification	26-Feb-24 \$ per week	26-Feb-25 \$ per week	26-Feb-26 \$ per week
Operational Support Level 1	\$2,032.77	\$2,114.08	\$2,240.92
Operational Support Level 2	\$2,304.19	\$2,396.36	\$2,540.14
Operational Support SO Level 2	\$2,304.19	\$2,396.36	\$2,540.14
Operational Support Level 2a	\$2,426.64	\$2,523.71	\$2,675.13
Operational Support Inspector	\$2,720.24	\$2,829.05	\$2,998.79
Operational Support Inspector Level 3	\$2,720.24	\$2,829.05	\$2,998.79
Operational Support Level 3a	\$2,949.64	\$3,067.63	\$3,251.69

Schedule 2 - Allowances and Reimbursements**Table 1 - Allowances**

	Description	Unit	Amount 26/02/2024	Amount 26/02/2025	Amount 26/02/2026
1	Laundry Expenses	\$ per week	\$45.82	\$47.65	\$50.51
2	Kilometre Allowance	\$ per km	\$1.48	\$1.54	\$1.63
3	Major Aerial Allowance	\$ per week	\$69.20	\$71.97	\$76.29
4	Minor Aerial Allowance	\$ per week	\$25.96	\$27.00	\$28.62
5	Hazmat Allowance	\$ per week	\$138.42	\$143.96	\$152.60
6	Communications Allowance - Non-Officers	\$ per week	\$215.19	\$223.80	\$237.23
7	Communications Allowance - Officers	\$ per week	\$233.32	\$242.65	\$257.21
8	Communications Allowance - Senior Officers	\$ per week	\$272.06	\$282.94	\$299.92
9	Country Allowance	\$ per week	\$9.39	\$9.77	\$10.36
10	Remote Area Allowance	\$ per week	\$35.95	\$37.39	\$39.63
11	Rescue Allowance	\$ per week	\$60.13	\$62.54	-
12	Marine Allowance	\$ per week	\$69.20	\$71.97	\$76.29
13	Service Allowance	\$ per week			
	-5 years or more, but less than 10 years		\$5.60	\$5.82	\$6.17
	-10 years or more, but less than 15		\$11.20	\$11.64	\$12.34
	-15 years or more		\$16.80	\$17.46	\$18.51
14	Meal Allowance	\$ per meal		\$38.65	
15	Refreshment Allowance	\$ per meal		\$19.30	
16	Relieving Allowance	\$ per rostered shift	\$39.80	\$41.39	\$43.87
17	Deployment Allowance	\$ per day	\$210.11	\$218.51	\$231.62

18	Court Attendance Stand-By Rate	\$			
	-Periods of less than 24-hours		\$18.60	\$19.34	\$20.50
	-Periods of 24 hours		\$27.88	\$29.00	\$30.74
19	Accommodation Contributions	\$ per week	\$47.55	\$49.45	\$52.42
20	ComSafe Duties	\$ per hour	\$91.99	\$95.67	\$101.41
21	Remotely Piloted Aircraft Systems Allowance	\$ per week	\$17.00	\$17.68	\$18.74
22	On Call Allowance	\$ per day			
	- Normal workday		\$17.50	\$18.20	\$19.29
	- Non-workday		\$30.00	\$31.20	\$33.07

Table 1A - General Land Rescue Skills Based Allowance

The General Land Rescue Allowance set at Item 1 of Table 1A Schedule 2 comes into effect and is payable under this award from 26 February 2026.

Item	Description	Unit Formula	Amount 26/02/2026
1 14.2.11.1	General Land Rescue (GLR)	Base rate \$ per week	\$33.15pw
2 14.2.11.2	GLR plus just one (1) of the following qualifications: In-Water Flood Rescue, Trench Rescue, Partial Structural Collapse or Large Animal Rescue	GLR Base rate x 25% loading	\$41.44pw
3 14.2.11.3	GLR plus two (2) or more of the following qualifications: In -Water Flood Rescue, Trench Rescue, Partial Structural Collapse or Large Animal Rescue	GLR Base rate x 50% loading	\$49.73pw
4 14.2.11.4	GLR Base plus one (1) or more of the following qualifications: Urban Search and Rescue (category 2) or Vertical Rescue	GLR Base rate x 50% loading	\$49.73pw

Table 1B - Qualification Allowance

Qualification that takes 1-2 days	\$80/day, maximum \$160
Qualification that takes 3-5 days	\$60/day, maximum \$280
Qualification that takes 6-10 days	\$50/day, maximum \$450
Qualification that takes 11+ days	\$45/day, maximum \$600

Table 2 - Travelling / Transferred Employees Compensation Allowances

Item	Clause	Description	Unit	On and from 1 July 2025	
1	51.5.2 53.3.3 19.6.4 29.6.5 & 29.8.1	Specified (Casual) Journey Rate (Dependent on Engine Capacity) 2601cc & over 1601cc to 2600cc Under 1600cc	Per km	48.08 cents 44.95 cents 37.73 cents	
2	53.3.8.4	Stand By Rate - see Item 18 in Table 1			
3	19.1.3	Hourly Rate - Travelling Compensation	Per hour	\$55.23	
4	19.3.1.1	Breakfast	Per meal	## \$34.75	^^ \$31.15
5	19.3.1.2	Lunch	Per meal	## \$39.10	^^ \$35.55
6	19.3.1.3	Dinner	Per meal	## \$66.65	^^ \$61.30
7	19.4.1 26.6.1	Accommodation first 35 days (includes all meals)	Per day	\$388.00 Sydney \$323.00 Adelaide	
	& 49.4.12.2	- Capital Cities		\$346.00 Brisbane \$343.00 Canberra	

		- High Cost Country Centres	Per day	\$385.00 Darwin \$341.00 Hobart \$338.00 Melbourne \$345.00 Perth \$372.00 Albury \$331.00 Armidale \$372.00 Bathurst \$372.00 Bega \$349.00 Bourke \$327.00 Broken Hill \$372.00 Coffs Harbour \$372.00 Cobar \$372.00 Cooma \$372.00 Cowra \$335.00 Dubbo \$330.00 Goulburn \$326.00 Gosford \$337.00 Grafton \$325.00 Griffith \$345.00 Gunnedah \$372.00 Inverell \$348.00 Lismore \$352.00 Maitland \$371.00 Mudgee \$325.00 Muswellbrook \$372.00 Narrabri \$360.00 Newcastle \$421.00 Norfolk Island \$333.00 Nowra \$380.00 Orange \$355.00 Port Macquarie \$372.00 Tamworth \$372.00 Taree \$372.00 Tumut \$342.00 Wagga Wagga \$347.00 Wollongong \$372.00 Queanbeyan
		- Tier 2 Country Centres		None listed for 2025-26
		- Other Country Centres	Per day	\$293.50
8	20.6.2 19.4.2	Actual Necessary Expenses - all locations	Per day	\$24.50
9	19.4.3	Accommodation - after first 35 days and up to 6 mths	Per day	50% of the appropriate location rate
10	19.5	Government Accommodation - Incidental Expenses - all locations	Per day	\$24.50
11	19.7.1.4 & 29.8.4	Official Business Rate (Dependent on Engine Capacity) 2601cc & over 1601cc to 2600cc Under 1600cc	Per km	135.62 cents 125.29 cents 90.51 cents
12	29.5.1 - 29.5.3	Temporary Accommodation	Per week (up to a maximum of)	\$254.00

13	29.5.2	Board & Lodging expenses to be covered by Employee	Per week	\$51.00
14	29.5.4.1	Laundry Allowance - Employee only rate	Per week	\$4.50
15	29.5.4.2.	Laundry Allowance - Employee and Dependants rate	Per week (actual expenses to a maximum of)	\$13.00
16	29.6.2	Cost of Insurance of Furniture and Effects in transit and in Storage	(up to a maximum of)	\$38,000
17	29.6.3.2	Accelerated depreciation of personal/household effects in transit	(up to a maximum of)	\$1,126
18	29.6.3.2	Value of furnishings and fittings	(up to a maximum of)	\$7,037
19	29.9.2	Board & Lodging to be covered by parent/guardian	Per week	\$27.00
20	29.9.2	Board & Lodging cost for Dependent staying in initial location due to Year 12 subjects	Per week	\$56.00
21	29.10.6 & 29.11.3.2	Relocation - City to Country for sale of property	(up to a maximum of)	\$520,000

Legend: Effective Dates are with effect from the first pay period to commence on or after the date.

= Capital Cities & High Cost Country Centres.

^^ = Tier 2 Country Centres & Other Country Centres.

SCHEDULE 3 - SAFE STAFFING TABLE

Table 1 - Station Based Minimum Safe Staffing Numbers

Appliance	Minimum Safe Staff Numbers	Minimum Qualifications (nb. where the motor driver holds any of the additional qualifications listed, they count as one of the required numbers for that qualification)
Pumper	1 Station Officer + 3 Firefighters*	1 Motor Driver
Rescue Pumper	1 Station Officer + 3 Firefighters	1 Motor Driver, 2 Rescue qualified Operators
HAZMAT Pumper	1 Station Officer + 3 Firefighters	1 Motor Driver, 2 Hazmat Technicians**
CAFS Pumper	1 Station Officer + 3 Firefighters	1 Motor Driver, 2 qualified CAFS Operators
CAFS Aerial Pumper	1 Station Officer + 3 Firefighters	To be determined via Consultation in accordance with Clause 9.
Tanker	2 Firefighters***	1 Tanker Motor Driver, 2 Tanker Operator
Bulk Tanker	2 Firefighters	1 Motor Driver, 2 Bulk Tanker qualified Operators
Aerial Pumper under 30 metres	1 Station Officer + 3 Firefighters	1 Motor Driver, 2 Aerial Pump qualified Operators
Ladder Platform 30 metres and over	2 Firefighters	2 x Qualified Aerial Ladder Platform Operators
Ladder Platform under 30 metres	2 Firefighters	2 x Qualified Aerial Ladder Platform Operators

Turn Table Ladder	2 Firefighters	2 x Qualified Turn Table Ladder Aerial Operators
Heavy HAZMAT (Newcastle and Shellharbour)	1 Station Officer + 1 Firefighter	1 Motor Driver, 2 Hazmat qualified Operators
Heavy HAZMAT (Alexandria and St Marys)	2 Firefighters	2 x Hazmat qualified Operators
HAZMAT Support	1 Firefighters	1 x Hazmat qualified Operator
Heavy/Technical Rescue	2 Firefighters	2 x Rescue qualified Operators
CO2	2 Firefighters	2 x CO2 qualified Operators

*All pumpers located at City of Sydney Firestation will have a minimum safe staff number of 1 Station Officer and 4 Firefighters.

**The minimum qualifications for the HAZMAT Pumper is one fully qualified Hazmat Technician and 1 Trainee Hazmat Technician. The Station Officer on this appliance must also as a minimum be qualified as a Trainee Hazmat Technician.

***Where a tanker is deployed as part of a Taskforce its minimum staffing number is 2 Firefighters.

SCHEDULE 4 - PERSONAL ISSUE UNIFORM AND PPE

The parties agree that in accordance with clause 61 all employees will be issued with the below items of Uniform and Personal Protective Clothing/Equipment in the quantities specified below:

PPE and Duty Wear

Item	Initial issue	
	Permanent	Retained
Personal protective equipment and clothing (including duty wear)		
Belt, web, duty wear	1	1
Boots, firefighting	2	2
Boots, utility	1	1
Bush fire goggles	1	1
Beanie, unlined	1	1
Cap, baseball	1	1
Coat, multi-purpose	1	1
Gloves, general purpose	1 pair	1 pair
Hat, sun	1	1
Helmet, multipurpose (Issued with name, rank and role insignia)	1	1
Helmet, structural (Issued with name, rank and role insignia)	1	1
Kit bag, PPE	1	1
Pocket line	1	1
Safety glasses	1	1
Shirt, duty wear, long or short sleeve	6	3
Shorts, athletes	2	2
Socks, either thick or standard, for operational use, dress uniform, and office wear	5 pair	5 pair
Torch	1	1
Trousers, duty wear	4	2
T-shirt	4	2
Uniform		
Belt, dress, skirt and slacks	1	1
Belt, trousers, dress, either buckle or velcro	1	1
Handbag - womens (local purchase)	On request	On request
Hat, peak cap - according to rank	1	1
Jacket, dress uniform, (galatea)	1	1

Jacket, soft shell, black	1	1
Necktie	1	1
Shirt, dress, short sleeve	1	1
Shirt, womens dress, maternity	As needed	As needed
Shoes, dress; boot, slip on; or court shoes, womens	1	1
Sweater, V-neck	1	1
Trousers or skirt, womens dress, maternity (ESCAT or local purchase)	As needed	As needed
Trousers, mens dress; or slacks, womens dress; or skirt womens	1	1
Accoutrements		
Badge, peak cap, ornate (officers - on promotion to Station Commander)	1	1
Badge, peak cap, standard	1	1
Buttons, 18 mm, galatea	6	6
Buttons, staple 24 mm, galatea	4	4
Epaulettes, soft - according to rank	6 sets	6 sets
Epaulettes, hardboard - according to rank; Station Commanders and above, issued on promotion	2 sets	2 sets
Key keeper	1	1
Notebook cover, pocket	1	1
Notebook, pocket	1	1
Ring, 16 mm	10	
Sticker, multi-purpose helmet, name	As needed	As needed
Sticker, multi-purpose helmet, qualifications	As needed	As needed
Sticker, multi-purpose helmet, rank	As needed	As needed
Sticker, structural helmet, name	As needed	As needed
Sticker, structural helmet, qualifications	As needed	As needed
Sticker, structural helmet, rank	As needed	As needed

Structural Firefighting Ensemble

Item	Entitlement	
Coat, structural firefighting	2	
Gloves, structural firefighting	2 pair	
Protective hood (flash hood)	2	
Trousers, structural firefighting (with braces)	2	

Office Wear for Senior Officer and Non-Station Based Positions

Item	/nit/al Issue	Issue as needed
Trousers	2	
Shirt, short sleeve or shirt, long sleeve (as preferred)	5 (total)	
Blouse, maternity, womens		5
Cardigan, maternity, womens		1
Trousers, maternity, womens		5

Items Specific to Senior Officers

Item	Issue on promotion
Bow tie	1
Chrome insignia buttons for dress uniform shirt	1set
Hardboard epaulettes, black, for galatea and mess dress jacket, blank (Order rank accoutrements separately)	1set
Mess cummerbund	1
Mess formal trousers; or mess formal skirt; or formal dress	1
Mess jacket	1

Mess jacket accoutrements: chrome insignia buttons, lapel pins according to rank.	1set
Shirt, dress uniform, long sleeve	1

Alpine Items

Item	Permanent - Available for Issue on posting	Retained- Initial Issue
* Boots, firefighting, (with moisture barrier, currently met by the current issue Magnum Vulcan CT/CP WPI with HBR membrane liner)	1	1
Gloves, alpine with liner	1	1
Goggles, alpine	1	1
Scarf combo	1	1
Socks, alpine	1	1
Thermal gloves	1	1
Thermal pants	1	1
Thermal shirt	1	1

SCHEDULE 5 - CONSULTATIVE MECHANISM (JOINT CONSULTATIVE COMMITTEE PROCESS)

Consultation Process.

1. The parties have established a Joint Consultative Committee (JCC) for the purposes of giving effect to the requirement to consult as outlined in clause 9 The JCC will seek to operate on the basis of consensus decision making.
 - 1.1 Prior to making any decision to effect change in the employment relationship, the Commissioner and/or FRNSW must consult with the Union in accordance with this process.
 - 1.2 Consultation will commence with a written notification to the Union regarding the proposed change(s). Such written notification will include an outline of the proposed change(s) including all relevant information pertaining to it so as to allow the Union to fully understand the proposed change and its implications. Such written notification will also include any productivity/efficiency associated with the proposed change(s) including estimated cost savings.
 - 1.3 The proposed change(s) will be placed on the agenda for a meeting of JCC by the Commissioner and/or FRNSW. The outline of the proposed change(s) must be provided to the Union at least seven days ahead of the JCC meeting where the Commissioner/FRNSW listed the matter for the JCC Agenda.
 - 1.4 Thereafter there will be a reasonable opportunity for the Union to consider the proposed change(s) including an opportunity to meet with the Commissioner and or relevant representatives so as to gather any information relating to the proposed changes and discuss the proposed change.
 - 1.5 Following such meeting, or if a meeting is not sought by the Union, the Union will be provided with a reasonable opportunity to present its views in relation to the proposed changes at the next scheduled JCC meeting or via other means where the Union is prepared to do so out of cycle. The Union may also choose to provide an alternative proposal at this time for consideration by the Commissioner. Where necessary, the parties will meet at this step to discuss the Unions response/alternative proposal.
 - 1.6 The Commissioner and/or FRNSW will respond to the Union's views and/or alternative proposal within a reasonable time frame which may also occur at the next meeting of the JCC.

SCHEDULE 6 – FRNSW HEALTH STANDARD**Health Standard for firefighters**

March 2016

Fire & Rescue New South Wales

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Foreword

The development of this Fire & Rescue NSW (FRNSW) *Health Standard for firefighters* (Health Standard) represents a significant step forward in ensuring the health, safety and wellbeing of all firefighters.

In line with requirements under Clause 4 of the *Crown Employees (NSW Fire Brigades Firefighting Staff Death and Disability Award) 2015*, the Fire Brigade Employees' Union and FRNSW must implement an agreed and compulsory health and fitness program. In meeting the requirements under the award, part of the process has been the need to develop a health standard for firefighters that forms the basis to which health assessments can be measured against.

The Health Standard adopts a risk management approach and reflects contemporary evidence based medical knowledge. It has been developed as a result of extensive research and input from a wide range of industry and medical stakeholders.

The Health Standard keeps pace with advances in medical knowledge and understanding of the impact of certain health conditions and firefighting. Contemporary antidiscrimination and privacy principles now legislated in New South Wales have also been taken into account.

FRNSW acknowledges the significant assistance and advice provided by external consultants Dr Bruce Hocking and Ms Fiona Landgren, who are experts in the design and development of medical standards. Acknowledgment is also given to RailCorp for their sharing of knowledge on their management systems and implementation processes around their medical standard and other experts who generously provided their time and expertise. Lastly, thanks need to be given to all members within the project team who provided valuable input in all stages in the development of the Health Standard.

Greg Mullins AFSM Commissioner, Fire & Rescue NSW

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PART 1: INTRODUCTION

1. Purpose of the Health Standard for firefighters

Fire & Rescue New South Wales (FRNSW) is committed to enhancing community safety by minimising the effects of hazards and emergency incidents on the people, environment and economy of New South Wales.

FRNSW's response profile requires its firefighters to respond to emergency incidents encompassing structural and wildfire suppression, rescues, hazardous materials incidents, storms and tempests, and counter[terrorism activities across the state. FRNSW also runs prevention and preparedness programs to prevent these emergencies and reduce their effects on the community.

FRNSW has a duty under the *Fire Brigades Act* 1989 to ensure systems are in place to protect the safety of the public. This includes a responsibility to ensure the health and fitness of firefighters so that they may conduct their physically and psychologically demanding duties safely and effectively. FRNSW also has a duty of care under the *Work Health and Safety Act* 2011 to ensure the health and safety of its firefighters as far as reasonably practicable. The management of firefighters in relation to their health and fitness for duty is also governed by obligations under discrimination, workers' compensation and injury management legislation. Where possible, to meet antidiscrimination requirements, FRNSW will accommodate the limitations on the firefighter's capabilities because of health issues through strategies such as job modifications, alternative duties or redeployment.

Firefighters also have a duty of care for their own safety and that of others under work health and safety legislation. They should be aware of the importance of their health and fitness to the overall obligations of FRNSW.

By clearly outlining the health requirements for firefighters, FRNSW seeks to meet its obligations in terms of duty of care, antidiscrimination and equal employee opportunity. It also seeks to ensure consistency and transparency in the assessment of health conditions in a firefighting context. The document also provides firefighters with a clear statement of the health requirements for their job.

With this in mind, this *Health Standard for firefighters* (Health Standard) has been developed to:

- define the level of health required to perform the inherent requirements and demands of firefighting
- describe how the health of firefighters is assessed and reported in relation to these requirements.

The document includes:

- Part 1 – Introduction

This part describes the purpose and scope of the Health Standard. It also details the steps taken during its development and validation. An overview of the health assessments conducted in relation to the Health Standard is also provided.

- Part 2 – Inherent requirements of firefighters

This part describes, in detail, the inherent requirements of firefighter tasks and the related health attributes, which in turn provide a basis for the medical criteria outlined in Part 4.

- Part 3 – Medical fitness for duty certifications

This part outlines how clinical findings are interpreted against the Health Standard to provide a medical fitness certification for a firefighter.

- Part 4 – Medical criteria

This part includes the criteria for medical fitness for duty for firefighters, arranged alphabetically in sections, addressing the most relevant medical conditions for firefighters.

2 Development of the Health Standard and evidence base

Medical literature and doctrine relating to firefighter and other emergency services personnel have been sourced to inform development of the Health Standard. Where evidence is lacking, expert opinion from

members of specialist medical colleges and other health professional organisations provides the basis of this Health Standard.

Key inputs into the development of this Health Standard from a medical view point have included:

- the medical standards for licensing of commercial vehicle drivers contained in *Assessing fitness to drive* (Austroads)
- the standards for medical fitness for duty of rail safety workers contained in the *National health assessment standard for rail safety workers* (National Transport Commission).

Both of these documents have most recently undergone review in 2012.

The Health Standard will be reviewed periodically every 5 years to ensure it keeps pace with medical evidence and the Fire & Rescue NSW operating environment. The standard will also be reviewed if amendment is made to interfacing medical standards (e.g. *Assessing fitness to drive*).

3 Scope and application of the Health Standard

This Health Standard has been developed on the inherent requirements of permanent and retained firefighters, up to the position of Station Commander.

As this standard is based on the inherent requirements of firefighting performed by firefighters up to and including the rank of Station Commander, its application will be modified when assessing firefighters at or above the rank of Inspector, such that only inherent requirements relevant to these roles will be considered.

The Health Standard focuses on medical fitness to perform the inherent requirements of firefighter duties. It does not cover other work, health and safety matters, such as screening for diseases of occupation, nor does it cover aspects such as fatigue or critical incident management, although the interfaces with these are recognised (refer to Section 4). The Health Standard also interfaces with health, fitness and wellbeing programs (refer to Section 4).

The Health Standard is used as a basis for all health assessments conducted to assess medical fitness for duty of applicants for firefighting roles or incumbent firefighters, ensuring consistent assessment across the career of a firefighter.

3.1 Pre employment health assessments

Firefighters require health assessments at recruitment to determine their initial medical fitness to perform the full range of inherent job requirements. All applicants also undergo a Physical Aptitude Test to determine their ability to meet the physical fitness demands of firefighting.

3.2 Periodic assessments

The mandatory period health and fitness checks conducted for firefighters are similar to those conducted at recruitment, and aim to detect conditions that may impact on a firefighter's ability to safely and effectively perform the inherent requirements of firefighting.

Firefighters will be assessed according to a defined schedule for periodic health assessments. Where indicated by this standard, a more frequent and targeted monitoring protocol for specific medical conditions may be established. This specific monitoring protocol occurs in addition to the routine periodic assessment schedule.

The periodic health and fitness checks also support firefighters in addressing chronic disease risk to assist them with maintaining their medical fitness for duty.

3.3 Triggered health assessments

Assessment of fitness for duty against the standard may be conducted in response to incidents or concerns regarding a firefighter's health and their ability to perform the inherent requirements of their job. These assessments are likely to address a particular health issue (e.g. psychiatric, musculoskeletal) and include scheduled assessments for conditional medical fitness for duty (fit with specified requirements or restrictions). They also include health assessments initiated by supervisors as a result of concerns regarding prolonged or recurrent sick leave, or a firefighter's return to work following illness or injury. Firefighters may request a triggered health assessment through Fire & Rescue NSW's (FRNSW's) Health & Safety Branch if they are concerned about their ability to safely perform their work due to health reasons.

4 Policy and program interfaces

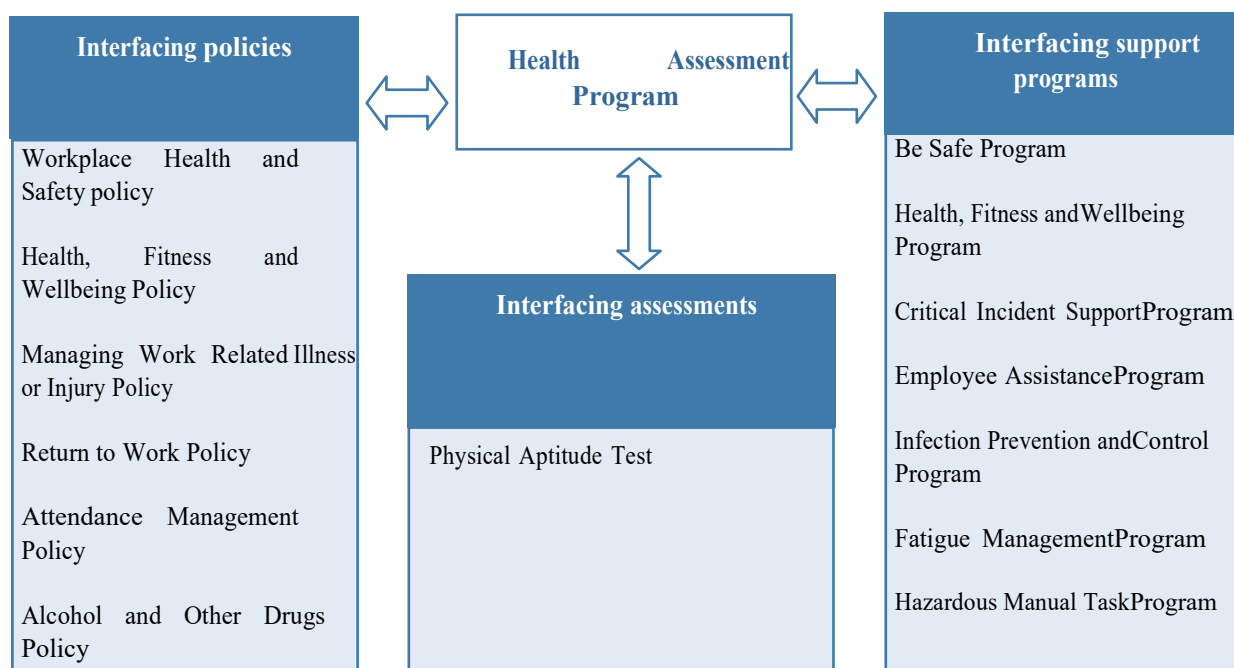
In developing the Health Standard, FRNSW recognises health assessments are one aspect of an integrated safety management system (SMS), which supports the health and safety of its employees and the public. Key aspects of the SMS include appropriate training, maintenance of a safe working environment and implementation of safe working practices, which are continuously monitored and improved (Figure 1).

In addition, health assessments integrate with, and are supported by, a range of other health[related policies and programs as shown in Figure 2.

Medical practitioners assessing firefighters against this Health Standard should be aware of relevant interfacing policies and programs so they may offer relevant and appropriate advice to firefighters. Some of these are described briefly in Sections 4.1–4.8. The medical criteria chapters in Part 4 make reference to these policies and programs as appropriate.

Figure 1 The context of health management within the Fire & Rescue NSW safety management system



Figure 2 Interfacing safety management system policies and programs

4.1 Alcohol and Other Drugs Policy

The FRNSW Alcohol and Other Drugs Policy includes random and targeted testing across the organisation. It also has in place procedures to ensure access to relevant support for firefighters where required.

4.2 Critical Incident Support Program

The FRNSW Critical Incident Support Program supports firefighters who are exposed to trauma, fatalities and major incidents. Periodic health assessments provide a further opportunity to assess general psychological wellbeing (refer to Section 16, Psychiatric disorders).

4.3 Employee Assistance Program

The FRNSW Employee Assistance Program offers free, confidential counselling and support to employees and immediate family members. There is potential for the health professional who performs the health assessment to recommend the program to firefighters, as appropriate (refer to Section 16, Psychiatric disorders).

4.4 Fatigue Management Program

The FRNSW Fatigue Management Program aims to minimise the effect of fatigue on firefighter vigilance. The program takes into account effective ways of managing fatigue in firefighters, given the nature of shift work, or – in the case of retained firefighters – the fact that their employment with FRNSW is secondary. Periodic health assessments may detect excessive daytime sleepiness or sleep disorders, and they should be managed in accordance with this Health Standard (refer to Section 19, Sleep disorders).

4.5 Health, Fitness and Wellbeing Program

FRNSW has a range of health promotion programs for firefighters under the Health, Fitness and Wellbeing Program. Health promotion activities include those targeted to mitigate cardiovascular risk factors, mental health, general health and fitness. The health assessments do not have a specific role in relation to health

promotion, but do provide an opportunity to identify chronic disease risks and alert the firefighter to appropriate support programs.

4.6 Physical Aptitude Test

All firefighter applicants undergo a pre[employment Physical Aptitude Test, which assesses cardiovascular fitness, musculoskeletal strength, endurance and power. This assessment is based on the most critical tasks performed in firefighting, and those most physically demanding and frequently performed.

4.7 Infection Prevention and Control Program

The Infection Prevention and Control Program educates firefighters on preventing the transmission of disease through occupational and environmental exposures. Understanding the modes of transmission of infectious organisms, and knowing how and when to apply the basic principles of infection prevention and control, are critical to the maintenance of optimal firefighter health. The program includes presentations to firefighter recruits, online education packages, station based education sessions and postexposure counselling and education.

4.8 Hazardous Manual Tasks Program

The Hazardous Manual Task Program provides firefighters with training on the prevention of musculoskeletal injury throughout their career. All training is conducted in accordance with the FRNSW hazardous manual task guidelines, and integrates with the broader range of physical assessment and conditioning support services available to firefighters. This includes functional movement screening.

5 Role and responsibilities of assessing medical practitioners

Medical practitioners should conduct health assessments in line with the processes outlined in this Health Standard. They should have appropriate knowledge and understanding of the firefighting environment, the associated risks and the Health Standard, including:

- familiarity with the tasks involved in firefighting work
- knowledge of and ability to perform the firefighter health assessment
- understanding of the requirements and certification options for medical fitness for duty
- knowledge of the administrative requirements, including form completion and record keeping
- understanding of ethical and legal obligations, and the ability to conduct health assessments accordingly, including appropriate communication with the firefighter and Fire & Rescue NSW
- understanding of ethical issues in relationships with the treating doctor or general practitioner.

Referral for, and management of, ongoing treatment of medical conditions should continue to be the responsibility of the firefighter's general practitioner or treating specialist.

PART 2 – DETERMINING THE HEALTH REQUIREMENTS FOR FIREFIGHTING

This part of the Health Standard sets out inherent requirements of firefighting based on a review of tasks across Fire & Rescue NSW, undertaken in 2010. It also identifies the health attributes (such as senses, musculoskeletal and cardiovascular capacities) needed to fulfill these inherent requirements. This, in turn, provides the basis for applying the medical criteria, which are set out in Part 4 of this Health Standard.

Summary of firefighters' main tasks and health requirements

Driving. The fire appliances are medium rigid class (or above) vehicles. They are driven in emergency mode at high speed while exercising exemptions to normal road rules provided to drivers of emergency vehicles. Driving is performed on a rotating roster basis by the crew member other than the Station Officer. The commercial vehicle medical standard applies for the licences required to drive these vehicles. This class of licence requires good health regarding the health attributes necessary for safe driving (vision and hearing, cognition and psychological health, an absence of conditions likely to cause acute incapacity or impairment).

Structural firefighting work includes rapidly entering buildings and climbing stairs, rescuing victims, hauling hoses, extinguishing fires, and salvage, ventilation and overhaul activities. Rescued victims may be unconscious, burnt, deceased or distressed. Work is conducted in hot and densely smoky conditions. Firefighters must wear an ensemble of personal protective clothing and must use self-contained breathing apparatus (SCBAs). Protective clothing limits the ability for sweat to evaporate and therefore restricts the body's cooling mechanism. Short rest breaks generally occur every 25 minutes if working at high intensities, when the air cylinders of the SCBA need to be replaced. The work requires great cardiopulmonary and musculoskeletal fitness, alertness, good vision and hearing, and psychological resilience.

Wildfire firefighting differs from structural firefighting in that the fire front is rapidly moving through bush or grasslands. The ambient environment is extremely hot. The work requires extensive walking and carrying of hoses and other equipment across difficult terrain, and vigorous use of hand tools. However, the work is similar to structural firefighting in that it requires great cardiopulmonary and musculoskeletal fitness, alertness, good vision and hearing, and psychological resilience. The P2 negative pressure particle mask that wildfire firefighters wear places an additional load on the respiratory system and does not protect against fire gases, including carbon monoxide.

Hazmat work involves the containment and clean up of dangerous goods and other hazardous materials. The work may require the firefighter to wear a fully encapsulated hazmat suit, which is resistant to external fluids and gases, but limits the ability for sweat to evaporate. A SCBA is also worn. The work involves rapidly assessing a scene, rescuing victims, identifying the presence of toxic chemicals, performing containment as needed and decontamination. Work may be conducted in variable environmental conditions. The work places considerable cardiac and musculoskeletal demands on the firefighter, and requires alertness, and good vision and hearing.

Rescue work involves rescuing victims who are trapped in cars or on cliff faces, involved in industrial accidents, and so on. The work varies greatly with the situation. It involves applying first aid to the victim and using a wide range of equipment for freeing and transporting the victim – often in awkward situations and on difficult terrain. The work is conducted in variable environmental conditions. Victims may be unconscious, injured, deceased or distressed. The work requires great cardiopulmonary and musculoskeletal fitness, good vision and hearing, and psychological resilience.

6 Risk management approach

Firefighting is safety critical work. There are considerable potential consequences for life and property if firefighting is not conducted efficiently. Although there are a range of administrative and engineering techniques to assist firefighting, the firefighter remains central and crucial to firefighting operations.

The requirements for firefighter health assessments are determined by a risk management approach, which aims to:

- identify the main tasks of firefighting, and what the impact would be on the firefighter in the event of acute incapacity or impairment
- assess the consequences of acute incapacity or impairment

- establish appropriate controls for the risks associated with acute incapacity or impairment, including the role of health assessments.

This approach ensures that the level and frequency of health assessments conducted is congruent with the risk associated with the tasks performed by firefighters.

It is acknowledged that health assessments are but one of a number of approaches to managing risk. Thus, a mix of engineering, administrative and health assessment measures is likely to be required. In determining the health assessment requirements, it is important to take into account the operational and engineering environment, since overall risk management significantly determines the human attributes that are required for safety. As these environments change, it may be necessary to change the health requirements.

This interaction between technology and human capabilities has implications not only for the setting and application of medical criteria, but also for meeting diverse legal requirements. Medical criteria cannot be simply set at the highest level for safety's sake. They must be set and applied carefully to match the risks associated with the tasks to be consistent with antidiscrimination laws. This requires careful and thorough assessment of the risks to, and as a consequence of, health as part of the assessment process.

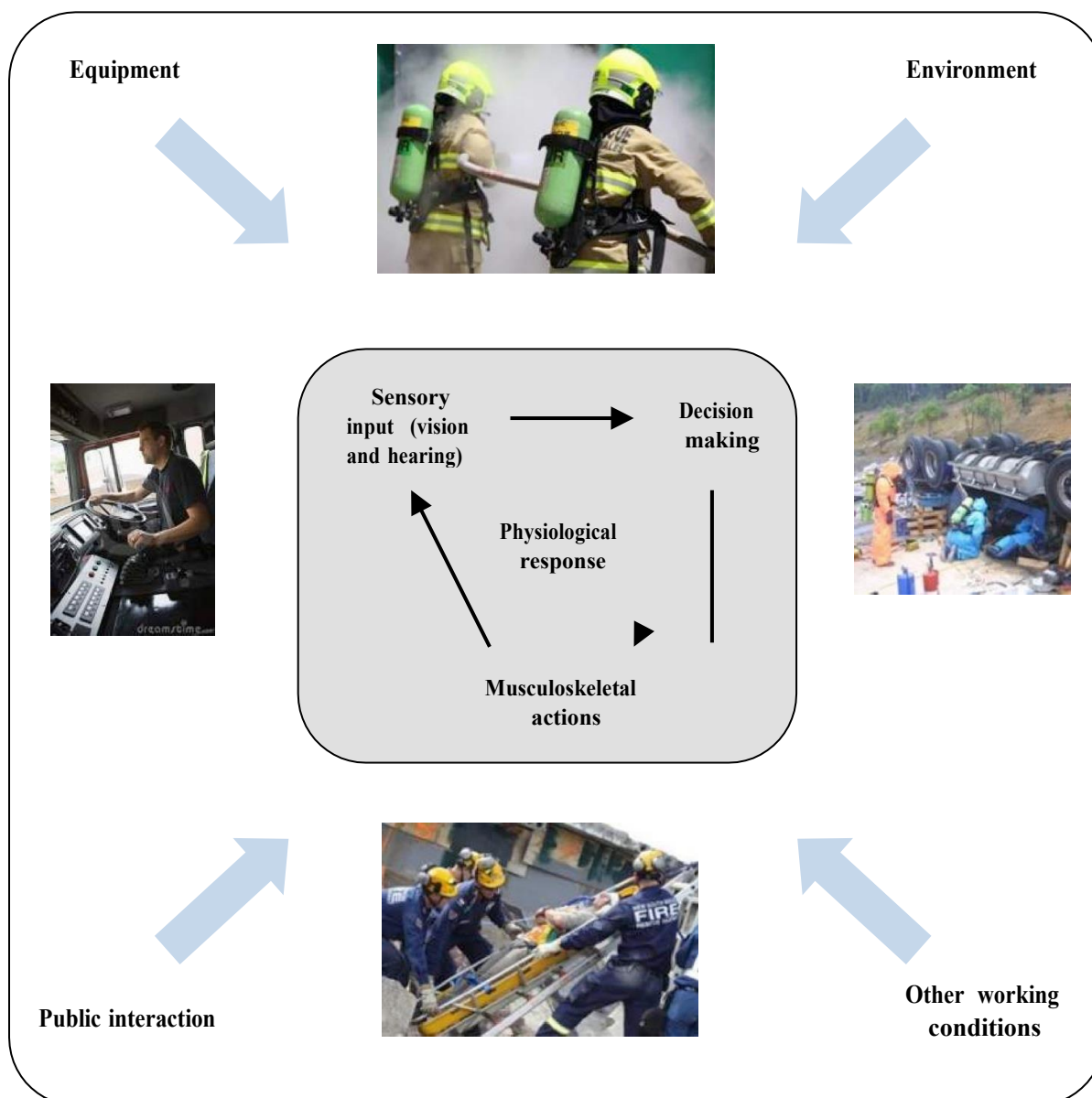
Figure 3 shows the key tasks, work demands and health attributes associated with firefighting, and provides a framework for understanding and applying a risk management approach to health assessments. It shows the key aspects of the firefighting job, namely:

- driving of vehicles, including driving in emergency mode
- firefighting (structural and bush firefighting)
- hazmat
- rescue.

For each of these tasks:

- a. information is gained about the environment through the senses (mainly vision and hearing)
- b. information is then processed by the brain (cognition or 'situational awareness')
- c. decisions are made that are then put into effect by the musculoskeletal system; the cycle rapidly repeats and is multichannelled.

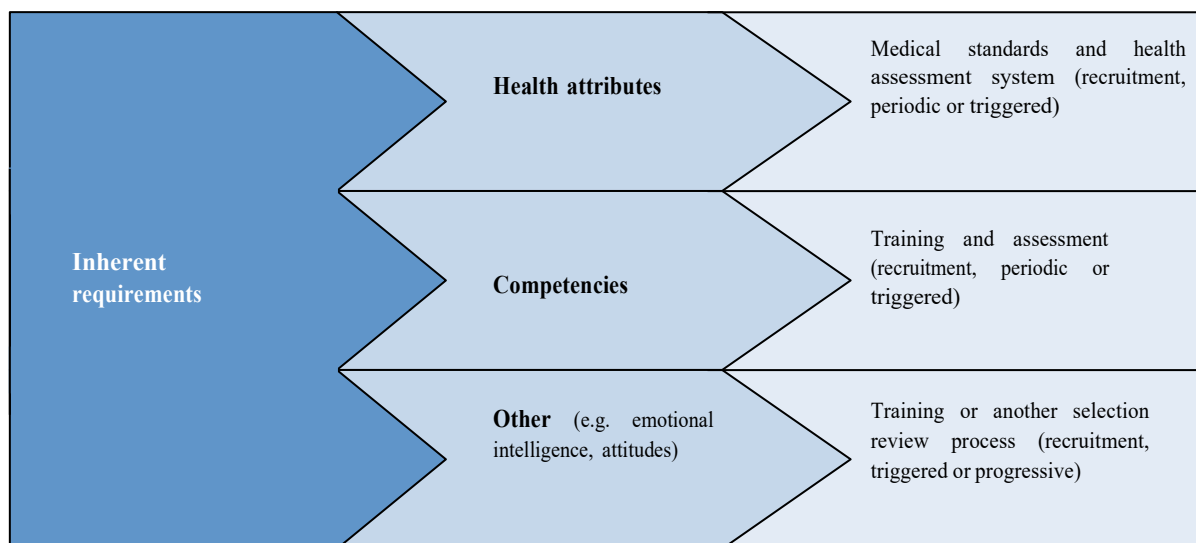
These processes take place within a diverse and challenging operational environment, which places considerable physiological demands on the firefighter.

Figure 3 The tasks and work demands of firefighting

Determination of the specific inherent requirements of a firefighter's job is fundamental to a risk based approach to health management. The term 'inherent requirement' has been variously defined.^{1,2} Most simply, the inherent requirements of a job may be described as the essential activities of the job – *the core duties that must be carried out to fulfil the purpose of the position*. This definition encompasses the broad requirements of the job, not just those related to health (refer to Figure 4).

An understanding of the inherent requirements also helps to identify those attributes that cannot be readily assessed through a medical examination (e.g. cognitive capacities) and for which other assessment tools may be required.

Figure 4 Inherent requirements as a basis for health standards



¹.NSW Department of Premier and Cabinet. *Employment health assessment: policy and guidelines*, April 2000 (http://www.dpc.nsw.gov.au/public_employment/policy_directory/policy_statement?metadata=8646).

² Australasian Human Rights and Equal Opportunities Commission ([https://www.humanrights.gov.au/our\[work/disability\[rights\)](https://www.humanrights.gov.au/our[work/disability[rights))).

7 Inherent requirements of firefighting

This section outlines the inherent requirements involved in the major tasks of firefighting i.e. driving the appliance, firefighting, hazmat and rescue.

The tasks associated with hearing and visual requirements are complex and are discussed separately to the main tasks (refer to Section 9). There is some duplication in this information to enable a complete understanding of the tasks dependent on the senses.

Note all firefighters are trained to be multi[skilled although some may specialise later. Operational staff, up to and including the ranks of leading Station Officer and Captain, are expected to be multiskilled and their duties are the focus of the requirements described below.

7.1 Driving

All members of the crew – apart from the Station Officer – drive the fire appliances on a rotating roster basis.

All drivers must hold a heavy vehicle (medium rigid or above) licence. Firefighters need to be able to drive different appliances that have different dimensions, weights and handling characteristics (refer to Figure 5).

Under New South Wales law, fire appliances are exempt from normal driving rules while responding to an incident under lights and siren. Drivers must be able to rapidly detect other factors such as vehicles, pedestrians and warning sounds, including when in emergency mode. The driver must be able to hear and respond to auditory cues from other traffic, bells at level crossings and so on while other radio and voice communication is ongoing in the cabin of the appliance. They must also be able to hear warning alarms such as low air pressure in the braking system.

Firefighters also need to be able to access directions to the fire ground via GPS and maps, and to communicate using radio (closed loop communication).

A detailed analysis of the driving tasks requiring vision and hearing is included in Section 9.

Figure 5 Examples of fire appliances



Urban pumping appliance: 15 tonnes (Gross Vehicle Mass)



Aerial pumper: 20 tonnes (Gross Vehicle Mass)



Ladder platform: 26 tonnes (Gross Vehicle Mass)

7.2 Structural firefighting

Structural firefighting is responding to, for example, a house, a factory or an office block fire. Typically, four firefighters turn out in response to an alarm, including one Station Commander. Each firefighter has a designated role. The Station Commander is responsible for commanding the crew and, in some cases, will take command of the entire incident. One firefighter is responsible for driving and operating the pump, and the other two will be allocated tasks depending on the specific incident. Most permanently staffed appliances have self contained breathing apparatus (SCBA) mounted on the rear seats, allowing the two firefighters in the rear of the cab to don it before exiting the appliance, either before leaving the station or on arrival at the incident. This leads to increased weight when stepping down from the appliance, sometimes onto uncertain ground in poor visibility because of smoke and perhaps night time. The total weight of protective equipment worn during structural firefighting is approximately 21 kg.

On arrival at the incident, firefighters' activities are summarised in the acronym RECEOSV:

- Rescue
- Exposures
- Containment
- Extinguish
- Overhaul
- Salvage
- Ventilation.

The requirements of these activities are described in Sections 7.2.1–7.2.8.

7.2.1 Rescue

The first priority is saving and protecting people's lives (including a firefighter's own life). Upon arrival, information will be gathered about the possible location and number of casualties. Using this information, firefighters that are wearing structural firefighting ensemble (see Section 7.2.8) and SCBA (see Section 7.2.8), and pulling a 'charged' (full of water) line of hose will enter the building.

This may require moving long distances carrying heavy equipment, climbing ladders or forcing entry through locked doors (Figure 6). Conditions inside the building are generally extremely hot and smoky.

Figure 6 Forcing entry through a locked door



Entry may require the use of petrol powered saws or bolt cutters that require a lot of force.

Search and rescue operations procedures are designed to reduce the possibility of disorientation. The search must be systematically performed by the search and rescue crew (firefighters are paired for this task) to ensure that all areas are covered and that nobody is missed. Rescue of an unconscious person is by dragging the victim. One firefighter will hold the casualty under the arms and around the chest and walk backwards while in a semi squatting position. The other firefighter guides them back to the exit point. It is common for the ground to be covered in debris, and it is reasonable to expect that a victim may weigh 100 kg or more. There is an especially high degree of team interdependence during this stage of firefighting.

Rescuing victims may involve using a fire rescue ladders, which are 10.5 m long, 49 kg and awkward to manoeuvre into place. Firefighters must work as a two person team (refer to Figure 7). Raising the ladder requires a high degree of upper body strength and shoulder joint stability.

Figure 7 Raising a fire rescue ladder



To raise a fire rescue ladder, firefighters must work as a two person team.

On arrival at the fire, the first 15 or more minutes involve particularly intense activity without a break. Lighting may be poor due to smoke and/or night time, and the terrain may be uneven and/or slippery, which puts stress on the limbs when moving and quickly assessing a site.

A major consideration is the possibility of a firefighter collapsing, leaving one firefighter on their own. This firefighter would then need to focus on rescue of the other firefighter – for example, they may need to drag the collapsed firefighter to safety on their own, while navigating through the hazardous environment.

7.2.2 Exposures

During this stage of operation, the objective is to confine the fire to the building/compartment of origin. Exposures may be internal (i.e. adjacent home units), external (i.e. adjacent buildings) or the environment. Protection must be achieved rapidly if property damage is to be limited and to ensure that further lives are not placed at risk. This stage will involve obtaining adequate water supplies from hydrants in the street. This operation alone will require a standpipe, a hydrant bar, and a one[into[two breeching to be collected from the appliance and carried to the hydrant. This is commonly 60 m, but is sometimes much further. Once this equipment is attached to the street hydrant, the hose is collected from the appliance and laid out between the hydrant and the appliance, and connected to the pump (Figure 8). Water is then turned on, which supplies the pump with more water. In some situations, this will need to be repeated if sufficient water cannot be obtained from the first hydrant.

Hose is laid out from the outlets of the pump to reach the areas threatened by fire. A suitable method of controlling and directing the water is attached to the hose. A 70[mm[diameter hose, when full of water, weighs about 4 kg/m, and 10s of meters of inflexible hose may need to be quickly manoeuvred into position. For handheld hose lines, a branch is attached. For large volumes of water, a monitor (non[handheld) is used, which is a piece of equipment that firefighters set up and leave, thereby reducing the chance of firefighter injury from building collapse or explosion (Figure 9).

Figure 8 Supplying water to the pumper

Supplying water to the pumper requires endurance and strength to carry the equipment to the hydrant to lay hose.

Figure 9 A firefighting monitor

Monitors are used to deliver large quantities of water while avoiding the need to manually hold and direct the hose.

7.2.3 Containment

During this stage, the expansion of the fire is stopped. This is generally achieved by appropriately applying water or foam, and by reinforcing the number and placement of hose lines (Figure 10). During this stage, similar physical demands are placed on the firefighters as in the exposure stage. Internal work will also expose firefighters to longer periods in high[temperature, low[visibility working conditions, although these may also be found in some close external locations. Often, smaller, easier[to[handle hose lines that are used initially for search and rescue are replaced by larger, heavier hoses that require more strength to operate and control because of the very high water pressure (Figure 11).

Figure 10 Controlling the charged lines of a hose



Controlling charged lines of hose is a physically demanding task, often requiring at least two firefighters per hose line.

Figure 11 Large diameter hoses



Large diameter hoses contain significant quantities of water. The weight of the hose (up to 4 kg/m) means that a lot of strength is required if the hose needs to be repositioned.

7.2.4 Extinguish the fire

During this stage, additional resources (firefighter and firefighting equipment) are deployed to overwhelm the fire. Sustained strength and endurance is required to maintain the attack (Figure 12).

Figure 12 Firefighters holding a hose for a long period



A firefighter's stamina is challenged during the extinguishment phase, which requires holding a hose for long periods.

7.2.5 Overhaul

During the overhaul stage, all pockets of fire are totally extinguished and hot fire gases are released from the building. This stage requires methodical work on uneven surfaces while often carrying

heavy equipment (Figure 13). A wide variety of hand tools – such as axes, power saws and shovels – are used, which require strength and coordination to operate them safely. Additionally, the firefighter may be required to work at height from a ladder or another type of elevated platform.

Figure 13 Working on uneven surfaces



It is common for firefighters to work on uneven surfaces that are littered with fire debris. The firefighter needs to maintain control of firefighting tools such as hoses.

7.2.6 Salvage

Salvage involves protecting household possessions, or business stock and equipment from the adverse effects of water, heat and smoke. This requires lifting and moving heavy items, covering items with protective sheeting, and removing debris and water.

7.2.7 Ventilation

Ventilation involves removing smoke and fire gases from a structure. It may require using tools to create openings and exhaust points at varying heights through building walls or roofs. For mechanical ventilation, a positive pressure fan will need to be carried some distance to be set up in the correct location to force clean air into the structure. The fans – which weigh up to 35 kg – are a multiple person lift, and may need to be carried up stairs or across varying terrain and debris.

7.2.8 Other considerations, including exposures and protective equipment

Poor visibility

Firefighters may have to work in the dark and/or in conditions of poor visibility (Figure 14), which may be due to many causes including smoke, night time or internal building darkness, visual

interference from personal protective equipment, glare from portable lighting, emergency vehicle flashing lights or condensation on the outside of a breathing apparatus mask. Refer to Section 9 for a detailed discussion of visual requirements of firefighter tasks.

Figure 14 Structural firefighting in poor visibility conditions



Note that these photographs were taken during the day.

Heat stress

The temperature of fires varies greatly, from ambient temperatures up to 1000°C. It is common for firefighters to work in environments of several hundred degrees. However, the firefighter should not be directly exposed to such temperatures if the fire is correctly assessed and controlled, and if protective equipment is worn. Although heat exposure is important, the main source of heat stress to the firefighter arises from his or her own metabolism because of the strenuous activities in fighting structural fires. The structural firefighting ensemble restricts air flow across the skin surface (and also increases the work load because of the ensembles weight), therefore impeding the removal of body heat through sweating. Eventually, when the air between the skin's surface and the structural firefighting ensemble becomes saturated with sweat, the sweating mechanism will be

impaired significantly. Core body temperature in firefighters has been demonstrated to rise to 39° C or more. High sweat rates are commonly observed in firefighters undertaking structural firefighting.

Figure 15 Exposure to radiant heat during structural firefighting



Exposure to radiant heat and the accumulation of metabolic heat underneath protective equipment contribute to heat stress during structural firefighting.

Smoke

Smoke is composed of particulate matter (a mixture of solid particles and liquid droplets), and CO₂, CO and numerous other gaseous chemicals. The chemicals include volatile organic compounds, such as formaldehyde and other aldehydes, which can be highly irritating to the upper and lower respiratory tract. In addition, there may be toxic chemicals such as hydrogen cyanide and polycyclic aromatic hydrocarbons. The oxygen levels are lower than normal, because fire consumes oxygen.

Figure 16 Structural fire smoke



Structural firefighting ensemble

The structural firefighting ensemble comprises overpants, a coat and a flash hood. This configuration is designed to protect the firefighter from the heat of the fire. A structural firefighting helmet with visor, and structural firefighting boots and gloves are also worn. The structural firefighting ensemble is protective, but it increases the work load because of its weight (up to 12 kg) and it limits the evaporation of sweat. When combined with a SCBA, the additional weight is about 22 kg (Figure 17).

Figure 17 Structural firefighting ensemble

PPE = personal protective equipment; SCBA = self contained breathing apparatus

Self contained breathing apparatus

The SCBA is a key piece of protective equipment. It is a positive[pressure system that imposes minimal load on breathing. It provides clean air, and protects against smoke, gases and heat. A SCBA is generally donned before exiting the appliance. It consists of an air cylinder and a back plate, pneumatics and face mask, and weighs 11–17 kg depending upon the SCBA type and configuration. The air supply lasts for approximately 30 minutes when performing simple tasks; however, it may be used more rapidly dependent on the work environment, firefighter work rate, experience level and fitness. When most of the air in the cylinder is consumed, the firefighter must leave the contaminated atmosphere and replace the cylinder. They may then return to the fire. In an ideal situation, the duration of this demanding work is minimised by good management of the incident (Figure 18).

Figure 18 Firefighter wearing a structural firefighting ensemble and a self contained breathing apparatus



The combined additional weight of the personal protective equipment (PPE) is about 22 kg, which increases the work load. Additionally, evaporative sweating is significantly reduced while wearing the PPE.

Shift work

The default roster for most permanent firefighters is the '10/14 roster'. This consists of two, 10[hour day shifts (0800–1800) followed by two, 14 hour night shifts (1800–0800), with 96 hours off before the shift cycle repeats. However, the majority of permanent firefighters work a modified '24 hour roster', consisting of a 24 hour day and night shift, 24 hours off, another 24[hour shift, followed by 120 hours off.

Other rosters worked are 'back to back' rosters, which is four, 12 hour days (0600–1800) and 108 hours off; and 'special roster', where firefighters work Monday to Friday during normal business hours. Sometimes, there are no firefighting activities in a shift, or there are relatively short ones (of a few hours), which enables refreshment. In the event of a major fire spanning the whole shift, firefighters are recycled and rehabilitated to control fatigue levels. The total time at an incident can vary greatly.

Retained firefighters are on call (unrostered), and hours worked are often in addition to those worked in primary employment.

7.3 Wildfires

Fighting a wildfire differs from a structural fire in several ways. Wildfires are a rapidly moving fire front that has to be pursued first in an appliance, and then often on foot. Firefighters must lay out heavy hoses and carry other equipment over long distances across difficult terrain, in poor visibility due to smoke. Progressing hoses through bush or grassland requires firefighters to drag hoses charged with water, often against friction from elements such as trees and rocks. This requires significant cardiovascular fitness and musculoskeletal strength. If the wind changes, the whole process needs to be reversed and then repeated at another site. Wildfires may be fought using wet or dry methods.

Dry methods involve creating fire breaks by back burning and creating control lines using hand tools (e.g. McLeod tools) and earth[moving equipment. Using hand tools requires significant cardiovascular and musculoskeletal fitness.

Wet methods use hoses or knapsacks (a knapsack can weigh up to 16 kg). These methods may involve identifying a source of water (e.g. dam, swimming pool) and carrying a petrol powered pump to the location so that firefighting can commence. This is often over difficult and unfamiliar terrain (Figure 19).

After the fire has abated, there is extensive work seeking out remaining pockets of fire and hotspots (called ‘blackening out’), which is especially dangerous because of the high risk of falling trees and branches.

Figure 19 Wildfire fighting using wet methods



Firefighter pulling and controlling a hose.

Figure 20 Poor visibility conditions of wildfire fighting



7.3.1 Refuge

In an emergency, refuge from the fire must be sought quickly, either within the natural environment or in the appliance fitted with special protection devices. Seeking refuge quickly may require high level cardiopulmonary and musculoskeletal fitness.

7.3.2 Heat stress

Wildfires typically occur on very hot days with high winds and low relative humidity, so there is little respite available. This heat load is additional to the heat of the fire itself, plus the vigorous activities in fighting the fire as previously described.

7.3.3 Wildfire personal protective equipment

The personal protective equipment (PPE) in wildfire fighting differs from that used for structural firefighting. It is lighter, consisting of the duty wear outlined above, a multipurpose coat, a P2 particle mask and goggles, a

multipurpose helmet, and boots (see Figure 21). The P2[particle mask imposes an extra load on the respiratory system, in contrast to a SCBA. The P2 mask protects the firefighter from particulates, but not from gases such as carbon monoxide. At times of severe wildfire activity, the lighter wildfire PPE (level 2) may be replaced with a SFE (level 1) and SCBA.

Figure 21 Personal protective equipment for wildfire firefighting



Personal protective equipment for wildfire fighting showing a multipurpose coat, a P2Rparticle mask, goggles, a helmet and boots.

7.3.4 Shift work

Unlike structural fires, wildfires may burn for days, so the work may be prolonged.

7.4 Hazmat

A hazardous materials (hazmat) situation is one that involves substances on the list of hazardous substances or dangerous goods, but may include other environmental threats, such as a milk tanker spilling its load into a watercourse.

The hazmat guidelines set out several steps for managing these incidents, using the initialism ‘SISIACMR’.

- Safe approach. The incident is assessed at a distance, upwind and upgrade. If needed, people may be rescued by being dragged from the scene and decontaminated.

- **Incident command.** The site is declared as hazmat and a command point established.
- **Scene security.** The incident scene is divided into three concentric zones: the contaminated centre (hot zone), then an inner ring (warm zone) where firefighters operate and pass through decontamination to the outer ring (cold zone), where other services, such as ambulance, operate.
- **Identify hazmats.** Two firefighters may don SCBA and fully encapsulated (FE) hazmat suits to enter the site and identify the hazardous materials (see Figure 22). This may involve walking up flights of stairs in poor visibility. They work as an interdependent pair. The FE suits are impervious to fluids and gases. The performance of hazmat related tasks while wearing FE suits results in a significant rise in core body temperature because of significantly impaired sweat evaporation – the firefighter becomes heated from his or her own exertions and the inability to evaporate sweat. FRNSW guidelines recommend a maximum duration of 20 minutes per wear. The firefighters then leave the hot zone and enter the decontamination procedure. Once this has occurred, they will enter the rehabilitation area. If necessary, they may then return to the hot zone. The visual requirements associated with this task are outlined in Section 9.1.2.
- **Assess potential harm and minimise environmental contamination.** The toxicity and the quantity of hazmat substances are assessed and a plan made for their containment.
- **Call[in resources.** Additional resources such as truckloads of sand or sweeping machines may be called in.
- **Monitor information.**
- **Render safe and decontaminate.** This may require the firefighter to work in an FE suit – for example, for handling drums of toxic material – or they may change into lighter ‘chemical spillage suits’ for less toxic materials. Rendering the material safe may require loading it into drums with hand tools, such as shovels.

Figure 22 Firefighters wearing chemical spillage suits and self contained breathing apparatus



Firefighters at a site of a toxic (pesticide) spill. They are rescuing the driver and containing the toxin. The work is intense and in direct sunshine for many hours. The chemical spillage suits prevent sweat evaporation.

7.5 Rescue

Fire & Rescue NSW (FRNSW) is the lead agency for rescue in several settings. These include motor vehicle accidents, industrial accidents, cliff face rescues, and urban search and rescue.

Incident sites are attended wearing duty wear, which comprise a long sleeved shirt, cargo trousers and safety boots.

7.5.1 Motor vehicle accidents

These are the most common rescue incidents and are attended to free victims trapped in their cars. When firefighters arrive at the scene, they conduct a triage to identify saveable persons. First aid – such as cardiopulmonary resuscitation, oxygen administration or placing a neck brace – is applied as appropriate. The situation may be distressing, and may include cries of pain, lacerations, blood and vomit. Hazards such sharp metal and glass, oil and petrol spills, and highway traffic are also identified.

Trapped victims are rescued using a range of heavy equipment. These include hydraulic spreaders, shears and rams, which weigh up to 19 kg (Figure 23). The equipment may need to be carried considerable distances across uneven terrain and on steep slopes. At the site it may need to be held in awkward positions – for example, above the head if the vehicle is lying on its side. Where possible, two people operate the equipment. The work is carried on under a time pressure until the victim is freed and then cared for by paramedics. The work is demanding, and requires considerable musculoskeletal and cardiovascular fitness as well as psychological resilience.

Work is conducted in all weather conditions, with wet weather increasing the likelihood of motor vehicle accidents.

Figure 23 Firefighters using equipment to rescue trapped driver



The firefighters are using a 19 kg tool, held at shoulder height with awkward foot holds, to cut the car door frame to rescue a driver.

7.5.2 Rescue from heights

These rescues are most often performed to rescue a person trapped on a cliff face or the outside of a building (Figure 24). An anchor and belay point is established at the top of the cliff or building, and one rescuer on double ropes is lowered to the victim. If needed, the victim is placed in a stretcher. The victim and rescuer are then pulled to the top of the cliff by the hauling party. The work requires considerable musculoskeletal and cardiovascular performance, dexterity with ropes, alertness and decision making. The rescuer may also need to render first aid. The rescue may be conducted in extreme weather conditions.

Figure 24 Firefighters performing a heights rescue



7.5.3 Urban search and rescue

Urban search and rescue is conducted when a building has collapsed and there is concern for victims trapped in the rubble or underneath the structure. Officers are trained to crawl, not walk, using three points of contact across the rubble to avoid falling. They may need to carry a heavy concrete cutting saw to cut through reinforced concrete to free victims. They may be required to crawl through narrow confined spaces to reach victims. The work is demanding and requires musculoskeletal, cardiovascular and psychological fitness, and the ability to tolerate confined spaces (Figure 25).

Figure 25 Rescue team handling a stretcher across unstable rocky terrain



7.6 Natural disasters

Natural disasters work, such as assisting after a storm, has similar requirements to rescue work (Figure 26).

Figure 26 Firefighters working on stormUdamaged roofs

The physical requirements of natural disasters work are similar to rescue at heights work.

8 Firefighting tasks requiring vision and hearing

Numerous aspects of the firefighter task require vision and hearing; thus, these requirements are described separately to support understanding and application of the medical criteria contained in this Health Standard.

8.1 Vision

The main considerations regarding vision are visual acuity, visual fields and colour vision. The concern with colour vision is for red–green discrimination, because 8% of men have some degree of red green colour recognition deficiency. When assessing colour vision, an important consideration is the co existence of redundancy of information, so safe working is not solely dependent on accurate colour detection.

8.1.1 Firefighting tasks and inherent requirements relevant to vision

Preparatory

At the station, routine duties include maintaining and repairing equipment, such as breathing apparatus, and hydraulic and electronic equipment. Some of the components are small, and it is important to safety that it is all assembled correctly. Sometimes, the task may require working while wearing gloves that reduce dexterity.

Driving the appliance, including under emergency conditions

The visual tasks associated with driving the appliance to the incident include accessing directions to the incident, and driving the appliance safely. Members of the crew rotate through these jobs.

Accessing directions to the incident requires reading a GPS, maps, street names and building numbers.

As with any commercial vehicle, drivers of the fire appliance must be able to rapidly detect other vehicles, pedestrians and warning signs. In addition, driving may be in emergency mode when speed limits and other road rules may be legally exceeded and traffic lights slowly driven through when red. Normal cues such as the flow of traffic cannot be relied upon. Other drivers may react erratically or unpredictably to the presence of the fire appliance, requiring anticipation and quick reaction by the driver.

Peripheral vision is required for common driving tasks such as merging, changing lanes, and detecting pedestrians and vehicles to the side of the line of vision. Approaching intersections requires the rapid detection of information from multiple directions, particularly when in emergency mode.

Colour vision is not essential to safe driving because of the redundancy of traffic lights (i.e. the position of the red and green lights).

Incident – structural

Firefighters work at night and in conditions of poor visibility, which may be from many causes, including smoke (Figure 27), night time or internal building darkness, visual interference from PPE, glare from portable lighting, emergency vehicle flashing lights or condensation on the outside of the SCBA mask.

Figure 27 Structural firefighting – poor visibility conditions



Note that this photograph was taken during the day.

Visual acuity

On arrival at the fire ground and entry to a structure, visual acuity is necessary for many tasks, including:

- reading fire safety signs and chemical placards (Figure 28), and dangerous goods manifests (Figure 29)
- identifying a gas cylinder from a distance, as the need to get closer to identify such an object could endanger the firefighter (Figure 30)
- identifying casualties in conditions of poor visibility
- identifying visual hazard cues, such as open stairways or voids, uneven surfaces and stairs, and exit signs
- reading channel selectors on handheld radios and equipment with LCDs
- reading the SCBA pressure gauge (Figure 31)
- interpreting thermal imaging camera displays.

Figure 28 Fire safety signs and chemical placards



Chemical drums showing safety placards, which must be quickly identified.

Figure 29 Dangerous goods manifests



Recognising dangerous goods symbols and text is important.

Figure 30 Liquid petroleum gas cylinder



Liquid petroleum gas cylinder showing a safety placard, which must be quickly identified.

Figure 31 Self contained breathing apparatus pressure gauge



Self contained breathing apparatus cylinder pressure gauge (hand held). An alarm sounds when the pressure is low.

Visual fields

Peripheral vision is necessary when arriving at structural fires, where work may be undertaken on roads and there is a need to detect traffic movements.

When entering a structure, peripheral vision is advantageous for detecting hazards and casualties; however, in reality, vision may be impaired by the poor visibility conditions.

Colour vision

Various tasks in structural firefighting require colour recognition. However, the need for red green colour differentiation may be lessened by redundancy of information in the signal – for example, including a positional or word cue. In structural firefighting, colour vision may be required for:

- interpreting smoke and flame colour
- using colour coded control panels on appliances
- recognising coloured helmets (designated to personnel with different roles)
- using coloured hydraulic lines
- interpreting fire control panels and medical equipment (such as Guedel airways)
- recognising gas cylinder colours
- recognising industrial pipes.

Wildfire

Wildfire fighting involves several visual tasks often in situations of poor visibility (refer to Figure 32). Duties are often undertaken at the bush–urban interface, so there will be some task overlap with structural fires.

Figure 32 Poor visibility conditions of wildfire fighting*Visual acuity*

Visual acuity is required for many wildfire firefighting tasks, including:

- identifying casualties in adverse conditions
- identifying other crew members in adverse conditions
- recognising visual hazard cues, such as uneven surfaces
- reading safety signs, chemical placards and so on
- identifying a gas cylinder from a distance
- finding one's way back to the fire appliance in adverse conditions, particularly during emergency recall.

Visual fields

Peripheral vision is impeded by the goggles that are worn for wildfire firefighting.

Colour vision

The ability to detect a red fire truck against a green bush background had previously been deemed a safety critical task for firefighters. Risk assessment concluded that this is not a major problem in reality. The lines of the vehicle, the use of striped panels, the use of writing on the vehicle, the possible movement of the vehicle, and the use of flashing lights and sirens, as well as the general context, all provide redundancy and aid in locating such a vehicle.

Hazmat

A number of activities rely on vision during hazmat operations.

Visual acuity

Visual acuity is required for several hazmat tasks, including:

- identifying and reading dangerous goods placards and other signage – for example, on an overturned tanker (refer to Figure 33). In hazmat situations, it is safest for the firefighter to identify the hazards from as far away as possible. For some substances, this distance is 200 m or more, which requires using binoculars.
- identifying gas cylinders
- identifying casualties
- reading Material Safety Data Sheets, manifests, emergency response plans, computer screens, chemical labels, pH papers and so on
- reading LCD and LED displays on equipment such as gas monitors and radiation dose meters (refer to Figure 34).

Figure 33 Dangerous goods signage on a tanker



Dangerous goods signage on can be seen on the overturned tanker (red diamond near the number plate).

Figure 34 Reading displays on a gas monitor



Colour vision

Colour vision is relevant for several hazmat tasks:

- reading pH papers
- reading chemical warfare detector papers
- recognising industrial pipe colours
- recognising colour coded industrial pipelines
- identifying industrial gas cylinders.

However, other cues are often available – for example, labelling.

Rescue

A number of rescue tasks rely on vision. Rescue duties are undertaken at all times of day, and during all weather and other adverse conditions that impact on visibility.

Visual acuity

Acuity is required for:

- locating casualties from motor vehicle accidents who may have been thrown from a vehicle
- identifying casualties in a debris field during urban search and rescue operations
- assessing injuries to victims, sometimes in conditions of poor visibility, to determine the most appropriate rescue methodology
- identifying hazards such as sharp metal and glass
- connecting lines to hydraulic tools
- operating other specialised equipment, changing blades in reciprocating saws (includes identifying the required blade and attaching it correctly)
- reading engravings on safety equipment to assist with knots and cordage during rope rescue

Visual fields

Peripheral vision may be impeded by safety glasses or goggles worn for rescue duties.

Colour vision

Rescue operations use a lot of equipment that is coloured, including cordage, rope, strapping, tubing and lifters. Much of the colour involved is discretionary, in that it is the colour that was ordered at the time. Some colours relate to the particular strain rating of equipment, such as lifting straps.

Judicious choice of coloured equipment can avoid confusions here.

8.1.2 The required vision attributes

To be able to perform the inherent requirements of driving the appliance, fire suppression, rescue and hazmat duties, the following visual attributes are required:

- Good **visual acuity** is crucial to driving safely. Good acuity is also essential to firefighting, especially under conditions of poor visibility, so that a firefighter may be operationally effective. Good acuity is crucial for tasks such as identifying casualties and identifying hazards to other firefighters when moving through the incident.
- **Peripheral vision** is crucial to driving safely; however, it is of limited importance in many firefighting situations because the PPE often limits the fields of vision and there are generally poor visibility conditions.
- A risk assessment undertaken by Dr John Parkes in 2009³ showed that **colour vision** is not essential to safe driving. This is because the position of red and green traffic lights makes the actual colours redundant. With the exception of marine tasks, which are subject to maritime colour vision requirements, all colour vision tasks were risk assessed and none deemed safety critical. Risk mitigation in relation to these task includes:
 - crew members working together and not in isolation
 - assessing overall fire behaviour
 - using positional cues
 - using monitors instead of detection papers

- using written labels or symbols in addition to colours on cylinders
- judicious purchasing of certain equipment.

Operational duties are undertaken often under emergency and adverse conditions, where the ability to detect visual information quickly relies on good eyesight, specifically, acuity and fields. Colour vision is not important if there is redundancy of information. Abnormal vision may impact on reaction time, mobility and casualty recognition. Failure to adequately see and respond to imminently hazardous situations jeopardises the safety of the firefighter and others dependent on the firefighter for their safety.

8.2 Hearing

The firefighting tasks that require communication and hearing are described first, to identify the inherent requirements relevant to hearing. Then the necessary hearing health attributes needed to meet these requirements are discussed.

8.2.1 Firefighting tasks and inherent requirements relevant to hearing

Call out

Firefighters must firstly respond to an alarm tone and voice through the station public address system. Retained firefighters must respond to a pager, mobile phone or home telephone.

Firefighters then assemble in the watch room to be briefed on the type of incident and discussions – for example, about the preferred route to the incident.

³ Parkes J. *Risk assessment of safety critical and other duties performed by NSWFB personnel requiring colour vision*, 2009.

Travelling in the appliance

The hearing tasks associated with travelling in the appliance can be divided into communicating with FireCOM and driving the appliance safely.

Communicating with FireCOM

In the appliance, a radio message will be sent by the Officer in Charge or the driver, using the vehicle mounted radio, informing the command centre that the appliance is responding. Messages sent will be read back, requiring the ability to verify that the information repeated back is correct. The vehicle mounted radio is of high wattage. It has a handheld microphone and the sound is volume adjustable (refer to Figure 35). The volume adjustment affects the volume throughout the cabin, which means if it is set too low or too high, it will affect crew members.

Figure 35 Vehicle mounted radio and microphone



Sirens are activated enroute. Usually, the windows will be closed to exclude external noise. However, on occasion, where the air conditioning is inadequate, windows may be opened during travel – for example, in extreme heat or in wet weather (when the windows fog up).

Additional radio communication that occurs enroute includes briefings between the Officer in Charge and the crew about the activities to be undertaken.

Driving the appliance safely.

As with any commercial vehicle, drivers of the fire appliance must be able to rapidly detect other elements, such as vehicles, pedestrians and warning sounds. In addition, driving may be in emergency mode when speed limits and other road rules may be legally exceeded and traffic lights slowly driven through when red. The driver must be able to hear and respond to auditory cues from other traffic, bells at level crossings and so on while other radio communication is ongoing in the cabin of the appliance. The driver of the appliance must also be able to hear warning alarms, such as low air pressure in the braking system.

Incident – structure fires

On arrival at the incident, extensive verbal communication occurs in noisy situations. Appliances, traffic, machinery, diesel fire pumps (used to boost sprinkler and hydrant systems) all generate noise. Additional noise may include emergency warning systems in buildings and peak noise events such as explosions.

Additionally, PPE is donned: a SCBA mask covers the mouth, and a helmet and flash hood cover the ears (refer to Figure 36). From this point, communication between crew members is somewhat inhibited by the helmet and flash hood covering the ears, and close proximity to the noise of the SCBA demand valve (because of inhalation and exhalation). The SCBA speech diaphragm results in decreased voice projection and muffled speech.

Figure 36 Personal protective equipment and communication



The flash hood sits over the ears under the helmet.



The self contained breathing apparatus mask sits over the mouth, resulting in decreased voice projection and muffled speech.

Communication without the use of handheld transceivers across distances of up to 5 metres is not uncommon (refer to Figure 37) between team members and between teams at the incident (including inside structures).

Figure 37 Communication without radio transceivers



Once inside a structure, firefighters always work in pairs. Communication occurs between partners to ensure safety. For example, one firefighter may describe identified dangers, such as weakened floors and changes in direction, to their partner.

The bulk of communication between the two firefighters is direct speech. Handheld radio communication is not used between partners. Because of poor visibility from the smoke, few hand and tactile signals are used (Figure 38). Communication may also be required with other crews. Fire and the combustion process can contribute to background noise.

Figure 38 Poor visibility conditions and communication



Firefighters entering structural fire wearing full personal protective equipment. Note the position of each firefighter in relation to each other for poor visibility conditions, resulting in increased reliance on verbal communication and less on visual communication such as signs.

- Firefighters need to hear various crucial sounds and noises, including:
- calls from casualties, which they need to localise accurately so they can then rescue the person
- important background noise – for example, fire development cues that may indicate imminent structural collapse such as creaking, falling masonry and beams (refer to Figure 39)
- the sound of gas release valves on heated gas cylinders is important, because pitch increases with increasing pressure and can indicate imminent explosion
- blasts of a horn from the distant fire appliance, which is used as a signal for evacuation
- the low pressure warning whistle a SCBA air supply emits when it reaches a critical level. The whistle generates a 2000–4000 Hz tone at a level of 90 dB. The whistle forms part of the valve arrangement that connects to the bottom of the SCBA cylinder
- a distress signal unit (DSU), which is worn by each firefighter (refer to Figure 40). Stages of pre[alarm are activated if the wearer stops moving for a period of time; this sound is initially soft and intermittent, then it increases in volume. A full alarm is sounded if the wearer fails to move on hearing the pre[alarm. The full alarm generates a 2000–3000 Hz tone at 90 dB (at 3 m). Hearing the DSU alarm by the partner is crucial for firefighter safety. The DSU also has flashing LEDs, which are only visible from limited angles to the firefighter and easily obscured by clothing or other objects. The DSU may also be voluntarily activated to assist additional crews coming in to locate firefighters inside.

Figure 39 Structural collapse of building



Auditory cues are important during internal firefighting for hearing sounds associated with imminent structural collapse.

Figure 40 Distress signal units



A distress signal unit is important to help locate a collapsed firefighter.



distress signal unit with lights activated in full alarm.

Handheld transceivers are also used to communicate messages – such as the conditions of the incident, the actions being undertaken and the requirement for additional resources – from the firefighter to the incident commander. The handheld transceiver sits over the left or right lower chest in a coat pocket. The transmitting device forms part of the unit that sits in the pocket (refer to Figure 41).

Structural firefighting helmets include an internal speaker and microphone that allow the handheld transceiver to be plugged in, directing communications to one ear inside the helmet (refer to Figure 41).

Figure 41 Handheld transceiver, and structural helmet speaker and microphone



Handheld transceiver in pocket



Helmet radio communication

Communication from the incident commander is received through the handheld transceiver, including updated instructions and other requests. Incident wide communication may also be received. Handheld transceiver volume levels must be moderated to reduce acoustic feedback between the two transceivers held by the partnered firefighters. High levels of background noise, combined with the SCBA, helmet and hood, can make it difficult to hear incoming messages.

Outside the structure, the pump operator works in close proximity to the noise of the running engine and pump of the appliance. They must be able to hear incoming radio communication from other firefighters on the incident ground, including command personnel and those inside the structure, to activate the correct controls. Duties are undertaken in significant additional background noise from the pumps, and multiple pumps may be present at incidents. The operator must also be able to hear other audible cues such as hissing from a ruptured gas main or noises associated with a collapsing structure. Duties include monitoring two radios – the incident ground radio channel and the command centre radio channel. Both sit on the pump control panel. Although the control panel includes a compound gauge to indicate water pressure, this cannot be monitored the whole time, and the operator needs to be able to hear changes in pitch that indicate changes to water pressure or supply.

Figure 42 Operating the pump against the engine background noise



Wildfire

Firefighters also work in teams of at least two people in wildfires. There may be several other crews in close proximity. Verbal communication with each other and with incident command are important, as is detecting crucial sounds and noises.

The PPE includes helmet and a neck protector, which cover the ears. There is less reliance on SCBA for wildfire firefighting. Mostly, P2[particle masks are worn – which, to some degree, inhibit speech. Communication occurs in high background noise – for example, higher than normal winds are generated by wildfires, the sound of burning bush (comparisons have been made to the sound of a jet engine) and petrol powered pumps. Important background noise includes the sound of falling trees and venting cylinders.

Handheld radio communication occurs in background noise during wildfire firefighting (refer to Figure 43). Firefighters must also be able to hear and localise victims' calls for assistance in background noise.

Figure 43 Handheld radio communication during wildfire fighting



During mopping[up operations, chainsaws contribute to background noise. Important background noise includes the warning noise of cracking and falling trees and branches.

Hazmat

The impervious FE hazmat suit affects communication by inhibiting speech and hearing (refer to Figure 44). Helmets and flash hoods are not normally worn underneath the suit. The firefighter's speech echoes off of the large visor, which affects communication. Firefighter pairs in FE suits use mainly direct speech and the handheld transceiver to communicate with each other and with the incident commander.

Figure 44 Fully encapsulated suit



Fully encapsulated suit limits hearing and distorts speech.

Splash suits surround the face, sitting over the ears, creating noise likened to a rustling plastic bag.

Rescue

Rescue operations may vary widely. The most common rescue scenarios are motor vehicle accidents. A designated crew member is responsible for fire protection and therefore wears a SCBA; however, other crew members are able to communicate by direct speech without the constraints of the SCBA mask. Powered equipment, the fire appliance engine and other ambient noises (e.g. traffic) all contribute to background noise. Specialised rescue operations, such as cliff face rescue, may use additional communication tools such as whistles. Background noise may include the crashing of the sea and howling wind. Urban search and rescue operators may be required to hear the fine tapping of a casualty caught below rubble.

9 *Health attributes*

The necessary health attributes for the effective undertaking of firefighting flow from a consideration of the inherent requirements. The assessment of health for firefighting also requires consideration of disease states, either latent or known, that can impact on capacity or that can lead to acute incapacity.

As with all commercial vehicle drivers, drivers of the fire appliance must be able to rapidly detect other vehicles, pedestrians and warning signs. However, this requirement is particularly important when firefighters are driving in emergency mode at high speed while exercising exemptions to normal road rules provided to drivers of emergency vehicles. Normal cues such as the flow of traffic cannot be relied upon.

Structural firefighting work requires very high levels of musculoskeletal and cardiopulmonary fitness, heat tolerance, alertness and decision making ability. There are also considerable psychological demands due to exposure to potentially traumatic incidents.

Work is conducted as a team. In particular, when firefighters go into a structure, they go as a pair and are closely dependent on each other. Should one become incapacitated, both that firefighter and the partner are in imminent danger.

Wildfire fighting places similar high demands on the firefighter to structural firefighting work. It requires very high levels of musculoskeletal and cardiopulmonary fitness, heat tolerance and situational awareness.

Hazmat work places considerable demands on the cardiopulmonary and musculoskeletal systems, and requires working in a FE or splash suit while wearing a breathing apparatus, which can lead to heat stress.

Health attributes for firefighting can be described under four main categories – although there is some overlap between them:

- **Senses:** These attributes include vision, balance, and hearing and speech. Problems with vision or hearing rarely cause acute incapacity, apart from Meniere's disease and other causes of vertigo. However, significant impairment of vision or hearing may impact on the ability to effectively and safely perform firefighting duties.
- **Psychological:** These attributes include attentiveness, cognition and psychological resilience, which may be impaired by psychiatric disorders. An acute anxiety state or psychosis may cause significant impairment or acute incapacity. Some psychological conditions may result in impaired or slow reactions, or inappropriate actions.
- **General health:** This attribute refers to conditions that can impact on capacity and/or conditions that may cause acute incapacity or impairment. They include:
 - cardiovascular disorders such as coronary heart disease or arrhythmias
 - respiratory disease such as asthma
 - neurological disorders such as epilepsy and stroke

- diabetes causing hypoglycaemia
 - heat related illness – the ability to regulate heat is a particular issue for the cardiovascular system (refer to Section 9.3.1).
- **Musculoskeletal:** These attributes refer to locomotor capacities of the limbs and back, coordination of movement, endurance and agility, and so on. An injury such as a dislocation may cause acute incapacity.

These attributes are discussed in more detail in the following sections.

9.1 Senses

9.1.1 Hearing

To be able to perform the inherent requirements of fire suppression, rescue and hazmat duties, the following hearing attributes are required:

- Firefighters must be able to hear speech from direct verbal communication as well as from radio communications while wearing PPE, which attenuates sound against a noisy background.
- Firefighters must have adequate hearing to be able to hear and localise auditory cues crucial for safety – a victim crying for help, a DSU alarm, or to hear noises associated with imminent collapse or an appliance siren signalling urgent evacuation.
- Conditions will often include significant background noise and SCBA noise. Failure to hear sounds of low intensity, or to distinguish a voice or speech from background noise can lead to failure to respond to imminently hazardous situations. This jeopardises the safety of the firefighter or others who are dependent on the firefighter.
- Firefighters must also be able to hear vehicle, traffic and other road sounds when driving the appliance particularly in emergency mode.

9.1.2 Vision

Firefighting duties are often undertaken under emergency and adverse conditions, where the ability to detect visual information quickly relies on good eyesight – specifically, acuity and field. However, colour vision is not critical if there is redundancy of information. Abnormal vision may impact on reaction time, mobility and casualty recognition. Failure to adequately see and respond to imminently hazardous situations jeopardises the safety of the firefighter and others dependent on the firefighter for their safety.

The following visual attributes are required to be able to perform the inherent requirements of driving the appliance, fire suppression, and rescue and hazmat duties:

- Good visual acuity is crucial to driving safely. Good acuity is also essential to firefighting, especially under conditions of poor visibility, so that a firefighter may be operationally effective. Good acuity is crucial for tasks such as identifying casualties and hazards to other firefighters when moving through the incident.
- Peripheral vision is crucial to driving safely. However, it is of limited importance in many firefighting situations because the PPE limits the fields of vision and there are generally poor visibility conditions anyway. Peripheral vision is necessary when a firefighter arrives at an incident where work may be undertaken on roads and there is a need to detect traffic movements.
- Colour vision. A risk assessment undertaken by Dr John Parkes in 2009 concluded that while some tasks undertaken by firefighters require colour recognition, none were deemed safety critical. The exception to this is marine tasks, which are subject to maritime colour vision requirements.

9.2 **Psychological health**

Firefighting places heavy demands on various psychological attributes. Psychological conditions can impact on attentiveness, cognition and decision making, and the capacity to manage exposure to distressing events such as motor vehicle accidents, burnt and injured victims, and suicides.

Conditions that can impact on psychological resilience, or impair judgement, behaviour, cognition and so on must therefore be assessed. Some psychological states may even result in acute incapacity (e.g. acute anxiety with panic attacks). Cognitive impairment may also occur due to misuse of drugs or alcohol, and some medications.

9.3 **General health**

9.3.1 **Cardiovascular system**

Good cardiovascular health is required. This is not merely the absence of cardiovascular conditions that can result in acute incapacity, but also good cardiovascular function, which is essential for coping with extreme workloads and maintaining core body temperature. Therefore, the risk of coronary heart disease and other conditions such as valvular heart disease and arrhythmias need to be assessed.

An efficient cardiovascular system is central to the maintenance of body heat regulation, to avoid impairment or acute incapacity from heat related illnesses, or a cardiovascular event.

Six of 10 deaths of FRNSW firefighters on duty since 1989 have been cardiac related. Kales et al. studied the risk of fatal heart attacks in American firefighters in relation to their various duties.⁴ Out of 449 deaths from 1994 to 2004, they found that fire suppression duties carried the highest risk of cardiac arrest, which was 10–100 times higher than for non emergency duties. Acute incapacity on the incident ground can be hazardous not only for the firefighter concerned, but for the others in the crew who may be dependent on them, or need to rescue them. Kales et al. also found there was an increased risk of heart attack in the alarm response phase, which may be hazardous if the person was driving the appliance. In association with this research, the National Institute for Occupational Safety and Health (United States) recommends screening of firefighters for cardiac risk factors.⁵

9.3.2 **Respiratory system**

The extreme workloads of firefighting place high demands on the respiratory system; hence, good respiratory function is required. This includes the ability to wear a P2 negative pressure particle mask, which imposes an extra load on respiration. Good respiratory function is essential for rapid exchange of O₂ and CO₂. Even normal respiratory function may be threatened by irritants in the firefighting environment, which can cause coughing, bronchospasm and pulmonary oedema.

Therefore, conditions such as asthma and chronic obstructive pulmonary disease need to be assessed in addition to overall respiratory function.

9.3.3 **Neurological disorders**

Neurological disorders such as seizures, epilepsy and stroke can cause acute incapacity. Certain neurological conditions can also result in impairments of, for example, cognition, coordination, attention, judgement, sensation, balance or body temperature regulation. Therefore, any neurological conditions that can impact on these functions or result in acute incapacity must be assessed.

⁴ Kales et al. *NEJM* 2007, 356:1207–15

⁵ National Institute for Occupational Safety and Health Alert. *Preventing firefighter fatalities due to heart attacks and other sudden cardiovascular events*, 2007.

9.3.4 Diabetes

As diabetes is a risk for cardiovascular disease, and good cardiovascular health is required for firefighting, diabetes screening and assessment is important. Diabetes treatment associated with risk of hypoglycaemia is also assessed, as the absence of conditions resulting in impairment or acute incapacity is required for safe firefighting. Diabetes assessment is also relevant due to complications such as retinopathy (can result in visual impairment) and peripheral neuropathy (may affect balance), which can also impact on the effective and safe undertaking of firefighting duties.

9.3.5 Renal disease, fluid balance and acid–base metabolism

The extremes of the operational firefighting environment may cause considerable stress on fluid balance and hydration. Good renal function is required for acid–base balance. In addition, good renal function is required to withstand challenges to hydration, as underlying impaired renal function combined with dehydration may result in further renal injury.

9.3.6 Sleep disorders

Firefighting, including driving the appliance in emergency mode, requires accurate perception of a situation and rapid decision making. Disorders such as obstructive sleep apnoea may result in loss of concentration, and therefore affect the safety of firefighters tasked with driving due to fatigue and impairment of concentration.

9.4 Musculoskeletal

Firefighting places very high demands on the musculoskeletal system regarding strength, stability, dexterity, endurance and coordination; hence, the requirement for good musculoskeletal capacity. Joint instability may cause acute incapacity.

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PART 3: MEDICAL FITNESS CERTIFICATIONS

Assessments undertaken against this Health Standard will result in applicants' or firefighters' medical fitness for firefighting being certified in accordance with one of the following standard classifications.

Fit to Perform Firefighting Duties Without Any Requirements or Restrictions

This indicates the applicant or firefighter meets all criteria in the Health Standard and is medically fit for the full range of firefighting duties without any requirements or restrictions.

For conciseness, this category will be referred to as Fit to Perform Firefighting Duties Unconditional within Part 4 of this standard.

Fit to Perform Firefighting Duties with Specified Requirements or Restrictions

This indicates that the applicant or firefighter meets all criteria in the Health Standard, provided that recommended requirements or restrictions are implemented, which may include and be certified as:

- Fit Subject to Review: more frequent medical review than that required under standard assessment schedules
- Fit Subject to Job Modification: suitable modifications to the job – for example, modification of physical equipment
- Fit Conditional on Wearing of Appropriate Aids (e.g. corrective lenses).

Temporarily Unfit to Perform Firefighting Duties, but fit to perform alternative duties, either with or without specified requirements or restrictions

This indicates that the firefighter does not meet the criteria for Fit to Perform Firefighting Duties Without Any Requirements or Restrictions. Their health situation is such that they may pose a risk to safety and therefore should not perform full firefighting duties at present. They must undergo prompt assessment to determine their ongoing status and be definitively classified. Temporarily Unfit to Perform Firefighting Duties may also be applied in situations where a clear diagnosis has not been made – for example, in the case of an undifferentiated illness that has resulted in blackouts.

The firefighter may be assessed as Fit to Perform Firefighting Duties With Specified Requirements or Restrictions.

For conciseness, this category will be referred to as Temporarily Unfit to Perform Firefighting Duties within Part 4 of this standard.

Temporarily Unfit to Perform Any FRNSW Duties

This indicates that the firefighter does not have the capacity to safely perform any meaningful duties available within FRNSW at present; however, they require additional assessment to determine their long[term medical fitness for firefighting.

Permanently Unfit to Perform Firefighting Duties

This indicates that the firefighter does not meet the criteria for Fit to Perform Firefighting Duties Without Any Requirements or Restrictions or Fit to Perform Firefighting Duties With Specified Requirements or Restrictions (or any other conditional category). Their condition is deemed permanent (defined as unlikely to improve to the level required for firefighting duties in the foreseeable future) and they will not be able to perform firefighting duties in the foreseeable future. Fire & Rescue NSW policies such as redeployment may be considered.

PART 4: MEDICAL CRITERIA FOR FIREFIGHTER HEALTH ASSESSMENTS

This part outlines the medical criteria to be applied when assessing a firefighter's fitness for firefighting duties. It also includes guidelines for assessment and management of various health conditions with respect to firefighting work.

For the purposes of this standard, firefighting is used to collectively define all of the inherent tasks detailed in Part 2 of this document.

This part is presented in a series of chapters addressing the main health conditions that are likely to affect fitness to perform firefighting duties, including:

- blackouts
- cardiovascular conditions
- diabetes
- hearing
- musculoskeletal conditions
- neurological conditions, including dementia, seizures and epilepsy, vestibular disorders and other neurological conditions
- psychological conditions
- respiratory conditions
- sleep disorders
- substance misuse
- vision and eye disorders.

Each section provides general information about the condition and its effects on medical fitness for duty, and then provides advice about the medical assessment of the condition. The tables set out the criteria to be met for medical fitness for duty; however, they are not exhaustive. The criteria usually emphasise function in relation to the job, rather than being based on diagnosis or impairment.

When assessing a firefighter, the assessing medical practitioner should be mindful of the general principles and demands of firefighting work (refer to Sections 7–9), and the implications for safety and effective delivery of service. These principles should be the touchstone for difficult cases or conditions not adequately covered in this Health Standard.

This Health Standard does not presume to deal with the myriad conditions that may affect health on a short term basis. Such conditions may include post-major surgery, severe migraine, fractures to limbs or acute infections.

Clinical judgement is usually required on a case by case basis, although the text in each section gives some advice on the clinical issues to be considered.

10 Blackouts

10.1 Relevance to firefighting duties

Unpredictable, spontaneous loss of consciousness is incompatible with performing firefighting duties, including driving an appliance in emergency mode and working in dangerous environments. Loss of consciousness in these circumstances is likely to jeopardise the safety of the individual firefighter, their crew and members of the public.

10.2 General assessment and management guidelines

Blackouts may arise from various conditions including:

- hypotension because of inappropriate vasodilation (e.g. vasovagal faints, autonomic nervous system disorder)
- other cardiovascular disorders (e.g. arrhythmias, flow obstruction, or other unusual conditions such as subclavian steal)
- neurogenic disorders (e.g. epilepsy)
- metabolic disorders (e.g. hypoglycaemia)
- psychiatric disorders (e.g. hyperventilation, psychosomatic states)

- drug intoxication
- sleep disorders.

For the purpose of this Health Standard, a syncopal event is defined as a loss of consciousness arising from a cardiovascular cause (refer to Section 11, Cardiovascular disorders).

Blackouts, whether they occur on or off duty, should be managed as per Figure 45. Determination of the cause of blackouts may be difficult and require extensive investigations (cardiac, neurological) and specialist referral.

Some conditions causing blackouts are temporary (e.g. acute infection or during venepuncture) and should not impact on fitness for duty if found to be triggered by a well defined provoking factor that can be avoided at work. The cause should be confirmed by the firefighter's treating doctor since vasovagal syncope can also result from conditions that are not so benign.

In the event of an unexplained blackout, the firefighter should be classified 'Temporarily unfit to perform firefighting duties' until the cause is ascertained and treated.

Despite extensive investigation, it is not always possible to determine whether the mechanism of a blackout is syncope, seizure, hypoglycaemia, a sleep disorder or another condition. For blackouts of unknown cause – as some of these cases will, in fact, be seizures – a standard similar to that for seizures is applied (refer to Table 1).

Where a firm diagnosis has been made, the criteria appropriate to the condition should be referred to elsewhere in the Health Standard. For blackouts not covered elsewhere in the Health Standard, refer to Table 1.

Figure 45 Management of blackouts and firefighting

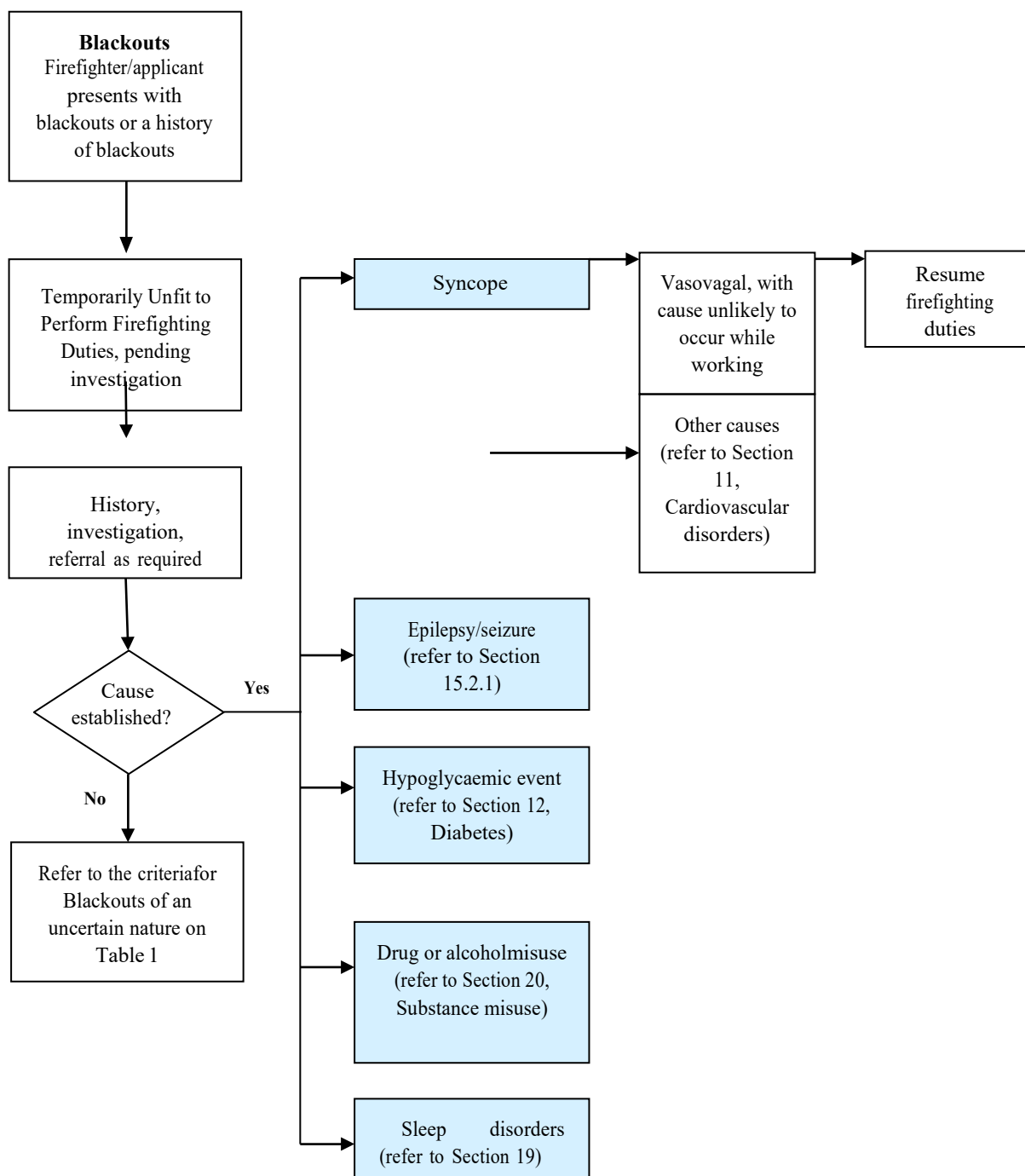


Table 1 Medical standards for operational firefighters – blackouts of uncertain nature

Condition	Criteria
Blackouts (an episode(s) of impaired consciousness) of uncertain nature	A firefighter is not Fit to Perform Firefighting Duties if they have experienced blackouts that cannot be diagnosed as syncope, seizure or another condition. If there has been a single blackout or more than one blackout in a 24 hour period, Fit to Perform Firefighting Duties Subject to Review may be determined by the FRNSW Occupational Physician, taking into account information provided by the appropriate specialist as to whether the following criterion is met: there have been no further blackouts for at least five years. If there have been two or more blackouts separated by at least 24 hours, Fit to Perform Firefighting Duties Subject to Review may be determined by the FRNSW Occupational Physician, taking into account information provided by the appropriate specialist as to whether the following criterion is met: there have been no further blackouts for at least 10 years.
Exceptional cases	Where a firefighter with one or more blackouts of undetermined mechanism does not meet the standard for Fit to Perform Firefighting Duties, Fit to Perform Firefighting Duties Subject to Review may be determined by the FRNSW Occupational Physician taking into account information provided by assessing specialists, investigations undertaken and blackout free period. Where the firefighter holds a licence subject to the medical standards for commercial vehicles (e.g. medium rigid, heavy rigid), the driver licensing authority assessment will also be taken into account.

10.3 Bibliography

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11 Cardiovascular disorders

11.1 Relevance to firefighting duties

The cardiovascular demands of operational firefighting duties are extreme, resulting in significant cardiovascular and thermal strain. Acute incapacitation of a firefighter during firefighting duties, including operation of the appliance, can severely jeopardise the safety of the firefighter, their crew (who may have to rescue them) and members of the public.

Active firefighting can be one of the most strenuous activities undertaken by people.

Analysis of the inherent requirements of Fire and Rescue NSW (FRNSW) firefighting duties closely match those of American firefighters as outlined in National Fire Protection Association's *NFPA1582: Standard on comprehensive occupational medical program for fire departments*. Therefore, consideration of United States (US) data and experience are highly relevant and are discussed here.

The leading causes of on duty deaths in firefighters are acute cardiovascular events. In the US, acute cardiovascular events accounted for 45% of all on duty deaths occurring between 1995 and 2004.

These rates are significantly higher than for other occupational groups, such as police and emergency medical services, with rates of 22% and 11%, respectively. Also, for every fatal cardiovascular event on duty, it is estimated that there are 17 nonfatal on duty events in the US.

Acute cardiovascular events include acute myocardial infarction, fatal arrhythmia and other events such as stroke.

In the five years to 2012, sudden cardiac death continued to account for 42% of on duty deaths in the US. The NFPA reported that, in 2012, in spite of the reduction in numbers of on duty deaths (from all causes), sudden cardiac death was still the number one cause of on duty firefighter deaths, and usually accounted for the highest share of deaths in any given year. In 2012, of the 74% of cardiac death victims for whom autopsy or medical records were available, 40% were reported to have had a history of cardiac problems, such as previous heart attacks or revascularisation procedures (e.g. stent or coronary artery bypass grafting). More than 50% of FRNSW deaths on duty in the past 20 years have been caused by cardiac events.

Studies confirm that the conditions of firefighting can precipitate acute cardiovascular events in susceptible individuals; these events are not just incidentally occurring while the firefighter is on duty. Although active fire suppression represents only 1–5% of on duty time, fire suppression accounts for the majority of on duty cardiovascular deaths:

- active fire suppression duties (more than 30%)
- alarm return (17%)
- alarm response (13%)
- physical training (12%).

Also, these deaths do not follow the normal circadian pattern of the general population – 66–77% occur between midday and midnight as do most emergency operations, whereas in the general population, the peak incidence of myocardial infarction is 0600–1100.

Acute incapacitation of a firefighter jeopardises the safety of the firefighter, their crew and members of the public.

11.1.1 Factors specific to firefighting

There are several factors specific to firefighting that act either individually or collectively to increase the risk of a heart attack:

- **Sympathetic activation.** Heart rates rise dramatically following initial alarm, and reach near maximal or maximal predicted values during simulated or actual fire emergencies. Firefighters go from complete rest to full activity in minutes. Irregular episodes of strenuous activity in normally sedentary individuals are well known precipitants of acute coronary events, as are periods of high emotional stress.
- **Strenuous activity.** Structural and bushfire firefighting, hazmat, and search and rescue all entail a high physical workload. Many duties are undertaken with the additional load of personal protective equipment of up to 21 kg, significantly adding to cardiovascular and thermal strain.
- **Oxygen uptake capacity.** Studies estimate that the average required oxygen uptake capacity, as measured by oxygen consumption required for the safe performance of firefighting duties, is 9.7–12.8 metabolic equivalents (METs) (VO_2 of 33.9–45 ml/kg/min). VO_2 max declines with age, so the stated range represents the following levels of fitness for each age group:
 - **30s:** a good level for men and good to excellent level for females
 - **40s:** good to excellent level for men and excellent to superior for females
 - **>50:** excellent to superior level for men and superior for females
- **Body heat.** The work of firefighting produces large amounts of metabolic heat. Additional sources of thermal strain include radiant heat from fires, ambient temperature and humidity. Core body temperature can rise to 39 °C. Normal heat dissipation mechanisms are severely limited by the firefighting ensemble

and chemical suits. Heat related illness is therefore a risk and adds to cardiovascular strain, with predisposing factors including obesity, low levels of fitness, dehydration, lack of acclimatisation, sleep deprivation, concurrent illness, medications that impair thermoregulation (e.g. stimulants and anticholinergics) and medications that increase fluid loss (e.g. diuretics).

- **Dehydration.** Heat stress and dehydration are closely related and add to cardiovascular strain. Dehydration results in decreased plasma volume (and hence stroke volume), with further impairment of thermoregulation and haemoconcentration. Haemoconcentration causes changes in blood electrolytes and increases blood viscosity. Prothrombotic tendencies are therefore potentially acutely increased.
- **Sweating.** The firefighting ensemble and chemical suits result in profuse sweating – as much as 2 litres or more per hour during strenuous firefighting activity. Plasma volume has been reported to decrease by 15% after 18 minutes of strenuous firefighting drills.⁶ Because of activities undertaken when not on duty – including sports, activities at home and other employment (secondary for permanent firefighters, primary for retained firefighters) – firefighters may be relatively dehydrated before undertaking active operational duties.
- **Carbon monoxide exposure.** Carbon monoxide is present in virtually all fire environments. Inhalation results in disruption to the blood's transport and intracellular use of oxygen. The resultant hypoxia leads to decreased oxygen supply to the myocardium. Unstable angina may be

⁶ Smith DL, Liebig JP, Steward NM, Fehling PC. *Sudden cardiac events in the fire service: understanding the cause and mitigating the risk*, Skidmore College, Health and Exercise Sciences, First Responder Health and Safety Laboratory, 2010.

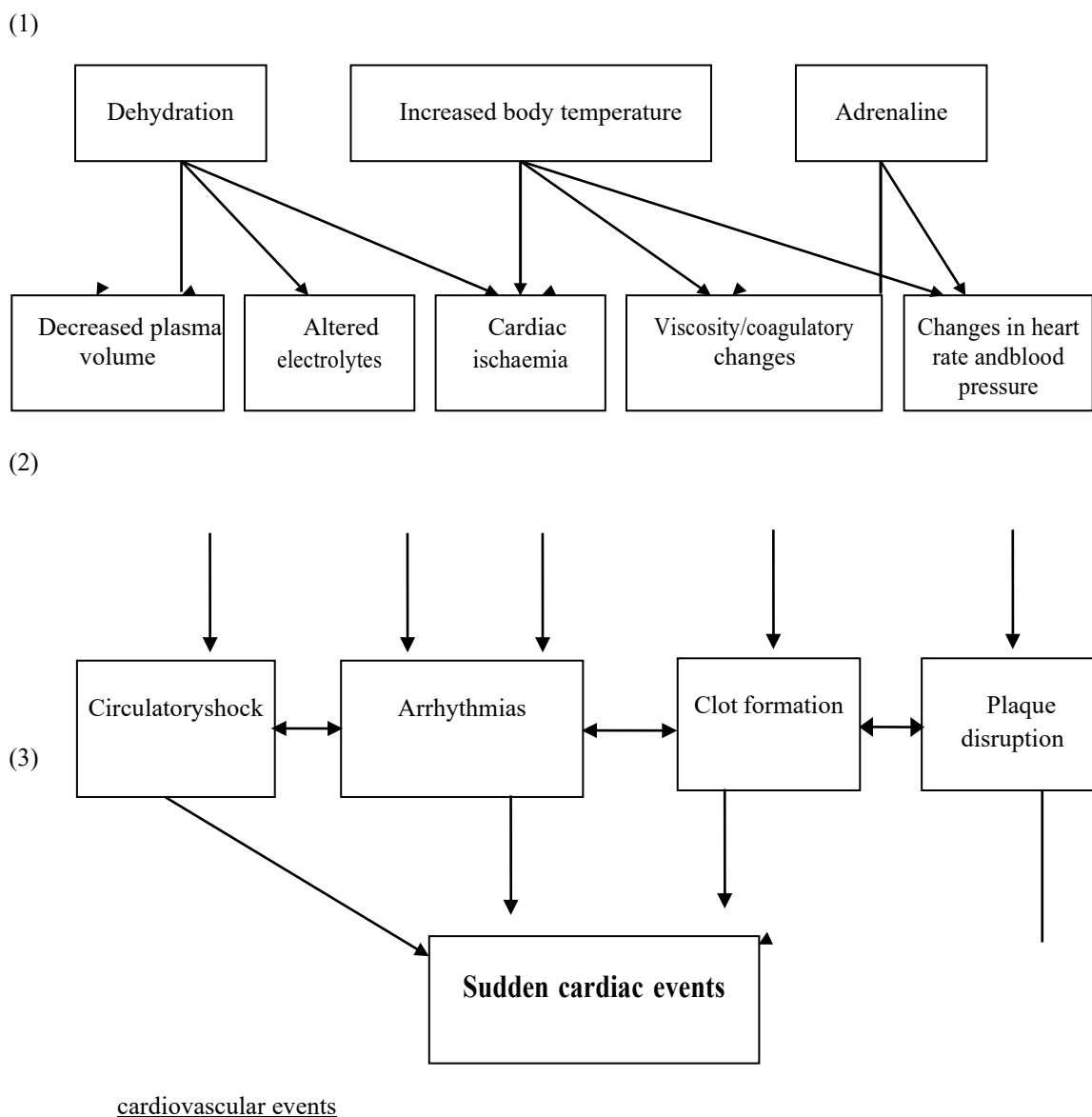
precipitated in those with previously stable disease. The risk of myocardial infarction is more acutely increased for those with underlying critical coronary artery atherosclerosis.

Firefighters are protected from carbon monoxide while wearing the self contained breathing apparatus (SCBA); however, firefighters frequently remove their SCBA during activities such as overhaul, where there may still be significant concentrations of carbon monoxide. A SCBA is not routinely worn for bushfire firefighting, rather, firefighters wear the P2 mask, which does not protect them from carbon monoxide. Increased uptake of carbon monoxide is expected with increased breathing during hard work.

- **Shift work.** Permanent firefighters mostly work a '10/14' roster, consisting of two, 10[hour days, followed by two, 14[hour nights, followed by four days off. Some permanent firefighters may engage in secondary employment in between sets of shifts. Retained firefighters are on call and can work variable hours, usually in addition to primary employment. Many studies of various occupations have found an association between shift work and increased risk of cardiovascular disease. The mechanisms are likely to be multifactorial, including psychosocial, behavioural and direct metabolic pathways. Poor dietary habits, sleep disruption and less physical activity may increase the risk of metabolic syndrome. Sleep deprivation or sleep disturbance has been associated with insulin resistance, weight gain, hypertension and cardiovascular disease.
- **Other.** Intermittent noise exposure from alarms, sirens, engines and mechanised rescue equipment all increase blood pressure. Short term exposure to particulate matter has been associated with triggering myocardial infarction, particularly among people with pre[existing heart disease. This has implications for firefighters, given their exposures to fire smoke particulate matter after removing their SCBA or mask in overhaul operations.

Active firefighting duties lead to hyperthermia, dehydration and considerable cardiovascular strain. Several biologically plausible pathways may trigger acute cardiovascular events: rupture of vulnerable plaque from shear stress, hypercoagulability leading to platelet aggregation and clot formation, and increase in myocardial oxygen demand exceeding myocardial oxygen supply.

Figure 46 Interaction of multiple events during firefighting that can combine to result in acute



11.1.2 Personal risk factors

US data show that on duty cardiovascular deaths occur almost exclusively in susceptible individuals with underlying coronary artery disease – either previously diagnosed or latent. Thirty per cent of the cardiac deaths had prior known coronary artery disease, as determined by evidence of a history of myocardial infarction, angioplasty/stent procedures or bypass surgery. Of all autopsies, 56% revealed left ventricular hypertrophy, a major cause of which is chronically uncontrolled hypertension.

Increasing age and male gender are significant and uncontrollable risks for cardiovascular disease, and relevant to an ageing, largely male workforce. FRNSW data from 2010 show a median age of 42 years for permanent firefighters and 40 years for retained firefighters, with 23% of all operational personnel aged 50 and over.

Epidemiological studies show that, similar to the general population, the majority of incident cardiovascular disease events occur in emergency responders (firefighters and police officers) who are initially only

prehypertensive or mildly hypertensive. The mean blood pressures observed in those who subsequently developed disease were in the range of 140–146/88–92 mmHg. Data show that hypertension is poorly controlled in the general community.

Of all on duty deaths from acute cardiovascular events ...

... 40%* had a previously documented history of coronary heart disease

... almost 100% of on duty cardiac deaths had underlying coronary heart disease.

*NIOSH data series 1994–2004. Of the 70% for whom medical information was available, 40% had a previous history.

11.2 Assessment and medical criteria

11.2.1 General assessment and management guidelines

The aim of assessment is to detect latent and symptomatic heart disease, and to detect risk factors that require management, to help prevent progression to critical disease. Cardiac risk level and clinical assessment is used for assessment.

Cardiovascular disease may also result in stroke, peripheral vascular disease and eye disease. The relevant chapters should be referred to for advice on assessment of these effects.

Medical criteria for medical fitness for duty are outlined in Table 2.

Cardiac risk assessment

Assessment of cardiac risk involves clinical assessment as well as determining the cardiac risk level. Clinical assessment includes evaluation of:

- symptoms such as undetermined chest pain
- family history such as first degree relatives having cardiovascular events in mid life
- past history
- comorbidities such as obesity, inactivity, obstructive sleep apnoea, depression and posttraumatic stress disorder.

A firefighter who is found to be at increased risk of a cardiac event, but is asymptomatic, requires a higher level of assessment than an ordinary patient because of:

- the risks inherent to firefighting that increase the risk of precipitating an event (as discussed in Section 11.1)
- the effect of acute incapacity on the safety of the individual firefighter and others.

All information should be taken into account. Clinical judgement and discussion with a FRNSW Occupational Physician may be needed to determine the individual's fitness for duty while further investigation is undertaken.

Cardiac risk level

The cardiac risk level is a tool for predicting the absolute risk of a cardiovascular event in asymptomatic persons. In particular, it is useful in predicting the risk of a heart attack over 5 years. Although it is a useful tool, it cannot replace clinical assessment. The tool is also useful in helping to guide risk factor management. Age is a major determinant of risk, and so application of this assessment is much more important for older firefighters than for young recruits.

To assess cardiac risk level, data need to be collected for:

- age and sex
- cigarette smoking
- blood pressure
- fasting total and HDL cholesterol
- fasting glucose levels or known diabetes (a fasting level of more than 7 mmol/L is 'diabetic' for calculations, and individuals with values of 5.5 mmol/L or more require an oral glucose tolerance test).

Determine risk level

To determine risk level, refer to Figure 47. An online calculator is available at www.cvdcheck.org.au.

Within the chart, choose the cell nearest to the person's age, systolic blood pressure and total cholesterol:HDL ratio. Individuals who fall exactly on a threshold between cells are placed in the cell indicating higher risk. Individuals below the age of 35 should be managed as if they are 35 years old.

Stratification and risk management

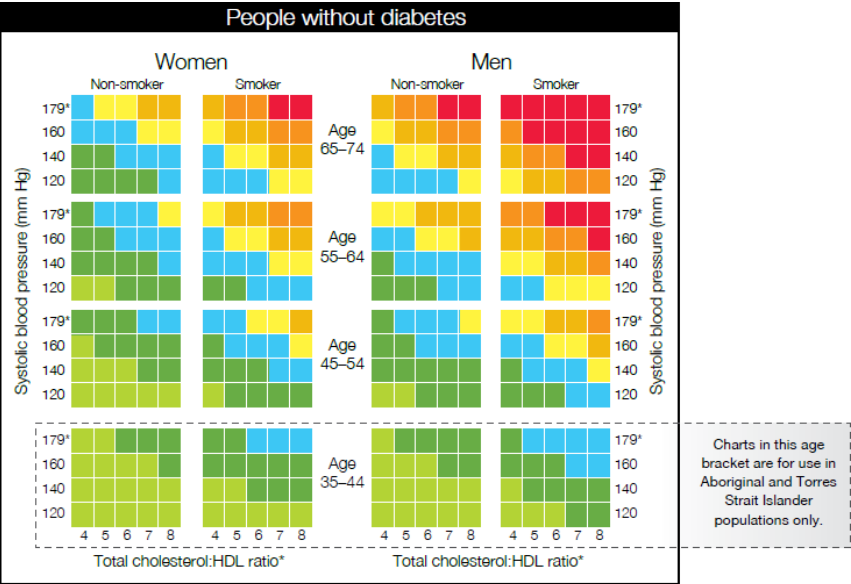
The cardiac risk level gives an estimation of probability of a cardiovascular event in the next 5 years. The higher the score, the higher the probability. Management of firefighters is determined by considering their risk level in conjunction with their overall cardiac risk assessment (again, refer to Figure 47):

- Probability $\geq 16\%$ in 5 years (red, orange, light orange and yellow cells). The firefighter is Unfit to Perform Firefighting Duties. They should be referred for an exercise stress test and classed as Temporarily Unfit to Perform Firefighting Duties pending results and appropriate management.
- Probability 10–15% in 5 years (blue cells). The firefighter is referred for an exercise stress test. While waiting for the results, the firefighter may be assessed as Fit to Perform Firefighting Duties Subject to Review (if there has been a normal exercise stress test within the past two years) or Temporarily Unfit to Perform Firefighting Duties.
- Probability 5–9% in 5 years (dark green cells). The firefighter is assessed for specific risk factors and overall cardiac risk, including obesity, physical activity and family history. The firefighter should be referred to their general practitioner for risk factor modification. An exercise stress test should usually be arranged. While awaiting results of further assessments or investigations, the firefighter may be classed as Fit to Perform Firefighting Duties Subject to Review or Temporarily Unfit to Perform Firefighting Duties, depending on the overall assessment.
- Probability $< 5\%$ in 5 years (light green cells). The firefighter is assessed regarding overall cardiac risk assessment and managed accordingly, including referral to their general practitioner as required. They may be classed as Fit to Perform Firefighting Duties or Fit to Perform Firefighting Duties Subject to Review depending on the overall assessment.

Absolute risk is considered very high (5[year risk of $> 20\%$) in persons with previous cardiovascular disease event (including myocardial infarction, stents, bypass surgery, transient ischaemic attack, ischaemic stroke). Adults with any of the following conditions are also considered to be at very high or high risk – therefore the cardiac risk level need not be applied:

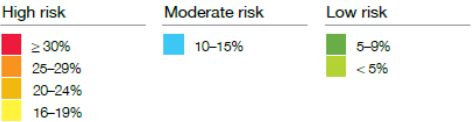
- diabetes and age > 60 years
- diabetes with microalbuminuria (> 20 mcg/min; or urinary albumin:creatinine ratio
- > 2.5 mg/mmol for males or > 3.5 mg/mmol for females) (see also Section 17, Renal disorders)
- moderate or severe chronic kidney disease (persistent proteinuria or estimated glomerular filtration rate < 45 mL/min/1.73 m²) (see also Section 17, Renal disorders)
- a previous diagnosis of familial hypercholesterolaemia
- systolic blood pressure > 180 mmHg or diastolic blood pressure > 110 mmHg
- serum total cholesterol > 7.5 mmol/L.

Figure 47 Coronary heart disease risk factor prediction charts



* In accordance with Australian guidelines, patients with systolic blood pressure ≥ 180 mm Hg, or a total cholesterol of > 7.5 mmol/L, should be considered at increased absolute risk of CVD.

Risk level for 5-year cardiovascular (CVD) risk



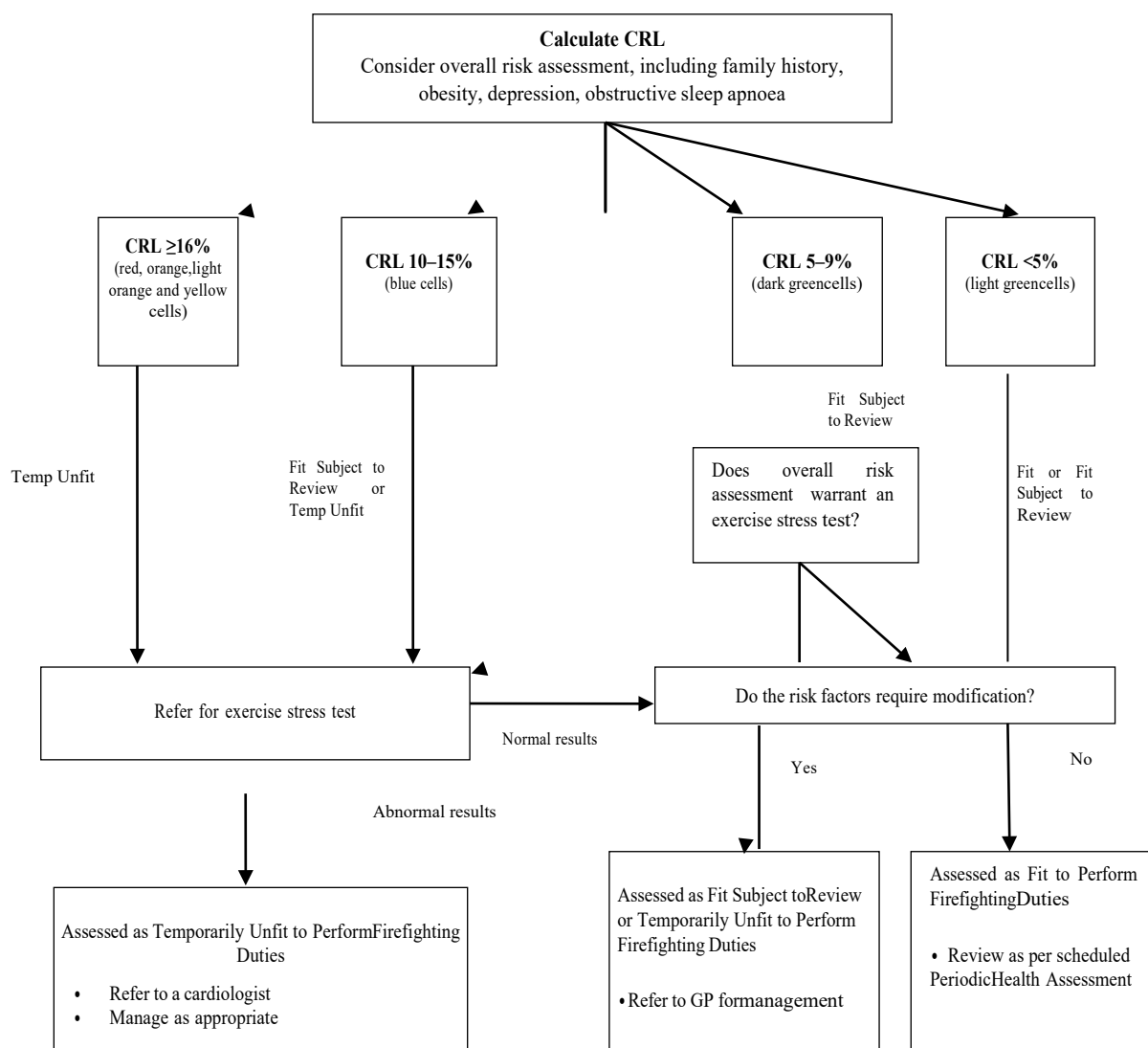
* In accordance with Australian guidelines, patients with systolic blood pressure ≥ 180 mm Hg, or a total cholesterol of > 7.5 mmol/L, should be considered at increased absolute risk of CVD.

Risk level for 5-year cardiovascular (CVD) risk



Reproduced with permission from Absolute cardiovascular disease risk assessment: quick reference guide for health professionals, an initiative of the National Vascular Disease Prevention Alliance. © 2009 National Heart Foundation of Australia (<https://heartfoundation.org.au/images/uploads/publications/austRcardiovascularRiskCharts.pdf>).

Figure 48 Management of cardiac risk level (CRL)



GP = general practitioner Refer to Figure 47 for CRLs.

Exercise stress test

The exercise stress test should be conducted using the Bruce protocol. The exercise capacity must be $\geq 90\%$ of the age/sex predicted capacity. Where the stress test is abnormal (e.g. ischaemia, arrhythmia, hypertensive response, abnormal heart rate recovery) or clinical assessment warrants it, referral to a cardiologist should be made for further assessment and advice on clinical management.

In addition, it is desirable for the person to achieve a level of ≥ 12 METS. If this is not met, they should be referred for assistance in improving their aerobic capacity.

Choice of stress test

Exercise stress electrocardiogram without imaging would normally be the first choice of exercise stress testing for screening asymptomatic individuals.

Interpretation of results should include consideration of electrocardiogram changes suggestive of ischaemia, blood pressure response, heart rate recovery and exercise capacity.

Stress echocardiography (in preference to myocardial perfusion imaging, as it does not involve injection) should be requested for those with left bundle branch block, any other reason for uninterpretable electrocardiogram (ECG), left ventricular hypertrophy or paced rhythm. Stress echocardiography should also be considered where the history is suggestive of ischaemic heart disease and for high risk groups – for example, in those with long[standing diabetes, where silent ischaemia is possible (stress echocardiography may show fixed wall motion abnormalities consistent with previous infarction).

Myocardial perfusion imaging (with exercise stress) may be required based on the opinion of a cardiologist.

Medication and exercise stress test

Some medications, such as beta blockers or digoxin, may impact on the results of exercise stress testing. Medication should be stopped at the appropriate time before the exercise stress test, only with the agreement of the treating doctor.

Electrocardiogram and echocardiograph

If voltage criteria for left ventricular hypertrophy are found on the ECG, an echocardiograph should be requested to assess for left ventricular hypertrophy. For the purpose of this standard, both the Sokolow Lyon and Cornell criteria must be met:

- Sokolow Lyon voltage criteria: R wave V_5 or V_6 + S wave V_1 >35 mm
- Cornell voltage criteria: R wave aVL + S wave V_3 >28 mm in men, or >20 mm in women

The ECG is specific, but not sensitive, for left ventricular hypertrophy; therefore, if the firefighter has a history of long standing or poorly controlled hypertension, an echocardiograph should be considered, even if voltage criteria for left ventricular hypertrophy are not met. If confirmed, the presence of left ventricular hypertrophy is associated with increased risk of cardiovascular morbidity and mortality, and will need to be considered in the overall cardiac risk assessment.

Management of risk factors

Where risk factors are identified – for example, raised blood pressure and smoking – the firefighter should be referred to their general practitioner and FRNSW health promotion programs. A negative stress test – although making the current presence of significant disease unlikely – does not 100% exclude the presence of disease. There may be noncritical disease present that can progress; hence, the importance of risk factor management must be emphasised.

The firefighter should be reviewed to monitor the management of their risk factor profile. If appropriate, the general practitioner may be requested to provide a management plan to the assessing doctor.

Coronary heart disease and related interventions

When considering the likelihood of future events in a firefighter with known coronary artery disease under treatment, it is important to note that the medical literature on the benefits of treatments and interventions relates to risk in the general population, not in groups such as firefighters who are exposed to extreme conditions that can result in extreme cardiovascular strain and an increased prothrombotic risk. A review of on duty cardiovascular deaths in the US between 1995 and 2004 revealed that 30% of decedents had a previous history or evidence of coronary heart disease – myocardial infarction, angioplasty, stent or bypass surgery. There is overwhelming evidence of markedly higher relative risk of on duty death and disability in firefighters with established coronary artery disease.

Many patients will consider themselves cured post-revascularisation procedures; however, the evidence does not support this. Coronary artery disease is a chronic disorder with a natural history that spans several decades. It is a progressive disease, so even after successful revascularisation, recurrent events are to be expected. The extreme conditions of firefighting increase the risk of acute cardiovascular events in vulnerable individuals. Previous cardiovascular events automatically place individuals in a high risk group, with their clinical 5 year risk assumed to be >20%.

In those with known disease, stress testing may be used as a tool for further risk stratification (to help predict the risk of future events); however, given the background of elevated risk in those with treated coronary heart disease, plus the conditions of firefighting known to increase the acute risk in vulnerable persons, plus the safety implications of acute incapacity, it is unlikely that risk would be estimated to be at an acceptably low level. Furthermore, stress testing cannot replicate the physiological strain of firefighting and, therefore, cannot be relied on as predictive for events under those extreme conditions.

Acute coronary syndrome (including ST and non ST elevation myocardial infarction, and unstable angina), bare metal or drug eluting stent surgery, or bypass surgery would normally preclude a firefighter from operational duties on a permanent basis. Such diagnoses must be verified by the appropriate specialist.

Other cardiovascular disorders

Suspected angina pectoris

Where chest pains of uncertain origin are reported, every attempt should be made to reach a positive diagnosis and the firefighter advised to not undertake firefighting duties while being evaluated. The firefighter should be classed as Temporarily Unfit to Perform Firefighting Duties until investigations have reasonably excluded cardiac origin for the symptoms. If investigations are positive or the firefighter remains symptomatic, requiring anti anginal medication for symptom control, they should remain Temporarily Unfit to Perform Firefighting Duties until a final diagnosis is reached. Should coronary artery disease or other cardiac disease be confirmed as the cause for symptoms, reference will need to be made to the relevant section of this standard.

Cardiac surgery

Cardiac surgery may be performed for various reasons, including valve repair, valve replacement or correction of septal defects. In some cases, the surgery will be curative. However, in other cases there will be ongoing risks in relation to firefighting – for example, the requirement for lifelong warfarin or other anticoagulation with a mechanical heart valve. Each case therefore requires individual assessment and all firefighters should be classed as Temporarily Unfit to Perform Firefighting Duties until the assessment is finalised.

High blood pressure

Hypertension increases the risk of heart attack and stroke. Heart rate and blood pressures are elevated during firefighting and other emergency operations. The physical work demand and the emotionally charged environment require these physiological responses. The extent of the physiological demands is determined by the particular operation. The strenuous activity and sympathetic activation associated with active operational duties may interact with underlying already elevated blood pressure to precipitate acute cardiovascular events. Uncontrolled hypertension is an independent risk factor for on duty cardiovascular events and deaths in firefighters.

The Health Standard reflects the importance of good blood pressure control for firefighters, and clinicians should encourage appropriate treatment so that firefighters do not continue to work for years with uncontrolled blood pressure.

The cut off blood pressure value at which a firefighter is considered unfit to perform firefighting duties does not reflect the usual goals for managing hypertension. A firefighter should be deemed Temporarily Unfit to Perform Firefighting Duties if their blood pressure is ≥ 160 mmHg systolic or ≥ 100 mmHg diastolic, treated or untreated, irrespective of cardiac risk level. This cut off has been set for firefighters because of the job specific factors described previously, which can result in acutely higher blood pressures and potentially precipitation of acute cardiovascular events.

Side effects of antihypertensive medication must also be considered when assessing fitness for firefighting duties. A number of antihypertensive agents cause vasodilatation. Hypotensive episodes may therefore be precipitated when exposed to high temperatures, strenuous exercise and fluid loss. History should be elicited in relation to such effects, and the firefighter should also be counselled on the potential for these effects and the importance of maintaining adequate hydration.

Arrhythmia

The Health Standard takes into consideration the risk of acute incapacity from an arrhythmia, other limiting symptoms, risk of ventricular fibrillation and the potential effect of the physiological strain of firefighting duties in increasing the risk of recurrent arrhythmia or other complications. Any underlying causes, precipitants and treatment side effects must also be considered.

Atrial fibrillation

Atrial fibrillation is of significance for firefighters because of immediate clinical effects such as shortness of breath, syncope, palpitations, chest pain or limited exercise tolerance. Symptoms vary significantly between individuals. Longer term complications, such as ventricular dysfunction or complications from thrombo emboli, are also of significance for firefighters. Medication side effects such as proarrhythmic effects must also be considered. The use of anticoagulants is discussed below.

Conduction defects

Conduction defects are assessed for underlying cause, effect on exercise capacity, interaction with the extreme conditions of operational duties, risk of acute incapacity and treatment, including medication and pacemakers.

As an isolated finding, a first degree heart block can be considered a variation of normal in the absence of syncope or presyncope, especially in a young and fit individual.

An incomplete right bundle branch block requires no further investigation. A complete right bundle branch block can occur as a normal finding in healthy individuals. Further assessment is, however, warranted to exclude or confirm the presence of a structural heart abnormality.

Incomplete left bundle branch block requires consideration of an underlying risk, such as hypertension and left ventricular hypertrophy. Left bundle branch block usually indicates underlying hypertension, coronary heart disease or cardiomyopathy, and must be assessed accordingly. The firefighter should be classed as Temporarily Unfit to Perform Firefighting Duties while further assessment is undertaken.

Long QT syndrome is a risk for tachyarrhythmias and ventricular fibrillation. Exercise, emotion and loud noises may precipitate an arrhythmic event. Long QT syndrome may also be caused by some medications. A long QT interval on an initial ECG should result in the firefighter being assessed as Temporarily Unfit to Perform Firefighting Duties while further specialist assessment is undertaken. A confirmed diagnosis of prolonged QT syndrome is incompatible with undertaking operational duties safely, and the firefighter should be assessed as Permanently Unfit to Perform Firefighting Duties.

Pacemakers

Consideration needs to be given to the underlying condition or indication, relative pacemaker dependence, risk to pacemaker function from electromagnetic interference (including the portable radio) and direct trauma, and risk of pacemaker lead fracture as a result of wearing or carrying equipment such as a SCBA. Careful assessment will be required in conjunction with the cardiologist and manufacturer.

Automatic internal cardiac defibrillators

Automatic internal cardiac defibrillators (AICDs) may be inserted post-ventricular fibrillation arrest or if a significant risk for ventricular fibrillation is present, such as cardiomyopathy. The indication for the AICD may be incompatible with undertaking firefighting duties effectively and safely; however, regardless of the indication for the device, there is a risk of sudden incapacity should the device activate. Persons with AICDs are not eligible to hold a commercial vehicle driver licence, and therefore cannot drive the appliance. Adhering

to the same principles of the result of acute incapacity, a firefighter with an AICD cannot safely undertake firefighting duties because of the potential effect on safety. They should be classed as Permanently Unfit to Perform Firefighting Duties and appropriate restrictions advised.

Deep vein thrombosis

Deep vein thrombosis (DVT) may occur in association with surgery, clotting disorders, malignancy and prolonged immobility, or it may result from unidentified causes. Complication by pulmonary embolism is of significance to firefighters, as it may result in acute incapacitation. The risk of recurrence needs to be assessed, as does any additional thrombogenic risk posed by the conditions of firefighting that result in thermal strain and dehydration. A DVT arising from surgery is unlikely to have long term implications on fitness for duty, because it is considered to be self limiting.

Treatment involving anticoagulation is incompatible with being able to undertake firefighting duties, and the section pertaining to anticoagulation should be consulted.

Anticoagulant therapy

Anticoagulant therapy may be used for short or long term treatment, and for preventing thrombus and thromboembolic events – for example, in those with cardiac rhythm disorders, cardiomyopathy, DVT, pulmonary embolism and mechanical heart valves. Firefighters work in emergency conditions with poor visibility conditions, slippery and uneven surfaces, structures that may be unstable, and at heights. These conditions place firefighters at increased risk of trauma and bleeding. An unexpected blow to the head while on anticoagulant treatment could result in intracranial haemorrhage, and a blow to a limb or a fracture may result in compartment syndrome. All firefighters requiring treatment with anticoagulation should be classed as Temporarily Unfit to Perform Firefighting Duties.

Where anticoagulation is required for a finite period, the underlying indication for the treatment will need to be considered and the relevant section of this standard should be referred to. If anticoagulation is required on an ongoing basis, the firefighter should be classed as Permanently Unfit to Perform Firefighting Duties and relevant restrictions should be advised.

Aneurysms

A firefighter presenting with abdominal aortic aneurysm of $\geq 4\text{cm}$, thoracic aortic aneurysm of $\geq 3.5\text{cm}$ or significant aortic root dilatation should be classed as Permanently Unfit to Perform Firefighting Duties. If, however, surgical repair is undertaken, individualised assessment is required, taking into account the remainder of their cardiovascular status, postrepair surveillance results, information provided by the vascular or cardiothoracic surgeon (and other specialists as appropriate), and the opinion of the FRNSW Occupational Physician. If the aortic valve has been replaced with a mechanical valve, the firefighter will be classed as Permanently Unfit to Perform Firefighting Duties, because of the need for lifelong anticoagulation.

Peripheral vascular disease

Peripheral vascular disease may result in symptoms that limit exercise capacity. For the purpose of this standard, it should be treated as a coronary heart disease equivalent, and the firefighter should be classed as at least Temporarily Unfit to Perform Firefighting Duties. The presence of peripheral vascular disease should prompt thorough review of the rest of the cardiovascular system.

Other conditions

Other conditions are addressed in Table 2, including dilated cardiomyopathy, hypertrophic cardiomyopathy, heart failure, valvular disorders and congenital disorders.

Table 2 Medical criteria for operational firefighters – cardiovascular disorders^a

Condition	Criteria
Cardiac risk level (refer to text and Figure 48) Note that conditions in the text where cardiovascular risk is considered high, and therefore the cardiac risk level is not applicable.	The cardiac risk level is to be interpreted in the context of overall cardiovascular risk assessment, including nonmodifiable risk factors. For details of management, refer to Section 12.2. If the cardiac risk level is: • Probability $\geq 16\%$ in 5 years (red, orange, light orange and yellow cells), the firefighter is Unfit to Perform Firefighting Duties. Refer for exercise stress test, refer to GP for risk factor modification and classify Temporarily Unfit to Perform Firefighting Duties pending results. If the firefighter has been reviewed in the past 12 months, including a negative exercise stress test, and risk factors have not worsened and there are no relevant symptoms, Fit to Perform Firefighting Duties Subject to Review may be considered while awaiting stress test result. Subject to negative exercise stress test and satisfactory risk factor management, review annually. • Probability 10–15% in five years (blue cells). Refer for exercise stress test and refer to GP for risk factor modification. While awaiting results, classify Fit to Perform Firefighting Duties Subject to Review or Temporarily Unfit to Perform Firefighting Duties depending on the overall risk assessment. Subject to negative exercise stress test and satisfactory risk factor management, review annually. • Probability 5–9% in five years (dark green cells). Refer to GP for risk factor modification, and with exercise stress test if appropriate. Most in this group should be referred for exercise stress testing. While awaiting correspondence or results, classify as Fit to Perform Firefighting Duties Subject to Review or • Temporarily Unfit to Perform Firefighting Duties depending on overall risk • assessment. Review annually. • Probability $<5\%$ in five years (light green cells). Assess risk factors and other clinical data and refer to GP as appropriate. Classify as Fit to Perform Firefighting Duties or Fit to Perform Firefighting Duties Subject to Review depending on the overall risk assessment. Review as appropriate. Refer to related criteria as required (e.g. hypertension, diabetes) and consider overall risk factor control. If a contraindication to exercise stress testing is present, the firefighter is Temporarily Unfit to Perform Firefighting Duties until further assessment. Contraindications include aortic stenosis (for the purpose of this standard, this includes known or suspected), hypertrophic cardiomyopathy and severe uncontrolled hypertension.

Condition	Criteria
<i>Ischaemic heart disease</i>	
Angina or suspected angina	A firefighter is not Fit to Perform Firefighting Duties if they are subject to angina symptoms or symptoms that may be angina. If a cardiac cause is confirmed, please refer to the relevant section of the standard (e.g. angiographic findings, acute myocardial infarction, percutaneous interventions, bypass surgery). Fit to Perform Firefighting Duties or Fit to Perform Firefighting Duties Subject to Review may be determined taking into account the opinion of the appropriate specialist if the following criteria are met: • there is an exercise tolerance of $\geq 90\%$ of age/sex predicted exercise capacity according to the Bruce protocol, and • a stress testing shows no evidence of ischaemia, and • the specialist is of the opinion that there is unlikely to be a cardiac cause for the symptoms.
Myocardial infarction/acute coronary syndrome	A firefighter is not Fit to Perform Firefighting Duties if there is a history of myocardial infarction as verified by the treating specialist. Firefighters will subsequently be classed as Permanently Unfit to Perform Firefighting Duties.
Percutaneous intervention (bare metal or drug eluting stent, angioplasty)	A firefighter is not Fit to Perform Firefighting Duties if they have undergone percutaneous intervention with a bare metal stent, a drug eluting stent or angioplasty, as verified by the treating specialist. Firefighters will subsequently be classed as Permanently Unfit to Perform Firefighting Duties.
Coronary artery bypass grafting	A firefighter is not Fit to Perform Firefighting Duties if the firefighter requires or has had coronary artery bypass grafting, as verified by the treating specialist. Firefighters will subsequently be classed as Permanently Unfit to Perform Firefighting Duties.

Condition	Criteria
Coronary angiography (not resulting in revascularisation procedure)	A firefighter is not fit to Perform Firefighting Duties if awaiting coronary angiography. A firefighter is Permanently Unfit to Perform Firefighting Duties if coronary angiography shows: • narrowing of any coronary artery $\geq 70\%$, or • narrowing of 50–70% in a major artery (left atrial dimension, circumflex or right coronary artery), or • narrowing of 50–70% in any two or more arteries, or • narrowing of $\geq 20\%$ in the left main coronary artery. Fit to Perform Firefighting Duties Subject to Review on an annual basis may be determined for coronary artery narrowings of $< 50\%$, subject to: • ongoing risk factor modification, and • exercise tolerance of $\geq 90\%$ of age/sex predicted exercise capacity according to the Bruce protocol, and • exercise stress test shows no evidence of ischaemia.
Hypertension	
Hypertension	A firefighter is Temporarily Unfit to Perform Firefighting Duties if blood pressure is ≥ 160 mmHg systolic or ≥ 100 mmHg diastolic (treated or untreated), irrespective of cardiac risk level. The firefighter should be referred back to their GP for further assessment and treatment as appropriate. At least two repeat blood pressure readings are required, at least one week apart, or ambulatory monitoring. Fit to Perform Firefighting Duties Subject to Review within 3 months may be determined if blood pressure falls within the range of 140–159 mmHg systolic and 90–99 mmHg diastolic, with or without treatment Fit to Perform Firefighting Duties may be determined once blood pressure falls below 140 mmHg systolic and 90 mmHg diastolic, with or without treatment. If hypertension is confirmed, GP assessment should include investigation for causes of secondary hypertension and assessment of renal function, and so on.⁷ Echocardiography for left ventricular hypertrophy should be considered, especially where the history is one of uncontrolled or longstanding (≥ 5 years) hypertension.

⁷ Note Heart Foundation, *Guide to management of hypertension 2008 (updated December 2010)*, ‘Evaluation in patients with confirmed hypertension’, 2010.

Condition	Criteria
	Treatment. Where a firefighter is on antihypertensive treatment, history should be elicited in relation to any hypotensive symptoms precipitated by exposure to heat, strenuous exercise and fluid loss, and medical fitness for duty be reviewed in accordance with any reported symptoms. The firefighter should also be counselled regarding the importance of hydration and reporting of any side effects that may impact adversely on the performance of firefighting duties. Adequate time (usually weeks) should be allowed if starting or changing antihypertensive medication to monitor for side effects that may impact on operational duties (e.g. dizziness, postural hypotension).
Disorders of rate, rhythm and conduction	
Atrial fibrillation	
Paroxysmal and other arrhythmias or known conduction defects	A firefighter is not Fit to Perform Firefighting Duties if there is a history of arrhythmia or conduction defect. Discretion regarding immediate fitness to perform firefighting duties should be applied if the history is one of an isolated arrhythmia (other than ventricular fibrillation) more than 5 years ago. Fit to Perform Firefighting Duties Subject to Review may be determined, taking into account the opinion of the treating specialist as to whether the following criteria are met: • the condition has been successfully treated by percutaneous intervention and the firefighter is at least 6 weeks post procedure or • risk of collapse is considered unlikely, and • there is no risk of ventricular arrhythmia, and • there are no symptoms such as shortness of breath that would impact on work capacity, and • any known precipitants are actively avoided, and • condition is unlikely to be aggravated by the conditions of firefighting, including strenuous exercise, dehydration, heat stress and sympathetic arousal, and • treatment, including anti arrhythmic agents, will not adversely interact with the conditions of firefighting, including strenuous exercise, dehydration, heat stress and sympathetic activation, and any anti arrhythmic agents are unlikely to result in pro arrhythmic side effects, and • the firefighter has been stabilised on treatment for at least 3 months If the condition is considered cured and/or unlikely to recur, periodic review is not required specifically for that condition.

Condition	Criteria
Cardiac arrest (also refer to the section on automatic implantable cardioverter defibrillators)	A firefighter is not Fit to Perform Firefighting Duties if they have suffered a cardiac arrest. Refer to the appropriate section regarding underlying causes. If a reversible cause is identified, further information should be sought regarding likelihood of recurrence and final medical fitness for duty will be determined by a FRNSW Occupational Physician, taking into account information supplied by the treating cardiologist and/or a cardiologist familiar with the conditions of firefighting. Mostly firefighters will be classed as Permanently Unfit to Perform Firefighting Duties.
Cardiac pacemaker	A firefighter is not Fit to Perform Firefighting Duties if a cardiac pacemaker is required, or has been implanted or replaced. Fit to Perform Firefighting Duties Subject to Review may be determined, taking into account any underlying pathology and information provided by the treating specialist as to whether the following criteria are met: • it is at least 4 weeks after insertion of the pacemaker, and • the risk of pacemaker dysfunction is considered unlikely and the following have been considered – risk to pacemaker function from electromagnetic interference (including the portable radio) and direct trauma – risk of pacemaker lead fracture as a result of wearing or carrying equipment such as a SCBA – degree of pacemaker dependence, and • there are normal haemodynamic responses on exercise stress testing, and • there are no other conditions as per this standard that would render the firefighter Unfit to Perform Firefighting Duties.
Automatic implantable cardiac defibrillator	A firefighter is Permanently Unfit to Perform Firefighting Duties if an automatic implantable defibrillator is required or has been implanted.
<i>Electrocardiogram changes</i>	
Left bundle branch block (suggestive of myocardial ischaemia or cardiomyopathy) or other changes suggestive of myocardial ischaemia	A firefighter is not Fit to Perform Firefighting Duties if there is an electrocardiographic abnormality, such as left bundle branch block, or changes suggestive of myocardial ischaemia or previous myocardial infarction. Fit to Perform Firefighting Duties Subject to Review (or Fit to Perform Firefighting Duties) may be determined, taking into account the information provided by the treating specialist as to whether the following criteria are met: • follow up investigation has excluded underlying cardiac disease, and • there are no other conditions as per this standard that would render the firefighter Unfit to Perform Firefighting Duties.

Condition	Criteria
Strain pattern	The presence of strain pattern – ST depression and T wave inversion – is associated with increased cardiovascular risk in individuals with hypertension. Further assessment is required, and the firefighter should be classed as Fit to Perform Firefighting Duties Subject to Review or Temporarily Unfit to Perform Firefighting Duties, depending on the clinical picture.
Left ventricular hypertrophy	A firefighter may be classed as Fit to Perform Firefighting Duties Subject to Review (or Temporarily Unfit to Perform Firefighting Duties if warranted by relevant clinical information) if an electrocardiograph shows left ventricular hypertrophy. Fit for to Perform Firefighting Duties Subject to Review may be determined taking into account the results of further assessment (including specialist opinion if required) as to whether the following criteria are met: • follow up investigation (such as echocardiography) has excluded pathological cardiac abnormality, and • there are no other disqualifying conditions.
Complete right bundle branch block	A firefighter may be classed as Fit to Perform Firefighting Duties Subject to Review (or Temporarily Unfit to Perform Firefighting Duties if warranted by relevant clinical information) if an electrocardiograph shows a complete right bundle branch block. Fit to Perform Firefighting Duties Subject to Review may be determined, taking into account the results of further assessment (including specialist opinion if required) as to whether the following criteria are met: • follow up investigation (such as an echocardiograph) has excluded underlying cardiac abnormality, and • there are no other disqualifying conditions.
Pre excitation, prolonged QT, heart block (except first degree), other	A firefighter is not Fit to Perform Firefighting Duties if electrocardiography shows pre excitation, prolonged QT or heart block (other than first degree heart block). Further cardiologist assessment is required. Permanently Unfit to Perform Firefighting Duties is applicable if long QT syndrome is confirmed, or if long QT is expected to persist because it is related to a medication that will be required long term. Permanently Unfit to Perform Firefighting Duties is applicable upon diagnosis of any other electrophysiological problem that can result in ventricular fibrillation (e.g. Brugada Syndrome). Please refer to other relevant sections (e.g. automatic implantable cardiac defibrillator), if applicable. For other diagnoses that are confirmed after further cardiologist assessment, please refer to criteria in the section relating to Disorders of rate, rhythm and conduction. If the electrocardiograph shows first degree heart block, no further assessment is required if there is no history of syncope or presyncope, especially in a young and fit individual.

Condition	Criteria
<i>Vascular disease</i>	
Aortic, thoracic and abdominal aneurysms	A firefighter is not fit to Perform Firefighting Duties if they have a dilated aortic root, thoracic aortic aneurysm or abdominal aortic aneurysm. Refer to Section 11.2.1.
Deep vein thrombosis (DVT)	A firefighter is not Fit to Perform Firefighting Duties after a diagnosis of DVT and while undergoing anticoagulation treatment. Fit to Perform Firefighting may be considered, taking into account the opinion of the treating doctor as to whether the following criteria are met: - the DVT is considered adequately treated and anticoagulation treatment has ceased, and - there are no underlying predisposing factors that significantly increase risk of recurrent DVT, taking into account the conditions of firefighting, such as dehydration, that increase prothrombotic risk.
Pulmonary embolism	A firefighter is not Fit to Perform Firefighting Duties after a diagnosis of a pulmonary embolism and while undergoing anticoagulation treatment. Fit to Perform Firefighting Duties or Fit to Perform Firefighting Duties Subject to Review may be determined, taking into account the opinion of the treating specialist as to whether the following criteria are met: - anticoagulation treatment has ceased, and - reported exercise capacity has not been adversely affected, and - there are no underlying predisposing factors that significantly increase risk of recurrent venous thromboembolism, taking into account the conditions of firefighting, such as dehydration, that increase prothrombotic risk. Exercise stress testing and echocardiography may be considered if there are any concerns regarding exercise capacity.
<i>Valvular heart disease</i>	
Valvular heart disease	A firefighter is not Fit to Perform Firefighting Duties if: - the firefighter has a history or evidence of valve disease, with associated haemodynamic compromise and/or symptoms of angina, syncope or dyspnoea; or history of cardiac enlargement, embolism, arrhythmia, abnormal ECG or high blood pressure; or - the firefighter is taking long term anticoagulation. Fit to Perform Firefighting Duties Subject to Review may be determined, taking into account information provided by the treating specialist as to whether the following criteria are met: - the cardiological assessment shows valvular disease of no haemodynamic significance, and - the conditions of firefighting, including strenuous exercise,

Condition	Criteria
	dehydration, heat stress and sympathetic activation, will not impact adversely on the condition, and • exercise tolerance of $\geq 90\%$ of age/sex according to the Bruce protocol, and • there is no other cardiac condition per this standard that would render the firefighter Unfit to Perform Firefighting Duties or • it is at least 3 months following successful surgery and there is no evidence of valvular dysfunction, and there are no electrocardiographic changes, arrhythmias, left ventricular dysfunction, cardiac failure, anticoagulant therapy, hypertension or other conditions per this standard that would render the firefighter Unfit to Perform Firefighting Duties, and • exercise tolerance of $\geq 90\%$ of age/sex according to the Bruce protocol, and • the results of presurgical coronary angiography (if performed) have been reviewed and assessed as meeting the relevant section of this standard.
Myocardial disease	
Dilated cardiomyopathy (see also heart failure)	A firefighter is not Fit to Perform Firefighting Duties if the firefighter has dilated cardiomyopathy, as verified by the treating specialist. (Rare cases of transient cardiomyopathy should be referred to the FRNSW Occupational Physician for further assessment in conjunction with an appropriate specialist.) Firefighters will subsequently be classed as Permanently Unfit to Perform Firefighting Duties.
Hypertrophic cardiomyopathy (also refer to the section on automatic implantable cardiac defibrillator)	A firefighter is not Fit to Perform Firefighting Duties if they have hypertrophic cardiomyopathy, as verified by the treating specialist. Firefighters will subsequently be classed as Permanently Unfit to Perform Firefighting Duties.
Other conditions	
Anticoagulant therapy	A firefighter is not Fit to Perform Firefighting Duties if the firefighter is on anticoagulant therapy, including but not limited to warfarin, dabigatran or enoxaparin. Permanently Unfit to Perform Firefighting Duties should be determined if the firefighter's treating doctor confirms that long term anticoagulation is required. Fit to Perform Firefighting Duties or Fit to Perform Firefighting Duties Subject to Review (if warranted by the clinical picture) may be determined if anticoagulation is ceased on the advice of the treating doctor (this must be confirmed with the doctor) and taking into account the criteria as per other relevant sections of this standard (e.g. deep vein thrombosis, pulmonary embolism).

Condition	Criteria
Congenital disorders	A firefighter is not Fit to Perform Firefighting Duties if the firefighter has a congenital heart disorder. Fit to Perform Firefighting Duties Subject to Review may be determined, taking into account the information provided by the treating specialist as to whether the following criteria are met: • there is no abnormality of haemodynamic significance within the heart, aorta or pulmonary vasculature, and • there is no other cardiac condition as per this standard that would render the firefighter Unfit to Perform Firefighting Duties. Discretion regarding medical fitness for operational duties should be applied if the history is one of successful repair or treatment of a noncomplex congenital heart disease (e.g. ventricular septal defect, atrial septal defect, patent ductus arteriosus, pulmonary stenosis) in infancy or childhood, with no ongoing cardiovascular issues.
Heart failure	A firefighter is not Fit to Perform Firefighting Duties if there is a history of heart failure, as verified by the treating specialist. (Rare cases of transient heart failure should be referred to the FRNSW Occupational Physician for further assessment in conjunction with an appropriate specialist.) Firefighters will subsequently be classed as Permanently Unfit to Perform Firefighting Duty.
Cardiac syncope or syncope due to hypotension (refer also to Section 10, Blackouts)	A firefighter may resume operational duties, taking into account information provided by the treating doctor if the episode was vasovagal in nature with a clear cut precipitating factor (such as venesection) and the situation is unlikely to recur while performing firefighting duties. A firefighter should be classed as Temporarily Unfit to Perform Firefighting Duties for at least 3 months after syncope because of other cardiovascular causes. A firefighter is not Fit for to Perform Firefighting Duties if the condition is severe enough to cause episodes of loss of consciousness without warning. Fit to Perform Firefighting Duties Subject to Review may be determined, taking into account information provided by the treating specialist as to whether the following criteria are met: • the firefighter has been symptom free for 3 months, and • the underlying cause has been identified, and • satisfactory treatment has been instituted, and • risk of recurrence is extremely low, and • risk of recurrence will not be increased by the conditions of firefighting, including strenuous exercise, dehydration, heat stress and sympathetic activation, and • there are no other conditions per this standard that would render the firefighter Unfit to Perform Firefighting Duties.

Condition	Criteria
Stroke	Refer to Section 15, Neurological disorders.
Other	Any other condition not addressed in this standard is to be assessed on a case by case basis in conjunction with a FRNSW Occupational Physician.

AF = atrial fibrillation; FRNSW = Fire & Rescue NSW; GP = general practitioner; SCBA = self contained breathing apparatus

a Some firefighters may already be under the review of a FRNSW Occupational Physician for a particular condition. If a firefighter states that they have been cleared to perform firefighting duties by the FRNSW Occupational Physician for a condition that renders them medically unfit for duty under this standard, the assessing doctor should contact the FRNSW Occupational Physician for advice regarding fitness to continue firefighting duties while further assessment is undertaken.

11.3 Bibliography

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11.4 Acknowledgements

Endorsement by Cardiac Society of Australia and New Zealand (November 2012)

12 Diabetes

12.1 Relevance to operational duties

Conditions of firefighting are unique and have the potential to impact on glycaemic control for those with diabetes. Diabetes may affect a firefighter's ability to safely and effectively perform firefighting duties, either through impairment or loss of consciousness during a hypoglycaemic episode, or from end organ effects on relevant functions, including retinopathy, cardiovascular disease, nephropathy and peripheral neuropathy. In people with type 2 diabetes, sleep apnoea is also more common (refer to Section 19, Sleep disorders).

Hypoglycaemia

There is an increased risk of hypoglycaemia in firefighters because of the:

- irregular access to meals due to the emergency response nature of the service
- unpredictable energy demands – that is, strenuous exertion at unpredictable times and for unpredictable periods
- inability to safely and quickly access food or other forms of oral glucose while wearing full personal protective equipment in hazardous environments; quick egress from such environments is not always possible
- possible failure to recognise typical symptoms of hypoglycaemia in the midst of emergency situations.

Symptoms such as lack of concentration or change of behaviour resulting from hypoglycaemia can impact on situational awareness. Hypoglycaemia in an operational situation, including driving the appliance under emergency conditions, presents a considerable risk and may impact on the safety of the individual firefighter, their crew and members of the public. Hypoglycaemia may result in confusion and impaired judgement, and impaired motor control, thus impacting on the effective and safe performance of firefighting duties. It may also be more difficult for a firefighter and for others (such as colleagues who know about the firefighter's condition) to recognise symptoms or signs of hypoglycaemia in an emergency environment.

The risk of hypoglycaemia is greatest in those treated with insulin. There is still a risk, albeit lower, associated with treatment with sulfonylureas and secretagogues. There should be a very low risk of severe hypoglycaemia for those treated with diet alone, or with added metformin, acarbose or thiazolidinediones. Gliptins and SGLT2 transporters also have a low propensity for hypoglycaemia. For those treated with insulin, the risk is higher for those with type 1 diabetes than those with type 2 diabetes; however, hypoglycaemia is increasingly reported in insulin-treated type 2 diabetes and with sufficient frequency to cause significant morbidity.

Lifestyle factors, such as alcohol intake, can also increase the risk of hypoglycaemia.

Lack of hypoglycaemic awareness significantly increases the risk of severe hypoglycaemia. Lack of hypoglycaemic awareness is more common in people treated with insulin for more than 10 years.

12.1.1 Conditions of firefighting that can increase the likelihood of hypoglycaemia

The emergency response nature of firefighting duties can involve intense physical activity at unpredictable, irregular times, and for unpredictable periods. Unpredictable energy demands can adversely affect glycaemic control. Regular meal schedules are often interrupted and regular monitoring of blood glucose can be difficult. Common causes of hypoglycaemia are delaying or missing a meal, not eating enough carbohydrates, unplanned physical activity and more strenuous exercise than usual. These factors occur in the firefighting environment and, therefore, the conditions of firefighting increase the likelihood of hypoglycaemia.

12.1.2 Challenges to managing early hypoglycaemia in the firefighting environment

The cornerstone of managing hypoglycaemia is being able to treat it immediately (even if immediate testing is not practicable) to stop blood glucose from dropping even further. There are challenges to being able to address hypoglycaemia immediately in the operational environment – for example, breathing apparatus cannot be removed in a hazardous environment to self administer treatment (e.g. consuming jelly beans or soft drink) and some hazardous environments are not easy to egress quickly. Failure to quickly address early hypoglycaemia can result in a continued drop of blood glucose, which may progress to loss of coordination, slurred speech, confusion, loss of consciousness and seizure. Suspending emergency duties to address hypoglycaemia immediately has the potential to impact on service delivery.

Shift work may also impact on glycaemic control. It should be noted that retained firefighters are on call, and hours worked can be irregular and are usually additional to those worked in primary employment.

12.1.3 Severe hypoglycaemia

A severe hypoglycaemic event is defined as a hypoglycaemic event of such severity that the person is unable to treat the hypoglycaemia themselves, and thus requires an outside party to administer treatment. The definition includes hypoglycaemia causing loss of consciousness. Severe hypoglycaemic events are relevant under this standard regardless of whether they occur at work or outside of work.

Severe hypoglycaemic events affect brain function, and can cause impairment of perception, motor skills or consciousness, or abnormal behaviour before unconsciousness – all of which are relevant for firefighters working in dangerous environments as part of a team, where others rely upon them for their own safety. Episodes of severe hypoglycaemia are associated with increased risk of subsequent episodes and may indicate lack of hypoglycaemic awareness (see Section 12.2.3).

Mild hypoglycaemic events can be distinguished from severe hypoglycaemic events in that mild episodes can, by definition, be self treated by the person with diabetes without needing assistance from another person. Early symptoms of hypoglycaemia include sweating, tremulousness, hunger and tingling around the mouth, and can occur commonly in those treated with insulin and some non insulin agents. When mild hypoglycaemia occurs, a combination of these early warning symptoms of hypoglycaemia is usual, enabling the person with diabetes to recognise the hypoglycaemia and to self treat. This may not, however, be possible on the incident ground.

12.1.4 Cardiovascular disease

Cardiovascular disease is the major cause of death in people with diabetes, accounting for approximately 50% of all fatalities. This is significant given the association between firefighting and on duty deaths from acute cardiovascular events. Refer to Section 11, Cardiovascular disorders.

12.2 General assessment and management guidelines

Treatment with insulin has been assessed by Fire & Rescue NSW (FRNSW) as representing an unacceptably high risk in the firefighting context and will therefore attract permanent restrictions on firefighting activities. This takes into account the significantly increased frequency with which hypoglycaemia occurs in those treated with insulin, compared with those on non insulin agents.

Although there are strategies that could help reduce the likelihood of hypoglycaemia for those treated with insulin, these control measures rely solely on individual behaviour. Measures include rushing meals when insulin has been administered already, administering insulin within minutes of completing a meal, testing blood glucose and ingesting additional carbohydrate on the way to a call (not possible if driver), always having access to testing kit, and carrying additional short and long acting carbohydrates (on the person or in the appliance). These strategies do not address the challenges to addressing hypoglycaemia when it does occur, and a firefighter would be required to recognise symptoms and egress the emergency environment to address symptoms immediately.

Early signs of hypoglycaemia may also be similar to the adrenaline symptoms felt during a call out, and may therefore be more difficult to recognise.

The outcome of an individual not acting on early signs of hypoglycaemia is the same as an individual who lacks hypoglycaemic awareness. There is often a relatively short window – minutes – between recognition of hypoglycaemic symptoms and the possibility of self rescue, and progressing to the stage where the individual may become impaired and no longer able to help themselves. There are risks with relying on control measures that solely depend on individual behaviour in an environment that is inherently unpredictable. These measures may not be reliably successful. When such a system fails in the firefighting context and the individual is not able to manage the hypoglycaemic event, the consequence is potentially catastrophic.

The use of insulin pumps in the firefighting context is associated with potential problems. Removing insulin pumps, other than for short periods can result in accumulation of ketones. While these devices may be moisture resistant, they are not waterproof, and are normally only removed for planned activities and for limited periods, such as showering or swimming. Personal protective clothing such as the structural firefighting ensemble

provides protection from heat, but limits the body's ability to dissipate heat, resulting in high fluid loss through sweating, thus creating a microclimate that is humid and where metabolic heat is trapped. Heat will also increase the absorption of subcutaneous insulin, and any subcutaneous insulin already delivered will continue to act and therefore increase the risk of hypoglycaemia. For example, NovoRapid® action will peak at 90 minutes and will continue to act for 3–4 hours.

The following information therefore relates to firefighters who are not on pharmacotherapy, or on non insulin treatment.

When assessing a firefighter's medical fitness for firefighting duties, consideration must be given to:

- satisfactory glycaemic control
- absence of severe hypoglycaemia (i.e. hypoglycaemia that results in impaired level of consciousness)
- presence of hypoglycaemic awareness
- absence of complications that impact on medical fitness for firefighting duties.

12.2.1 Glycaemic control

Although HbA1c is used to assess long term blood glucose control, and correlates with diabetes complications and outcomes, a degree of flexibility is required. Targets are often individualised depending on specific factors such as the type of diabetes, its duration, type of medication, age, presence of cardiovascular disease, risk of and problems from hypoglycaemia, and comorbidities. An individual may have a good HbA1c while experiencing extreme fluctuations of blood glucose levels; therefore, some caution is required in interpretation of the HbA1c and a review of a blood glucose diary is always helpful. When there is evidence of poor control, a review of blood glucose diary should form a part of the assessment, for evidence of improvement and stability. Comparisons should be made with previous HbA1c of the particular individual. The general target in the community for HbA1c is $\leq 7.0\%$. High or increasing HbA1c will often indicate poor or deteriorating glycaemic control; however, it may also result from other conditions such as haemoglobinopathies or iron deficiency anaemia. The benefits of good control must be balanced against the increased risk of hypoglycaemia associated with tighter control. An HbA1c level of $\geq 9.0\%$ indicates that control may be suboptimal or poor, and requires referral to an endocrinologist or diabetes specialist to assist in assessment of medical fitness for operational duties.

12.2.2 Severe hypoglycaemia

Although the risk of hypoglycaemia for those not treated with insulin is considered acceptably low in the firefighting context, severe hypoglycaemia – should it occur in such individuals – requires very careful assessment and will attract a significant nonworking (non[firefighting]) period. A return to firefighting duties may be considered by the FRNSW Occupational Physician, taking into account information provided by the treating endocrinologist regarding the reason for the episode, re establishment of glycaemic control, hypoglycaemic awareness (see Section 12.2.3) and risk of recurrence.

Where multiple severe hypoglycaemic events have occurred, this requires further assessment, taking into consideration the overall history, including the spacing of the events and if they involved circumstances that are unlikely to be repeated. Where the history is of repeated episodes without extenuating circumstances, the firefighter may be assessed as Permanently Unfit to Perform Firefighting Duties.

12.2.3 Hypoglycaemic awareness

Hypoglycaemic awareness is crucial in managing the risks related to hypoglycaemia while on duty. Lack of hypoglycaemic awareness exists when an individual does not regularly sense the usual early warning symptoms of hypoglycaemia, such as sweating, tremulousness, hunger, tingling around the mouth, palpitations and headache. Lack of hypoglycaemic awareness is more common in people treated with insulin for more than 10 years and significantly increases the risk of a severe hypoglycaemic event. In the setting of a long duration of diabetes, it tends to be a persistent condition.

The outcome of an individual not acting on early signs of hypoglycaemia is the same as an individual who lacks hypoglycaemic awareness, and for the purpose of this standard, the failure to act (with the exception of extenuating circumstances) should be managed in the same way.

Lack of hypoglycaemic awareness may develop in someone who has experienced a severe hypoglycaemic event; however, it may then improve in subsequent weeks or months if further hypoglycaemia can be avoided.

Persistent lack of hypoglycaemic awareness is incompatible with firefighting duties and the firefighter should be deemed Permanently Unfit to Perform Firefighting Duties.

12.2.4 Reducing risk of hypoglycaemia

For those firefighters on non insulin medication regimens associated with increased risk of hypoglycaemia, the following are some strategies to assist with reducing the risk of hypoglycaemia:

- having an in depth knowledge of diabetes and self care strategies
- being committed and motivated to self management
- frequent and rational self monitoring of blood glucose levels
- reacting appropriately to particular blood glucose levels
- having a readily available supply of short and long acting carbohydrate on the person and in the appliance.
- supplementing carbohydrate intake when increased physical activity is anticipated.

12.2.5 Diabetes complications

Cardiovascular disease

Cardiovascular disease is the most significant complication of diabetes for firefighters, and further assessment should be undertaken in line with Section 11, Cardiovascular disorders.

Renal function

Renal function should be reviewed for all firefighters with diabetes, including estimated glomerular filtration rate and albumin:creatinine ratio. Decreased renal reserve combined with dehydration may precipitate acute renal impairment. Firefighters are at an increased risk of heat stress and dehydration, because the firefighting ensemble and chemical suits inhibit normal cooling mechanisms. Firefighters may lose up to 2 L/h of sweat during active firefighting duties.

The presence of diabetic nephropathy should prompt further cardiovascular assessment regardless of cardiac risk level, as chronic renal disease in people with diabetes is a major risk factor for cardiovascular and all cause mortality.

Peripheral neuropathy

Peripheral neuropathy affecting feet may affect the balance and stability required to negotiate uneven surfaces in poor visibility conditions, safe use of ladders and driving the appliance.

Other relevant chapters (e.g. on vision) should be consulted as needed.

12.2.6 Triggered assessment

The FRNSW Occupational Physician should be notified immediately:

- if there are significant changes in treatment

- following a severe hypoglycaemic episode.

12.2.7 Specialist review

Endocrinologist or diabetes specialist review is required if:

- the treating general practitioner (GP) (for those on non[insulin medication) has indicated that the diabetes is not well controlled
- there has been a severe hypoglycaemic event within the past 12 months
- there is a lack of hypoglycaemic awareness
- there is evidence of nephropathy.

12.2.8 Prediabetes

Type 2 diabetes mellitus may develop over many years, preceded by impaired fasting glycaemia (IFG) and impaired glucose tolerance (IGT) (i.e. prediabetes). Prediabetes is of relevance for firefighters, as it indicates a significantly increased risk of progression to type 2 diabetes.

Furthermore, prediabetes is a known risk factor for cardiovascular disease.

A fasting blood glucose of ≥ 5.5 mmol/L requires a referral for an oral glucose tolerance test. Where IFG or IGT is diagnosed in a firefighter, Fit to Perform Firefighting Duties Subject to Review is required, with periodic review every 12–24 months depending on the overall clinical assessment. They should also be referred back to their GP for appropriate management and monitoring. In the event of progression to type 2 diabetes, the criteria for diabetes apply.

Table 3 Medical criteria for operational firefighters – diabetes^a

Condition	Criteria
Prediabetes	Fit to Perform Firefighting Duties Subject to Review every 12–24 months is applicable for any firefighter with confirmed prediabetes. They should be referred back to their GP for appropriate management and monitoring.
Diabetes not requiring medication	Fit to Perform Firefighting Duties Subject to Review annually is applicable for any firefighter with type 2 diabetes controlled by diet and exercise alone. A report should be provided by the treating GP at each review outlining: • control, including HbA1c, and • results of screening for end organ disease, including albumin:creatinine ratio and eGFR. If, on review, a firefighter's diabetes does not appear to be well controlled or there is concern about end organ disease, the firefighter should be classed as Temporarily Unfit to Perform Firefighting Duties or Fit to Perform Firefighting Duties Subject to Review in 3 months while further assessment and/or treatment is undertaken. If treatment comes to include glucose lowering agents, refer to the appropriate section of this Health Standard.

Condition	Criteria
Type 2 diabetes treated with glucose lowering agents other than insulin	A firefighter is not Fit to Perform Firefighting Duties if they have type 2 diabetes treated with glucose lowering agents other than insulin. Fit to Perform Firefighting Duties Subject to Review, with review at least annually, may be determined taking into account information provided by the treating GP or endocrinologist/diabetes specialist as to whether the following criteria are met: • satisfactory control is demonstrated; there must be objective evidence of this, such as HbA1c with or without review of a blood glucose diary, and • the firefighter is compliant with treatment, and if treatment includes an agent or agents that can cause hypoglycaemia: • there is an absence of severe hypoglycaemic events in the past 12 months, and • hypoglycaemic awareness (the firefighter experiences early warning symptoms) is present and acted upon appropriately, and • the treatment regimen minimises the risk of hypoglycaemia, and • renal function is within normal limits, as demonstrated by urinary albumin: creatinine ratio and eGFR, and • there is an absence of other end organ effects (including cardiovascular disease and peripheral neuropathy affecting balance) that would render a firefighter Unfit to Perform Firefighting Duties per this standard.
Insulin treated diabetes	A firefighter is not Fit to Perform Firefighting Duties if they have type 1 diabetes or type 2 diabetes treated with insulin. The medical practitioner, with the consent of the firefighter, should notify the FRNSW Occupational Physician so that appropriate restrictions can be advised.

eGFR = estimated glomerular filtration rate; FRNSW = Fire & Rescue NSW; GP = general practitioner
a FRNSW does not advise changing treatment for the purpose of meeting this standard. Any change of treatment must be made by the firefighter's treating doctor and based on clinical grounds.

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13 Hearing

13.1 Relevance to firefighting duties

Firefighting is a hearing critical occupation. Firefighting duties are often undertaken in poor visibility conditions because of smoke, where auditory cues may be heavily relied on for communication and for safety. Good hearing is required, particularly the ability to hear speech in background noise and to localise warning sounds. Failure to hear sounds of relatively low intensity, or to distinguish a voice or speech from background noise can lead to failure to respond to imminently hazardous situations, thus jeopardising the safety of the firefighter, their crew and members of the public.

Hearing takes place against a range of significant background noises caused by the fire itself, high winds in bushfires, firefighting equipment such as pumps, the self contained breathing apparatus, and from sirens when driving the appliance.

Firefighters must have adequate hearing to be able to hear and localise auditory cues crucial for safety, such as a victim crying for help, the distress signal unit alarm of another firefighter, noises associated with fire behaviour or imminent structural collapse, or an appliance horn signalling urgent evacuation.

Firefighters must be able to hear speech from direct verbal communication with each other as well as from radio communications while wearing personal protective equipment, which attenuates sound against a noisy background.

Firefighters must also be able to hear vehicle, traffic and other road sounds when driving the appliance in emergency mode.

13.2 General assessment and management guidelines

The procedures for assessment of applicants and incumbent firefighters are summarised in Figure 49.

No hearing devices may be worn for Level 1 or Level 2 testing.

13.2.1 Level 1 testing

Firefighters are initially screened by pure tone audiometry at 0.5, 1, 2, 3, 4, 6 and 8 kHz as per Australian Standard AS 2586[1983]. The standard is not met if hearing loss is >40 dB in any frequency between 0.5 and 3 kHz (inclusive) in either ear.

All who fail screening are referred to an audiologist for more detailed audiological evaluation – Level 2 testing. The audiologist should be a member of the Audiological Society of Australia Inc. For contacts of members, see www.audiology.asn.au.

13.2.2 Level 2 testing

The purpose of Level 2 testing is to provide the opportunity to demonstrate auditory fitness and to assist in diagnosis of conditions that may require referral for specialist medical assessment and/or treatment. There are three components to testing, and each component must be passed for the standard to be met:

- Step 1. Hearing thresholds

Air and bone conduction audiometry with masking is undertaken. Further assessment is not required if the threshold standard is met as per Level 1 testing (i.e. no loss >40dB in any frequency between 0.5 and 3 kHz inclusive in either ear). The firefighter should be classed as Fit to Perform Firefighting Duties. If the threshold standard is not met, steps 2, 3 and 4 must be undertaken.

- Step 2. Integrity of the middle ear system

Tympanometry is performed as well as acoustic reflex thresholds for thresholds 0.5, 1 and 2 kHz. The hearing loss will then be identified as conductive, sensorineural or mixed.

- Step 3. Speech discrimination in quiet

The pass level is set at 90% correct in each ear, with no significant rollover at high intensities in either ear.

- Step 4. Speech discrimination in noise

This must be done, as per the Fire & Rescue NSW (FRNSW) referral instructions. The pass level is set at 70% correct binaurally.

A recommendation to see a ear, nose and throat specialist review may be considered if any of the following are detected:

- asymmetrical hearing (hearing threshold differential >15 dB at any frequency)
- air bone gap >15 dB
- abnormal tympanograms in either ear
- rollover⁸ in performance–intensity function

- absent acoustic reflexes.

If treatment is undertaken as a result of specialist assessment, or the condition is one that has improved, retesting may commence with an audiologist, commencing at step 1 of Level 2 testing.

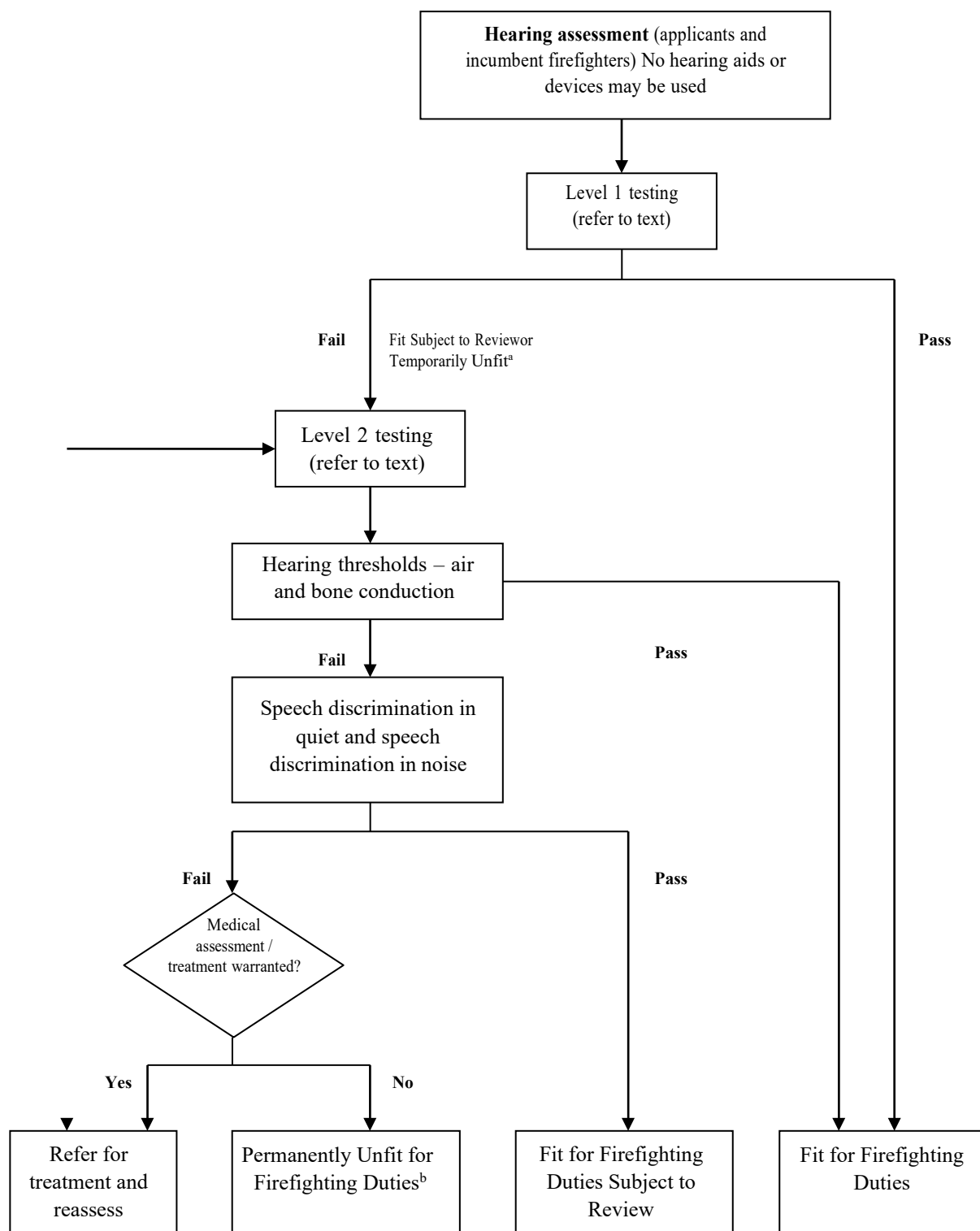
It is recognised that incumbent firefighters may adjust to some disabilities through years of operational experience. Therefore, an incumbent firefighter with a borderline fail result after Level 2 testing (including specialist assessment if indicated) may be referred to the FRNSW Occupational Physician for further consideration.

13.2.3 Hearing aids, cochlear implants and bone anchored hearing aids

The risks associated with the use of hearing devices while firefighting have been assessed and no devices have been deemed suitable for the purpose of firefighting. Conditions experienced in firefighting increase the risk of device failure, and there are limitations in signal processing, which may result in failure to hear adequately in the operational environment.

⁸ Reduced speech discrimination at high intensities relative to maximum discrimination ability.

Figure 49 Hearing assessment process (applicant and incumbent firefighters)



a Classify as Temporarily Unfit for Firefighting Duties if loss is severe. Otherwise, classify as Fit for Firefighting Duties Subject to Review (by an audiologist) within one month.

b Borderline fail in an incumbent firefighter may be referred to the Fire & Rescue NSW Occupational Physician for further assessment.

Table 4 Medical criteria for operational firefighters – hearing^a

Condition	Criteria
Hearing for firefighting	Level 1 testing A firefighter is not Fit to Perform Firefighting Duties if Level 1 testing – air conduction (refer to text) shows there is hearing loss >40 dB in any frequency between 0.5 and 3kHz (inclusive) in either ear. If Level 1 criteria are not met, the firefighter may be referred to an audiologist for Level 2 testing (refer to text and below). If the loss is severe, Temporarily Unfit to Perform Firefighting Duties should be determined; otherwise, Fit to Perform Firefighting Duties Subject to Review should be determined, with review by an audiologist within one month. Level 2 testing A firefighter is not Fit to Perform Firefighting Duties if Level 2 threshold testing – bone and air conduction (refer to text) – shows there is hearing loss >40 dB in any frequency between 0.5 and 3kHz (inclusive) in either ear. If the loss is severe, Temporarily Unfit to Perform Firefighting Duties should be determined; otherwise, Fit to Perform Firefighting Subject to Review should be determined, with review by an audiologist within one month for speech discrimination test. Fit to Perform Firefighting Duties Subject to Review may be determined if the following are met: speech discrimination in quiet, 90% correct in each ear, and speech discrimination in noise, 70% correct binaurally. Where Level 2 criteria are not met, and the diagnostic component of Level 2 testing indicates that ear, nose and throat specialist review is indicated, Temporarily Unfit to Perform Firefighting Duties may be determined while further assessment and treatment (if appropriate) is undertaken. The firefighter may recommence the hearing assessment process after treatment, and medical fitness for duty determined in accordance with the results. If treatment is not an option and hearing is not expected to improve unaided, the firefighter should be classed as Permanently Unfit to Perform Firefighting Duties. Incumbent firefighters with only borderline fail may be referred to the Fire & Rescue NSW Occupational Physician for further review.

a All testing is to be conducted without the use of hearing devices.

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14 **Musculoskeletal disorders**

14.1 *Relevance to operational duties*

Operational duties are physically demanding and many of the typical firefighting tasks required result in extremely high loading on the musculoskeletal system.

While wearing personal protective equipment, which weighs up to 21 kg and includes self contained breathing apparatus, firefighters are required to perform firefighting tasks such as:

- handling charged lines of hose under high pressure
- extensive crawling, squatting, lifting and carrying heavy objects
- obtaining forcible entry
- carrying and handling rescue equipment including heavy power and hand tools
- raising of ladders
- working in awkward spaces and positions under emergency conditions that may not allow for best practice manual handling techniques
- climbing multiple flights of stairs (depending on location) while carrying equipment and tools
- climbing ladders
- undertaking search and rescue, which includes prolonged squatting or crouching, dragging or carrying victims ranging in weight from newborns to grossly overweight adults. Firefighters may need to rescue a collapsed fellow firefighter who is also wearing full personal protective equipment
- negotiating uneven and slippery surfaces.

Firefighting duties place high loads on the lower back, knees and shoulders, and this is supported by Fire & Rescue NSW (FRNSW) injury records. Significant histories or other findings involving these areas should prompt very careful assessment.

There are many musculoskeletal conditions, including those of a degenerative nature, with the potential to be aggravated or exacerbated by firefighting duties. This chapter does not aim to address every musculoskeletal diagnosis, rather, it focuses on conditions:

- that may result in acute incapacity
- where the risks of aggravation or exacerbation may be particularly high
- that may significantly impact on function.

All musculoskeletal conditions should be assessed with these same principles in mind.

14.2 General assessment and management guidelines

14.2.1 General

The examining doctor should take a thorough history, noting information such as:

- day to day functional capacity
- performance in other jobs (pre employment, secondary or primary employment for incumbent firefighters)
- history of injuries, the circumstances of any injuries, their severity and recovery time including time off work or time on suitable duties, and time off sports)
- treatment required and duration of treatment
- exacerbating and relieving factors.

Examination should evaluate the following:

- gait – the ability to walk on flat and uneven surfaces
- spine – range of movement of cervical and lumbosacral spine
- limbs – power, range of movement, stability of joints
- pain – presence of musculoskeletal pain that may impede movement or affect the ability to tolerate heavy loads
- balance.

14.2.2 Shoulder dislocation

A history of anterior glenohumeral joint dislocation requires assessment of the likelihood of recurrence. Forceful activities above shoulder height (e.g. raising ladders) may precipitate dislocation in a firefighter so predisposed. Glenohumeral joint dislocation is acutely incapacitating, with obvious implications for the safety of the individual firefighter and those relying on them for their own safety, such as their crew and members of the public.

A firefighter should be classified as Temporarily Unfit to Perform Firefighting Duties after isolated anterior glenohumeral joint dislocation. The younger the firefighter, the higher the risk of recurrence, although the risk reduces over time. The rate of redislocation ranges from 55% to 95%. If a sufficient period has passed, such that the risk of recurrence is considered low by an orthopaedic surgeon, Fit to Perform Firefighting Duties may be considered.

If there is a history of recurrent shoulder dislocation without repair, the firefighter is Permanently Unfit to Perform Firefighting Duties. Temporarily Unfit to Perform Firefighting Duties is appropriate if the firefighter is awaiting surgery. Further clinical assessment of medical fitness for duty may be undertaken after the appropriate postoperative period. Fit to Perform Firefighting Duties may be determined if repair is successful and the treating orthopaedic surgeon deems the risk of recurrence is low.

History of posterior shoulder dislocation is usually only because of seizure or electrical injury, and should be assessed with these underlying causes in mind.

14.2.3 Ruptured anterior cruciate ligament

Unrepaired ruptured anterior cruciate ligament (ACL) leaves the affected knee potentially unstable and at increased risk of accelerated degeneration. Excessive loads are placed on the knees, as well as the need to negotiate uneven surfaces, thereby further increasing risks. A knee giving way during firefighting duties because of a deficient ACL may be acutely incapacitating, with obvious safety implications for the firefighter and others relying on them for their safety, such as their crew and members of the public.

Fit to Perform Firefighting Duties may be determined for firefighters having undergone successful ACL reconstruction, after the appropriate postoperative and rehabilitation period.

14.2.4 Patellar dislocation

Recurrent dislocation of the patella is incompatible with undertaking firefighting duties safely because of the risk of acute incapacity, and the conditions of firefighting expected to increase the risk of dislocation in a firefighter with such a history. Permanently Unfit to Perform Firefighting Duties applies, or Temporarily Unfit to Perform Firefighting Duties if the firefighter is awaiting surgery. Fit to Perform Firefighting Duties may be determined following successful surgical repair.

14.2.5 Degenerative knee disease

The potential to aggravate or exacerbate significant underlying degenerative disease of the knee is high with the activities of firefighting. Incumbent firefighters often continue until they are limited by their symptoms. Individualised assessment is required, including discussion of ongoing risks.

14.2.6 Lower back

Incumbent firefighters with a history of chronic or recurrent lower back symptoms require assessment on an individual basis, taking into account their experience in the job and tolerance of duties.

Successful first time lumbar disc surgery does not necessarily require permanent restrictions; however, there is some increased risk of mechanical pain over time, such that operational duties may not be able to be sustained. This risk should be discussed with the firefighter and their treatment provider.

Any applicants with a history of chronic low back problems or lumbar surgery require referral to the FRNSW Occupational Physician for further assessment of their medical fitness for operational duties.

14.2.7 Inflammatory arthropathies

Many of these conditions – including rheumatoid arthritis, psoriatic arthritis and ankylosing spondylitis – are often seen in young people and can lead to chronic pain and mobility problems. The heavy physical work of firefighting is likely to aggravate conditions during periods of active inflammation. Consideration must also be given to aggravation of joints already affected by any destructive inflammatory processes. Corticosteroid medication is a risk for developing osteoporosis, even when used for short periods; therefore, fracture risk must also be considered, given the extraordinary forces and increased risk of trauma with firefighting duties. Other systems affected by the multisystem disease must also be considered in relation to any potential interaction with the conditions of firefighting – for example, vision. The opinion of the FRNSW Occupational Physician is required, in conjunction with information provided by a rheumatologist.

14.2.8 Joint replacement – knee and hip (including resurfacing)

Total knee replacement may result in difficulties with kneeling, deep squatting, and prolonged squatting or crouching. The heavy loading resulting from firefighting duties may increase the risk of accelerated wear of the prosthesis, resulting in early failure. Firefighters having undergone total hip replacement or hip resurfacing procedures must be assessed for their level of recovery and function, risk of acute incapacity because of dislocation of the joint, and risk of accelerated wear of the prosthesis from firefighting duties. The FRNSW Occupational Physician will make the final determination of medical fitness for firefighting duties, taking into account information provided by the treating and/or an independent orthopaedic surgeon.

14.2.9 Applicants

Applicants are unlikely to be accustomed to undertaking activities while so heavily loaded. Significant histories or other findings involving the lower back, knees and shoulders should prompt very careful assessment. For the purpose of this standard, all significant musculoskeletal conditions in applicants must be referred to the FRNSW Occupational Physician for a final determination on medical fitness for duty.

Applicants with a history of chronic nonspecific lower back pain must be assessed very carefully, as history is the most significant predictor of future problems, and the risk is increased, regardless of occupation. Lumbar disc herniation and nerve root involvement also require careful assessment of risk of recurrence, as the activities of firefighting may precipitate further episodes. Likewise, the risks for applicants who have had previous lumbar disc surgery need to be very carefully assessed. Where chronic lower back problems or surgery have been related to previous employment, it is important to determine if any permanent restrictions were placed on the applicant.

Applicants with a history of ACL repair should be assessed with regard to integrity of the repair and evidence of significant degenerative disease likely to be aggravated or exacerbated by firefighting duties. Careful clinical assessment is required, as well as review of the operation report. MRI may be considered depending on the time since surgery and the age of the firefighter, if further information is required regarding integrity of the repair and degenerative changes.

Applicants with a history of significant knee injury or symptoms, and/or examination findings consistent with degeneration or inflammation require further careful assessment. Applicants should provide copies of any existing imaging studies and operation reports. Further assessment may be required depending on these results. Findings such as large areas of chondral damage and advanced osteoarthritis are not compatible with safely undertaking firefighting duties.

Table 5 Medical criteria for operational firefighters – musculoskeletal disorders^a

Condition	Criteria
Musculoskeletal disorders	A firefighter is not Fit to Perform Firefighting Duties if they have a musculoskeletal condition that: • may result in acute incapacity, or • is highly likely to be aggravated by firefighting duties, or • may significantly impact on capacity to effectively and safely undertake the physical requirements of firefighting duties. They may be classed as Fit to Perform Firefighting Duties Subject to Review or Temporarily Unfit to Perform Firefighting Duties while being further assessed or awaiting surgery, or Permanently Unfit to Perform Firefighting Duties. Refer to the text for guidelines regarding assessment and management.

^a For additional information regarding applicants, refer to text.

14.3 Bibliography

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15 Neurological disorders

This chapter covers epilepsy and other neurological conditions, including dementia.

15.1 *Relevance to operational duties*

The ability to effectively and safely undertake the inherent requirements of firefighting duties relies on a number of intact neurological functions. Firefighters are required to have awareness of what is happening in their environment and understand what that information means (situational awareness). They make decisions and act under conditions of extreme time pressure when the consequences of the decisions could impact lives and property.

The following functions are required for operational duties to be undertaken effectively and safely:

- visuospatial perception
- insight
- judgement
- attention and concentration
- reaction time
- memory
- sensation
- muscle power (also refer to Section 14, Musculoskeletal disorder)
- coordination
- balance and vertigo (also refer to Section 21, Vestibular disorders)
- vision (also refer to Section 22, Vision and eye disorders).

Loss of consciousness, seizure, confusional states, cognitive impairment, impairment of muscular power and coordination impact on the ability to effectively and safely undertake operational duties, including the ability to drive the appliance in emergency mode. Such impairments can jeopardise the safety of the individual firefighter, their crew and members of the public.

- In addition, the risk of precipitating some neurological events is increased because of the conditions under which operational duties are undertaken:
- Shift work, sleep disruption and sleep deprivation can lower seizure threshold, thus precipitating a seizure in a firefighter at risk of seizures. In some cases, raised body temperature (refer to Section 11, Cardiovascular disorders, High thermal load) can also reduce the seizure threshold.
- The cardiovascular stressors of firefighting are well defined and may precipitate an ischaemic or haemorrhagic cerebrovascular accident in a firefighter with cerebrovascular disease or severe hypertension (refer to [Section 11, Cardiovascular disorders](#)).
- Hot and humid conditions may worsen symptoms of multiple sclerosis.
- Lifestyle factors, such as alcohol intake and social activities resulting in sleep deprivation, can also lower seizure threshold.

15.2 *General assessment and management guidelines*

This chapter provides guidance and medical criteria for the following conditions:

- seizures and epilepsy
- aneurysms (unruptured aneurysms and other vascular malformations)
- cerebrovascular accident
- dementia
- head injury
- intracranial surgery

- neurodegenerative disorders (multiple sclerosis, motor neurone disease, Parkinson’s disease, Huntington’s disease)
- space occupying lesions
- subarachnoid haemorrhage.

15.2.1 Seizures and epilepsy

Epilepsy is characterised by the tendency to experience recurrent seizures. It is defined by two or more unprovoked seizures. Not all seizures constitute a diagnosis of epilepsy.

Epilepsy is a common disorder, with a cumulative incidence in the population of 2%, and 0.5% of the population affected and taking medication at any one time. Even with treatment, approximately 20% of those with epilepsy continue to experience seizures.

Firefighters experiencing an initial seizure should be referred to a specialist for accurate diagnosis, so that appropriate treatment can be instituted and risks related to firefighting can be determined, explained and managed appropriately.

If medical fitness to perform firefighting duties is being assessed after a specified seizure free period, the assessing specialist in epilepsy should advise if a sleep deprived electroencephalogram is warranted as part of the assessment, as firefighters work shifts or on call, with the potential for sleep disruption or sleep deprivation.

Consideration should also be given to conditions inherent to firefighting that have the potential to lower seizure threshold, such as shift work and on[call work – including how this may impact on medication dosing and high thermal load.

The default standard (all cases)

This standard applies to all firefighters who have had a seizure. In line with the current commercial vehicle driver medical standard, which considers the effect of acute incapacity, a seizure free period of 10 years is required before firefighting duties can be considered. A number of defined situations, however, may attract a shorter seizure[free period. Adherence to medical advice and reviews at least annually would still apply in these cases.

Variations to the default standard

Variation to the default standard may be appropriate in some cases, thus allowing an earlier return to firefighting duties. These situations are discussed below.

Seizures in childhood

Some specific childhood epilepsy syndromes are characterised by cessation of seizures in teenage years, before working age. Firefighters may be classified as Fit to Perform Firefighting Duties if seizures have not occurred after 11 years of age. The default standard applies if a seizure has occurred after the age of 11 years.

First seizure

Approximately 50% of all people experiencing a first seizure will never have another seizure, while 50% will have another seizure (i.e. epilepsy.) Risk of recurrence decreases with time. If sufficient time has passed without further seizures – with or without medication – such that risk has reduced to an acceptably low level, firefighting duties may be considered. If a second seizure occurs, the risk of recurrence is much higher. A second seizure within 24 hours, however, is still considered a first seizure and does not worsen prognosis.

Epilepsy treated for the first time

When treatment with antiepileptic medication is commenced in a previously untreated person, sufficient time should pass to establish that the medication is effective. The default standard applies.

Acute symptomatic seizures

These seizures are caused by a transient brain disorder or metabolic disturbance, in individuals without previous epilepsy – for example, because of encephalitis, hyponatraemia, hypoglycaemia, head injury (posttraumatic epilepsy; see Section 15.2.5), benzodiazepine or alcohol withdrawal.

Further seizures may follow weeks, months or years after resolution of the transient brain disorder. This may be as a result of permanent changes to the brain caused by the process underlying the acute symptomatic seizures, or because the transient brain disorder has recurred (e.g. benzodiazepine withdrawal).

Seizures during and resulting directly from a transient brain disorder or metabolic disturbance will result in exclusion from firefighting duties for a sufficient period to allow the risk of recurrence to fall to an acceptably low level.

The acute symptomatic seizures standard no longer applies if there is seizure recurrence after the causative acute illness has resolved, whether or not due to a second transient brain disorder or metabolic disturbance. For example, if an episode of encephalitis results in seizure and there is another seizure after recovery from the encephalitis, and the person commences treatment for epilepsy, the standard for epilepsy treated for the first time applies. Similarly, the default standard would apply for seizures related to two separate episodes of benzodiazepine withdrawal.

Other considerations*Epilepsy treated by surgery*

Surgery to resect epileptogenic brain tissue may eliminate seizures completely in about two thirds of individuals.

The default standard applies.

‘Safe’ seizures, including prolonged aura

Some seizures may not obviously impair consciousness. People may believe their consciousness is unimpaired when it actually is impaired. For example, some auras are associated with impaired consciousness that a person does not perceive. Seizures may begin with a subjective sensation (the aura) that precedes impairment of consciousness. Auras are actually simple partial seizures in which consciousness is maintained. Such warnings cannot be relied upon in firefighting because of the emergency and time critical nature of duties.

The default standard applies.

SleepOnly seizures

The default standard applies.

Seizure in a person whose epilepsy has been previously well controlled, including ‘provoked’ seizures

Seizures may be provoked in those with epilepsy by factors such as sleep deprivation, missed doses of anti epileptic medication, alcohol or acute illness.

The default standard applies.

Medication noncompliance

Compliance with medical advice regarding medication use is a requirement for fitness to perform firefighting duties. Drug level monitoring may be recommended if noncompliance is suspected.

The default standard applies if a seizure results from noncompliance or a missed dose of medication.

Withdrawal, change or dose reduction of antiEpileptic medication

Withdrawal of anti epileptic medication is incompatible with firefighting duties. Dose reduction of anti epileptic medication is incompatible with firefighting duties, except if the dose reduction only because of the presence of side effects.

Exceptional cases

Where a neurologist experienced in the management of epilepsy considers that a firefighter with seizures or epilepsy does not meet the standard, but may be safe to undertake firefighting duties without undue risk of harm to the firefighter or others, the Fire & Rescue NSW (FRNSW) Occupational Physician may consider information provided by the neurologist in assessing fitness to perform firefighting duties. Generally, such cases will be based on extenuating circumstances. For all firefighters who are required to drive the appliance (i.e. all firefighters except Station Commanders), they must meet the criteria for holding a conditional commercial vehicle driver licence for consideration to be given to their case.

Concurrent conditions

Where epilepsy is associated with other impairments or conditions, the relevant section of this standard should be consulted.

Other conditions with risk of seizure

Seizures or risk of seizures may be associated with many brain disorders (e.g. intracranial surgery, traumatic brain injury). Neurological deficit associated with the brain disorder may impact on medical fitness to perform firefighting duties. Both the risk of seizures and the effect of any neurological deficit must be considered when assessing medical fitness to perform firefighting duties.

15.2.2 Aneurysms (unruptured intracranial aneurysms and other vascular malformations)

Sudden severe haemorrhage from an intracranial aneurysm or vascular malformation may cause acute incapacity.

Size is the most significant predictor of aneurysm rupture; however, the potentially catastrophic consequences should an aneurysm rupture while on duty must also be considered.

The annualised risk of haemorrhage from vascular malformations, such as cavernous haemangiomas (cavernomas) varies in the literature. A previous history of haemorrhage is a significant risk factor for clinically significant haemorrhage. Seizure risk is also a consideration.

Individualised assessment must be undertaken for firefighters with these conditions. The FRNSW Occupational Physician will determine fitness to perform firefighting duties taking into account information from the treating neurosurgeon or neurologist regarding:

- risk of haemorrhage
- risk of seizure
- any increased risk related to the physiological conditions of firefighting (such as acutely increased blood pressure)
- the potential for catastrophic consequence of haemorrhage and seizure while on duty.

Mostly, Permanently Unfit to Perform Firefighting Duties will be determined, unless the firefighter is awaiting surgery, in which case Temporally Unfit to Perform Firefighting Duties may be determined.

15.2.3 Dementia

Dementia is characterised by progressive deterioration of cognitive function, affecting memory, psychomotor abilities, attention, visuospatial functions and executive functions.

Dementia may rise from many causes, including Alzheimer's disease, Huntington's disease, Parkinson's disease and vascular dementia. Alzheimer's disease is the most common cause, accounting for 50–70% of cases. Although it mainly affects people over the age of 70, onset can occur younger than this, and it is of relevance for firefighters due to an ageing workforce.

Dementia may affect the ability to safely undertake operate firefighting duties because of the following effects:

- memory loss
- limited concentration or gaps in attention
- errors in judgement
- confusion when making choices
- poor decision making or difficulty problem solving
- poor insight and denial of deficits
- errors with navigation, including forgetting details of routes
- slowed reaction times, including failure to respond in a timely fashion to instructions
- poor hand–eye coordination.

Based on studies of road accidents, a diagnosis of dementia is associated with a moderately high risk of collision when compared with age matched controls. This is of significance for firefighters who need to drive the appliance, including under emergency conditions, and can be extrapolated to other firefighting tasks that are complex, done under time pressures and have safety implications.

Dementia in a firefighter will eventually represent a risk to individual and others, because of the progressive and irreversible nature of the condition.

Impairment levels vary widely, with individuals experiencing different patterns and timing of impairment as their conditions progress. This presents diagnostic and management problems.

The following may assist with the assessment of dementia or suspected dementia. This assumes other causes of cognitive impairment have been considered and excluded (e.g. chronic alcohol misuse):

- Work history. Have they been involved in any incidents? Have they been referred for assessment by line management?
- Hearing. Can they hear speech and warning sounds?
- Reaction times. Can they respond to incident ground orders?
- Problem solving. Do they become upset or confused when more than one thing happens at the same time?
- Coordination. Have they become clumsy or started to walk differently because their coordination is affected?
- Praxis. Do they have difficulty using their hands and feet when asked to follow motor instructions?
- Alertness and perception. Are they aware of, and do they understand, what is happening around them? Do they experience hallucinations or delusions?
- Insight. Are they aware of the effects of their dementia? Is there denial?

Lack of insight and variable memory abilities are associated with most dementia syndromes; therefore, the individual may minimise or deny any difficulties with working. Reports of work performance, feedback from supervisors or co firefighters may be useful when assessing overall coping and safety decision making skills.

15.2.4 Head injury

Head trauma may result in various severities of injury. Loss of consciousness of less than one minute, with no complications, does not usually result in any long term impairment. The individual should be free of symptoms of concussion before resuming duty.

More significant head injury can result in impairment of the neurological functions listed in Section 5.1. Personality or behavioural changes may affect judgement and tolerance, and may also be associated with psychiatric disorders such as depression or posttraumatic stress symptom. If assessment reveals concerns about neurocognitive function, formal neuropsychological assessment should be considered. Assessment for the risk of posttraumatic epilepsy (PTE) must also form part of any assessment for a firefighter with a significant head injury.

15.2.5 Posttraumatic epilepsy

PTE is a recurrent seizure disorder secondary to brain injury following head trauma. It is a nonhomogeneous condition and its onset may be several years after the head injury. It should be distinguished, however, from immediate posttraumatic (acute symptomatic) seizures that occur within 24 hours of a head injury, which are considered part of the acute process (refer to acute symptomatic seizures in Section 15.2.4). Seizures that occur within one week after injury are termed early posttraumatic seizures and seizures occurring more than one week after injury are termed late posttraumatic seizures. Single late traumatic seizures should not be labelled as PTE. The risk of having a second seizure, however, is high, with one population based study showing 86% of individuals progressing to a second seizure within two years of the first.⁹

The risk of PTE increases with the severity of the traumatic brain injury. Risk factors for late posttraumatic seizures after traumatic brain injury include:

- early posttraumatic seizures (from 24 hours to 1 week after the trauma)
- penetrating brain injury
- brain contusion
- subdural haematoma/surgery for subdural haematoma
- depressed skull fractures
- loss of consciousness/alteration of consciousness or posttraumatic amnesia greater than 24 hours
- age older than 65 at time of injury.

After severe traumatic brain injury, the risk remains elevated for more than 10 years after the injury; however, the risk reduces with time.

15.2.6 Intracranial surgery

The risk of seizure must be considered after certain types of intracranial surgery, as well as any impairment related to the underlying condition or as a result of surgery. Supratentorial surgery, or surgery requiring retraction of the cerebral hemispheres, will attract a significant nonworking period. Individualised assessment will be undertaken by the FRNSW Occupational Physician in conjunction with the treating neurosurgeon.

15.2.7 Multiple sclerosis

Multiple sclerosis may produce a wide range of neurological deficits that impact on the ability to effectively and safely undertake firefighting duties. Deficits may be temporary or permanent, and the course of illness is variable. Many people with multiple sclerosis experience temporary worsening of symptoms with even small increases in body temperature from hot or humid weather or exercise. The conditions of firefighting are conducive to heat stress, with strenuous exercise undertaken in protective clothing that inhibits the body's normal cooling mechanisms. Other contributors to heat stress include hot, humid weather conditions, and radiant heat.

Medical fitness for duty will be determined by the FRNSW Occupational Physician, taking into account information provided by the treating neurologist.

⁹ Frey L. Epidemiology of post traumatic epilepsy: a critical review. *Epilepsia* 2003, 44(Suppl. 10):11–17.

15.2.8 Neuromuscular disorders

Neuromuscular disorders include diseases of the peripheral nerves, muscles or neuromuscular junction. Severe weakness or problems with sensation, especially proprioception, will result in difficulties effectively and safely undertaking firefighting duties. Medical fitness for duty will be determined by the FRNSW Occupational Physician, taking into account information provided by the treating neurologist.

15.2.9 Parkinson's disease

Parkinson's disease is a common progressive disease. Motor, cognitive, autonomic nervous system and psychiatric manifestations all potentially impact on the ability to effectively and safely undertake firefighting duties. Motor fluctuations are incompatible with firefighting duties. Fitness to perform firefighting for duties will be determined by the FRNSW Occupational Physician, taking into account information provided by the treating neurologist.

15.2.10 Stroke (cerebral infarction or intracerebral haemorrhage)

Ischaemic stroke (atherosclerotic or embolic) stratifies an individual into a very high cardiovascular risk group (i.e. >20% 5 year risk of an acute cardiovascular event). Such high cardiovascular risk in the context of an overt cardiovascular event is incompatible with undertaking the inherent requirements of firefighting safely and Permanently Unfit to Perform Firefighting Duties applies.

The most common cause for haemorrhagic stroke is sustained or transient elevation of blood pressure. Regardless of level of recovery, Permanently Unfit to Perform Firefighting Duties applies due to the cardiovascular strain of firefighting and the associated increases in blood pressure that would increase the risk of recurrent stroke.

In unusual cases (e.g. embolic stroke from patent foramen ovale, which is subsequently closed percutaneously), Fit to Perform Firefighting Duties Subject to Review may be determined by the FRNSW Occupational Physician, taking into account information provided by the treating neurologist and other treatment providers regarding level of recovery and control of risk factors, if recurrence is considered unlikely.

If the firefighter has had an associated seizure, seizure and epilepsy standards also apply.

15.2.11 Transient ischaemic attack

Transient ischaemic attacks (TIAs) can be single or recurrent, and may be followed by a stroke. The risk of stroke can be as high as 15% at 90 days post[TIA. Up to 85% of strokes that follow TIA will be fatal or disabling. In the majority of cases, individuals who have suffered a TIA would be stratified into a very high cardiovascular risk group (i.e. >20% 5 year risk of an acute cardiovascular event).

Such high cardiovascular risk in the context of an overt cardiovascular event is generally incompatible with undertaking the inherent requirements of firefighting safely and, therefore, Permanently Unfit to Perform Firefighting Duties is likely to apply. However, each individual firefighter must be assessed individually with regard to any underlying cause of the TIA, cardiovascular risk factors and likelihood of recurrence. Assessments of these cases are likely to be complex and require the input of an appropriate specialist.

15.2.12 Space occupying lesions, including brain tumours

Brain tumours and other space occupying lesions may cause a range of effects depending on their location and the type of lesion. If a firefighter has a brain tumour or other space[occupying lesion, they are Unfit to Perform Firefighting Duties. The FRNSW Occupational Physician shall further determine medical fitness for duty,

taking into account information provided by the treating neurosurgeon or other relevant specialist regarding factors including:

- effect on neurological function
- treatment
- prognosis
- seizure risk.

Other sections of this standard may also apply (e.g. vision, seizures and epilepsy, intracranial surgery).

15.2.13 Subarachnoid haemorrhage

Any cases of subarachnoid haemorrhage should be classified as Temporarily Unfit to Perform Firefighting Duties while further assessment is undertaken. The FRNSW Occupational Physician will determine final fitness to perform firefighting duties. Assessment of fitness for firefighting duties may be considered after a nonworking period of at least 6 months, unless a poor prognosis is apparent before this.

Consideration shall be given to:

- underlying cause
- treatment, and if this is considered definitive
- level of recovery/residual neurological deficit
- presence of problems with concentration, attention and mood
- likelihood of recurrence
- risk of conditions of firefighting, such as physiological strain increasing the risk of recurrence.

Other sections of this standard may also apply (e.g. vision, seizures and epilepsy, intracranial surgery).

15.2.14 Other neurological conditions

Any condition affecting neurological function not covered by the above, must be assessed on first principles, considering the functional requirements of firefighting. For vertigo, refer to Section 21, Vestibular disorders.

Table 6 Medical criteria for operational firefighters – neurological conditions

Condition	Criteria
<i>Seizures and epilepsy</i>	
All cases: default standard Applies to all firefighters who have experienced a seizure. Exceptions may be considered for situations matching those listed below.	A firefighter is not Fit to Perform Firefighting Duties if they have experienced a seizure. Fit to Perform Firefighting Duties Subject to Review, with at least annual review, may be determined, taking into account information provided by a specialist in epilepsy as to whether the following criteria are met: • there have been no seizures for at least 10 years, and • the EEG shows no epileptiform activity or, if recommended by the specialist, a sleep deprived EEG shows no epileptiform activity, and • the firefighter follows medical advice with respect to medication adherence, and • there are no adverse medication effects that would impact on the ability to effectively and safely undertake firefighting duties, and • due consideration has been given to potential triggers in the firefighting environment (e.g. shift and on[call work, including impact on medication dosing, and high thermal load).
Seizures and epilepsy – possible reductions in seizure-free periods	
History of a benign seizure or epilepsy syndrome limited to childhood	Fit to Perform Firefighting Duties applies if there have been no seizures after the age of 11. If a seizure has occurred after the age of 11, there is no reduction and the default standard applies.
First seizure (note, two or more seizures in a 24-hour period are considered a single seizure)	Fit to Perform Firefighting Duties Subject to Review, with at least annual review, may be determined, taking into account information provided by a specialist in epilepsy as to whether the following criteria are met: • there have been no seizures for at least 5 years (with medication for the 5 years, or without medication for the 5 years), and • the EEG shows no epileptiform activity or, if recommended by the specialist, a sleep deprived EEG shows no epileptiform activity, and • if medication has been taken for the preceding 5 year period, the firefighter adheres to the medication regimen, and • due consideration has been given to potential triggers in the firefighting environment (e.g. shift and on call work, including impact on medication dosing, and high thermal load).
Epilepsy treated for the first time	The default standard applies.

Condition	Criteria
Acute symptomatic seizures Seizures occurring only during temporary brain disorder or metabolic disturbance in a person without previous seizures. This includes seizures within 24 hours of a head injury, and withdrawal from alcohol or drugs. This is not the same as provoked seizures in a person with epilepsy	In exceptional circumstances, a firefighter may be determined to be Fit to Perform Firefighting Duties Subject to Review by the FRNSW Occupational Physician, with at least annual review. Consideration must be given to the underlying cause, as well as information provided by a specialist in epilepsy as to whether the following criteria are met: - there have been no further seizures for at least 12 months, and - the EEG shows no epileptiform activity or, if recommended by the specialist, a sleep deprived EEG shows no epileptiform activity, and - due consideration has been given to potential triggers in the firefighting environment (e.g. shift and on call work, including impact on medication dosing, and high thermal load). If there have been two or more transient disorders causing acute symptomatic seizures, the default standard applies.
'Safe' seizures	The default standard applies.
Sleep only seizures	The default standard applies.
Seizure in a firefighter whose epilepsy was previously well controlled	The default standard applies.
<i>Seizures and epilepsy – other factors that may influence medical fitness for operational duties</i>	
Epilepsy treated by surgery	The default standard applies. The vision standard may also apply if there is a visual field defect (refer to Section 22 , Vision and eye disorders). Withdrawal of any anti epileptic medication is incompatible with operational duties.
Medication noncompliance	Refer to text above.
Planned withdrawal of one or more anti epileptic medications in a firefighter who meets the criteria for Fit for to Perform Firefighting Duties Subject to Review	Withdrawal of anti epileptic medication is incompatible with being Fit to Perform Firefighting Duties.
Reduction in dosage of anti epileptic medication in a person who meets the criteria for Fit to Perform Firefighting Duties Subject to Review	Reduction in dosage of anti epileptic medication is incompatible with being Fit to Perform Firefighting Duties, except if the dose reduction is only because of the presence of side effects.
Exceptional cases	Where a specialist experienced in the management of epilepsy considers that a firefighter with seizures or epilepsy does not meet the standards for firefighters, but may be safe to undertake firefighting duties without undue risk of harm to the firefighter or others, the FRNSW Occupational Physician may consider information provided by the neurologist in assessing medical fitness for duty. The firefighter will be subject to at least annual review.
<i>Other neurological conditions</i>	

Condition	Criteria
Aneurysms	A firefighter is not Fit to Perform Firefighting Duties if they have an unruptured intracranial aneurysm or other vascular malformation. Under exceptional circumstances, Fit to Perform Firefighting Duties Subject to Review may be determined, taking into account information provided by the treating neurosurgeon and the opinion of the FRNSW Occupational Physician regarding the risk of bleeding the risk of seizure; and increases in these risks associated with the conditions of operational duties, such as acute increases in blood pressure and sleep disruption. Mostly, Permanently Unfit to Perform Firefighting Duties will be determined, unless awaiting surgery, in which case they should be classed Temporarily Unfit to Perform Firefighting Duties and may be reviewed after the appropriate postoperative period.
Dementia	Also refer to the text. Permanently Unfit to Perform Firefighting Duties will apply if dementia is confirmed.
Head injury (including risk of posttraumatic epilepsy)	A firefighter is not Fit to Perform Firefighting Duties if they have sustained a head injury resulting in impairment of any of the following: • visuospatial perception • insight • judgement • attention • reaction time • memory • sensation • muscle power • coordination • vision (including visual fields).
	A firefighter is not Fit to Perform Firefighting Duties if they have a high risk of posttraumatic epilepsy – that is: • early posttraumatic seizures (from 24 hours to 1 week post trauma) • penetrating brain injury • brain contusion • subdural haematoma/surgery for subdural haematoma • loss of consciousness/alteration of consciousness, or • posttraumatic amnesia greater than 24 hours, and • age older than 65 at time of injury. They should be classed as Temporarily Unfit to Perform Firefighting Duties for at least 2–5 years or longer depending on the severity of the injury, with a minimum of 5 years for a penetrating brain injury. Shorter non operational periods may be considered on a case[by]case basis taking into consideration advice from a specialist experienced in the assessment and management of epilepsy. If a seizure has already occurred, refer to Section 15.2.1.

Condition	Criteria
Intracranial surgery	A firefighter should be classified as Temporarily Unfit to Perform Firefighting Duties for at least 12 months following supratentorial surgery or surgery that involves retraction of the cerebral hemispheres. The nonworking period should be commensurate with the level of recovery and risk of seizure. If there are seizures or long term neurological deficits, refer to Section 15.2.1 and 'Other neurological conditions', below.
Multiple sclerosis	A firefighter is not Fit to Perform Firefighting Duties if they have multiple sclerosis. Fit to Perform Firefighting Duties Subject to Review, with at least annual review, may be considered by the FRNSW Occupational Physician, taking into account information provided by the treating specialist regarding: • impairment affecting muscle power, sensation, balance, coordination, vision and cognition • the effect of heat on the firefighter's symptoms • the course of the firefighter's illness • the effect and side effects of treatment.
Neuromuscular conditions	A firefighter is not Fit to Perform Firefighting Duties if they have: • a peripheral neuropathy • muscular dystrophy • another neuromuscular disorder that significantly impairs muscle power, sensation or coordination. Fit to Perform Firefighting Duties Subject to Review, with at least annual review, may be considered, taking into account information provided by the treating specialist regarding: • the level of impairment of muscle power, sensation, balance or coordination • the course of the illness.
Parkinson's disease	A firefighter is not Fit to Perform Firefighting Duties if they have Parkinson's disease. Permanently Unfit to Perform Firefighting Duties applies if the firefighter experiences fluctuations in motor control and/or problems with balance. In exceptional circumstances, Fit to Perform Firefighting Duties Subject to Review, with at least annual review, may be determined by the FRNSW Occupational Physician, taking into account information provided by the treating specialist regarding: • the level of motor impairment • the level of cognitive and mood impairment • the presence of autonomic nervous system impairment • the response to treatment.

Condition	Criteria
Space occupying lesions (including brain tumours)	A firefighter is not Fit to Perform Firefighting Duties if they have a space occupying lesion. In exceptional circumstances, Fit to Perform Firefighting Duties may be considered by the FRSNW Occupational Physician, taking into account information provided by the treating specialist regarding: • any neurological impairment • seizure risk • prognosis.
Subarachnoid haemorrhage (also refer to aneurysms, intracranial surgery)	A firefighter is not Fit to Perform Firefighting Duties if they have had a subarachnoid haemorrhage. Temporarily Unfit to Perform Firefighting Duties applies for at least 6 months. Fit to Perform Firefighting Duties Subject to Review may be determined by the FRNSW Occupational Physician after 6 months (unless a poor prognosis is apparent before this time), taking into account information provided by the appropriate specialist(s) regarding: • the level of impairment of any of the following: visuospatial perception, insight, judgement, attention, reaction time, memory, sensation, muscle power, coordination, vision (including visual fields), concentration and mood • the underlying cause • the nature of, and response to, treatment • likelihood of recurrence.
Stroke	A firefighter is not Fit to Perform Firefighting Duties if they have had a stroke. In unusual cases, Fit to Perform Firefighting Duties Subject to Review may be determined by the FRNSW Occupational Physician, taking into account information provided by the treating specialist regarding: • the level of impairment of visuospatial perception, insight, judgement, attention, reaction time, memory, sensation, muscle power, coordination, vision (including visual fields), concentration and mood • the underlying cause, and potential for definitive treatment or control of risk factors • the likelihood of recurrence • the risk associated with the of conditions of firefighting such as cardiovascular and thermal load, and dehydration increasing the risk of stroke recurrence. In all other cases, Permanently Unfit to Perform Firefighting Duties applies.

Condition	Criteria
Transient ischaemic attack (TIA)	A firefighter is not Fit to Perform Firefighting Duties if they have suffered a TIA. Information should be sought from the treating specialist to confirm diagnosis, cause and treatment. Permanently Unfit to Perform Firefighting Duties may be applicable if the diagnosis is confirmed with due consideration of the underlying cause, cardiovascular risk factors and likelihood of recurrence.
Other neurological conditions	A firefighter is not Fit to Perform Firefighting Duties if they have any neurological condition that significantly impairs any of the following: • visuospatial perception • insight • judgement • attention • reaction time • memory • sensation • muscle power • coordination • vision (including visual fields). Fitness to perform firefighting duties must be discussed with the FRNSW Occupational Physician.

EEG = electroencephalogram; FRNSW = Fire & Rescue New South Wales

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16 Psychiatric disorders

16.1 *Relevance to operational duties*

Firefighters work as part of team in complex, hazardous and dynamic environments. Impairment of judgement, behaviour or psychomotor function in any individual member jeopardises the safety of the individual, their crew and members of the public.

Firefighters must make critical decisions that can affect others under emergency conditions, often when they are tired or feeling stressed. The cognitive and decision making demands are relatively high, even for those not in command positions. For Station Commanders and Captains, there is the additional responsibility of decision making, operational planning and the overall responsibility for the safety of firefighters.

Firefighting duties also require good psychomotor function, which is dependent on complex coordination between the sensory and motor systems. Psychomotor function is influenced by factors such as arousal, perception, learning, memory, attention, concentration, emotion, reflex speed, time estimation, auditory and visual functions, decision making ability and personality. A coordinated behavioural response results from the interaction of complex feedback systems.

Anything that interferes with any of these factors may impact adversely on situational awareness (being aware of what is happening in their environment and understanding what that information means now and in the future), and the ability to undertake appropriate and safe actions on the incident ground, which is dynamic and often complex.

Psychiatric disorders encompass a range of cognitive, emotional and behavioural disorders, such as depression, schizophrenia, anxiety disorders and personality disorders. They also include dementia and substance abuse disorders, which are discussed in Section 15, Neurological disorders, and Section 20, Substance misuse.

Psychiatric disorders may impact on behaviour, cognitive abilities and perception, and therefore impact on the safety of individual firefighters and others who rely on them for their own safety. There are, however, considerable differences in the aetiology, symptoms, course and severity of psychiatric disorders, and they may be intermittent or persistent.

The impact of psychiatric disorders is also influenced by an individual's social circumstances, personality and coping strategies. In most cases, individualised assessment is required to evaluate the pattern of illness, severity and potential impairments, rather than the diagnosis alone.

Impairments differ at different phases of the illness and vary from person to person. The range of potential impairments associated with various conditions is described in Table 7.

16.1.1 **Effects of firefighting on mental health**

All firefighters will witness the death or serious injury of victims. These situations can be violent, even horrific, giving rise to critical incident stress. Situations range from burns and accident victims to suicides. These incidents are managed through the Critical Incident Support Program; however, such events, especially when recurrent, may lead to depression, anxiety disorders and substance misuse. Such events may also compound an existing psychiatric disorder.

There are, however, vast interindividual differences in response to trauma and only a minority of those exposed will develop trauma related mental health problems. Apart from the nature of the trauma, the main risk for developing trauma related pathology is the make up of the individual, both in terms of past psychiatric problems and past experience of, and response to, trauma.

Table 7 Potential impairments associated with various conditions

Condition	Potential impairment or effects on firefighting
Schizophrenia	• Reduced ability to sustain concentration or attention • Reduced cognitive and perceptual processing speeds, including reaction time • Reduced ability to perform in complex situations, such as when there are multiple distractions • Abnormalities of perceptions such as hallucinations, which are distracting and pre occupying • Delusional beliefs that interfere with working – for example, persecutory beliefs may include being followed and result in erratic working
Bipolar affective disorder	• Depression and suicidal ideation • Mania or hypomania, with impaired judgement about working safely, skill and associated recklessness • Delusional beliefs that may directly affect work • Grandiose beliefs that may result in extreme risk taking
Depression	• Disturbance of attention, information processing and judgement, including the reduced ability to anticipate situations • Psychomotor retardation and reduced reaction times • Sleep disturbance and fatigue • Suicidal ideation that may result in reckless conduct
Anxiety disorders	• Preoccupation or distraction • Decreased working memory • Panic attacks • Obsessional behaviours, including obsessional slowness, that impair the ability to work efficiently and safely
Posttraumatic stress disorder	• Avoidance of certain situations related to traumatic experience • Increased startle response • Poor sleep • Recurrent intrusive memories
Personality disorders	• Aggressive or impulsive behaviour • Resentment of authority or reckless behaviour • Disordered interpersonal relationships • Impaired decision making
Adult attention deficit hyperactivity disorder	• Difficulty with sustaining attention, decision making, planning, organising and prioritising

Shift work, sleep disruption and sleep deprivation may impact adversely on those with mood disorders. People with bipolar disorders can be sensitive to disruptions of circadian rhythms and the sleep cycle. Sleep reduction can lead to precipitation of mania. Disruption of circadian rhythms may aggravate depressive disorders, further compounding sleep disruption from the illness.

16.1.2 Treatment considerations

Some medications prescribed for psychiatric conditions may impair performance of safety critical tasks. This possible impairment needs to be balanced against the deleterious effects of untreated or undertreated illness. Side effects that warrant consideration can include sedation, movement disorders and increased propensity to heat stress (e.g. medications with anticholinergic effects).

Self reporting, observation, clinical assessment and collateral information should be used to determine if there are any effects of medication that can cause impairment.

Lithium is a mood stabiliser commonly prescribed for bipolar disorder, and lithium toxicity can result from severe dehydration, which may occur in firefighters. Firefighters can lose copious amounts of sweat, up to 2 L/h. Therefore, the use of lithium is not compatible with operational duties.

Anticholinergic side effects of some psychoactive medications may result in orthostatic hypotension, especially with increased fluid loss from firefighting.

Some antipsychotic medications can cause disruption of body temperature regulation. Heat stress associated with firefighting could increase the risk of neuroleptic malignant syndrome, which is life threatening.

Medication regimens, such as those required for treating attention deficit hyperactivity disorder, are not compatible with emergency response work.

Consideration of dosing of medication in relation to shift and on[call work is also required.

Cardiovascular effects of amphetamine type medication will add to the already significant cardiovascular load of firefighting; therefore, cardiovascular status must be closely considered.

Electroconvulsive therapy may cause cognitive impairment – notably, memory dysfunction.

16.2 General assessment and management guidelines

Mental illness must be individually assessed for manifestations that can impact on the psychomotor and cognitive abilities required for firefighting, as well as the potential impact on interpersonal behaviour, which can impact adversely on the safety of the individual firefighter and those that rely on them for their own safety.

Mild mental illness does not usually impact significantly on function. Moderate levels of mental illness may affect functioning; however, successful treatment can help minimise the effect on occupational functioning. Long standing or recurrent severe mental illness is unlikely to be compatible with the functions required of firefighters who work in dangerous environments where the safety of others is reliant upon appropriate judgement and behaviour.

Successful management of significant mental illness in the operational workplace is contingent upon a high level of insight, compliance and cooperation from the firefighter.

Good lines of communication with treatment providers, nominated family members and line management are also advantageous in helping to assess fitness to perform firefighting duties, and to monitor progress and detect early signs of relapse or decline. Recognition of these signs and development of a satisfactory management plan is important for early and effective management aimed at improving occupational and medical outcomes. Management plans may include documentation of individual's obligations and expected actions of the individual firefighter and Fire & Rescue NSW (FRNSW) when early signs or symptoms of illness are detected.

The assessment of significant mental illness will depend heavily on psychiatric assessment and neuropsychological testing, if indicated.

16.2.1 Insight

The presence or absence of insight has significant implications for the workplace management of firefighters with psychiatric disorders.

A firefighter with insight may recognise when they are unwell and self limit their working.

Limited insight may be associated with a lack of awareness or deficits, which may result in impaired judgement or self appraisal, and lack of awareness of the need for treatment. Temporarily Unfit to Perform Firefighting Duties should be assigned while further assessment is undertaken.

16.2.2 Mental state examination

The mental state examination (MSE) can be helpful in identifying areas of impairment that may affect fitness to perform firefighting duties. This includes assessment of the following:

- **Appearance:** This is suggestive of general functioning (e.g. attention to personal hygiene, grooming, sedation, indications of substance use).
- **Behaviour:** This may include observations of the firefighter's behaviour at the time of assessment, and reports from the workplace about the firefighter's behaviour.
- **Attitude:** For example, whether the firefighter is cooperative, uncooperative, hostile or guarded.
- **Mood and affect:** For example, elevated or low mood.
- **Speech:** For example, tangential, pressured or monotonous.
- **Thought form, stream and content:** Relates to the logic, quantity, flow and subject of thoughts, which may be affected by mania, depression, schizophrenia or dementia. Delusions with specific thought content may impact on the ability to work safely.
- **Perception:** Disturbances such as hallucinations may interfere with attention and concentration, and influence behaviour.
- **Cognition:** This relates to alertness, orientation, attention, memory, visuospatial functioning, language functions and executive functions.
- **Insight:** This relates to self awareness of the effects of the condition on behaviour and thinking. Assessment requires exploration of the person's awareness of the nature and impacts of their condition, and has major implications for management.
- **Judgement:** The person's ability to make sound and responsible decisions has obvious implications for safety.

16.2.3 Treatment

As outlined above, the effects of prescribed medication should be assessed, including:

how medication may help to control aspects of the condition that impact on the ability to work safely

medication side effects such as sedation, impaired reaction time, impaired motor skills, hypotension or dizziness. Potential for exacerbation of heat stress must also be assessed potential adverse effects when combined with heat stress or dehydration additional cardiovascular load (e.g. from amphetamine type medication).

Assessment of compliance with treatment is also required. Consideration of dosing of medication in relation to shift and on call work is also required.

Lithium requires specific consideration and is incompatible with safe firefighting because of the risk of lithium toxicity with dehydration.

The potential for cognitive impairment after electroconvulsive therapy requires consideration.

16.2.4 Substance misuse

Specific assessment is required for concurrent alcohol abuse, and/or abuse of pharmaceutical and/or illicit drugs. Dual diagnoses (psychiatric disorders with comorbid substance abuse) require very careful assessment regarding medical fitness and will usually result in the person being classed as Temporarily, if not Permanently, Unfit to Perform Firefighting Duties. Assessment of any psychiatric disorder should specifically seek to identify the presence of:

- problematic alcohol consumption
- illicit substance use
- pharmaceutical drug misuse.

Refer also to Section 20, Substance misuse.

16.2.5 Severe chronic conditions

The presence of a severe or relapsing psychiatric condition is unlikely to be compatible with being able to sustain operational duties in the long run, and will usually result in the person being classed as Permanently Unfit to Perform Firefighting Duties.

16.2.6 Applicants

Applicants, on the whole, will not have the benefit of experience with firefighting duties. Therefore, for any applicant with past psychiatric illness, very careful consideration needs to be given to the issue of psychological resilience. Resilience will affect the risk of the psychological exposures of firefighting aggravating their condition, and the risk of increased vulnerability to trauma related psychological illness.

Table 8 Medical criteria for operational firefighters – psychiatric disorders^a

Condition	Criteria
Schizophrenia and other psychotic disorders	A firefighter is not Fit to Perform Firefighting Duties if they have schizophrenia or another psychotic condition. Further information should be sought from a psychiatrist to confirm diagnosis, prognosis, treatment and features of the illness likely to impact on operational duties. Fitness for firefighting duties shall be determined by the FRNSW Occupational Physician, taking into account information provided by the treating and/or independent psychiatrist. Permanently Unfit to Perform Firefighting Duties will apply if a psychiatrist confirms a chronic, relapsing psychotic condition.

Condition	Criteria
Bipolar disorder	A firefighter is not Fit to Perform Firefighting Duties if they have bipolar disorder. Fit to Perform Firefighting Duties Subject to Review may be considered, taking into account information provided by the treating and/or independent psychiatrist, and the opinion of the FRNSW Occupational Physician as to whether the following criteria are met: - the condition has been well controlled (including no rapid cycling) and compliance with treatment has been demonstrated over a substantial period (years), and - there has been no recurrent psychosis or, if there has been an isolated episode of psychosis, it is considered unlikely to recur, and - the firefighter has good insight into the potential effects of their condition on their own safety and that of others reliant on them for their own safety, and - shift work and sleep disruption are not expected to aggravate the condition, and - treatment does not include lithium, and - there are no side effects of treatment such as sedation, motor or cognitive impairment, or increased risk of heat related illness, and - there is no concomitant substance misuse, and - any recurrence is likely to be picked up early, and - the risk of inappropriate behaviour that could impact on safety in emergency situations is considered to be low, and - the psychiatrist considers that the firefighter is not at increased risk of trauma related psychological illness because of their condition. and - where appropriate, the FRNSW Occupational Physician has collaborative information from line management that there are no impairment issues apparent while on duty.

Condition	Criteria
Other – moderate or severe psychiatric conditions	A firefighter is not Fit to Perform Firefighting Duties if they have a psychiatric disorder that is likely to impair behaviour, cognitive ability or perception required for operational duties. Fit to Perform Firefighting Duties Subject to Review may be determined, in consultation with the FRNSW Occupational Physician, taking into account information provided by a psychiatrist regarding: • the course and severity of the condition, hospital admissions (including involuntary), self harm, psychosis • the level and duration of control of the condition and compliance with treatment • adverse medication effects, including sedation, motor or cognitive impairment, increased risk of heat related illness, and additional cardiovascular load • insight • the likelihood of impulsive behaviour • the risk of adverse impact on the condition from shift work or sleep disruption • the likelihood of recurrence or deterioration being detected early • the presence of comorbidities (e.g. substance misuse) • the risk of aggravation with the psychological exposures of operational duties • any heightened risk of developing trauma related psychological illness because of their condition.

FRNSW = Fire & Rescue NSW

a For additional information regarding applicants, refer to text.

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17 Renal disorders

17.1 Relevance to operational duties

The kidneys help to regulate fluid balance. Good kidney function is required for firefighting duties because of the potential for significant dehydration. The kidneys also play a key role in acid–base metabolism and electrolyte balance, and, hence, in restoring homeostasis after vigorous activity. Underlying impairment of kidney function combined with significant dehydration may result in acute renal impairment. Chronic kidney disease is associated with increased cardiovascular risk, which is highly significant for operational firefighters (refer to Section 11, Cardiovascular disorders).

Significant reduction in kidney function may jeopardise the safety of the firefighter, others in the crew and members of the public.

Persistent albuminuria and/or a reduced glomerular filtration rate (GFR) indicate the presence of chronic kidney disease and are the strongest independent predictors for progression to end stage kidney disease. They are also strong independent predictors of adverse cardiovascular outcomes, including strokes, myocardial infarction, congestive cardiac failure and death.

17.2 *General assessment and management guidelines*

Figure 50 summarises the assessment and management of firefighters in relation to renal function and kidney disease.

17.2.1 Risk factors

Hypertension and diabetes are significant risk factors for kidney disease (refer to following sections). Other factors that increase the risk of chronic kidney disease include:

- being more than 50 years old
- smoking
- being obese
- having a family history of kidney disease
- being Aboriginal or Torres Strait Islander
- having established cardiovascular disease.

17.2.2 Estimated glomerular filtration rate

The health assessment for the purpose of this standard includes screening for kidney disease by estimated GFR (eGFR) and urinary albumin:creatinine ratio (UACR). For the general community, most mild to moderate kidney disorders can be appropriately managed by a general practitioner; however, for firefighters, the indications for referral to a nephrologist will differ. Specialist assessment and advice from nephrologists is desirable for firefighters, in view of the potential for the kidneys being exposed to severe stress.

eGFR is widely accepted as the best measure of kidney function. Unexpected abnormal results should be repeated in the first instance and factors such as diet (including creatine supplements), muscle mass and extremes of body size should be considered:

- eGFR 60–90 mL/min/1.73 m², in the **presence of albuminuria** may indicate mild kidney dysfunction and referral to a nephrologist is required. Temporarily Unfit to Perform Firefighting Duties should be determined.
- eGFR <60 mL/min/1.73 m² indicates at least moderate kidney dysfunction and requires referral to a nephrologist. Temporarily Unfit to Perform Firefighting Duties should be determined for incumbent firefighters and Permanently Unfit to Perform Firefighting Duties for applicants.
- eGFR falls from a starting point of >90 mL/min/1.73 m² by 10 mL/min/1.73 m² per decade, beyond the age of 40 in most healthy adults, **but** an eGFR <60 mL/min/1.73 m² is associated with increased cardiovascular risk and poorer outcomes for all ages.

17.2.3 Assessment of albuminuria

The following clinical notes relate to the measurement and interpretation of albuminuria.

- All urine specimens should be mid stream and clean catch to avoid abnormalities related to specimen contamination.
- The preferred method for assessment for albuminuria in both diabetic and non diabetic individuals is a

UACR measurement in a first void specimen. Where a first void specimen is not possible or practical, a spot (random) urine specimen for UACR is acceptable.

Albuminuria is seldom, if ever, secondary to microscopic haematuria, even if on dipstick the amount of bleeding is strongly positive.

If haematuria accompanies albuminuria, an important underlying parenchymal lesion, such as glomerulonephritis, is highly likely.

Common causes for transient isolated albuminuria include:

- strenuous exercise
- urinary contamination with vaginal mucus or semen
- orthostatic (postural) albuminuria – primarily seen in adolescents, rarely seen over age 30
- urinary tract infection
- fever
- emotional stress
- pregnancy.

Persistent albuminuria beyond 3 months (with the exception of orthostatic albuminuria in adolescents) is definitive for chronic kidney disease.

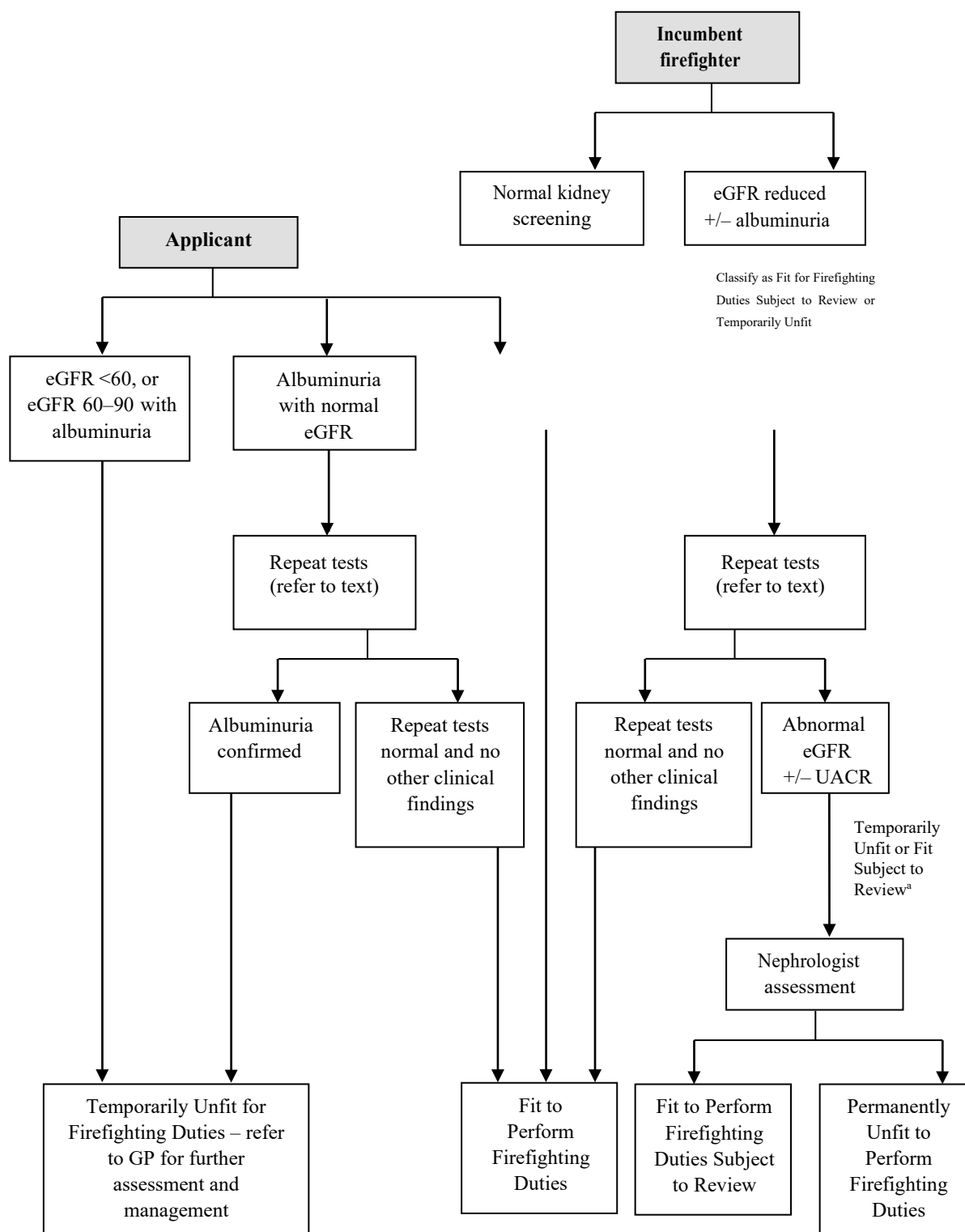
In investigating albuminuria, cut off levels for albuminuria are gender specific (refer to Table 9):

- For albuminuria, if UACR >2.5 mg/mmol for males, >3.5 mg/mmol for females and no other findings (including a normal eGFR), repeat the UACR in the first instance ensuring repeat specimen is **first void**, mid stream and clean catch.
- If albuminuria >2.5 mg/mmol for males and >3.5 mg/mmol for females is confirmed on repeat specimen, for the purpose of this standard, arrange for nephrologist assessment. Temporarily Unfit to Perform Firefighting Duties should be determined.

Table 9 Interpretation of urine albumin in females and males

Albumin levels	Females	Males
Normal	<3.5 mg/mmol	<2.5 mg/mmol
Microalbuminuria	3.5–35 mg/mmol	2.5–25 mg/mmol
Macroalbuminuria	>35 mg/mmol	>25 mg/mmol

Figure 50 Assessment of firefighters for kidney disease



eGFR = estimated glomerular filtration rate; GP = general practitioner; UACR = urine albumin:creatinine ratio **a** *Classify as Temporarily Unfit to Perform Firefighting Duties if the person has diabetes mellitus or hypertension. Others to be classified as Temporarily Unfit to Perform Firefighting Duties or Fit to Perform Firefighting Duties Subject to Review depending on severity of abnormality and clinical history.*

17.2.4 The undiagnosed firefighter

Abnormalities such as persistent haematuria of glomerular origin, persistent albuminuria or an eGFR <60 mL/min/1.73 m² in an incumbent firefighter with no known kidney problems require investigation to exclude or confirm kidney disease. For the purpose of this standard, further investigation is required for albuminuria, reduced eGFR and glomerular haematuria (other forms of haematuria can be referred back to the general practitioner [GP] for further assessment).

Fit to Perform Firefighting Duties Subject to Review or Temporarily Unfit to Perform Firefighting Duties should be determined, based on the severity of the findings and overall clinical assessment, while further investigation is undertaken.

17.2.5 Confirmed kidney disease or kidney function reduction, not because of hypertension or diabetes mellitus

All cases of kidney disease or reduced kidney function require careful assessment of risk in relation to dehydration from firefighting. Unless cardiovascular risk or diabetes result in Permanently Unfit to Perform Firefighting Duties, the opinion of a nephrologist who has been briefed on the conditions of firefighting is required. Temporarily Unfit to Perform Firefighting Duties should be determined while further assessment is undertaken. Note, all decreased eGFR is associated with increased cardiovascular risk. A stable eGFR of 45–59 mL/min/1.73 m² need not preclude a firefighter from being considered medically fit for duty, subject to individual assessment and advice.

17.2.6 Hypertensive kidney disease

A firefighter with kidney disease resulting from hypertension needs to be assessed in the broader context of cardiovascular risk as well as the threat to kidney function from dehydration. Kidney damage from hypertension indicates high cardiovascular risk. If screening shows albuminuria or an eGFR <60 mL/min/1.73 m² the firefighter should be classed as Temporarily Unfit to Perform Firefighting Duties while further assessment is undertaken. Also refer to Section 11, Cardiovascular disorders.

17.2.7 Diabetic nephropathy

A firefighter with kidney disease resulting from diabetes must also be assessed in the broader contexts of diabetes control and cardiovascular risk. Kidney damage secondary to diabetes is usually evidence of poor diabetes and blood pressure control, and high cardiovascular risk. If screening shows albuminuria or an eGFR <60 mL/min/1.73 m², the firefighter should be classed as Temporarily Unfit to Perform Firefighting Duties while further assessment is undertaken. Under this standard, all firefighters with diabetes require assessment of renal function by way of albumin: creatinine ratio as part of their periodic assessment. Also refer to Section 11, Cardiovascular disorders, and Section 12, Diabetes.

17.2.8 Dialysis and transplantation

Any firefighter requiring peritoneal or haemodialysis should be classed as Permanently Unfit to Perform Firefighting Duties. Kidney transplantation also is unlikely to be compatible with operational duties. Factors for consideration include level and protection of renal function, comorbid disease, cardiovascular risk, bone density, immunosuppression and other medication effects.

17.2.9 Applicants

Applicants with any of the following should be referred back to their GP for further assessment and management:

- confirmed kidney disease, and/or
- an eGFR <60 mL/min/1.73 m², or
- an eGFR 60–90 mL/min/1.73 m² and albuminuria.

These applicants will usually be classed as Permanently Unfit to Perform Firefighting Duties but, in exceptional cases where kidney function is preserved, they may be referred to the FRNSW

Occupational Physician for further assessment of medical fitness for duty, taking into account information provided by a nephrologist.

Minor abnormalities may, however, be investigated under this standard to help determine if there is kidney disease.

17.2.10 Nephrologist referrals

Referrals to, or requests for reports from, nephrologists **must** include the following information about firefighting:

- Firefighters work under conditions that promote heat stress and dehydration.
- Contributing factors to heat stress and dehydration include personal protective clothing, which results in profuse sweating and inhibits normal cooling mechanisms (i.e. the structural firefighting ensemble is insulated and contains a moisture barrier, and fully encapsulated chemical suits), strenuous exercise, radiant heat, and hot and humid weather conditions.
- Significant and rapid fluid loss – up to 2L/h or more – which can easily progress to clinical dehydration.

The nephrologist's report **must** address the:

- diagnosis and aetiology
- current clinical status
- investigation results
- severity of kidney function reduction and impact on cardiovascular risk
- complications or sequelae of the kidney disease
- prognosis or expected course of illness
- treatment
- potential impact of the conditions of firefighting as outlined above on kidney function.

Table 10 Medical criteria for operational firefighters – renal disease^a

Condition	Criteria
Suspected kidney disease based on abnormal assessment findings	A firefighter is not Fit to Perform Firefighting Duties if there is evidence of possible kidney disease or impairment on assessment. Fit to Perform Firefighting Duties Subject to Review or Temporarily Unfit to Perform Firefighting Duties may be determined while further assessment is undertaken depending on the clinical context.
Confirmed kidney disease or impairment (not related to hypertension or diabetes – refer below)	A firefighter is not Fit to Perform Firefighting Duties if they have a known or confirmed kidney disease, or moderate to severe kidney function reduction. Temporarily Unfit to Perform Firefighting Duties should be determined while further assessment by a nephrologist is undertaken. Refer to the text for referral details. Fit to Perform Firefighting Duties Subject to Review or Permanently

Condition	Criteria
	Unfit to Perform Firefighting Duties may be determined by the FRNSW Occupational Physician, taking into account the information provided by the nephrologist. Temporarily Unfit to Perform Firefighting Duties may be determined if the condition is expected to improve in the foreseeable future.
Kidney impairment secondary to hypertension	A firefighter is not Fit to Perform Firefighting Duties if they have suspected or confirmed hypertensive kidney disease. Temporarily Unfit to Perform Firefighting Duties should be determined while further assessment is undertaken. Refer to the text.
Diabetic nephropathy	A firefighter is not Fit to Perform Firefighting Duties if they have suspected or confirmed diabetic nephropathy. Temporarily Unfit to Perform Firefighting Duties should be determined while further assessment is undertaken. Refer to the text.

FRNSW = Fire & Rescue NSW

a For additional information regarding applicants, refer to text.

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18 Respiratory disorders

18.1 Relevance to firefighting duties

Good pulmonary function is essential for the extreme workloads of firefighting, which require a VO_2 max of 33.9–45 mL/kg/min. Hard work such as firefighting typically requires a 10 fold increase in respiratory minute volume, from 4.5 L/min to 45 L/min. An adequate intake of oxygen and rapid exchange of O_2 and CO_2 is required to meet the demands of firefighting duties.

Respiratory function may be threatened by exposure to smoke and other respiratory irritants. Smoke contains many respiratory irritants, which vary with the type of fire, but typically include aldehydes, ammonia, acrolein, halogen gases, isocyanates, nitrogen oxides, sulfur dioxide and particulates. The vapours from chemical spills may also include respiratory irritants. These irritants can cause coughing, bronchospasm and pulmonary oedema. Conditions such as asthma and chronic airflow limitation can be aggravated by exposure to smoke and other respiratory irritants encountered in the course of operational duties.

Self contained breathing apparatus (SCBAs) protect the lungs from respiratory hazards. However, SCBAs are not routinely worn at bushfires, because of the additional workload; rather, a P2 mask is worn. Also, smoke exposure may occur at structural fires despite the use of SCBAs, because respiratory irritants may still be present even when an atmosphere has been deemed by monitoring to not be immediately dangerous to life, or in the vicinity of a fire.

The conditions of firefighting can aggravate asthma. An asthma attack can result in acute incapacity.

18.1.1 Asthma

Asthma is a chronic lung disease characterised by the presence of both excessive variation in lung function and respiratory symptoms (e.g. wheeze, shortness of breath, cough, chest tightness) that vary over time, and may be present or absent at any point in time.¹ Airway hyperresponsiveness is a central feature of asthma and is associated with triggering of symptoms by factors such as exercise, cold air and inhaled irritants. One in 10 Australians have current asthma symptoms, and 19% of Australians aged 16 years or older have been diagnosed with asthma at some time in their lives.²

Occupational asthma is asthma caused by workplace conditions. Irritant induced asthma is a form of occupational asthma that develops following one or more exposures to high level respiratory irritants and has been described in firefighters. Work exacerbated asthma is asthma that is made worse, but was not initially caused, by workplace conditions such as exposure to smoke, exercise or stress. Previous studies have shown an underdiagnosis of asthma in the occupational setting, including firefighters.³

An asthma attack during a firefighting situation can result in acute incapacity, thus impacting on the safety of the firefighter, their crew and members of the public. The urge to remove the SCBA mask should a firefighter suffer asthma symptoms in a hostile environment would result in an immediate risk to the firefighter and others.

Many of the typical triggers for asthma are present in the firefighting environment, including:

- **Smoke and other respiratory irritants.** The chemistry of smoke and other exposures has been discussed above. The bushfire season is acknowledged to be problematic for those with asthma and the Asthma Foundation (NSW) advises individuals with asthma to avoid physical activities outdoors when there is smoke around. The Asthma Foundation acknowledges that bushfire volunteers and other emergency personnel are at an increased risk of asthma attacks.
- **Physical exertion.** Firefighting requires strenuous physical exertion, which increases oxygen demand and ventilation, thus further increasing the risk of exposure to inhaled irritants during tasks where SCBAs are not used.
- **Exercise.** Exercise induced bronchoconstriction is a well recognised aspect of asthma, affecting 50–65% of asthmatics who are otherwise well controlled on an inhaled corticosteroid. Firefighting is hard work, and thus presents a particular risk in this regard.
- **Cold dry air.** Cold dry air is a well recognised trigger for asthma, as it is very irritating to asthmatic airways. The compressed air in SCBAs is dry and, when released through a small valve, becomes cooled. The challenge to the airways from the cold dry air from SCBAs can be increased further with strenuous exercise.

Even though successful treatment of asthma may abolish symptoms, it does not mean that an individual no longer has asthma. Some people who have not experienced asthma symptoms for several years still have evidence of airway hyperresponsiveness on bronchial provocation.

There are no studies of the effectiveness of anti inflammatory medication (e.g. inhaled corticosteroids) in preventing or adequately controlling asthma in the firefighting environment; therefore, the effectiveness of such medications in this context has not been established. In addition, it is not acceptable to use or rely on bronchodilator medications for this purpose because:

- their use is for rescue after an asthma attack and not for prevention in an irritant environment
- there are no studies that support or deny that their use is effective in a fire or smoke environment
- it is impractical and dangerous to remove SCBAs to use an inhaler.

18.2 General assessment and management guidelines

Note that Fire & Rescue NSW (FRNSW) does not advise changes of treatment for the purpose of meeting this standard. Any change of treatment must be made by the firefighter's treating doctor and based only on clinical grounds.

Establishing that asthmatics are stable in a normal environment, and are not at risk of an asthma attack in a fire or other irritant environment is difficult. There is no test that an individual can be subjected to that will simulate or provide a reliable proxy for such environments.

18.2.1 Spirometry

Spirometry may be normal in between episodes of asthma; therefore, normal spirometry does not exclude the presence of asthma. A pattern of obstructive spirometry ($FEV_1/FVC < 0.7$) and/or $FEV_1 \leq 80\%$ in the absence of a history of obstructive lung disease would usually prompt further investigation, which may include a bronchial provocation test (BPT), provided it is safe to do so. In some cases, respiratory physician review may be required for further evaluation.

18.2.2 Bronchial provocation test

For the purpose of this standard, the BPT is used as an objective test to identify or exclude active asthma. Only 'indirect BPT' using mannitol dry powder will be accepted for the purpose of this standard. These hyperosmolar stimuli cause smooth muscle contraction 'indirectly' via the action of mediators released from inflammatory cells in response to the osmotic stimulus and, unlike 'direct' BPT, these mediators can act on many cells and receptors. Testing should be conducted in laboratories accredited by the Thoracic Society of Australia and New Zealand.

A positive result for an indirect BPT (mannitol) is defined as a fall in FEV_1 of $\geq 15\%$ from baseline. Applicants are eligible to undergo BPT only if they have not had any symptoms of asthma or required any asthma treatment whatsoever for at least 3 years, and respiratory examination and spirometry is normal. If there is any concern in relation to history, examination or spirometry (e.g. low reserve or obstructive pattern), referral for a BPT is not appropriate, as current asthma may be a possibility and a respiratory physician assessment may be required for further confirmation of asthma.

Incumbent firefighters eligible to undergo a BPT may perform the test on or off medication, according to their treatment regimen. If a firefighter's symptoms are well controlled on low dose corticosteroid, leukotriene receptor antagonists or cromones, they may undertake the test (after respiratory physician review) while on this treatment; however, they should not have used a short or long acting bronchodilator in the previous 24 hours.

For incumbent firefighters, once a BPT is found to be negative, it does not need to be repeated annually and should only be repeated if clinically indicated.

18.2.3 Assessment and management of established asthma

Figure 51 summaries the steps in assessing applicants and incumbents.

18.2.4 Applicants

Applicants with a history of childhood asthma, or those who have not had any asthma symptoms or treatment for at least 3 years, should provide a statement from their respiratory physician or general practitioner to confirm that their asthma has resolved, and they have been without symptoms and without medication for at least 3 years. Spirometry should then be conducted and, if this is satisfactory, a BPT can be arranged provided:

- a clear and reliable history of long standing absence of symptoms or treatment is established, and
- normal examination and spirometry, and
- no history ever of high risk features (e.g. severe asthma, brittle asthma, previous intensive care unit

admission), and

- no significant current issues with other atopic conditions.

If there are any doubts about the safety of a BPT in the clinical presentation, referral to a respiratory physician is recommended.

Applicants who currently require regular treatment with preventer (inhaled anti-inflammatory) or a symptom controller (long acting beta agonist), and/or reliever medication (short acting beta agonist), whether well controlled or not, are Permanently Unfit to Perform Firefighting Duties.

18.2.5 Firefighters

Wheeze associated with upper respiratory tract infection is not necessarily asthma. Short temporary incidents such as these, once resolved, do not compromise a firefighter's ability to safely undertake firefighting duties. This must, however, be distinguished from asthma exacerbated by upper respiratory tract infection.

Figure 51 and the following summarise the steps in assessing incumbent firefighters who have asthma:

- The firefighter's asthma history should be assessed, including information provided by the treating doctor where necessary.
- If, after a minimum of 3 months, they are considered stable on treatment and they meet the adapted *Australian asthma handbook* definition of 'good control' and 'mild severity asthma', and have no high risk features (Table 11), further individualised assessment will be undertaken by a respiratory physician.
- The respiratory physician should be familiar with the conditions of firefighting, so occupational causes are also considered. In cases of irritant induced asthma, airways will be generally hyperresponsive to irritants, but can be managed under this standard as per other asthma symptoms. As part of the assessment, the firefighter requires a BPT. The respiratory physician will need to determine if safe to proceed to a BPT.
- If the firefighter meets the relevant criteria in Table 11, they can be classed as Fit to Perform Firefighting Duties Subject to Review. The importance of wearing a SCBA for all fire suppression duties, including overhaul, should be emphasised.
- Firefighters with asthma should not fight wildfires, as SCBAs are not routinely worn. They should be classed Fit to Perform Firefighting Duties Subject to Job Modification.
- A BPT will not be required at subsequent assessments unless clinically indicated.
- If the firefighter does not meet the criteria for stability, or 'good control' and 'mild severity', or the respiratory physician assessment is unfavourable, or the criteria in Table 11 are not met, the assessing medical practitioner must determine if treatment has been optimised (based on information from the treating doctor). If further treatment optimisation is warranted, the firefighter will be classified as Temporarily Unfit to Perform Firefighting Duties, will attend to their treating doctor and their fitness for duty can be reviewed (as above) after a minimum of 3 months. If further treatment is deemed unlikely to alter the fitness assessment, the firefighter should be classified Permanently Unfit to Perform Firefighting Duties.

Table 11 Risk assessment of asthma in firefighters

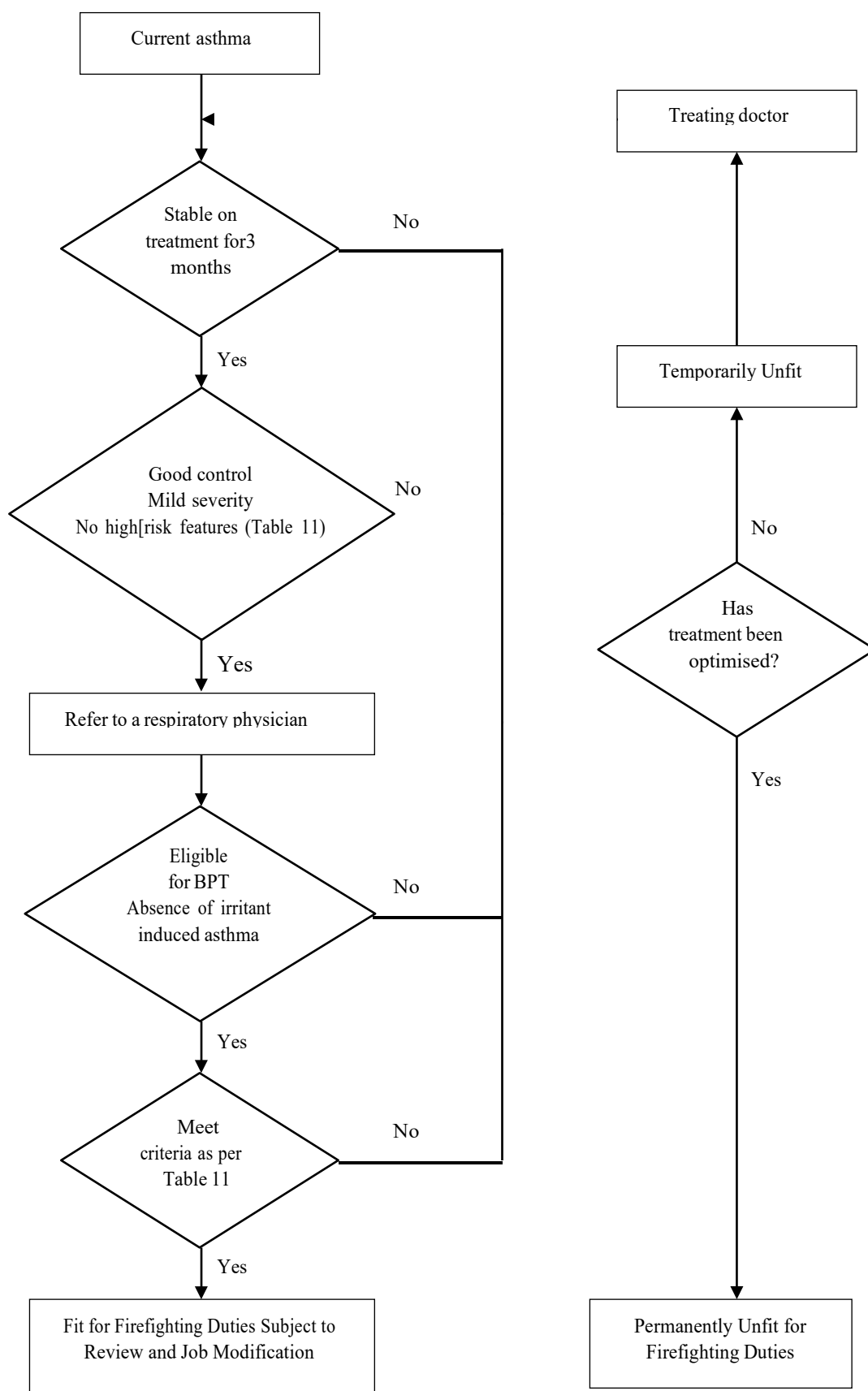
Control of asthma	Symptoms and treatment	
Good control	- No daytime symptoms, and - No need for reliever^a, and - No limitation of activities, and - No symptoms during night or on waking	
Mild severity	Good control can be achieved with (any of): - low dose inhaled corticosteroid (see 'Inhaled corticosteroid dose level in adults') - leukotriene receptor antagonist - cromone Note that an intermittent reliever is not acceptable.	
Inhaled corticosteroid dose levels in adults	Inhaled corticosteroid	Daily dose (mcg) – low
	Beclomethasone dipropionate ^b	100–200
	Budesonide	200–400
	Ciclesonide	80–160
	Fluticasone furoate ^c	—
	Fluticasone propionate	100–200
No high risk features	- Exercise induced symptoms - Any asthma flare up during the previous 12 months - Intubation or admission to intensive care unit due to asthma (ever) - Two or more hospitalisations for asthma in the past year - Three or more emergency department (ED) visits for asthma in the past year - Hospitalisation or ED visit for asthma in the past month - High short acting beta2 agonist use (>2 canisters per month) - History of delayed presentation to hospital during flare ups - History of sudden onset acute asthma	

a SABA taken prophylactically before exercise is not acceptable.

b Dose equivalents for Qvar (TGARregistered CFCRfree formulation of beclomethasone dipropionate).

c Fluticasone furoate is not available as low dose. TGARregistered formulations of fluticasone furoate contain a medium or high dose of fluticasone furoate in combination with vilanterol (a long acting beta2 agonist) and should only be prescribed as one inhalation once daily.

Source: adapted from the Australian asthma handbook

Figure 51 Assessment of incumbent firefighters

BPT = bronchial provocation test

18.2.6 Chronic airflow limitation

The criteria for Fit to Perform Firefighting Duties are not met if an applicant or firefighter has chronic airflow limitation (CAL), including chronic obstructive pulmonary disease. Individuals with CAL are unlikely to be able to meet the physical demands of firefighting duties. Fit to Perform Firefighting Duties Subject to Review may be considered, taking into account information provided by a respiratory physician familiar with firefighting duties and the opinion of the Occupational Physician. Careful individual assessment is required to determine lung function, the presence of bronchial hyperresponsiveness, oxygen saturation with exercise and objective evidence of exercise capacity.

18.2.7 Spontaneous pneumothorax

Fit to Perform Firefighting Duties may be determined after appropriate successful rehabilitation, usually a minimum of 3 months. A history of recurrent pneumothorax will require information from the treating specialist to assist with assessment of risk of recurrence.

No further assessment is required if successful pleurodesis has been undertaken.

18.2.8 Other chronic respiratory conditions

Other conditions should be assessed on an individual basis, taking into account lung capacity, exercise and functional capacity, gas exchange and risk of aggravation with the duties of firefighting.

Table 12 Medical criteria for firefighters – asthma

Condition	Criteria
Applicants with a past history of asthma	Fit to Perform Firefighting Duties may be determined if there is a past history of asthma, including childhood asthma, if: - information provided by the applicant's usual treating practitioner and the assessing medical practitioner's assessment confirms that there have been no asthma symptoms and no requirement for asthma medication for at least 3 years, and - clinical assessment, including examination and spirometry, is normal, and - the BPT is negative.
Applicants with current asthma	Applicants with evidence of current asthma shall be deemed Permanently Unfit to Perform Firefighting Duties.

Condition	Criteria
Firefighter with current asthma	Fit to Perform Firefighting Duties Subject to Review and Subject to Job Modification (see below) may be determined if: • information provided by the applicant's usual treating practitioner and the assessing medical practitioner confirms that the asthma meets the criteria of 'good control' and 'mild severity' for 6 months, and there is an absence of high risk features, and • clinical assessment, including examination and spirometry, is normal, and • there have been no asthma symptoms and reliever medication has not been required at any time during strenuous exertion, temperature or humidity extremes, SCBA use, irritant exposures, fire suppression activities, Hazmat duties, rescue duties, training activities (in newly diagnosed firefighters, confirm there have been no asthma symptoms and reliever medication has not been required at any time during strenuous exertion since the condition has been considered stable), and • respiratory physician (briefed on the requirements of firefighting) clears the applicant for BPT, and the BPT is negative, and • the firefighter is compliant with treatment and has a current asthma plan. Should the above conditions be met, the following permanent job modifications must be advised: • SCBA to be worn for all fire suppression duties, including overhaul and whenever there is expected to be exposure to particulate matter, smoke or inhaled irritant, and • no wildfire firefighting. BPT is not required annually and should only be repeated if clinically indicated. Temporarily Unfit to Perform Firefighting Duties may be determined if further treatment optimisation is warranted to assist the firefighter in meeting the criteria. Fitness to Perform Firefighting duties can be reviewed after a minimum of 3 months. Permanently Unfit to Perform Firefighting Duties may be determined if, despite treatment optimisation, firefighters do not meet the above criteria.

BPT = bronchial provocation test; SCBA = self contained breathing apparatus

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19 Sleep disorders

19.1 Relevance to operational duties

The focus of this chapter is on sleep apnoea. Other sleep disorders have the potential to impact on medical fitness to undertake firefighting duties, and should be assessed on a case by case basis.

Sleep apnoea is of significance for firefighting duties as it may result in:

- sleepiness or daytime somnolence and fatigue, with increased risk of injury, accidents and falling asleep while driving (including to and from work)
- impaired cognition and analytical skills, resulting in poor decision making.

Also of significance for firefighting duties are the long term health effects of sleep apnoea, including:

- hypertension (refer to Section 11, Cardiovascular disorders)
- coronary artery disease (refer to Section 11, Cardiovascular disorders). Multiple episodes of low oxygen from apnoeas can also lead to sudden death from a cardiac event if there is underlying heart disease. Obstructive sleep apnoea has also been shown to be associated with atrial fibrillation and congestive cardiac failure
- stroke (refer to Section 15, Neurological disorders).

Sleep apnoea may also worsen pre existing conditions such as hypertension and depression. Sleep apnoea is associated with type 2 diabetes. Chronic snoring is an indicator of potential obstructive sleep apnoea and, anecdotally, it can cause interpersonal problems for firefighters staying overnight in close quarters.

Risk factors for obstructive sleep apnoea include male gender, middle age and obesity, which is of significance given the Fire & Rescue NSW (FRSNW) firefighters' demographic and increasing prevalence of obesity in the general population.

Also, shift work may compound the effects of poor quality sleep from sleep apnoea. Additionally, secondary employment or, in the case of retained firefighters, primary employment, may impact on sleep time.

19.2 General assessment and management guidelines

19.2.1 General considerations

Excessive daytime sleepiness, which manifests as a tendency to doze at inappropriate times when intending to stay awake, can arise from many causes. It is important to distinguish sleepiness (the tendency to fall asleep) from fatigue or tiredness that is not associated with a tendency to fall asleep. Many chronic illnesses can cause fatigue without causing sleepiness.

Increased sleepiness during the daytime may be because of sleep deprivation, poor sleep hygiene habits or irregular sleep–wake schedules, or the influence of sedative medication, including alcohol. Insufficient sleep (less than 5 hours) before driving is strongly related to motor vehicle crash risk.

Excessive daytime sleepiness may also result from a number of sleep disorders, including sleep apnoea syndromes (obstructive sleep apnoea, central sleep apnoea and nocturnal hypoventilation), periodic limb movement disorder, circadian rhythm disturbances (e.g. advanced or delayed sleep phase syndrome), some forms of insomnia and narcolepsy.

Unexplained episodes of sleepiness may also require consideration of the several causes of blackouts (refer to Section 10, Blackouts).

Firefighters who are sleepy or otherwise found to be at high risk should be classed as Temporarily Unfit to Perform Firefighting Duties while further investigation and effective treatment is undertaken.

High risk individuals include those who:

- experience moderate to severe excessive daytime sleepiness (Epworth Sleepiness Scale [ESS] score of 16–24)
- have a history of frequent self reported sleepiness while driving or working
- have had a motor vehicle crash or other incident caused by inattention or sleepiness.

High risk individuals have a significantly increased risk of sleepiness related incidents and require referral to a specialist in sleep disorders to assess if sleep apnoea or another medical condition is responsible for their symptoms.

Others at risk of obstructive sleep apnoea include those with:

- BMI ≥ 40
- BMI ≥ 35 , and
 - type 2 diabetes, or
 - hypertension requiring two or more medications for control, or
 - history of habitual loud snoring during sleep or of witnessed apnoeic events (such as in bed by a partner).

Sleep apnoea is present on overnight monitoring in 9% of adult women and 24% of adult men. Sleep apnoea syndrome (excessive daytime sleepiness in combination with sleep apnoea on overnight monitoring) is present in 2% of women and 4% of men.

19.2.2 Screening for excessive daytime sleepiness – the Epworth Sleepiness Scale

Screening tools may assist in determining excessive daytime sleepiness. The ESS is a subjective measure and is included in the Health Assessment Questionnaire. The ESS is scored by summing the numeric values in the boxes in the questionnaire. The maximum possible is $8 \times 3 = 24$:

- A score of 0–10 is in the normal range.
- A score of 11–15 indicates mild to moderate self reported sleepiness, and may be associated with a significant sleep disorder. The degree of sleepiness related motor vehicle accidents in this range is unknown.
- A score of 16–24 is consistent with moderate to severe sleepiness, and is associated with increased risk of sleepiness related motor vehicle accidents.
- A score of ≥ 16 or the presence of other clinical findings should prompt discussion with the firefighter to determine possible explanations such as sleep deprivation or sleep disorders. Referral may be required to the firefighter's general practitioner or to a sleep clinic for polysomnography.

19.2.3 Referral and management

Firefighters in whom sleep apnoea, chronic excessive sleepiness or another medical sleep disorder is suspected should be referred to a specialist sleep physician for further assessment, investigation with overnight polysomnography and management. Referral to a sleep disorder specialist should be considered for any firefighter who has unexplained daytime sleepiness while driving, or who has been involved in a motor vehicle crash that may have been caused by sleepiness.

Home polysomnography may be helpful for those in rural and remote areas. The investigation should include (during a period of sleep):

- a continuous electrocardiograph recording
- a continuous electroencephalograph recording
- respiratory function testing (including oronasal airflow, rib cage/abdominal movement, body position, oximetry).

These parameters should be interpreted and reported on by a sleep physician who has established quality assurance procedures for the data acquisition.

Firefighters who are diagnosed with obstructive sleep apnoea syndrome and require treatment should have annual review to ensure that adequate treatment is maintained.

Firefighters with moderate sleep apnoea based on a diagnostic sleep study, and who do not report moderate to excessive sleepiness, should be assessed as Fit to Perform Firefighting Duties Subject to Review annually. Repeat sleep studies may be recommended depending on the clinical review.

Firefighters treated with continuous positive airway pressure (CPAP) are recommended to use CPAP machines with a usage meter to allow objective assessment and recording of treatment compliance.

Objective measurement of sleepiness should be considered (maintenance of wakefulness test and/or multiple sleep latency test) if there is concern regarding persisting sleepiness or treatment compliance.

19.2.4 Advice to firefighters

All firefighters suspected of having, or found to have, sleep apnoea or other sleep disorders should be advised about the potential impact on firefighting duties and strategies for maintaining fitness for duty. General advice should include:

- minimising unnecessary working at times when normally asleep

- allowing adequate time for sleep
- avoiding working after having missed a large portion of their normal sleep
- avoiding alcohol and sedative medications
- resting if sleepy.

The firefighter is responsible for:

- avoiding work if they are sleepy
- complying with treatment, including management of lifestyle factors
- maintaining their treatment device
- attending review appointments
- honestly reporting their condition to their treating physician.

Table 13 Medical standard for firefighters – sleep disorders

Condition	Criteria
Sleep disorder risk assessment	A firefighter is likely to be at increased risk of sleep disorder if they have a: • BMI ≥ 40; or • BMI ≥ 35 and one of – type 2 diabetes – high blood pressure requiring 2 or more medications for control, or – a history of habitual loud snoring or of witness apnoeic events (such as in bed by a spouse/partner). A firefighter meeting the above criteria should be promptly assessed in relation to a possible sleep disorder. They should be classed as Fit to Perform Firefighting Duties Subject to Review. Some discretion should be applied for subsequent review. Persons with or without the above risks and with evidence of excessive sleepiness should be classed as Temporarily Unfit to Perform Firefighting Duties while further assessment is undertaken. Evidence of sleepiness may include: • an ESS score of ≥ 16, or • frequent self reported episodes of sleepiness or drowsiness while working or driving, or • work performance reports indicating excessive sleepiness, or • an incident plausibly caused by inattention or sleepiness.

Condition	Criteria
Sleep apnoea	A firefighter is not Fit to Perform Firefighting Duties if: • they have established sleep apnoea syndrome – sleep apnoea on a diagnostic sleep study and moderate to severe excessive daytime sleepiness, or • the person has severe sleep apnoea on a diagnostic sleep study with or without self reported excessive daytime sleepiness, or • Temporarily Unfit to Perform Firefighting Duties should be determined until the treating specialist confirms compliance with treatment and the condition is well controlled, with an absence of moderate to severe excessive daytime sleepiness. Fit to Perform Firefighting Duties Subject to Review on an annual basis may be determined for those with treated sleep apnoea (without moderate to excessive daytime sleepiness), and taking into account information provided by a sleep specialist or the treating GP as to whether the following criteria are met: • the firefighter is compliant with treatment (where possible, this should include objective evidence such as usage meter download), and • the response to treatment is satisfactory. GP management may be determined to be sufficient if there is an established pattern of compliance and good response to treatment. Fit to Perform Firefighting Duties Subject to Review on an annual basis may be determined for those with moderate sleep apnoea diagnosed on diagnostic sleep study (without moderate to excessive daytime sleepiness).

GP = general practitioner

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20 Substance misuse

This standard applies to firefighters seeking to resume duty after a period of treatment or if a firefighter is referred for assessment of medical fitness for duty after a positive test undertaken under Fire & Rescue NSW's (FRNSW's) Alcohol and Other Drugs Policy.

20.1 Relevance to operational duties

Firefighting, including driving the appliance in emergency mode, requires accurate perception of a situation, rapid decision making, and quickness and strength of action. These cognitive attributes may be adversely affected by substance misuse. Acute or chronic effects of alcohol and other drugs, including illicit and pharmaceutical, can result in acute incapacity or impairment, thus impacting on the safety of the individual firefighter, their crew and members of the public.

The focus of this chapter is mainly on the chronic, regular heavy use and dependence on alcohol and other substances, including illicit and pharmaceutical drugs. Acute intoxication is addressed in the FRNSW Alcohol and Other Drugs Policy, and does not form part of the assessment of fitness for firefighting duties in this standard. In a long term dependent person, impairment can, however, result from both chronic use and recent consumption, and both these risks must be assessed in determining fitness to perform firefighting duties.

20.1.1 Features of chronic substance misuse

Abuse is characterised by the continued use of a substance, resulting in a negative effect on a person's life.

Chronic misuse of alcohol and other substances can lead to a syndrome of dependences, characterised by several of the following features:

- tolerance, as defined by a need for markedly increased amounts of the substance to achieve intoxication or the desired effect, or a markedly diminished effect with continued use of the same amount of substance
- withdrawal, as manifested by the characteristic withdrawal syndrome for the substance, or the same (or closely related) substance is taken to relieve or avoid withdrawal symptoms
- the substance is often taken in larger amounts over a longer period than was intended
- there is a persistent desire or unsuccessful efforts to cut down or control substance use
- a great deal of time is spent in activities to obtain the substance, use the substance or recover from its effects
- important social, occupational or recreational activities are given up or reduced because of substance use
- the substance use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance (e.g. continued drinking despite recognition that an ulcer was made worse by alcohol consumption).

20.1.2 Effects of long term alcohol and other substance use on operational duties

Alcohol

Neurocognitive deficits relevant to the capability to undertake firefighting duties are a common and potentially severe consequence of heavy long term alcohol consumption. Such deficits include:

- Short term memory and learning impairments, which become more evident with increasing difficulty of the task
- impairment of perceptual motor speed
- impairment of visual search and scanning strategies
- executive function deficits such as mental flexibility and problem solving skills; difficulty in planning, organising and prioritising tasks; difficulty focusing attention, sustaining focus, shifting focus from one task to another or filtering out distractions; difficulty monitoring and regulating self action; or impulsivity.

Verbal abilities are among the few cognitive functions that are relatively spared in chronic alcohol abuse; therefore, such individuals may often give the mistaken impression of being more capable than they are.

Alcohol may also act to increase the effects of sleep deprivation, sleep disorders and fatigue.

Various other pathologies of relevance for firefighting duties may also result from long term heavy alcohol use, including:

- hypertension (refer to Section 11, Cardiovascular disorders)

- Wernicke–Korsakoff syndrome (dementia and neurological impairments)
- peripheral neuropathy
- cardiomyopathy (refer to Section 16, Cardiovascular disorders)
- bleeding diatheses
- chronic liver disease.

Cessation or significant reduction in alcohol dependent persons may result in a withdrawal syndrome, which carries the risk of generalised seizure, states of confusion and hallucinations.

Other substances

Illicit drugs, and prescribed or over the counter medications can be used for their intoxicating, sedative or euphoric effects. These drugs may cause impairments that are clearly incompatible with undertaking firefighting duties safely, including risk taking, aggression, feelings of invulnerability, narrowed attention, altered arousal states and poor judgement. The effects of sleep deprivation, sleep disorders and fatigue may also be compounded by substance use. Some of the physiological effects of these drugs may interact with the conditions of firefighting to increase cardiovascular strain and risk of heat related illness.

Illicit substances are a heterogeneous group. The effects of chronic use vary and are not as well understood as those of alcohol. There is some evidence that chronic use of stimulants, opioids and benzodiazepines may be associated with cognitive impairment.

Illicit substance users may be at risk of brain injury through hypoxic overdose, trauma or chronic illness.

End organ damage, including cardiac, neurological and hepatic damage, may be associated with some forms of illicit drug use, particularly injecting drug use.

Amphetamine type stimulants (including prescribed) can be associated with a range of acute and long term effects of direct relevance to operational duties. Short and long term use can impact on the cardiovascular system – increasing heart rate and blood pressure, and causing arrhythmia and palpitations – sometimes resulting in myocardial infarction or stroke. Amphetamine type stimulants can also impact on the ability to regulate body temperature, contributing to hyperthermia. These effects are significant, given the cardiovascular and thermal loads of firefighting, and in combination, may be enough to result in acute, if not fatal, events. Evidence suggests that amphetamine type stimulants can also impact on cognition, which may sometimes persist even after abstinence.

Cannabis can cause changes in heart rate and blood pressure, which may pose an acute health threat to those with hypertension, coronary atherosclerosis and cerebrovascular disease (all of which may be latent). These effects are of additional significance for firefighters because of the additional cardiovascular strain of firefighting duties.

In the event of end organ effects relevant to firefighting duties, the appropriate requirements should be applied as set out elsewhere in this publication.

20.1.3 Effect of alcohol and drugs on other conditions

Frequent intoxication when combined with certain other medical conditions means that the person may not necessarily give the care and attention required to their medical condition. This may have implications for undertaking operational duties safely.

Diabetes

People with diabetes requiring insulin may not only forget to take their insulin at the proper time or dosage if intoxicated, but their food balance may also fall out of balance with their insulin dosage. Hypoglycaemia or slow onset of diabetic coma may follow.

Epilepsy

Many people with epilepsy are quite likely to have a seizure if they miss their prescribed medication even for a day or two, particularly when this omission is combined with inadequate rest, irregular meals, and alcohol or other substances. Even without omitted doses of medication, alcohol misuse, especially if combined with inadequate sleep, may precipitate a seizure in someone with epilepsy.

20.2 General assessment and management guidelines

20.2.1 Screening for substance misuse disorders

The Alcohol Use Disorders Identification Test (AUDIT) is a useful tool to screen for a spectrum of alcohol misuse, and is included in Firefighter Health Assessment Questionnaires. The questionnaire should be used in combination with clinical judgement, as some people may understate their alcohol use in the context of an employment health assessment. If a firefighter has a total score of >8 on the AUDIT, the accuracy of the high[score] questions should be checked with the firefighter and additional questions should be asked to help determine the potential for alcohol dependence. A score of >8 indicates strong likelihood of hazardous or harmful alcohol consumption, and requires careful assessment.

20.2.2 Assessment of firefighters with misuse disorders

Careful individual assessment is required for firefighters with declared or suspected misuse of alcohol or other substances (illicit, prescribed or over the counter). The standard is also intended to apply to firefighters seeking to resume duty after a period of treatment or if referral for assessment of fitness to perform firefighting duties is made after a positive test undertaken under FRNSW Alcohol and Other Drugs Policy.

In employment health assessments, people may understate or even deny substance use for fear of the consequences of disclosure. Acute and chronic cognitive effects of some substance use may also lead to difficulty in obtaining an accurate history and identification of substance misuse. Assessment should therefore incorporate a range of indicators of substance use in addition to self reporting.

The opinion of an appropriate specialist, such as an addiction medicine specialist or addiction psychiatrist may be required. Neuropsychological assessment may be indicated. Firefighters with a dual diagnosis (substance use disorder combined with a mental illness) require specialist assessment due to the complexity of issues.

Specialised assessment requires consideration of the firefighter's substance use history, previous treatment episodes, readiness to change, signs of harmful alcohol and other drug use, signs of intoxication or withdrawal, mental health, cognitive function, psychosocial history, occupational history, legal issues, support networks, response to treatment and level of insight.

Occasional use of drugs also requires very careful assessment. In particular, the FRNSW Occupational Physician must be satisfied that such use is not going to affect a firefighter in their performance of firefighting duties, and that it is unlikely to result in a positive drug or alcohol test at work or other breach of FRNSW's Alcohol and Other Drug Policy. After appropriate specialist assessment, firefighters who have been determined to have nonproblematic use of alcohol or other drugs (use at a rate, level, time and in a context that represents no evident or identifiable risk or problem for the individual in the workplace), a tailored approach to assessing fitness to perform firefighting duties and return to work is required. This may include counselling, negative tests before returning to work and follow up workplace testing.

For firefighters assessed as having anything other than nonproblematic use of alcohol or other drugs (e.g. abuse or dependence), the medical criteria as outlined in Table 14 must be met. Return to work will also be subject to a comprehensive return to work plan, which will include details regarding follow up workplace testing.

Chronic misuse of alcohol or drugs is not compatible with undertaking firefighting duties safely. Firefighters should be classed as Temporarily Unfit to Perform Firefighting Duties while their condition is assessed and treated.

20.2.3 Remission

Fit to Perform Firefighting Duties Subject to Review may be considered if there is evidence of remission:

- a strong response to treatment, **and**
- **well documented** abstinence and recovery.

For the purpose of this standard, remission is defined by:

- an abstinence from illicit drugs, **or**
- the use of other substances, such as alcohol, has reduced in frequency to the point where it is **unlikely** to cause impairment or result in a positive test at work.

Remission should be confirmed by biological monitoring (e.g. urine drug tests, alcohol breath test, carbohydrate deficient transferrin, liver function tests, full blood count) over a period of at least 3– 6 months, depending on the severity and complexity of the presentation.

The following must be considered when assessing fitness to perform firefighting duties:

- the firefighter's substance use history
- response to treatment
- level of insight
- FRNSW's Alcohol and Other Drugs Policy.

Firefighters with severe substance use problems, with previous high rates of relapse and fluctuation in stabilisation, would not be considered medically fit to undertake firefighting duties.

20.2.4 Firefighters being treated for opioid dependence

Stable doses of buprenorphine and methadone for opioid dependency may not result in impairment, providing the dose is stable and there is no abuse of other drugs that could cause impairment.

Impairment due to unsanctioned use of opioids or other substances must be considered in determining medical fitness for duty.

Firefighters treated with buprenorphine or methadone should be referred for assessment by an appropriate specialist, such as an addiction medicine specialist or addiction psychiatrist. The opinion of a clinical psychologist experienced in substance misuse may be of additional benefit. Fitness to perform firefighting duties will be determined by the FRNSW Occupational Physician, taking into account information provided from the specialist assessment(s).

Short acting opioids may cause fluctuations in blood levels of opioids, which are considered to be not compatible with operational duties.

20.2.5 Drug and alcohol screening

Drug and alcohol screening does not form part of periodic health assessments; however, testing may occur as part of a return to work program for a substance misuse condition, for objective confirmation of abstinence. Where drug testing is required, urine drug testing will be used. Other tests may include alcohol breath testing, and other biomarkers such as full blood count, liver function tests and carbohydrate deficient transferrin.

If a firefighter is suspected of being intoxicated by alcohol or drugs at the time of assessment, the assessing doctor should assess them and enquire of possible reasons for their condition. If drug or alcohol intoxication is suspected or admitted to by the firefighter, the doctor should cease the examination, classify the firefighter as Temporarily Unfit to Perform Firefighting Duties and must contact the designated FRNSW person so that Workplace Standards can be notified.

20.2.6 Applicants

Applicants will not usually have the benefit of experience with the psychological stressors of firefighting duties. Any applicant deemed to be in remission from a substance misuse disorder must be assessed very carefully regarding their psychological resilience, risk of relapse and if the psychological stressors of operational duties would increase any such risk.

Table 14 Medical criteria for operational firefighters – substance misuse

Condition	Criteria
AUDIT questionnaire	Score of 8–15. The firefighter may be managed within the consultation by providing simple advice and information on alcohol guidelines and risk factors. They may be classified as Fit to Perform Firefighting Duties if, on overall assessment, the risk is considered to be low. If there are any concerns, the firefighter should be classified as Fit to Perform Firefighting Duties Subject to Review. Score of 16–19. The firefighter may be managed with a combination of simple advice, counselling and monitoring. Follow up and referral to the firefighter's GP are required and the GP should be provided with a copy of this standard. They should be classified as Fit to Perform Firefighting Duties Subject to Review or Temporarily Unfit to Perform Firefighting Duties, pending further assessment. Score of ≥ 20, or where combined scores on questions 4, 5, and 6 are >4. The firefighter should be referred for specialist service assessment for consideration of treatment and an opinion regarding prognosis. (If the FRNSW nominated specialist recommends treatment, and the firefighter is willing to engage in treatment, the firefighter should be referred back to their GP for referral to an appropriate treatment provider. All treatment providers should be provided with this standard for substance misuse.) The firefighter should be classed as Temporarily Unfit to Perform Firefighting Duties, pending further assessment. Firefighters not willing to engage in treatment should be classed as Permanently Unfit to Perform Firefighting Duties.

Condition	Criteria
Substance misuse	A firefighter is not Fit to Perform Firefighting Duties if there is evidence of illicit drug use, or abuse or dependence of any substance. Fit to Perform Firefighting Duties Subject to Review, with at least annual review, may be determined by the FRNSW Occupational Physician, taking into account the opinion of an appropriate specialist (such as an addiction medicine specialist or addiction psychiatrist) as to whether the following criteria are met: - the firefighter is involved in a treatment program and has been in remission for a minimum of 3–6 months (refer to the text for the definition of remission), and - biological monitoring confirms remission, and - there is an absence of cognitive impairments, and - there is an absence of end[organ effects that impact on medical fitness for operational duties (as described elsewhere in this standard), and - the risk of further illicit drug use or other substance misuse is assessed as being low.

FRNSW = Fire & Rescue NSW; GP = general practitioner

a It is important that assessing doctors familiarise themselves with both the general information above and the tabulated standards before making an assessment of a person's medical fitness for duty.

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21 Vestibular disorders

21.1 Relevance to firefighting duties

Many tasks undertaken by firefighters require good balance. In addition, a lack of balance may lead to serious injury in the firefighting environment. Situations include climbing and working from ladders, working at heights, working in awkward spaces and in awkward positions, stooping, looking overhead, and negotiating uneven and slippery surfaces in poor visibility conditions. Loss of balance causing acute incapacity in an operational situation jeopardises the safety of the individual firefighter, their crew and members of the public.

A number of conditions may affect balance, including diseases of the vestibular system, abnormal proprioception or disorders of the central nervous system, particularly of the extra pyramidal system and cerebellum. Blackouts or presyncope resulting from cardiac and other causes are not dealt with in this chapter (refer to Section 10, Blackouts, Section 11, Cardiovascular disorders (syncope) and Section 12, Diabetes).

Of most significance are recurrent vestibular conditions that can result in sudden, unheralded attacks of vertigo. Some vestibular disorders also affect hearing (refer to Section 13, Hearing).

21.2 General assessment and management guidelines

A firefighter who suffers unheralded attacks of vertigo is not medically fit to perform firefighting duties.

Vestibular disorders may change between the asymptomatic and symptomatic state with little warning. The subsequent vestibular dysfunction can occur suddenly and result in acute incapacity.

21.2.1 Meniere's disease

Meniere's disease often results in recurrent vertigo despite treatment. The timing and frequency of the attacks vary. Some individuals can regularly predict when they will have an attack. Others note a completely random pattern. One in 25 people with Meniere's disease also experience drop attacks – sudden falls without loss of consciousness. The natural history is one of progression in the affected ear associated with increasing hearing loss. In extreme cases, total loss of vestibular function and partial loss of cochlear function can occur in the affected ear. Attacks are often heralded by a sense of fullness in the affected ear; however, quick egress from emergency or hostile environments is not always practicable. Meniere's disease may not be compatible with operational duties in the long run.

21.2.2 Benign paroxysmal positional vertigo

Symptoms of benign paroxysmal positional vertigo (BPPV) are typically triggered by changing head position, lying down, turning over in bed and sitting up from lying, and by stooping or extending the neck to look up. Given the emergency nature of firefighting duties, which may require frequent variation of posture and working in awkward positions, symptoms of BPPV may be precipitated by firefighting duties and firefighters would usually be required to be symptom free for a minimum of 6 months before a return to firefighting duties can be considered.

21.2.3 Central causes

Given the increased risk in those with underlying cardiovascular disease of precipitation of acute cardiovascular events with firefighting, the clinical history should be considered carefully, and the possibility of a cerebrovascular cause for vertigo or other balance problems may need to be considered if clinically appropriate. Note that cerebellar infarction is the main differential diagnosis for vestibular neuritis.

For central causes of vertigo (such as stroke or transient ischaemic attack) please refer to Section 15, Neurological disorders.

21.2.4 Acute peripheral vestibulopathy – vestibular neuritis (syn vestibular neuronitis, neurolabyrinthitis) and labyrinthitis

Vestibular neuritis and labyrinthitis are thought to result mostly from viral infections. Generally, they are self limiting conditions; however, symptoms such as vertigo may become persistent in some individuals. Where symptoms persist, medical fitness to resume firefighting duties will be assessed by the FRNSW Occupational Physician on a case by case basis; however, a significant symptom free period will be required before resuming operational duties. Persistence of symptoms beyond 2–3 months should prompt review of diagnosis.

Table 15 Medical criteria for operational firefighters – vestibular disorders

Condition	Criteria
Meniere's disease	A firefighter is not Fit to Perform Firefighting Duties if they have Meniere's or suspected Meniere's disease. Fit to Perform Firefighting Duties Subject to Review may be determined, taking into account information provided by the treating ENT specialist, including response to treatment and whether the following criteria are met: - the firefighter has been free of vertigo for 12 months, and - the hearing standard is met.
Benign paroxysmal positional vertigo (BPPV)	A firefighter is not Fit to Perform Firefighting Duties if they have BPPV in any direction. Fit to Perform Firefighting Duties Subject to Review may be determined, taking into account information provided by the treating GP and/or ENT specialist, including response to treatment, pattern of disease and whether the following criterion is met: the firefighter has been free of vertigo for at least 6 months. A shorter period may be considered by the FRNSW Occupational Physician, taking into the account information provided by an ENT specialist if further episodes after appropriate treatment is considered unlikely.

ENT = ears, nose and throat; FRNSW = Fire & Rescue NSW; GP = general practitioner

21.3 Bibliography

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22 Vision and eye disorders

22.1 Relevance to operational duties

Firefighting requires good eyesight, specifically acuity and fields. Firefighting duties are often undertaken under emergency and adverse conditions that impact on visibility, such as smoke, poor weather and at night. Failure to adequately see and respond to imminently hazardous situations jeopardises the safety of the firefighter and others dependent on the firefighter for their safety.

Driving of the appliance, particularly in emergency mode is also a major consideration in assessing visual fitness.

The following visual attributes are required:

- Visual acuity.** Good visual acuity is crucial to driving safely in emergency mode. Good acuity is also essential for other tasks, including those undertaken in conditions of poor visibility, so that a firefighter may be operationally effective. Good acuity is crucial for tasks such as reading street signs and chemical

placards, and identifying casualties and hazards to firefighters when moving through the incident ground. Abnormal vision may impact on reaction time, mobility and casualty recognition.

- **Visual fields.** Good peripheral vision is crucial to driving safely under emergency conditions and for working on roads near traffic. However peripheral vision is of limited importance in many firefighting situations because of personal protective equipment limiting the fields of vision.
- **Colour vision.** All colour vision tasks for firefighting were risk assessed by Dr John Parkes in 2009 and none were deemed safety critical. Risk mitigation in relation to these task include crew members working together and not in isolation, positional cues, use of monitors instead of detection papers, written labels or symbols in addition to colours on cylinders, and judicious purchasing of certain equipment. The same risk assessment also determined that colour vision is not essential to safe driving due to redundancy of traffic lights, based on the position of red and green lights.

22.2 **General management guidelines**

22.2.1 **Visual acuity**

For the purpose of this standard, visual acuity is defined as a firefighter's clarity of vision with or without corrective glasses or contact lenses. However, given the risk and consequence of damaged or dislodged visual aids, a minimum uncorrected visual acuity requirement has been set. If the visual acuity standard is not met at initial assessment, the firefighter may be referred to an optometrist or ophthalmologist for further assessment.

Assessment method

Visual acuity should be measured for each eye separately, then binocular without optical correction. If correction is needed, acuity should be retested with appropriate corrective lenses. (Refer to Figure 52.)

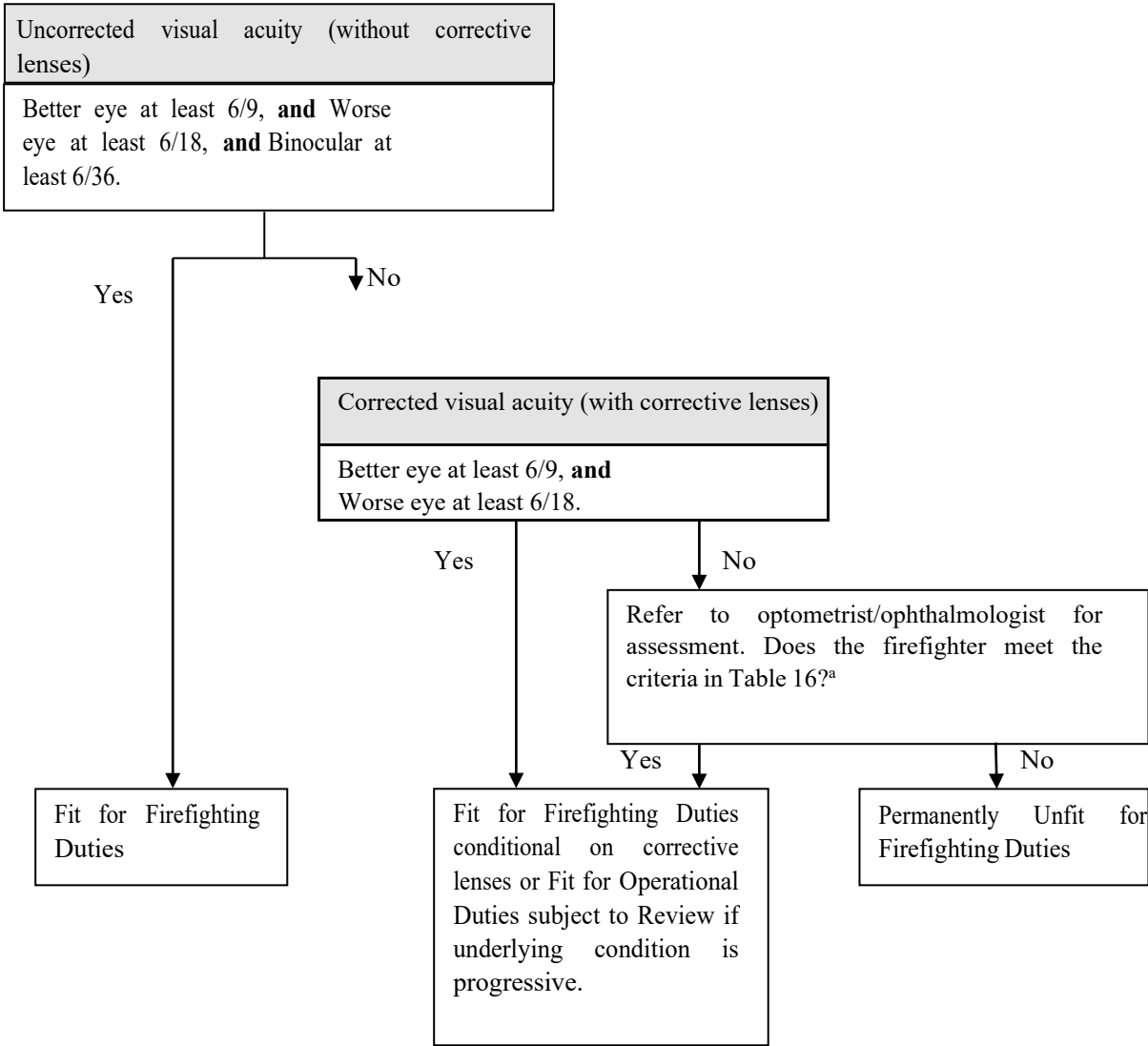
Acuity should be tested using a standard visual acuity chart (Snellen or equivalent, with five letters on the 6/12 line). Standard charts should be placed 6 metres from the person tested, or 3 metres for other calibrated charts. More than two errors in reading the letters of any line is regarded as a failure to read that line. The standard is not met if visual acuity is worse than 6/9 in the better eye, or worse than 6/18 in either eye (uncorrected or corrected). There is some flexibility providing the visual acuity in the better eye, with or without correction is 6/9 or better, taking into account the opinion of an optometrist or ophthalmologist. A copy of *Inherent requirements* (Part 2 of Health Standard) should be included in the referral to the assessing optometrist or ophthalmologist

In addition, firefighters who meet the standard corrected with glasses or contact lenses must meet a minimum uncorrected standard of 6/36 or better binocular, so that a minimum level of vision is present should their visual aids become damaged or dislodged during operational duties.

All firefighters who meet the standard with correction are encouraged to carry a spare pair of glasses on duty.

Corrective glasses and contact lenses may be worn with personal protective equipment. Custom made frames clip into the self contained breathing apparatus mask (see Figure 53).

Figure 52 Vision assessment method



a Must still meet uncorrected binocular at least 6/36.

Figure 53 Corrective lenses



Breathing apparatus corrective lens frames



Breathing apparatus corrective lens frames clipped into mask

22.2.2 Visual fields

For the purpose of this standard, visual fields are defined as a measure of the extent of peripheral (side) vision. Visual fields may be reduced as a result of many neurological or ocular diseases or injuries.

Assessment method

Visual fields may initially be screened by confrontation. Sit close to and directly opposite the person and instruct the person to cover one eye. Occlude your opposite eye like a mirror image. Ask the person to fixate on your non occluded eye and to count the number of fingers held up in each of the four corners of your own visual field. Other extreme upper, lower and side points may also be tested. Repeat for the other eye.

Confrontation is an imprecise test. Any person who has, or is suspected of having, a visual field defect should be referred for assessment by an optometrist or ophthalmologist. Assessment will involve automated perimetry using an automated static perimeter (Kinetic Goldman Visual Field, Humphrey Field Analyser, Medmont M700, Octopus).

22.2.3 Monocular vision

People with monocular vision have a reduction of visual field due to obstruction of the medial visual field by the nose. This may be compensated for by increased scanning and head movements.

Persons with monocular vision usually have satisfactory depth perception on the basis of monocular cues; however, any loss of depth perception from lack of stereopsis (a binocular cue) is not expected to affect a firefighters' ability to safely perform the inherent requirements of operational duties.

Persons with monocular vision do not meet the criteria for an unconditional commercial vehicle driver licence. However, in some cases, a conditional licence may be granted, taking into account the nature of the driving task and information provided by the treating ophthalmologist or optometrist.

The current medical guidelines for commercial vehicle drivers do not specifically take into account emergency driving conditions. There is an increased dependence on visual cues when driving under emergency conditions. Good quality cues are relied on, as large amounts of visual and other information must be acted on quickly by the driver. Those with monocular vision are therefore permanently restricted from driving in emergency mode. This also takes into consideration that the appliance is driven with passengers.

A firefighter with monocular vision may undertake all firefighting duties except in relation to driving the appliance in emergency mode (as outlined above), subject to assessment by an ophthalmologist and conditions outlined in Table 16 being met.

22.2.4 Sudden loss of unilateral vision

A firefighter who has lost an eye or most of the vision in an eye on a long term basis has to adapt to their new visual circumstances and re[establish depth perception. They should therefore be classed as Temporarily Unfit to Perform Firefighting Duties for an appropriate period (usually 6 months) and be assessed for monocular vision.

22.2.5 Colour vision

Defective colour vision mainly affects the perception of red and green colours. Various degrees of colour vision affect up to 5% of men. Based on the above mentioned risk assessment of tasks requiring colour vision, colour vision is still assessed, but carries no medical fitness for duty implications. Where an abnormality of colour vision is confirmed, the individual is counselled about the impairment and how this impacts on particular tasks.

Assessment method – for applicants only

Colour vision is initially screened using 12 Ishihara plates; ≥ 3 errors per 12 plates constitutes a fail. No colour lenses or sunglasses should be used when testing. If the firefighter fails the Ishihara test, they should undergo

further testing with the Farnsworth D15 test. Failure of the Farnsworth D15 indicates a deficiency of surface colour recognition.

Applicants who fail the Farnsworth D15 are given a Fire & Rescue NSW (FRNSW) fact sheet explaining how their colour vision abnormality affects particular tasks requiring colour vision. Once read, they must then sign a statement to indicate that they have read and understood the information given. Should they be unsure about any aspect of the information, they should contact a FRNSW Occupational Physician before signing the statement.

Colour vision testing is not required for incumbent firefighters.

22.2.6 Other

Diplopia

A firefighter with permanent diplopia is Permanently Unfit to Perform Firefighting Duties. Transient diplopia requires appropriate medical assessment for any underlying cause relevant to firefighting as outlined in this standard.

Nystagmus

A firefighter with nystagmus must meet the visual acuity standard. Any underlying cause must be assessed to ensure that there is no other condition that would render the firefighter Unfit to Perform Firefighting Duties as per this standard.

Table 16 Medical criteria for operational firefighters – vision

Visual attribute	Standard
Acuity	A firefighter is not Fit to Perform Firefighting Duties if: - visual acuity is worse than 6/9 in the better eye, or - visual acuity is worse than 6/18 in either eye. Fit to Perform Firefighting Duties may be determined if: - the standard is met with corrective lenses, and - uncorrected binocular visual acuity is no worse than 6/36. Fit to Perform Firefighting Duties may be considered taking into account the opinion of an optometrist or ophthalmologist if: - vision is worse than 6/18 in the worse eye, provided that visual acuity in the better eye is 6/9 or better, and - uncorrected binocular visual acuity is no worse than 6/36. Fit to Perform Firefighting Duties Subject to Review may be recommended if the underlying disorder is progressive.
Visual fields	A firefighter is not Fit to Perform Firefighting Duties if there is a visual field defect. Fit to Perform Firefighting Duties or Fit to Perform Firefighting Duties Subject to Review may be determined, taking into account the opinion of an optometrist or ophthalmologist, and as to whether the following criteria are met: if the binocular visual field has an extent of at least 140 degrees within 10 degrees above and below the horizontal midline, and

Visual attribute	Standard
	- there is no significant visual field loss (scotoma, hemianopia, quadrantanopia) that is likely to impact on the effective and safe undertaking of operational duties, and - the visual field loss is static and unlikely to progress rapidly.
Monocular vision	A firefighter is not Fit to Perform Firefighting Duties if they have monocular vision. If the following criteria are met, a permanent restriction on emergency driving is applicable. If the driver licensing authority has granted a conditional commercial vehicle driver licence, the appliance may be driven under non emergency conditions, subject to FRNSW being able to accommodate this job modification. Fit to Perform Firefighting Duties Subject to Review and subject to the above job modification may be determined, taking into account the opinion of an ophthalmologist as to whether the following criteria are met: - uncorrected visual acuity in the better eye is $\geq 6/9$, and - at least 6 months have passed since the onset of the impairment and the firefighter has adjusted well to being monocular, and - visual field in the good eye is normal, and - there is no underlying disease of the good eye that would reasonably be expected to deteriorate rapidly.
Colour vision – for applicants only	Refer to text.
Diplopia, nystagmus	Refer to text.

22.3 ***Bibliography***

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Parkes J. *Risk assessment of safety critical and other duties performed by NSWFB personnel requiring colour vision*, 2009.

I. TAYLOR *J, President*
D CHIN *J, Vice-President*
J. McDONALD, *Commissioner*

CROWN EMPLOYEES (FIRE AND RESCUE NSW RETAINED FIREFIGHTING STAFF) AWARD 2024

INDUSTRIAL RELATIONS COMMISSION OF NEW SOUTH WALES

Application by Industrial Relations Secretary.

(Case No. 68961 & 301353 of 2024)

Before The Honourable Justice Taylor, President
The Honourable Justice Chin, Vice President
Commissioner McDonald

19 December 2025

AWARD

PART A - CONDITIONS APPLYING TO ALL EMPLOYEES

A1 - STRUCTURE, OPERATION AND APPLICATION

1. Title

- 1.1. This Award shall be known as the "Crown Employees (Fire and Rescue NSW Retained Firefighting Staff) Award 2024".

2. Application and Structure

- 2.1. This Award regulates the pay and conditions of employment for employees covered by this Award.
- 2.2. This Award covers all employees employed in a Retained Firefighter classification as defined at Clause 40, Classifications, of this Award, employed by Fire and Rescue New South Wales.
- 2.3. This Award is in 2 parts as follows:

Part A - Conditions applying to all employees

A1 - Structure, Operation and Application

A2 - Productivity, Consultation and Extra Claims

A3 - Wages, Allowances and Remuneration

A4 - Staffing, System Conditions and Rosters

A5 - Leave Entitlements

A6 - Classifications, Career Paths and Promotions

A7 - Employment Relationship

A8 - Health and Wellbeing

A9 - Workplaces, Appliances, Uniforms and Equipment

Part B - Additional Conditions for Specific Groups of Employees

B1 - Additional Conditions for Retained Officers

B2 - Additional Conditions for Retained Rescue Operators

B3 - Additional Conditions for Retained Hazmat Operators

- 2.4. This Award is structured into Parts A and B as listed above with the intention that the more specific parts add specific conditions to the more general conditions. Where multiple parts apply to an employee, all conditions in those parts will apply. However, where there is an inconsistency between the general provision in Part A and a relevant provision in Part B then the specific provision in Part B applies to the extent of the inconsistency.

3. Area, Incidence and Duration

- 3.1. This Award rescinds and replaces the "Crown Employees (Fire and Rescue NSW Retained Firefighting Staff) Award 2023".
- 3.2. This Award shall take effect on and from 26 February 2024 and shall remain in force until 25 February 2027.

4. Renegotiation

- 4.1. The Department and the Union agree to commence negotiations on a new Award nine months prior to the nominal expiry date of this agreement.

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Schedule 4 - Personal Protective Uniform and PPE
Schedule 5 - Consultative Mechanism (Joint Consultative
Committee Process)
Schedule 6 - Health Standards
Schedule 7 - Retained to Permanent Firefighter Pathway

6. Definitions

"Authorised Absence" means any time, not including approved leave, where an employee is performing duties for the Department, during which period they would otherwise have been available for response. Examples include authorised duties, strike teams, relief duties, attendance at an incident on a non-primary appliance, or training other than regular drills or make-up drills. This list is not exhaustive and is not intended to limit the scenarios to which it applies.

"Brigade" for the purposes of this Award means any individual brigade of Fire and Rescue NSW constituted under the *Fire and Rescue NSW Act 1989*.

"CFR" means Community First Responder, the medical first response role performed by CFR firefighters as at 21 June 2012 in support (but not in lieu) of the Ambulance Service of NSW.

"CFR Brigade" means any Brigade that is designated as such by Fire & Rescue NSW from time to time and such designation may be attached or withdrawn following consultation with the Union.

"CFR firefighter" means an employee who is both attached to a CFR Brigade and who is qualified to undertake CFR duties. Any retained firefighter attached to a CFR Brigade may request CFR training and then shall be provided with such training as soon as practicable. Any CFR firefighter may at any time elect to relinquish their CFR qualification and classification.

"Commissioner" means Commissioner of the Department holding office as such under the *Government Sector Employment Act 2013*.

"Competency" means the training competencies developed by the Department following consultation between the Department and the Union providing the appropriate level of training, or part thereof, for the skill required to undertake the work for each classification covered by this Award.

"Deemed fortnightly salary" means the "Per Week" rate of pay of a Qualified Firefighter as set out at Table 1 of Schedule 1 of the Crown Employees (Fire and Rescue NSW Permanent Firefighting Staff) Award multiplied by 2.

"Department" means Fire and Rescue NSW established by the Fire and Rescue NSW Act 1989 and as a Public Service Executive Agency under Schedule 1 of the *Government Sector Employment Act 2013*.

"Domestic Violence" means domestic violence as defined in the *Crimes (Domestic and Personal Violence) Act 2007*.

"Emergency Meal" means a Long Life Meal Pack supplied when the provision of a Substantial Meal is not practicable, the basis of which shall be a self-heating 320g meal that is generally meat based (except for special diet packs such as vegetarian or vegan packs) and shall also include 1 dried fruit or fruit and nut mix (Sunbeam Fruit and Nut 40g, Fruit on the Go 50g, or similar) and 1 cheese and biscuits (Uncle Tobys Le Snak Cheddar Cheese 20g, or similar) or 1 fruit pack (Goulburn Valley no added sugar 220 g, or similar) and one 100% fruit juice box (Just Juice 250 ml, or similar).

"Employee" means a person, other than an employee covered by the Crown Employees (Fire and Rescue NSW Permanent Firefighting Staff) Award, employed in one of the classifications covered by this Award, as a member of Fire and Rescue NSW in terms of the provisions of the *Fire and Rescue NSW Act 1989*.

"Fire District" has the same meaning as in the *Fire and Rescue NSW Act 1989*.

"GSA" (Greater Sydney Area) means within the area bounded by the Local Government areas of Northern Beaches, Hornsby, Baulkham Hills, Hawkesbury, Penrith, Liverpool, Wollondilly, Campbelltown and Sutherland.

"Incident" means a fire call, or any other emergency incident attended by Fire and Rescue NSW.

"Merit Selection" means a fair, transparent, impartial process that assesses the merit of all applicants so that the employee selected is the applicant who is the most suitable to perform the duties of the vacant position.

"Operational Firefighter" means a firefighter classified as one of the following: Recruit Firefighter, Firefighter, Deputy Captain, Captain, CFR Firefighter, CFR Deputy Captain, CFR Captain.

"Parties" means the Department and the Fire Brigade Employees' Union.

"Refreshments" means tea bags, instant coffee, boiling water, sugar, long life milk, two biscuits and one cereal bar (any bar from the following list: K Time Twists 37 g bar, All-Bran Baked Bars 40g bar, Uncle Tobys Crunchy Muesli Bars Apricot, Uncle Tobys Fruit Twist - Apple and Pear, or similar) or one Goulburn Valley or similar fruit pack 220 g (no added sugar) and one liquid meal drink (any drink from the following list: Sustagen Sport 250 ml, Up and Go 250 ml, or similar) or one carbohydrate/electrolyte beverage (Sqwincher Qwik Serv 42g sachet, or similar).

"Retained Officer" means employees with the classification "Deputy Captain" or "Captain" in this Award.

"Retainer" means the relevant amount set out at the Entitlement Codes at Clause 12, Rates of Pay, that is paid per fortnight to employees in accordance with their classification, less the fortnightly equivalent of any contribution required pursuant to the Crown Employees (NSW Fire Brigades Firefighting Staff Death and Disability) Award 2012 or its successors.

"Service" for the purposes of determining leave entitlements, means continuous service.

"Special Leave Without Pay" means a period of approved unpaid leave during which the employee's retainer shall be unaffected.

"Substantial Meal" means a meal identified in the Department's Incident Ground Meals Guide, as published at the date of the making of this Award, or a meal of a similar nutritional and sensory quality standard.

"Union" means the Fire Brigade Employees' Union of New South Wales.

A2 - PRODUCTIVITY, CONSULTATION AND CHANGE, AND EXTRA CLAIMS

7. Productivity

- 7.1. The parties accept that during the life of the Award, there may be productivity initiatives and benefits. Where such productivity and/or efficiencies are identified during the life of the Award, FRNSW acknowledges that any savings as a result of such productivity/efficiency can be discussed by employees/FBEU as part of future Award negotiations and through the forums established under Clause 8, Consultation.
- 7.2. Prior to the introduction of any change which may impact employees, and which may have a productivity/efficiency associated with it or provide any cost saving, FRNSW must provide to the Union as part of the consultation process, information sufficient to allow the Union to quantify the productivity, efficiency and or cost saving for the purposes of making a future claim in accordance with subclause 7.2.

8. Consultation

- 8.1. This clause recognises the capacity of the Commissioner to make decisions to effect change within the Department. This clause also recognises that where the employer seeks to introduce or implement any

change that affects employees, provisions of this Award and/or the employment relationship such change will be the subject of consultation with the FBEU.

- 8.2. Consultation as defined for the purposes of this Award means the full, meaningful and candid disclosure and discussion of issues and proposals with a genuine consideration of each party's views. It also requires full disclosure of the proposed change including relevant information pertaining to it, and a full and proper opportunity for the Union to consider and respond to the proposed change, along with an opportunity to provide an alternative proposal. Consultation shall provide a genuine opportunity to affect the outcome of any proposal prior to the making of a final decision.
- 8.3. No change pertaining to the employment relationship, this Award and/or matters which affect employees will be implemented prior to full consultation in accordance with this clause.
- 8.4. The parties agree to implement these consultative provisions via the consultative mechanism contained at Schedule 5 of this Award.
- 8.5. If, following the consultation process outlined in Schedule 5 there is a reasonable basis for the Commissioner/FRNSW to conclude that the consultation process has been exhausted, the Commissioner/FRNSW shall advise the Union accordingly and the following procedures shall then operate.
 - 8.5.1. The Commissioner/FRNSW will notify the Union and the workforce affected by the proposed change of their decision in relation to the subject of the proposed change as well as the process and timetable for its implementation.
 - 8.5.2. If the matter remains in dispute, the Union may refer the decision to the Industrial Relations Commission (IRC). Such referral should normally take place within 7 days however the parties recognise that at times, such a referral may take longer. In this case, a reasonable time frame will be appropriate. For the avoidance of doubt, the subject matter of the dispute may be in relation to either the consultation process, or the subject matter of the change, or both.
 - 8.5.3. Where the Union exercises its rights under clause 8.5.2 to refer a matter to the IRC, there will be no implementation of the change until either the parties agree, or the IRC determines the matter or orders otherwise.

9. Climate

- 9.1. FRNSW will consult in accordance with Clause 8, Consultation, in relation to any researching, considering, planning and preparing for changes in Emergency Management impacting on the work of or conditions under which work is performed by employees as a result of changes to climate. Response to changes to climate shall be a standing item on the Joint Consultative Committee.

10. Disputes Procedure

- 10.1. The parties recognise the need to promote prompt and genuine resolution of disputes as they arise.
- 10.2. Where a dispute has been notified, and while the dispute process as outlined below is continuing and remains unresolved, status quo will remain in place in accordance with the existing situation or practice that existed immediately prior to the subject matter of the dispute occurring or arising. No party shall be prejudice as to final settlement by the continuance of work in accordance with the status quo.
- 10.3. Disputes Process
 - 10.3.1. Step 1

Employee(s) and/or Union representatives will place the matter before the relevant Senior Employer Representative and/or immediate supervisor. The relevant senior employer representative and/or immediate supervisor will take all reasonable steps to reply to the

employee(s) and/or Union representatives as soon as possible, and will at least provide a progress report before the close of ordinary business on the next working day.

10.3.2. Step 2

Failing agreement, employee(s) and/or Union representatives will place the claim, issue or dispute before the next higher officer in charge of the relevant zone or region or other relevant Senior Employer Representative. That officer will take all reasonable steps to reply to the employee(s) and/or Union representatives as soon as possible, and will at least provide a progress report before the close of ordinary business on the next working day.

10.3.3. Step 3

Failing agreement, employee(s) and/or Union representatives will place the claim, issue or dispute before the Executive Director People and Culture. The Executive Director People and Culture will take all reasonable steps to reply to the employee(s) and/or

Union representatives as soon as possible, and will at least provide a progress report before the close of ordinary business on the next working day.

10.3.4. Step 4

Failing agreement, employee(s) and/or Union representatives will place the claim, issue or dispute before the Commissioner. The claim, issue or dispute and all relevant circumstances relating to it will be fully reviewed by the Commissioner and the Union and all reasonable steps shall be taken in an attempt to resolve the matter.

10.3.5. Step 5

Failing agreement the claim, issue or dispute may be referred to the appropriate Industrial Tribunal and or Court where all powers of such Tribunal/Court can be exercised including any appeal rights in order to determine the dispute.

- 10.4. It is the intention of the parties that Steps 1-4 of the disputes process should take no longer than twenty-eight days allowing seven days total for each step to be completed. At any time during the disputes process the parties may agree to meet to discuss the dispute.

A3 - WAGES, ALLOWANCES AND REMUNERATION

11. Basic Wage

- 11.1. This Award, in so far as it fixes rates of wages, is made by reference and in relation to the adult basic wage currently in force under Clause 15 of Division 4 of Part 2 of Schedule 4, Savings, Transitional and other provisions, of the *Industrial Relations Act* 1996.

12. Rates of Pay

- 12.1. An employee shall be paid the rate of pay and Retainer prescribed for the employee's classification in Tables 1 and 2 of Schedule 1, Pay Rates & Allowances, of this Award.
- 12.2. Employees' rates of pay will increase annually by the following percentage increases:

26 February 2024	26 February 2025	26 February 2026
4.0%	4.0%	6.0%

12.3. Retainers

12.3.1. The Retainer is paid in recognition of and compensation for the attendances and periods of declared availability required of employees by Clause 22, Attendance and Availability Requirements, and include a loading in compensation for:

12.3.1.1. Annual leave loading.

12.3.1.2. The driving and operating of all vehicles operated by appropriately qualified employees as at 30 September 1999 and rescue and hazmat vehicles outside the GSA and the Newcastle, Lake Macquarie, Wollongong, Shellharbour, Central Coast and Blue Mountains Local Government Areas. The operation of any other vehicles shall be by agreement between the Union and the Department.

12.3.1.3. Rescue, Cordage, Hazmat & Unit Trainer capabilities and CBT qualifications required to be held under subclause 12.3.

12.3.2. Firefighter Retainers

Recruit Firefighter, Firefighter and CFR Firefighter	Retainer Level	Compulsory availability per week	Entitlement Code
	Standard Retainers (anytime, any day of the week)		
	Base	24 hours	A
	50%	48 hours	B
	75%	72 hours	C
	100%	96 hours	D
	Weekday Retainers (between 0600 hours and 1800 hours, Monday to Friday only)		
	50%	30 hours	B
	75%	40 hours	C
	100%	50 hours	D

12.3.3. Deputy Captain Retainers

Deputy Captain and CFR Deputy Captain	Retainer Level	Compulsory availability per week	Entitlement Code
	Standard Retainers (anytime, any day of the week)		
	Base	24 hours	E
	50%	48 hours	F
	75%	72 hours	G
	100%	96 hours	H
	Weekday Retainers (between 0600 hours and 1800 hours, Monday to Friday only)		
	50%	30 hours	F
	75%	40 hours	G
	100%	50 hours	H

12.3.4. Captain Retainers

Captain and CFR Captain	Retainer Level	Compulsory availability per week	Entitlement Code
	Standard Retainers (anytime, any day of the week)		
	Base	24 hours	I
	50%	48 hours	J
	75%	72 hours	K
	100%	96 hours	L
	Weekday Retainers (between 0600 hours and 1800 hours, Monday to Friday only)		

	50%	30 hours	J
	75%	40 hours	K
	100%	50 hours	L

12.4. Hourly Rates

Classification	1st Hour	Each subsequent half-hour or part thereof
Recruit Firefighter	M	N
Firefighter	O	P
CFR Firefighter	Q	R
Deputy Captain	S	T
CFR Deputy Captain	U	V
Captain	W	X
CFR Captain	Y	Z

12.5. All new employees shall commence employment in the classification of Recruit Firefighter and on the Base level of the Standard Retainer and shall not progress to a higher and/or Weekday Retainer other than in accordance with Clause 12.6 Higher Retainers.

12.6. Higher Retainers

12.6.1. Progression from one Standard Retainer to any higher Standard Retainer, or from one Standard Retainer to any Weekday Retainer, or from one Weekday Retainer to any higher Weekday Retainer shall be subject to the occurrence of a vacancy and shall be determined solely on the basis of merit selection. The number of higher and/or Weekday Retainers available at any brigade (if any) will remain solely at the Department's discretion and subject to expansion or reduction pursuant to Clause 12.6.2.

12.6.2. An employee who applies for and is subsequently appointed to a higher Standard Retainer and/or a Weekday Retainer may be transferred to a lower Retainer, either Standard or Weekday, without the employee's consent provided; firstly, that the Department provides the employee(s) concerned with at least one month's written notice of such transfer; and secondly, that such transfers are applied as equitably within the brigade as reasonably possible in the circumstances; and thirdly, that the employee's transfer is not a consequence of disciplinary action, in which case neither of the preceding requirements will apply and the transfer may be affected immediately.

12.6.3. An employee who applies for and is subsequently appointed to a higher Standard Retained and/or a Weekday Retainer, and who then performs higher duties for any period of time, or is permanently promoted to a position which attracts a higher rate of pay, shall have their Higher Retainer increased to correspond with the rank that they are temporarily or permanently occupying.

12.7. Community First Response Classification

12.7.1. Progression of employees to their corresponding CFR classification (Firefighter, Deputy Captain or Captain, whichever applies) shall be subject to:

12.7.1.1. attachment to a CFR Brigade; and

12.7.1.2. the satisfactory completion of the training and/or training competencies specified for CFR duties.

12.8. Employees appointed as Unit Trainers shall receive payment at the rates prescribed at Items W and X when delivering training at regular station drills or make-up drills, for the duration of the drill.

12.9. Calculation of Payment for Duties Performed

- 12.9.1. Employees shall be paid, subject to the provisions of Clauses 12.10 and 12.11, for the total period of time spent performing duties, which shall be calculated as follows:
- 12.9.1.1. Attendance at Scheduled Weekend Training courses - the period of attendance shall be equivalent to the scheduled training hours. For the avoidance of doubt, a 'training course' does not include a station drill or station program training exercise.
 - 12.9.1.2. Major Emergencies - Periods of attendance for the purpose of calculating payment shall be calculated having regard to the provisions of Clause 23, Attendance at Major Emergencies.
 - 12.9.1.3. Attendance at Zone Conferences - the period of attendance shall be equivalent to the scheduled hours of the conference.
 - 12.9.1.4. Royal Easter Show and ComSafe - periods of attendance for the purpose of calculating payment shall be calculated having regard to the provisions of Clauses 12.14 to 12.16.
 - 12.9.1.5. In all other instances - employees shall be paid for the period that elapses from the time the employee arrived at the employee's station, until the time such employee ceased duty at the employee's station.

12.10. Minimum periods of payment

- 12.10.1. Attendance at an incident, hazard reduction, and unit training - a minimum payment of 1.5 hours. All subsequent time thereafter shall be paid to the half hour.
 - 12.10.2. Regular drills (of which there shall be 2 per station, per month) - a minimum payment of 2 hours.
 - 12.10.3. All other authorised duties (excepting Travelling Time) - a minimum payment of 1 hour. All subsequent time to be paid to the minute.
 - 12.10.4. Travelling time - where an employee is entitled to travelling time in terms of this Award, all such time shall be paid to the minute.
 - 12.10.5. Relief Duties - where an employee performs relief duties in accordance with Clause 21 Relief Duties and Overtime, for 3 hours or less, such employee shall receive a minimum payment of 3 hours for each such relief. All subsequent time thereafter shall be paid to the minute.
 - 12.10.6. Attendance at scheduled weekend training courses and zone conferences - a minimum payment of 8 hours per day spent in attendance.
 - 12.10.7. Royal Easter Show and ComSafe - where an employee performs duties in accordance with Clause 12.14 and Clause 12.15 for 3 hours or less, such employee shall receive a minimum payment of 3 hours. All subsequent time shall be paid to the minute.
 - 12.10.8. Except in the case of regular drills and authorised duties, where the purpose for which an employee was required to report for duty is completed, the employee shall be released.
- 12.11. An employee who attends either the station or the incident within 30 minutes of notification shall for each such attendance be entitled to payment pursuant to subclause 12.10.1 unless the employee was already performing duty at the time of the notification (for example, the employee had returned from a previous incident but had not signed off in the occurrence book prior to notification of the subsequent incident).

12.12. If the non-availability of retained firefighting staff at any brigade requires the Department to maintain minimum staffing with a FRNSW firefighter not belonging to that station, then only those employees who had declared their availability shall be eligible for payment for attendance until such time as the minimum staffing by that brigade's employees is restored and the firefighter performing relief duties has been released, whereupon the ordinary payment of employees attached to the brigade shall resume.

12.12.1. Despite Subclause 12.12, employees are entitled to be paid in accordance with this Award if they are directed to perform duties during the period referred to in Subclause 12.12.

12.13. Authorised Duties

12.13.1. Where an employee is required to attend meetings or to perform other authorised duties, payment shall be made at the appropriate rate of pay for the employee's classification pursuant to subclause 12.4. Such authorised duties include, but are not limited to, those duties that are set out in Schedule 2 - Authorised Duties.

12.13.2. Employees seeking to attend meetings and/or perform duties in accordance with subclause 12.13.1 which are not referred to in Schedule 2 must receive authorisation from the relevant Captain, Inspector or higher-ranking officer prior to the performance of such duties.

12.13.3. Each station is allocated, at minimum:

12.13.3.1. 26 hours per month of station-based duties; and

12.13.3.2. 1.5 hours per week, per vehicle of Engine Keeper duties; and

12.13.3.3. 2 hours per week, per vehicle of Station Inventory Management System (SIMS) duties; and

12.13.3.4. 16 hours per annum of attendance at station open days and local shows; and

12.13.3.5. in the case of any and all other authorised duties, an additional:

12.13.3.5.1. 14 hours per month if attending 100 incidents or less per year. 12.13.3.5.2. 19 hours per month if attending more than 100 but less than 200 incidents per year.

12.13.3.5.3. 24 hours per month if attending 200 or more incidents per year.

12.14. Attendance at the Royal Easter Show

12.14.1. The following hourly rates shall be paid to employees working at the Royal Easter Show:

12.14.1.1. For Recruit Firefighter and Firefighter, the rate prescribed at Entitlement Code "RASf" of Table 2 of Schedule 1 of this Award.

12.14.1.2. For Deputy Captain, the rate prescribed at Entitlement Code "RASDC" of Table 2 of Schedule 1 of this Award.

12.14.1.3. For Captain, rate prescribed at Entitlement Code "RASC" of Table 2 of Schedule 1 of this Award.

12.15. Performance of ComSafe duties

12.15.1. Employees who perform ComSafe duties shall be paid the hourly rate prescribed at Entitlement Code "COMS" of Table 2 of Schedule 1 of this Award.

12.16. ComSafe and Royal Easter Show - General Provisions

- 12.16.1. The rates prescribed in subclauses 12.14 and 12.15 are all incidence of employment rates and, notwithstanding anything else prescribed in this Award, employees receiving such rates shall:
- 12.16.1.1. only be entitled to be paid for the hours actually worked, subject to continuous payment for work performed on any calendar day. Provided that, if an employee cannot attend for duty at the Royal Easter Show (only) due to illness or incapacity and provides a medical certificate pursuant to Clause 33, Sick Leave, then the employee shall be entitled to be paid for the hours that would have otherwise been worked;
 - 12.16.1.2. not be entitled to any payment or compensation for travelling time or travelling costs in connection with the work performed;
 - 12.16.1.3. not be entitled to any payment or compensation with respect to either meals (except as provided for by Clause 12.16.3) and/or accommodation (except as provided for by Clause 12.16.1.6) in connection with the work performed;
 - 12.16.1.4. not be entitled to the payment of overtime in connection with the work performed;
 - 12.16.1.5. not be entitled to payment of downtime in connection with attendance at the Royal Easter Show;
 - 12.16.1.6. be paid the accommodation allowance set at Schedule 1, Table 4, for each day that the distance travelled between the employee's residence and the furthest location where the ComSafe work is performed exceeds 100 kms and the employee resides away from home (evidence of which may be required prior to payment).
- 12.16.2. All payments made for ComSafe of Royal Easter Show shall count for the purpose of any paid leave.
- 12.16.3. In the event that the employees attend an incident while working at the Royal Easter Show such employees shall be entitled to the provisions of Clause 16, Meals and Refreshments.
- 12.16.4. Attendance at the Royal Easter Show and/or the performance of ComSafe duties shall be treated as a period of authorised absence for the purposes of Clause 22, Attendance and Availability Requirements.
- 12.16.5. It is expressly provided that attendance at the Royal Easter Show and/or the performance of ComSafe duties are not performed as Authorised Duties.
- 12.17. The parties agree to establish a Joint Working Party pursuant to the provisions of Clause 8, Consultation, of this Award. This working party will consider the remuneration of retained firefighters and the effect this has on attendance.

13. Allowance and Reimbursements**13.1. RTAAS Allowance**

- 13.1.1. The Retained Telephone Alerting and Availability System Allowance prescribed at Entitlement Code "RTAAS" of Schedule 1, Table 3, of this Award shall be paid to employees who provide the Department with a valid telephone number in compensation for the maintenance of that primary contact number and the use of an agreed software application to declare their compulsory availability and, if they elect, any additional availability that they may wish to declare, and to monitor their brigade's availability on both a projected and real-time basis.

13.2. Remotely Piloted Aircraft System (RPAS) Allowance

- 13.2.1. The Remotely Piloted Aircraft Systems Allowance set at Item 5 of Table 3 of Schedule 1 is for Retained Firefighters who have obtained and maintained a qualification in Remotely Piloted Aircraft Systems and are approved by the Commissioner to use it.

13.3. General Land Rescue Allowance

- 13.3.1. The General Land Rescue Allowance is set at Item 1 of Table 3A for a Retained Firefighter at the 100% retainer level and is to be calculated on a pro rata basis based on the percentage retainer level worked (e.g. a Retained Firefighter at the base 25% retainer level will be entitled to 25% of the General Land Rescue Allowance).
- 13.3.2. The General Land Rescue Allowance is payable to a Retained Firefighter who is recognised as a General Land Rescue qualified rescue operator and is attached to an accredited General Land Rescue unit as determined by the State Rescue Board and has obtained that qualification at the request of the Commissioner;

13.4. Additional Rescue Capabilities

- 13.4.1. A Retained Firefighter who is entitled to the General Land Rescue Allowance pursuant to clause 13.3 will be entitled to be paid a 25 per cent loading if they satisfy just one (1) of the following criteria:
- (a) they are directed by FRNSW to hold and maintain a qualification for In Water Flood Rescue and are attached to a station that is accredited by the State Rescue Board for In Water Flood Rescue;
 - (b) they are directed by FRNSW to hold and maintain a qualification for Trench Rescue and are attached to a Technical Rescue Station with a Technical Rescue Vehicle;
 - (c) they are directed by FRNSW to hold and maintain a qualification for Partial Structural Collapse and are attached to a Technical Rescue Station with a Technical Rescue Vehicle; or
 - (d) they are directed by FRNSW to hold and maintain a qualification for Large Animal Rescue and are attached to a Technical Rescue Station with a Technical Rescue Vehicle.

This loading is set out in Item 2 of Table 3A as it would apply to a Retained Firefighter at the 100% retainer level and is to be calculated on a pro rata basis based on the percentage of the retainer level worked (e.g. a Retained Firefighter at the base 25% retainer level will be entitled to 25% of the loading at Item 2).

- 13.4.2. A Retained Firefighter who is entitled to the General Land Rescue Allowance pursuant to subclause 13.3 and that satisfies two (2) or more of the criteria listed in subclauses 13.4.1 (a, b, c, d) above will be paid a 50 per cent loading on the base General Land Rescue Allowance. This loading is set out in Item 3 of Table 3A for a Retained Firefighter at the 100% retainer level and is to be calculated on a pro rata basis based on the percentage of the retainer level worked (e.g. a Retained Firefighter at the base 25% retainer level will be entitled to 25% of the loading at Item 3).
- 13.4.3. Where a Retained Firefighter is entitled to the General Land Rescue Allowance pursuant to subclause 13.3, that employee will be paid a maximum 50 per cent loading upon the base General Land Rescue Allowance if they satisfy one or both of the following for the criteria:
- (a) they are directed by FRNSW to hold and maintain a qualification for Vertical Rescue and are attached to a station that is accredited by the State Rescue Board for Vertical Rescue;

- (b) they are directed by FRNSW to hold and maintain a qualification for Urban Search and Rescue (category 2).

This loading is set out in Item 4 Table 3A for a Retained Firefighter at the 100% retainer level and is to be calculated on a pro rata basis based on the percentage of the retainer level worked (e.g. a Retained Firefighter at the base 25% retainer level will be entitled to 25% of the loading set at Item 4).

13.4.4. Nothing in this subclause 13.4 should be taken to:

- (a) extend the entitlement of the rescue allowances payable under clauses 13.3 and 13.4 beyond those Retained Firefighters who have obtained and maintained the rescue accreditation at the direction of the Commissioner and are attached to a station that is accredited to perform that work; or
- (b) be any commitment by the Commissioner or FRNSW to:
- (i) seek the accreditation of additional stations with the State Rescue Board;
- (ii) provide Retained Firefighters with the opportunity to be attached to any particular station that is accredited by the State Rescue Board to perform particular forms of rescue or that has access to Technical Rescue Vehicles or any other form of rescue appliance; or
- (iii) direct any number (if any) of Retained Firefighters to obtain, hold or maintain any form of rescue qualifications.

14. Relativities

14.1. Pay increases will be determined by calculating as follows:

14.1.1. Retainers - rounded to the nearest cent

100% retainer	100% increase
75% retainer	75% of the 100% retainer
50% retainer	50% of the 100% retainer
Base retainer Firefighter	25% of 100% retainer
Base retainer Deputy Captain, Captain	37.5% of 100% retainer

14.1.2. Regular pay rates - all rounded to the nearest cent. Increase by the percentage increase listed in Clause 12.2.

Recruit Firefighter	80%
Firefighter	90%
CFR Firefighter	107% of Firefighter rate
Deputy Captain	100%
CFR Deputy Captain	107% of Deputy Captain rate
Captain	112%
CFR Captain	107% of Captain rate

14.1.3. Half hour rates - divide each rate in Clause 14.1.2 by two, then round to the nearest cent

14.1.4. The Rates of Pay for Entitlement Codes RASF, RASDC and RASC at Table 2 of Schedule 1 shall in future be adjusted:

- 14.1.4.1. Firstly, by calculating the increase for the Firefighter rate at Entitlement Code RASF to the nearest cent, and

- 14.1.4.2. Secondly, by then subtracting the new Firefighter rate at Entitlement Code O from the new Royal Easter Show firefighter rate at Entitlement Code RASF, and
 - 14.1.4.3. Thirdly, by then adding the amount produced at subclause 14.1.4.2 to the new Deputy Captain rate at Entitlement Code S and to the new Captain Rate at Entitlement Code W to arrive at the new Royal Easter Show rates for the Deputy Captain and Captain classifications at Entitlement Codes RASDC and RASC respectively.
- 14.2. The amounts set at Items 1 to 3 in Schedule 1, Table 4, shall be adjusted on 1 July each year in line with the corresponding reasonable allowance amounts for the appropriate financial year as published by the Australian Taxation Office (ATO).

15. Payment of Wages and Allowances

- 15.1. Employees shall be paid fortnightly, and payment shall be made into a bank account specified by the employee, or other financial institutions acceptable to the Department and the Union.
- 15.2. Employees shall be paid within 2 pay periods of the date of any work performed under this Award.
- 15.3. In the event of the death of an employee, all monies due to the employee pursuant to the provisions of this Award shall be paid to the employee's estate.
- 15.4. Payroll Deductions
- 15.4.1. Except as provided for in subclause 15.4.2, all salary deductions shall be made in accordance with the Treasury Guidelines.
 - 15.4.2. Upon application by an employee, the Department shall make deductions from the employee's pay for Union subscriptions and shall forward the amount so deducted to the Union as soon as possible thereafter.
- 15.5. Overpayments
- 15.5.1. In cases where an employee has been overpaid, the Department shall be entitled to recover such overpayment in full. Unless the employee agrees otherwise, the maximum rate at which the overpayment can be recovered is an amount, calculated on a per fortnight basis, equivalent to 10% of the employee's gross fortnightly pay.
 - 15.5.2. In all cases where overpayments have occurred, the Department shall as soon as possible advise the employee concerned of both the circumstances surrounding the overpayment and the amount involved. The Department will also advise the employee of the pay period from which the recovery of the overpayment is to commence.
 - 15.5.3. The recovery rate of 10% of an employee's gross fortnightly pay referred to in subclause 15.5.1 may be reduced by approval of the Commissioner if the Commissioner is satisfied that such a rate of recovery would cause undue hardship to the employee concerned.
 - 15.5.4. Where an employee's remaining period of service does not permit the full recovery of any overpayment to be achieved on the fortnightly basis prescribed in subclause 15.5.1, the Department shall have the right to deduct any balance of such overpayment from monies owing to the employee on the employee's date of termination, resignation or retirement, as the case may be.

16. Meals and Refreshments

- 16.1.
- 16.1.1. For the purposes of this clause, an "incident" also includes hazard reduction.

- 16.1.2. Where an employee attends an incident which extends for 2 hours or more Refreshments shall be provided no later than 2 hours after the start of the incident. A refreshment allowance will not be payable if there are in-date refreshment packs located on the appliance to which the employee is attached.
- 16.1.3. Where such an incident extends for four hours or more, the employee shall be provided with a Substantial Meal. After every subsequent four hours of attendance at such an incident, a further Substantial Meal shall be provided.
- 16.2. Payment in Lieu of the Provision of Refreshments/Meals
 - 16.2.1. Where Refreshments are not provided in terms of subclause 16.1.2, the Refreshment Allowance set at Entitlement Code "RA" of Schedule 1, Table 3, shall be paid.
 - 16.2.2. Where an Emergency Meal is supplied in lieu of a Substantial Meal, the Refreshment Allowance set at Entitlement Code "RA" of Schedule 1, Table 3, shall be paid.
 - 16.2.3. Where a Substantial Meal or Emergency Meal is not provided in terms of subclause 16.1.3, the Meal Allowance set at Entitlement Code "MA" of Schedule 1, Table 3, shall be paid.
- 16.3. Calculation of Future Adjustments to Refreshments/Meal Allowances
 - 16.3.1. The allowances referred to in this clause shall be calculated as follows:
 - 16.3.1.1. The Meal Allowance at Entitlement Code "MA" of Schedule 1, Table 3, is the average, rounded to the nearest five cents of the amounts prescribed for the overtime meal allowances for breakfast, lunch and dinner at Item 19 of Table 1 Part B of the Crown Employees (Public Service Conditions of Employment) Award 2002 as subsequently adjusted pursuant to subclause 16.3.1.3.
 - 16.3.1.2. The Refreshment Allowance at Entitlement Code "RA" of Schedule 1, Table 3, is half, rounded to the nearest five cents of the amount at Entitlement Code "MA" of Schedule 1, Table 3.
 - 16.3.1.3. The amounts specified in subclauses 16.3.1.1 and 16.3.1.2 shall be adjusted on 1 July each year in line with the corresponding reasonable allowance amount for overtime meals for the appropriate financial year as published by the Australian Taxation Office (ATO).

17. Transport

- 17.1. Attendance at an incident
 - 17.1.1. Where it is necessary for an employee to use the employee's private vehicle to attend an incident, the employee shall be paid at the rate prescribed at Entitlement Code "KM" of Schedule 1, Table 3, per kilometre, as follows:
 - 17.1.1.1. The return distance from the employee's residence to the station or the distance actually travelled on the forward and return journeys to the station, whichever is the lesser, provided that payment shall be limited in all instances to a return distance of 14 kilometres; and
 - 17.1.1.2. The return distance from the station to the incident if it is necessary for the employee to use the employee's private vehicle to travel from the station to the incident.
 - 17.1.1.3. For the avoidance of doubt, an employee's private vehicle includes a car, motorcycle, bicycle, or any other moving transportation device with wheels.

17.2. Attendance at Authorised Meetings and Other Duties

- 17.2.1. Where an employee is required to use the employee's private vehicle to attend such meetings or to perform such other authorised duties as prescribed in subclause 12.13, the employee shall be paid the rate prescribed at Entitlement Code "KM" of Schedule 1, Table 3, of this Award per kilometre for the actual distance necessarily and reasonably travelled for that purpose.
- 17.2.1.1. Provided that where an employee is authorised to, and does, use their own private vehicle and the principal purpose of the journey is, or is as a consequence of, the transportation of the Department's equipment and/or appliances from one location to another, then such employee shall be paid the appropriate rate per hour prescribed for the employee's classification in addition to the rate per kilometre prescribed at Entitlement Code "KM" of Schedule 1, Table 3. Provided further that, for the purposes of this subclause:
- 17.2.1.1.1. An employee's turnout gear shall not be regarded as equipment.
- 17.2.1.1.2. The hourly rate shall be paid on a basis similar to travelling time. That is, no minimum period of payment and all time to be paid to the minute.
- 17.2.1.1.3. Where the reason for the journey is to attend an incident, the normal provisions of this Award shall apply in lieu of the provisions of this subclause.
- 17.2.2. The provisions of this clause shall not apply where transport is provided by the Department.
- 17.2.3. Employees who are required to attend such meetings or perform such authorised duties, but do not use their private vehicle and are therefore not entitled to claim the rate prescribed at Entitlement Code "KM" of Schedule 1, Table 3, shall be entitled to claim travelling time and/or travelling expenses in accordance with Clause 18, Travelling Compensation.

18. Travelling Compensation

- 18.1. Travelling Time - When an employee is required to travel for purposes other than attending regular drills or incidents, the employee may apply for payment, at the rate applicable to the employees' classification, for time spent travelling subject to the following:
- 18.1.1. Where the employee has travelled overnight but has been provided with sleeping facilities, the travelling time shall not include travel between 2300 hours on one day and 0730 hours on the next day.
- 18.1.2. Travelling time does not include time spent taking a meal when the employee stops a journey to take the meal.
- 18.1.3. Travelling time shall be calculated by reference to the use of the most practical and economic means of transport.
- 18.1.4. Payment will not be made or allowed for more than 8 hours in any period of twenty- four hours.
- 18.1.5. Where an employee is in receipt of the kilometre allowance prescribed at Entitlement Code "KM" of Schedule 1, Table 3, such employee shall not be entitled to claim compensation for travelling time.
- 18.2. Meal Allowances - When an employee is required to perform official duty at a temporary work location other than attendance at incidents or regular drills, and is not required to reside away from home (a one

day journey), the employee shall be eligible to be paid the following meal allowances, subject to the following conditions:

- 18.2.1. For breakfast when required to commence travel at/or before 0600 hours, the amount set at Item 1 of Schedule 1, Table 4
 - 18.2.2. For lunch when, by reason of the journey, an employee is unable to take lunch at the place or in the manner in which the employee ordinarily takes lunch and is put to additional expense, the amount set at Item 1 of Schedule 1, Table 4, or an amount equivalent to the additional expense, whichever is the lesser.
 - 18.2.3. For an evening meal when required to work or travel until or beyond 1830 hours, an amount set at Item 1 of Schedule 1, Table 4.
 - 18.2.4. Meal Allowances shall not be paid if the employee is provided with an adequate meal.
- 18.3. Accommodation Allowances - When an employee is required to perform official duty at a temporary work location, other than attendance at incidents or regular drills, which requires the employee to reside away from home and the employee is not provided with accommodation by the Government, the employee shall be eligible to be paid the following accommodation (sustenance) allowances subject to the conditions set out below:
- 18.3.1. For the first 35 calendar days, the appropriate amounts set at Item 2 of Schedule 1, Table 4.
 - 18.3.2. The actual necessary expenses for meals and accommodation (actuals), together with incidental expenses as appropriate, set at Item 2 of Schedule 1, Table 4. The necessary expenses do not include morning and afternoon tea.
 - 18.3.3. After the first 35 calendar days and for up to six months an employee shall be paid an allowance at the rate set at Item 2 of Schedule 1, Table 4 provided the allowance paid to an employee temporarily located in Broken Hill shall be increased by 20%. The allowance is subject to:
 - 18.3.3.1. Any period during which the employee returns home on weekends or public holidays, commencing with the time of arrival at the residence and ending at the time of departure from the residence shall not be payable;
 - 18.3.3.2. Any other period during which the employee is absent from the temporary work location (including leave) otherwise than on official duty, unless approved by the Commissioner shall not be payable;
 - 18.3.3.3. The capital city rate shall apply to Sydney as bounded by the GSA.
 - 18.3.3.4. Where an employee proceeds directly to a temporary work location in a Capital city and returns direct, the Capital city rate applies to the whole absence.
 - 18.3.3.5. Where an employee breaks the journey, other than for a meal, in a centre that is not a Capital city, the Capital city rate applies only in respect of the time spent in the Capital city, the elsewhere rate applies to the remainder of the absence.
- 18.4. Incidental Expenses Allowances - Government Provided Accommodation - When an employee is required to perform official duty at a temporary work location which requires that the employee reside away from home and is provided with accommodation by the Government, the employee shall be eligible to be reimbursed expenses properly and reasonably incurred during the time actually spent away from the employee's residence in order to perform that duty and in addition be paid an allowance at the rate set at Item 3 of Schedule 1, Table 4 as appropriate. Such expenses are limited to costs in relation to food, laundry and accommodation that exceed what would normally have been incurred at home. Any meal taken at a Government establishment is to be paid for and appropriate reimbursement sought.

18.5. Additional Provisions

- 18.5.1. Unless specifically provided for in Clause 44, Training Course Attendance Entitlements or Clause 46, Court Attendance Entitlements, the provisions of this clause shall not apply in the circumstances provided for by those clauses.
- 18.5.2. When an employee is required to travel to a temporary work location or to attend a training course or conference on what would normally be regarded as a 1-day journey and the total time of absence will exceed 13 hours, the employee may be directed or may request that the employee reside temporarily at a place other than the employee's residence. In such cases, employees shall be entitled to the accommodation allowances or reimbursement of expenses, as appropriate.
- 18.5.3. The claim for an accommodation allowance or reimbursement of expenses shall be for the whole of the period of absence and cannot be dissected into part of the time of the absence by way of allowance and part of the absence being compensated by reimbursement.
- 18.5.4. When an employee in receipt of an accommodation allowance is granted leave to return home from a temporary work location, the employee shall be reimbursed for the cost of the return rail fare or, if a first-class rail service is reasonably available, the cost of a first class return rail fare. No taxi fares or other incidental expenses are payable.
- 18.5.5. Employees shall be entitled, subject to Departmental approval, to use either their private vehicle or public transport on the following basis:
- 18.5.5.1. Reimbursement is not to be paid for a journey if an official motor vehicle is used for the journey.
- 18.5.5.2. Where employees are granted approval to use their private vehicles, such employees shall receive the kilometre rate, set at Entitlement Code "KM" of Schedule 1, Table 3 for the actual distance necessarily and reasonably travelled. Employees in receipt of the rate set at Entitlement Code "KM" of Schedule 1, Table 3, shall not be entitled to the provisions of subclause 18.1, Travelling Time.
- 18.5.5.3. Employees who are required to utilise public transport shall be reimbursed the necessary costs incurred.
- 18.5.5.4. The Commissioner is to consider the convenience of the employee when an employee is required to travel to a temporary work location.
- 18.5.5.5. Unless special circumstances exist, the employee's work, the mode of transport used and the employee's travel itineraries are to be organised and approved in advance so that compensation for travel time and payment of allowances is reasonably minimised.
- 18.5.6. Where a meal allowance or an accommodation allowance is insufficient to adequately reimburse the employee for expenses properly and reasonably incurred, a further amount may be paid so as to reimburse the employee for the additional expenses incurred, subject to the following:
- 18.5.6.1. The Commissioner may require the production of receipts or other proof that expenditure was incurred.
- 18.5.6.2. If any expense in respect of which an allowance is payable was not properly and reasonably incurred by the employee in the performance of official duties, payment of the allowance may be refused, or the amount of the allowance may be reduced.
- 18.5.6.3. If any purported expense was not incurred by the employee, payment of the allowance may be refused, or the amount of the allowance may be reduced.

- 18.6. Claims - Claims should be submitted promptly by employees.
- 18.6.1. The Commissioner may approve applications for advance payments of travelling and sustenance allowances. Such applications should detail the appropriate expenditure anticipated and be in accordance with In Orders 1982/34.
- 18.6.2. In assessing claims for travelling time and payment of allowances, reference should be made to the time that might reasonably have been taken by the particular mode of transport used. Provided that where an employee can demonstrate that the use of the means of transport proposed by the Department is unreasonable in the circumstances, the employee may apply to the Commissioner for a review of the Department's decision. Where an employee does not wish to use the means of transport proposed by the Department, e.g. air travel as against train or car travel, travelling time and allowances should be assessed on the basis that the most practical and economical means of transport is used.
- 18.6.3. Where an allowance is payable at a daily rate and a claim is made for a portion of the day, the amount to be paid is to be calculated to the nearest half hour.
- 18.7. The amounts set at Items 1 to 3 in Table 4 of Schedule 1, shall be adjusted on 1 July in line with the corresponding reasonable allowance amounts for the appropriate financial year as published by the Australian Taxation Office (ATO).

19. Salary Packaging Arrangements, Including Salary Sacrifice to Superannuation

- 19.1. The entitlement to salary package in accordance with this clause is available to permanent full- time employees.
- 19.2. For the purposes of this clause:
- 19.2.1. "Salary" means the salary or rate of pay prescribed for the employee's classification by Clause 12, Rates of Pay, and Clause 13, Allowances and Reimbursements, of this Award, and any other payment that can be salary packaged in accordance with Australian taxation law.
- 19.2.2. "Post compulsory deduction salary" means the amount of salary available to be packaged after payroll deductions required by legislation or order have been taken into account. Such payroll deductions may include, but are not limited to, taxes, compulsory superannuation payments, HECS payments, child support payments, and judgement debtor/garnishee orders.
- 19.3. By mutual agreement with the Commissioner, an employee may elect to package a part or all of their post compulsory deduction salary in order to obtain:
- 19.3.1. a benefit or benefits selected from those approved by the Industrial Relations Secretary; and
- 19.3.2. an amount equal to the difference between the employee's salary, and the amount specified by the Industrial Relations Secretary for the benefit provided to or in respect of the employee in accordance with such agreement.
- 19.4. An election to salary package must be made prior to the commencement of the period of service to which the earnings relate.
- 19.5. The agreement shall be known as a Salary Packaging Agreement.
- 19.6. Except in accordance with subclause 19.7, a Salary Packaging Agreement shall be recorded in writing and shall be for a period of time as mutually agreed between the employee and the Commissioner at the time of signing the Salary Packaging Agreement.

- 19.7. Where an employee makes an election to sacrifice a part or all of their post compulsory deduction salary as additional employer superannuation contributions, the employee may elect to have the amount sacrificed:
- 19.7.1. paid into the superannuation fund established under the *Aware Super Act* 1992; or
 - 19.7.2. where the Department is making compulsory employer superannuation contributions to another complying superannuation fund, paid into the same complying fund; or
 - 19.7.3. subject to the Department's agreement, paid into another complying superannuation fund.
- 19.8. Where the employee makes an election to salary sacrifice, the Department shall pay the amount of post compulsory deduction salary, the subject of election, to the relevant superannuation fund.
- 19.9. Where the employee makes an election to salary package and where the employee is a member of a superannuation scheme established under the:
- 19.9.1. *Police Regulation (Superannuation) Act* 1906;
 - 19.9.2. *Superannuation Act* 1916;
 - 19.9.3. *State Authorities Superannuation Act* 1987; or
 - 19.9.4. *State Authorities Non-contributory Superannuation Act* 1987, the Department must ensure that the employee's superable salary for the purposes of the above Acts, as notified to the SAS Trustee Corporation, is calculated as if the Salary Packaging Agreement had not been entered into.
- 19.10. Where the employee makes an election to salary package, and where the employee is a member of a superannuation fund other than a fund established under legislation listed in subclause 19.9 of this clause, the Department must continue to base contributions to that fund on the salary payable as if the Salary Packaging Agreement had not been entered into. This clause applies even though the superannuation contributions made by the Department may be in excess of superannuation guarantee requirements after the salary packaging is implemented.
- 19.11. Where the employee makes an election to salary package:
- 19.11.1. subject to Australian Taxation law, the amount of salary packaged will reduce the salary subject to appropriate PAYG taxation deductions by the amount packaged; and
 - 19.11.2. any allowance, penalty rate, payment for unused leave entitlements, weekly worker's compensation or other payment, other than any payments for leave taken in service, to which an employee is entitled under this Award or any applicable Award, Act or statute which is expressed to be determined by reference to the employee's rate of pay, shall be calculated by reference to the rate of pay which would have applied to the employee under Clause 12, Rates of Pay, and Clause 13, Allowances and Reimbursements, of this Award if the Salary Packaging Agreement had not been entered into.
- 19.12. The Industrial Relations Secretary may vary the range and type of benefits available from time to time following discussion with the Union. Such variations shall apply to any existing or future Salary Packaging Agreement from date of such variation.
- 19.13. The Industrial Relations Secretary will determine from time to time the value of the benefits provided following discussion with the Union. Such variations shall apply to any existing or future Salary Packaging Agreement from the date of such variation. In this circumstance, the employee may elect to terminate the Salary Packaging Agreement.

A4 - STAFFING, SYSTEM CONDITIONS AND ROSTERS**20. Higher Duties****20.1. Higher Duties as Deputy Captain**

- 20.1.1. Any employee may act into the role of Deputy Captain in the following circumstances:
 - 20.1.1.1. The employee should be fully trained and competent to drive all primary Retained appliances (non SEV appliances) at the station at which they are performing higher duties.
- 20.1.2. A merit-based selection process will not be utilised for higher duties lasting less than two months.
 - 20.1.2.1. The Department will have regard to equity, career progression and the educational opportunities that come with higher duties, to ensure that such an opportunity is fairly rotated amongst interested and suitably qualified staff.
- 20.1.3. A merit-based selection process must be utilised if the higher duties will last more than two months, through the calling of expressions of interest and a suitably qualified and constituted selection panel determining the successful applicant.
- 20.1.4. If no staff at the Brigade meet the qualification requirements at 20.1.1, the Parties may agree to dispense with those requirements.

20.2. Higher Duties as Captain

- 20.2.1. Any employee may act into the role of Captain in the following circumstances:
 - 20.2.1.1. The employee should be fully trained and competent to drive all primary Retained appliances (non SEV appliances) at the station at which they are performing higher duties.
 - 20.2.2. The Department must offer the opportunity to act up as Captain to any Deputy Captain attached to the station.
 - 20.2.3. A regular Firefighter may only be offered the opportunity to act up as Captain should no Deputy Captain agree to act up.
 - 20.2.4. A merit-based selection process will not be utilised for higher duties lasting less than two months.
 - 20.2.4.1. The Department will have regard to equity, career progression and the educational opportunities that come with higher duties, to ensure that such an opportunity is fairly rotated amongst interested and suitably qualified staff.
 - 20.2.5. A merit-based selection process must be utilised if the higher duties will last more than two months, through the calling of expressions of interest and a suitably qualified and constituted selection panel determining the successful applicant.
 - 20.2.6. If no staff at the Brigade meet the qualification requirements at 20.2.1, the Parties may agree to dispense with those requirements.
- 20.3. An employee performing Higher Duties shall be paid for the period of relief, the difference between the employee's usual hourly rates of pay and the hourly rates of pay for the classification in which the Higher Duties are performed. Provided that:

- 20.3.1. The difference between the employee's Retainer payment and the Retainer payment for the classification in which the Higher Duties are performed shall not be paid unless the Higher Duties are performed for a continuous period of one day (24 hours) or more.

20.4. Attendance at an Incident

- 20.4.1. Any Higher Duties entitlement in terms of this clause, which was actually being paid, or which should have been paid, during a period immediately prior to an incident, shall not be diminished as a consequence of the incident.
- 20.4.2. Except as provided for in 20.4.1, the only other circumstances under which a Higher Duties payment is to be made during an incident is in a case where neither the Captain nor the Deputy Captain of that Brigade attends the incident. In such cases, only 1 employee shall be entitled to a Higher Duties payment at the Deputy Captain hourly rate of pay and that employee shall be the employee who was in charge of the Brigade for the majority of the time. To avoid doubt, in the case of attendance by multiple Retained Brigades, a Higher Duties payment shall be made to the relevant employee from each Brigade whose Captain and Deputy Captains(s) do not attend the incident.
- 20.4.2.1. For the avoidance of doubt, the payment at 20.4.2 shall be paid even if a Captain or Deputy Captain "attends at station" and does not attend the incident.
- 20.4.3. For the purposes of 20.4.2, the term "Captain" and "Deputy Captain" shall also mean "Acting Captain" and "Acting Deputy Captain" in cases where an employee was, during the period immediately prior to the incident, the Acting Captain or Acting Deputy Captain in the terms of this clause.

21. Relief Duties and Overtime

21.1. Relief Duties

- 21.1.1. Where an employee is required to maintain minimum staffing due to the non-availability of retained or permanent firefighting staff at another station, or permanent firefighting staff at the employee's own station, such employee shall be paid the amount prescribed at Entitlement Code "RD3" of Schedule 1, Table 2 for the first three hours, or part thereof, and at the rate prescribed at Entitlement Code "RDH" of Schedule 1, Table 2 for any period thereafter which elapses from the time the employee is required to begin work at the relief station, until the time such employee completes work at the relief station.
- 21.1.1.1. Employees who perform relief duties in accordance with this subclause shall not attract additional payment under this Clause for attendance at incidents or performing authorised duties or drills during the period of the relief.
- 21.1.1.2. Employees who relieve at a station other than their own shall be paid the appropriate rate per hour prescribed for the employee's classification for the duration of the forward and return journeys between the employee's station and the location of the relief. All such time shall be paid to the minute.
- 21.1.1.3. Where it is necessary for an employee to use the employee's private vehicle to perform relief duties, such employee shall be paid the rate per kilometre prescribed at Entitlement Code "KM" of Schedule 1, Table 3 for the forward and return journeys between their residence and their station, and the forward and return journeys between their station and the location of the relief.
- 21.1.1.4. For the avoidance of doubt, for relief duties, both payments at 21.1.1.2 and 21.1.1.3 are payable simultaneously.

21.2. Overtime

- 21.2.1. Where an employee works in excess of 10 consecutive hours, such employee shall be paid at overtime rates for the hours worked in excess of 10. Provided that the provisions of this subclause shall not apply to employees receiving payment under either Clause 23, Attendance at Major Emergencies, Clause 21, Relief Duties and Overtime, or Clause 12.14, Attendance at the Royal Easter Show.
- 21.2.2. Overtime shall be paid for at the rate of time and one half for the first 2 hours and at the rate of double time thereafter, for the rate(s) prescribed for the employee's classification, provided that all overtime shall be paid to the half hour in accordance with Clause 12.10.1.
- 21.2.3. Employees who work on Easter Sunday or on any additional public holiday that is Gazetted or otherwise confirmed by the NSW Government shall be paid at overtime rates for all hours worked on each such day. For the purposes of this subclause, additional public holidays shall not include local public holidays.

22. Attendance and Availability Requirements

22.1. The following attendance guidelines shall apply to employees covered by this Award:

22.1.1. Attendance at Incidents

- 22.1.1.1. Employees are required to attend a minimum of 33% of all calls received by the employee's brigade in any six month period.
 - 22.1.1.1.1. Employees working at a station which has in excess of 700 calls in the prior calendar year will have their attendance percentage set to 20% for the following year.
- 22.1.1.2. Employees are also required to attend a minimum of 80% of all calls received by the employee's brigade during periods of compulsory availability in any four-week period.

22.1.2. Attendance at Drills

- 22.1.2.1. Employees are required to attend a minimum of 75% of all regular drills conducted at their brigade in any six month period, provided that make-up drills as outlined in 22.1.3 will count for the attendance requirement for any regular drill which is missed by an employee, even if the make-up drill is conducted outside of the reporting period for the attendance monitoring.

22.1.3. Make-up drills

- 22.1.3.1. A make-up drill is a drill conducted by one or more employees who have been unable to attend the regular station drill for any reason.
- 22.1.3.2. Make-up drills must be constructive and reflect the learning content of the regular drill that it is replacing. Firefighters should make every effort to attend their regular drill with their crew to facilitate teamwork and group learning.
- 22.1.3.3. A make-up drill must be prearranged with a Retained Officer attached to that station, in writing, unless otherwise authorised by a Retained Officer, who must not unreasonably refuse any request for a make-up drill to be conducted. Any refusal must have a reason provided in writing to the Firefighter who requested the make-up drill.

- 22.1.3.4. No more than 2 make-up drills will be allowed per regular drill at any station, with the exception of special circumstances preventing a Firefighter from attending a regular drill and its 2 make-up drills. A Retained Officer should act reasonably in considering these special circumstances and, if refused, must provide a written reason to the Firefighter requesting the make-up drill.
- 22.2. Any calls received or drills conducted during a period of approved leave or authorised absence will not be included as part of any relevant minimum levels as outlined in Clause 22.1. In effect, attendance percentages will be paused completely during any period of approved leave or authorised absence.
- 22.2.1. For the avoidance of any doubt, in any monitoring period, time on leave will be excluded from attendance calculations, regardless of how much time is taken on leave. If an employee is on leave for an entire monitoring period, then they will be exempt from that monitoring period.
- 22.3. In cases where an employee's attendance falls below the requirements prescribed by Clause 22.1, the employee's Area Commander shall notify the employee in writing of such deficiency and inform the employee that his/her attendance will be monitored over the next 3 months. If the employee's attendance does not meet the required levels pursuant to Clause 22.1 for that 3-month period, then disciplinary action may be initiated.
- 22.4. Employees who have been notified in terms of subclause 22.3 may make application to the Commissioner for special consideration.
- 22.5. The attendance requirements referred to in subclause 22.1 may be altered by agreement between the Department and the Union.
- 22.6. Compulsory Availability
- 22.6.1. Employees are required to declare a minimum number of hours during which they will be available to respond over the course of the coming week, and the days and times upon which this declared availability will apply.
- 22.6.2. The minimum number of hours required of each employee shall be known as compulsory availability and shall be determined by their current retainer as provided at Clause 12, Rates of Pay.
- 22.6.3. If hours of availability in any given week is more than 24 hours, or the required number of hours as otherwise required by agreement for a higher retainer, the days and times of periods of availability shall be determined by the Firefighter at their discretion.
- 22.6.4. If the period of availability of any Firefighter is only the compulsory availability hours in any given week, the Captain and Duty Commander may allocate the days and times as required by the Department, provided that an employee on the Standard Retainer cannot be assigned to a Weekday Retainer period without their consent.
- 22.6.4.1. Any Firefighter who has their days and times allocated by the Captain and Duty Commander may apply to have those hours varied, either in whole or in part, by written application to the Duty Commander, but must maintain the allocated hours until otherwise advised by the Duty Commander.
- 22.6.5. All Firefighters must declare their availability for the coming week, which starts at 0001 hours each Friday, prior to 1800 hours the Wednesday immediately beforehand.
- 22.6.6. A Firefighter on a Standard Retainer may change their availabilities without notice at any point throughout the week, so long as they do not fall to their compulsory availability hours, and so long as the whole Station Management Team is informed about the change immediately.

23. Attendance at Major Emergencies

23.1. The provisions of this clause shall apply to those employees who attend a Major Emergency which has, following specification as such by the Commissioner, been deemed to attract such entitlements.

23.2. Travel Entitlements

23.2.1. Employees who are required to collect their firefighting uniform from the station shall be paid in accordance with Clause 17.1.1.1.

23.2.2. Employees who are required to use their private vehicle to attend the incident or a "pick up point" that is not at their station, shall be paid at the rate prescribed at Entitlement Code "KM" of Schedule 1, Table 3, for the return distance from the station to the incident or pick up point.

23.2.3. Employees who are provided with transport for any part of the forward and return journeys between their residence and the incident shall be entitled to be paid travelling time at the appropriate rate of pay for the employee's classification for the time spent travelling, provided that:

23.2.3.1. Travelling Time shall not be paid for any part of a journey where the employee received payment under subclauses 23.2.1 or 23.2.2 of this Award; and

23.2.3.2. Travelling Time for the forward journey shall be calculated as being the total time between departure from the station or pick up point to arrival at the incident; and

23.2.3.3. Travelling Time for the return journey shall be calculated as being the total time between departure from the incident to arrival at the pick-up point or station.

23.3. Accommodation Entitlements

23.3.1. Employees who reside further than 50 kilometres from the scene of the major emergency shall be entitled to be provided with appropriate accommodation where their attendance at the emergency extends beyond a single day or in such cases where it would be unreasonable to travel at the conclusion of duty.

23.3.2. Notwithstanding the provisions of subclause 23.3.1, the Commissioner may grant approval to provide appropriate accommodation to employees who reside within 50 kilometres of the scene of a major emergency.

23.3.3. Employees who are provided with accommodation shall be entitled to claim the incidental allowance prescribed at Item 3 of Schedule 1, Table 4, for each day of attendance.

23.4. Meals

23.4.1. Employees shall be provided with substantial meals for breakfast, lunch and dinner throughout the period of attendance at a major emergency.

23.4.2. Where meals are not provided to employees in accordance with subclause 23.4.1, an allowance set at Entitlement Code "MA" of Schedule 1, Table 3 shall be paid.

23.4.3. Where employees are required to work between the meals provided for in subclause 23.4.1, such employees shall be entitled to the refreshments and meals prescribed by Clause 16, Meals and Refreshments.

23.5. Payment for time spent in Attendance

- 23.5.1. Where an employee's period of attendance at a major emergency is less than 48 hours, such employee shall be paid at the appropriate rate of pay for the employee's classification for the entire period of attendance.
- 23.5.2. Where an employee's period of attendance at a major emergency is greater than 48 hours, such employee shall be paid at the appropriate rate of pay for the employee's classification for the following periods:
 - 23.5.2.1. on the day of departure from the employees' residence, the period from the time of departure to 2400 Hrs; and
 - 23.5.2.2. on the day of arrival at the employees' residence following attendance at the major emergency, the period from 0000 Hrs to the time of arrival; and
 - 23.5.2.3. for the period between the day of departure to and the day of return from attendance at a major emergency, all time less any periods of down time, provided that employees will receive payment of a minimum of 16 hours per day.
- 23.5.3. For the purposes of this subclause the "period of attendance at a major emergency" shall mean the entire period from the time of departure from the employee's residence until the time of return to the employee's residence following attendance at the emergency.
- 23.5.4. For the purposes of this subclause "periods of down time" shall mean periods of not less than 8 consecutive hours where employees are neither performing operational duties nor on stand by to perform such duties.

23.6. All employees who are invited and elect to respond to a major emergency as part of a deployment under Clause 23, Attendance at Major Emergencies, will, along with the Union, be made aware of the arrangements for that deployment including the following:

- 23.6.1. the location of the deployment.
- 23.6.2. the time frame of the deployment.
- 23.6.3. the expected amenities, meals, and accommodation available throughout the deployment.

23.7. Cancellation Payment

- 23.7.1. Where a Firefighter has been informed that they are selected for a Deployment that is to be 48 hours or more in length, and are subsequently informed, with less than 48 hours' notice prior to the start of the Deployment, that the Deployment has been cancelled, the Firefighter will be entitled to the following payments:
 - 23.7.1.1. A payment of the minimum incident payment as per Clause 12.10.1, and
 - 23.7.1.2. An additional payment up to the monetary value of 6 hours of the Firefighter's regular single time pay rate, where the Firefighter can demonstrate that due to the cancellation of the Deployment, they lost income or incurred expenses over and above the payment in Clause 23.7.1.1.

24. Transfers

- 24.1. Subject to satisfactory attendance and service and the employee meeting Departmental residential guidelines, an employee may apply for a transfer from one Retained Brigade to another Retained Brigade.

- 24.2. In the event that the station to which the transfer is sought does not have a vacancy, the Department will appoint such employee as a supernumerary, with a minimum of two supernumerary transferred employees, providing other vacancies exist within the destination Zone. Where an employee is not appointed as a supernumerary due to the limit being reached, such employee shall be placed on an eligibility list for appointment at the station when a vacancy arises.
- 24.2.1. Where an employee is placed on an eligibility list and has moved away from their base station's response area, they will be entitled to utilise their accrued leave while they wait for a position to become vacant. Once accrued leave is fully used, the employee will be placed on Leave Without Pay and their service and other conditions will be maintained in line with that clause.
- 24.2.2. Placement on an eligibility list will be for a maximum period of 1 year.
- 24.3. In all transfer circumstances, the employee's service shall be regarded as continuous.
- 24.4. Any employee transferred from one Retained Brigade to another Retained Brigade shall not be entitled to compensation or reimbursement of expenses in relation to that transfer.
- 24.5. Employees holding the rank of Captain or Deputy Captain must relinquish that rank before they transfer, whereupon they will be placed in the new brigade in accordance with subclause 24.6.
- 24.6. When an employee is transferred to a new brigade, the employee's seniority in the new brigade will be determined as if that employee had always been with the new brigade, that is, by length of continuous service with the Department.
- 24.7. The Department will not unreasonably refuse a transfer request.

25. Security, Safety of Work and Classifications

- 25.1. The Department does not intend to use contractors to reduce the utilisation of employees covered under this Award or to perform work ordinarily performed by, or which could be performed by, employees covered under this Award.
- 25.2. The use of contractor services by the Department which may reduce the utilisation of employees covered under this Award or to perform work ordinarily by, or which could be performed by, employees covered under this Award may only occur in the following circumstance:
- (a) following full consultation in accordance with Clause 8, Consultation.

26. Safe Staffing and Systems of Work

26.1. Safe Staffing

- 26.1.1. The parties have agreed for reasons including employee health, safety and welfare, Table 1 of Schedule 3 outlines the minimum safe staffing arrangements for all Station Based Positions in relation to the number, qualification and rank of employees allocated to an appliance.
- 26.1.2. Except in the event of an emergency situation, any alteration to the number, qualification and rank of employees required to be allocated under this clause and Table 1 of Schedule 3 may be implemented for a period not exceeding 7 days by agreement between the parties, and can be extended by further agreement, which will not be unreasonably withheld. Any such agreement or dispensation shall be confirmed in writing.

26.2. Further Additional Staffing

- 26.2.1. It has been agreed between the parties that the deployment of any additional employees and/or positions will be via consultation in accordance with Clause 8, Consultation.

26.3. Safe Systems of Work

- 26.3.1. In the absence of exceptional circumstances, the Department agrees that in order to meet its duty of care in maintaining safe firefighter operations in responding to structure fires, FRNSW will ensure a minimum of eight FRNSW firefighters respond to structural fires to enable safe firefighting operations. The parties agree that during the life of this Award, response protocols to incidents which provide the number and type of appliance and number, rank and qualifications of firefighters will be reviewed and considered to ensure such protocols meet necessary safe staffing levels for incidents. There will be no change to response protocols currently in place at the time of making this Award unless specifically provided for in this Award or following consultation between the parties in accordance with Clause 8, Consultation, and agreement.

A5 - LEAVE ENTITLEMENTS**27. Annual Leave**

- 27.1. On each anniversary of an employee's appointment to the Brigade, an employee shall be entitled to annual leave. Such annual leave shall accrue at the rate of 4 weeks for each completed year of service and shall be taken in multiple periods of not less than 3 consecutive days, or in single-day periods, so long as the single-day periods do not exceed 10 days in any calendar year.
- 27.2. An employee with less than 12 months service may, subject to approval by the Department and the requirements of subclause 27.1, take in advance leave which has accrued.
- 27.3. Wherever possible, annual leave shall be taken within 6 months of the date on which the leave becomes due.
- 27.4. As far as possible, annual leave shall be granted to coincide with the employee's leave period from the employee's primary form of employment.
- 27.5. Payment for annual leave shall be calculated on the weekly average of the total amount paid by the Department to the employee for the twelve months immediately prior to the date on which leave is commenced excluding any periods of Special Leave Without Pay, unpaid leave and/or suspension. For the purposes of this subclause, "total amount" shall include all payments made to the employee by the Department, excluding the RTAS Allowance and payments made as compensation or reimbursement for expenses (e.g. payments for meals, accommodation and for kilometres travelled).
- 27.6. An employee who is directed to return to duty in the case of an emergency whilst on annual leave, shall have any day or part thereof recredited.
- 27.7. An employee shall be paid in advance for a period of approved annual leave, providing such employee has given a minimum of 6 weeks written notice of the date on which the leave is to commence.

28. Compassionate Leave

- 28.1. An employee shall be entitled to up to two days compassionate leave without deduction of pay, on each occasion of the death of a person as prescribed in Clause 28.3 of this clause.
- 28.2. The employee must notify the employer as soon as practicable of the intention to take compassionate leave and will, if required by the employer, provide to the satisfaction of the employer proof of death.
- 28.3. Compassionate leave shall be available to the employee in respect to the death of a person prescribed for the purposes of Carer's Leave as set out in subclause 34.1.3.2 of Clause 34, Carer's Leave, provided that, for the purpose of compassionate leave, the employee need not have been responsible for the care of the person concerned.
- 28.4. An employee shall not be entitled to compassionate leave under this clause during any period in respect of which the employee has been granted other leave.

- 28.5. Compassionate leave may be taken in conjunction with other leave available under 34.2 and 34.3, Carer's Leave. In determining such a request, the employer will give consideration to the circumstances of the employee and the reasonable operational requirements of the Department.

29. Long Service Leave

- 29.1. Subject also to the provisions of Clause 29.9, an employee shall be entitled to long service leave calculated on the following basis:
- 29.1.1. For all continuous service prior to 1 April 1963, and provided that such previous service is also continuous with the employee's current service, at the rate of 3 months, for 20 years of service.
 - 29.1.2. For all continuous service on and subsequent to 1 April 1963, in the case of an employee who has completed 10 years service, 2 months long service leave and for each 5 years completed service thereafter, a further 1 month long service leave.
- 29.2. On termination of services, in respect of the number of years' service with the Department since the employee last became entitled to an amount of long service leave, a proportionate amount on the basis of two months for 10 years' service.
- 29.3. In the case of an employee who has completed at least 7 years' service and whose services are terminated or cease for any reason, such employee shall be paid a proportionate amount calculated at the rate of 2 months for 10 years' service.
- 29.4. In the case of an employee who has completed at least 5 years but less than 7 years' service and whose services are terminated by the Department for any reason, other than serious and wilful misconduct, or by the employee on account of illness, incapacity or domestic or other pressing necessity, or by reason of the death of the employee, such employee (or in the event of the death of the employee, the employee's estate) shall be paid a proportionate amount calculated at the rate of 2 months for 10 years' service.
- 29.5. Long service leave shall be granted subject to the convenience of the Department, as and when such leave becomes due (i.e., after 7 years) or any time thereafter. Provided that an employee shall give at least 20 days' notice in writing of the intention to take such leave.
- 29.6. Long service leave shall be paid at the rate of full pay which, for the purposes of this clause, shall mean the greater average monthly remuneration received by the employee calculated over either the preceding twelve months or five years excluding any periods of Special Leave Without Pay, unpaid leave and/or suspension. The averages referred to in this subclause shall be calculated up to and including the end of the month immediately prior to the month during which the long service leave is taken or commences, as the case may be.
- 29.7. The term "remuneration" referred to in subclause 29.6 shall include all payments made to the employee by the Department, excluding the RTAS Allowance and payments made as compensation or reimbursement for expenses (e.g., payments for meals, accommodation and for kilometres travelled).
- 29.8. An employee who is directed to return to duty in the case of an emergency while on long service leave shall have any day or part thereof recredited.
- 29.9. Notwithstanding anything elsewhere provided by this clause, effective on and from the date of operation of this Award:
- 29.9.1. Employees may apply to take pro-rata Long Service leave after the completion of seven (7) years of service. Additionally, employees with such service shall be entitled to pro-rata Long Service leave on resignation or termination.
 - 29.9.2. Employees may apply to take a period of Long Service leave at double pay provided that:

- 29.9.2.1. The additional payment will be made as a non-superable taxable allowance payable for the period of the absence from work.
- 29.9.2.2. The employee's leave balance will be debited for the actual period of the absence from work and an equivalent number of days as are necessary to pay the allowance.
- 29.9.2.3. Other leave entitlements, e.g., recreation leave, sick leave and Long Service leave will accrue at the single time rate where an employee takes Long Service leave at double time.
- 29.9.2.4. Superannuation contributions will only be made on the basis of the actual absence from work, i.e., at the single time rate.
- 29.9.2.5. Where an employee elects to take Long Service leave at double pay, the minimum period of actual absence should be not less than 1 week.
- 29.9.3. where a public holiday falls during a period of Long Service leave the employee shall be paid for that day and additionally it shall not be deducted from the period of the leave.
 - 29.9.3.1. In respect of public holidays that fall during a period of double pay Long Service Leave, an employee will not be debited in respect of the leave on a public holiday. The employee's leave balance will however be reduced by an additional day to fund the non-superable taxable allowance.

30. Parental Leave

30.1. Definitions - for the purposes of this clause, the following definitions apply.

- 30.1.1. Parental Leave includes birth, adoption, altruistic surrogacy, and permanent out-of- home care.
- 30.1.2. "Partner" includes a spouse, de facto partner, former partner or former de facto partner. The employee's de facto partner means a person who is the employee's partner, who lives with the employee on a bona fide domestic basis, although not legally married to the Employee.
- 30.1.3. "Continuous service" includes any period of authorised leave or absence, any period of part-time work, or any full or part-time service within the public sector.

30.2. Entitlement to Parental Leave

- 30.2.1. An employee is entitled to Paid Parental Leave on the following terms:
 - 30.2.1.1. An employee who has, or will have completed not less than 40 weeks continuous service (at the expected date of birth, time of adoption, time of altruistic surrogacy or permanent out-of-home care placement), is entitled to up to 14 weeks paid parental leave if the leave is associated with:
 - 30.2.1.1.1. The birth of a child (or children from a multiple birth) of the employee, the employee's partner or the employee's legal surrogate, the adoption of a child (or children) under 18 years of age by the employee or the employee's partner or the placement of a child (or children) under 18 years of age in permanent out-of-home care with the employee or the employee's partner, and
 - 30.2.1.1.2. The employee has or will have responsibility for the care of the child.
 - 30.2.1.2. Paid parental leave must be taken in a single continuous period within the first 24 months from the date of birth, adoption, altruistic surrogacy or permanent out-of-

home care placement, subject to the provisions in clause 30.7. Pregnant Employees may commence leave up to 9 weeks prior to the expected date of birth.

30.2.1.3. Parental leave may be taken at half pay from the date the leave commences for a period of 28 weeks.

30.2.1.4. Payment for parental leave may be made in advance in a lump sum, or on a normal fortnightly basis.

30.3. Bonus Paid Parental Leave

30.3.1. An employee who has, or will have, completed not less than 40 weeks continuous service (at the expected date of birth, time of adoption, time of altruistic surrogacy, or placement of a child in permanent out-of-home care) is entitled to an additional two-week bonus paid parental leave where each parent has exhausted any paid parental leave offered by their employer.

30.3.2. Employees who are single parents or whose partners do not have access to or are ineligible for employer paid parental leave will receive the full two weeks of bonus paid parental leave.

30.3.3. The two weeks bonus parental leave is in addition to the 14 weeks paid parental leave outlined in 30.2.1.1.

30.4. Notice requirements

30.4.1. To access paid parental leave, including bonus parental leave, the employee must provide notice to the Department, stating:

30.4.1.1. The period of leave being sought, including the anticipated date of return to duty, and

30.4.1.2. That the employee will have responsibility for the care of their child for the period during which they are seeking the paid parental leave.

30.4.2. The employee must notify the Department as soon as possible of any changes to their circumstances that will or is likely to affect their eligibility for paid parental leave prior, or throughout the period of payment.

30.4.3. An employee does not fail to comply with this clause if the failure was caused by the child being born before the expected date of birth, the child being placed for adoption before the expected date of placement, or any other compelling circumstance as determined by the Commissioner.

30.5. Evidence requirements

30.5.1. To access paid parental leave, the employee must provide evidence of the birth, adoption, altruistic surrogacy, or permanent out-of-home care placement:

30.5.1.1. For birth-related leave - a medical certificate or birth certificate showing the expected birth date of the child; or

30.5.1.2. For adoption-related leave - An integrated birth certificate, or certificate of adoption; or

30.5.1.3. For altruistic surrogacy-related leave - Provision of documentary evidence of the altruistic surrogacy agreement and a statutory declaration advising of the intention to make application for a parentage order as required under the *Surrogacy Act* 2010. A copy of the parentage order must be provided as soon as it is obtained; or

- 30.5.1.4. For permanent out-of-home-care related leave - provision of a guardianship or permanent placement order for a child or young person.
- 30.5.2. To access bonus paid parental leave, the Department needs to be satisfied that an employee's partner has or will have either exhausted paid parental leave provided by their employer or does not have access to employer paid parental leave. The Department may require evidence such as:
 - 30.5.2.1. A letter from the partner's employer confirming paid parental leave has or will have been exhausted or confirming the partner does not have an entitlement to employer funded paid parental leave; or
 - 30.5.2.2. A statutory declaration from the employee confirming their partner has or will have exhausted paid parental leave or the partner does not have an entitlement or access to employer funded paid parental leave.
- 30.6. Concurrency of Paid Parental Leave
 - 30.6.1. All paid parental leave may be taken concurrently except in circumstances where both parents are employed by the Department and operational requirements may prevent concurrent leave.
 - 30.6.2. Employees where both parents are employed by the Department may take up to 4 weeks paid parental leave concurrently with their partner.
- 30.7. Flexibility for taking Paid Parental Leave
 - 30.7.1. Where an employee's eligibility for paid parental leave is determined at the time of birth, adoption, altruistic surrogacy or permanent out-of-home care placement, the employee and the Department may agree for the employee to use paid parental leave entitlements at any time within the first 24 months from the date of birth, adoption, altruistic surrogacy, or permanent out-of-home care placement.
 - 30.7.2. An employee may request:
 - 30.7.2.1. To use their paid parental leave entitlement in a manner other than a single continuous period; or
 - 30.7.2.2. To take more than 4 weeks of paid parental leave concurrently.
 - 30.7.3. The Department will consider their operational requirements and the employee's personal and family circumstances in considering requests and may refuse the request on reasonable business grounds related to the impact of the Department's workplace including but not limited to excessive cost, lack of adequate replacement staff, loss of productivity or impact on service delivery. The Department will provide their response to the employee's request within 21 days.
 - 30.7.3.1. Any refusal to consider the flexibility clauses in 30.7 may be appealed through the same terms as appear in the Disputes Procedure at Clause 10, with determination of the above criteria able to be resolved by the Industrial Relations Commission if the employee and the Department are not in agreement.
 - 30.7.4. Should the Department agree to paid parental leave in a manner other than a single continuous period, the period of leave must not extend beyond the first 24 months from the date of birth, adoption, altruistic surrogacy or permanent out-of-home care placement and will not be extended by any periods of public holidays that fall within the paid parental leave period.
- 30.8. Additional Provisions for Altruistic Surrogacy and Permanent Out-of-Home Care Arrangements

- 30.8.1. Employees in altruistic surrogacy arrangements and permanent out-of-home care arrangements have an entitlement to take 12 months unpaid parental leave, similar to entitlements available to employees who give birth to or adopt a child (12 months' leave of which up to 16 weeks is paid leave available in accordance with this Clause and the remained unpaid).
- 30.8.2. The right to request extended parental leave and return to work on a part time basis is available to employees granted parental leave for altruistic surrogacy and permanent out-of-home care arrangements.
- 30.8.3. Where an employee takes paid parental leave in respect of a permanent out-of-home care arrangement and later adopts the child (or children), the employee is not entitled to access a further period of paid parental leave in connection with the adoption.

30.9. Cancellation of leave

- 30.9.1. Parental leave may be cancelled prior to starting the leave if the employee withdraws the application by written notice to the Commissioner, or if the pregnancy concerned terminates other than by the birth of a living child or the placement of the child concerned does not proceed.
- 30.9.2. Parental leave may be cancelled after starting the leave in the event of a miscarriage, at which point Clause 31, Other Parental Leave, will take over, or if the child dies, or if adopted placement does not proceed or continue.
- 30.9.3. A parent may break the period of leave and return to work by agreement between the Commissioner and the employee on the following conditions:
 - 30.9.3.1. A birthing parent who gives birth to a living child shall not resume duty until 6 weeks after the birth of the child, unless special arrangements for early return are made at the request of the employee and supported by a medical certificate.
 - 30.9.3.2. A birthing parent who has returned to full-time duty after less than their full entitlement to parental leave, shall be entitled to revert to parental leave either on a full-time or part-time basis if they so elect. This election may be exercised only once, and a minimum of 4 weeks' notice (or less if agreed to by the Commissioner) must be given.

30.10. Additional provisions

- 30.10.1. All parents who do not have the necessary service as outlined in 30.2.1.1 shall be entitled to unpaid leave for the period of time as outlined in that clause.
- 30.10.2. In addition to the Parental Leave outlined in 30.2, birthing parents shall be entitled to a further period of unpaid leave, provided that the total period of absence on leave shall not exceed a period of 2 years.
- 30.10.3. In addition to the Parental Leave outlined in 30.2, non-birthing parents shall be entitled to a further period of unpaid leave, provided that the total period of absence on leave shall not exceed 52 weeks.
- 30.10.4. The unpaid leave arrangements in 30.10.2 and 30.10.3 may be substituted for any combination of accrued annual, long service, or consolidated leave up to the time periods outlined.
- 30.10.5. Any period of parental leave will count as full service for all purposes, including for continuity of service, promotion, and accrual of leave.

- 30.10.6. Parental leave may be extended beyond what was originally planned by giving the Commissioner notice in writing of the extended period at least 14 days before the start of the extended period. The period of leave cannot be extended beyond the maximum period of leave authorised by clause 30.10.
- 30.10.7. The maximum periods of leave can be extended at any time with agreement between the employee and the Commissioner.
- 30.10.8. An employee returning to work after parental leave will return to work in the same classification and location held by the employee immediately prior to proceeding on that leave. If the employee was in a safe job prior to proceeding on parental leave, they will return to the classification and location held immediately before the safe job.
- 30.10.9. The Commissioner must not terminate or threaten to terminate the employment of an employee due to any action taken, or leave used or planned to be used, under clause 30.
- 30.10.10. Upon being informed of an impending birth, adoption, altruistic surrogacy, or permanent out-of-home care arrangement, the Commissioner must inform the employee of their entitlements to parental leave and their obligations under this clause.
- 30.10.11. Any employee seeking to adopt a child is entitled to up to two days paid leave per calendar year if the employee requires that in connection with the adoption process, and includes but is not limited to interviews, meetings, or examinations.

30.11. Replacement employees

- 30.11.1. A replacement employee is a person who is specifically employed because of an employee proceeding on parental leave, including as a replacement for an employee who has been temporarily promoted or transferred in order to replace the employee proceeding on parental leave.
- 30.11.2. Before a replacement employee is employed, the Commissioner must inform the person of the temporary nature of the employment and the rights of the employee on parental leave to return to work.
- 30.11.3. A reference in this clause to an employee proceeding on leave includes a reference to a pregnant employee exercising a right to be transferred to a safe job under clause 30.12.

30.12. Transfer to a safe job

- 30.12.1. This subclause applies whenever the present work of a birthing employee is, because of the pregnancy or breastfeeding, a risk to the health or safety of the employee or of the unborn or newborn child. The assessment of such a risk is to be made based on a medical certificate supplied by the employee and of the obligations of the Commissioner under the *Work Health and Safety Act 2011*.
- 30.12.2. The Commissioner is required to temporarily adjust the employee's working conditions or hours of work to avoid exposure to risk as follows:
 - 30.12.2.1. Where a birthing parent is confirmed pregnant, they are to notify their Superintendent and Station Commander as soon as possible who will, in turn, direct that they be withdrawn from operational firefighting duties.
 - 30.12.2.2. Upon withdrawal from operational firefighting duties alternate work of a suitable nature is to be provided.
 - 30.12.2.3. Allocation of duties will be determined by the Department following consultation between the employee's medical practitioner, the employee's Station Commander and the employee.

- 30.12.2.4. If such an adjustment is not feasible or cannot reasonably be accommodated, the Commissioner is to transfer the employee to other work where they will not be exposed to that risk.
 - 30.12.2.5. If such a transfer is not feasible or cannot reasonably be required to be made, the Commissioner is to grant the employee special parental leave under this clause for as long as is necessary to avoid exposure to that risk, as certified by a medical practitioner.
 - 30.12.2.5.1. Any period of special parental leave due to a safe job not being provided is not counted towards the employee's maximum period of leave and is to be paid at full pay without any deduction from any leave balances.
 - 30.12.3. Employees will be provided with a maternity uniform for use when appropriate.
 - 30.12.4. The standard issue uniform is to be worn by employees until the pregnancy becomes apparent prior to the birth and from the tenth week, if practicable, following the birth.
 - 30.12.5. An employee on maternity leave who gives birth to a living child shall not resume operational firefighting duties until thirteen weeks have elapsed after the birth of the child, unless a special request for early return is made by the employee supported by a medical certificate.
 - 30.12.6. Duties other than firefighting may be undertaken after six weeks following the birth of the child, if supported by a medical certificate.
- 30.13. Transitional Arrangements
- 30.13.1. The provisions of Clause 30 are taken to have been in effect since 1 October 2022, in line with the 27 September 2022 s52(1) Determination no 4 of 2022, by the Secretary of the Department of Premier and Cabinet.

31. Other Parental Leave

31.1. Definitions - for the purposes of this clause, the following definitions apply:

- 31.1.1. Other Parental Leave includes the provisions available to employees in the event of a miscarriage, still-birth, pre-term birth, or when undergoing fertility treatment.
- 31.1.2. "Partner" includes a spouse, de facto partner, former partner or former de facto partner. The employee's de facto partner means a person who is the employee's partner, who lives with the employee on a bona fide domestic basis,
- 31.1.3. "Miscarriage" means a pregnancy that ceases prior to 20 weeks gestation or, where the number of weeks is unknown, the baby weighed less than 400g.
- 31.1.4. "Stillbirth" means the birth of a baby who has died any time from 20 weeks into a pregnancy and includes death during pregnancy or during birth.
- 31.1.5. "Pre-Term Birth" means the birth of a live child prior to 37 weeks gestation.
- 31.1.6. "Full-Term Birth" means the birth of a live child at 37 weeks onwards.
- 31.1.7. "Fertility Treatment" means the following assisted reproductive treatments: Intrauterine insemination (IUI), In vitro fertilization (IVF) and Intracytoplasmic sperm injection (ICSI).
- 31.1.8. "Continuous service" includes any period of authorised leave or absence, any period of part-time work, or any full or part-time service within the public sector.

31.2. Entitlement to Leave for Other Parental Leave occurrences

31.2.1. Leave in the event of a miscarriage

- 31.2.1.1. Where an employee or the partner of an employee miscarries, the employee is entitled to five days special miscarriage leave on each occasion a pregnancy ceases by way of miscarriage up to 20 weeks' gestation.
- 31.2.1.2. Leave as defined above will commence from the date the miscarriage occurs and is to be taken in one continuous block of leave at full pay. Paid special miscarriage leave must not be taken concurrently with any other form of leave available to the employee.
- 31.2.1.3. When accessing paid special miscarriage leave, the employee must provide notice as soon as reasonably practicable stating:
 - 31.2.1.3.1. The period of leave being sought, and
 - 31.2.1.3.2. The anticipated date of return to duty.
- 31.2.1.4. To access paid special miscarriage leave, the Department needs to be satisfied that a miscarriage has occurred and may require evidence such as:
 - 31.2.1.4.1. A medical certificate; or
 - 31.2.1.4.2. Early loss certificate issued by NSW Registry of Births, Deaths & Marriages or equivalent State agency

31.2.2. Leave in the event of a stillbirth

- 31.2.2.1. Where an employee has an entitlement to parental leave and they suffer a still birth the employee may elect at their absolute discretion to either take their parental leave entitlement or to take available sick leave.

31.2.3. Leave in the event of a pre-term birth

- 31.2.3.1. Where an employee or the partner of an employee gives birth to a pre-term child (prior to 37 weeks), the parent with the caring responsibility is entitled to paid special pre-term parental leave from the date of birth of the child (or children from a multiple birth) up to the end of 36 weeks.
- 31.2.3.2. Immediately following the period of paid special pre-term parental leave and at commencement of 37 weeks, paid parental leave will be in accordance with Clause 30.
- 31.2.3.3. Eligible employees are those who have or would have, if not for the pre-term birth, completed 40 weeks continuous service at the expected due date. Where employees are in a couple, only one parent may access paid special pre-term birth leave.
- 31.2.3.4. Leave as defined above will commence from the date the pre-term birth occurs and must be taken in one continuous block up to the end of 36 weeks. Paid special pre-term parental leave must not be taken concurrently with any other form of leave available to the employee.
- 31.2.3.5. In the event of a death of a pre-term child (or children) during a period of paid special pre-term parental leave, the remaining portion of that leave ceases and paid parental leave in accordance with Clause 31 will commence.
- 31.2.3.6. When accessing paid special pre-term parental leave in the event of a pre-term birth, the employee must provide notice as soon as reasonably practicable stating:

- 31.2.3.6.1. The period of paid special pre-term parental leave being sought up to the end of 36 weeks, and
- 31.2.3.6.2. The details of all other types of leave (paid or unpaid) to be taken or proposed to be taken or applied for by the employee following the period of paid special pre-term parental leave including Parental Leave.
- 31.2.3.7. To access special pre-term parental leave in the event of a pre-term birth, the employee may be required to provide evidence such as:
 - 31.2.3.7.1. A medical certificate showing the expected due date; and
 - 31.2.3.7.2. A statutory declaration or medical certificate confirming caring responsibility; and
 - 31.2.3.7.3. A medical certificate showing the actual date of birth of the child; or
 - 31.2.3.7.4. Birth certificate showing the date of birth of the child.
- 31.2.4. Leave for employees undergoing fertility treatment
 - 31.2.4.1. Where an employee is absent from work to undergo fertility treatment, the employee is entitled to up to five days paid special fertility treatment leave per calendar year.
 - 31.2.4.2. Leave as defined above is non-cumulative and can be taken in part-days, single days, or consecutive days. Paid special fertility treatment leave must not be taken concurrently with any other form of leave. Paid special fertility treatment leave is not available to a partner of a person undergoing fertility treatment.
 - 31.2.4.3. To access paid special fertility treatment leave, the employee may be required to provide a medical certificate confirming the fertility treatment.
- 31.3. Additional Provisions
 - 31.3.1. Any period of parental leave will count as full service for all purposes, including for continuity of service, promotion, and accrual of leave.
 - 31.3.2. The Commissioner must not terminate or threaten to terminate the employment of an employee due to any action taken, or leave used or planned to be used, under clause 31.
- 31.4. Transitional Arrangements
 - 31.4.1. The provisions of Clause 31 are taken to have been in effect since 1 October 2022, in line with the 28 September 2022 s52(1) Determination no 3 of 2022, by the Secretary of the Department of Premier and Cabinet.

32. Lactation Policy

- 32.1. Within three months of the making of this Award, the Parties will negotiate and agree to a Lactation and Work Policy to support employees who seek to breastfeed and/or express milk while at work. If there is a failure to agree on a policy within the time period, either party may apply to the Commission to determine the wording of the policy and both parties undertake to agree to a policy being implemented as determined by the Commission.

33. Sick Leave

- 33.1. In every case of illness or incapacity sustained by an employee whilst off duty, the following conditions shall apply.

- 33.2. Such employee shall, as soon as practicable, inform their immediate supervisor of such inability to attend for duty and as far as possible, shall state the estimated duration of their absence.
- 33.3. Subject to the provisions of Clause 33.7, such employee shall forward to the Department's Health and Safety Branch by Electronic Self Service (ESS), a medical certificate stating that the employee is unfit for duty, and, if known, the date the employee is fit to resume duty. If a medical certificate does not specify the date the employee is fit to resume duty, the employee must, before being entitled to resume duty, forward a further medical certificate to the effect that the employee has recovered from the illness or incapacity and is fit for duty, unless the employer dispenses with this requirement. The Health and Safety Branch shall ensure that personal medical information provided pursuant to this clause is not disclosed to any employees of the Department outside of the Health and Safety Branch.
- 33.4. Every employee who is absent from duty for a period of more than 28 days will have their case reviewed by the Department's medical officer, or a medical officer nominated by the Department, and must be certified by such medical officer as fit for duty prior to being permitted to resume duty. An employee who is required to attend the Department's medical officer or nominated medical officer shall be reimbursed any out-of-pocket expenses reasonably and necessarily incurred. The Department shall meet the cost of any such consultation.
- 33.5. The granting of Sick Leave, the duration thereof and the pay, if any, for the same shall be on the following basis:
- 33.5.1. 1 week paid sick leave for each year of service, cumulative, less any paid Sick Leave taken, to a maximum of 26 weeks.
- 33.5.2. Sick Leave beyond that provided for in subclause 33.5.1 shall be Sick Leave without pay.
- 33.5.3. Payment for Sick Leave shall be calculated on the weekly average of the total amount paid by the Department to the employee for the twelve months immediately prior to the date on which leave is commenced excluding any periods of Special Leave Without Pay, unpaid leave and/or suspension. For the purposes of this subclause, "total amount" shall include all payments made to the employee by the Department excluding the RTAS Allowance and payments made as compensation or reimbursement for expenses (e.g. payments for meals, accommodation and for kilometres travelled).
- 33.6. Where payment has been made for sick leave, under this clause, to an employee whose sick leave entitlement has already been exhausted, or whose right to sick leave is not established, the Department may deduct the amount overpaid from any future payments made to the employee concerned in accordance with the provisions of Clause 15.4.
- 33.7. Employees are entitled to take unsupported sick leave absences, where no medical certificate is required, subject to the following provisions:
- 33.7.1. Such absences may not exceed 3 separate days in any calendar year; and
- 33.7.2. Such absences may not be taken on consecutive days; and
- 33.7.3. Such absences may not be taken on public holidays; and
- 33.7.4. Such absences may not be taken in relation to any matter that may be covered by workers' compensation.

34. Carer's Leave

34.1. Use of Sick Leave

- 34.1.1. An employee with responsibilities in relation to a class of person set out in subclause 34.1.3.2, who needs the employee's care and support shall be entitled to use, in accordance with this clause, any current or accrued Sick Leave entitlement, provided for

at Clause 33, for absences to provide care and support for such persons when they are ill. Such leave may be taken for part of a single day.

34.1.2. The employee shall, if required, establish by production of a medical certificate or statutory declaration, the illness of the person concerned and that the illness is such as to require care by another person. In normal circumstances an employee must not take Carer's Leave under this clause where another person has taken leave to care for the same person.

34.1.3. The entitlement to use Sick Leave in accordance with this clause is subject to:

34.1.3.1. The employee being responsible for the care of the person concerned.

34.1.3.2. The person concerned being:

34.1.3.2.1. A spouse of the employee.

34.1.3.2.2. A de facto spouse who, in relation to a person, is a person of the same or opposite sex to the first mentioned person and who lives with the first mentioned person as the husband or wife of that person on a bona fide domestic basis, although not legally married to that person.

34.1.3.2.3. A child or an adult child (including an adopted child, a stepchild, a foster child or an ex-nuptial child), parent (including a foster parent and legal guardian), grandparent, grandchild or sibling of the employee or spouse or de facto spouse of the employee.

34.1.3.2.4. A relative of the employee who is a member of the same household where, for the purposes of this subclause:

34.1.3.2.4.1. "Relative" means a person related by blood, marriage or affinity.

34.1.3.2.4.2. "Affinity" means a relationship that one spouse, because of marriage, has to blood relatives of the other.

34.1.3.2.4.3. "Household" means a family group living in the same domestic dwelling.

34.1.4. An employee shall, wherever practicable, give the Department notice, prior to the absence, of the intention to take leave, the name of the person requiring care and their relationship to the employee, the reasons for taking such leave and the estimated length of absence. If it is not practicable for the employee to give prior notice of absence, the employee shall notify the Department by telephone of such absence at the first opportunity on the day of absence.

34.2. Unpaid Leave for Family Purpose

34.2.1. An employee may elect, with the consent of the Department, to take unpaid leave for the purpose of providing care and support to a class of person, as set out in subclause 34.1.3.2, who is ill.

34.3. Use of Annual Leave

34.3.1. An employee may elect, with the consent of the employer, to take Annual Leave not exceeding 10 days in single-day periods, or part thereof, in any calendar year at a time or times agreed by the parties.

34.3.2. An employee may elect with the employer's agreement to take Annual Leave at any time within a period of 24 months from the date it falls due.

35. Domestic and Family Violence Leave

- 35.1. The definition of domestic violence is found in Clause 6, Definitions of this Award.
- 35.2. Employees experiencing domestic violence are entitled to 10 days paid domestic and family violence leave per calendar year (non-cumulative and able to be taken in part-days, single days, or consecutive days). The leave is to be available for employees experiencing domestic and family violence, for purposes including:
- 35.2.1. seeking safe accommodation;
 - 35.2.2. attending medical, legal police or counselling appointments relating to their experience of domestic and family violence;
 - 35.2.3. attending court and other legal proceedings relating to their experience of domestic and family violence;
 - 35.2.4. organising alternative care or education arrangements for their children; or
 - 35.2.5. other related purposes approved by the employer.
- 35.3. The leave entitlement can be accessed without the need to exhaust other existing leave entitlements first.
- 35.4. When approving leave, the Department needs to be satisfied, on reasonable grounds, that domestic and family violence has occurred, and may require proof such as:
- 35.4.1. an agreed document issued by the Police Force, a court, a domestic violence support service or a member of the legal profession;
 - 35.4.2. a provisional, interim or final Apprehended Violence Order (AVO), certificate of conviction or family law injunction; or
 - 35.4.3. a medical certificate.
- 35.5. Where the entitlements provided by this clause have been exhausted, other available leave entitlements provided for under this Award may be applied for by employees experiencing domestic and family violence.
- 35.6. Personal information concerning domestic and family violence will be kept confidential by the Department.
- 35.7. The Department where appropriate, may facilitate flexible working arrangements subject to operational requirements, including changes to working times and changes to work location, telephone number and email address.

36. Special Leave for Union Activities

- 36.1. Attendance at Union Training, Conferences/Meetings
- 36.1.1. Employees who are members of the Union and accredited by the Union as a delegate (including an employee elected to hold office within the Union), health and safety representative, and/or members of the State Committee of Management (SCOM) are entitled to special leave with pay to attend the following:
 - 36.1.1.1. Union training sessions/courses; and
 - 36.1.1.2. conferences of the Union; and

- 36.1.1.3. conferences of the United Firefighters Union of Australia or other interstate, national or international firefighters union conferences; and
 - 36.1.1.4. meetings of the Union's Executive/Committee of Management; and
 - 36.1.1.5. annual conference of Unions NSW; and
 - 36.1.1.6. bi-annual conference of the Australian Council of Trade Unions; and
 - 36.1.1.7. meetings of the Death and Disability Board of directors.
- 36.1.2. While there is no limit on special leave for Union activities, such leave is to be kept to a minimum and is subject to the employee:
- 36.1.2.1. establishing accreditation as a delegate with the Union or other position as outlined in Clause 36.1; and
 - 36.1.2.2. providing sufficient notice of absence to the Department; and
 - 36.1.2.3. lodging a formal application for special leave.
- 36.1.3. Such leave is also subject to the Union:
- 36.1.3.1. providing documentary evidence to the Department about an accredited delegate in sufficient time to enable the Department to make arrangements for performance of duties; and
 - 36.1.3.2. meeting all travelling, accommodation and any other costs incurred for the employee; and
 - 36.1.3.3. providing the Department with confirmation of attendance of the employee.
- 36.1.4. Providing the provisions of this clause are satisfied by both the employee and the Union, the Department shall:
- 36.1.4.1. release the employee for the duration of the training, conference or meeting;
 - 36.1.4.2. grant special leave (with pay); and
 - 36.1.4.3. ensure that the duties of the absent employee are performed in his/her absence, if appropriate.
- 36.1.5. Period of Notice
- 36.1.5.1. Generally, dates of training, conferences or meetings are known well in advance and it is expected that the Department would be notified as soon as accreditation has been given to a delegate or at least two weeks before the date of attendance.
 - 36.1.5.2. Where extraordinary meetings are called at short notice, a shorter period of notice would be acceptable, provided such notice is given to the Department as soon as advice of the meeting is received by the employee.
- 36.1.6. Travel Time
- 36.1.6.1. Where an employee has to travel to Sydney, inter or intra State, or internationally to attend a conference or meeting, special leave will also apply to reasonable travelling time to and from the venue of the conference or meeting.

- 36.1.6.2. No compensation is to be provided if travel can be and is undertaken on an accredited delegate's non-working day or before or after his/her normal hours of work.
- 36.1.7. Payment
 - 36.1.7.1. Employees entitled to special leave in terms of this clause shall, for such special leave, receive their full rate of pay as if they worked during the period of the leave.
- 36.1.8. Special leave in terms of this clause shall count as service for all purposes.
- 36.2. Attendance at Courses/Seminars Conducted or Supported by Trade Union Education Foundation (TUEF).
 - 36.2.1. Except where inconsistent with the provisions of subclause 36.2, the provisions of subclause 36.1 of this clause shall also apply to attendance at courses or seminars conducted or supported by TUEF.
 - 36.2.2. Up to a maximum of twelve days in any period of two years may be granted to employees who are members of the Union.
 - 36.2.3. The grant of leave to attend courses or seminars conducted or supported by TUEF, is subject to the following conditions:
 - 36.2.3.1. Departmental operating requirements permit the grant of leave and the absence does not result in working of overtime by other employees.
 - 36.2.3.2. Expenses associated with attendance at such courses or seminars, e.g. fares, accommodation, meal costs, etc., will be required to be met by the employee concerned but, subject to the maximum prescribed in subclause 36.2.2, special leave may include travelling time necessarily required to attend courses or seminars.
 - 36.2.3.3. Applications for leave must be accompanied by a statement from the Union that it has nominated the employee concerned for such a course or seminar and supports the application.
- 36.3. Union officers and staff
 - 36.3.1. Employees who are selected, by election or appointment, to hold a position of full-time employment with the Union or an honorary office on the Union's State Committee of Management, will be excluded from all attendance monitoring requirements set out in Clause 22, Attendance and Availability Requirements, of this Award for the period of their selection, election or appointment.

37. Military Leave

- 37.1. Military leave may be granted to employees who are volunteer part-time members of the Defence Forces Reserves.
- 37.2. Such leave shall be available in accordance with the following provisions on a twelve-month-to- twelve-month basis, commencing on 1 July each year:
 - 37.2.1. For members of the Navy Reserve - thirteen calendar days for the purpose of annual training and thirteen calendar days for the purposes of attending a school, class or course of instruction, including in a teaching capacity.

- 37.2.2. For members of the Army Reserve - fourteen calendar days for the purpose of annual training and fourteen calendar days for the purposes of attending a school, class or course of instruction, including in a teaching capacity.
- 37.2.3. For members of the Air Force Reserve - sixteen calendar days for the purpose of annual training and sixteen calendar days for the purposes of attending a school, class or course of instruction, including in a teaching capacity.
- 37.3. Where a Commanding Officer certifies in writing that it is obligatory for a member of the Reserves to attend training for a period that exceeds the leave granted under Clause 37.2, the Commissioner may grant further Military Leave up to 4 calendar days in any one Military Leave year.
- 37.4. Periods of approved Military Leave shall be regarded as Special Leave Without Pay.

38. Leave Without Pay

- 38.1. All employees will be entitled to apply for Leave Without Pay.
- 38.2. Leave Without Pay may be granted only when an employee's Annual Leave balances have been exhausted.
- 38.3. Leave Without Pay may be for a period up to a maximum of 2 years. This limit is inclusive of any paid leave taken and represents a total period of time.
- 38.4. An employee returning from over 6 months of Leave Without Pay must wait a period of 6 months prior to being able to access any further period of Leave Without Pay.
- 38.5. The Department may refuse to grant Leave Without Pay if there are reasonable grounds for such refusal. In determining whether there are reasonable grounds for refusing Leave Without Pay, the Department may consider the reasons provided for the Leave against operational requirements.

39. Cultural and Ceremonial Leave

- 39.1. The Parties to this Award recognise the value and cultural diversity of all employees and therefore shall provide the opportunity to participate in activities of cultural, ceremonial, or religious significance for employees who are required to observe such days. This includes the opportunity for employees who identify as Aboriginal or a Torres Strait Islander to attend National Aborigines and Islanders Day of Observance Committee events.
- 39.2. Where attendance requires time away from work, Employees may apply for any accrued leave (excluding sick and carers leave) to which they may be entitled.

A6 - CLASSIFICATIONS, CAREER PATHS AND PROMOTIONS

40. Classifications

- 40.1. All employees covered by this Award will be employed in one of the following ranks and will be provided by FRNSW the opportunity to complete and hold all the qualifications and competencies for the rank as determined by the Commissioner following consultation with the Union in accordance with Clause 8, Consultation.
- 40.2. All employees covered under this Award will be employed at one of the following ranks/classifications specified below:
 - 40.2.1. Recruit Firefighter
 - 40.2.2. Firefighter

- 40.2.2.1. PUAFIR210 Prevent Injury, PUAOPE013 Operate Communication Systems and Equipment, PUAFIR207 Operate Breathing Apparatus Open Circuit, PUATEA001 Work in a Team, MSMWHS217 Gas Test Atmospheres, HLTAID001 Provide Fire Aid, HLTAID015 Provide Advanced Resuscitation and Oxygen Therapy, FREPR1A13A Retained Recruit Hazmat and PPE, FREPR1A12A Structural Firefighting 1, FREPR1A14A Structural Firefighting 2, FREPR1A10A Extinguishes, FRETCL14A Forcible Door Entry, FRETBL02A Patient Pathways.
- 40.2.3. CFR Firefighter
 - 40.2.3.1. Additional CFR training and competencies.
- 40.2.4. Deputy Captain
- 40.2.5. CFR Deputy Captain
- 40.2.6. Additional CFR training and competencies.
- 40.2.7. Captain
- 40.2.8. CFR Captain
 - 40.2.8.1. Additional CFR training and competencies.
- 40.3. Progression and promotion through the ranks will be in accordance with Clause 41, Progression and Promotion. Where an employee is eligible for promotion the Department will, in accordance with the provisions of this Award, ensure employees are provided the opportunity to attain the necessary qualifications for that rank.
- 40.4. The parties agree that during the life of this Award the Training Subcommittee will develop an agreed framework for inclusion in any future Award which will specify the specific qualifications and competencies required for each rank.
- 40.5. Engine Keepers
 - 40.5.1. The position of Engine Keeper will exist alongside a Retained Firefighter's ordinary rank.
 - 40.5.1.1. A Retained Officer may also hold the position of Engine Keeper.
 - 40.5.2. The position of Engine Keeper does not entitle a Retained Firefighter to any increase in pay rate or any allowances.
 - 40.5.3. The default position is that a station will appoint an Engine Keeper. Stations may opt-out of appointing an Engine Keeper but can opt back in at any point in time. This decision can only be made by the brigade's Captain, who must consult with the crew and management. There must be a compelling reason for a Captain to opt-out of the Engine Keeper system.
 - 40.5.4. Where an Engine Keeper is not appointed, the duties ordinarily assigned to an Engine Keeper are to be assigned by the Station Management Team to relevant staff on a fair, equitable basis amongst all staff who are interested in performing these duties.
 - 40.5.5. Where an Engine Keeper is appointed, they are to undertake the Engine Keeper duties as provided for in Clause 12.13.3.2.
 - 40.5.6. Where there are two or more appliances at a station where Engine Keeper duties are undertaken, one additional Engine Keepers may be appointed to a maximum of two per station.

- 40.5.7. All Engine Keeper appointments will follow a merit selection process, involving written applications and interviews.

41. Progression and Promotion

41.1. Probation

- 41.1.1. Probation will be a 6-month period from the date of commencement as a Recruit Firefighter.

41.2. Recruit Firefighter to Firefighter

- 41.2.1. Progression from Recruit Firefighter to Firefighter will be subject to the satisfactory completion of the probation period as outlined in Clause 41.1, as well as the successful completion of the competencies and qualifications specified by the Commissioner on the advice of the Training Review Committee, for progression to Firefighter.
- 41.2.2. Failure to achieve progression to Firefighter within a reasonable time, will result in the employee being considered unsuitable for continued employment, and the employment of such an employee will be terminated accordingly. In such circumstances, the Department will advise the Union that the services of the employee are to be terminated.
- 41.2.3. The reference to "reasonable time" in subclause 41.2.2 means a period in excess of 6 months. The excess time to be allowed shall be determined by the Commissioner after taking into account all the circumstances of the case of the employee concerned.

41.3. Deputy Captain

- 41.3.1. Progression to Deputy Captain shall be subject to a vacancy and shall be determined solely on the basis of merit selection. All applicants for Deputy Captain should be qualified and trained in the operation of all primary Retained appliances (non SEV appliances) attached to their station.
- 41.3.2. If the above requirements are unable to be met, the Parties may agree to some other standard on a case-by-case basis.

41.4. Captain

- 41.4.1. Progression to Captain shall be subject to a vacancy and shall be determined solely on the basis of merit selection. All applicants for Captain should be qualified and trained in the operation of all primary Retained appliances (non SEV appliances) attached to their station.
- 41.4.2. If the above requirements are unable to be met, the Parties may agree to some other standard on a case-by-case basis.

41.5. Retained to Permanent (Full-time) Pathway

- 41.5.1. The agreed process for Retained Firefighters to move to Permanent ranks is contained in the 'Retained to Permanent Firefighter Pathway' document contained at Schedule 7 of this Award, which may be amended from time to time as agreed between the parties. Recruitment for external applicants in line with recruitment procedures and existing recruitment pathways for hard to fill permanent firefighter station positions or ComSafe positions will continue despite this clause
- 41.5.1.1. Up to 25% of the number of positions in each general intake round are to be set aside for Retained Firefighters. This number may be changed at any time through agreement between the Parties.

- 41.5.1.1.1. At the commencement of each general intake round, the Department must notify the workforce of the percentage of positions in that intake round that will be set aside for Retained Firefighters in line with Clause 41.5 of this Award.
- 41.5.1.2. Eligible Retained Firefighters are to apply through the usual intake process and indicate that they are a current Retained Firefighter with Fire & Rescue NSW.
- 41.5.1.3. All Retained Firefighters who apply will be set aside and compete internally for the up to 25% of positions set aside for Retained Firefighters.
- 41.5.1.4. Selection to the position will be via a merit-based selection process which will be determined by the parties via consultation in accordance with Clause 8, Consultation, within 3 months of the commencement of this Award.
- 41.5.1.5. If there are more Retained Firefighter candidates than positions, those who are unsuccessful will be placed into the general intake pool and will compete with the general public for the remaining Permanent Firefighter positions.
- 41.5.1.6. If there are fewer successful Retained Firefighter candidates than positions, the surplus Retained positions will be transferred to the general intake and be available for those competing in that intake.

42. Training Subcommittee

- 42.1. The parties have agreed to rename the current previous training Review Committee to the training subcommittee which will be an agreed subcommittee of the Joint Consultative Committee outlined at Clause 8, Consultation.
- 42.2. The Training Subcommittee shall provide advice and recommendation to the Joint Consultative Committee on all items referred to it by the Joint Consultative Committee along with matters relating to establishing and/or maintaining an effective and equitable system of training in Fire and Rescue NSW using the principles of Competency Based Training.
- 42.3. The role of the Training Subcommittee will include (but not be limited to):
 - 42.3.1. advising on the further development of training throughout Fire and Rescue NSW;
 - 42.3.2. advising on the implementation of a Competency Based Training regime throughout Fire and Rescue NSW;
 - 42.3.3. considering Recognised Prior Learning (RPL) policy generally and in particular, the consideration of individual applications for RPL.
 - 42.3.4. any other matters referred to it by the Joint Consultative Committee in accordance with Clause 8, Consultation.
- 42.4. Procedure
 - 42.4.1. The Training Subcommittee will meet at least once every four weeks, or as otherwise agreed between the parties;
 - 42.4.2. Union Representatives on the Subcommittee will attend in accordance with Clause 45.
 - 42.4.3. The Subcommittee will be adequately resourced by the Department so that it can effectively fulfil the above roles.

43. Training and Staff Development

- 43.1. Employees covered by this Award will complete appropriate training, as specified by the Commissioner following consultation with the Union under Clause 8, Consultation, to maintain their skills and improve the productivity and efficiency of the Department's operations.
- 43.2. Upon request by an employee, the Department will consider an application by an employee to attend a course which is appropriate, relevant and recognised by the Department but is not essential for promotion. If approval is granted by the Department for the employee to attend such a course, the employee shall be entitled to the provisions of Clause 44 of this Award.

44. Training Course Attendance Entitlements

- 44.1. The provisions of this clause shall apply to attendance at training programs (other than regular drills) delivered by, on behalf of, or approved by the Department.
- 44.2. Accommodation
- 44.2.1. The Commissioner (or delegate) shall approve appropriate accommodation for an employee, if it can be demonstrated that an unreasonable amount of travelling time and/or distance is involved when travelling to and from the employee's residence to the training venue.
- 44.2.2. Where Departmental accommodation is not provided to an employee with an entitlement to accommodation, the relevant accommodation provisions prescribed by Clause 18, Travelling Compensation, shall be paid.
- 44.2.3. Where it is not possible for an employee to travel to the training venue on the first day of the course or where the travelling time would be unreasonable to travel on the first day of the course, the employee shall be entitled to appropriate accommodation on the evening prior to the start of the course. If it is not possible for an employee to travel from the training venue to their residence at the conclusion of the course or if the travelling time would be unreasonable, the employee shall be entitled to appropriate accommodation on the evening of the last day of the course. Approval must be obtained from the Commissioner (or delegate) prior to bookings being made.
- 44.2.4. Notwithstanding the provisions of this subclause, any employee who considers that these criteria would cause undue hardship etc. may make application for special consideration. All such applications will be considered on their individual merits according to the program content and the starting and completion times, on a daily basis.
- 44.3. Meals
- 44.3.1. All employees attending training programs which extend for a whole day shall be provided with morning/afternoon tea and lunch.
- 44.3.2. Where employees have been granted approval for overnight accommodation and when such accommodation is provided by the Department, expenses reasonably and properly incurred shall be reimbursed in accordance with Clause 18, Travelling Compensation.
- 44.3.3. Employees who are not required to accommodate themselves overnight shall, where appropriate, be paid the relevant meal allowances prescribed by Clause 18, Travelling Compensation.
- 44.3.4. Meal allowances are not payable during times at which an accommodation allowance (as prescribed in subclause 44.2.2) has been paid. A component of the accommodation allowance compensates for the costs associated with breakfast, lunch and evening meals.

44.4. Incidentals

- 44.4.1. Employees who are provided with Departmental accommodation shall be entitled to claim the appropriate incidental allowance as prescribed by Clause 18, Travelling Compensation.
- 44.4.2. The incidental allowance cannot be claimed for any day during which an accommodation allowance referred to in subclause 44.2.2, is paid. The incidental allowance forms a component of the accommodation allowance and amongst other things, recognises the cost associated with personal telephone calls, etc.

44.5. Travelling Time

- 44.5.1. Compensation shall be in accordance with Clause 18, Travelling Compensation.

A7 - EMPLOYMENT RELATIONSHIP**45. Attendance and Participation in Union Representation Activities**

- 45.1. The parties recognise the rights of employees to participate in Union activities, including ensuring employees are appropriately represented by Union representatives and maintaining a healthy and safe workplace.
- 45.2. In recognition of this right, an employee who is accredited by the Union to represent it in any consultative process under this Award including the Joint Consultative Committee and/or its subcommittees will be granted the necessary time off during working hours without loss of pay to attend meetings and/or participate in relevant activities required to carry out their functions subject to the employee reaching agreement on a local level with the relevant officer in charge so as to enable the employee to perform the activities.
- 45.3. An employee participating in Union activities in line with Clause 45.2 shall be entitled to single time pay rates for time spent in attendance at the relevant activities.
- 45.4. Where such meetings/activities occur during a period of annual or long service leave, the employee will be recredited with hours of the relevant leave type without loss of pay for all time spent attending or participating in the relevant activities.

46. Court Attendance Entitlements

- 46.1. The provisions of this clause shall apply to employees attending Court and related conferences as a:
 - 46.1.1. result of the duties performed by the employee in the employee's position with the Department, including attendance at an incident.
 - 46.1.2. witness for the Crown but not as a result of the duties performed by the employee in the employee's position with the Department.
 - 46.1.3. witness in a private capacity.
- 46.2. Any reference in this clause to "Court" is taken to also mean the "Industrial Relations Commission (IRC) or any Court which arises out of the *Industrial Relations Act* (NSW) 1996", provided that:
 - 46.2.1. An employee is only covered by this clause when:
 - 46.2.1.1. The Department requires them to attend to be cross examined, or
 - 46.2.1.2. The Union requires them to attend to give evidence, or

- 46.2.1.3. The matter in question is one that relates to one individual employee and is not a collective dispute, or
 - 46.2.1.4. The matter in question has been lodged in the name of an employee - that employee will be covered for all work performed in advancing their matter, or
 - 46.2.1.5. Any other circumstances which are agreed between the parties on a case-by-case basis.
- 46.2.2. The provisions of Clause 46.3 will apply to IRC matters where the employee meets one of the criteria at clause 46.2.1.
- 46.3. Where an Employee attends Court as a result of the duties performed by an employee in the employee's position with the Department, including attendance at an incident:
- 46.3.1. Such attendance shall be regarded as attendance in an Official Capacity and uniform must be worn.
 - 46.3.2. The Other than monies paid as reimbursement for loss of income as an employee of the Department, employees may retain all monies paid in connection with their attendance as a witness.
 - 46.3.3. In addition to any monies to which an employee may be entitled pursuant to subclause 46.3.2, employees shall be paid at the rate applicable to the employee's classification, from the time the employee is required to attend Court to the time on that day that the employee is no longer required by the Court.
 - 46.3.4. Travelling time and travel expenses in excess of any compensation paid by the Court or other party shall be compensated in accordance with clause 18, Travelling Compensation.
 - 46.3.5. Where the employee is required to attend Court while on Annual or Long Service Leave, such employee shall be recredited with a full day of leave, for each day or part thereof.
 - 46.3.6. Where an employee is subpoenaed to attend Court while on Sick Leave it is the responsibility of the employee to ensure that the circumstances are communicated to the Court. If the employee is still required to and does attend Court, the sick leave debited for that period shall be recredited and the entitlements provided for in subclauses 46.3.2, 46.3.3 and 46.3.4 shall apply.
- 46.4. Where an Employee Attends Court as a Witness for the Crown but not as a result of the duties performed by the employee in the employee's position with the Department, or as a witness in a Private Capacity (i.e., not subpoenaed by the Crown):
- 46.4.1. The employee shall only be entitled to Special Leave Without Pay from the Department to attend Court.
 - 46.4.2. Any claim for reimbursement of expenses, compensation for travelling time, lost income etc. is to be made by the employee to the Court and/or the party issuing the subpoena. The employee may retain all monies paid as a consequence of such claims.
- 46.5. Where an Employee Attends Court in a Private Capacity, (i.e., not subpoenaed by the Crown).
- 46.5.1. Employees shall be granted leave of absence without pay for the period they are necessarily absent from duty or, if they so desire, may apply for consolidated leave and, in either case, may retain monies paid to them as witnesses.
- 46.6. An employee who attends jury duty is entitled to Special Leave without loss of Retainer for the duration of the jury duty if attending court affects their availability to turn out. This leave is available whether or not the employee accepts jury fees.

47. Acknowledgement of Applications and Reports

- 47.1. When an employee makes an application or a report in writing, to the proper officer, the employee shall be sent a memorandum or email acknowledging its receipt and noting the matter contained therein.
- 47.2. The result of an application shall be communicated to the employee no later than fourteen days after a decision has been reached. In cases where no decision has been reached within one month the reason for the delay shall be communicated in writing, by memorandum or email, to the employee.
- 47.3. The provisions of this clause shall not apply in cases where other procedures are specifically stipulated (e.g., in Standing Orders or Commissioner's Orders).

48. Procedures, Reports and Charges

- 48.1. When an employee is summoned to appear before the employee's Senior Officer or before the department on a charge, appeal or formal inquiry, the employee shall be given particulars in writing of the charge or allegation, if any, against the employee, at least 48 hours before the hearing of the charge or appeal or the opening of the said inquiry. The employee shall be allowed access personally or by a representative duly authorised in writing by the employee, to all or any of the official papers, correspondence or reports of the Department relating to the charge, appeal or subject of the said inquiry.
- 48.2. The employee shall also be allowed to give and to call evidence on the employee's own behalf and to hear all evidence given.
- 48.3. If an employee so requests the employee may be represented by an officer of the Union before the employee's Senior Officer or the Department on all such occasions.
- 48.4. Where the Department has, for its own purposes, arranged for a transcript to be taken of proceedings on a charge appeal or formal inquiry, a copy of such transcript shall be supplied, free of cost, to the employee concerned if, during the hearing or at the termination of the proceedings, a request therefore, in writing, is made by the employee.
- 48.5. After the Senior Officer has announced the recommendation or when the Department has made its decision as the result of a charge or an appeal, the employee concerned shall be informed thereof, in writing, within seven days after such announcement or decision has been made or has been given, as the case may be.
- 48.6. For the purposes of this clause "Senior Officer" means the employee's Senior Officer or an Officer of a higher rank.

49. Alcohol and Other Drugs

- 49.1. The joint Protocol on Drug and Alcohol Safety and Rehabilitation in the Workplace, signed by the Department and the Union on 18 March 1998, shall apply to all employees covered by this Award until 4 September 2013, when it will be replaced by the FRNSW Alcohol and Other Drugs Policy and associated FRNSW Alcohol and Other Drugs Testing Procedures which shall thereafter then apply to all employees covered by this Award.
- 49.2. The Department may develop a new Protocol, or revised Policy or Procedures following consultation between the Department and the Union in accordance with Clause 8, Consultation.

50. Anti-Discrimination

- 50.1. It is the intention of the parties bound by this Award to seek to achieve the object in 3(f) of the *Industrial Relations Act* 1996 to prevent and eliminate discrimination in the workplace. This includes discrimination on the grounds of race, sex, marital status, disability, homosexuality, transgender identity, age and responsibilities as a carer.

- 50.2. It follows that in fulfilling their obligations under the Disputes Procedure prescribed by Clause 10 of this Award the parties have obligations to take all reasonable steps to ensure that the operation of the provisions of this Award are not directly or indirectly discriminatory in their effects. It will be consistent with the fulfilment of these obligations for the parties to make application to vary any provision of the Award which, by its terms or operation, has a direct or indirect discriminatory effect.
- 50.3. Under the *Anti-Discrimination Act 1977*, it is unlawful to victimise an employee because the employee has made or may make or has been involved in a complaint of unlawful discrimination or harassment.
- 50.4. Nothing in this Clause is taken to affect:
- 50.4.1. any conduct or act which is specifically exempted from anti-discrimination legislation;
 - 50.4.2. offering or providing junior rates of pay to persons under 21 years of age;
 - 50.4.3. any act or practice of a body established to propagate religion which is exempted under section 56(d) of the *Anti-Discrimination Act 1977*;
 - 50.4.4. a party to this Award from pursuing matters of unlawful discrimination in any State or Federal jurisdiction.
- 50.5. This Clause does not create legal rights or obligations in addition to those imposed upon the parties by legislation referred to in this Clause.

51. Rights of Union Representatives

- 51.1. The parties recognise the importance of freedom of association and the right to Union representation in the workplace.
- 51.2. As such, no employee will be dismissed or injured in their employment, or have their position altered to their prejudice or be subject to any act by the employer to their prejudice solely for reasons of:
- 51.2.1. Their status as a Union member, Union employee or accredited representative; and/or
 - 51.2.2. Their participation or any proposal to participate in Union activities including but not limited to, consultation processes, disputes processes, campaigns and/or legal proceedings.
- 51.3. Accredited representatives of the Union will also have rights to freedom of communication both in the workplace and outside of the workplace in order to express the views of the Union without fear of dismissal, injury of their employment or any act of prejudice by the employer. Where accredited representatives express such views, the accredited representative will be clear that in expressing the view they are doing so as a Union accredited representative with the authority of the Union and not as an employee of the Department.

52. Employees' Duties

- 52.1. An employee may be directed to carry out duties which are within the limits of his or her skills, competence, and training, in such a manner, as may be required by the Department, provided that:
- 52.1.1. the direction is reasonable,
 - 52.1.2. an employee who elects to relinquish a rank or qualification shall cease to be considered to be capable of carrying out the duties associated with that former rank or qualification, and
 - 52.1.3. the direction is not otherwise inconsistent with a provision of this Award.
- 52.2. Any direction issued by the Department pursuant to subclause 52.1 shall be consistent with:

- 52.2.1. the provision of a safe and health working environment,
 - 52.2.2. ensuring that the Department responds to relevant technological changes and changes in its operating environment in a timely and effective manner.
- 52.3. The parties to this Award shall work collaboratively to ensure the effective and reasonable operation of this clause.

A8 - HEALTH AND WELLBEING

53. Health Screening

- 53.1. The parties agree that the current system of health checks under the Crown Employees (Fire and Rescue NSW Firefighting Staff Death and Disability) Award 2022 will be replaced with a health screening program for all employees. The health screening program will operate as a trial for a period of 36 months, commencing on a date agreed between the parties. The trial will be reviewed after 12 months.
- 53.2. The key objectives of the health screening program are to promote the health and fitness of firefighters and ensure employees are screened for relevant occupational illness and injuries.
- 53.3. The health screening model and process, as described in this clause, is also the agreed, and only process for the Department to assess an employee's fitness for duty as against the inherent requirements of the role of a firefighter.
- 53.4. Employees will be assessed against an agreed health standard. The current agreed health standard is contained at Schedule 6 of this Award however the parties agree that the current health standard will be reviewed in line with the consultation provisions of Clause 8, Consultation, of this Award, during the life of this Award, with a view to developing a new health standard specific to the firefighting industry which is intended to replace the current agreed health standard in any future Award.
- 53.5. The health screening program will include:
- (a) Medical examination by a general practitioner (primary focus on cardiovascular, respiratory and musculoskeletal systems);
 - (b) Pathology testing (general health markers; e.g. lipid profile, blood glucose level);
 - (c) Urinalysis;
 - (d) Twelve lead ECG;
 - (e) Cardiac Risk Profile (risk score based on Framingham study);
 - (f) Spirometry (lung function), if recommended by the firefighters nominated general practitioner;
 - (g) Vision;
 - (h) Audiometry (hearing), if recommended by the firefighters nominated general practitioner;
 - (i) Voluntary PFAS/PFOA blood testing and voluntary comprehensive cancer screening including PET scans which will be implemented within 6 months of the commencement of the trial.
- 53.6. Health Screening
- 53.6.1. A health screen will be undertaken by each employee at every 5-year anniversary of their employment with the Department.
 - 53.6.2. It is the sole responsibility of the Department to contact the employee in writing at least 12 months prior to each 5-year anniversary of the employee and advise them of the

requirement to complete a Health Screen by no later than the date of the relevant 5-year anniversary of employment. This contact will be in writing and must include:

- (a) a full list of agreed tests (based on the agreed health standard and agreed tests as per clause 53.5) required to be completed;
- (b) a copy of the agreed health standard;
- (c) an agreed checklist and clearance form to be developed between the parties in accordance with Clause 8, Consultation, of this Award to be completed by the employee's nominated medical practitioner.

53.6.3. Where the Department fails to meet each of their obligations as outlined in clause 53.6.2, the employee is not required to complete the health screen at that five year anniversary and cannot be required to do so until their next five year anniversary, unless the employee elects to do so or otherwise in accordance with subclause 53.6.4.

53.6.4. The only circumstances where an employee may be required to undergo a health screen at more frequent intervals than each 5-year anniversary are in circumstances where the Department has formed a reasonable belief, based on direct evidence, that, should the employee remain on duty or perform duties, they may endanger themselves, their colleagues or the public, and the employee disagrees with this belief. In these circumstances the Department may require the employee to undergo either a full health screen or a component(s) of the health screen, in accordance with this clause to assess their fitness for duty. Where the employer exercises their right in accordance with this subclause, an employee will be provided alternative duties on the basis of no disadvantage to the employee in terms of pay, location and roster until such time as the health screen process, in accordance with the clause, is complete or, alternatively, if the employee is unable to perform any duties, or alternative duties are not able to be provided by the Department, the employee will be released from duty without loss of any pay, entitlements or leave of the employee.

53.6.5. Health Screening Process

53.6.5.1. Step 1

53.6.5.1.1. On notification to an employee of the need to complete a health screen either in accordance with subclause 53.6.2 or 53.6.4, the employee will attend their own nominated health practitioner to complete the screen. The employee may elect for the Brigade Medical Officer to be their nominated health practitioner.

53.6.5.1.2. The employee's nominated health practitioner will perform the agreed tests and medical assessments listed in subclause 53.5 and assess the results against the agreed health standard before completing the agreed checklist and clearance form.

53.6.5.1.3. All results, information, discussions etc between the employee and their nominated health practitioner are strictly confidential as between the employee and the nominated health practitioner.

53.6.5.1.4. On completion of the health screen, the employee's nominated health practitioner will complete the agreed clearance form which the employee is to provide to the Department. This clearance form will certify that the employee's nominated health practitioner has undertaken all agreed tests and medical assessments, has been provided with a copy of the agreed health standard and has completed the health screen with the employee. The employee's nominated health practitioner will then declare further on the form one of the following:

- (a) that the employee is fit to perform the firefighter's ordinary duties without any requirements or restrictions; or
- (b) that the employee is fit to perform the firefighter's ordinary duties with specified requirements or restrictions; or
- (c) that the employee is temporarily unfit to perform the firefighter's ordinary duties but fit to perform alternative duties; or
- (d) that the employee is temporarily unfit to perform any FRNSW duties; or
- (e) that the employee is permanently unfit to perform the firefighter's ordinary duties but fit to perform alternative duties; or
- (f) that the employee is permanently unfit to perform the firefighter's ordinary duties.

53.6.5.1.5. The Department will provide the employee's nominated health practitioner access to their nominated health practitioner (the Brigade Medical Officer) during the health screen process should the employee's nominated health practitioner require advice/assistance in completing the health screen however any such discussion will be deidentified and strictly confidential between the Brigade Medical Officer and the employee's nominated health practitioner.

53.6.5.2. Step 2

53.6.5.2.1. Where an employee submits an agreed clearance form to the Department in accordance with step 1 and the employee's nominated medical practitioner has declared that the employee is fit to perform ordinary duties without any requirement or restrictions, the health screen is complete, and no further action will be taken by the employee or the Department.

53.6.5.2.2. Where an employee submits an agreed clearance form in accordance with step 1 and the employee's nominated medical practitioner has declared that the employee is fit to perform the firefighter's ordinary duties with specified requirements or restrictions, the Department will accommodate the specified requirements or restrictions and the employee will agree to abide by the specified requirements and or restrictions at all times whilst performing duties unless updated medical advice is provided (i.e. if the employee is required to wear glasses to meet vision standards the employee will do so while at work).

53.6.5.2.3. Where an employee submits an agreed clearance form in accordance with step 1 and the employee's nominated medical practitioner has declared that the employee is temporarily unfit to perform the firefighter's ordinary duties but fit to perform alternative duties, the Department will take all reasonable action to provide the employee with alternative duties taking into consideration the employee's personal circumstances including but not limited to:

- the location of the employee's residence;
- the employee's usual hours of work;
- care and other family arrangements of the employee;
- any relevant financial considerations.

Where alternative duties are not able to be provided by the Department, the employee will be released from duty and entitled to access any leave balance they may have or leave without pay for the temporary period.

53.6.5.2.4. Where an employee submits an agreed clearance form in accordance with step 1 and the employee's nominated medical practitioner has declared that the employee is temporarily unfit to perform any FRNSW duties, the employee will be directed to utilise their own leave entitlements and/or other compensations where applicable such as workers compensation. Where the employee has no paid leave entitlements available and is not entitled, or is not yet accessing other compensation, the Department will provide the employee with leave without pay for the relevant period.

53.6.5.2.5. Where an employee submits an agreed clearance form in accordance with step 1 and the employee's nominated medical practitioner has declared that the employee is permanently unfit to perform the firefighter's ordinary duties but fit to perform alternative duties, the Department will take all reasonable action provide the employee with alternative duties taking into consideration the employee's personal circumstances including but not limited to:

- the location of the employee's residence;
- the employee's usual hours of work;
- care and other family arrangements of the employee;
- any relevant financial considerations.

Where the Department has offered alternative duties following a consideration of the above matters, but the employee does not accept the alternative duties as offered by the Department the employee is entitled to exercise all their rights in accordance with Clause 10, Disputes Procedure. No action will be taken in relation to the employee's employment by the Department until such time as the steps in accordance with Clause 10 are complete. For any period where the employee is not provided with alternative duties agreed to by the employee including for any period where the matter is in dispute, the employee will be released from duty without loss of any pay, entitlements or leave of the employee. A dispute issued under Clause 10 in relation to an offer of alternative duties by the Department will determine whether the duties offered are suitable to the employee concerned taking into consideration primarily the items listed in this subclause along with:

- the employee's relevant medical restrictions requiring them to access alternative duties.
- the employer's capacity to offer such suitable alternative duties.

If it is ultimately determined that the employer is unable to provide the employee with alternative duties to which the employee can agree, the employee will be directed to access their entitlements in accordance with Clause 8 of the Crown Employees (Fire and Rescue New South Wales) Death and Disability Award 2023.

53.6.5.2.6. Where an employee submits an agreed clearance form in accordance with step one and the employee's nominated medical practitioner has declared that the employee is permanently unfit to perform the firefighter's ordinary duties and any other alternative role within FRNSW, the employee will be directed to access their entitlements in accordance with the Crown Employees (Fire and Rescue New South Wales) Death and Disability Award 2023.

- 53.6.5.2.7. Should an employee's health screen result in any of the outcomes described in subclauses 53.6.5.2.3-53.6.5.2.6, the Department may, within 7 days of receipt of the employee's health screen, direct the employee to provide the results of the tests undertaken in accordance with 53.5 (with the exception of the voluntary tests) to the Brigade Medical Officer for a review of such results. If the Brigade Medical Officer deems it necessary, they may, within a further 7 days, require the employee to present for an appointment with them to further discuss the results of Health Screen. The Brigade Medical Officer will, by no later than a further 7 days from any appointment with the employee, or, if no appointment is required, within 7 days of receipt of the employees' test results, determine to either affirm the outcome as specified by the employee's nominated health practitioner or, add to/vary the outcome. Where the Brigade Medical Officer does not affirm the outcome as specified by the employee's nominated health practitioner, the employee is entitled to exercise all their rights in accordance with Clause 10, Disputes Procedure. No action will be taken in relation to the employee's employment by the Department until such time as the steps in accordance with Clause 10 are complete. For any period where the employee is required by the Brigade Medical Officer and/or the Department to not continue to work in their usual role, including for any period where the matter is in dispute, the employee will be released from duty without loss of any pay, entitlements or leave of the employee.
- 53.6.5.2.8. The Department will, on receipt of evidence from the employee, reimburse the employee all costs associated with the health screening process by no later than the next full pay cycle following receipt of the employee's evidence.
- 53.6.5.2.9. Employees who are off duty will be compensated by the Department for all time spent participating in the Health Screening process by way of a payment equivalent to 4% of the Awards deemed fortnightly salary for each incident of participation. Unless transport is provided by FRNSW, payment at the Official Business rate will also be made for the actual return distance necessarily and reasonably travelled between the firefighter's normal residence or place of work and the location(s) travelled to for the Health Screen.

A9 - WORKPLACES, APPLIANCES, UNIFORMS AND EQUIPMENT

54. Personal Protective Clothing and Equipment, and Uniforms

- 54.1. Recognising the inherently dangerous nature of firefighting work, and the uncontrolled environment firefighters work in, the Department shall supply to all employees appropriate personal protective clothing and equipment (PPE/PPC) and uniforms required to maintain the best possible standards of health and safety for operational and other duties required to be undertaken.
- 54.2. Such PPE/PPC and uniforms will meet relevant national and/or international Standards or as otherwise agreed to with the Union.
- 54.3. No new PPE/PPC or uniform shall be implemented or introduced without full consultation in accordance with Clause 8, Consultation. There will be no changes to any existing PPE/PPC or uniforms without full consultation under Clause 8, Consultation.
- 54.4. Where any new PPE/PPC or uniform is introduced which requires training in its use, consultation will occur in accordance with Clause 8, Consultation, in relation to the training and implementation will not occur until the completion of the relevant training.
- 54.5. Employees supplied with the all the items of clothing and PPE/PPC listed at Schedule 4 shall wear it in accordance with Departmental instructions. No employee outside of those covered under this Award

will be entitled to be issued with or wear any of the items listed at Schedule 4 outside of Fire and Rescue New South Wales Commissioner, Deputy Commissioners and Assistant Commissioners.

- 54.6. The provision of wet weather gear shall be in accordance with existing practice, or as otherwise agreed between the parties.

55. Clothes Drying Facilities

- 55.1. A drying closet for artificially drying clothing shall be provided by the Department at all fire stations to which employees are attached.

56. Cleaning of Clothes

- 56.1. For the purposes of this clause:

56.1.1. "Personal Protective Equipment" means external clothing designed for personal protection at an incident.

56.1.2. "Duty wear" means duty wear trousers and duty wear shirt.

56.1.3. "Dress uniform" is limited to Dress Trousers, Slacks, Culottes, Skirts, Galatea and Pullover.

- 56.2. Where any Personal Protective Equipment or Duty wear is supplied by the Department and is required to be worn by its employees, and such Personal Protective Equipment or Duty wear becomes soiled or damaged in the execution of duty as to require cleaning or repairs, such cleaning or repairs shall be done at the expense of the Department. Provided that the above Dress Uniform items shall also be cleaned or repaired at the expense of the Department.

- 56.3. When an employee retires, resigns or is terminated all Personal Protective Equipment issued to that employee shall be returned to the station to which the employee was attached. As much of that returned Personal Protective Equipment shall be retained at the station as is necessary to maintain an emergency supply of spare Personal Protective Equipment.

57. Vehicles, Appliances and Equipment

- 57.1. Recognising the inherently dangerous nature of firefighting work, and the uncontrolled environment firefighters work in, the parties agree that all vehicles, appliances and equipment to be used by firefighters must be fit for purpose and maintain the highest possible safety standards.
- 57.2. No new appliance, vehicle or equipment shall be implemented or introduced without full consultation in accordance with Clause 8, Consultation. There will be no changes to any existing appliance, vehicle or equipment without full consultation under Clause 8, Consultation. Where any new appliance, vehicle or equipment is introduced which requires training in its use, consultation in accordance with Clause 8, Consultation, will occur in relation to the training and, implementation will not occur until the completion of the relevant training.
- 57.3. The parties agree that there will be a subcommittee of the Joint Consultative Committee which will be called the Vehicle and Equipment Subcommittee. This committee will have three representatives of the Department and three representatives of the FBEU and will be established to consult on all matters relating to vehicles and equipment in accordance with Clause 8, Consultation.

58. Safety Belts

- 58.1. Safety belts shall be fitted to all seats on all vehicles operated by the Department which employees are called upon to drive or to ride upon on a public road. Employees are required to wear safety belts at all times while driving or a passenger in a vehicle operated by the Department.

59. Station Design, Infrastructure and Amenities

- 59.1. The parties acknowledge that Fire Stations are unique workplaces which require specific infrastructure and amenities.
- 59.2. The parties agree to work towards the development of a guideline prior to the expiry of this Award to ensure standard and appropriate amenities in all new Fire Stations or in the case of modifications to existing Fire Stations.
- 59.3. The parties agree that no new Fire Stations or modifications to existing Fire Stations will occur without full consultation in accordance with Clause 8, Consultation. It is not the intention of the parties to decrease the number of overall Fire Stations, appliances or crewing as a result of this clause.
- 59.4. The parties agree that there will be a subcommittee of the Joint Consultative Committee which will be called the Infrastructure Subcommittee. This committee will have three representative of the Department and three representatives of the FBEU and will be established to consult on all matters relating to Infrastructure in accordance with Clause 8, Consultation.

60. Station Relocation, Redevelopments and Renovations

- 60.1. The following arrangements shall apply whenever the Department is considering a relocation, redevelopment, or renovation of a fire station/work location staffed by employees covered by this Award. It is not the intention of the parties to decrease the overall number of Fire Stations, appliances or crewing as a result of this clause.
- 60.2. All aspects of any station/work location relocation, redevelopment and renovation will be in accordance with Clause 8, Consultation, along with the provisions of this clause.
- 60.3. Where relocation, redevelopment or renovation work results in the temporary relocation of the workplace/station within the station's area, then the temporary location will be considered the station's ordinary location for all purposes (e.g. relieving). Where temporary relocation within the workplace/station's area is not practicable then the status of the station's temporary location (ordinary or not) will be determined on a case-by-case basis with agreement with the Union.
- 60.4. Fire Station Relocation, redevelopment and/or renovation additional consultation process:
 - 60.4.1. Where the Department are proposing a permanent relocation of a Fire Station or work location staffed by employees (whether this be to an entirely new premises or an alternative currently existing FRNSW premises); or redevelopment and/or renovation of an existing premises, the Department will notify the Union health and safety representative and all affected staff in writing including a full proposal. This proposal will include but not be limited to the following:
 - Reasons for the proposed relocation, redevelopment and/or renovation.
 - Indicative timelines for the project.
 - Clear information as to how crewing numbers, current appliances and services will be maintained during any redevelopment and/or renovation works including any period of temporary relocation and/or following the occupation to the relocated premises.
 - The proposed design and amenities for any temporary premises where temporary premises are required (including where this is in temporary facilities on site at the relocated premises).
 - The proposed design and amenities for the redeveloped and/or renovated fire or any new station/work location.
 - Any other matters deemed relevant and requested by affected staff or the Union.
 - 60.4.2. Affected staff, and the Union will have full consultation regarding the above proposal prior to any action by the Department to commence the redevelopment, renovation or relocation process.

60.5. All redeveloped, renovated, temporary and/or permanently relocated Fire Stations/ Work locations will at a minimum provide the following facilities/amenities:

- Facilities for the preparation and consumption of meals, recreation and rest and recline.
- Facilities to ensure privacy for all employees.
- Any other items agreed between the Department, the Union and affected employees.

60.6. Prior to occupation of any redeveloped, renovated, temporary and/or permanently relocated facilities, the Department will arrange an inspection of the premises. The inspection party will include, as a minimum, a representative of the Department capable of explaining in detail what work will be done and answering questions about the work, and a Union-nominated representative and the relevant Health and Safety Representative.

PART B - ADDITIONAL CONDITIONS FOR SPECIFIC GROUPS OF EMPLOYEES

B1 - ADDITIONAL CONDITIONS FOR RETAINED OFFICERS

61. Safe Staffing and Systems of Work

61.1. At all Retained stations with a single operational appliance (that is, excluding SEVs), one Captain and one Deputy Captain will be employed and maintained as a minimum number at all times.

- 61.1.1. By agreement between the Department and the Union, stations may request a second Deputy Captain if the administrative or operational workload is high enough to warrant an additional Retained Officer position.

B2 - ADDITIONAL CONDITIONS FOR RETAINED RESCUE OPERATORS

62. Safe Staffing and Systems of Work

62.1. At all Retained stations accredited as rescue units with the State Rescue Board, the minimum number of operators as required by the State Rescue Board will be trained to the required level, with the goal of all staff being rescue qualified.

62.2. At all times, a minimum of two rescue operators must be available to respond to an incident at the station.

B3 - ADDITIONAL CONDITIONS FOR RETAINED HAZMAT OPERATORS

63. Safe Staffing and Systems of Work

63.1. At all Retained stations which have a Retained Hazmat appliance, a minimum number of half of the staff numbers at the station will be trained, with the goal of all staff being Intermediate Hazmat trained.

63.2. At all times, a minimum of two Hazmat operators must be available to respond to an incident at the station.

SCHEDULE 1 - PAY RATES & ALLOWANCES

Table 1 - Retainers

Retainers per fortnight	Retainer Level	Code	26 February 2024 \$	26 February 2025 \$	26 February 2026 \$
Firefighters (all)	Base	A	\$81.41	\$84.67	\$89.75
	50%	B	\$162.83	\$169.34	\$179.50
	75%	C	\$244.24	\$254.01	\$269.25

	100%	D	\$325.66	\$338.69	\$359.01
Deputy Captains (all)	Base	E	\$135.69	\$141.12	\$149.59
	50%	F	\$180.93	\$188.17	\$199.46
	75%	G	\$271.39	\$282.25	\$299.19
	100%	H	\$361.85	\$376.32	\$398.90
Captains (all)	Base	I	\$151.98	\$158.06	\$167.54
	50%	J	\$202.64	\$210.75	\$223.40
	75%	K	\$303.96	\$316.12	\$335.09
	100%	L	\$405.28	\$421.49	\$446.78

Table 2 - Rates of Pay

Description		Code	26 February 2024 \$	26 February 2025 \$	26 February 2026 \$
Recruit Firefighter	1st hour	M	\$34.47	\$35.85	\$38.00
	Each further ½ hour or part	N	\$17.23	\$17.92	\$19.00
Firefighter	1st hour	O	\$38.78	\$40.33	\$42.75
	Each further ½ hour or part	P	\$19.40	\$20.18	\$21.39
CFR Firefighter	1st hour	Q	\$41.50	\$43.16	\$45.75
	Each further ½ hour or part	R	\$20.75	\$21.58	\$22.87
Deputy Captain	1st hour	S	\$43.09	\$44.81	\$47.50
	Each further ½ hour or part	T	\$21.55	\$22.41	\$23.75
CFR Deputy Captain	1st hour	U	\$46.10	\$47.94	\$50.82
	Each further ½ hour or part	V	\$23.06	\$23.98	\$25.42
Captain	1st hour	W	\$48.26	\$50.19	\$53.20
	Each further ½ hour or part	X	\$24.13	\$25.10	\$26.61
CFR Captain	1st hour	Y	\$51.64	\$53.71	\$56.93
	Each further ½ hour or part	Z	\$25.82	\$26.85	\$28.46
Relief Duties, all ranks	1st three hours	RD3	\$216.66	\$225.33	\$238.85
	Each further hour	RDH	\$86.68	\$90.15	\$95.56
Royal Easter Show	Firefighters (all) per hour	RASF	\$59.98	\$62.38	\$66.12
	Deputy Captains (all) per hour	RASDC	\$64.28	\$66.85	\$70.86
	Captains (all) per hour	RASC	\$69.45	\$72.23	\$76.56
ComSafe Duties	Per Hour	COMS	\$91.99	\$95.67	\$101.41

Table 3 - Allowances

Item	Description	Unit	26 February 2024 \$	26 February 2025 \$	26 February 2026 \$
1	RTAAS Allowance	Per Fortnight	\$18.22	\$18.95	\$20.09
2	KM Allowance	Per Kilometre	\$1.48	\$1.54	\$1.63
3	Meal Allowance (MA)	Per meal		\$38.65	
4	Refreshment Allowance (RA)	Per meal		\$19.30	
5	Remotely Piloted Aircraft Systems Allowance	Per Week	\$17.00	\$17.68	\$18.74
12	Court Attendance Stand- By Rate	\$			
	-Periods of less than 24- hours		\$18.60	\$19.34	\$20.50

	-Periods of 24 hours		\$27.88	\$29.00	\$30.74

Table 3A - General Land Rescue and Other Rescue Allowances

Item	Description	Unit Formula	RFF on 100% retainer rate
1	General Land Rescue Allowance	RFF 100% retainer GLR rate \$ per week	\$33.15pw
2	Retained Firefighter satisfies clause 13.4.1 of the Award.	RFF 100% retainer GLR rate x 25% loading	\$41.44pw
3	Retained Firefighter satisfies clause 13.4.2 of the Award.	RFF 100% retainer GLR rate x 50% loading	\$49.73pw
4	Retained Firefighter satisfies clause 13.4.3 of the Award.	RFF 100% retainer GLR rate x 50% loading	\$49.73pw

Table 4 - Travelling Compensation Allowances

Item No	Clause	Description	Amount
1		Meal expenses on one day journeys	
		Capital cities and high cost country centres	
	18.2.1	Breakfast	\$34.75
	18.2.2	Lunch	\$39.10
	18.2.3	Dinner	\$66.65
		Tier 2 and other country centres	
	18.2.1	Breakfast	\$31.15
	18.2.2	Lunch	\$35.55
	18.2.3	Dinner	\$61.30
2		Travelling allowances	
	18.3.3	Capital cities	Per day (inclusive of accommodation, meals and incidental expenses allowance)
		Adelaide	\$323.00
		Canberra	\$343.00
		Darwin	\$385.00
		Hobart	\$341.00
		Melbourne	\$338.00
		Perth	\$345.00
		Sydney	\$388.00
	18.3.3	High cost country centres	Per day (inclusive of accommodation, meals and incidental expenses allowance)
		Albury	\$372.00
		Armidale	\$331.00
		Bathurst	\$372.00
		Bega	\$372.00
		Bourke	\$349.00
		Broken Hill	\$327.00
		Cobar	\$372.00
		Coffs Harbour	\$372.00
		Cooma	\$372.00
		Cowra	\$372.00
		Dubbo	\$335.00
		Goulburn	\$330.00
		Gosford	\$326.00
		Grafton	\$337.00
		Griffith	\$325.00

		Gunnedah	\$345.00
		Halls Creek (WA)	\$369.00
		Inverell	\$372.00
		Lismore	\$348.00
		Maitland	\$352.00
		Mudgee	\$371.00
		Muswellbrook	\$325.00
		Narrabri	\$372.00
		Newcastle	\$360.00
		Nowra	\$333.00
		Orange	\$380.00
		Port Macquarie	\$355.00
		Port Pirie (SA)	\$372.00
		Queanbeyan	\$372.00
		Tamworth	\$372.00
		Taree	\$372.00
		Tumut	\$372.00
		Wagga Wagga	\$342.00
		Wollongong	\$347.00
		Tier 2 country centres	Per day (inclusive of accommodation, meals and incidental expenses allowance)
		None listed for 2025-26	-
		Other country centres	\$293.50 (Per day)
	18.3.2	Incidental expenses when claiming actual expenses - all locations	\$24.50 (Per day)
	18.3.3	Daily allowance payable after 35 days and up to 6 months in the same location - all locations	50% of the appropriate location rate
3	18.3.2	Incidental expenses	\$24.50 (Per day)

Legend:

Effective Dates are with effect from the first pay period to commence on or after the date.

SCHEDULE 2 - AUTHORISED DUTIES

Table 1 - Duties Listing

Appliance Maintenance: Engine Keeping Duties, Hose Audit/Repairs, Restow, SIMS Duties, Transporting fire appliance for service/repairs/transfer, Transporting FRNSW equipment in private vehicle

Community Safety Activities: CFU Training, Chemwise program, Fire safety displays, Fire permits, Open day, Fire education, Hydrant or booster inspections, Media, social media or photo shoot, Pre-Incident Planning, Rescued, Safety visits, Static water supply program, or any other public education activity.

Recruitment: Campaigning (including but not limited to social media, media, visiting businesses, information nights), Merit selection training, Physical Aptitude testing, Selection panel interviews.

Station maintenance: Cleaning, Lawn mowing/weeding/edges, Recharge BA Cylinder/ BA and equipment checks, Taking out station bins, Changing community information signs.

Station management: Access for contractors or visitors, Attendance/timesheet management, Availability management, CARS reports, Correspondence, eAIRS report completion where insufficient time at the conclusion of calls, ESCAT Order/receipt, SMART authorisation, Debrief - formal or informal, Meetings, ORP Activities, Drill preparation, Response to urgent emails and/or other correspondence received outside of incidents, Process of leave applications, Petty cash procedures, Zone teleconference or video meetings, Health & Safety Matters.

Training: Training will not form part of authorised duties and will be accounted for in a separate training budget.

SCHEDULE 3 - SAFE STAFFING

Chart 1 - Minimum Staffing Ratios

Minimum Safe Staffing Numbers

Minimum Safe Staffing numbers for retained brigades are based on the number of firefighters required to crew the appliances allocated to the brigade plus allowance for factors such as leave availability of staff and relieving components.

For the primary appliance at the station the standard is:

- the minimum crew required for the appliance, plus
- an availability component of another minimum crew, plus
- a relieving component of 50% of the above.

For each additional appliance allocated to the brigade the standard is:

- the minimum crew required for the appliance, plus
- a relieving component of 50% of the minimum crew.

There is no additional availability component for additional appliances, as the availability component for the primary appliance is sufficient to cover the additional appliances.

The positions of Captain and Deputy Captain are included in these crew numbers.

Table 1: Examples of standard establishments for primary appliances

Appliance	Minimum crew	Availability component	Relieving component	Standard establishment
Pump	4	4	4	12
Water tanker	2	2	2	6
Composite	4	4	4	12

Table 2: Examples of standard establishments for additional appliances

Appliance	Minimum Crew	Relieving component	Standard establishment
Second pump	4	2	6
Water tanker	2	1	3
Composite	2	1	3
Hazmat and rescue support vehicles	2	1	3

Applying these calculations results in the following typical examples of standard establishments:

Table 3: Examples of standard establishments

Appliances allocated	Standard establishment
Pump and water tanker	15 = (12 + 3)
Pump and rescue support vehicle	15 = (12 + 3)
Pump and composite	15 = (12 + 3)
Two pumps and a hazmat support vehicle	21 = (12 + 6 + 3)

Mixed crew stations

Where retained firefighters are used to cover times when permanent firefighters are not on duty, the retained establishment is calculated as for a fully retained station, as they will be required to crew all the appliances at the station during those times.

For example, where permanent firefighters crew a pump during the day, and retained firefighters crew it at night, the retained establishment is 12. If the retained firefighters were also used to crew a water tanker at any time, the retained establishment would be 15.

If retained firefighters are not required to crew all the appliances available when the permanent firefighters are not on duty, the retained establishment is limited to only those appliances they are required to crew.

When retained firefighters are used to crew appliances additional to appliances crewed by permanent firefighters, the retained establishment is based on the crews required only for those appliances, with one appliance crewed by retained firefighters designated as their primary appliance and the others treated as additional appliances.

For example, where permanent firefighters crew a pump on the 10/14 roster, and retained firefighters crew a water tanker, the standard retained establishment is 6.

Tanker Only Stations

Where a Retained Fire Station has only a single appliance and that appliance is a water tanker the minimum retained establishment number for that fire station will be 12 retained firefighters.

Variations

There will be no variations to the minimum safe staffing numbers provided for in this Schedule unless otherwise in accordance with this Award and only by agreement with the FBEU.

Table 1 - Minimum Safe Staffing Numbers

Appliance	Minimum Safe Staff Numbers	Minimum Qualifications (nb. where the motor driver holds any of the additional qualifications listed, they count as one of the required numbers for that qualification)
Pumper	4 Firefighters	1 Motor Driver
Rescue Pumper	4 Firefighters	1 Motor Driver, 2 Rescue qualified Operators
HAZMAT Pumper	4 Firefighters	1 Motor Driver, 2 Hazmat Technicians
CAFS Pumper	4 Firefighters	1 Motor Driver, 2 qualified CAFS Operators
Tanker	2 Firefighters	1 Tanker Motor Driver, 2 Tanker Operator
Bulk Tanker	2 Firefighters	1 Motor Driver, 2 Bulk Tanker qualified Operators

SCHEDULE 4 - PERSONAL ISSUE UNIFORM AND PPE

The parties agree that in accordance with Clause 54, all employees will be issued with the below items of Uniform and Personal Protective Clothing/Equipment in the quantities specified below:

PPE and Duty Wear

Item	Initial issue	
	Permanent	Retained
Personal protective equipment and clothing (including duty wear)		
Belt, web, duty wear	1	1
Boots, firefighting	2	2
Boots, utility	1	1

Bush fire goggles	1	1
Beanie, unlined	1	1
Cap, baseball	1	1
Coat, multi-purpose	1	1
Gloves, general purpose	1 pair	1 pair
Hat, sun	1	1
Helmet, multipurpose (Issued with name, rank and role insignia)	1	1
Helmet, structural (Issued with name, rank and role insignia)	1	1
Kit bag, PPE	1	1
Pocket line	1	1
Safety glasses	1	1
Shirt, duty wear, long or short sleeve	6	3
Shorts, duty wear	4	2
Shorts, athletes	2	2
Socks, either thick or standard, for operational use, dress uniform, and office wear	5 pair	5 pair
Torch	1	1
Trousers, duty wear	4	2
T-shirt	4	2
Uniform		
Belt, dress, skirt and slacks	1	1
Belt, trousers, dress, either buckle or velcro	1	1
Handbag-womens (local purchase)	On request	On request
Hat, peak cap - according to rank	1	1
Jacket, dress uniform, (galatea)	1	As Needed
Jacket, soft shell, black	1	1
Necktie	1	1
Shirt, dress, short sleeve	1	1
Shirt, womens dress, maternity	As needed	As needed
Shoes, dress; boot, slip on; or court shoes, womens	1	1
Sweater, V-neck	1	1
Trousers or skirt, womens dress, maternity (ESCAT or local purchase)	As needed	As needed
Trousers, mens dress; or slacks, womens dress; or skirt womens	1	1
Accoutrements		
Badge, peak cap, ornate (officers - on promotion to Station Commander)	1	1
Badge, peak cap, standard	1	1
Buttons, 18 mm, galatea	6	6
Buttons, staple 24 mm, galatea	4	4
Epaulettes, soft-according to rank	6 sets	6 sets
Epaulettes, hardboard - according to rank; Station Commanders and above, issued on promotion	2 sets	2 sets
Key keeper	1	1
Notebook cover, pocket	1	1
Notebook, pocket	1	1
Ring, 16 mm	10	
Sticker, multi-purpose helmet, name	As needed	As needed
Sticker, multi-purpose helmet, qualifications	As needed	As needed
Sticker, multi-purpose helmet, rank	As needed	As needed
Sticker, structural helmet, name	As needed	As needed
Sticker, structural helmet, qualifications	As needed	As needed
Sticker, structural helmet, rank	As needed	As needed

Structural Firefighting Ensemble

Item	Entitlement
Coat, structural firefighting	2

Gloves, structural firefighting	2 pair
Protective hood (flash hood)	2
Trousers, structural firefighting (with braces)	2

Alpine Items

Item	Permanent- Available for Issue on posting	Retained- Initial Issue
* Boots, firefighting, (with moisture barrier, currently met by the current issue Magnum Vulcan CT/CP WPI with HBR membrane liner)	1	1
Gloves, alpine with liner	1	1
Goggles, alpine	1	1
Scarf combo	1	1
Socks, alpine	1	1
Thermal gloves	1	1
Thermal pants	1	1
Thermal shirt	1	1

SCHEDULE 5 - CONSULTATIVE MECHANISM (JOINT CONSULTATIVE COMMITTEE PROCESS)

Consultation Process.

1. The parties have established a Joint Consultative Committee (JCC) for the purposes of giving effect to the requirement to consult as outlined in Clause 8, Consultation. The JCC will seek to operate on the basis of consensus decision making.
 - 1.1 Prior to making any decision to effect change in the employment relationship, the Commissioner and/or FRNSW must consult with the Union in accordance with this process.
 - 1.2 Consultation will commence with a written notification to the Union regarding the proposed change(s). Such written notification will include an outline of the proposed change(s) including all relevant information pertaining to it so as to allow the Union to fully understand the proposed change and its implications. Such written notification will also include any productivity/efficiency associated with the proposed change(s) including estimated cost savings.
 - 1.3 The proposed change(s) will be placed on the Agenda for a meeting of JCC by the Commissioner and/or FRNSW. The outline of the proposed change(s) must be provided to the Union at least seven days ahead of the JCC meeting where the Commissioner/FRNSW listed the matter for the JCC Agenda.
 - 1.4 Thereafter there will be a reasonable opportunity for the Union to consider the proposed change(s) including an opportunity to meet with the Commissioner and or relevant representatives so as to gather any information relating to the proposed changes and discuss the proposed change.
 - 1.5 Following such meeting, or if a meeting is not sought by the Union, the Union will be provided with a reasonable opportunity to present its views in relation to the proposed changes at the next scheduled JCC meeting or via other means where the Union is prepared to do so out of cycle. The Union may also choose to provide an alternative proposal at this time for consideration by the Commissioner. Where necessary, the parties will meet at this step to discuss the Unions response/alternative proposal.
 - 1.6 The Commissioner and/or FRNSW will respond to the Union's views and/or alternative proposal within a reasonable time frame which may also occur at the next meeting of the JCC.

SCHEDULE 6 – FRNSW HEALTH STANDARD**Health Standard for firefighters**

March 2016

Fire & Rescue New South Wales

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Foreword

The development of this Fire & Rescue NSW (FRNSW) *Health Standard for firefighters* (Health Standard) represents a significant step forward in ensuring the health, safety and wellbeing of all firefighters.

In line with requirements under Clause 4 of the *Crown Employees (NSW Fire Brigades Firefighting Staff Death and Disability Award) 2015*, the Fire Brigade Employees' Union and FRNSW must implement an agreed and compulsory health and fitness program. In meeting the requirements under the award, part of the process has been the need to develop a health standard for firefighters that forms the basis to which health assessments can be measured against.

The Health Standard adopts a risk management approach and reflects contemporary evidence based medical knowledge. It has been developed as a result of extensive research and input from a wide range of industry and medical stakeholders.

The Health Standard keeps pace with advances in medical knowledge and understanding of the impact of certain health conditions and firefighting. Contemporary antidiscrimination and privacy principles now legislated in New South Wales have also been taken into account.

FRNSW acknowledges the significant assistance and advice provided by external consultants Dr Bruce Hocking and Ms Fiona Landgren, who are experts in the design and development of medical standards. Acknowledgment is also given to RailCorp for their sharing of knowledge on their management systems and implementation processes around their medical standard and other experts who generously provided their time and expertise. Lastly, thanks need to be given to all members within the project team who provided valuable input in all stages in the development of the Health Standard.

Greg Mullins AFMS Commissioner, Fire & Rescue NSW

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PART 1: INTRODUCTION

1. Purpose of the Health Standard for firefighters

Fire & Rescue New South Wales (FRNSW) is committed to enhancing community safety by minimising the effects of hazards and emergency incidents on the people, environment and economy of New South Wales. FRNSW's response profile requires its firefighters to respond to emergency incidents encompassing structural and wildfire suppression, rescues, hazardous materials incidents, storms and tempests, and counter[terrorism activities across the state. FRNSW also runs prevention and preparedness programs to prevent these emergencies and reduce their effects on the community.

FRNSW has a duty under the *Fire Brigades Act* 1989 to ensure systems are in place to protect the safety of the public. This includes a responsibility to ensure the health and fitness of firefighters so that they may conduct their physically and psychologically demanding duties safely and effectively. FRNSW also has a duty of care under the *Work Health and Safety Act* 2011 to ensure the health and safety of its firefighters as far as reasonably practicable. The management of firefighters in relation to their health and fitness for duty is also

governed by obligations under discrimination, workers' compensation and injury management legislation. Where possible, to meet antidiscrimination requirements, FRNSW will accommodate the limitations on the firefighter's capabilities because of health issues through strategies such as job modifications, alternative duties or redeployment.

Firefighters also have a duty of care for their own safety and that of others under work health and safety legislation. They should be aware of the importance of their health and fitness to the overall obligations of FRNSW.

By clearly outlining the health requirements for firefighters, FRNSW seeks to meet its obligations in terms of duty of care, antidiscrimination and equal employee opportunity. It also seeks to ensure consistency and transparency in the assessment of health conditions in a firefighting context. The document also provides firefighters with a clear statement of the health requirements for their job.

With this in mind, this *Health Standard for firefighters* (Health Standard) has been developed to:

- define the level of health required to perform the inherent requirements and demands of firefighting
- describe how the health of firefighters is assessed and reported in relation to these requirements.

The document includes:

- Part 1 – Introduction

This part describes the purpose and scope of the Health Standard. It also details the steps taken during its development and validation. An overview of the health assessments conducted in relation to the Health Standard is also provided.

- Part 2 – Inherent requirements of firefighters

This part describes, in detail, the inherent requirements of firefighter tasks and the related health attributes, which in turn provide a basis for the medical criteria outlined in Part 4.

- Part 3 – Medical fitness for duty certifications

This part outlines how clinical findings are interpreted against the Health Standard to provide a medical fitness certification for a firefighter.

- Part 4 – Medical criteria

This part includes the criteria for medical fitness for duty for firefighters, arranged alphabetically in sections, addressing the most relevant medical conditions for firefighters.

2 Development of the Health Standard and evidence base

Medical literature and doctrine relating to firefighter and other emergency services personnel have been sourced to inform development of the Health Standard. Where evidence is lacking, expert opinion from members of specialist medical colleges and other health professional organisations provides the basis of this Health Standard.

Key inputs into the development of this Health Standard from a medical view point have included:

- the medical standards for licensing of commercial vehicle drivers contained in *Assessing fitness to drive* (Austroads)
- the standards for medical fitness for duty of rail safety workers contained in the *National health assessment standard for rail safety workers* (National Transport Commission).

Both of these documents have most recently undergone review in 2012.

The Health Standard will be reviewed periodically every 5 years to ensure it keeps pace with medical evidence and the Fire & Rescue NSW operating environment. The standard will also be reviewed if amendment is made to interfacing medical standards (e.g. *Assessing fitness to drive*).

3 Scope and application of the Health Standard

This Health Standard has been developed on the inherent requirements of permanent and retained firefighters, up to the position of Station Commander.

As this standard is based on the inherent requirements of firefighting performed by firefighters up to and including the rank of Station Commander, its application will be modified when assessing firefighters at or above the rank of Inspector, such that only inherent requirements relevant to these roles will be considered.

The Health Standard focuses on medical fitness to perform the inherent requirements of firefighter duties. It does not cover other work, health and safety matters, such as screening for diseases of occupation, nor does it cover aspects such as fatigue or critical incident management, although the interfaces with these are recognised (refer to Section 4). The Health Standard also interfaces with health, fitness and wellbeing programs (refer to Section 4).

The Health Standard is used as a basis for all health assessments conducted to assess medical fitness for duty of applicants for firefighting roles or incumbent firefighters, ensuring consistent assessment across the career of a firefighter.

3.1 Pre employment health assessments

Firefighters require health assessments at recruitment to determine their initial medical fitness to perform the full range of inherent job requirements. All applicants also undergo a Physical Aptitude Test to determine their ability to meet the physical fitness demands of firefighting.

3.2 Periodic assessments

The mandatory period health and fitness checks conducted for firefighters are similar to those conducted at recruitment, and aim to detect conditions that may impact on a firefighter's ability to safely and effectively perform the inherent requirements of firefighting.

Firefighters will be assessed according to a defined schedule for periodic health assessments. Where indicated by this standard, a more frequent and targeted monitoring protocol for specific medical conditions may be established. This specific monitoring protocol occurs in addition to the routine periodic assessment schedule.

The periodic health and fitness checks also support firefighters in addressing chronic disease risk to assist them with maintaining their medical fitness for duty.

3.3 Triggered health assessments

Assessment of fitness for duty against the standard may be conducted in response to incidents or concerns regarding a firefighter's health and their ability to perform the inherent requirements of their job. These assessments are likely to address a particular health issue (e.g. psychiatric, musculoskeletal) and include scheduled assessments for conditional medical fitness for duty (fit with specified requirements or restrictions). They also include health assessments initiated by supervisors as a result of concerns regarding prolonged or recurrent sick leave, or a firefighter's return to work following illness or injury. Firefighters may request a triggered health assessment through Fire & Rescue NSW's (FRNSW's) Health & Safety Branch if they are concerned about their ability to safely perform their work due to health reasons.

4 Policy and program interfaces

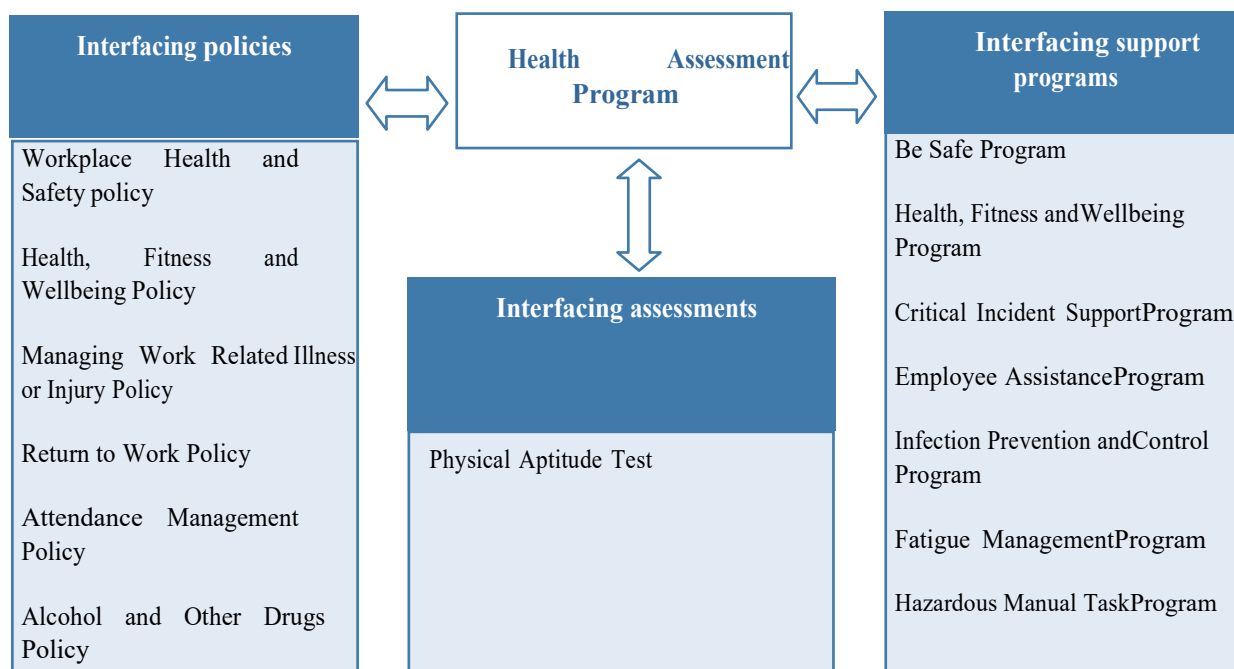
In developing the Health Standard, FRNSW recognises health assessments are one aspect of an integrated safety management system (SMS), which supports the health and safety of its employees and the public. Key aspects of the SMS include appropriate training, maintenance of a safe working environment and implementation of safe working practices, which are continuously monitored and improved (Figure 1).

In addition, health assessments integrate with, and are supported by, a range of other health related policies and programs as shown in Figure 2.

Medical practitioners assessing firefighters against this Health Standard should be aware of relevant interfacing policies and programs so they may offer relevant and appropriate advice to firefighters. Some of these are described briefly in Sections 4.1–4.8. The medical criteria chapters in Part 4 make reference to these policies and programs as appropriate.

Figure 1 The context of health management within the Fire & Rescue NSW safety management system



Figure 2 Interfacing safety management system policies and programs

4.1 Alcohol and Other Drugs Policy

The FRNSW Alcohol and Other Drugs Policy includes random and targeted testing across the organisation. It also has in place procedures to ensure access to relevant support for firefighters where required.

4.2 Critical Incident Support Program

The FRNSW Critical Incident Support Program supports firefighters who are exposed to trauma, fatalities and major incidents. Periodic health assessments provide a further opportunity to assess general psychological wellbeing (refer to Section 16, Psychiatric disorders).

4.3 Employee Assistance Program

The FRNSW Employee Assistance Program offers free, confidential counselling and support to employees and immediate family members. There is potential for the health professional who performs the health assessment to recommend the program to firefighters, as appropriate (refer to Section 16, Psychiatric disorders).

4.4 Fatigue Management Program

The FRNSW Fatigue Management Program aims to minimise the effect of fatigue on firefighter vigilance. The program takes into account effective ways of managing fatigue in firefighters, given the nature of shift work, or – in the case of retained firefighters – the fact that their employment with FRNSW is secondary. Periodic health assessments may detect excessive daytime sleepiness or sleep disorders, and they should be managed in accordance with this Health Standard (refer to Section 19, Sleep disorders).

4.5 Health, Fitness and Wellbeing Program

FRNSW has a range of health promotion programs for firefighters under the Health, Fitness and Wellbeing Program. Health promotion activities include those targeted to mitigate cardiovascular risk factors, mental

health, general health and fitness. The health assessments do not have a specific role in relation to health promotion, but do provide an opportunity to identify chronic disease risks and alert the firefighter to appropriate support programs.

4.6 Physical Aptitude Test

All firefighter applicants undergo a pre[employment Physical Aptitude Test, which assesses cardiovascular fitness, musculoskeletal strength, endurance and power. This assessment is based on the most critical tasks performed in firefighting, and those most physically demanding and frequently performed.

4.7 Infection Prevention and Control Program

The Infection Prevention and Control Program educates firefighters on preventing the transmission of disease through occupational and environmental exposures. Understanding the modes of transmission of infectious organisms, and knowing how and when to apply the basic principles of infection prevention and control, are critical to the maintenance of optimal firefighter health. The program includes presentations to firefighter recruits, online education packages, station based education sessions and postexposure counselling and education.

4.8 Hazardous Manual Tasks Program

The Hazardous Manual Task Program provides firefighters with training on the prevention of musculoskeletal injury throughout their career. All training is conducted in accordance with the FRNSW hazardous manual task guidelines, and integrates with the broader range of physical assessment and conditioning support services available to firefighters. This includes functional movement screening.

5 Role and responsibilities of assessing medical practitioners

Medical practitioners should conduct health assessments in line with the processes outlined in this Health Standard. They should have appropriate knowledge and understanding of the firefighting environment, the associated risks and the Health Standard, including:

- familiarity with the tasks involved in firefighting work
- knowledge of and ability to perform the firefighter health assessment
- understanding of the requirements and certification options for medical fitness for duty
- knowledge of the administrative requirements, including form completion and record keeping
- understanding of ethical and legal obligations, and the ability to conduct health assessments accordingly, including appropriate communication with the firefighter and Fire & Rescue NSW
- understanding of ethical issues in relationships with the treating doctor or general practitioner.

Referral for, and management of, ongoing treatment of medical conditions should continue to be the responsibility of the firefighter's general practitioner or treating specialist.

PART 2 – DETERMINING THE HEALTH REQUIREMENTS FOR FIREFIGHTING

This part of the Health Standard sets out inherent requirements of firefighting based on a review of tasks across Fire & Rescue NSW, undertaken in 2010. It also identifies the health attributes (such as senses, musculoskeletal and cardiovascular capacities) needed to fulfill these inherent requirements. This, in turn, provides the basis for applying the medical criteria, which are set out in Part 4 of this Health Standard.

Summary of firefighters' main tasks and health requirements

Driving. The fire appliances are medium rigid class (or above) vehicles. They are driven in emergency mode at high speed while exercising exemptions to normal road rules provided to drivers of emergency vehicles. Driving is performed on a rotating roster basis by the crew member other than the Station Officer. The commercial vehicle medical standard applies for the licences required to drive these vehicles. This class of licence requires good health regarding the health attributes necessary for safe driving (vision and hearing, cognition and psychological health, an absence of conditions likely to cause acute incapacity or impairment).

Structural firefighting work includes rapidly entering buildings and climbing stairs, rescuing victims, hauling hoses, extinguishing fires, and salvage, ventilation and overhaul activities. Rescued victims may be unconscious, burnt, deceased or distressed. Work is conducted in hot and densely smoky conditions. Firefighters must wear an ensemble of personal protective clothing and must use self-contained breathing apparatus (SCBAs). Protective clothing limits the ability for sweat to evaporate and therefore restricts the body's cooling mechanism. Short rest breaks generally occur every 25 minutes if working at high intensities, when the air cylinders of the SCBA need to be replaced. The work requires great cardiopulmonary and musculoskeletal fitness, alertness, good vision and hearing, and psychological resilience.

Wildfire firefighting differs from structural firefighting in that the fire front is rapidly moving through bush or grasslands. The ambient environment is extremely hot. The work requires extensive walking and carrying of hoses and other equipment across difficult terrain, and vigorous use of hand tools. However, the work is similar to structural firefighting in that it requires great cardiopulmonary and musculoskeletal fitness, alertness, good vision and hearing, and psychological resilience. The P2 negative pressure particle mask that wildfire firefighters wear places an additional load on the respiratory system and does not protect against fire gases, including carbon monoxide.

Hazmat work involves the containment and clean[up of dangerous goods and other hazardous materials. The work may require the firefighter to wear a fully encapsulated hazmat suit, which is resistant to external fluids and gases, but limits the ability for sweat to evaporate. A SCBA is also worn. The work involves rapidly assessing a scene, rescuing victims, identifying the presence of toxic chemicals, performing containment as needed and decontamination. Work may be conducted in variable environmental conditions. The work places considerable cardiac and musculoskeletal demands on the firefighter, and requires alertness, and good vision and hearing.

Rescue work involves rescuing victims who are trapped in cars or on cliff faces, involved in industrial accidents, and so on. The work varies greatly with the situation. It involves applying first aid to the victim and using a wide range of equipment for freeing and transporting the victim – often in awkward situations and on difficult terrain. The work is conducted in variable environmental conditions. Victims may be unconscious, injured, deceased or distressed. The work requires great cardiopulmonary and musculoskeletal fitness, good vision and hearing, and psychological resilience.

6 Risk management approach

Firefighting is safety critical work. There are considerable potential consequences for life and property if firefighting is not conducted efficiently. Although there are a range of administrative and engineering techniques to assist firefighting, the firefighter remains central and crucial to firefighting operations.

The requirements for firefighter health assessments are determined by a risk management approach, which aims to:

- identify the main tasks of firefighting, and what the impact would be on the firefighter in the event of acute incapacity or impairment
- assess the consequences of acute incapacity or impairment
- establish appropriate controls for the risks associated with acute incapacity or impairment, including the role of health assessments.

This approach ensures that the level and frequency of health assessments conducted is congruent with the risk associated with the tasks performed by firefighters.

It is acknowledged that health assessments are but one of a number of approaches to managing risk. Thus, a mix of engineering, administrative and health assessment measures is likely to be required. In determining the health assessment requirements, it is important to take into account the operational and engineering environment, since overall risk management significantly determines the human attributes that are required for safety. As these environments change, it may be necessary to change the health requirements.

This interaction between technology and human capabilities has implications not only for the setting and application of medical criteria, but also for meeting diverse legal requirements. Medical criteria cannot be simply set at the highest level for safety's sake. They must be set and applied carefully to match the risks associated with the tasks to be consistent with antidiscrimination laws. This requires careful and thorough assessment of the risks to, and as a consequence of, health as part of the assessment process.

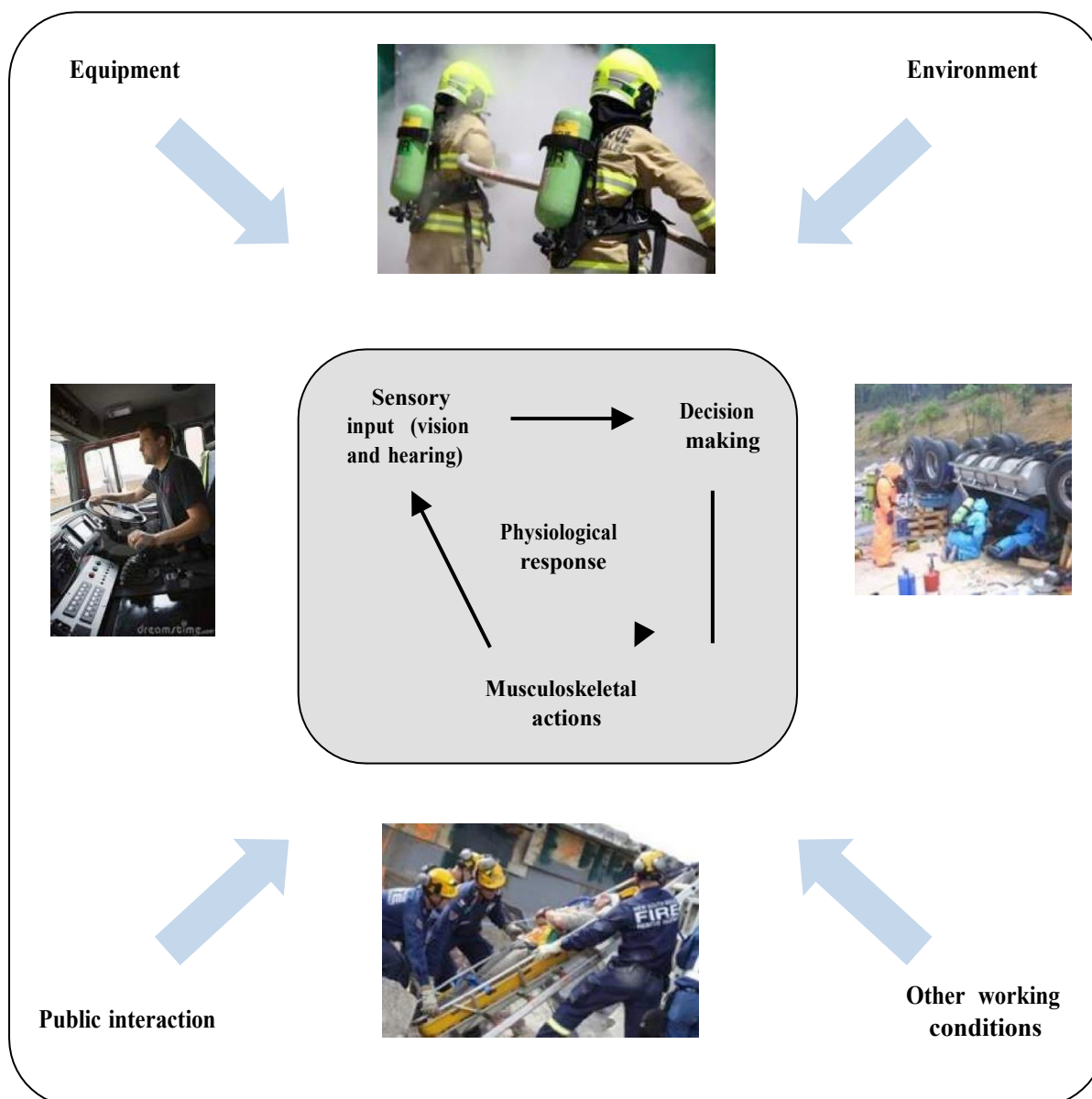
Figure 3 shows the key tasks, work demands and health attributes associated with firefighting, and provides a framework for understanding and applying a risk management approach to health assessments. It shows the key aspects of the firefighting job, namely:

- driving of vehicles, including driving in emergency mode
- firefighting (structural and bush firefighting)
- hazmat
- rescue.

For each of these tasks:

- a. information is gained about the environment through the senses (mainly vision and hearing)
- b. information is then processed by the brain (cognition or 'situational awareness')
- c. decisions are made that are then put into effect by the musculoskeletal system; the cycle rapidly repeats and is multichannelled.

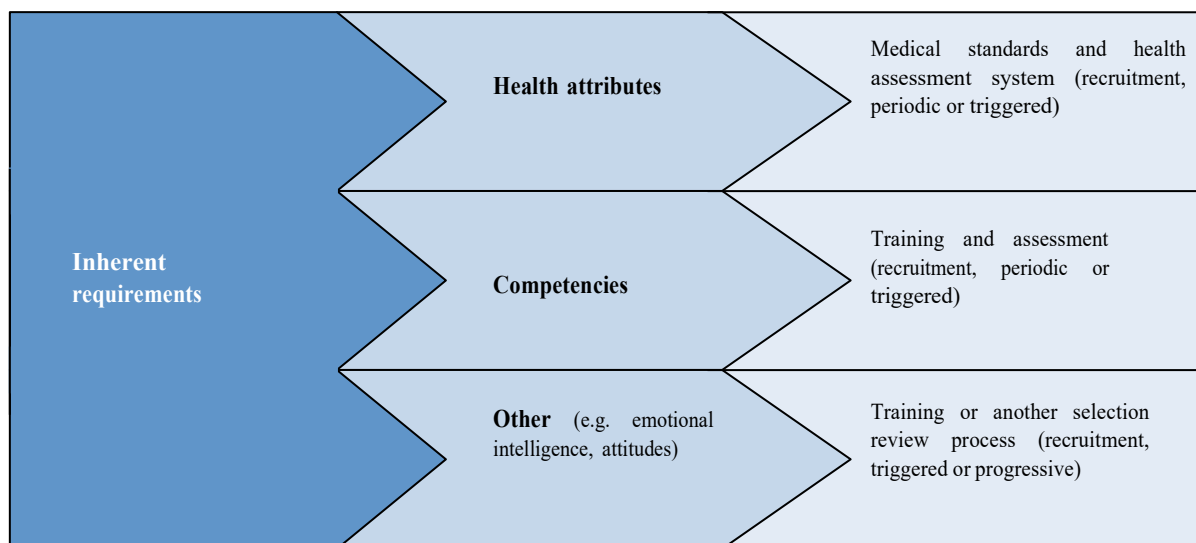
These processes take place within a diverse and challenging operational environment, which places considerable physiological demands on the firefighter.

Figure 3 The tasks and work demands of firefighting

Determination of the specific inherent requirements of a firefighter's job is fundamental to a risk based approach to health management. The term 'inherent requirement' has been variously defined.^{1,2} Most simply, the inherent requirements of a job may be described as the essential activities of the job – *the core duties that must be carried out to fulfil the purpose of the position*. This definition encompasses the broad requirements of the job, not just those related to health (refer to Figure 4).

An understanding of the inherent requirements also helps to identify those attributes that cannot be readily assessed through a medical examination (e.g. cognitive capacities) and for which other assessment tools may be required.

Figure 4 Inherent requirements as a basis for health standards



¹.NSW Department of Premier and Cabinet. *Employment health assessment: policy and guidelines*, April 2000 (http://www.dpc.nsw.gov.au/public_employment/policy_directory/policy_statement?metadata=8646).

² Australasian Human Rights and Equal Opportunities Commission (<https://www.humanrights.gov.au/our-work/disability-rights>).

7 Inherent requirements of firefighting

This section outlines the inherent requirements involved in the major tasks of firefighting i.e. driving the appliance, firefighting, hazmat and rescue.

The tasks associated with hearing and visual requirements are complex and are discussed separately to the main tasks (refer to Section 9). There is some duplication in this information to enable a complete understanding of the tasks dependent on the senses.

Note all firefighters are trained to be multi skilled although some may specialise later. Operational staff, up to and including the ranks of leading Station Officer and Captain, are expected to be multiskilled and their duties are the focus of the requirements described below.

7.1 Driving

All members of the crew – apart from the Station Officer – drive the fire appliances on a rotating roster basis.

All drivers must hold a heavy vehicle (medium rigid or above) licence. Firefighters need to be able to drive different appliances that have different dimensions, weights and handling characteristics (refer to Figure 5).

Under New South Wales law, fire appliances are exempt from normal driving rules while responding to an incident under lights and siren. Drivers must be able to rapidly detect other factors such as vehicles, pedestrians and warning sounds, including when in emergency mode. The driver must be able to hear and respond to auditory cues from other traffic, bells at level crossings and so on while other radio and voice communication is ongoing in the cabin of the appliance. They must also be able to hear warning alarms such as low air pressure in the braking system.

Firefighters also need to be able to access directions to the fire ground via GPS and maps, and to communicate using radio (closed loop communication).

A detailed analysis of the driving tasks requiring vision and hearing is included in Section 9.

Figure 5 Examples of fire appliances



Urban pumping appliance: 15 tonnes (Gross Vehicle Mass)



Aerial pumper: 20 tonnes (Gross Vehicle Mass)



Ladder platform: 26 tonnes (Gross Vehicle Mass)

7.2 Structural firefighting

Structural firefighting is responding to, for example, a house, a factory or an office block fire. Typically, four firefighters turn out in response to an alarm, including one Station Commander. Each firefighter has a designated role. The Station Commander is responsible for commanding the crew and, in some cases, will take command of the entire incident. One firefighter is responsible for driving and operating the pump, and the other two will be allocated tasks depending on the specific incident. Most permanently staffed appliances have self contained breathing apparatus (SCBA) mounted on the rear seats, allowing the two firefighters in the rear of the cab to don it before exiting the appliance, either before leaving the station or on arrival at the incident. This leads to increased weight when stepping down from the appliance, sometimes onto uncertain ground in poor visibility because of smoke and perhaps night time. The total weight of protective equipment worn during structural firefighting is approximately 21 kg.

On arrival at the incident, firefighters' activities are summarised in the acronym RECEOSV:

- Rescue
- Exposures
- Containment
- Extinguish
- Overhaul
- Salvage
- Ventilation.

The requirements of these activities are described in Sections 7.2.1–7.2.8.

7.2.1 Rescue

The first priority is saving and protecting people's lives (including a firefighter's own life). Upon arrival, information will be gathered about the possible location and number of casualties. Using this information, firefighters that are wearing structural firefighting ensemble (see Section 7.2.8) and SCBA (see Section 7.2.8), and pulling a 'charged' (full of water) line of hose will enter the building.

This may require moving long distances carrying heavy equipment, climbing ladders or forcing entry through locked doors (Figure 6). Conditions inside the building are generally extremely hot and smoky.

Figure 6 Forcing entry through a locked door



Entry may require the use of petrolRpowered saws or bolt cutters that require a lot of force.

Search and rescue operations procedures are designed to reduce the possibility of disorientation. The search must be systematically performed by the search and rescue crew (firefighters are paired for this task) to ensure that all areas are covered and that nobody is missed. Rescue of an unconscious person is by dragging the victim. One firefighter will hold the casualty under the arms and around the chest and walk backwards while in a semi squatting position. The other firefighter guides them back to the exit point. It is common for the ground to be covered in debris, and it is reasonable to expect that a victim may weigh 100 kg or more. There is an especially high degree of team interdependence during this stage of firefighting.

Rescuing victims may involve using a fire rescue ladders, which are 10.5 m long, 49 kg and awkward to manoeuvre into place. Firefighters must work as a two person team (refer to Figure 7). Raising the ladder requires a high degree of upper body strength and shoulder joint stability.

Figure 7 Raising a fire rescue ladder



To raise a fire rescue ladder, firefighters must work as a twoRperson team.

On arrival at the fire, the first 15 or more minutes involve particularly intense activity without a break. Lighting may be poor due to smoke and/or night time, and the terrain may be uneven and/or slippery, which puts stress on the limbs when moving and quickly assessing a site.

A major consideration is the possibility of a firefighter collapsing, leaving one firefighter on their own. This firefighter would then need to focus on rescue of the other firefighter – for example, they may need to drag the collapsed firefighter to safety on their own, while navigating through the hazardous environment.

7.2.2 Exposures

During this stage of operation, the objective is to confine the fire to the building/compartment of origin. Exposures may be internal (i.e. adjacent home units), external (i.e. adjacent buildings) or the environment. Protection must be achieved rapidly if property damage is to be limited and to ensure that further lives are not placed at risk. This stage will involve obtaining adequate water supplies from hydrants in the street. This operation alone will require a standpipe, a hydrant bar, and a one into two breeching to be collected from the appliance and carried to the hydrant. This is commonly 60 m, but is sometimes much further. Once this equipment is attached to the street hydrant, the hose is collected from the appliance and laid out between the hydrant and the appliance, and connected to the pump (Figure 8). Water is then turned on, which supplies the pump with more water. In some situations, this will need to be repeated if sufficient water cannot be obtained from the first hydrant.

Hose is laid out from the outlets of the pump to reach the areas threatened by fire. A suitable method of controlling and directing the water is attached to the hose. A 70mm diameter hose, when full of water, weighs about 4 kg/m, and 10s of meters of inflexible hose may need to be quickly manoeuvred into position. For handheld hose lines, a branch is attached. For large volumes of water, a monitor (non[handheld]) is used, which is a piece of equipment that firefighters set up and leave, thereby reducing the chance of firefighter injury from building collapse or explosion (Figure 9).

Figure 8 Supplying water to the pumper

Supplying water to the pumper requires endurance and strength to carry the equipment to the hydrant to lay hose.

Figure 9 A firefighting monitor

Monitors are used to deliver large quantities of water while avoiding the need to manually hold and direct the hose.

7.2.3 Containment

During this stage, the expansion of the fire is stopped. This is generally achieved by appropriately applying water or foam, and by reinforcing the number and placement of hose lines (Figure 10). During this stage, similar physical demands are placed on the firefighters as in the exposure stage. Internal work will also expose firefighters to longer periods in high temperature, low visibility working conditions, although these may also be found in some close external locations. Often, smaller, easier to handle hose lines that are used initially for search and rescue are replaced by larger, heavier hoses that require more strength to operate and control because of the very high water pressure (Figure 11).

Figure 10 Controlling the charged lines of a hose



Controlling charged lines of hose is a physically demanding task, often requiring at least two firefighters per hose line.

Figure 11 Large Diameter hoses



Large diameter hoses contain significant quantities of water. The weight of the hose (up to 4 kg/m) means that a lot of strength is required if the hose needs to be repositioned.

7.2.4 Extinguish the fire

During this stage, additional resources (firefighter and firefighting equipment) are deployed to overwhelm the fire. Sustained strength and endurance is required to maintain the attack (Figure 12).

Figure 12 Firefighters holding a hose for a long period



A firefighter's stamina is challenged during the extinguishment phase, which requires holding a hose for long periods.

7.2.5 Overhaul

During the overhaul stage, all pockets of fire are totally extinguished and hot fire gases are released from the building. This stage requires methodical work on uneven surfaces while often carrying

heavy equipment (Figure 13). A wide variety of hand tools – such as axes, power saws and shovels – are used, which require strength and coordination to operate them safely. Additionally, the firefighter may be required to work at height from a ladder or another type of elevated platform.

Figure 13 Working on uneven surfaces



It is common for firefighters to work on uneven surfaces that are littered with fire debris. The firefighter needs to maintain control of firefighting tools such as hoses.

7.2.6 Salvage

Salvage involves protecting household possessions, or business stock and equipment from the adverse effects of water, heat and smoke. This requires lifting and moving heavy items, covering items with protective sheeting, and removing debris and water.

7.2.7 Ventilation

Ventilation involves removing smoke and fire gases from a structure. It may require using tools to create openings and exhaust points at varying heights through building walls or roofs. For mechanical ventilation, a positive pressure fan will need to be carried some distance to be set up in the correct location to force clean air into the structure. The fans – which weigh up to 35 kg – are a multiple person lift, and may need to be carried up stairs or across varying terrain and debris.

7.2.8 Other considerations, including exposures and protective equipment

Poor visibility

Firefighters may have to work in the dark and/or in conditions of poor visibility (Figure 14), which may be due to many causes including smoke, night time or internal building darkness, visual

interference from personal protective equipment, glare from portable lighting, emergency vehicle flashing lights or condensation on the outside of a breathing apparatus mask. Refer to Section 9 for a detailed discussion of visual requirements of firefighter tasks.

Figure 14 Structural firefighting in poor visibility conditions



Note that these photographs were taken during the day.

Heat stress

The temperature of fires varies greatly, from ambient temperatures up to 1000° C. It is common for firefighters to work in environments of several hundred degrees. However, the firefighter should not be directly exposed to such temperatures if the fire is correctly assessed and controlled, and if protective equipment is worn. Although heat exposure is important, the main source of heat stress to the firefighter arises from his or her own metabolism because of the strenuous activities in fighting structural fires. The structural firefighting ensemble restricts air flow across the skin surface (and also increases the work load because of the ensembles weight), therefore impeding the removal of body heat through sweating. Eventually, when the air between the skin's surface and the structural firefighting ensemble becomes saturated with sweat, the sweating mechanism will be

impaired significantly. Core body temperature in firefighters has been demonstrated to rise to 39° C or more. High sweat rates are commonly observed in firefighters undertaking structural firefighting.

Figure 15 Exposure to radiant heat during structural firefighting



Exposure to radiant heat and the accumulation of metabolic heat underneath protective equipment contribute to heat stress during structural firefighting.

Smoke

Smoke is composed of particulate matter (a mixture of solid particles and liquid droplets), and CO₂, CO and numerous other gaseous chemicals. The chemicals include volatile organic compounds, such as formaldehyde and other aldehydes, which can be highly irritating to the upper and lower respiratory tract. In addition, there may be toxic chemicals such as hydrogen cyanide and polycyclic aromatic hydrocarbons. The oxygen levels are lower than normal, because fire consumes oxygen.

Figure 16 Structural fire smoke



Structural firefighting ensemble

The structural firefighting ensemble comprises overpants, a coat and a flash hood. This configuration is designed to protect the firefighter from the heat of the fire. A structural firefighting helmet with visor, and structural firefighting boots and gloves are also worn. The structural firefighting ensemble is protective, but it increases the work load because of its weight (up to 12 kg) and it limits the evaporation of sweat. When combined with a SCBA, the additional weight is about 22 kg (Figure 17).

Figure 17 Structural firefighting ensemble

PPE = personal protective equipment; SCBA = self-contained breathing apparatus

Self contained breathing apparatus

The SCBA is a key piece of protective equipment. It is a positive pressure system that imposes minimal load on breathing. It provides clean air, and protects against smoke, gases and heat. A SCBA is generally donned before exiting the appliance. It consists of an air cylinder and a back plate, pneumatics and face mask, and weighs 11–17 kg depending upon the SCBA type and configuration. The air supply lasts for approximately 30 minutes when performing simple tasks; however, it may be used more rapidly dependent on the work environment, firefighter work rate, experience level and fitness. When most of the air in the cylinder is consumed, the firefighter must leave the contaminated atmosphere and replace the cylinder. They may then return to the fire. In an ideal situation, the duration of this demanding work is minimised by good management of the incident (Figure 18).

Figure 18 Firefighter wearing a structural firefighting ensemble and a self contained breathing apparatus



The combined additional weight of the personal protective equipment (PPE) is about 22 kg, which increases the work load. Additionally, evaporative sweating is significantly reduced while wearing the PPE.

Shift work

The default roster for most permanent firefighters is the '10/14 roster'. This consists of two, 10 hour day shifts (0800–1800) followed by two, 14 hour night shifts (1800–0800), with 96 hours off before the shift cycle repeats. However, the majority of permanent firefighters work a modified '24 hour roster', consisting of a 24 hour day and night shift, 24 hours off, another 24[hour shift, followed by 120 hours off.

Other rosters worked are 'back to back' rosters, which is four, 12 hour days (0600–1800) and

108 hours off; and 'special roster', where firefighters work Monday to Friday during normal business hours. Sometimes, there are no firefighting activities in a shift, or there are relatively short ones (of a few hours), which enables refreshment. In the event of a major fire spanning the whole shift, firefighters are recycled and rehabilitated to control fatigue levels. The total time at an incident can vary greatly.

Retained firefighters are on call (unrostered), and hours worked are often in addition to those worked in primary employment.

7.3 Wildfires

Fighting a wildfire differs from a structural fire in several ways. Wildfires are a rapidly moving fire front that has to be pursued first in an appliance, and then often on foot. Firefighters must lay out heavy hoses and carry other equipment over long distances across difficult terrain, in poor visibility due to smoke. Progressing hoses through bush or grassland requires firefighters to drag hoses charged with water, often against friction from elements such as trees and rocks. This requires significant cardiovascular fitness and musculoskeletal strength. If the wind changes, the whole process needs to be reversed and then repeated at another site. Wildfires may be fought using wet or dry methods.

Dry methods involve creating fire breaks by back burning and creating control lines using hand tools (e.g. McLeod tools) and earth moving equipment. Using hand tools requires significant cardiovascular and musculoskeletal fitness.

Wet methods use hoses or knapsacks (a knapsack can weigh up to 16 kg). These methods may involve identifying a source of water (e.g. dam, swimming pool) and carrying a petrol powered pump to the location so that firefighting can commence. This is often over difficult and unfamiliar terrain (Figure 19).

After the fire has abated, there is extensive work seeking out remaining pockets of fire and hotspots (called ‘blackening out’), which is especially dangerous because of the high risk of falling trees and branches.

Figure 19 Wildfire fighting using wet methods



Firefighter pulling and controlling a hose.

Figure 20 Poor visibility conditions of wildfire fighting



7.3.1 Refuge

In an emergency, refuge from the fire must be sought quickly, either within the natural environment or in the appliance fitted with special protection devices. Seeking refuge quickly may require high level cardiopulmonary and musculoskeletal fitness.

7.3.2 Heat stress

Wildfires typically occur on very hot days with high winds and low relative humidity, so there is little respite available. This heat load is additional to the heat of the fire itself, plus the vigorous activities in fighting the fire as previously described.

7.3.3 Wildfire personal protective equipment

The personal protective equipment (PPE) in wildfire fighting differs from that used for structural firefighting. It is lighter, consisting of the duty wear outlined above, a multipurpose coat, a P2 particle mask and goggles, a

multipurpose helmet, and boots (see Figure 21). The P2[particle mask imposes an extra load on the respiratory system, in contrast to a SCBA. The P2 mask protects the firefighter from particulates, but not from gases such as carbon monoxide. At times of severe wildfire activity, the lighter wildfire PPE (level 2) may be replaced with a SFE (level 1) and SCBA.

Figure 21 Personal protective equipment for wildfire firefighting



Personal protective equipment for wildfire fighting showing a multipurpose coat, a P2Rparticle mask, goggles, a helmet and boots.

7.3.4 Shift work

Unlike structural fires, wildfires may burn for days, so the work may be prolonged.

7.4 Hazmat

A hazardous materials (hazmat) situation is one that involves substances on the list of hazardous substances or dangerous goods, but may include other environmental threats, such as a milk tanker spilling its load into a watercourse.

The hazmat guidelines set out several steps for managing these incidents, using the initialism ‘SISIACMR’.

- Safe approach. The incident is assessed at a distance, upwind and upgrade. If needed, people may be rescued by being dragged from the scene and decontaminated.

- **Incident command.** The site is declared as hazmat and a command point established.
- **Scene security.** The incident scene is divided into three concentric zones: the contaminated centre (hot zone), then an inner ring (warm zone) where firefighters operate and pass through decontamination to the outer ring (cold zone), where other services, such as ambulance, operate.
- **Identify hazmats.** Two firefighters may don SCBA and fully encapsulated (FE) hazmat suits to enter the site and identify the hazardous materials (see Figure 22). This may involve walking up flights of stairs in poor visibility. They work as an interdependent pair. The FE suits are impervious to fluids and gases. The performance of hazmat related tasks while wearing FE suits results in a significant rise in core body temperature because of significantly impaired sweat evaporation – the firefighter becomes heated from his or her own exertions and the inability to evaporate sweat. FRNSW guidelines recommend a maximum duration of 20 minutes per wear. The firefighters then leave the hot zone and enter the decontamination procedure. Once this has occurred, they will enter the rehabilitation area. If necessary, they may then return to the hot zone. The visual requirements associated with this task are outlined in Section 9.1.2.
- **Assess potential harm and minimise environmental contamination.** The toxicity and the quantity of hazmat substances are assessed and a plan made for their containment.
- **Call in resources.** Additional resources such as truckloads of sand or sweeping machines may be called in.
- **Monitor information.**
- **Render safe and decontaminate.** This may require the firefighter to work in an FE suit – for example, for handling drums of toxic material – or they may change into lighter ‘chemical spillage suits’ for less toxic materials. Rendering the material safe may require loading it into drums with hand tools, such as shovels.

Figure 22 Firefighters wearing chemical spillage suits and self contained breathing apparatus



Firefighters at a site of a toxic (pesticide) spill. They are rescuing the driver and containing the toxin. The work is intense and in direct sunshine for many hours. The chemical spillage suits prevent sweat evaporation.

7.5 Rescue

Fire & Rescue NSW (FRNSW) is the lead agency for rescue in several settings. These include motor vehicle accidents, industrial accidents, cliff face rescues, and urban search and rescue.

Incident sites are attended wearing duty wear, which comprise a long sleeved shirt, cargo trousers and safety boots.

7.5.1 Motor vehicle accidents

These are the most common rescue incidents and are attended to free victims trapped in their cars. When firefighters arrive at the scene, they conduct a triage to identify saveable persons. First aid – such as cardiopulmonary resuscitation, oxygen administration or placing a neck brace – is applied as appropriate. The situation may be distressing, and may include cries of pain, lacerations, blood and vomit. Hazards such sharp metal and glass, oil and petrol spills, and highway traffic are also identified.

Trapped victims are rescued using a range of heavy equipment. These include hydraulic spreaders, shears and rams, which weigh up to 19 kg (Figure 23). The equipment may need to be carried considerable distances across uneven terrain and on steep slopes. At the site it may need to be held in awkward positions – for example, above the head if the vehicle is lying on its side. Where possible, two people operate the equipment. The work is carried on under a time pressure until the victim is freed and then cared for by paramedics. The work is demanding, and requires considerable musculoskeletal and cardiovascular fitness as well as psychological resilience.

Work is conducted in all weather conditions, with wet weather increasing the likelihood of motor vehicle accidents.

Figure 23 Firefighters using equipment to rescue trapped driver



The firefighters are using a 19 kg tool, held at shoulder height with awkward footholds, to cut the car door frame to rescue a driver.

7.5.2 Rescue from heights

These rescues are most often performed to rescue a person trapped on a cliff face or the outside of a building (Figure 24). An anchor and belay point is established at the top of the cliff or building, and one rescuer on double ropes is lowered to the victim. If needed, the victim is placed in a stretcher. The victim and rescuer are then pulled to the top of the cliff by the hauling party. The work requires considerable musculoskeletal and cardiovascular performance, dexterity with ropes, alertness and decision making. The rescuer may also need to render first aid. The rescue may be conducted in extreme weather conditions.

Figure 24 Firefighters performing a heights rescue



7.5.3 Urban search and rescue

Urban search and rescue is conducted when a building has collapsed and there is concern for victims trapped in the rubble or underneath the structure. Officers are trained to crawl, not walk, using three points of contact across the rubble to avoid falling. They may need to carry a heavy concrete cutting saw to cut through reinforced concrete to free victims. They may be required to crawl through narrow confined spaces to reach victims. The work is demanding and requires musculoskeletal, cardiovascular and psychological fitness, and the ability to tolerate confined spaces (Figure 25).

Figure 25 Rescue team handling a stretcher across unstable rocky terrain



7.6 Natural disasters

Natural disasters work, such as assisting after a storm, has similar requirements to rescue work (Figure 26).

Figure 26 Firefighters working on stormUdamaged roofs

The physical requirements of natural disasters work are similar to rescue at heights work.

8 Firefighting tasks requiring vision and hearing

Numerous aspects of the firefighter task require vision and hearing; thus, these requirements are described separately to support understanding and application of the medical criteria contained in this Health Standard.

8.1 Vision

The main considerations regarding vision are visual acuity, visual fields and colour vision. The concern with colour vision is for red–green discrimination, because 8% of men have some degree of red green colour recognition deficiency. When assessing colour vision, an important consideration is the co existence of redundancy of information, so safe working is not solely dependent on accurate colour detection.

8.1.1 Firefighting tasks and inherent requirements relevant to vision

Preparatory

At the station, routine duties include maintaining and repairing equipment, such as breathing apparatus, and hydraulic and electronic equipment. Some of the components are small, and it is important to safety that it is all assembled correctly. Sometimes, the task may require working while wearing gloves that reduce dexterity.

Driving the appliance, including under emergency conditions

The visual tasks associated with driving the appliance to the incident include accessing directions to the incident, and driving the appliance safely. Members of the crew rotate through these jobs.

Accessing directions to the incident requires reading a GPS, maps, street names and building numbers.

As with any commercial vehicle, drivers of the fire appliance must be able to rapidly detect other vehicles, pedestrians and warning signs. In addition, driving may be in emergency mode when speed limits and other road rules may be legally exceeded and traffic lights slowly driven through when red. Normal cues such as the flow of traffic cannot be relied upon. Other drivers may react erratically or unpredictably to the presence of the fire appliance, requiring anticipation and quick reaction by the driver.

Peripheral vision is required for common driving tasks such as merging, changing lanes, and detecting pedestrians and vehicles to the side of the line of vision. Approaching intersections requires the rapid detection of information from multiple directions, particularly when in emergency mode.

Colour vision is not essential to safe driving because of the redundancy of traffic lights (i.e. the position of the red and green lights).

Incident – structural

Firefighters work at night and in conditions of poor visibility, which may be from many causes, including smoke (Figure 27), night time or internal building darkness, visual interference from PPE, glare from portable lighting, emergency vehicle flashing lights or condensation on the outside of the SCBA mask.

Figure 27 Structural firefighting – poor visibility conditions



Note that this photograph was taken during the day.

Visual acuity

On arrival at the fire ground and entry to a structure, visual acuity is necessary for many tasks, including:

- reading fire safety signs and chemical placards (Figure 28), and dangerous goods manifests (Figure 29)
- identifying a gas cylinder from a distance, as the need to get closer to identify such an object could endanger the firefighter (Figure 30)
- identifying casualties in conditions of poor visibility
- identifying visual hazard cues, such as open stairways or voids, uneven surfaces and stairs, and exit signs
- reading channel selectors on handheld radios and equipment with LCDs
- reading the SCBA pressure gauge (Figure 31)
- interpreting thermal imaging camera displays.

Figure 28 Fire safety signs and chemical placards



Chemical drums showing safety placards, which must be quickly identified.

Figure 29 Dangerous goods manifests



Recognising dangerous goods symbols and text is important.

Figure 30 Liquid petroleum gas cylinder



Liquid petroleum gas cylinder showing a safety placard, which must be quickly identified.

Figure 31 Self contained breathing apparatus pressure gauge

Self contained breathing apparatus cylinder pressure gauge (hand held). An alarm sounds when the pressure is low.

Visual fields

Peripheral vision is necessary when arriving at structural fires, where work may be undertaken on roads and there is a need to detect traffic movements.

When entering a structure, peripheral vision is advantageous for detecting hazards and casualties; however, in reality, vision may be impaired by the poor visibility conditions.

Colour vision

Various tasks in structural firefighting require colour recognition. However, the need for red green colour differentiation may be lessened by redundancy of information in the signal – for example, including a positional or word cue. In structural firefighting, colour vision may be required for:

- interpreting smoke and flame colour
- using colour coded control panels on appliances
- recognising coloured helmets (designated to personnel with different roles)
- using coloured hydraulic lines
- interpreting fire control panels and medical equipment (such as Guedel airways)
- recognising gas cylinder colours
- recognising industrial pipes.

Wildfire

Wildfire fighting involves several visual tasks often in situations of poor visibility (refer to Figure 32). Duties are often undertaken at the bush–urban interface, so there will be some task overlap with structural fires.

Figure 32 Poor visibility conditions of wildfire fighting



Visual acuity

Visual acuity is required for many wildfire firefighting tasks, including:

- identifying casualties in adverse conditions
- identifying other crew members in adverse conditions
- recognising visual hazard cues, such as uneven surfaces
- reading safety signs, chemical placards and so on
- identifying a gas cylinder from a distance
- finding one's way back to the fire appliance in adverse conditions, particularly during emergency recall.

Visual fields

Peripheral vision is impeded by the goggles that are worn for wildfire firefighting.

Colour vision

The ability to detect a red fire truck against a green bush background had previously been deemed a safety critical task for firefighters. Risk assessment concluded that this is not a major problem in reality. The lines of the vehicle, the use of striped panels, the use of writing on the vehicle, the possible movement of the vehicle, and the use of flashing lights and sirens, as well as the general context, all provide redundancy and aid in locating such a vehicle.

Hazmat

A number of activities rely on vision during hazmat operations.

Visual acuity

Visual acuity is required for several hazmat tasks, including:

- identifying and reading dangerous goods placards and other signage – for example, on an overturned tanker (refer to Figure 33). In hazmat situations, it is safest for the firefighter to identify the hazards from as far away as possible. For some substances, this distance is 200 m or more, which requires using binoculars.
- identifying gas cylinders
- identifying casualties
- reading Material Safety Data Sheets, manifests, emergency response plans, computer screens, chemical labels, pH papers and so on
- reading LCD and LED displays on equipment such as gas monitors and radiation dose meters (refer to Figure 34).

Figure 33 Dangerous goods signage on a tanker

Dangerous goods signage on can be seen on the overturned tanker (red diamond near the number plate).

Figure 34 Reading displays on a gas monitor

Colour vision

Colour vision is relevant for several hazmat tasks:

- reading pH papers
- reading chemical warfare detector papers
- recognising industrial pipe colours
- recognising colour coded industrial pipelines
- identifying industrial gas cylinders.

However, other cues are often available – for example, labelling.

Rescue

A number of rescue tasks rely on vision. Rescue duties are undertaken at all times of day, and during all weather and other adverse conditions that impact on visibility.

Visual acuity

Acuity is required for:

- locating casualties from motor vehicle accidents who may have been thrown from a vehicle
- identifying casualties in a debris field during urban search and rescue operations
- assessing injuries to victims, sometimes in conditions of poor visibility, to determine the most appropriate rescue methodology
- identifying hazards such as sharp metal and glass
- connecting lines to hydraulic tools
- operating other specialised equipment, changing blades in reciprocating saws (includes identifying the required blade and attaching it correctly)
- reading engravings on safety equipment to assist with knots and cordage during rope rescue

Visual fields

Peripheral vision may be impeded by safety glasses or goggles worn for rescue duties.

Colour vision

Rescue operations use a lot of equipment that is coloured, including cordage, rope, strapping, tubing and lifters. Much of the colour involved is discretionary, in that it is the colour that was ordered at the time. Some colours relate to the particular strain rating of equipment, such as lifting straps.

Judicious choice of coloured equipment can avoid confusions here.

8.1.2 The required vision attributes

To be able to perform the inherent requirements of driving the appliance, fire suppression, rescue and hazmat duties, the following visual attributes are required:

- Good **visual acuity** is crucial to driving safely. Good acuity is also essential to firefighting, especially under conditions of poor visibility, so that a firefighter may be operationally effective. Good acuity is crucial for tasks such as identifying casualties and identifying hazards to other firefighters when moving through the incident.
- **Peripheral vision** is crucial to driving safely; however, it is of limited importance in many firefighting situations because the PPE often limits the fields of vision and there are generally poor visibility conditions.
- A risk assessment undertaken by Dr John Parkes in 2009³ showed that **colour vision** is not essential to safe driving. This is because the position of red and green traffic lights makes the actual colours redundant. With the exception of marine tasks, which are subject to maritime colour vision requirements, all colour vision tasks were risk assessed and none deemed safety critical. Risk mitigation in relation to these task includes:
 - crew members working together and not in isolation
 - assessing overall fire behaviour
 - using positional cues
 - using monitors instead of detection papers
 - using written labels or symbols in addition to colours on cylinders
 - judicious purchasing of certain equipment.

Operational duties are undertaken often under emergency and adverse conditions, where the ability to detect visual information quickly relies on good eyesight, specifically, acuity and fields. Colour vision is not important if there is redundancy of information. Abnormal vision may impact on reaction time, mobility and casualty recognition. Failure to adequately see and respond to imminently hazardous situations jeopardises the safety of the firefighter and others dependent on the firefighter for their safety.

8.2 Hearing

The firefighting tasks that require communication and hearing are described first, to identify the inherent requirements relevant to hearing. Then the necessary hearing health attributes needed to meet these requirements are discussed.

8.2.1 Firefighting tasks and inherent requirements relevant to hearing

Call out

Firefighters must firstly respond to an alarm tone and voice through the station public address system. Retained firefighters must respond to a pager, mobile phone or home telephone.

Firefighters then assemble in the watch room to be briefed on the type of incident and discussions – for example, about the preferred route to the incident.

³ Parkes J. *Risk assessment of safety critical and other duties performed by NSWFB personnel requiring colour vision*, 2009.

Travelling in the appliance

The hearing tasks associated with travelling in the appliance can be divided into communicating with FireCOM and driving the appliance safely.

Communicating with FireCOM

In the appliance, a radio message will be sent by the Officer in Charge or the driver, using the vehicle mounted radio, informing the command centre that the appliance is responding. Messages sent will be read back, requiring the ability to verify that the information repeated back is correct. The vehicle mounted radio is of high wattage. It has a handheld microphone and the sound is volume adjustable (refer to Figure 35). The volume adjustment affects the volume throughout the cabin, which means if it is set too low or too high, it will affect crew members.

Figure 35 Vehicle mounted radio and microphone



Sirens are activated enroute. Usually, the windows will be closed to exclude external noise. However, on occasion, where the air conditioning is inadequate, windows may be opened during travel – for example, in extreme heat or in wet weather (when the windows fog up).

Additional radio communication that occurs enroute includes briefings between the Officer in Charge and the crew about the activities to be undertaken.

Driving the appliance safely.

As with any commercial vehicle, drivers of the fire appliance must be able to rapidly detect other elements, such as vehicles, pedestrians and warning sounds. In addition, driving may be in emergency mode when speed limits and other road rules may be legally exceeded and traffic lights slowly driven through when red. The driver must be able to hear and respond to auditory cues from other traffic, bells at level crossings and so on while other radio communication is ongoing in the cabin of the appliance. The driver of the appliance must also be able to hear warning alarms, such as low air pressure in the braking system.

Incident – structure fires

On arrival at the incident, extensive verbal communication occurs in noisy situations. Appliances, traffic, machinery, diesel fire pumps (used to boost sprinkler and hydrant systems) all generate noise. Additional noise may include emergency warning systems in buildings and peak noise events such as explosions.

Additionally, PPE is donned: a SCBA mask covers the mouth, and a helmet and flash hood cover the ears (refer to Figure 36). From this point, communication between crew members is somewhat inhibited by the helmet and flash hood covering the ears, and close proximity to the noise of the SCBA demand valve (because of inhalation and exhalation). The SCBA speech diaphragm results in decreased voice projection and muffled speech.

Figure 36 Personal protective equipment and communication



The flash hood sits over the ears under the helmet.



The self contained breathing apparatus mask sits over the mouth, resulting in decreased voice projection and muffled speech.

Communication without the use of handheld transceivers across distances of up to 5 metres is not uncommon (refer to Figure 37) between team members and between teams at the incident (including inside structures).

Figure 37 Communication without radio transceivers

Once inside a structure, firefighters always work in pairs. Communication occurs between partners to ensure safety. For example, one firefighter may describe identified dangers, such as weakened floors and changes in direction, to their partner.

The bulk of communication between the two firefighters is direct speech. Handheld radio communication is not used between partners. Because of poor visibility from the smoke, few hand and tactile signals are used (Figure 38). Communication may also be required with other crews. Fire and the combustion process can contribute to background noise.

Figure 38 Poor visibility conditions and communication

Firefighters entering structural fire wearing full personal protective equipment. Note the position of each firefighter in relation to each other for poor visibility conditions, resulting in increased reliance on verbal communication and less on visual communication such as signs.

- Firefighters need to hear various crucial sounds and noises, including:
- calls from casualties, which they need to localise accurately so they can then rescue the person
- important background noise – for example, fire development cues that may indicate imminent structural collapse such as creaking, falling masonry and beams (refer to Figure 39)
- the sound of gas release valves on heated gas cylinders is important, because pitch increases with increasing pressure and can indicate imminent explosion
- blasts of a horn from the distant fire appliance, which is used as a signal for evacuation

- the low pressure warning whistle a SCBA air supply emits when it reaches a critical level. The whistle generates a 2000–4000 Hz tone at a level of 90 dB. The whistle forms part of the valve arrangement that connects to the bottom of the SCBA cylinder
- a distress signal unit (DSU), which is worn by each firefighter (refer to Figure 40). Stages of pre alarm are activated if the wearer stops moving for a period of time; this sound is initially soft and intermittent, then it increases in volume. A full alarm is sounded if the wearer fails to move on hearing the pre alarm. The full alarm generates a 2000–3000 Hz tone at 90 dB (at 3 m). Hearing the DSU alarm by the partner is crucial for firefighter safety. The DSU also has flashing LEDs, which are only visible from limited angles to the firefighter and easily obscured by clothing or other objects. The DSU may also be voluntarily activated to assist additional crews coming in to locate firefighters inside.

Figure 39 Structural collapse of building



Auditory cues are important during internal firefighting for hearing sounds associated with imminent structural collapse.

Figure 40 Distress signal units



A distress signal unit is important to help locate a collapsed firefighter.



distress signal unit with lights activated in full alarm.

Handheld transceivers are also used to communicate messages – such as the conditions of the incident, the actions being undertaken and the requirement for additional resources – from the firefighter to the incident commander. The handheld transceiver sits over the left or right lower chest in a coat pocket. The transmitting device forms part of the unit that sits in the pocket (refer to Figure 41).

Structural firefighting helmets include an internal speaker and microphone that allow the handheld transceiver to be plugged in, directing communications to one ear inside the helmet (refer to Figure 41).

Figure 41 Handheld transceiver, and structural helmet speaker and microphone



Handheld transceiver in pocket



Helmet radio communication

Communication from the incident commander is received through the handheld transceiver, including updated instructions and other requests. Incident wide communication may also be received. Handheld transceiver volume levels must be moderated to reduce acoustic feedback between the two transceivers held by the partnered firefighters. High levels of background noise, combined with the SCBA, helmet and hood, can make it difficult to hear incoming messages.

Outside the structure, the pump operator works in close proximity to the noise of the running engine and pump of the appliance. They must be able to hear incoming radio communication from other firefighters on the incident ground, including command personnel and those inside the structure, to activate the correct controls. Duties are undertaken in significant additional background noise from the pumps, and multiple pumps may be present at incidents. The operator must also be able to hear other audible cues such as hissing from a ruptured gas main or noises associated with a collapsing structure. Duties include monitoring two radios – the incident ground radio channel and the command centre radio channel. Both sit on the pump control panel. Although the control panel includes a compound gauge to indicate water pressure, this cannot be monitored the whole time, and the operator needs to be able to hear changes in pitch that indicate changes to water pressure or supply.

Figure 42 Operating the pump against the engine background noise



Wildfire

Firefighters also work in teams of at least two people in wildfires. There may be several other crews in close proximity. Verbal communication with each other and with incident command are important, as is detecting crucial sounds and noises.

The PPE includes helmet and a neck protector, which cover the ears. There is less reliance on SCBA for wildfire firefighting. Mostly, P2[particle masks are worn – which, to some degree, inhibit speech. Communication occurs in high background noise – for example, higher than normal winds are generated by wildfires, the sound of burning bush (comparisons have been made to the sound of a jet engine) and petrol powered pumps. Important background noise includes the sound of falling trees and venting cylinders.

Handheld radio communication occurs in background noise during wildfire firefighting (refer to Figure 43). Firefighters must also be able to hear and localise victims' calls for assistance in background noise.

Figure 43 Handheld radio communication during wildfire fighting



During mopping[up operations, chainsaws contribute to background noise. Important background noise includes the warning noise of cracking and falling trees and branches.

Hazmat

The impervious FE hazmat suit affects communication by inhibiting speech and hearing (refer to Figure 44). Helmets and flash hoods are not normally worn underneath the suit. The firefighter's speech echoes off of the large visor, which affects communication. Firefighter pairs in FE suits use mainly direct speech and the handheld transceiver to communicate with each other and with the incident commander.

Figure 44 Fully encapsulated suit



Fully encapsulated suit limits hearing and distorts speech.

Splash suits surround the face, sitting over the ears, creating noise likened to a rustling plastic bag.

Rescue

Rescue operations may vary widely. The most common rescue scenarios are motor vehicle accidents. A designated crew member is responsible for fire protection and therefore wears a SCBA; however, other crew members are able to communicate by direct speech without the constraints of the SCBA mask. Powered equipment, the fire appliance engine and other ambient noises (e.g. traffic) all contribute to background noise. Specialised rescue operations, such as cliff face rescue, may use additional communication tools such as whistles. Background noise may include the crashing of the sea and howling wind. Urban search and rescue operators may be required to hear the fine tapping of a casualty caught below rubble.

9 *Health attributes*

The necessary health attributes for the effective undertaking of firefighting flow from a consideration of the inherent requirements. The assessment of health for firefighting also requires consideration of disease states, either latent or known, that can impact on capacity or that can lead to acute incapacity.

As with all commercial vehicle drivers, drivers of the fire appliance must be able to rapidly detect other vehicles, pedestrians and warning signs. However, this requirement is particularly important when firefighters are driving in emergency mode at high speed while exercising exemptions to normal road rules provided to drivers of emergency vehicles. Normal cues such as the flow of traffic cannot be relied upon.

Structural firefighting work requires very high levels of musculoskeletal and cardiopulmonary fitness, heat tolerance, alertness and decision making ability. There are also considerable psychological demands due to exposure to potentially traumatic incidents.

Work is conducted as a team. In particular, when firefighters go into a structure, they go as a pair and are closely dependent on each other. Should one become incapacitated, both that firefighter and the partner are in imminent danger.

Wildfire fighting places similar high demands on the firefighter to structural firefighting work. It requires very high levels of musculoskeletal and cardiopulmonary fitness, heat tolerance and situational awareness.

Hazmat work places considerable demands on the cardiopulmonary and musculoskeletal systems, and requires working in a FE or splash suit while wearing a breathing apparatus, which can lead to heat stress.

Health attributes for firefighting can be described under four main categories – although there is some overlap between them:

- **Senses:** These attributes include vision, balance, and hearing and speech. Problems with vision or hearing rarely cause acute incapacity, apart from Meniere's disease and other causes of vertigo. However, significant impairment of vision or hearing may impact on the ability to effectively and safely perform firefighting duties.
- **Psychological:** These attributes include attentiveness, cognition and psychological resilience, which may be impaired by psychiatric disorders. An acute anxiety state or psychosis may cause significant impairment or acute incapacity. Some psychological conditions may result in impaired or slow reactions, or inappropriate actions.
- **General health:** This attribute refers to conditions that can impact on capacity and/or conditions that may cause acute incapacity or impairment. They include:
 - cardiovascular disorders such as coronary heart disease or arrhythmias
 - respiratory disease such as asthma
 - neurological disorders such as epilepsy and stroke

- diabetes causing hypoglycaemia
 - heat related illness – the ability to regulate heat is a particular issue for the cardiovascular system (refer to Section 9.3.1).
- **Musculoskeletal:** These attributes refer to locomotor capacities of the limbs and back, coordination of movement, endurance and agility, and so on. An injury such as a dislocation may cause acute incapacity.

These attributes are discussed in more detail in the following sections.

9.1 Senses

9.1.1 Hearing

To be able to perform the inherent requirements of fire suppression, rescue and hazmat duties, the following hearing attributes are required:

- Firefighters must be able to hear speech from direct verbal communication as well as from radio communications while wearing PPE, which attenuates sound against a noisy background.
- Firefighters must have adequate hearing to be able to hear and localise auditory cues crucial for safety – a victim crying for help, a DSU alarm, or to hear noises associated with imminent collapse or an appliance siren signalling urgent evacuation.
- Conditions will often include significant background noise and SCBA noise. Failure to hear sounds of low intensity, or to distinguish a voice or speech from background noise can lead to failure to respond to imminently hazardous situations. This jeopardises the safety of the firefighter or others who are dependent on the firefighter.
- Firefighters must also be able to hear vehicle, traffic and other road sounds when driving the appliance particularly in emergency mode.

9.1.2 Vision

Firefighting duties are often undertaken under emergency and adverse conditions, where the ability to detect visual information quickly relies on good eyesight – specifically, acuity and field. However, colour vision is not critical if there is redundancy of information. Abnormal vision may impact on reaction time, mobility and casualty recognition. Failure to adequately see and respond to imminently hazardous situations jeopardises the safety of the firefighter and others dependent on the firefighter for their safety.

The following visual attributes are required to be able to perform the inherent requirements of driving the appliance, fire suppression, and rescue and hazmat duties:

- Good visual acuity is crucial to driving safely. Good acuity is also essential to firefighting, especially under conditions of poor visibility, so that a firefighter may be operationally effective. Good acuity is crucial for tasks such as identifying casualties and hazards to other firefighters when moving through the incident.
- Peripheral vision is crucial to driving safely. However, it is of limited importance in many firefighting situations because the PPE limits the fields of vision and there are generally poor visibility conditions anyway. Peripheral vision is necessary when a firefighter arrives at an incident where work may be undertaken on roads and there is a need to detect traffic movements.
- Colour vision. A risk assessment undertaken by Dr John Parkes in 2009 concluded that while some tasks undertaken by firefighters require colour recognition, none were deemed safety critical. The exception to this is marine tasks, which are subject to maritime colour vision requirements.

9.2 **Psychological health**

Firefighting places heavy demands on various psychological attributes. Psychological conditions can impact on attentiveness, cognition and decision making, and the capacity to manage exposure to distressing events such as motor vehicle accidents, burnt and injured victims, and suicides.

Conditions that can impact on psychological resilience, or impair judgement, behaviour, cognition and so on must therefore be assessed. Some psychological states may even result in acute incapacity (e.g. acute anxiety with panic attacks). Cognitive impairment may also occur due to misuse of drugs or alcohol, and some medications.

9.3 **General health**

9.3.1 **Cardiovascular system**

Good cardiovascular health is required. This is not merely the absence of cardiovascular conditions that can result in acute incapacity, but also good cardiovascular function, which is essential for coping with extreme workloads and maintaining core body temperature. Therefore, the risk of coronary heart disease and other conditions such as valvular heart disease and arrhythmias need to be assessed.

An efficient cardiovascular system is central to the maintenance of body heat regulation, to avoid impairment or acute incapacity from heat related illnesses, or a cardiovascular event.

Six of 10 deaths of FRNSW firefighters on duty since 1989 have been cardiac related. Kales et al. studied the risk of fatal heart attacks in American firefighters in relation to their various duties.⁴ Out of 449 deaths from 1994 to 2004, they found that fire suppression duties carried the highest risk of cardiac arrest, which was 10–100 times higher than for non emergency duties. Acute incapacity on the incident ground can be hazardous not only for the firefighter concerned, but for the others in the crew who may be dependent on them, or need to rescue them. Kales et al. also found there was an increased risk of heart attack in the alarm response phase, which may be hazardous if the person was driving the appliance. In association with this research, the National Institute for Occupational Safety and Health (United States) recommends screening of firefighters for cardiac risk factors.⁵

9.3.2 **Respiratory system**

The extreme workloads of firefighting place high demands on the respiratory system; hence, good respiratory function is required. This includes the ability to wear a P2 negative pressure particle mask, which imposes an extra load on respiration. Good respiratory function is essential for rapid exchange of O₂ and CO₂. Even normal respiratory function may be threatened by irritants in the firefighting environment, which can cause coughing, bronchospasm and pulmonary oedema.

Therefore, conditions such as asthma and chronic obstructive pulmonary disease need to be assessed in addition to overall respiratory function.

9.3.3 **Neurological disorders**

Neurological disorders such as seizures, epilepsy and stroke can cause acute incapacity. Certain neurological conditions can also result in impairments of, for example, cognition, coordination, attention, judgement, sensation, balance or body temperature regulation. Therefore, any neurological conditions that can impact on these functions or result in acute incapacity must be assessed.

⁴ Kales et al. *NEJM* 2007, 356:1207–15

⁵ National Institute for Occupational Safety and Health Alert. *Preventing firefighter fatalities due to heart attacks and other sudden cardiovascular events*, 2007.

9.3.4 Diabetes

As diabetes is a risk for cardiovascular disease, and good cardiovascular health is required for firefighting, diabetes screening and assessment is important. Diabetes treatment associated with risk of hypoglycaemia is also assessed, as the absence of conditions resulting in impairment or acute incapacity is required for safe firefighting. Diabetes assessment is also relevant due to complications such as retinopathy (can result in visual impairment) and peripheral neuropathy (may affect balance), which can also impact on the effective and safe undertaking of firefighting duties.

9.3.5 Renal disease, fluid balance and acid–base metabolism

The extremes of the operational firefighting environment may cause considerable stress on fluid balance and hydration. Good renal function is required for acid–base balance. In addition, good renal function is required to withstand challenges to hydration, as underlying impaired renal function combined with dehydration may result in further renal injury.

9.3.6 Sleep disorders

Firefighting, including driving the appliance in emergency mode, requires accurate perception of a situation and rapid decision making. Disorders such as obstructive sleep apnoea may result in loss of concentration, and therefore affect the safety of firefighters tasked with driving due to fatigue and impairment of concentration.

9.4 Musculoskeletal

Firefighting places very high demands on the musculoskeletal system regarding strength, stability, dexterity, endurance and coordination; hence, the requirement for good musculoskeletal capacity. Joint instability may cause acute incapacity.

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PART 3: MEDICAL FITNESS CERTIFICATIONS

Assessments undertaken against this Health Standard will result in applicants' or firefighters' medical fitness for firefighting being certified in accordance with one of the following standard classifications.

Fit to Perform Firefighting Duties Without Any Requirements or Restrictions

This indicates the applicant or firefighter meets all criteria in the Health Standard and is medically fit for the full range of firefighting duties without any requirements or restrictions.

For conciseness, this category will be referred to as Fit to Perform Firefighting Duties Unconditional within Part 4 of this standard.

Fit to Perform Firefighting Duties with Specified Requirements or Restrictions

This indicates that the applicant or firefighter meets all criteria in the Health Standard, provided that recommended requirements or restrictions are implemented, which may include and be certified as:

- Fit Subject to Review: more frequent medical review than that required under standard assessment schedules
- Fit Subject to Job Modification: suitable modifications to the job – for example, modification of physical equipment
- Fit Conditional on Wearing of Appropriate Aids (e.g. corrective lenses).

Temporarily Unfit to Perform Firefighting Duties, but fit to perform alternative duties, either with or without specified requirements or restrictions

This indicates that the firefighter does not meet the criteria for Fit to Perform Firefighting Duties Without Any Requirements or Restrictions. Their health situation is such that they may pose a risk to safety and therefore should not perform full firefighting duties at present. They must undergo prompt assessment to determine their ongoing status and be definitively classified. Temporarily Unfit to Perform Firefighting Duties may also be applied in situations where a clear diagnosis has not been made – for example, in the case of an undifferentiated illness that has resulted in blackouts.

The firefighter may be assessed as Fit to Perform Firefighting Duties With Specified Requirements or Restrictions.

For conciseness, this category will be referred to as Temporarily Unfit to Perform Firefighting Duties within Part 4 of this standard.

Temporarily Unfit to Perform Any FRNSW Duties

This indicates that the firefighter does not have the capacity to safely perform any meaningful duties available within FRNSW at present; however, they require additional assessment to determine their long term medical fitness for firefighting.

Permanently Unfit to Perform Firefighting Duties

This indicates that the firefighter does not meet the criteria for Fit to Perform Firefighting Duties Without Any Requirements or Restrictions or Fit to Perform Firefighting Duties With Specified Requirements or Restrictions (or any other conditional category). Their condition is deemed permanent (defined as unlikely to improve to the level required for firefighting duties in the foreseeable future) and they will not be able to perform firefighting duties in the foreseeable future. Fire & Rescue NSW policies such as redeployment may be considered.

PART 4: MEDICAL CRITERIA FOR FIREFIGHTER HEALTH ASSESSMENTS

This part outlines the medical criteria to be applied when assessing a firefighter's fitness for firefighting duties. It also includes guidelines for assessment and management of various health conditions with respect to firefighting work.

For the purposes of this standard, firefighting is used to collectively define all of the inherent tasks detailed in Part 2 of this document.

This part is presented in a series of chapters addressing the main health conditions that are likely to affect fitness to perform firefighting duties, including:

- blackouts
- cardiovascular conditions
- diabetes
- hearing
- musculoskeletal conditions
- neurological conditions, including dementia, seizures and epilepsy, vestibular disorders and other neurological conditions
- psychological conditions
- respiratory conditions
- sleep disorders
- substance misuse
- vision and eye disorders.

Each section provides general information about the condition and its effects on medical fitness for duty, and then provides advice about the medical assessment of the condition. The tables set out the criteria to be met for medical fitness for duty; however, they are not exhaustive. The criteria usually emphasise function in relation to the job, rather than being based on diagnosis or impairment.

When assessing a firefighter, the assessing medical practitioner should be mindful of the general principles and demands of firefighting work (refer to Sections 7–9), and the implications for safety and effective delivery of service. These principles should be the touchstone for difficult cases or conditions not adequately covered in this Health Standard.

This Health Standard does not presume to deal with the myriad conditions that may affect health on a short term basis. Such conditions may include post-major surgery, severe migraine, fractures to limbs or acute infections.

Clinical judgement is usually required on a case by case basis, although the text in each section gives some advice on the clinical issues to be considered.

10 Blackouts

10.1 Relevance to firefighting duties

Unpredictable, spontaneous loss of consciousness is incompatible with performing firefighting duties, including driving an appliance in emergency mode and working in dangerous environments. Loss of consciousness in these circumstances is likely to jeopardise the safety of the individual firefighter, their crew and members of the public.

10.2 General assessment and management guidelines

Blackouts may arise from various conditions including:

- hypotension because of inappropriate vasodilation (e.g. vasovagal faints, autonomic nervous system disorder)
- other cardiovascular disorders (e.g. arrhythmias, flow obstruction, or other unusual conditions such as subclavian steal)
- neurogenic disorders (e.g. epilepsy)
- metabolic disorders (e.g. hypoglycaemia)
- psychiatric disorders (e.g. hyperventilation, psychosomatic states)

- drug intoxication
- sleep disorders.

For the purpose of this Health Standard, a syncopal event is defined as a loss of consciousness arising from a cardiovascular cause (refer to Section 11, Cardiovascular disorders).

Blackouts, whether they occur on or off duty, should be managed as per Figure 45. Determination of the cause of blackouts may be difficult and require extensive investigations (cardiac, neurological) and specialist referral.

Some conditions causing blackouts are temporary (e.g. acute infection or during venepuncture) and should not impact on fitness for duty if found to be triggered by a well defined provoking factor that can be avoided at work. The cause should be confirmed by the firefighter's treating doctor since vasovagal syncope can also result from conditions that are not so benign.

In the event of an unexplained blackout, the firefighter should be classified 'Temporarily unfit to perform firefighting duties' until the cause is ascertained and treated.

Despite extensive investigation, it is not always possible to determine whether the mechanism of a blackout is syncope, seizure, hypoglycaemia, a sleep disorder or another condition. For blackouts of unknown cause – as some of these cases will, in fact, be seizures – a standard similar to that for seizures is applied (refer to Table 1).

Where a firm diagnosis has been made, the criteria appropriate to the condition should be referred to elsewhere in the Health Standard. For blackouts not covered elsewhere in the Health Standard, refer to Table 1.

Figure 45 Management of blackouts and firefighting

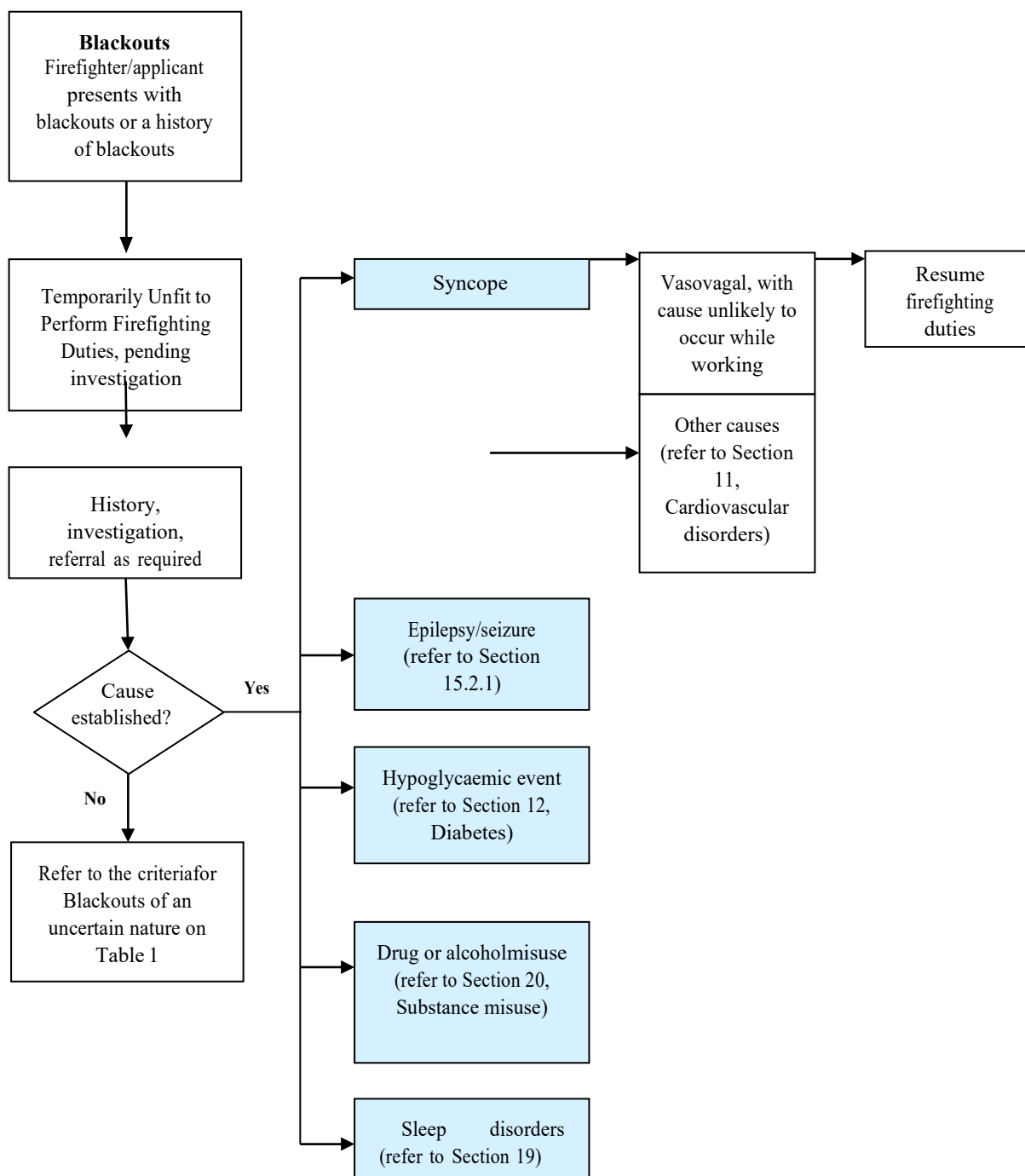


Table 1 Medical standards for operational firefighters – blackouts of uncertain nature

Condition	Criteria
Blackouts (an episode(s) of impaired consciousness) of uncertain nature	A firefighter is not Fit to Perform Firefighting Duties if they have experienced blackouts that cannot be diagnosed as syncope, seizure or another condition. If there has been a single blackout or more than one blackout in a 24[hour period, Fit to Perform Firefighting Duties Subject to Review may be determined by the FRNSW Occupational Physician, taking into account information provided by the appropriate specialist as to whether the following criterion is met: there have been no further blackouts for at least five years. If there have been two or more blackouts separated by at least 24 hours, Fit to Perform Firefighting Duties Subject to Review may be determined by the FRNSW Occupational Physician, taking into account information provided by the appropriate specialist as to whether the following criterion is met: there have been no further blackouts for at least 10 years.
Exceptional cases	Where a firefighter with one or more blackouts of undetermined mechanism does not meet the standard for Fit to Perform Firefighting Duties, Fit to Perform Firefighting Duties Subject to Review may be determined by the FRNSW Occupational Physician taking into account information provided by assessing specialists, investigations undertaken and blackout free period. Where the firefighter holds a licence subject to the medical standards for commercial vehicles (e.g. medium rigid, heavy rigid), the driver licensing authority assessment will also be taken into account.

10.3 Bibliography

Austrroads, National Transport Commission. *Assessing fitness to drive for commercial and private vehicles*, 2012.

National Transport Commission. *National standard for health assessment of rail safety workers*, 2012.

11 Cardiovascular disorders

11.1 Relevance to firefighting duties

The cardiovascular demands of operational firefighting duties are extreme, resulting in significant cardiovascular and thermal strain. Acute incapacitation of a firefighter during firefighting duties, including operation of the appliance, can severely jeopardise the safety of the firefighter, their crew (who may have to rescue them) and members of the public.

Active firefighting can be one of the most strenuous activities undertaken by people.

Analysis of the inherent requirements of Fire and Rescue NSW (FRNSW) firefighting duties closely match those of American firefighters as outlined in National Fire Protection Association's *NFPA1582: Standard on comprehensive occupational medical program for fire departments*. Therefore, consideration of United States (US) data and experience are highly relevant and are discussed here.

The leading causes of on duty deaths in firefighters are acute cardiovascular events. In the US, acute cardiovascular events accounted for 45% of all on duty deaths occurring between 1995 and 2004.

These rates are significantly higher than for other occupational groups, such as police and emergency medical services, with rates of 22% and 11%, respectively. Also, for every fatal cardiovascular event on duty, it is estimated that there are 17 nonfatal on duty events in the US.

Acute cardiovascular events include acute myocardial infarction, fatal arrhythmia and other events such as stroke.

In the five years to 2012, sudden cardiac death continued to account for 42% of on duty deaths in the US. The NFPA reported that, in 2012, in spite of the reduction in numbers of on duty deaths (from all causes), sudden cardiac death was still the number one cause of on duty firefighter deaths, and usually accounted for the highest share of deaths in any given year. In 2012, of the 74% of cardiac death victims for whom autopsy or medical records were available, 40% were reported to have had a history of cardiac problems, such as previous heart attacks or revascularisation procedures (e.g. stent or coronary artery bypass grafting). More than 50% of FRNSW deaths on duty in the past 20 years have been caused by cardiac events.

Studies confirm that the conditions of firefighting can precipitate acute cardiovascular events in susceptible individuals; these events are not just incidentally occurring while the firefighter is on duty. Although active fire suppression represents only 1–5% of on duty time, fire suppression accounts for the majority of on duty cardiovascular deaths:

- active fire suppression duties (more than 30%)
- alarm return (17%)
- alarm response (13%)
- physical training (12%).

Also, these deaths do not follow the normal circadian pattern of the general population – 66–77% occur between midday and midnight as do most emergency operations, whereas in the general population, the peak incidence of myocardial infarction is 0600–1100.

Acute incapacitation of a firefighter jeopardises the safety of the firefighter, their crew and members of the public.

11.1.1 Factors specific to firefighting

There are several factors specific to firefighting that act either individually or collectively to increase the risk of a heart attack:

- **Sympathetic activation.** Heart rates rise dramatically following initial alarm, and reach near maximal or maximal predicted values during simulated or actual fire emergencies. Firefighters go from complete rest to full activity in minutes. Irregular episodes of strenuous activity in normally sedentary individuals are well known precipitants of acute coronary events, as are periods of high emotional stress.
- **Strenuous activity.** Structural and bushfire firefighting, hazmat, and search and rescue all entail a high physical workload. Many duties are undertaken with the additional load of personal protective equipment of up to 21 kg, significantly adding to cardiovascular and thermal strain.
- **Oxygen uptake capacity.** Studies estimate that the average required oxygen uptake capacity, as measured by oxygen consumption required for the safe performance of firefighting duties, is 9.7–12.8 metabolic equivalents (METs) (VO_2 of 33.9–45 ml/kg/min). VO_2 max declines with age, so the stated range represents the following levels of fitness for each age group:
 - **30s:** a good level for men and good to excellent level for females
 - **40s:** good to excellent level for men and excellent to superior for females
 - **>50:** excellent to superior level for men and superior for females
- **Body heat.** The work of firefighting produces large amounts of metabolic heat. Additional sources of thermal strain include radiant heat from fires, ambient temperature and humidity. Core body temperature can rise to 39 °C. Normal heat dissipation mechanisms are severely limited by the firefighting ensemble

and chemical suits. Heat related illness is therefore a risk and adds to cardiovascular strain, with predisposing factors including obesity, low levels of fitness, dehydration, lack of acclimatisation, sleep deprivation, concurrent illness, medications that impair thermoregulation (e.g. stimulants and anticholinergics) and medications that increase fluid loss (e.g. diuretics).

- **Dehydration.** Heat stress and dehydration are closely related and add to cardiovascular strain. Dehydration results in decreased plasma volume (and hence stroke volume), with further impairment of thermoregulation and haemoconcentration. Haemoconcentration causes changes in blood electrolytes and increases blood viscosity. Prothrombotic tendencies are therefore potentially acutely increased.
- **Sweating.** The firefighting ensemble and chemical suits result in profuse sweating – as much as
- 2 litres or more per hour during strenuous firefighting activity. Plasma volume has been reported to decrease by 15% after 18 minutes of strenuous firefighting drills.⁶ Because of activities undertaken when not on duty – including sports, activities at home and other employment (secondary for permanent firefighters, primary for retained firefighters) – firefighters may be relatively dehydrated before undertaking active operational duties.
- **Carbon monoxide exposure.** Carbon monoxide is present in virtually all fire environments. Inhalation results in disruption to the blood's transport and intracellular use of oxygen. The resultant hypoxia leads to decreased oxygen supply to the myocardium. Unstable angina may be

⁶ Smith DL, Liebig JP, Steward NM, Fehling PC. *Sudden cardiac events in the fire service: understanding the cause and mitigating the risk*, Skidmore College, Health and Exercise Sciences, First Responder Health and Safety Laboratory, 2010.

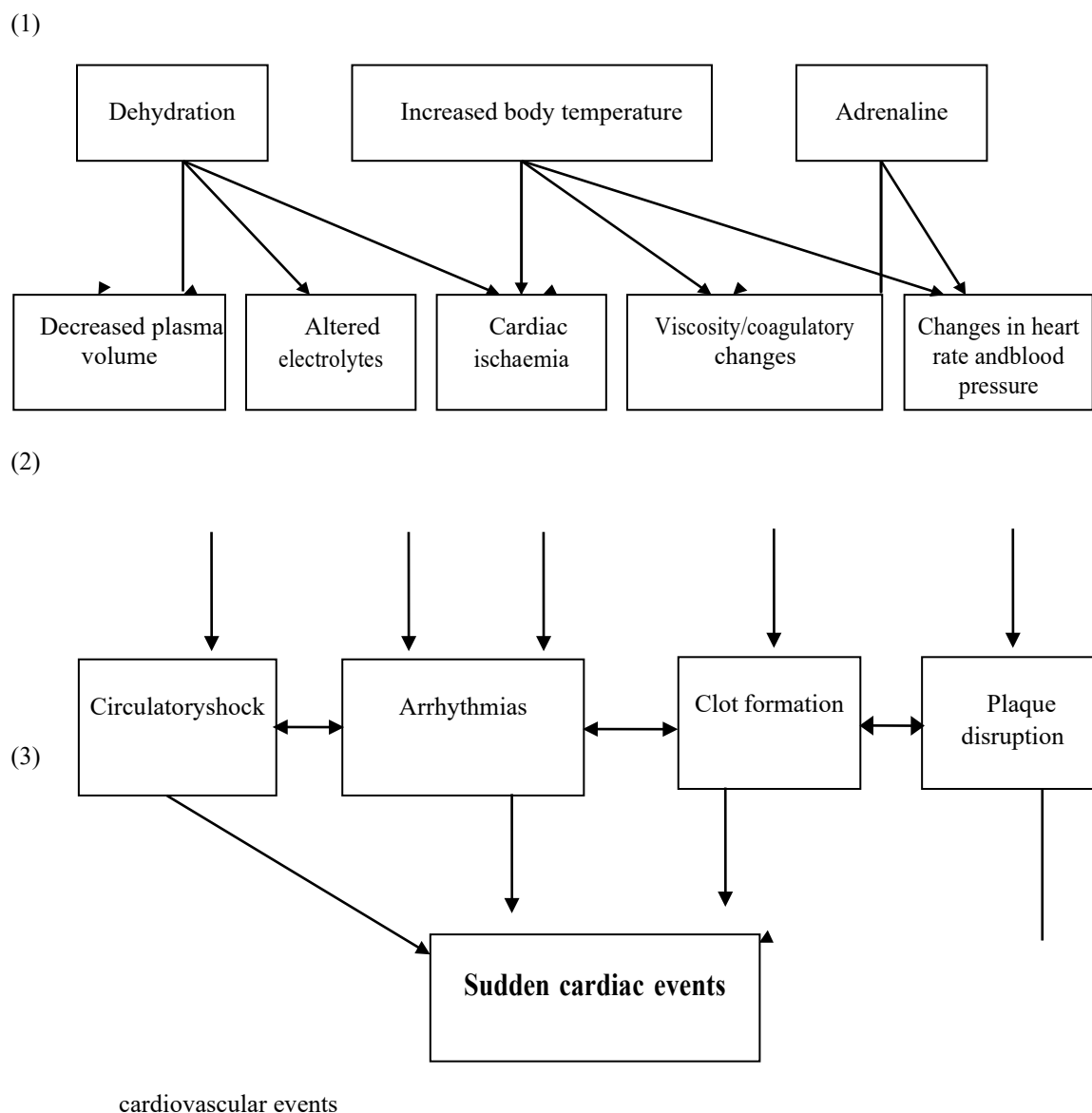
precipitated in those with previously stable disease. The risk of myocardial infarction is more acutely increased for those with underlying critical coronary artery atherosclerosis.

Firefighters are protected from carbon monoxide while wearing the self contained breathing apparatus (SCBA); however, firefighters frequently remove their SCBA during activities such as overhaul, where there may still be significant concentrations of carbon monoxide. A SCBA is not routinely worn for bushfire firefighting, rather, firefighters wear the P2 mask, which does not protect them from carbon monoxide. Increased uptake of carbon monoxide is expected with increased breathing during hard work.

- **Shift work.** Permanent firefighters mostly work a '10/14' roster, consisting of two, 10[hour days, followed by two, 14[hour nights, followed by four days off. Some permanent firefighters may engage in secondary employment in between sets of shifts. Retained firefighters are on call and can work variable hours, usually in addition to primary employment. Many studies of various occupations have found an association between shift work and increased risk of cardiovascular disease. The mechanisms are likely to be multifactorial, including psychosocial, behavioural and direct metabolic pathways. Poor dietary habits, sleep disruption and less physical activity may increase the risk of metabolic syndrome. Sleep deprivation or sleep disturbance has been associated with insulin resistance, weight gain, hypertension and cardiovascular disease.
- **Other.** Intermittent noise exposure from alarms, sirens, engines and mechanised rescue equipment all increase blood pressure. Short term exposure to particulate matter has been associated with triggering myocardial infarction, particularly among people with pre existing heart disease. This has implications for firefighters, given their exposures to fire smoke particulate matter after removing their SCBA or mask in overhaul operations.

Active firefighting duties lead to hyperthermia, dehydration and considerable cardiovascular strain. Several biologically plausible pathways may trigger acute cardiovascular events: rupture of vulnerable plaque from shear stress, hypercoagulability leading to platelet aggregation and clot formation, and increase in myocardial oxygen demand exceeding myocardial oxygen supply.

Figure 46 Interaction of multiple events during firefighting that can combine to result in acute



11.1.2 Personal risk factors

US data show that on duty cardiovascular deaths occur almost exclusively in susceptible individuals with underlying coronary artery disease – either previously diagnosed or latent. Thirty per cent of the cardiac deaths had prior known coronary artery disease, as determined by evidence of a history of myocardial infarction, angioplasty/stent procedures or bypass surgery. Of all autopsies, 56% revealed left ventricular hypertrophy, a major cause of which is chronically uncontrolled hypertension.

Increasing age and male gender are significant and uncontrollable risks for cardiovascular disease, and relevant to an ageing, largely male workforce. FRNSW data from 2010 show a median age of 42 years for permanent firefighters and 40 years for retained firefighters, with 23% of all operational personnel aged 50 and over.

Epidemiological studies show that, similar to the general population, the majority of incident cardiovascular disease events occur in emergency responders (firefighters and police officers) who are initially only prehypertensive or mildly hypertensive. The mean blood pressures observed in those who subsequently

developed disease were in the range of 140–146/88–92 mmHg. Data show that hypertension is poorly controlled in the general community.

Of all on duty deaths from acute cardiovascular events

40%* had a previously documented history of coronary heart disease

almost 100% of on duty cardiac deaths had underlying coronary heart disease.

*NIOSH data series 1994–2004. Of the 70% for whom medical information was available, 40% had a previous history.

11.2 Assessment and medical criteria

11.2.1 General assessment and management guidelines

The aim of assessment is to detect latent and symptomatic heart disease, and to detect risk factors that require management, to help prevent progression to critical disease. Cardiac risk level and clinical assessment is used for assessment.

Cardiovascular disease may also result in stroke, peripheral vascular disease and eye disease. The relevant chapters should be referred to for advice on assessment of these effects.

Medical criteria for medical fitness for duty are outlined in Table 2.

Cardiac risk assessment

Assessment of cardiac risk involves clinical assessment as well as determining the cardiac risk level. Clinical assessment includes evaluation of:

- symptoms such as undetermined chest pain
- family history such as first degree relatives having cardiovascular events in mid life
- past history
- comorbidities such as obesity, inactivity, obstructive sleep apnoea, depression and posttraumatic stress disorder.

A firefighter who is found to be at increased risk of a cardiac event, but is asymptomatic, requires a higher level of assessment than an ordinary patient because of:

- the risks inherent to firefighting that increase the risk of precipitating an event (as discussed in Section 11.1)
- the effect of acute incapacity on the safety of the individual firefighter and others.

All information should be taken into account. Clinical judgement and discussion with a FRNSW Occupational Physician may be needed to determine the individual's fitness for duty while further investigation is undertaken.

Cardiac risk level

The cardiac risk level is a tool for predicting the absolute risk of a cardiovascular event in asymptomatic persons. In particular, it is useful in predicting the risk of a heart attack over 5 years. Although it is a useful tool, it cannot replace clinical assessment. The tool is also useful in helping to guide risk factor management. Age is a major determinant of risk, and so application of this assessment is much more important for older firefighters than for young recruits.

To assess cardiac risk level, data need to be collected for:

- age and sex
- cigarette smoking
- blood pressure
- fasting total and HDL cholesterol
- fasting glucose levels or known diabetes (a fasting level of more than 7 mmol/L is 'diabetic' for calculations, and individuals with values of 5.5 mmol/L or more require an oral glucose tolerance test).

Determine risk level

To determine risk level, refer to Figure 47. An online calculator is available at www.cvdcheck.org.au.

Within the chart, choose the cell nearest to the person's age, systolic blood pressure and total cholesterol:HDL ratio. Individuals who fall exactly on a threshold between cells are placed in the cell indicating higher risk. Individuals below the age of 35 should be managed as if they are 35 years old.

Stratification and risk management

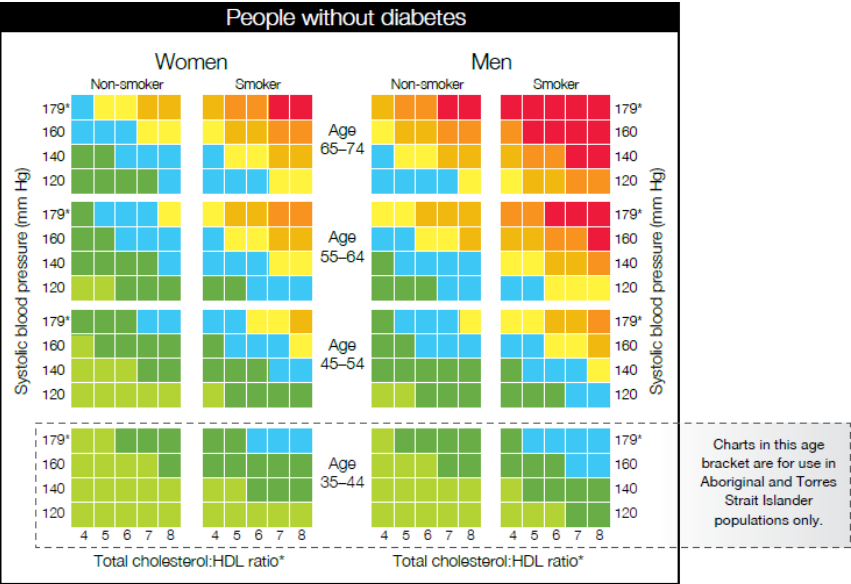
The cardiac risk level gives an estimation of probability of a cardiovascular event in the next 5 years. The higher the score, the higher the probability. Management of firefighters is determined by considering their risk level in conjunction with their overall cardiac risk assessment (again, refer to Figure 47):

- Probability $\geq 16\%$ in 5 years (red, orange, light orange and yellow cells). The firefighter is Unfit to Perform Firefighting Duties. They should be referred for an exercise stress test and classed as Temporarily Unfit to Perform Firefighting Duties pending results and appropriate management.
- Probability 10–15% in 5 years (blue cells). The firefighter is referred for an exercise stress test. While waiting for the results, the firefighter may be assessed as Fit to Perform Firefighting Duties Subject to Review (if there has been a normal exercise stress test within the past two years) or Temporarily Unfit to Perform Firefighting Duties.
- Probability 5–9% in 5 years (dark green cells). The firefighter is assessed for specific risk factors and overall cardiac risk, including obesity, physical activity and family history. The firefighter should be referred to their general practitioner for risk factor modification. An exercise stress test should usually be arranged. While awaiting results of further assessments or investigations, the firefighter may be classed as Fit to Perform Firefighting Duties Subject to Review or Temporarily Unfit to Perform Firefighting Duties, depending on the overall assessment.
- Probability $< 5\%$ in 5 years (light green cells). The firefighter is assessed regarding overall cardiac risk assessment and managed accordingly, including referral to their general practitioner as required. They may be classed as Fit to Perform Firefighting Duties or Fit to Perform Firefighting Duties Subject to Review depending on the overall assessment.

Absolute risk is considered very high (5[year risk of $> 20\%$) in persons with previous cardiovascular disease event (including myocardial infarction, stents, bypass surgery, transient ischaemic attack, ischaemic stroke). Adults with any of the following conditions are also considered to be at very high or high risk – therefore the cardiac risk level need not be applied:

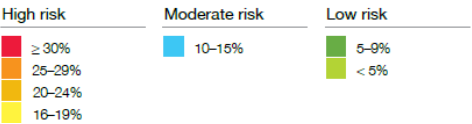
- diabetes and age > 60 years
- diabetes with microalbuminuria (> 20 mcg/min; or urinary albumin: creatinine ratio
- > 2.5 mg/mmol for males or > 3.5 mg/mmol for females) (see also Section 17, Renal disorders)
- moderate or severe chronic kidney disease (persistent proteinuria or estimated glomerular filtration rate < 45 mL/min/1.73 m²) (see also Section 17, Renal disorders)
- a previous diagnosis of familial hypercholesterolaemia
- systolic blood pressure > 180 mmHg or diastolic blood pressure > 110 mmHg
- serum total cholesterol > 7.5 mmol/L.

Figure 47 Coronary heart disease risk factor prediction charts



* In accordance with Australian guidelines, patients with systolic blood pressure ≥ 180 mm Hg, or a total cholesterol of > 7.5 mmol/L, should be considered at increased absolute risk of CVD.

Risk level for 5-year cardiovascular (CVD) risk



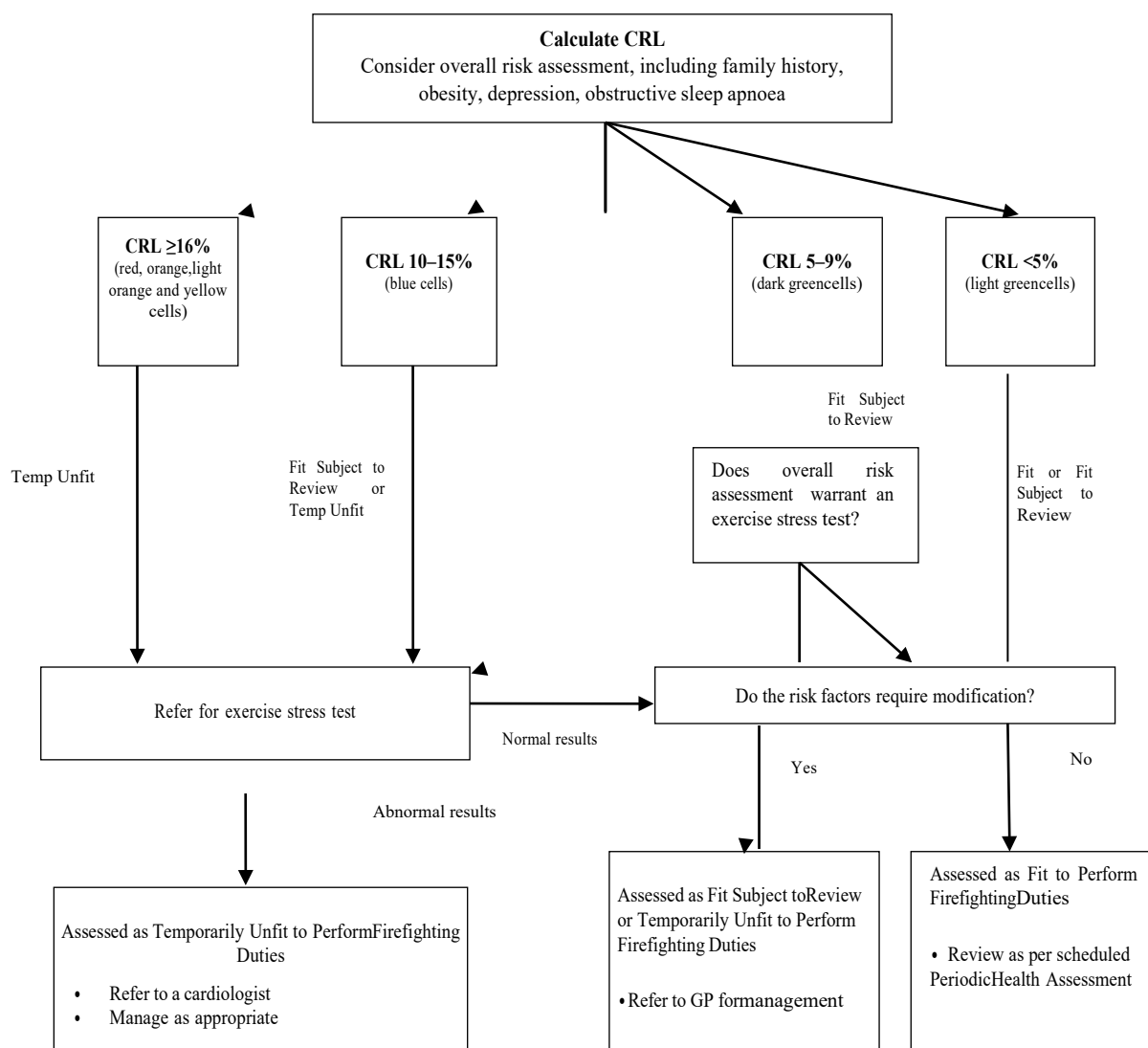
* In accordance with Australian guidelines, patients with systolic blood pressure ≥ 180 mm Hg, or a total cholesterol of > 7.5 mmol/L, should be considered at increased absolute risk of CVD.

Risk level for 5-year cardiovascular (CVD) risk



Reproduced with permission from Absolute cardiovascular disease risk assessment: quick reference guide for health professionals, an initiative of the National Vascular Disease Prevention Alliance. © 2009 National Heart Foundation of Australia (<https://heartfoundation.org.au/images/uploads/publications/austReCardiovascularRiskCharts.pdf>).

Figure 48 Management of cardiac risk level (CRL)



GP = general practitioner Refer to Figure 47 for CRLs.

Exercise stress test

The exercise stress test should be conducted using the Bruce protocol. The exercise capacity must be $\geq 90\%$ of the age/sex predicted capacity. Where the stress test is abnormal (e.g. ischaemia, arrhythmia, hypertensive response, abnormal heart rate recovery) or clinical assessment warrants it, referral to a cardiologist should be made for further assessment and advice on clinical management.

In addition, it is desirable for the person to achieve a level of ≥ 12 METS. If this is not met, they should be referred for assistance in improving their aerobic capacity.

Choice of stress test

Exercise stress electrocardiogram without imaging would normally be the first choice of exercise stress testing for screening asymptomatic individuals.

Interpretation of results should include consideration of electrocardiogram changes suggestive of ischaemia, blood pressure response, heart rate recovery and exercise capacity.

Stress echocardiography (in preference to myocardial perfusion imaging, as it does not involve injection) should be requested for those with left bundle branch block, any other reason for uninterpretable electrocardiogram (ECG), left ventricular hypertrophy or paced rhythm. Stress echocardiography should also be considered where the history is suggestive of ischaemic heart disease and for high risk groups – for example, in those with long standing diabetes, where silent ischaemia is possible (stress echocardiography may show fixed wall motion abnormalities consistent with previous infarction).

Myocardial perfusion imaging (with exercise stress) may be required based on the opinion of a cardiologist.

Medication and exercise stress test

Some medications, such as beta blockers or digoxin, may impact on the results of exercise stress testing. Medication should be stopped at the appropriate time before the exercise stress test, only with the agreement of the treating doctor.

Electrocardiogram and echocardiograph

If voltage criteria for left ventricular hypertrophy are found on the ECG, an echocardiograph should be requested to assess for left ventricular hypertrophy. For the purpose of this standard, both the Sokolow Lyon and Cornell criteria must be met:

- Sokolow Lyon voltage criteria: R wave V_5 or V_6 + S wave V_1 >35 mm
- Cornell voltage criteria: R wave aVL + S wave V_3 >28 mm in men, or >20 mm in women

The ECG is specific, but not sensitive, for left ventricular hypertrophy; therefore, if the firefighter has a history of long standing or poorly controlled hypertension, an echocardiograph should be considered, even if voltage criteria for left ventricular hypertrophy are not met. If confirmed, the presence of left ventricular hypertrophy is associated with increased risk of cardiovascular morbidity and mortality, and will need to be considered in the overall cardiac risk assessment.

Management of risk factors

Where risk factors are identified – for example, raised blood pressure and smoking – the firefighter should be referred to their general practitioner and FRNSW health promotion programs. A negative stress test – although making the current presence of significant disease unlikely – does not 100% exclude the presence of disease. There may be noncritical disease present that can progress; hence, the importance of risk factor management must be emphasised.

The firefighter should be reviewed to monitor the management of their risk factor profile. If appropriate, the general practitioner may be requested to provide a management plan to the assessing doctor.

Coronary heart disease and related interventions

When considering the likelihood of future events in a firefighter with known coronary artery disease under treatment, it is important to note that the medical literature on the benefits of treatments and interventions relates to risk in the general population, not in groups such as firefighters who are exposed to extreme conditions that can result in extreme cardiovascular strain and an increased prothrombotic risk. A review of on duty cardiovascular deaths in the US between 1995 and 2004 revealed that 30% of decedents had a previous history or evidence of coronary heart disease – myocardial infarction, angioplasty, stent or bypass surgery. There is overwhelming evidence of markedly higher relative risk of on duty death and disability in firefighters with established coronary artery disease.

Many patients will consider themselves cured post-revascularisation procedures; however, the evidence does not support this. Coronary artery disease is a chronic disorder with a natural history that spans several decades. It is a progressive disease, so even after successful revascularisation, recurrent events are to be expected. The extreme conditions of firefighting increase the risk of acute cardiovascular events in vulnerable individuals. Previous cardiovascular events automatically place individuals in a high risk group, with their clinical 5 year risk assumed to be >20%.

In those with known disease, stress testing may be used as a tool for further risk stratification (to help predict the risk of future events); however, given the background of elevated risk in those with treated coronary heart disease, plus the conditions of firefighting known to increase the acute risk in vulnerable persons, plus the safety implications of acute incapacity, it is unlikely that risk would be estimated to be at an acceptably low level. Furthermore, stress testing cannot replicate the physiological strain of firefighting and, therefore, cannot be relied on as predictive for events under those extreme conditions.

Acute coronary syndrome (including ST and non ST elevation myocardial infarction, and unstable angina), bare metal or drug eluting stent surgery, or bypass surgery would normally preclude a firefighter from operational duties on a permanent basis. Such diagnoses must be verified by the appropriate specialist.

Other cardiovascular disorders

Suspected angina pectoris

Where chest pains of uncertain origin are reported, every attempt should be made to reach a positive diagnosis and the firefighter advised to not undertake firefighting duties while being evaluated. The firefighter should be classed as Temporarily Unfit to Perform Firefighting Duties until investigations have reasonably excluded cardiac origin for the symptoms. If investigations are positive or the firefighter remains symptomatic, requiring anti anginal medication for symptom control, they should remain Temporarily Unfit to Perform Firefighting Duties until a final diagnosis is reached. Should coronary artery disease or other cardiac disease be confirmed as the cause for symptoms, reference will need to be made to the relevant section of this standard.

Cardiac surgery

Cardiac surgery may be performed for various reasons, including valve repair, valve replacement or correction of septal defects. In some cases, the surgery will be curative. However, in other cases there will be ongoing risks in relation to firefighting – for example, the requirement for lifelong warfarin or other anticoagulation with a mechanical heart valve. Each case therefore requires individual assessment and all firefighters should be classed as Temporarily Unfit to Perform Firefighting Duties until the assessment is finalised.

High blood pressure

Hypertension increases the risk of heart attack and stroke. Heart rate and blood pressures are elevated during firefighting and other emergency operations. The physical work demand and the emotionally charged environment require these physiological responses. The extent of the physiological demands is determined by the particular operation. The strenuous activity and sympathetic activation associated with active operational duties may interact with underlying already elevated blood pressure to precipitate acute cardiovascular events. Uncontrolled hypertension is an independent risk factor for on duty cardiovascular events and deaths in firefighters.

The Health Standard reflects the importance of good blood pressure control for firefighters, and clinicians should encourage appropriate treatment so that firefighters do not continue to work for years with uncontrolled blood pressure.

The cut off blood pressure value at which a firefighter is considered unfit to perform firefighting duties does not reflect the usual goals for managing hypertension. A firefighter should be deemed Temporarily Unfit to Perform Firefighting Duties if their blood pressure is ≥ 160 mmHg systolic or ≥ 100 mmHg diastolic, treated or untreated, irrespective of cardiac risk level. This cut off has been set for firefighters because of the job specific factors described previously, which can result in acutely higher blood pressures and potentially precipitation of acute cardiovascular events.

Side effects of antihypertensive medication must also be considered when assessing fitness for firefighting duties. A number of antihypertensive agents cause vasodilatation. Hypotensive episodes may therefore be precipitated when exposed to high temperatures, strenuous exercise and fluid loss. History should be elicited in relation to such effects, and the firefighter should also be counselled on the potential for these effects and the importance of maintaining adequate hydration.

Arrhythmia

The Health Standard takes into consideration the risk of acute incapacity from an arrhythmia, other limiting symptoms, risk of ventricular fibrillation and the potential effect of the physiological strain of firefighting duties in increasing the risk of recurrent arrhythmia or other complications. Any underlying causes, precipitants and treatment side effects must also be considered.

Atrial fibrillation

Atrial fibrillation is of significance for firefighters because of immediate clinical effects such as shortness of breath, syncope, palpitations, chest pain or limited exercise tolerance. Symptoms vary significantly between individuals. Longer term complications, such as ventricular dysfunction or complications from thrombo emboli, are also of significance for firefighters. Medication side effects such as proarrhythmic effects must also be considered. The use of anticoagulants is discussed below.

Conduction defects

Conduction defects are assessed for underlying cause, effect on exercise capacity, interaction with the extreme conditions of operational duties, risk of acute incapacity and treatment, including medication and pacemakers.

As an isolated finding, a first degree heart block can be considered a variation of normal in the absence of syncope or presyncope, especially in a young and fit individual.

An incomplete right bundle branch block requires no further investigation. A complete right bundle branch block can occur as a normal finding in healthy individuals. Further assessment is, however, warranted to exclude or confirm the presence of a structural heart abnormality.

Incomplete left bundle branch block requires consideration of an underlying risk, such as hypertension and left ventricular hypertrophy. Left bundle branch block usually indicates underlying hypertension, coronary heart disease or cardiomyopathy, and must be assessed accordingly. The firefighter should be classed as Temporarily Unfit to Perform Firefighting Duties while further assessment is undertaken.

Long QT syndrome is a risk for tachyarrhythmias and ventricular fibrillation. Exercise, emotion and loud noises may precipitate an arrhythmic event. Long QT syndrome may also be caused by some medications. A long QT interval on an initial ECG should result in the firefighter being assessed as Temporarily Unfit to Perform Firefighting Duties while further specialist assessment is undertaken. A confirmed diagnosis of prolonged QT syndrome is incompatible with undertaking operational duties safely, and the firefighter should be assessed as Permanently Unfit to Perform Firefighting Duties.

Pacemakers

Consideration needs to be given to the underlying condition or indication, relative pacemaker dependence, risk to pacemaker function from electromagnetic interference (including the portable radio) and direct trauma, and risk of pacemaker lead fracture as a result of wearing or carrying equipment such as a SCBA. Careful assessment will be required in conjunction with the cardiologist and manufacturer.

Automatic internal cardiac defibrillators

Automatic internal cardiac defibrillators (AICDs) may be inserted post-ventricular fibrillation arrest or if a significant risk for ventricular fibrillation is present, such as cardiomyopathy. The indication for the AICD may be incompatible with undertaking firefighting duties effectively and safely; however, regardless of the indication for the device, there is a risk of sudden incapacity should the device activate. Persons with AICDs are not eligible to hold a commercial vehicle driver licence, and therefore cannot drive the appliance. Adhering

to the same principles of the result of acute incapacity, a firefighter with an AICD cannot safely undertake firefighting duties because of the potential effect on safety. They should be classed as Permanently Unfit to Perform Firefighting Duties and appropriate restrictions advised.

Deep vein thrombosis

Deep vein thrombosis (DVT) may occur in association with surgery, clotting disorders, malignancy and prolonged immobility, or it may result from unidentified causes. Complication by pulmonary embolism is of significance to firefighters, as it may result in acute incapacitation. The risk of recurrence needs to be assessed, as does any additional thrombogenic risk posed by the conditions of firefighting that result in thermal strain and dehydration. A DVT arising from surgery is unlikely to have long term implications on fitness for duty, because it is considered to be self limiting.

Treatment involving anticoagulation is incompatible with being able to undertake firefighting duties, and the section pertaining to anticoagulation should be consulted.

Anticoagulant therapy

Anticoagulant therapy may be used for short or long term treatment, and for preventing thrombus and thromboembolic events – for example, in those with cardiac rhythm disorders, cardiomyopathy, DVT, pulmonary embolism and mechanical heart valves. Firefighters work in emergency conditions with poor visibility conditions, slippery and uneven surfaces, structures that may be unstable, and at heights. These conditions place firefighters at increased risk of trauma and bleeding. An unexpected blow to the head while on anticoagulant treatment could result in intracranial haemorrhage, and a blow to a limb or a fracture may result in compartment syndrome. All firefighters requiring treatment with anticoagulation should be classed as Temporarily Unfit to Perform Firefighting Duties.

Where anticoagulation is required for a finite period, the underlying indication for the treatment will need to be considered and the relevant section of this standard should be referred to. If anticoagulation is required on an ongoing basis, the firefighter should be classed as Permanently Unfit to Perform Firefighting Duties and relevant restrictions should be advised.

Aneurysms

A firefighter presenting with abdominal aortic aneurysm of $\geq 4\text{cm}$, thoracic aortic aneurysm of $\geq 3.5\text{cm}$ or significant aortic root dilatation should be classed as Permanently Unfit to Perform Firefighting Duties. If, however, surgical repair is undertaken, individualised assessment is required, taking into account the remainder of their cardiovascular status, post repair surveillance results, information provided by the vascular or cardiothoracic surgeon (and other specialists as appropriate), and the opinion of the FRNSW Occupational Physician. If the aortic valve has been replaced with a mechanical valve, the firefighter will be classed as Permanently Unfit to Perform Firefighting Duties, because of the need for lifelong anticoagulation.

Peripheral vascular disease

Peripheral vascular disease may result in symptoms that limit exercise capacity. For the purpose of this standard, it should be treated as a coronary heart disease equivalent, and the firefighter should be classed as at least Temporarily Unfit to Perform Firefighting Duties. The presence of peripheral vascular disease should prompt thorough review of the rest of the cardiovascular system.

Other conditions

Other conditions are addressed in Table 2, including dilated cardiomyopathy, hypertrophic cardiomyopathy, heart failure, valvular disorders and congenital disorders.

Table 2 Medical criteria for operational firefighters – cardiovascular disorders^a

Condition	Criteria
Cardiac risk level (refer to text and Figure 48) Note that conditions in the text where cardiovascular risk is considered high, and therefore the cardiac risk level is not applicable.	The cardiac risk level is to be interpreted in the context of overall cardiovascular risk assessment, including nonmodifiable risk factors. For details of management, refer to Section 12.2. If the cardiac risk level is: • Probability $\geq 16\%$ in 5 years (red, orange, light orange and yellow cells), the firefighter is Unfit to Perform Firefighting Duties. Refer for exercise stress test, refer to GP for risk factor modification and classify Temporarily Unfit to Perform Firefighting Duties pending results. If the firefighter has been reviewed in the past 12 months, including a negative exercise stress test, and risk factors have not worsened and there are no relevant symptoms, Fit to Perform Firefighting Duties Subject to Review may be considered while awaiting stress test result. Subject to negative exercise stress test and satisfactory risk factor management, review annually. • Probability 10–15% in five years (blue cells). Refer for exercise stress test and refer to GP for risk factor modification. While awaiting results, classify Fit to Perform Firefighting Duties Subject to Review or Temporarily Unfit to Perform Firefighting Duties depending on the overall risk assessment. Subject to negative exercise stress test and satisfactory risk factor management, review annually. • Probability 5–9% in five years (dark green cells). Refer to GP for risk factor modification, and with exercise stress test if appropriate. Most in this group should be referred for exercise stress testing. While awaiting correspondence or results, classify as Fit to Perform Firefighting Duties Subject to Review or • Temporarily Unfit to Perform Firefighting Duties depending on overall risk • assessment. Review annually. • Probability $< 5\%$ in five years (light green cells). Assess risk factors and other clinical data and refer to GP as appropriate. Classify as Fit to Perform Firefighting Duties or Fit to Perform Firefighting Duties Subject to Review depending on the overall risk assessment. Review as appropriate. Refer to related criteria as required (e.g. hypertension, diabetes) and consider overall risk factor control. If a contraindication to exercise stress testing is present, the firefighter is Temporarily Unfit to Perform Firefighting Duties until further assessment. Contraindications include aortic stenosis (for the purpose of this standard, this includes known or suspected), hypertrophic cardiomyopathy and severe uncontrolled hypertension.

Condition	Criteria
<i>Ischaemic heart disease</i>	
Angina or suspected angina	A firefighter is not Fit to Perform Firefighting Duties if they are subject to angina symptoms or symptoms that may be angina. If a cardiac cause is confirmed, please refer to the relevant section of the standard (e.g. angiographic findings, acute myocardial infarction, percutaneous interventions, bypass surgery). Fit to Perform Firefighting Duties or Fit to Perform Firefighting Duties Subject to Review may be determined taking into account the opinion of the appropriate specialist if the following criteria are met: • there is an exercise tolerance of $\geq 90\%$ of age/sex predicted exercise capacity according to the Bruce protocol, and • a stress testing shows no evidence of ischaemia, and • the specialist is of the opinion that there is unlikely to be a cardiac cause for the symptoms.
Myocardial infarction/acute coronary syndrome	A firefighter is not Fit to Perform Firefighting Duties if there is a history of myocardial infarction as verified by the treating specialist. Firefighters will subsequently be classed as Permanently Unfit to Perform Firefighting Duties.
Percutaneous intervention (bare metal or drug eluting stent, angioplasty)	A firefighter is not Fit to Perform Firefighting Duties if they have undergone percutaneous intervention with a bare metal stent, a drug eluting stent or angioplasty, as verified by the treating specialist. Firefighters will subsequently be classed as Permanently Unfit to Perform Firefighting Duties.
Coronary artery bypass grafting	A firefighter is not Fit to Perform Firefighting Duties if the firefighter requires or has had coronary artery bypass grafting, as verified by the treating specialist. Firefighters will subsequently be classed as Permanently Unfit to Perform Firefighting Duties.

Condition	Criteria
Coronary angiography (not resulting in revascularisation procedure)	A firefighter is not fit to Perform Firefighting Duties if awaiting coronary angiography. A firefighter is Permanently Unfit to Perform Firefighting Duties if coronary angiography shows: • narrowing of any coronary artery $\geq 70\%$, or • narrowing of 50–70% in a major artery (left atrial dimension, circumflex or right coronary artery), or • narrowing of 50–70% in any two or more arteries, or • narrowing of $\geq 20\%$ in the left main coronary artery. Fit to Perform Firefighting Duties Subject to Review on an annual basis may be determined for coronary artery narrowings of $< 50\%$, subject to: • ongoing risk factor modification, and • exercise tolerance of $\geq 90\%$ of age/sex predicted exercise capacity according to the Bruce protocol, and • exercise stress test shows no evidence of ischaemia.
Hypertension	
Hypertension	A firefighter is Temporarily Unfit to Perform Firefighting Duties if blood pressure is ≥ 160 mmHg systolic or ≥ 100 mmHg diastolic (treated or untreated), irrespective of cardiac risk level. The firefighter should be referred back to their GP for further assessment and treatment as appropriate. At least two repeat blood pressure readings are required, at least one week apart, or ambulatory monitoring. Fit to Perform Firefighting Duties Subject to Review within 3 months may be determined if blood pressure falls within the range of 140–159 mmHg systolic and 90–99 mmHg diastolic, with or without treatment Fit to Perform Firefighting Duties may be determined once blood pressure falls below 140 mmHg systolic and 90 mmHg diastolic, with or without treatment. If hypertension is confirmed, GP assessment should include investigation for causes of secondary hypertension and assessment of renal function, and so on.⁷ Echocardiography for left ventricular hypertrophy should be considered, especially where the history is one of uncontrolled or longstanding (≥ 5 years) hypertension.

⁷ Note Heart Foundation, *Guide to management of hypertension 2008 (updated December 2010)*, 'Evaluation in patients with confirmed hypertension', 2010.

Condition	Criteria
	Treatment. Where a firefighter is on antihypertensive treatment, history should be elicited in relation to any hypotensive symptoms precipitated by exposure to heat, strenuous exercise and fluid loss, and medical fitness for duty be reviewed in accordance with any reported symptoms. The firefighter should also be counselled regarding the importance of hydration and reporting of any side effects that may impact adversely on the performance of firefighting duties. Adequate time (usually weeks) should be allowed if starting or changing antihypertensive medication to monitor for side effects that may impact on operational duties (e.g. dizziness, postural hypotension).
Disorders of rate, rhythm and conduction	
Atrial fibrillation	A firefighter is not Fit to Perform Firefighting Duties if: - the firefighter has a history of recurrent or persistent AF, or - there is a history of AF with syncope or presyncope. Fit to Perform Firefighting Duties Subject to Review every 3 months for the first 12 months, then at least annually, may be determined, taking into account information provided by the treating specialist as to whether the following criteria are met: - the condition has been successfully treated by percutaneous intervention and the firefighter is at least 4 weeks post procedure; and there have been no prior thromboembolic events; and any anti arrhythmic agents are unlikely to result in pro arrhythmic side effects; and exercise tolerance of $\geq 90\%$ of age/sex predicted exercise capacity according to the Bruce protocol or - the condition has been successfully treated by cardioversion; and warfarin or other anticoagulant has ceased; and risk of recurrence is low; and there have been no prior thromboembolic events; and any anti[arrhythmic agents are unlikely to result in pro arrhythmic side effects; and there are no other disqualifying conditions; and exercise tolerance of $\geq 90\%$ of age/sex predicted exercise capacity according to the Bruce protocol. Fit to Perform Firefighting Duties Subject to Review may be determined for persistent or chronic AF, considering information received from the treating cardiologist, including the history and course of the illness, and subject to the following criteria being met: - there is no syncope, presyncope, palpitations or other limiting symptoms such as shortness of breath, and - reversible underlying causes have been successfully treated, and - any known precipitants such as alcohol are avoided, and - there are no complications such as transient ischaemic attack or cerebrovascular accident, and - the condition is unlikely to be affected by strenuous exercise, dehydration, heat stress or sympathetic activation, and

Condition	Criteria
	- the condition is highly unlikely to result in acute incapacity, and - thromboembolic risk, including consideration of the effects of dehydration and heat stress, is considered extremely low, and - there are no side effects of treatment that would limit work capacity and treatment is not expected to interact adversely with the conditions of firefighting, such as strenuous exercise, dehydration, heat stress or sympathetic activation, and any anti arrhythmic agents are unlikely to result in pro arrhythmic side effect, and - exercise tolerance of $\geq 90\%$ of age/sex predicted exercise capacity according to the Bruce protocol, and - there are no other conditions per this standard that would render the firefighter Unfit to Perform Firefighting Duties. If treatment includes warfarin, enoxaparin or other anticoagulant treatment, please refer to the anticoagulation section of this standard. Please refer to relevant section of the standard for syncope and for any underlying causes (e.g. coronary artery disease) or complications (e.g. cerebrovascular accident).
Paroxysmal and other arrhythmias or known conduction defects	A firefighter is not Fit to Perform Firefighting Duties if there is a history of arrhythmia or conduction defect. Discretion regarding immediate fitness to perform firefighting duties should be applied if the history is one of an isolated arrhythmia (other than ventricular fibrillation) more than 5 years ago. Fit to Perform Firefighting Duties Subject to Review may be determined, taking into account the opinion of the treating specialist as to whether the following criteria are met: - the condition has been successfully treated by percutaneous intervention and the firefighter is at least 6 weeks post procedure or - risk of collapse is considered unlikely, and - there is no risk of ventricular arrhythmia, and - there are no symptoms such as shortness of breath that would impact on work capacity, and - any known precipitants are actively avoided, and - condition is unlikely to be aggravated by the conditions of firefighting, including strenuous exercise, dehydration, heat stress and sympathetic arousal, and - treatment, including anti arrhythmic agents, will not adversely interact with the conditions of firefighting, including strenuous exercise, dehydration, heat stress and sympathetic activation, and any anti arrhythmic agents are unlikely to result in pro arrhythmic side effects, and - the firefighter has been stabilised on treatment for at least 3 months If the condition is considered cured and/or unlikely to recur, periodic

Condition	Criteria
	review is not required specifically for that condition.
Cardiac arrest (also refer to the section on automatic implantable cardioverter defibrillators)	A firefighter is not Fit to Perform Firefighting Duties if they have suffered a cardiac arrest. Refer to the appropriate section regarding underlying causes. If a reversible cause is identified, further information should be sought regarding likelihood of recurrence and final medical fitness for duty will be determined by a FRNSW Occupational Physician, taking into account information supplied by the treating cardiologist and/or a cardiologist familiar with the conditions of firefighting. Mostly firefighters will be classed as Permanently Unfit to Perform Firefighting Duties.
Cardiac pacemaker	A firefighter is not Fit to Perform Firefighting Duties if a cardiac pacemaker is required, or has been implanted or replaced. Fit to Perform Firefighting Duties Subject to Review may be determined, taking into account any underlying pathology and information provided by the treating specialist as to whether the following criteria are met: • it is at least 4 weeks after insertion of the pacemaker, and • the risk of pacemaker dysfunction is considered unlikely and the following have been considered – risk to pacemaker function from electromagnetic interference (including the portable radio) and direct trauma – risk of pacemaker lead fracture as a result of wearing or carrying equipment such as a SCBA – degree of pacemaker dependence, and • there are normal haemodynamic responses on exercise stress testing, and • there are no other conditions as per this standard that would render the firefighter Unfit to Perform Firefighting Duties.
Automatic implantable cardiac defibrillator	A firefighter is Permanently Unfit to Perform Firefighting Duties if an automatic implantable defibrillator is required or has been implanted.
<i>Electrocardiogram changes</i>	
Left bundle branch block (suggestive of myocardial ischaemia or cardiomyopathy) or other changes suggestive of myocardial ischaemia	A firefighter is not Fit to Perform Firefighting Duties if there is an electrocardiographic abnormality, such as left bundle branch block, or changes suggestive of myocardial ischaemia or previous myocardial infarction. Fit to Perform Firefighting Duties Subject to Review (or Fit to Perform Firefighting Duties) may be determined, taking into account the information provided by the treating specialist as to whether the following criteria are met: • follow up investigation has excluded underlying cardiac disease, and • there are no other conditions as per this standard that would render the firefighter Unfit to Perform Firefighting Duties.

Condition	Criteria
Strain pattern	The presence of strain pattern – ST depression and T[wave inversion – is associated with increased cardiovascular risk in individuals with hypertension. Further assessment is required, and the firefighter should be classed as Fit to Perform Firefighting Duties Subject to Review or Temporarily Unfit to Perform Firefighting Duties, depending on the clinical picture.
Left ventricular hypertrophy	A firefighter may be classed as Fit to Perform Firefighting Duties Subject to Review (or Temporarily Unfit to Perform Firefighting Duties if warranted by relevant clinical information) if an electrocardiograph shows left ventricular hypertrophy. Fit for to Perform Firefighting Duties Subject to Review may be determined taking into account the results of further assessment (including specialist opinion if required) as to whether the following criteria are met: • follow up investigation (such as echocardiography) has excluded pathological cardiac abnormality, and • there are no other disqualifying conditions.
Complete right bundle branch block	A firefighter may be classed as Fit to Perform Firefighting Duties Subject to Review (or Temporarily Unfit to Perform Firefighting Duties if warranted by relevant clinical information) if an electrocardiograph shows a complete right bundle branch block. Fit to Perform Firefighting Duties Subject to Review may be determined, taking into account the results of further assessment (including specialist opinion if required) as to whether the following criteria are met: • follow up investigation (such as an echocardiograph) has excluded underlying cardiac abnormality, and • there are no other disqualifying conditions.
Pre excitation, prolonged QT, heart block (except first degree), other	A firefighter is not Fit to Perform Firefighting Duties if electrocardiography shows pre excitation, prolonged QT or heart block (other than first degree heart block). Further cardiologist assessment is required. Permanently Unfit to Perform Firefighting Duties is applicable if long QT syndrome is confirmed, or if long QT is expected to persist because it is related to a medication that will be required long term. Permanently Unfit to Perform Firefighting Duties is applicable upon diagnosis of any other electrophysiological problem that can result in ventricular fibrillation (e.g. Brugada Syndrome). Please refer to other relevant sections (e.g. automatic implantable cardiac defibrillator), if applicable. For other diagnoses that are confirmed after further cardiologist assessment, please refer to criteria in the section relating to Disorders of rate, rhythm and conduction. If the electrocardiograph shows first degree heart block, no further assessment is required if there is no history of syncope or presyncope, especially in a young and fit individual.

Condition	Criteria
<i>Vascular disease</i>	
Aortic, thoracic and abdominal aneurysms	A firefighter is not fit to Perform Firefighting Duties if they have a dilated aortic root, thoracic aortic aneurysm or abdominal aortic aneurysm. Refer to Section 11.2.1.
Deep vein thrombosis (DVT)	A firefighter is not Fit to Perform Firefighting Duties after a diagnosis of DVT and while undergoing anticoagulation treatment. Fit to Perform Firefighting may be considered, taking into account the opinion of the treating doctor as to whether the following criteria are met: - the DVT is considered adequately treated and anticoagulation treatment has ceased, and - there are no underlying predisposing factors that significantly increase risk of recurrent DVT, taking into account the conditions of firefighting, such as dehydration, that increase prothrombotic risk.
Pulmonary embolism	A firefighter is not Fit to Perform Firefighting Duties after a diagnosis of a pulmonary embolism and while undergoing anticoagulation treatment. Fit to Perform Firefighting Duties or Fit to Perform Firefighting Duties Subject to Review may be determined, taking into account the opinion of the treating specialist as to whether the following criteria are met: - anticoagulation treatment has ceased, and - reported exercise capacity has not been adversely affected, and - there are no underlying predisposing factors that significantly increase risk of recurrent venous thromboembolism, taking into account the conditions of firefighting, such as dehydration, that increase prothrombotic risk. Exercise stress testing and echocardiography may be considered if there are any concerns regarding exercise capacity.
<i>Valvular heart disease</i>	
Valvular heart disease	A firefighter is not Fit to Perform Firefighting Duties if: - the firefighter has a history or evidence of valve disease, with associated haemodynamic compromise and/or symptoms of angina, syncope or dyspnoea; or history of cardiac enlargement, embolism, arrhythmia, abnormal ECG or high blood pressure; or - the firefighter is taking long term anticoagulation. Fit to Perform Firefighting Duties Subject to Review may be determined, taking into account information provided by the treating specialist as to whether the following criteria are met: - the cardiological assessment shows valvular disease of no haemodynamic significance, and - the conditions of firefighting, including strenuous exercise,

Condition	Criteria
	dehydration, heat stress and sympathetic activation, will not impact adversely on the condition, and • exercise tolerance of $\geq 90\%$ of age/sex according to the Bruce protocol, and • there is no other cardiac condition per this standard that would render the firefighter Unfit to Perform Firefighting Duties or • it is at least 3 months following successful surgery and there is no evidence of valvular dysfunction, and there are no electrocardiographic changes, arrhythmias, left ventricular dysfunction, cardiac failure, anticoagulant therapy, hypertension or other conditions per this standard that would render the firefighter Unfit to Perform Firefighting Duties, and • exercise tolerance of $\geq 90\%$ of age/sex according to the Bruce protocol, and • the results of presurgical coronary angiography (if performed) have been reviewed and assessed as meeting the relevant section of this standard.
Myocardial disease	
Dilated cardiomyopathy (see also heart failure)	A firefighter is not Fit to Perform Firefighting Duties if the firefighter has dilated cardiomyopathy, as verified by the treating specialist. (Rare cases of transient cardiomyopathy should be referred to the FRNSW Occupational Physician for further assessment in conjunction with an appropriate specialist.) Firefighters will subsequently be classed as Permanently Unfit to Perform Firefighting Duties.
Hypertrophic cardiomyopathy (also refer to the section on automatic implantable cardiac defibrillator)	A firefighter is not Fit to Perform Firefighting Duties if they have hypertrophic cardiomyopathy, as verified by the treating specialist. Firefighters will subsequently be classed as Permanently Unfit to Perform Firefighting Duties.
Other conditions	
Anticoagulant therapy	A firefighter is not Fit to Perform Firefighting Duties if the firefighter is on anticoagulant therapy, including but not limited to warfarin, dabigatran or enoxaparin. Permanently Unfit to Perform Firefighting Duties should be determined if the firefighter's treating doctor confirms that long term anticoagulation is required. Fit to Perform Firefighting Duties or Fit to Perform Firefighting Duties Subject to Review (if warranted by the clinical picture) may be determined if anticoagulation is ceased on the advice of the treating doctor (this must be confirmed with the doctor) and taking into account the criteria as per other relevant sections of this standard (e.g. deep vein thrombosis, pulmonary embolism).

Condition	Criteria
Congenital disorders	A firefighter is not Fit to Perform Firefighting Duties if the firefighter has a congenital heart disorder. Fit to Perform Firefighting Duties Subject to Review may be determined, taking into account the information provided by the treating specialist as to whether the following criteria are met: • there is no abnormality of haemodynamic significance within the heart, aorta or pulmonary vasculature, and • there is no other cardiac condition as per this standard that would render the firefighter Unfit to Perform Firefighting Duties. Discretion regarding medical fitness for operational duties should be applied if the history is one of successful repair or treatment of a noncomplex congenital heart disease (e.g. ventricular septal defect, atrial septal defect, patent ductus arteriosus, pulmonary stenosis) in infancy or childhood, with no ongoing cardiovascular issues.
Heart failure	A firefighter is not Fit to Perform Firefighting Duties if there is a history of heart failure, as verified by the treating specialist. (Rare cases of transient heart failure should be referred to the FRNSW Occupational Physician for further assessment in conjunction with an appropriate specialist.) Firefighters will subsequently be classed as Permanently Unfit to Perform Firefighting Duty.
Cardiac syncope or syncope due to hypotension (refer also to Section 10, Blackouts)	A firefighter may resume operational duties, taking into account information provided by the treating doctor if the episode was vasovagal in nature with a clear cut precipitating factor (such as venesection) and the situation is unlikely to recur while performing firefighting duties. A firefighter should be classed as Temporarily Unfit to Perform Firefighting Duties for at least 3 months after syncope because of other cardiovascular causes. A firefighter is not Fit for to Perform Firefighting Duties if the condition is severe enough to cause episodes of loss of consciousness without warning. Fit to Perform Firefighting Duties Subject to Review may be determined, taking into account information provided by the treating specialist as to whether the following criteria are met: • the firefighter has been symptom free for 3 months, and • the underlying cause has been identified, and • satisfactory treatment has been instituted, and • risk of recurrence is extremely low, and • risk of recurrence will not be increased by the conditions of firefighting, including strenuous exercise, dehydration, heat stress and sympathetic activation, and • there are no other conditions per this standard that would render the firefighter Unfit to Perform Firefighting Duties.

Condition	Criteria
Stroke	Refer to Section 15, Neurological disorders.
Other	Any other condition not addressed in this standard is to be assessed on a case by case basis in conjunction with a FRNSW Occupational Physician.

AF = atrial fibrillation; FRNSW = Fire & Rescue NSW; GP = general practitioner; SCBA = self contained breathing apparatus

a Some firefighters may already be under the review of a FRNSW Occupational Physician for a particular condition. If a firefighter states that they have been cleared to perform firefighting duties by the FRNSW Occupational Physician for a condition that renders them medically unfit for duty under this standard, the assessing doctor should contact the FRNSW Occupational Physician for advice regarding fitness to continue firefighting duties while further assessment is undertaken.

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11.4 Acknowledgements

Endorsement by Cardiac Society of Australia and New Zealand (November 2012)

12 Diabetes

12.1 Relevance to operational duties

Conditions of firefighting are unique and have the potential to impact on glycaemic control for those with diabetes. Diabetes may affect a firefighter's ability to safely and effectively perform firefighting duties, either through impairment or loss of consciousness during a hypoglycaemic episode, or from end organ effects on relevant functions, including retinopathy, cardiovascular disease, nephropathy and peripheral neuropathy. In people with type 2 diabetes, sleep apnoea is also more common (refer to Section 19, Sleep disorders).

Hypoglycaemia

There is an increased risk of hypoglycaemia in firefighters because of the:

- irregular access to meals due to the emergency response nature of the service
- unpredictable energy demands – that is, strenuous exertion at unpredictable times and for unpredictable periods
- inability to safely and quickly access food or other forms of oral glucose while wearing full personal protective equipment in hazardous environments; quick egress from such environments is not always possible
- possible failure to recognise typical symptoms of hypoglycaemia in the midst of emergency situations.

Symptoms such as lack of concentration or change of behaviour resulting from hypoglycaemia can impact on situational awareness. Hypoglycaemia in an operational situation, including driving the appliance under emergency conditions, presents a considerable risk and may impact on the safety of the individual firefighter, their crew and members of the public. Hypoglycaemia may result in confusion and impaired judgement, and impaired motor control, thus impacting on the effective and safe performance of firefighting duties. It may also be more difficult for a firefighter and for others (such as colleagues who know about the firefighter's condition) to recognise symptoms or signs of hypoglycaemia in an emergency environment.

The risk of hypoglycaemia is greatest in those treated with insulin. There is still a risk, albeit lower, associated with treatment with sulfonylureas and secretagogues. There should be a very low risk of severe hypoglycaemia for those treated with diet alone, or with added metformin, acarbose or thiazolidinediones. Gliptins and SGLT2 transporters also have a low propensity for hypoglycaemia. For those treated with insulin, the risk is higher for those with type 1 diabetes than those with type 2 diabetes; however, hypoglycaemia is increasingly reported in insulin treated type 2 diabetes and with sufficient frequency to cause significant morbidity.

Lifestyle factors, such as alcohol intake, can also increase the risk of hypoglycaemia.

Lack of hypoglycaemic awareness significantly increases the risk of severe hypoglycaemia. Lack of hypoglycaemic awareness is more common in people treated with insulin for more than 10 years.

12.1.1 Conditions of firefighting that can increase the likelihood of hypoglycaemia

The emergency response nature of firefighting duties can involve intense physical activity at unpredictable, irregular times, and for unpredictable periods. Unpredictable energy demands can adversely affect glycaemic control. Regular meal schedules are often interrupted and regular monitoring of blood glucose can be difficult. Common causes of hypoglycaemia are delaying or missing a meal, not eating enough carbohydrates, unplanned physical activity and more strenuous exercise than usual. These factors occur in the firefighting environment and, therefore, the conditions of firefighting increase the likelihood of hypoglycaemia.

12.1.2 Challenges to managing early hypoglycaemia in the firefighting environment

The cornerstone of managing hypoglycaemia is being able to treat it immediately (even if immediate testing is not practicable) to stop blood glucose from dropping even further. There are challenges to being able to address hypoglycaemia immediately in the operational environment – for example, breathing apparatus cannot be removed in a hazardous environment to self administer treatment (e.g. consuming jelly beans or soft drink) and some hazardous environments are not easy to egress quickly. Failure to quickly address early hypoglycaemia can result in a continued drop of blood glucose, which may progress to loss of coordination, slurred speech, confusion, loss of consciousness and seizure. Suspending emergency duties to address hypoglycaemia immediately has the potential to impact on service delivery.

Shift work may also impact on glycaemic control. It should be noted that retained firefighters are on call, and hours worked can be irregular and are usually additional to those worked in primary employment.

12.1.3 Severe hypoglycaemia

A severe hypoglycaemic event is defined as a hypoglycaemic event of such severity that the person is unable to treat the hypoglycaemia themselves, and thus requires an outside party to administer treatment. The definition includes hypoglycaemia causing loss of consciousness. Severe hypoglycaemic events are relevant under this standard regardless of whether they occur at work or outside of work.

Severe hypoglycaemic events affect brain function, and can cause impairment of perception, motor skills or consciousness, or abnormal behaviour before unconsciousness – all of which are relevant for firefighters working in dangerous environments as part of a team, where others rely upon them for their own safety. Episodes of severe hypoglycaemia are associated with increased risk of subsequent episodes and may indicate lack of hypoglycaemic awareness (see Section 12.2.3).

Mild hypoglycaemic events can be distinguished from severe hypoglycaemic events in that mild episodes can, by definition, be self treated by the person with diabetes without needing assistance from another person. Early symptoms of hypoglycaemia include sweating, tremulousness, hunger and tingling around the mouth, and can occur commonly in those treated with insulin and some non insulin agents. When mild hypoglycaemia occurs, a combination of these early warning symptoms of hypoglycaemia is usual, enabling the person with diabetes to recognise the hypoglycaemia and to self treat. This may not, however, be possible on the incident ground.

12.1.4 Cardiovascular disease

Cardiovascular disease is the major cause of death in people with diabetes, accounting for approximately 50% of all fatalities. This is significant given the association between firefighting and on duty deaths from acute cardiovascular events. Refer to Section 11, Cardiovascular disorders.

12.2 General assessment and management guidelines

Treatment with insulin has been assessed by Fire & Rescue NSW (FRNSW) as representing an unacceptably high risk in the firefighting context and will therefore attract permanent restrictions on firefighting activities. This takes into account the significantly increased frequency with which hypoglycaemia occurs in those treated with insulin, compared with those on non insulin agents.

Although there are strategies that could help reduce the likelihood of hypoglycaemia for those treated with insulin, these control measures rely solely on individual behaviour. Measures include rushing meals when insulin has been administered already, administering insulin within minutes of completing a meal, testing blood glucose and ingesting additional carbohydrate on the way to a call (not possible if driver), always having access to testing kit, and carrying additional short and long acting carbohydrates (on the person or in the appliance). These strategies do not address the challenges to addressing hypoglycaemia when it does occur, and a firefighter would be required to recognise symptoms and egress the emergency environment to address symptoms immediately.

Early signs of hypoglycaemia may also be similar to the adrenaline symptoms felt during a call out, and may therefore be more difficult to recognise.

The outcome of an individual not acting on early signs of hypoglycaemia is the same as an individual who lacks hypoglycaemic awareness. There is often a relatively short window – minutes – between recognition of hypoglycaemic symptoms and the possibility of self rescue, and progressing to the stage where the individual may become impaired and no longer able to help themselves. There are risks with relying on control measures that solely depend on individual behaviour in an environment that is inherently unpredictable. These measures may not be reliably successful. When such a system fails in the firefighting context and the individual is not able to manage the hypoglycaemic event, the consequence is potentially catastrophic.

The use of insulin pumps in the firefighting context is associated with potential problems. Removing insulin pumps, other than for short periods can result in accumulation of ketones. While these devices may be moisture resistant, they are not waterproof, and are normally only removed for planned activities and for limited periods, such as showering or swimming. Personal protective clothing such as the structural firefighting ensemble

provides protection from heat, but limits the body's ability to dissipate heat, resulting in high fluid loss through sweating, thus creating a microclimate that is humid and where metabolic heat is trapped. Heat will also increase the absorption of subcutaneous insulin, and any subcutaneous insulin already delivered will continue to act and therefore increase the risk of hypoglycaemia. For example, NovoRapid® action will peak at 90 minutes and will continue to act for 3–4 hours.

The following information therefore relates to firefighters who are not on pharmacotherapy, or on non insulin treatment.

When assessing a firefighter's medical fitness for firefighting duties, consideration must be given to:

- satisfactory glycaemic control
- absence of severe hypoglycaemia (i.e. hypoglycaemia that results in impaired level of consciousness)
- presence of hypoglycaemic awareness
- absence of complications that impact on medical fitness for firefighting duties.

12.2.1 Glycaemic control

Although HbA1c is used to assess long term blood glucose control, and correlates with diabetes complications and outcomes, a degree of flexibility is required. Targets are often individualised depending on specific factors such as the type of diabetes, its duration, type of medication, age, presence of cardiovascular disease, risk of and problems from hypoglycaemia, and comorbidities. An individual may have a good HbA1c while experiencing extreme fluctuations of blood glucose levels; therefore, some caution is required in interpretation of the HbA1c and a review of a blood glucose diary is always helpful. When there is evidence of poor control, a review of blood glucose diary should form a part of the assessment, for evidence of improvement and stability. Comparisons should be made with previous HbA1c of the particular individual. The general target in the community for HbA1c is $\leq 7.0\%$. High or increasing HbA1c will often indicate poor or deteriorating glycaemic control; however, it may also result from other conditions such as haemoglobinopathies or iron deficiency anaemia. The benefits of good control must be balanced against the increased risk of hypoglycaemia associated with tighter control. An HbA1c level of $\geq 9.0\%$ indicates that control may be suboptimal or poor, and requires referral to an endocrinologist or diabetes specialist to assist in assessment of medical fitness for operational duties.

12.2.2 Severe hypoglycaemia

Although the risk of hypoglycaemia for those not treated with insulin is considered acceptably low in the firefighting context, severe hypoglycaemia – should it occur in such individuals – requires very careful assessment and will attract a significant nonworking (non[firefighting]) period. A return to firefighting duties may be considered by the FRNSW Occupational Physician, taking into account information provided by the treating endocrinologist regarding the reason for the episode, reestablishment of glycaemic control, hypoglycaemic awareness (see Section 12.2.3) and risk of recurrence.

Where multiple severe hypoglycaemic events have occurred, this requires further assessment, taking into consideration the overall history, including the spacing of the events and if they involved circumstances that are unlikely to be repeated. Where the history is of repeated episodes without extenuating circumstances, the firefighter may be assessed as Permanently Unfit to Perform Firefighting Duties.

12.2.3 Hypoglycaemic awareness

Hypoglycaemic awareness is crucial in managing the risks related to hypoglycaemia while on duty. Lack of hypoglycaemic awareness exists when an individual does not regularly sense the usual early warning symptoms of hypoglycaemia, such as sweating, tremulousness, hunger, tingling around the mouth, palpitations and headache. Lack of hypoglycaemic awareness is more common in people treated with insulin for more than 10 years and significantly increases the risk of a severe hypoglycaemic event. In the setting of a long duration of diabetes, it tends to be a persistent condition.

The outcome of an individual not acting on early signs of hypoglycaemia is the same as an individual who lacks hypoglycaemic awareness, and for the purpose of this standard, the failure to act (with the exception of extenuating circumstances) should be managed in the same way.

Lack of hypoglycaemic awareness may develop in someone who has experienced a severe hypoglycaemic event; however, it may then improve in subsequent weeks or months if further hypoglycaemia can be avoided.

Persistent lack of hypoglycaemic awareness is incompatible with firefighting duties and the firefighter should be deemed Permanently Unfit to Perform Firefighting Duties.

12.2.4 Reducing risk of hypoglycaemia

For those firefighters on non insulin medication regimens associated with increased risk of hypoglycaemia, the following are some strategies to assist with reducing the risk of hypoglycaemia:

- having an in depth knowledge of diabetes and self care strategies
- being committed and motivated to self management
- frequent and rational self monitoring of blood glucose levels
- reacting appropriately to particular blood glucose levels
- having a readily available supply of short and long acting carbohydrate on the person and in the appliance.
- supplementing carbohydrate intake when increased physical activity is anticipated.

12.2.5 Diabetes complications

Cardiovascular disease

Cardiovascular disease is the most significant complication of diabetes for firefighters, and further assessment should be undertaken in line with Section 11, Cardiovascular disorders.

Renal function

Renal function should be reviewed for all firefighters with diabetes, including estimated glomerular filtration rate and albumin: creatinine ratio. Decreased renal reserve combined with dehydration may precipitate acute renal impairment. Firefighters are at an increased risk of heat stress and dehydration, because the firefighting ensemble and chemical suits inhibit normal cooling mechanisms. Firefighters may lose up to 2 L/h of sweat during active firefighting duties.

The presence of diabetic nephropathy should prompt further cardiovascular assessment regardless of cardiac risk level, as chronic renal disease in people with diabetes is a major risk factor for cardiovascular and all cause mortality.

Peripheral neuropathy

Peripheral neuropathy affecting feet may affect the balance and stability required to negotiate uneven surfaces in poor visibility conditions, safe use of ladders and driving the appliance.

Other relevant chapters (e.g. on vision) should be consulted as needed.

12.2.6 Triggered assessment

The FRNSW Occupational Physician should be notified immediately:

- if there are significant changes in treatment

- following a severe hypoglycaemic episode.

12.2.7 Specialist review

Endocrinologist or diabetes specialist review is required if:

- the treating general practitioner (GP) (for those on non insulin medication) has indicated that the diabetes is not well controlled
- there has been a severe hypoglycaemic event within the past 12 months
- there is a lack of hypoglycaemic awareness
- there is evidence of nephropathy.

12.2.8 Prediabetes

Type 2 diabetes mellitus may develop over many years, preceded by impaired fasting glycaemia (IFG) and impaired glucose tolerance (IGT) (i.e. prediabetes). Prediabetes is of relevance for firefighters, as it indicates a significantly increased risk of progression to type 2 diabetes.

Furthermore, prediabetes is a known risk factor for cardiovascular disease.

A fasting blood glucose of ≥ 5.5 mmol/L requires a referral for an oral glucose tolerance test. Where IFG or IGT is diagnosed in a firefighter, Fit to Perform Firefighting Duties Subject to Review is required, with periodic review every 12–24 months depending on the overall clinical assessment. They should also be referred back to their GP for appropriate management and monitoring. In the event of progression to type 2 diabetes, the criteria for diabetes apply.

Table 3 Medical criteria for operational firefighters – diabetes^a

Condition	Criteria
Prediabetes	Fit to Perform Firefighting Duties Subject to Review every 12–24 months is applicable for any firefighter with confirmed prediabetes. They should be referred back to their GP for appropriate management and monitoring.
Diabetes not requiring medication	Fit to Perform Firefighting Duties Subject to Review annually is applicable for any firefighter with type 2 diabetes controlled by diet and exercise alone. A report should be provided by the treating GP at each review outlining: • control, including HbA1c, and • results of screening for end organ disease, including albumin:creatinine ratio and eGFR. If, on review, a firefighter's diabetes does not appear to be well controlled or there is concern about end organ disease, the firefighter should be classed as Temporarily Unfit to Perform Firefighting Duties or Fit to Perform Firefighting Duties Subject to Review in 3 months while further assessment and/or treatment is undertaken. If treatment comes to include glucose lowering agents, refer to the appropriate section of this Health Standard.

Condition	Criteria
Type 2 diabetes treated with glucose lowering agents other than insulin	A firefighter is not Fit to Perform Firefighting Duties if they have type 2 diabetes treated with glucose lowering agents other than insulin. Fit to Perform Firefighting Duties Subject to Review, with review at least annually, may be determined taking into account information provided by the treating GP or endocrinologist/diabetes specialist as to whether the following criteria are met: • satisfactory control is demonstrated; there must be objective evidence of this, such as HbA1c with or without review of a blood glucose diary, and • the firefighter is compliant with treatment, and if treatment includes an agent or agents that can cause hypoglycaemia: • there is an absence of severe hypoglycaemic events in the past 12 months, and • hypoglycaemic awareness (the firefighter experiences early warning symptoms) is present and acted upon appropriately, and • the treatment regimen minimises the risk of hypoglycaemia, and • renal function is within normal limits, as demonstrated by urinary albumin: creatinine ratio and eGFR, and • there is an absence of other end organ effects (including cardiovascular disease and peripheral neuropathy affecting balance) that would render a firefighter Unfit to Perform Firefighting Duties per this standard.
Insulin treated diabetes	A firefighter is not Fit to Perform Firefighting Duties if they have type 1 diabetes or type 2 diabetes treated with insulin. The medical practitioner, with the consent of the firefighter, should notify the FRNSW Occupational Physician so that appropriate restrictions can be advised.

eGFR = estimated glomerular filtration rate; FRNSW = Fire & Rescue NSW; GP = general practitioner
a FRNSW does not advise changing treatment for the purpose of meeting this standard. Any change of treatment must be made by the firefighter's treating doctor and based on clinical grounds.

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13 Hearing

13.1 Relevance to firefighting duties

Firefighting is a hearing critical occupation. Firefighting duties are often undertaken in poor visibility conditions because of smoke, where auditory cues may be heavily relied on for communication and for safety. Good hearing is required, particularly the ability to hear speech in background noise and to localise warning sounds. Failure to hear sounds of relatively low intensity, or to distinguish a voice or speech from background noise can lead to failure to respond to imminently hazardous situations, thus jeopardising the safety of the firefighter, their crew and members of the public.

Hearing takes place against a range of significant background noises caused by the fire itself, high winds in bushfires, firefighting equipment such as pumps, the self contained breathing apparatus, and from sirens when driving the appliance.

Firefighters must have adequate hearing to be able to hear and localise auditory cues crucial for safety, such as a victim crying for help, the distress signal unit alarm of another firefighter, noises associated with fire behaviour or imminent structural collapse, or an appliance horn signalling urgent evacuation.

Firefighters must be able to hear speech from direct verbal communication with each other as well as from radio communications while wearing personal protective equipment, which attenuates sound against a noisy background.

Firefighters must also be able to hear vehicle, traffic and other road sounds when driving the appliance in emergency mode.

13.2 General assessment and management guidelines

The procedures for assessment of applicants and incumbent firefighters are summarised in Figure 49.

No hearing devices may be worn for Level 1 or Level 2 testing.

13.2.1 Level 1 testing

Firefighters are initially screened by pure tone audiometry at 0.5, 1, 2, 3, 4, 6 and 8 kHz as per Australian Standard AS 2586[1983]. The standard is not met if hearing loss is >40 dB in any frequency between 0.5 and 3 kHz (inclusive) in either ear.

All who fail screening are referred to an audiologist for more detailed audiological evaluation – Level 2 testing. The audiologist should be a member of the Audiological Society of Australia Inc. For contacts of members, see www.audiology.asn.au.

13.2.2 Level 2 testing

The purpose of Level 2 testing is to provide the opportunity to demonstrate auditory fitness and to assist in diagnosis of conditions that may require referral for specialist medical assessment and/or treatment. There are three components to testing, and each component must be passed for the standard to be met:

- Step 1. Hearing thresholds

Air and bone conduction audiometry with masking is undertaken. Further assessment is not required if the threshold standard is met as per Level 1 testing (i.e. no loss >40dB in any frequency between 0.5 and 3 kHz inclusive in either ear). The firefighter should be classed as Fit to Perform Firefighting Duties. If the threshold standard is not met, steps 2, 3 and 4 must be undertaken.

- Step 2. Integrity of the middle ear system

Tympanometry is performed as well as acoustic reflex thresholds for thresholds 0.5, 1 and 2 kHz. The hearing loss will then be identified as conductive, sensorineural or mixed.

- Step 3. Speech discrimination in quiet

The pass level is set at 90% correct in each ear, with no significant rollover at high intensities in either ear.

- Step 4. Speech discrimination in noise

This must be done, as per the Fire & Rescue NSW (FRNSW) referral instructions. The pass level is set at 70% correct binaurally.

A recommendation to see a ear, nose and throat specialist review may be considered if any of the following are detected:

- asymmetrical hearing (hearing threshold differential >15 dB at any frequency)
- air bone gap >15 dB
- abnormal tympanograms in either ear
- rollover⁸ in performance–intensity function

- absent acoustic reflexes.

If treatment is undertaken as a result of specialist assessment, or the condition is one that has improved, retesting may commence with an audiologist, commencing at step 1 of Level 2 testing.

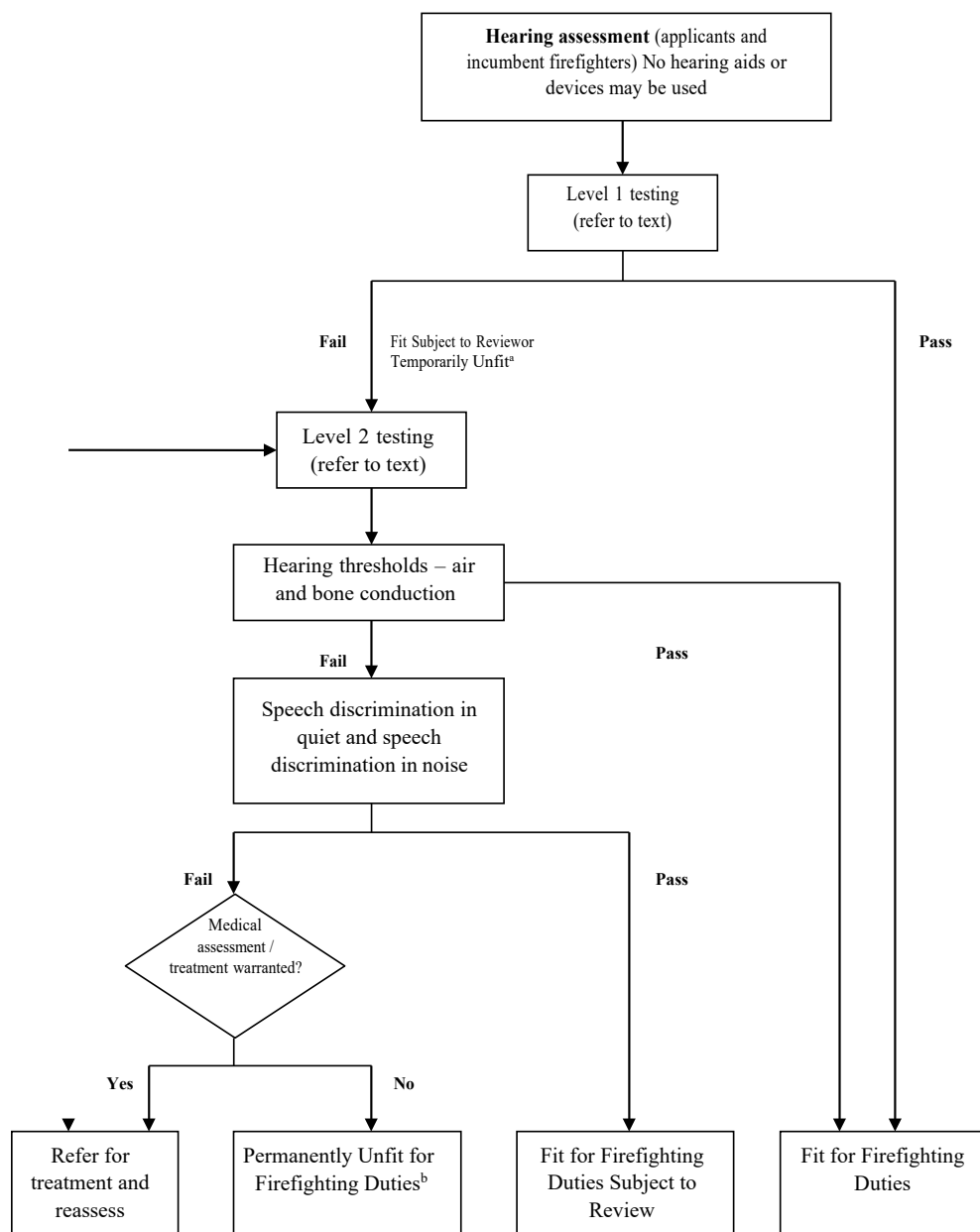
It is recognised that incumbent firefighters may adjust to some disabilities through years of operational experience. Therefore, an incumbent firefighter with a borderline fail result after Level 2 testing (including specialist assessment if indicated) may be referred to the FRNSW Occupational Physician for further consideration.

13.2.3 Hearing aids, cochlear implants and boneXanchored hearing aids

The risks associated with the use of hearing devices while firefighting have been assessed and no devices have been deemed suitable for the purpose of firefighting. Conditions experienced in firefighting increase the risk of device failure, and there are limitations in signal processing, which may result in failure to hear adequately in the operational environment.

⁸ Reduced speech discrimination at high intensities relative to maximum discrimination ability.

Figure 49 Hearing assessment process (applicant and incumbent firefighters)



^a Classify as Temporarily Unfit for Firefighting Duties if loss is severe. Otherwise, classify as Fit for Firefighting Duties Subject to Review (by an audiologist) within one month.

^b Borderline fail in an incumbent firefighter may be referred to the Fire & Rescue NSW Occupational Physician for further assessment.

Table 4 Medical criteria for operational firefighters – hearing^a

Condition	Criteria
Hearing for firefighting	Level 1 testing A firefighter is not Fit to Perform Firefighting Duties if Level 1 testing – air conduction (refer to text) shows there is hearing loss >40 dB in any frequency between 0.5 and 3kHz (inclusive) in either ear. If Level 1 criteria are not met, the firefighter may be referred to an audiologist for Level 2 testing (refer to text and below). If the loss is severe, Temporarily Unfit to Perform Firefighting Duties should be determined; otherwise, Fit to Perform Firefighting Duties Subject to Review should be determined, with review by an audiologist within one month. Level 2 testing A firefighter is not Fit to Perform Firefighting Duties if Level 2 threshold testing – bone and air conduction (refer to text) – shows there is hearing loss >40 dB in any frequency between 0.5 and 3kHz (inclusive) in either ear. If the loss is severe, Temporarily Unfit to Perform Firefighting Duties should be determined; otherwise, Fit to Perform Firefighting Subject to Review should be determined, with review by an audiologist within one month for speech discrimination test. Fit to Perform Firefighting Duties Subject to Review may be determined if the following are met: speech discrimination in quiet, 90% correct in each ear, and speech discrimination in noise, 70% correct binaurally. Where Level 2 criteria are not met, and the diagnostic component of Level 2 testing indicates that ear, nose and throat specialist review is indicated, Temporarily Unfit to Perform Firefighting Duties may be determined while further assessment and treatment (if appropriate) is undertaken. The firefighter may recommence the hearing assessment process after treatment, and medical fitness for duty determined in accordance with the results. If treatment is not an option and hearing is not expected to improve unaided, the firefighter should be classed as Permanently Unfit to Perform Firefighting Duties. Incumbent firefighters with only borderline fail may be referred to the Fire & Rescue NSW Occupational Physician for further review.

a All testing is to be conducted without the use of hearing devices.

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14 **Musculoskeletal disorders**

14.1 **Relevance to operational duties**

Operational duties are physically demanding and many of the typical firefighting tasks required result in extremely high loading on the musculoskeletal system.

While wearing personal protective equipment, which weighs up to 21 kg and includes self contained breathing apparatus, firefighters are required to perform firefighting tasks such as:

- handling charged lines of hose under high pressure
- extensive crawling, squatting, lifting and carrying heavy objects
- obtaining forcible entry
- carrying and handling rescue equipment including heavy power and hand tools
- raising of ladders
- working in awkward spaces and positions under emergency conditions that may not allow for best practice manual handling techniques
- climbing multiple flights of stairs (depending on location) while carrying equipment and tools
- climbing ladders
- undertaking search and rescue, which includes prolonged squatting or crouching, dragging or carrying victims ranging in weight from newborns to grossly overweight adults. Firefighters may need to rescue a collapsed fellow firefighter who is also wearing full personal protective equipment
- negotiating uneven and slippery surfaces.

Firefighting duties place high loads on the lower back, knees and shoulders, and this is supported by Fire & Rescue NSW (FRNSW) injury records. Significant histories or other findings involving these areas should prompt very careful assessment.

There are many musculoskeletal conditions, including those of a degenerative nature, with the potential to be aggravated or exacerbated by firefighting duties. This chapter does not aim to address every musculoskeletal diagnosis, rather, it focuses on conditions:

- that may result in acute incapacity
- where the risks of aggravation or exacerbation may be particularly high
- that may significantly impact on function.

All musculoskeletal conditions should be assessed with these same principles in mind.

14.2 **General assessment and management guidelines**

14.2.1 **General**

The examining doctor should take a thorough history, noting information such as:

- day to day functional capacity
- performance in other jobs (pre employment, secondary or primary employment for incumbent firefighters)
- history of injuries, the circumstances of any injuries, their severity and recovery time including time off work or time on suitable duties, and time off sports)
- treatment required and duration of treatment
- exacerbating and relieving factors.

Examination should evaluate the following:

- gait – the ability to walk on flat and uneven surfaces
- spine – range of movement of cervical and lumbosacral spine
- limbs – power, range of movement, stability of joints
- pain – presence of musculoskeletal pain that may impede movement or affect the ability to tolerate heavy loads
- balance.

14.2.2 Shoulder dislocation

A history of anterior glenohumeral joint dislocation requires assessment of the likelihood of recurrence. Forceful activities above shoulder height (e.g. raising ladders) may precipitate dislocation in a firefighter so predisposed. Glenohumeral joint dislocation is acutely incapacitating, with obvious implications for the safety of the individual firefighter and those relying on them for their own safety, such as their crew and members of the public.

A firefighter should be classified as Temporarily Unfit to Perform Firefighting Duties after isolated anterior glenohumeral joint dislocation. The younger the firefighter, the higher the risk of recurrence, although the risk reduces over time. The rate of redislocation ranges from 55% to 95%. If a sufficient period has passed, such that the risk of recurrence is considered low by an orthopaedic surgeon, Fit to Perform Firefighting Duties may be considered.

If there is a history of recurrent shoulder dislocation without repair, the firefighter is Permanently Unfit to Perform Firefighting Duties. Temporarily Unfit to Perform Firefighting Duties is appropriate if the firefighter is awaiting surgery. Further clinical assessment of medical fitness for duty may be undertaken after the appropriate postoperative period. Fit to Perform Firefighting Duties may be determined if repair is successful and the treating orthopaedic surgeon deems the risk of recurrence is low.

History of posterior shoulder dislocation is usually only because of seizure or electrical injury, and should be assessed with these underlying causes in mind.

14.2.3 Ruptured anterior cruciate ligament

Unrepaired ruptured anterior cruciate ligament (ACL) leaves the affected knee potentially unstable and at increased risk of accelerated degeneration. Excessive loads are placed on the knees, as well as the need to negotiate uneven surfaces, thereby further increasing risks. A knee giving way during firefighting duties because of a deficient ACL may be acutely incapacitating, with obvious safety implications for the firefighter and others relying on them for their safety, such as their crew and members of the public.

Fit to Perform Firefighting Duties may be determined for firefighters having undergone successful ACL reconstruction, after the appropriate postoperative and rehabilitation period.

14.2.4 Patellar dislocation

Recurrent dislocation of the patella is incompatible with undertaking firefighting duties safely because of the risk of acute incapacity, and the conditions of firefighting expected to increase the risk of dislocation in a firefighter with such a history. Permanently Unfit to Perform Firefighting Duties applies, or Temporarily Unfit to Perform Firefighting if the firefighter is awaiting surgery. Fit to Perform Firefighting Duties may be determined following successful surgical repair.

14.2.5 Degenerative knee disease

The potential to aggravate or exacerbate significant underlying degenerative disease of the knee is high with the activities of firefighting. Incumbent firefighters often continue until they are limited by their symptoms. Individualised assessment is required, including discussion of ongoing risks.

14.2.6 Lower back

Incumbent firefighters with a history of chronic or recurrent lower back symptoms require assessment on an individual basis, taking into account their experience in the job and tolerance of duties.

Successful first time lumbar disc surgery does not necessarily require permanent restrictions; however, there is some increased risk of mechanical pain over time, such that operational duties may not be able to be sustained. This risk should be discussed with the firefighter and their treatment provider.

Any applicants with a history of chronic low back problems or lumbar surgery require referral to the FRNSW Occupational Physician for further assessment of their medical fitness for operational duties.

14.2.7 Inflammatory arthropathies

Many of these conditions – including rheumatoid arthritis, psoriatic arthritis and ankylosing spondylitis – are often seen in young people and can lead to chronic pain and mobility problems. The heavy physical work of firefighting is likely to aggravate conditions during periods of active inflammation. Consideration must also be given to aggravation of joints already affected by any destructive inflammatory processes. Corticosteroid medication is a risk for developing osteoporosis, even when used for short periods; therefore, fracture risk must also be considered, given the extraordinary forces and increased risk of trauma with firefighting duties. Other systems affected by the multisystem disease must also be considered in relation to any potential interaction with the conditions of firefighting – for example, vision. The opinion of the FRNSW Occupational Physician is required, in conjunction with information provided by a rheumatologist.

14.2.8 Joint replacement – knee and hip (including resurfacing)

Total knee replacement may result in difficulties with kneeling, deep squatting, and prolonged squatting or crouching. The heavy loading resulting from firefighting duties may increase the risk of accelerated wear of the prosthesis, resulting in early failure. Firefighters having undergone total hip replacement or hip resurfacing procedures must be assessed for their level of recovery and function, risk of acute incapacity because of dislocation of the joint, and risk of accelerated wear of the prosthesis from firefighting duties. The FRNSW Occupational Physician will make the final determination of medical fitness for firefighting duties, taking into account information provided by the treating and/or an independent orthopaedic surgeon.

14.2.9 Applicants

Applicants are unlikely to be accustomed to undertaking activities while so heavily loaded. Significant histories or other findings involving the lower back, knees and shoulders should prompt very careful assessment. For the purpose of this standard, all significant musculoskeletal conditions in applicants must be referred to the FRNSW Occupational Physician for a final determination on medical fitness for duty.

Applicants with a history of chronic nonspecific lower back pain must be assessed very carefully, as history is the most significant predictor of future problems, and the risk is increased, regardless of occupation. Lumbar disc herniation and nerve root involvement also require careful assessment of risk of recurrence, as the activities of firefighting may precipitate further episodes. Likewise, the risks for applicants who have had previous lumbar disc surgery need to be very carefully assessed. Where chronic lower back problems or surgery have been related to previous employment, it is important to determine if any permanent restrictions were placed on the applicant.

Applicants with a history of ACL repair should be assessed with regard to integrity of the repair and evidence of significant degenerative disease likely to be aggravated or exacerbated by firefighting duties. Careful clinical assessment is required, as well as review of the operation report. MRI may be considered depending on the

time since surgery and the age of the firefighter, if further information is required regarding integrity of the repair and degenerative changes.

Applicants with a history of significant knee injury or symptoms, and/or examination findings consistent with degeneration or inflammation require further careful assessment. Applicants should provide copies of any existing imaging studies and operation reports. Further assessment may be required depending on these results. Findings such as large areas of chondral damage and advanced osteoarthritis are not compatible with safely undertaking firefighting duties.

Table 5 Medical criteria for operational firefighters – musculoskeletal disorders^a

Condition	Criteria
Musculoskeletal disorders	A firefighter is not Fit to Perform Firefighting Duties if they have a musculoskeletal condition that: • may result in acute incapacity, or • is highly likely to be aggravated by firefighting duties, or • may significantly impact on capacity to effectively and safely undertake the physical requirements of firefighting duties. They may be classed as Fit to Perform Firefighting Duties Subject to Review or Temporarily Unfit to Perform Firefighting Duties while being further assessed or awaiting surgery, or Permanently Unfit to Perform Firefighting Duties. Refer to the text for guidelines regarding assessment and management.

^a For additional information regarding applicants, refer to text.

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15 Neurological disorders

This chapter covers epilepsy and other neurological conditions, including dementia.

15.1 Relevance to operational duties

The ability to effectively and safely undertake the inherent requirements of firefighting duties relies on a number of intact neurological functions. Firefighters are required to have awareness of what is happening in their environment and understand what that information means (situational awareness). They make decisions and act under conditions of extreme time pressure when the consequences of the decisions could impact lives and property.

The following functions are required for operational duties to be undertaken effectively and safely:

- visuospatial perception
- insight
- judgement
- attention and concentration
- reaction time
- memory
- sensation
- muscle power (also refer to Section 14, Musculoskeletal disorder)
- coordination
- balance and vertigo (also refer to Section 21, Vestibular disorders)
- vision (also refer to Section 22, Vision and eye disorders).

Loss of consciousness, seizure, confusional states, cognitive impairment, impairment of muscular power and coordination impact on the ability to effectively and safely undertake operational duties, including the ability to drive the appliance in emergency mode. Such impairments can jeopardise the safety of the individual firefighter, their crew and members of the public.

- In addition, the risk of precipitating some neurological events is increased because of the conditions under which operational duties are undertaken:
- Shift work, sleep disruption and sleep deprivation can lower seizure threshold, thus precipitating a seizure in a firefighter at risk of seizures. In some cases, raised body temperature (refer to [Section 11](#), Cardiovascular disorders, High thermal load) can also reduce the seizure threshold.
- The cardiovascular stressors of firefighting are well defined and may precipitate an ischaemic or haemorrhagic cerebrovascular accident in a firefighter with cerebrovascular disease or severe hypertension (refer to [Section 11](#), Cardiovascular disorders).
- Hot and humid conditions may worsen symptoms of multiple sclerosis.
- Lifestyle factors, such as alcohol intake and social activities resulting in sleep deprivation, can also lower seizure threshold.

15.2 General assessment and management guidelines

This chapter provides guidance and medical criteria for the following conditions:

- seizures and epilepsy
- aneurysms (unruptured aneurysms and other vascular malformations)
- cerebrovascular accident
- dementia
- head injury
- intracranial surgery
- neurodegenerative disorders (multiple sclerosis, motor neurone disease, Parkinson's disease, Huntington's disease)
- space occupying lesions
- subarachnoid haemorrhage.

15.2.1 Seizures and epilepsy

Epilepsy is characterised by the tendency to experience recurrent seizures. It is defined by two or more unprovoked seizures. Not all seizures constitute a diagnosis of epilepsy.

Epilepsy is a common disorder, with a cumulative incidence in the population of 2%, and 0.5% of the population affected and taking medication at any one time. Even with treatment, approximately 20% of those with epilepsy continue to experience seizures.

Firefighters experiencing an initial seizure should be referred to a specialist for accurate diagnosis, so that appropriate treatment can be instituted and risks related to firefighting can be determined, explained and managed appropriately.

If medical fitness to perform firefighting duties is being assessed after a specified seizure free period, the assessing specialist in epilepsy should advise if a sleep deprived electroencephalogram is warranted as part of the assessment, as firefighters work shifts or on call, with the potential for sleep disruption or sleep deprivation.

Consideration should also be given to conditions inherent to firefighting that have the potential to lower seizure threshold, such as shift work and on call work – including how this may impact on medication dosing and high thermal load.

The default standard (all cases)

This standard applies to all firefighters who have had a seizure. In line with the current commercial vehicle driver medical standard, which considers the effect of acute incapacity, a seizure free period of 10 years is required before firefighting duties can be considered. A number of defined situations, however, may attract a shorter seizure free period. Adherence to medical advice and reviews at least annually would still apply in these cases.

Variations to the default standard

Variation to the default standard may be appropriate in some cases, thus allowing an earlier return to firefighting duties. These situations are discussed below.

Seizures in childhood

Some specific childhood epilepsy syndromes are characterised by cessation of seizures in teenage years, before working age. Firefighters may be classified as Fit to Perform Firefighting Duties if seizures have not occurred after 11 years of age. The default standard applies if a seizure has occurred after the age of 11 years.

First seizure

Approximately 50% of all people experiencing a first seizure will never have another seizure, while 50% will have another seizure (i.e. epilepsy.) Risk of recurrence decreases with time. If sufficient time has passed without further seizures – with or without medication – such that risk has reduced to an acceptably low level, firefighting duties may be considered. If a second seizure occurs, the risk of recurrence is much higher. A second seizure within 24 hours, however, is still considered a first seizure and does not worsen prognosis.

Epilepsy treated for the first time

When treatment with antiepileptic medication is commenced in a previously untreated person, sufficient time should pass to establish that the medication is effective. The default standard applies.

Acute symptomatic seizures

These seizures are caused by a transient brain disorder or metabolic disturbance, in individuals without previous epilepsy – for example, because of encephalitis, hyponatraemia, hypoglycaemia, head injury (posttraumatic epilepsy; see Section 15.2.5), benzodiazepine or alcohol withdrawal.

Further seizures may follow weeks, months or years after resolution of the transient brain disorder. This may be as a result of permanent changes to the brain caused by the process underlying the acute symptomatic seizures, or because the transient brain disorder has recurred (e.g. benzodiazepine withdrawal).

Seizures during and resulting directly from a transient brain disorder or metabolic disturbance will result in exclusion from firefighting duties for a sufficient period to allow the risk of recurrence to fall to an acceptably low level.

The acute symptomatic seizures standard no longer applies if there is seizure recurrence after the causative acute illness has resolved, whether or not due to a second transient brain disorder or metabolic disturbance. For example, if an episode of encephalitis results in seizure and there is another seizure after recovery from the encephalitis, and the person commences treatment for epilepsy, the standard for epilepsy treated for the first time applies. Similarly, the default standard would apply for seizures related to two separate episodes of benzodiazepine withdrawal.

Other considerations

Epilepsy treated by surgery

Surgery to resect epileptogenic brain tissue may eliminate seizures completely in about two thirds of individuals.

The default standard applies.

‘Safe’ seizures, including prolonged aura

Some seizures may not obviously impair consciousness. People may believe their consciousness is unimpaired when it actually is impaired. For example, some auras are associated with impaired consciousness that a person does not perceive. Seizures may begin with a subjective sensation (the aura) that precedes impairment of consciousness. Auras are actually simple partial seizures in which consciousness is maintained. Such warnings cannot be relied upon in firefighting because of the emergency and time critical nature of duties.

The default standard applies.

Sleep only seizures

The default standard applies.

Seizure in a person whose epilepsy has been previously well controlled, including ‘provoked’ seizures

Seizures may be provoked in those with epilepsy by factors such as sleep deprivation, missed doses of anti epileptic medication, alcohol or acute illness.

The default standard applies.

Medication noncompliance

Compliance with medical advice regarding medication use is a requirement for fitness to perform firefighting duties. Drug level monitoring may be recommended if noncompliance is suspected.

The default standard applies if a seizure results from noncompliance or a missed dose of medication.

Withdrawal, change or dose reduction of anti epileptic medication

Withdrawal of anti epileptic medication is incompatible with firefighting duties. Dose reduction of anti[epileptic medication is incompatible with firefighting duties, except if the dose reduction only because of the presence of side effects.

Exceptional cases

Where a neurologist experienced in the management of epilepsy considers that a firefighter with seizures or epilepsy does not meet the standard, but may be safe to undertake firefighting duties without undue risk of harm to the firefighter or others, the Fire & Rescue NSW (FRNSW) Occupational Physician may consider

information provided by the neurologist in assessing fitness to perform firefighting duties. Generally, such cases will be based on extenuating circumstances. For all firefighters who are required to drive the appliance (i.e. all firefighters except Station Commanders), they must meet the criteria for holding a conditional commercial vehicle driver licence for consideration to be given to their case.

Concurrent conditions

Where epilepsy is associated with other impairments or conditions, the relevant section of this standard should be consulted.

Other conditions with risk of seizure

Seizures or risk of seizures may be associated with many brain disorders (e.g. intracranial surgery, traumatic brain injury). Neurological deficit associated with the brain disorder may impact on medical fitness to perform firefighting duties. Both the risk of seizures and the effect of any neurological deficit must be considered when assessing medical fitness to perform firefighting duties.

15.2.2 Aneurysms (unruptured intracranial aneurysms and other vascular malformations)

Sudden severe haemorrhage from an intracranial aneurysm or vascular malformation may cause acute incapacity.

Size is the most significant predictor of aneurysm rupture; however, the potentially catastrophic consequences should an aneurysm rupture while on duty must also be considered.

The annualised risk of haemorrhage from vascular malformations, such as cavernous haemangiomas (cavernomas) varies in the literature. A previous history of haemorrhage is a significant risk factor for clinically significant haemorrhage. Seizure risk is also a consideration.

Individualised assessment must be undertaken for firefighters with these conditions. The FRNSW Occupational Physician will determine fitness to perform firefighting duties taking into account information from the treating neurosurgeon or neurologist regarding:

- risk of haemorrhage
- risk of seizure
- any increased risk related to the physiological conditions of firefighting (such as acutely increased blood pressure)
- the potential for catastrophic consequence of haemorrhage and seizure while on duty.

Mostly, Permanently Unfit to Perform Firefighting Duties will be determined, unless the firefighter is awaiting surgery, in which case Temporally Unfit to Perform Firefighting Duties may be determined.

15.2.3 Dementia

Dementia is characterised by progressive deterioration of cognitive function, affecting memory, psychomotor abilities, attention, visuospatial functions and executive functions.

Dementia may rise from many causes, including Alzheimer's disease, Huntington's disease, Parkinson's disease and vascular dementia. Alzheimer's disease is the most common cause, accounting for 50–70% of cases. Although it mainly affects people over the age of 70, onset can occur younger than this, and it is of relevance for firefighters due to an ageing workforce.

Dementia may affect the ability to safely undertake operate firefighting duties because of the following effects:

- memory loss
- limited concentration or gaps in attention

- errors in judgement
- confusion when making choices
- poor decision making or difficulty problem solving
- poor insight and denial of deficits
- errors with navigation, including forgetting details of routes
- slowed reaction times, including failure to respond in a timely fashion to instructions
- poor hand–eye coordination.

Based on studies of road accidents, a diagnosis of dementia is associated with a moderately high risk of collision when compared with age matched controls. This is of significance for firefighters who need to drive the appliance, including under emergency conditions, and can be extrapolated to other firefighting tasks that are complex, done under time pressures and have safety implications.

Dementia in a firefighter will eventually represent a risk to individual and others, because of the progressive and irreversible nature of the condition.

Impairment levels vary widely, with individuals experiencing different patterns and timing of impairment as their conditions progress. This presents diagnostic and management problems.

The following may assist with the assessment of dementia or suspected dementia. This assumes other causes of cognitive impairment have been considered and excluded (e.g. chronic alcohol misuse):

- Work history. Have they been involved in any incidents? Have they been referred for assessment by line management?
- Hearing. Can they hear speech and warning sounds?
- Reaction times. Can they respond to incident ground orders?
- Problem solving. Do they become upset or confused when more than one thing happens at the same time?
- Coordination. Have they become clumsy or started to walk differently because their coordination is affected?
- Praxis. Do they have difficulty using their hands and feet when asked to follow motor instructions?
- Alertness and perception. Are they aware of, and do they understand, what is happening around them? Do they experience hallucinations or delusions?
- Insight. Are they aware of the effects of their dementia? Is there denial?

Lack of insight and variable memory abilities are associated with most dementia syndromes; therefore, the individual may minimise or deny any difficulties with working. Reports of work performance, feedback from supervisors or co[firefighters may be useful when assessing overall coping and safety decision making skills.

15.2.4 Head injury

Head trauma may result in various severities of injury. Loss of consciousness of less than one minute, with no complications, does not usually result in any long term impairment. The individual should be free of symptoms of concussion before resuming duty.

More significant head injury can result in impairment of the neurological functions listed in Section 5.1. Personality or behavioural changes may affect judgement and tolerance, and may also be associated with psychiatric disorders such as depression or posttraumatic stress symptom. If assessment reveals concerns about neurocognitive function, formal neuropsychological assessment should be considered. Assessment for the risk of posttraumatic epilepsy (PTE) must also form part of any assessment for a firefighter with a significant head injury.

15.2.5 Posttraumatic epilepsy

PTE is a recurrent seizure disorder secondary to brain injury following head trauma. It is a nonhomogeneous condition and its onset may be several years after the head injury. It should be distinguished, however, from immediate posttraumatic (acute symptomatic) seizures that occur within 24 hours of a head injury, which are considered part of the acute process (refer to acute symptomatic seizures in Section 15.2.4). Seizures that occur within one week after injury are termed early posttraumatic seizures and seizures occurring more than one week after injury are termed late posttraumatic seizures. Single late traumatic seizures should not be labelled as PTE. The risk of having a second seizure, however, is high, with one population based study showing 86% of individuals progressing to a second seizure within two years of the first.⁹

The risk of PTE increases with the severity of the traumatic brain injury. Risk factors for late posttraumatic seizures after traumatic brain injury include:

- early posttraumatic seizures (from 24 hours to 1 week after the trauma)
- penetrating brain injury
- brain contusion
- subdural haematoma/surgery for subdural haematoma
- depressed skull fractures
- loss of consciousness/alteration of consciousness or posttraumatic amnesia greater than 24 hours
- age older than 65 at time of injury.

After severe traumatic brain injury, the risk remains elevated for more than 10 years after the injury; however, the risk reduces with time.

15.2.6 Intracranial surgery

The risk of seizure must be considered after certain types of intracranial surgery, as well as any impairment related to the underlying condition or as a result of surgery. Supratentorial surgery, or surgery requiring retraction of the cerebral hemispheres, will attract a significant nonworking period. Individualised assessment will be undertaken by the FRNSW Occupational Physician in conjunction with the treating neurosurgeon.

15.2.7 Multiple sclerosis

Multiple sclerosis may produce a wide range of neurological deficits that impact on the ability to effectively and safely undertake firefighting duties. Deficits may be temporary or permanent, and the course of illness is variable. Many people with multiple sclerosis experience temporary worsening of symptoms with even small increases in body temperature from hot or humid weather or exercise. The conditions of firefighting are conducive to heat stress, with strenuous exercise undertaken in protective clothing that inhibits the body's normal cooling mechanisms. Other contributors to heat stress include hot, humid weather conditions, and radiant heat.

Medical fitness for duty will be determined by the FRNSW Occupational Physician, taking into account information provided by the treating neurologist.

⁹ Frey L. Epidemiology of post traumatic epilepsy: a critical review. *Epilepsia* 2003, 44(Suppl. 10):11–17.

15.2.8 Neuromuscular disorders

Neuromuscular disorders include diseases of the peripheral nerves, muscles or neuromuscular junction. Severe weakness or problems with sensation, especially proprioception, will result in difficulties effectively and safely undertaking firefighting duties. Medical fitness for duty will be determined by the FRNSW Occupational Physician, taking into account information provided by the treating neurologist.

15.2.9 Parkinson's disease

Parkinson's disease is a common progressive disease. Motor, cognitive, autonomic nervous system and psychiatric manifestations all potentially impact on the ability to effectively and safely undertake firefighting duties. Motor fluctuations are incompatible with firefighting duties. Fitness to perform firefighting for duties will be determined by the FRNSW Occupational Physician, taking into account information provided by the treating neurologist.

15.2.10 Stroke (cerebral infarction or intracerebral haemorrhage)

Ischaemic stroke (atherosclerotic or embolic) stratifies an individual into a very high cardiovascular risk group (i.e. >20% 5[year risk of an acute cardiovascular event). Such high cardiovascular risk in the context of an overt cardiovascular event is incompatible with undertaking the inherent requirements of firefighting safely and Permanently Unfit to Perform Firefighting Duties applies.

The most common cause for haemorrhagic stroke is sustained or transient elevation of blood pressure. Regardless of level of recovery, Permanently Unfit to Perform Firefighting Duties applies due to the cardiovascular strain of firefighting and the associated increases in blood pressure that would increase the risk of recurrent stroke.

In unusual cases (e.g. embolic stroke from patent foramen ovale, which is subsequently closed percutaneously), Fit to Perform Firefighting Duties Subject to Review may be determined by the FRNSW Occupational Physician, taking into account information provided by the treating neurologist and other treatment providers regarding level of recovery and control of risk factors, if recurrence is considered unlikely.

If the firefighter has had an associated seizure, seizure and epilepsy standards also apply.

15.2.11 Transient ischaemic attack

Transient ischaemic attacks (TIAs) can be single or recurrent, and may be followed by a stroke. The risk of stroke can be as high as 15% at 90 days post TIA. Up to 85% of strokes that follow TIA will be fatal or disabling. In the majority of cases, individuals who have suffered a TIA would be stratified into a very high cardiovascular risk group (i.e. >20% 5 year risk of an acute cardiovascular event).

Such high cardiovascular risk in the context of an overt cardiovascular event is generally incompatible with undertaking the inherent requirements of firefighting safely and, therefore, Permanently Unfit to Perform Firefighting Duties is likely to apply. However, each individual firefighter must be assessed individually with regard to any underlying cause of the TIA, cardiovascular risk factors and likelihood of recurrence. Assessments of these cases are likely to be complex and require the input of an appropriate specialist.

15.2.12 Space occupying lesions, including brain tumours

Brain tumours and other space occupying lesions may cause a range of effects depending on their location and the type of lesion. If a firefighter has a brain tumour or other space occupying lesion, they are Unfit to Perform Firefighting Duties. The FRNSW Occupational Physician shall further determine medical fitness for duty, taking into account information provided by the treating neurosurgeon or other relevant specialist regarding factors including:

- effect on neurological function
- treatment
- prognosis
- seizure risk.

Other sections of this standard may also apply (e.g. vision, seizures and epilepsy, intracranial surgery).

15.2.13 Subarachnoid haemorrhage

Any cases of subarachnoid haemorrhage should be classified as Temporarily Unfit to Perform Firefighting Duties while further assessment is undertaken. The FRNSW Occupational Physician will determine final fitness to perform firefighting duties. Assessment of fitness for firefighting duties may be considered after a nonworking period of at least 6 months, unless a poor prognosis is apparent before this.

Consideration shall be given to:

- underlying cause
- treatment, and if this is considered definitive
- level of recovery/residual neurological deficit
- presence of problems with concentration, attention and mood
- likelihood of recurrence
- risk of conditions of firefighting, such as physiological strain increasing the risk of recurrence.

Other sections of this standard may also apply (e.g. vision, seizures and epilepsy, intracranial surgery).

15.2.14 Other neurological conditions

Any condition affecting neurological function not covered by the above, must be assessed on first principles, considering the functional requirements of firefighting. For vertigo, refer to Section 21, Vestibular disorders.

Table 6 Medical criteria for operational firefighters – neurological conditions

Condition	Criteria
<i>Seizures and epilepsy</i>	
All cases: default standard Applies to all firefighters who have experienced a seizure. Exceptions may be considered for situations matching those listed below.	A firefighter is not Fit to Perform Firefighting Duties if they have experienced a seizure. Fit to Perform Firefighting Duties Subject to Review, with at least annual review, may be determined, taking into account information provided by a specialist in epilepsy as to whether the following criteria are met: • there have been no seizures for at least 10 years, and • the EEG shows no epileptiform activity or, if recommended by the specialist, a sleep deprived EEG shows no epileptiform activity, and • the firefighter follows medical advice with respect to medication adherence, and • there are no adverse medication effects that would impact on the ability to effectively and safely undertake firefighting duties, and • due consideration has been given to potential triggers in the firefighting environment (e.g. shift and on call work, including impact on medication dosing, and high thermal load).
Seizures and epilepsy – possible reductions in seizure free periods	
History of a benign seizure or epilepsy syndrome limited to childhood	Fit to Perform Firefighting Duties applies if there have been no seizures after the age of 11. If a seizure has occurred after the age of 11, there is no reduction and the default standard applies.

Condition	Criteria
First seizure (note, two or more seizures in a 24 hour period are considered a single seizure)	Fit to Perform Firefighting Duties Subject to Review, with at least annual review, may be determined, taking into account information provided by a specialist in epilepsy as to whether the following criteria are met: - there have been no seizures for at least 5 years (with medication for the 5 years, or without medication for the 5 years), and - the EEG shows no epileptiform activity or, if recommended by the specialist, a sleep deprived EEG shows no epileptiform activity, and - if medication has been taken for the preceding 5 year period, the firefighter adheres to the medication regimen, and - due consideration has been given to potential triggers in the firefighting environment (e.g. shift and on call work, including impact on medication dosing, and high thermal load).
Epilepsy treated for the first time	The default standard applies.
Acute symptomatic seizures Seizures occurring only during temporary brain disorder or metabolic disturbance in a person without previous seizures. This includes seizures within 24 hours of a head injury, and withdrawal from alcohol or drugs. This is not the same as provoked seizures in a person with epilepsy	In exceptional circumstances, a firefighter may be determined to be Fit to Perform Firefighting Duties Subject to Review by the FRNSW Occupational Physician, with at least annual review. Consideration must be given to the underlying cause, as well as information provided by a specialist in epilepsy as to whether the following criteria are met: - there have been no further seizures for at least 12 months, and - the EEG shows no epileptiform activity or, if recommended by the specialist, a sleep deprived EEG shows no epileptiform activity, and - due consideration has been given to potential triggers in the firefighting environment (e.g. shift and on[call work, including impact on medication dosing, and high thermal load). If there have been two or more transient disorders causing acute symptomatic seizures, the default standard applies.
‘Safe’ seizures	The default standard applies.
Sleep only seizures	The default standard applies.
Seizure in a firefighter whose epilepsy was previously well controlled	The default standard applies.
<i>Seizures and epilepsy – other factors that may influence medical fitness for operational duties</i>	
Epilepsy treated by surgery	The default standard applies. The vision standard may also apply if there is a visual field defect (refer to Section 22, Vision and eye disorders). Withdrawal of any anti epileptic medication is incompatible with operational duties.
Medication noncompliance	Refer to text above.
Planned withdrawal of one or more anti epileptic medications in a firefighter who meets the criteria for Fit for to Perform Firefighting Duties Subject to Review	Withdrawal of anti epileptic medication is incompatible with being Fit to Perform Firefighting Duties.

Condition	Criteria
Reduction in dosage of anti epileptic medication in a person who meets the criteria for Fit to Perform Firefighting Duties Subject to Review	Reduction in dosage of anti epileptic medication is incompatible with being Fit to Perform Firefighting Duties, except if the dose reduction is only because of the presence of side effects.
Exceptional cases	Where a specialist experienced in the management of epilepsy considers that a firefighter with seizures or epilepsy does not meet the standards for firefighters, but may be safe to undertake firefighting duties without undue risk of harm to the firefighter or others, the FRNSW Occupational Physician may consider information provided by the neurologist in assessing medical fitness for duty. The firefighter will be subject to at least annual review.
<i>Other neurological conditions</i>	
Aneurysms	A firefighter is not Fit to Perform Firefighting Duties if they have an unruptured intracranial aneurysm or other vascular malformation. Under exceptional circumstances, Fit to Perform Firefighting Duties Subject to Review may be determined, taking into account information provided by the treating neurosurgeon and the opinion of the FRNSW Occupational Physician regarding the risk of bleeding the risk of seizure; and increases in these risks associated with the conditions of operational duties, such as acute increases in blood pressure and sleep disruption. Mostly, Permanently Unfit to Perform Firefighting Duties will be determined, unless awaiting surgery, in which case they should be classed Temporarily Unfit to Perform Firefighting Duties and may be reviewed after the appropriate postoperative period.
Dementia	Also refer to the text. Permanently Unfit to Perform Firefighting Duties will apply if dementia is confirmed.
Head injury (including risk of posttraumatic epilepsy)	A firefighter is not Fit to Perform Firefighting Duties if they have sustained a head injury resulting in impairment of any of the following: • visuospatial perception • insight • judgement • attention • reaction time • memory • sensation • muscle power • coordination • vision (including visual fields).

Condition	Criteria
	A firefighter is not Fit to Perform Firefighting Duties if they have a high risk of posttraumatic epilepsy – that is: • early posttraumatic seizures (from 24 hours to 1 week post trauma) • penetrating brain injury • brain contusion • subdural haematoma/surgery for subdural haematoma • loss of consciousness/alteration of consciousness, or • posttraumatic amnesia greater than 24 hours, and age older than 65 at time of injury. They should be classed as Temporarily Unfit to Perform Firefighting Duties for at least 2–5 years or longer depending on the severity of the injury, with a minimum of 5 years for a penetrating brain injury. Shorter non operational periods may be considered on a case by case basis taking into consideration advice from a specialist experienced in the assessment and management of epilepsy. If a seizure has already occurred, refer to Section 15.2.1.
Intracranial surgery	A firefighter should be classified as Temporarily Unfit to Perform Firefighting Duties for at least 12 months following supratentorial surgery or surgery that involves retraction of the cerebral hemispheres. The nonworking period should be commensurate with the level of recovery and risk of seizure. If there are seizures or long term neurological deficits, refer to Section 15.2.1 and ‘Other neurological conditions’, below.
Multiple sclerosis	A firefighter is not Fit to Perform Firefighting Duties if they have multiple sclerosis. Fit to Perform Firefighting Duties Subject to Review, with at least annual review, may be considered by the FRNSW Occupational Physician, taking into account information provided by the treating specialist regarding: • impairment affecting muscle power, sensation, balance, coordination, vision and cognition • the effect of heat on the firefighter’s symptoms • the course of the firefighter’s illness • the effect and side effects of treatment.

Condition	Criteria
Neuromuscular conditions	A firefighter is not Fit to Perform Firefighting Duties if they have: • a peripheral neuropathy • muscular dystrophy • another neuromuscular disorder that significantly impairs muscle power, sensation or coordination. Fit to Perform Firefighting Duties Subject to Review, with at least annual review, may be considered, taking into account information provided by the treating specialist regarding: • the level of impairment of muscle power, sensation, balance or coordination • the course of the illness.
Parkinson's disease	A firefighter is not Fit to Perform Firefighting Duties if they have Parkinson's disease. Permanently Unfit to Perform Firefighting Duties applies if the firefighter experiences fluctuations in motor control and/or problems with balance. In exceptional circumstances, Fit to Perform Firefighting Duties Subject to Review, with at least annual review, may be determined by the FRNSW Occupational Physician, taking into account information provided by the treating specialist regarding: • the level of motor impairment • the level of cognitive and mood impairment • the presence of autonomic nervous system impairment • the response to treatment.
Space occupying lesions (including brain tumours)	A firefighter is not Fit to Perform Firefighting Duties if they have a space occupying lesion. In exceptional circumstances, Fit to Perform Firefighting Duties may be considered by the FRSNW Occupational Physician, taking into account information provided by the treating specialist regarding: • any neurological impairment • seizure risk • prognosis.

Condition	Criteria
Subarachnoid haemorrhage (also refer to aneurysms, intracranial surgery)	A firefighter is not Fit to Perform Firefighting Duties if they have had a subarachnoid haemorrhage. Temporarily Unfit to Perform Firefighting Duties applies for at least 6 months. Fit to Perform Firefighting Duties Subject to Review may be determined by the FRNSW Occupational Physician after 6 months (unless a poor prognosis is apparent before this time), taking into account information provided by the appropriate specialist(s) regarding: - the level of impairment of any of the following: visuospatial perception, insight, judgement, attention, reaction time, memory, sensation, muscle power, coordination, vision (including visual fields), concentration and mood - the underlying cause - the nature of, and response to, treatment - likelihood of recurrence.
Stroke	A firefighter is not Fit to Perform Firefighting Duties if they have had a stroke. In unusual cases, Fit to Perform Firefighting Duties Subject to Review may be determined by the FRNSW Occupational Physician, taking into account information provided by the treating specialist regarding: - the level of impairment of visuospatial perception, insight, judgement, attention, reaction time, memory, sensation, muscle power, coordination, vision (including visual fields), concentration and mood - the underlying cause, and potential for definitive treatment or control of risk factors - the likelihood of recurrence - the risk associated with the of conditions of firefighting such as cardiovascular and thermal load, and dehydration increasing the risk of stroke recurrence. In all other cases, Permanently Unfit to Perform Firefighting Duties applies.
Transient ischaemic attack (TIA)	A firefighter is not Fit to Perform Firefighting Duties if they have suffered a TIA. Information should be sought from the treating specialist to confirm diagnosis, cause and treatment. Permanently Unfit to Perform Firefighting Duties may be applicable if the diagnosis is confirmed with due consideration of the underlying cause, cardiovascular risk factors and likelihood of recurrence.

Condition	Criteria
Other neurological conditions	A firefighter is not Fit to Perform Firefighting Duties if they have any neurological condition that significantly impairs any of the following: • visuospatial perception • insight • judgement • attention • reaction time • memory • sensation • muscle power • coordination • vision (including visual fields). Fitness to perform firefighting duties must be discussed with the FRNSW Occupational Physician.

EEG = electroencephalogram; *FRNSW* = Fire & Rescue New South Wales

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16 Psychiatric disorders

16.1 Relevance to operational duties

Firefighters work as part of team in complex, hazardous and dynamic environments. Impairment of judgement, behaviour or psychomotor function in any individual member jeopardises the safety of the individual, their crew and members of the public.

Firefighters must make critical decisions that can affect others under emergency conditions, often when they are tired or feeling stressed. The cognitive and decision making demands are relatively high, even for those not in command positions. For Station Commanders and Captains, there is the additional responsibility of decision making, operational planning and the overall responsibility for the safety of firefighters.

Firefighting duties also require good psychomotor function, which is dependent on complex coordination between the sensory and motor systems. Psychomotor function is influenced by factors such as arousal, perception, learning, memory, attention, concentration, emotion, reflex speed, time estimation, auditory and visual functions, decision making ability and personality. A coordinated behavioural response results from the interaction of complex feedback systems.

Anything that interferes with any of these factors may impact adversely on situational awareness (being aware of what is happening in their environment and understanding what that information means now and in the future), and the ability to undertake appropriate and safe actions on the incident ground, which is dynamic and often complex.

Psychiatric disorders encompass a range of cognitive, emotional and behavioural disorders, such as depression, schizophrenia, anxiety disorders and personality disorders. They also include dementia and substance abuse disorders, which are discussed in Section 15, Neurological disorders, and Section 20, Substance misuse.

Psychiatric disorders may impact on behaviour, cognitive abilities and perception, and therefore impact on the safety of individual firefighters and others who rely on them for their own safety. There are, however, considerable differences in the aetiology, symptoms, course and severity of psychiatric disorders, and they may be intermittent or persistent.

The impact of psychiatric disorders is also influenced by an individual's social circumstances, personality and coping strategies. In most cases, individualised assessment is required to evaluate the pattern of illness, severity and potential impairments, rather than the diagnosis alone.

Impairments differ at different phases of the illness and vary from person to person. The range of potential impairments associated with various conditions is described in Table 7.

16.1.1 Effects of firefighting on mental health

All firefighters will witness the death or serious injury of victims. These situations can be violent, even horrific, giving rise to critical incident stress. Situations range from burns and accident victims to suicides. These incidents are managed through the Critical Incident Support Program; however, such events, especially when recurrent, may lead to depression, anxiety disorders and substance misuse. Such events may also compound an existing psychiatric disorder.

There are, however, vast interindividual differences in response to trauma and only a minority of those exposed will develop trauma related mental health problems. Apart from the nature of the trauma, the main risk for developing trauma related pathology is the make up of the individual, both in terms of past psychiatric problems and past experience of, and response to, trauma.

Table 7 Potential impairments associated with various conditions

Condition	Potential impairment or effects on firefighting
Schizophrenia	• Reduced ability to sustain concentration or attention • Reduced cognitive and perceptual processing speeds, including reaction time • Reduced ability to perform in complex situations, such as when there are multiple distractions • Abnormalities of perceptions such as hallucinations, which are distracting and pre occupying • Delusional beliefs that interfere with working – for example, persecutory beliefs may include being followed and result in erratic working
Bipolar affective disorder	• Depression and suicidal ideation • Mania or hypomania, with impaired judgement about working safely, skill and associated recklessness • Delusional beliefs that may directly affect work • Grandiose beliefs that may result in extreme risk taking
Depression	• Disturbance of attention, information processing and judgement, including the reduced ability to anticipate situations • Psychomotor retardation and reduced reaction times • Sleep disturbance and fatigue • Suicidal ideation that may result in reckless conduct
Anxiety disorders	• Preoccupation or distraction • Decreased working memory • Panic attacks • Obsessional behaviours, including obsessional slowness, that impair the ability to work efficiently and safely
Posttraumatic stress disorder	• Avoidance of certain situations related to traumatic experience • Increased startle response • Poor sleep • Recurrent intrusive memories
Personality disorders	• Aggressive or impulsive behaviour • Resentment of authority or reckless behaviour • Disordered interpersonal relationships • Impaired decision making
Adult attention deficit hyperactivity disorder	• Difficulty with sustaining attention, decision making, planning, organising and prioritising

Shift work, sleep disruption and sleep deprivation may impact adversely on those with mood disorders. People with bipolar disorders can be sensitive to disruptions of circadian rhythms and the sleep cycle. Sleep reduction can lead to precipitation of mania. Disruption of circadian rhythms may aggravate depressive disorders, further compounding sleep disruption from the illness.

16.1.2 Treatment considerations

Some medications prescribed for psychiatric conditions may impair performance of safety critical tasks. This possible impairment needs to be balanced against the deleterious effects of untreated or undertreated illness. Side effects that warrant consideration can include sedation, movement disorders and increased propensity to heat stress (e.g. medications with anticholinergic effects).

Self reporting, observation, clinical assessment and collateral information should be used to determine if there are any effects of medication that can cause impairment.

Lithium is a mood stabiliser commonly prescribed for bipolar disorder, and lithium toxicity can result from severe dehydration, which may occur in firefighters. Firefighters can lose copious amounts of sweat, up to 2 L/h. Therefore, the use of lithium is not compatible with operational duties.

Anticholinergic side effects of some psychoactive medications may result in orthostatic hypotension, especially with increased fluid loss from firefighting.

Some antipsychotic medications can cause disruption of body temperature regulation. Heat stress associated with firefighting could increase the risk of neuroleptic malignant syndrome, which is life threatening.

Medication regimens, such as those required for treating attention deficit hyperactivity disorder, are not compatible with emergency response work.

Consideration of dosing of medication in relation to shift and on call work is also required.

Cardiovascular effects of amphetamine type medication will add to the already significant cardiovascular load of firefighting; therefore, cardiovascular status must be closely considered.

Electroconvulsive therapy may cause cognitive impairment – notably, memory dysfunction.

16.2 General assessment and management guidelines

Mental illness must be individually assessed for manifestations that can impact on the psychomotor and cognitive abilities required for firefighting, as well as the potential impact on interpersonal behaviour, which can impact adversely on the safety of the individual firefighter and those that rely on them for their own safety.

Mild mental illness does not usually impact significantly on function. Moderate levels of mental illness may affect functioning; however, successful treatment can help minimise the effect on occupational functioning. Long standing or recurrent severe mental illness is unlikely to be compatible with the functions required of firefighters who work in dangerous environments where the safety of others is reliant upon appropriate judgement and behaviour.

Successful management of significant mental illness in the operational workplace is contingent upon a high level of insight, compliance and cooperation from the firefighter.

Good lines of communication with treatment providers, nominated family members and line management are also advantageous in helping to assess fitness to perform firefighting duties, and to monitor progress and detect early signs of relapse or decline. Recognition of these signs and development of a satisfactory management plan is important for early and effective management aimed at improving occupational and medical outcomes. Management plans may include documentation of individual's obligations and expected actions of the individual firefighter and Fire & Rescue NSW (FRNSW) when early signs or symptoms of illness are detected.

The assessment of significant mental illness will depend heavily on psychiatric assessment and neuropsychological testing, if indicated.

16.2.1 Insight

The presence or absence of insight has significant implications for the workplace management of firefighters with psychiatric disorders.

A firefighter with insight may recognise when they are unwell and self limit their working.

Limited insight may be associated with a lack of awareness or deficits, which may result in impaired judgement or self appraisal, and lack of awareness of the need for treatment. Temporarily Unfit to Perform Firefighting Duties should be assigned while further assessment is undertaken.

16.2.2 Mental state examination

The mental state examination (MSE) can be helpful in identifying areas of impairment that may affect fitness to perform firefighting duties. This includes assessment of the following:

- **Appearance:** This is suggestive of general functioning (e.g. attention to personal hygiene, grooming, sedation, indications of substance use).
- **Behaviour:** This may include observations of the firefighter's behaviour at the time of assessment, and reports from the workplace about the firefighter's behaviour.
- **Attitude:** For example, whether the firefighter is cooperative, uncooperative, hostile or guarded.
- **Mood and affect:** For example, elevated or low mood.
- **Speech:** For example, tangential, pressured or monotonous.
- **Thought form, stream and content:** Relates to the logic, quantity, flow and subject of thoughts, which may be affected by mania, depression, schizophrenia or dementia. Delusions with specific thought content may impact on the ability to work safely.
- **Perception:** Disturbances such as hallucinations may interfere with attention and concentration, and influence behaviour.
- **Cognition:** This relates to alertness, orientation, attention, memory, visuospatial functioning, language functions and executive functions.
- **Insight:** This relates to self awareness of the effects of the condition on behaviour and thinking. Assessment requires exploration of the person's awareness of the nature and impacts of their condition and has major implications for management.
- **Judgement:** The person's ability to make sound and responsible decisions has obvious implications for safety.

16.2.3 Treatment

As outlined above, the effects of prescribed medication should be assessed, including:

- how medication may help to control aspects of the condition that impact on the ability to work safely
- medication side effects such as sedation, impaired reaction time, impaired motor skills, hypotension or dizziness. Potential for exacerbation of heat stress must also be assessed
- potential adverse effects when combined with heat stress or dehydration
- additional cardiovascular load (e.g. from amphetamine type medication).

Assessment of compliance with treatment is also required. Consideration of dosing of medication in relation to shift and on call work is also required.

Lithium requires specific consideration and is incompatible with safe firefighting because of the risk of lithium toxicity with dehydration.

The potential for cognitive impairment after electroconvulsive therapy requires consideration.

16.2.4 Substance misuse

Specific assessment is required for concurrent alcohol abuse, and/or abuse of pharmaceutical and/or illicit drugs. Dual diagnoses (psychiatric disorders with comorbid substance abuse) require very careful assessment regarding medical fitness and will usually result in the person being classed as Temporarily, if not Permanently, Unfit to Perform Firefighting Duties. Assessment of any psychiatric disorder should specifically seek to identify the presence of:

- problematic alcohol consumption
- illicit substance use
- pharmaceutical drug misuse.

Refer also to Section 20, Substance misuse.

16.2.5 Severe chronic conditions

The presence of a severe or relapsing psychiatric condition is unlikely to be compatible with being able to sustain operational duties in the long run, and will usually result in the person being classed as Permanently Unfit to Perform Firefighting Duties.

16.2.6 Applicants

Applicants, on the whole, will not have the benefit of experience with firefighting duties. Therefore, for any applicant with past psychiatric illness, very careful consideration needs to be given to the issue of psychological resilience. Resilience will affect the risk of the psychological exposures of firefighting aggravating their condition, and the risk of increased vulnerability to trauma related psychological illness.

Table 8 Medical criteria for operational firefighters – psychiatric disorders^a

Condition	Criteria
Schizophrenia and other psychotic disorders	A firefighter is not Fit to Perform Firefighting Duties if they have schizophrenia or another psychotic condition. Further information should be sought from a psychiatrist to confirm diagnosis, prognosis, treatment and features of the illness likely to impact on operational duties. Fitness for firefighting duties shall be determined by the FRNSW Occupational Physician, taking into account information provided by the treating and/or independent psychiatrist. Permanently Unfit to Perform Firefighting Duties will apply if a psychiatrist confirms a chronic, relapsing psychotic condition.

Condition	Criteria
Bipolar disorder	A firefighter is not Fit to Perform Firefighting Duties if they have bipolar disorder. Fit to Perform Firefighting Duties Subject to Review may be considered, taking into account information provided by the treating and/or independent psychiatrist, and the opinion of the FRNSW Occupational Physician as to whether the following criteria are met: - the condition has been well controlled (including no rapid cycling) and compliance with treatment has been demonstrated over a substantial period (years), and - there has been no recurrent psychosis or, if there has been an isolated episode of psychosis, it is considered unlikely to recur, and - the firefighter has good insight into the potential effects of their condition on their own safety and that of others reliant on them for their own safety, and - shift work and sleep disruption are not expected to aggravate the condition, and - treatment does not include lithium, and - there are no side effects of treatment such as sedation, motor or cognitive impairment, or increased risk of heat related illness, and - there is no concomitant substance misuse, and - any recurrence is likely to be picked up early, and - the risk of inappropriate behaviour that could impact on safety in emergency situations is considered to be low, and - the psychiatrist considers that the firefighter is not at increased risk of trauma related psychological illness because of their condition. and - where appropriate, the FRNSW Occupational Physician has collaborative information from line management that there are no impairment issues apparent while on duty.

Condition	Criteria
Other – moderate or severe psychiatric conditions	A firefighter is not Fit to Perform Firefighting Duties if they have a psychiatric disorder that is likely to impair behaviour, cognitive ability or perception required for operational duties. Fit to Perform Firefighting Duties Subject to Review may be determined, in consultation with the FRNSW Occupational Physician, taking into account information provided by a psychiatrist regarding: • the course and severity of the condition, hospital admissions (including involuntary), self harm, psychosis • the level and duration of control of the condition and compliance with treatment • adverse medication effects, including sedation, motor or cognitive impairment, increased risk of heat related illness, and additional cardiovascular load • insight • the likelihood of impulsive behaviour • the risk of adverse impact on the condition from shift work or sleep disruption • the likelihood of recurrence or deterioration being detected early • the presence of comorbidities (e.g. substance misuse) • the risk of aggravation with the psychological exposures of operational duties • any heightened risk of developing trauma related psychological illness because of their condition.

FRNSW = Fire & Rescue NSW

a For additional information regarding applicants, refer to text.

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17 Renal disorders

17.1 Relevance to operational duties

The kidneys help to regulate fluid balance. Good kidney function is required for firefighting duties because of the potential for significant dehydration. The kidneys also play a key role in acid–base metabolism and electrolyte balance, and, hence, in restoring homeostasis after vigorous activity. Underlying impairment of kidney function combined with significant dehydration may result in acute renal impairment. Chronic kidney disease is associated with increased cardiovascular risk, which is highly significant for operational firefighters (refer to Section 11, Cardiovascular disorders).

Significant reduction in kidney function may jeopardise the safety of the firefighter, others in the crew and members of the public.

Persistent albuminuria and/or a reduced glomerular filtration rate (GFR) indicate the presence of chronic kidney disease and are the strongest independent predictors for progression to end stage kidney disease. They are also strong independent predictors of adverse cardiovascular outcomes, including strokes, myocardial infarction, congestive cardiac failure and death.

17.2 **General assessment and management guidelines**

Figure 50 summarises the assessment and management of firefighters in relation to renal function and kidney disease.

17.2.1 **Risk factors**

Hypertension and diabetes are significant risk factors for kidney disease (refer to following sections). Other factors that increase the risk of chronic kidney disease include:

- being more than 50 years old
- smoking
- being obese
- having a family history of kidney disease
- being Aboriginal or Torres Strait Islander
- having established cardiovascular disease.

17.2.2 **Estimated glomerular filtration rate**

The health assessment for the purpose of this standard includes screening for kidney disease by estimated GFR (eGFR) and urinary albumin:creatinine ratio (UACR). For the general community, most mild to moderate kidney disorders can be appropriately managed by a general practitioner; however, for firefighters, the indications for referral to a nephrologist will differ. Specialist assessment and advice from nephrologists is desirable for firefighters, in view of the potential for the kidneys being exposed to severe stress.

eGFR is widely accepted as the best measure of kidney function. Unexpected abnormal results should be repeated in the first instance and factors such as diet (including creatine supplements), muscle mass and extremes of body size should be considered:

- eGFR 60–90 mL/min/1.73 m², in the **presence of albuminuria** may indicate mild kidney dysfunction and referral to a nephrologist is required. Temporarily Unfit to Perform Firefighting Duties should be determined.
- eGFR <60 mL/min/1.73 m² indicates at least moderate kidney dysfunction and requires referral to a nephrologist. Temporarily Unfit to Perform Firefighting Duties should be determined for incumbent firefighters and Permanently Unfit to Perform Firefighting Duties for applicants.
- eGFR falls from a starting point of >90 mL/min/1.73 m² by 10 mL/min/1.73 m² per decade, beyond the age of 40 in most healthy adults, **but** an eGFR <60 mL/min/1.73 m² is associated with increased cardiovascular risk and poorer outcomes for all ages.

17.2.3 **Assessment of albuminuria**

The following clinical notes relate to the measurement and interpretation of albuminuria.

- All urine specimens should be mid stream and clean catch to avoid abnormalities related to specimen contamination.
- The preferred method for assessment for albuminuria in both diabetic and non diabetic individuals is a

UACR measurement in a first void specimen. Where a first void specimen is not possible or practical, a spot (random) urine specimen for UACR is acceptable.

Albuminuria is seldom, if ever, secondary to microscopic haematuria, even if on dipstick the amount of bleeding is strongly positive.

If haematuria accompanies albuminuria, an important underlying parenchymal lesion, such as glomerulonephritis, is highly likely.

Common causes for transient isolated albuminuria include:

- strenuous exercise
- urinary contamination with vaginal mucus or semen
- orthostatic (postural) albuminuria – primarily seen in adolescents, rarely seen over age 30
- urinary tract infection
- fever
- emotional stress
- pregnancy.

Persistent albuminuria beyond 3 months (with the exception of orthostatic albuminuria in adolescents) is definitive for chronic kidney disease.

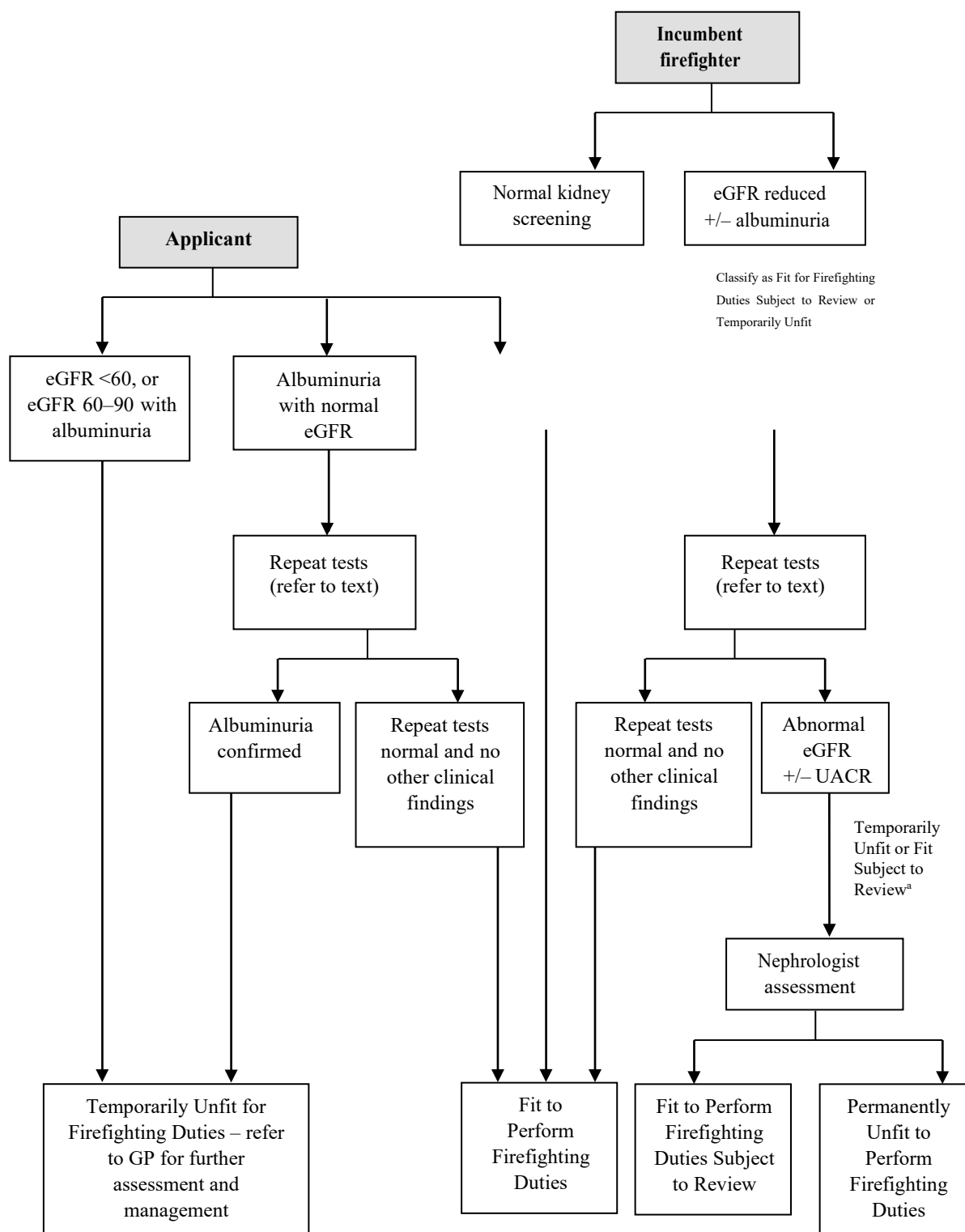
In investigating albuminuria, cut off levels for albuminuria are gender specific (refer to Table 9):

- For albuminuria, if UACR >2.5 mg/mmol for males, >3.5 mg/mmol for females and no other findings (including a normal eGFR), repeat the UACR in the first instance ensuring repeat specimen is **first void**, mid stream and clean catch.
- If albuminuria >2.5 mg/mmol for males and >3.5 mg/mmol for females is confirmed on repeat specimen, for the purpose of this standard, arrange for nephrologist assessment. Temporarily Unfit to Perform Firefighting Duties should be determined.

Table 9 Interpretation of urine albumin in females and males

Albumin levels	Females	Males
Normal	<3.5 mg/mmol	<2.5 mg/mmol
Microalbuminuria	3.5–35 mg/mmol	2.5–25 mg/mmol
Macroalbuminuria	>35 mg/mmol	>25 mg/mmol

Figure 50 Assessment of firefighters for kidney disease



eGFR = estimated glomerular filtration rate; GP = general practitioner; UACR = urine albumin:creatinine ratio **a** *Classify as Temporarily Unfit to Perform Firefighting Duties if the person has diabetes mellitus or hypertension. Others to be classified as Temporarily Unfit to Perform Firefighting Duties or Fit to Perform Firefighting Duties Subject to Review depending on severity of abnormality and clinical history.*

17.2.4 The undiagnosed firefighter

Abnormalities such as persistent haematuria of glomerular origin, persistent albuminuria or an eGFR <60 mL/min/1.73 m² in an incumbent firefighter with no known kidney problems require investigation to exclude or confirm kidney disease. For the purpose of this standard, further investigation is required for albuminuria, reduced eGFR and glomerular haematuria (other forms of haematuria can be referred back to the general practitioner [GP] for further assessment).

Fit to Perform Firefighting Duties Subject to Review or Temporarily Unfit to Perform Firefighting Duties should be determined, based on the severity of the findings and overall clinical assessment, while further investigation is undertaken.

17.2.5 Confirmed kidney disease or kidney function reduction, not because of hypertension or diabetes mellitus

All cases of kidney disease or reduced kidney function require careful assessment of risk in relation to dehydration from firefighting. Unless cardiovascular risk or diabetes result in Permanently Unfit to Perform Firefighting Duties, the opinion of a nephrologist who has been briefed on the conditions of firefighting is required. Temporarily Unfit to Perform Firefighting Duties should be determined while further assessment is undertaken. Note, all decreased eGFR is associated with increased cardiovascular risk. A stable eGFR of 45–59 mL/min/1.73 m² need not preclude a firefighter from being considered medically fit for duty, subject to individual assessment and advice.

17.2.6 Hypertensive kidney disease

A firefighter with kidney disease resulting from hypertension needs to be assessed in the broader context of cardiovascular risk as well as the threat to kidney function from dehydration. Kidney damage from hypertension indicates high cardiovascular risk. If screening shows albuminuria or an eGFR <60 mL/min/1.73 m² the firefighter should be classed as Temporarily Unfit to Perform Firefighting Duties while further assessment is undertaken. Also refer to Section 11, Cardiovascular disorders.

17.2.7 Diabetic nephropathy

A firefighter with kidney disease resulting from diabetes must also be assessed in the broader contexts of diabetes control and cardiovascular risk. Kidney damage secondary to diabetes is usually evidence of poor diabetes and blood pressure control, and high cardiovascular risk. If screening shows albuminuria or an eGFR <60 mL/min/1.73 m², the firefighter should be classed as Temporarily Unfit to Perform Firefighting Duties while further assessment is undertaken. Under this standard, all firefighters with diabetes require assessment of renal function by way of albumin:creatinine ratio as part of their periodic assessment. Also refer to Section 11, Cardiovascular disorders, and Section 12, Diabetes.

17.2.8 Dialysis and transplantation

Any firefighter requiring peritoneal or haemodialysis should be classed as Permanently Unfit to Perform Firefighting Duties. Kidney transplantation also is unlikely to be compatible with operational duties. Factors for consideration include level and protection of renal function, comorbid disease, cardiovascular risk, bone density, immunosuppression and other medication effects.

17.2.9 Applicants

Applicants with any of the following should be referred back to their GP for further assessment and management:

- confirmed kidney disease, and/or
- an eGFR <60 mL/min/1.73 m², or
- an eGFR 60–90 mL/min/1.73 m² and albuminuria.

These applicants will usually be classed as Permanently Unfit to Perform Firefighting Duties but, in exceptional cases where kidney function is preserved, they may be referred to the FRNSW

Occupational Physician for further assessment of medical fitness for duty, taking into account information provided by a nephrologist.

Minor abnormalities may, however, be investigated under this standard to help determine if there is kidney disease.

17.2.10 Nephrologist referrals

Referrals to, or requests for reports from, nephrologists **must** include the following information about firefighting:

- Firefighters work under conditions that promote heat stress and dehydration.
- Contributing factors to heat stress and dehydration include personal protective clothing, which results in profuse sweating and inhibits normal cooling mechanisms (i.e. the structural firefighting ensemble is insulated and contains a moisture barrier, and fully encapsulated chemical suits), strenuous exercise, radiant heat, and hot and humid weather conditions.
- Significant and rapid fluid loss – up to 2L/h or more – which can easily progress to clinical dehydration.

The nephrologist's report **must** address the:

- diagnosis and aetiology
- current clinical status
- investigation results
- severity of kidney function reduction and impact on cardiovascular risk
- complications or sequelae of the kidney disease
- prognosis or expected course of illness
- treatment
- potential impact of the conditions of firefighting as outlined above on kidney function.

Table 10 Medical criteria for operational firefighters – renal disease^a

Condition	Criteria
Suspected kidney disease based on abnormal assessment findings	A firefighter is not Fit to Perform Firefighting Duties if there is evidence of possible kidney disease or impairment on assessment. Fit to Perform Firefighting Duties Subject to Review or Temporarily Unfit to Perform Firefighting Duties may be determined while further assessment is undertaken depending on the clinical context.
Confirmed kidney disease or impairment (not related to hypertension or diabetes – refer below)	A firefighter is not Fit to Perform Firefighting Duties if they have a known or confirmed kidney disease, or moderate to severe kidney function reduction. Temporarily Unfit to Perform Firefighting Duties should be determined while further assessment by a nephrologist is undertaken. Refer to the text for referral details. Fit to Perform Firefighting Duties Subject to Review or Permanently

Condition	Criteria
	Unfit to Perform Firefighting Duties may be determined by the FRNSW Occupational Physician, taking into account the information provided by the nephrologist. Temporarily Unfit to Perform Firefighting Duties may be determined if the condition is expected to improve in the foreseeable future.
Kidney impairment secondary to hypertension	A firefighter is not Fit to Perform Firefighting Duties if they have suspected or confirmed hypertensive kidney disease. Temporarily Unfit to Perform Firefighting Duties should be determined while further assessment is undertaken. Refer to the text.
Diabetic nephropathy	A firefighter is not Fit to Perform Firefighting Duties if they have suspected or confirmed diabetic nephropathy. Temporarily Unfit to Perform Firefighting Duties should be determined while further assessment is undertaken. Refer to the text.

FRNSW = Fire & Rescue NSW

a For additional information regarding applicants, refer to text.

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18 Respiratory disorders

18.1 Relevance to firefighting duties

Good pulmonary function is essential for the extreme workloads of firefighting, which require a VO_2 max of 33.9–45 mL/kg/min. Hard work such as firefighting typically requires a 10 fold increase in respiratory minute volume, from 4.5 L/min to 45 L/min. An adequate intake of oxygen and rapid exchange of O_2 and CO_2 is required to meet the demands of firefighting duties.

Respiratory function may be threatened by exposure to smoke and other respiratory irritants. Smoke contains many respiratory irritants, which vary with the type of fire, but typically include aldehydes, ammonia, acrolein, halogen gases, isocyanates, nitrogen oxides, sulfur dioxide and particulates. The vapours from chemical spills may also include respiratory irritants. These irritants can cause coughing, bronchospasm and pulmonary oedema. Conditions such as asthma and chronic airflow limitation can be aggravated by exposure to smoke and other respiratory irritants encountered in the course of operational duties.

Self contained breathing apparatus (SCBAs) protect the lungs from respiratory hazards. However, SCBAs are not routinely worn at bushfires, because of the additional workload; rather, a P2 mask is worn. Also, smoke exposure may occur at structural fires despite the use of SCBAs, because respiratory irritants may still be present even when an atmosphere has been deemed by monitoring to not be immediately dangerous to life, or in the vicinity of a fire.

The conditions of firefighting can aggravate asthma. An asthma attack can result in acute incapacity.

18.1.1 Asthma

Asthma is a chronic lung disease characterised by the presence of both excessive variation in lung function and respiratory symptoms (e.g. wheeze, shortness of breath, cough, chest tightness) that vary over time, and may be present or absent at any point in time.¹ Airway hyperresponsiveness is a central feature of asthma and is associated with triggering of symptoms by factors such as exercise, cold air and inhaled irritants. One in 10 Australians have current asthma symptoms, and 19% of Australians aged 16 years or older have been diagnosed with asthma at some time in their lives.²

Occupational asthma is asthma caused by workplace conditions. Irritant induced asthma is a form of occupational asthma that develops following one or more exposures to high level respiratory irritants and has been described in firefighters. Work exacerbated asthma is asthma that is made worse, but was not initially caused, by workplace conditions such as exposure to smoke, exercise or stress. Previous studies have shown an underdiagnosis of asthma in the occupational setting, including firefighters.³

An asthma attack during a firefighting situation can result in acute incapacity, thus impacting on the safety of the firefighter, their crew and members of the public. The urge to remove the SCBA mask should a firefighter suffer asthma symptoms in a hostile environment would result in an immediate risk to the firefighter and others.

Many of the typical triggers for asthma are present in the firefighting environment, including:

- **Smoke and other respiratory irritants.** The chemistry of smoke and other exposures has been discussed above. The bushfire season is acknowledged to be problematic for those with asthma and the Asthma Foundation (NSW) advises individuals with asthma to avoid physical activities outdoors when there is smoke around. The Asthma Foundation acknowledges that bushfire volunteers and other emergency personnel are at an increased risk of asthma attacks.
- **Physical exertion.** Firefighting requires strenuous physical exertion, which increases oxygen demand and ventilation, thus further increasing the risk of exposure to inhaled irritants during tasks where SCBAs are not used.
- **Exercise.** Exercise induced bronchoconstriction is a well recognised aspect of asthma, affecting 50–65% of asthmatics who are otherwise well controlled on an inhaled corticosteroid. Firefighting is hard work, and thus presents a particular risk in this regard.
- **Cold dry air.** Cold dry air is a well recognised trigger for asthma, as it is very irritating to asthmatic airways. The compressed air in SCBAs is dry and, when released through a small valve, becomes cooled. The challenge to the airways from the cold dry air from SCBAs can be increased further with strenuous exercise.

Even though successful treatment of asthma may abolish symptoms, it does not mean that an individual no longer has asthma. Some people who have not experienced asthma symptoms for several years still have evidence of airway hyperresponsiveness on bronchial provocation.

There are no studies of the effectiveness of anti inflammatory medication (e.g. inhaled corticosteroids) in preventing or adequately controlling asthma in the firefighting environment; therefore, the effectiveness of such medications in this context has not been established. In addition, it is not acceptable to use or rely on bronchodilator medications for this purpose because:

- their use is for rescue after an asthma attack and not for prevention in an irritant environment
- there are no studies that support or deny that their use is effective in a fire or smoke environment
- it is impractical and dangerous to remove SCBAs to use an inhaler.

18.2 General assessment and management guidelines

Note that Fire & Rescue NSW (FRNSW) does not advise changes of treatment for the purpose of meeting this standard. Any change of treatment must be made by the firefighter's treating doctor and based only on clinical grounds.

Establishing that asthmatics are stable in a normal environment, and are not at risk of an asthma attack in a fire or other irritant environment is difficult. There is no test that an individual can be subjected to that will simulate or provide a reliable proxy for such environments.

18.2.1 Spirometry

Spirometry may be normal in between episodes of asthma; therefore, normal spirometry does not exclude the presence of asthma. A pattern of obstructive spirometry ($FEV_1/FVC < 0.7$) and/or $FEV_1 \leq 80\%$ in the absence of a history of obstructive lung disease would usually prompt further investigation, which may include a bronchial provocation test (BPT), provided it is safe to do so. In some cases, respiratory physician review may be required for further evaluation.

18.2.2 Bronchial provocation test

For the purpose of this standard, the BPT is used as an objective test to identify or exclude active asthma. Only 'indirect BPT' using mannitol dry powder will be accepted for the purpose of this standard. These hyperosmolar stimuli cause smooth muscle contraction 'indirectly' via the action of mediators released from inflammatory cells in response to the osmotic stimulus and, unlike 'direct' BPT, these mediators can act on many cells and receptors. Testing should be conducted in laboratories accredited by the Thoracic Society of Australia and New Zealand.

A positive result for an indirect BPT (mannitol) is defined as a fall in FEV_1 of $\geq 15\%$ from baseline. Applicants are eligible to undergo BPT only if they have not had any symptoms of asthma or required any asthma treatment whatsoever for at least 3 years, and respiratory examination and spirometry is normal. If there is any concern in relation to history, examination or spirometry (e.g. low reserve or obstructive pattern), referral for a BPT is not appropriate, as current asthma may be a possibility and a respiratory physician assessment may be required for further confirmation of asthma.

Incumbent firefighters eligible to undergo a BPT may perform the test on or off medication, according to their treatment regimen. If a firefighter's symptoms are well controlled on low dose corticosteroid, leukotriene receptor antagonists or cromones, they may undertake the test (after respiratory physician review) while on this treatment; however, they should not have used a short or long acting bronchodilator in the previous 24 hours.

For incumbent firefighters, once a BPT is found to be negative, it does not need to be repeated annually and should only be repeated if clinically indicated.

18.2.3 Assessment and management of established asthma

Figure 51 summaries the steps in assessing applicants and incumbents.

18.2.4 Applicants

Applicants with a history of childhood asthma, or those who have not had any asthma symptoms or treatment for at least 3 years, should provide a statement from their respiratory physician or general practitioner to confirm that their asthma has resolved, and they have been without symptoms and without medication for at least 3 years. Spirometry should then be conducted and, if this is satisfactory, a BPT can be arranged provided:

- a clear and reliable history of long standing absence of symptoms or treatment is established, and
- normal examination and spirometry, and
- no history ever of high risk features (e.g. severe asthma, brittle asthma, previous intensive care unit admission), and

- no significant current issues with other atopic conditions.

If there are any doubts about the safety of a BPT in the clinical presentation, referral to a respiratory physician is recommended.

Applicants who currently require regular treatment with preventer (inhaled anti[inflammatory) or a symptom controller (long acting beta agonist), and/or reliever medication (short acting beta agonist), whether well controlled or not, are Permanently Unfit to Perform Firefighting Duties.

18.2.5 Firefighters

Wheeze associated with upper respiratory tract infection is not necessarily asthma. Short temporary incidents such as these, once resolved, do not compromise a firefighter's ability to safely undertake firefighting duties. This must, however, be distinguished from asthma exacerbated by upper respiratory tract infection.

Figure 51 and the following summarise the steps in assessing incumbent firefighters who have asthma:

- a. The firefighter's asthma history should be assessed, including information provided by the treating doctor where necessary.
- b. If, after a minimum of 3 months, they are considered stable on treatment and they meet the adapted *Australian asthma handbook* definition of 'good control' and 'mild severity asthma', and have no high risk features (Table 11), further individualised assessment will be undertaken by a respiratory physician.
- c. The respiratory physician should be familiar with the conditions of firefighting, so occupational causes are also considered. In cases of irritant induced asthma, airways will be generally hyperresponsive to irritants, but can be managed under this standard as per other asthma symptoms. As part of the assessment, the firefighter requires a BPT. The respiratory physician will need to determine if safe to proceed to a BPT.
- d. If the firefighter meets the relevant criteria in Table 11, they can be classed as Fit to Perform Firefighting Duties Subject to Review. The importance of wearing a SCBA for all fire suppression duties, including overhaul, should be emphasised.
- e. Firefighters with asthma should not fight wildfires, as SCBAs are not routinely worn. They should be classed Fit to Perform Firefighting Duties Subject to Job Modification.
- f. A BPT will not be required at subsequent assessments unless clinically indicated.
- g. If the firefighter does not meet the criteria for stability, or 'good control' and 'mild severity', or the respiratory physician assessment is unfavourable, or the criteria in Table 11 are not met, the assessing medical practitioner must determine if treatment has been optimised (based on information from the treating doctor). If further treatment optimisation is warranted, the firefighter will be classified as Temporarily Unfit to Perform Firefighting Duties, will attend to their treating doctor and their fitness for duty can be reviewed (as above) after a minimum of 3 months. If further treatment is deemed unlikely to alter the fitness assessment, the firefighter should be classified Permanently Unfit to Perform Firefighting Duties.

Table 11 Risk assessment of asthma in firefighters

Control of asthma	Symptoms and treatment	
Good control	- No daytime symptoms, and - No need for reliever^a, and - No limitation of activities, and - No symptoms during night or on waking	
Mild severity	Good control can be achieved with (any of): - low dose inhaled corticosteroid (see ‘Inhaled corticosteroid dose level in adults’) - leukotriene receptor antagonist - cromone Note that an intermittent reliever is not acceptable.	
Inhaled corticosteroid dose levels in adults	Inhaled corticosteroid	Daily dose (mcg) – low
	Beclomethasone dipropionate ^b	100–200
	Budesonide	200–400
	Ciclesonide	80–160
	Fluticasone furoate ^c	—
	Fluticasone propionate	100–200
No high risk features	- Exercise induced symptoms - Any asthma flare up during the previous 12 months - Intubation or admission to intensive care unit due to asthma (ever) - Two or more hospitalisations for asthma in the past year - Three or more emergency department (ED) visits for asthma in the past year - Hospitalisation or ED visit for asthma in the past month - High short acting beta2 agonist use (>2 canisters per month) - History of delayed presentation to hospital during flare ups - History of sudden onset acute asthma	

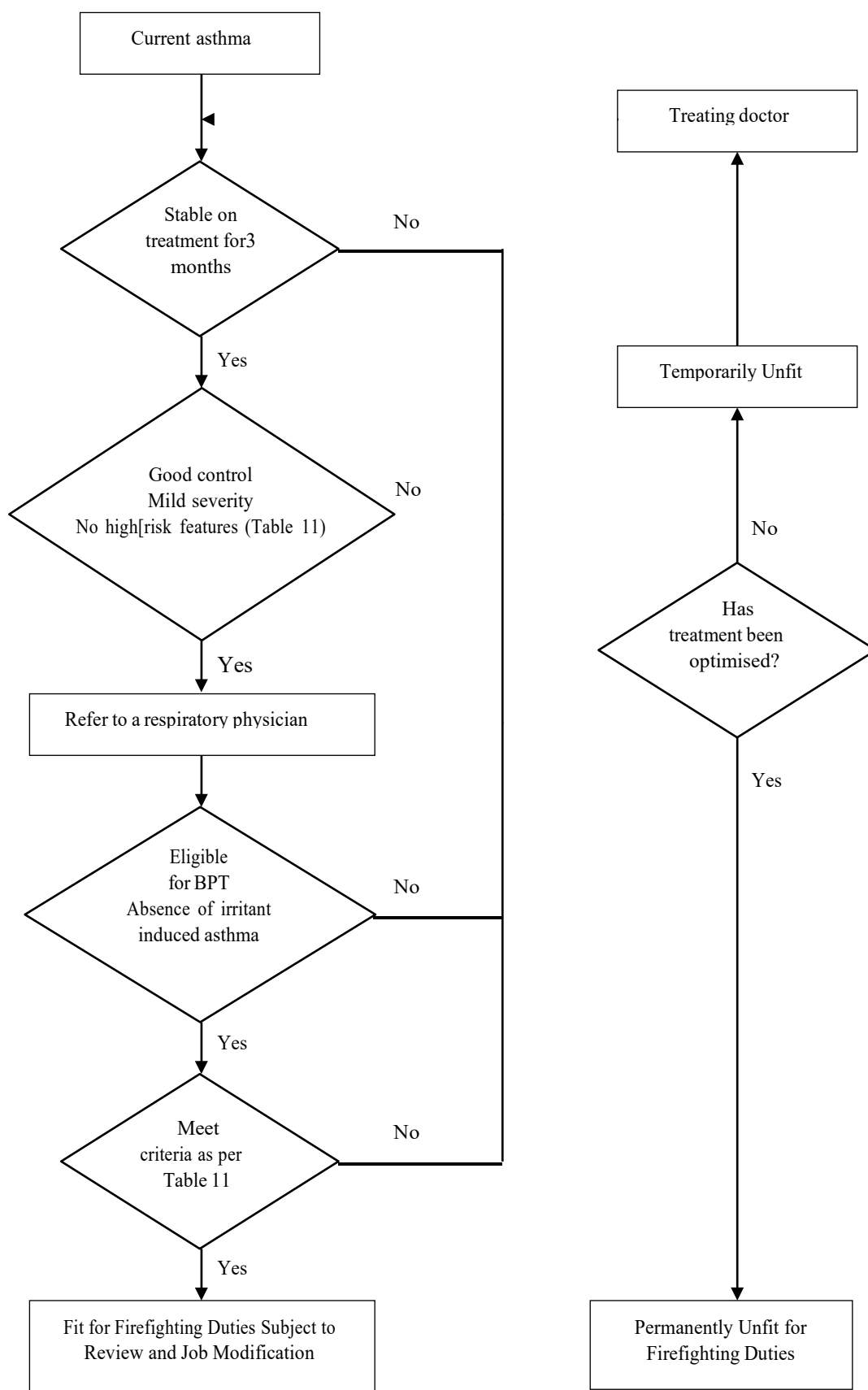
a SABA taken prophylactically before exercise is not acceptable.

b Dose equivalents for Qvar (TGA registered CFC-free formulation of beclomethasone dipropionate).

c Fluticasone furoate is not available as low dose. TGA registered formulations of fluticasone furoate contain a medium or high dose of fluticasone furoate in combination with vilanterol (a long acting beta2 agonist) and should only be prescribed as one inhalation once daily.

Source: adapted from the Australian asthma handbook

Figure 51 Assessment of incumbent firefighters



BPT = bronchial provocation test

18.2.6 Chronic airflow limitation

The criteria for Fit to Perform Firefighting Duties are not met if an applicant or firefighter has chronic airflow limitation (CAL), including chronic obstructive pulmonary disease. Individuals with CAL are unlikely to be able to meet the physical demands of firefighting duties. Fit to Perform Firefighting Duties Subject to Review may be considered, taking into account information provided by a respiratory physician familiar with firefighting duties and the opinion of the Occupational Physician. Careful individual assessment is required to determine lung function, the presence of bronchial hyperresponsiveness, oxygen saturation with exercise and objective evidence of exercise capacity.

18.2.7 Spontaneous pneumothorax

Fit to Perform Firefighting Duties may be determined after appropriate successful rehabilitation, usually a minimum of 3 months. A history of recurrent pneumothorax will require information from the treating specialist to assist with assessment of risk of recurrence.

No further assessment is required if successful pleurodesis has been undertaken.

18.2.8 Other chronic respiratory conditions

Other conditions should be assessed on an individual basis, taking into account lung capacity, exercise and functional capacity, gas exchange and risk of aggravation with the duties of firefighting.

Table 12 Medical criteria for firefighters – asthma

Condition	Criteria
Applicants with a past history of asthma	Fit to Perform Firefighting Duties may be determined if there is a past history of asthma, including childhood asthma, if: - information provided by the applicant's usual treating practitioner and the assessing medical practitioner's assessment confirms that there have been no asthma symptoms and no requirement for asthma medication for at least 3 years, and - clinical assessment, including examination and spirometry, is normal, and - the BPT is negative.
Applicants with current asthma	Applicants with evidence of current asthma shall be deemed Permanently Unfit to Perform Firefighting Duties.

Condition	Criteria
Firefighter with current asthma	Fit to Perform Firefighting Duties Subject to Review and Subject to Job Modification (see below) may be determined if: - information provided by the applicant's usual treating practitioner and the assessing medical practitioner confirms that the asthma meets the criteria of 'good control' and 'mild severity' for 6 months, and there is an absence of high risk features, and - clinical assessment, including examination and spirometry, is normal, and - there have been no asthma symptoms and reliever medication has not been required at any time during strenuous exertion, temperature or humidity extremes, SCBA use, irritant exposures, fire suppression activities, Hazmat duties, rescue duties, training activities (in newly diagnosed firefighters, confirm there have been no asthma symptoms and reliever medication has not been required at any time during strenuous exertion since the condition has been considered stable), and - respiratory physician (briefed on the requirements of firefighting) clears the applicant for BPT, and the BPT is negative, and - the firefighter is compliant with treatment and has a current asthma plan. Should the above conditions be met, the following permanent job modifications must be advised: - SCBA to be worn for all fire suppression duties, including overhaul and whenever there is expected to be exposure to particulate matter, smoke or inhaled irritant, and - no wildfire firefighting. BPT is not required annually and should only be repeated if clinically indicated. Temporarily Unfit to Perform Firefighting Duties may be determined if further treatment optimisation is warranted to assist the firefighter in meeting the criteria. Fitness to Perform Firefighting duties can be reviewed after a minimum of 3 months. Permanently Unfit to Perform Firefighting Duties may be determined if, despite treatment optimisation, firefighters do not meet the above criteria.

BPT = bronchial provocation test; SCBA = self contained breathing apparatus

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19 Sleep disorders

19.1 *Relevance to operational duties*

The focus of this chapter is on sleep apnoea. Other sleep disorders have the potential to impact on medical fitness to undertake firefighting duties, and should be assessed on a case by case basis.

Sleep apnoea is of significance for firefighting duties as it may result in:

- sleepiness or daytime somnolence and fatigue, with increased risk of injury, accidents and falling asleep while driving (including to and from work)
- impaired cognition and analytical skills, resulting in poor decision making.

Also of significance for firefighting duties are the long term health effects of sleep apnoea, including:

- hypertension (refer to Section 11, Cardiovascular disorders)
- coronary artery disease (refer to Section 11, Cardiovascular disorders). Multiple episodes of low oxygen from apnoeas can also lead to sudden death from a cardiac event if there is underlying heart disease. Obstructive sleep apnoea has also been shown to be associated with atrial fibrillation and congestive cardiac failure
- stroke (refer to Section 15, Neurological disorders).

Sleep apnoea may also worsen preexisting conditions such as hypertension and depression. Sleep apnoea is associated with type 2 diabetes. Chronic snoring is an indicator of potential obstructive sleep apnoea and, anecdotally, it can cause interpersonal problems for firefighters staying overnight in close quarters.

Risk factors for obstructive sleep apnoea include male gender, middle age and obesity, which is of significance given the Fire & Rescue NSW (FRSNW) firefighters' demographic and increasing prevalence of obesity in the general population.

Also, shift work may compound the effects of poor quality sleep from sleep apnoea. Additionally, secondary employment or, in the case of retained firefighters, primary employment, may impact on sleep time.

19.2 General assessment and management guidelines

19.2.1 General considerations

Excessive daytime sleepiness, which manifests as a tendency to doze at inappropriate times when intending to stay awake, can arise from many causes. It is important to distinguish sleepiness (the tendency to fall asleep) from fatigue or tiredness that is not associated with a tendency to fall asleep. Many chronic illnesses can cause fatigue without causing sleepiness.

Increased sleepiness during the daytime may be because of sleep deprivation, poor sleep hygiene habits or irregular sleep–wake schedules, or the influence of sedative medication, including alcohol. Insufficient sleep (less than 5 hours) before driving is strongly related to motor vehicle crash risk.

Excessive daytime sleepiness may also result from a number of sleep disorders, including sleep apnoea syndromes (obstructive sleep apnoea, central sleep apnoea and nocturnal hypoventilation), periodic limb movement disorder, circadian rhythm disturbances (e.g. advanced or delayed sleep phase syndrome), some forms of insomnia and narcolepsy.

Unexplained episodes of sleepiness may also require consideration of the several causes of blackouts (refer to Section 10, Blackouts).

Firefighters who are sleepy or otherwise found to be at high risk should be classed as Temporarily Unfit to Perform Firefighting Duties while further investigation and effective treatment is undertaken.

High risk individuals include those who:

- experience moderate to severe excessive daytime sleepiness (Epworth Sleepiness Scale [ESS] score of 16–24)
- have a history of frequent self reported sleepiness while driving or working
- have had a motor vehicle crash or other incident caused by inattention or sleepiness.

High risk individuals have a significantly increased risk of sleepiness related incidents and require referral to a specialist in sleep disorders to assess if sleep apnoea or another medical condition is responsible for their symptoms.

Others at risk of obstructive sleep apnoea include those with:

- BMI ≥ 40
- BMI ≥ 35 , and
 - type 2 diabetes, or
 - hypertension requiring two or more medications for control, or
 - history of habitual loud snoring during sleep or of witnessed apnoeic events (such as in bed by a partner).

Sleep apnoea is present on overnight monitoring in 9% of adult women and 24% of adult men. Sleep apnoea syndrome (excessive daytime sleepiness in combination with sleep apnoea on overnight monitoring) is present in 2% of women and 4% of men.

19.2.2 Screening for excessive daytime sleepiness – the Epworth Sleepiness Scale

Screening tools may assist in determining excessive daytime sleepiness. The ESS is a subjective measure and is included in the Health Assessment Questionnaire. The ESS is scored by summing the numeric values in the boxes in the questionnaire. The maximum possible is $8 \times 3 = 24$:

- A score of 0–10 is in the normal range.
- A score of 11–15 indicates mild to moderate self reported sleepiness, and may be associated with a significant sleep disorder. The degree of sleepiness related motor vehicle accidents in this range is unknown.

- A score of 16–24 is consistent with moderate to severe sleepiness, and is associated with increased risk of sleepiness related motor vehicle accidents.
- A score of ≥ 16 or the presence of other clinical findings should prompt discussion with the firefighter to determine possible explanations such as sleep deprivation or sleep disorders. Referral may be required to the firefighter's general practitioner or to a sleep clinic for polysomnography.

19.2.3 Referral and management

Firefighters in whom sleep apnoea, chronic excessive sleepiness or another medical sleep disorder is suspected should be referred to a specialist sleep physician for further assessment, investigation with overnight polysomnography and management. Referral to a sleep disorder specialist should be considered for any firefighter who has unexplained daytime sleepiness while driving, or who has been involved in a motor vehicle crash that may have been caused by sleepiness.

Home polysomnography may be helpful for those in rural and remote areas. The investigation should include (during a period of sleep):

- a continuous electrocardiograph recording
- a continuous electroencephalograph recording
- respiratory function testing (including oronasal airflow, rib cage/abdominal movement, body position, oximetry).

These parameters should be interpreted and reported on by a sleep physician who has established quality assurance procedures for the data acquisition.

Firefighters who are diagnosed with obstructive sleep apnoea syndrome and require treatment should have annual review to ensure that adequate treatment is maintained.

Firefighters with moderate sleep apnoea based on a diagnostic sleep study, and who do not report moderate to excessive sleepiness, should be assessed as Fit to Perform Firefighting Duties Subject to Review annually. Repeat sleep studies may be recommended depending on the clinical review.

Firefighters treated with continuous positive airway pressure (CPAP) are recommended to use CPAP machines with a usage meter to allow objective assessment and recording of treatment compliance.

Objective measurement of sleepiness should be considered (maintenance of wakefulness test and/or multiple sleep latency test) if there is concern regarding persisting sleepiness or treatment compliance.

19.2.4 Advice to firefighters

All firefighters suspected of having, or found to have, sleep apnoea or other sleep disorders should be advised about the potential impact on firefighting duties and strategies for maintaining fitness for duty. General advice should include:

- minimising unnecessary working at times when normally asleep
- allowing adequate time for sleep
- avoiding working after having missed a large portion of their normal sleep
- avoiding alcohol and sedative medications
- resting if sleepy.

The firefighter is responsible for:

- avoiding work if they are sleepy
- complying with treatment, including management of lifestyle factors
- maintaining their treatment device
- attending review appointments
- honestly reporting their condition to their treating physician.

Table 13 Medical standard for firefighters – sleep disorders

Condition	Criteria
Sleep disorder risk assessment	A firefighter is likely to be at increased risk of sleep disorder if they have a: • BMI ≥ 40; or • BMI ≥ 35 and one of – type 2 diabetes – high blood pressure requiring 2 or more medications for control, or – a history of habitual loud snoring or of witness apnoeic events (such as in bed by a spouse/partner). A firefighter meeting the above criteria should be promptly assessed in relation to a possible sleep disorder. They should be classed as Fit to Perform Firefighting Duties Subject to Review. Some discretion should be applied for subsequent review. Persons with or without the above risks and with evidence of excessive sleepiness should be classed as Temporarily Unfit to Perform Firefighting Duties while further assessment is undertaken. Evidence of sleepiness may include: • an ESS score of ≥ 16, or • frequent self reported episodes of sleepiness or drowsiness while working or driving, or • work performance reports indicating excessive sleepiness, or • an incident plausibly caused by inattention or sleepiness.
Sleep apnoea	A firefighter is not Fit to Perform Firefighting Duties if: • they have established sleep apnoea syndrome – sleep apnoea on a diagnostic sleep study and moderate to severe excessive daytime sleepiness, or • the person has severe sleep apnoea on a diagnostic sleep study with or without self reported excessive daytime sleepiness, or • Temporarily Unfit to Perform Firefighting Duties should be determined until the treating specialist confirms compliance with treatment and the condition is well controlled, with an absence of moderate to severe excessive daytime sleepiness. Fit to Perform Firefighting Duties Subject to Review on an annual basis may be determined for those with treated sleep apnoea (without moderate to excessive daytime sleepiness), and taking into account information provided by a sleep specialist or the treating GP as to whether the following criteria are met: • the firefighter is compliant with treatment (where possible, this should include objective evidence such as usage meter download), and • the response to treatment is satisfactory.

Condition	Criteria
	GP management may be determined to be sufficient if there is an established pattern of compliance and good response to treatment.
	Fit to Perform Firefighting Duties Subject to Review on an annual basis may be determined for those with moderate sleep apnoea diagnosed on diagnostic sleep study (without moderate to excessive daytime sleepiness).

GP = general practitioner

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20 Substance misuse

This standard applies to firefighters seeking to resume duty after a period of treatment or if a firefighter is referred for assessment of medical fitness for duty after a positive test undertaken under Fire & Rescue NSW's (FRNSW's) Alcohol and Other Drugs Policy.

20.1 Relevance to operational duties

Firefighting, including driving the appliance in emergency mode, requires accurate perception of a situation, rapid decision making, and quickness and strength of action. These cognitive attributes may be adversely affected by substance misuse. Acute or chronic effects of alcohol and other drugs, including illicit and pharmaceutical, can result in acute incapacity or impairment, thus impacting on the safety of the individual firefighter, their crew and members of the public.

The focus of this chapter is mainly on the chronic, regular heavy use and dependence on alcohol and other substances, including illicit and pharmaceutical drugs. Acute intoxication is addressed in the FRNSW Alcohol and Other Drugs Policy, and does not form part of the assessment of fitness for firefighting duties in this standard. In a long term dependent person, impairment can, however, result from both chronic use and recent consumption, and both these risks must be assessed in determining fitness to perform firefighting duties.

20.1.1 Features of chronic substance misuse

Abuse is characterised by the continued use of a substance, resulting in a negative effect on a person's life.

Chronic misuse of alcohol and other substances can lead to a syndrome of dependences, characterised by several of the following features:

- tolerance, as defined by a need for markedly increased amounts of the substance to achieve intoxication or the desired effect, or a markedly diminished effect with continued use of the same amount of substance
- withdrawal, as manifested by the characteristic withdrawal syndrome for the substance, or the same (or closely related) substance is taken to relieve or avoid withdrawal symptoms
- the substance is often taken in larger amounts over a longer period than was intended
- there is a persistent desire or unsuccessful efforts to cut down or control substance use
- a great deal of time is spent in activities to obtain the substance, use the substance or recover from its effects
- important social, occupational or recreational activities are given up or reduced because of substance use

- the substance use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance (e.g. continued drinking despite recognition that an ulcer was made worse by alcohol consumption).

20.1.2 Effects of long term alcohol and other substance use on operational duties

Alcohol

Neurocognitive deficits relevant to the capability to undertake firefighting duties are a common and potentially severe consequence of heavy long term alcohol consumption. Such deficits include:

- Short term memory and learning impairments, which become more evident with increasing difficulty of the task
- impairment of perceptual motor speed
- impairment of visual search and scanning strategies
- executive function deficits such as mental flexibility and problem solving skills; difficulty in planning, organising and prioritising tasks; difficulty focusing attention, sustaining focus, shifting focus from one task to another or filtering out distractions; difficulty monitoring and regulating self action; or impulsivity.

Verbal abilities are among the few cognitive functions that are relatively spared in chronic alcohol abuse; therefore, such individuals may often give the mistaken impression of being more capable than they are.

Alcohol may also act to increase the effects of sleep deprivation, sleep disorders and fatigue.

Various other pathologies of relevance for firefighting duties may also result from long term heavy alcohol use, including:

- hypertension (refer to Section 11, Cardiovascular disorders)
- Wernicke–Korsakoff syndrome (dementia and neurological impairments)
- peripheral neuropathy
- cardiomyopathy (refer to Section 16, Cardiovascular disorders)
- bleeding diatheses
- chronic liver disease.

Cessation or significant reduction in alcohol dependent persons may result in a withdrawal syndrome, which carries the risk of generalised seizure, states of confusion and hallucinations.

Other substances

Illicit drugs, and prescribed or over the counter medications can be used for their intoxicating, sedative or euphoric effects. These drugs may cause impairments that are clearly incompatible with undertaking firefighting duties safely, including risk taking, aggression, feelings of invulnerability, narrowed attention, altered arousal states and poor judgement. The effects of sleep deprivation, sleep disorders and fatigue may also be compounded by substance use. Some of the physiological effects of these drugs may interact with the conditions of firefighting to increase cardiovascular strain and risk of heat related illness.

Illicit substances are a heterogeneous group. The effects of chronic use vary and are not as well understood as those of alcohol. There is some evidence that chronic use of stimulants, opioids and benzodiazepines may be associated with cognitive impairment.

Illicit substance users may be at risk of brain injury through hypoxic overdose, trauma or chronic illness.

End organ damage, including cardiac, neurological and hepatic damage, may be associated with some forms of illicit drug use, particularly injecting drug use.

Amphetamine type stimulants (including prescribed) can be associated with a range of acute and long term effects of direct relevance to operational duties. Short and long term use can impact on the cardiovascular system – increasing heart rate and blood pressure, and causing arrhythmia and palpitations – sometimes resulting in myocardial infarction or stroke. Amphetamine type stimulants can also impact on the ability to regulate body temperature, contributing to hyperthermia. These effects are significant, given the cardiovascular and thermal loads of firefighting, and in combination, may be enough to result in acute, if not fatal, events. Evidence suggests that amphetamine type stimulants can also impact on cognition, which may sometimes persist even after abstinence.

Cannabis can cause changes in heart rate and blood pressure, which may pose an acute health threat to those with hypertension, coronary atherosclerosis and cerebrovascular disease (all of which may be latent). These effects are of additional significance for firefighters because of the additional cardiovascular strain of firefighting duties.

In the event of end organ effects relevant to firefighting duties, the appropriate requirements should be applied as set out elsewhere in this publication.

20.1.3 Effect of alcohol and drugs on other conditions

Frequent intoxication when combined with certain other medical conditions means that the person may not necessarily give the care and attention required to their medical condition. This may have implications for undertaking operational duties safely.

Diabetes

People with diabetes requiring insulin may not only forget to take their insulin at the proper time or dosage if intoxicated, but their food balance may also fall out of balance with their insulin dosage. Hypoglycaemia or slow onset of diabetic coma may follow.

Epilepsy

Many people with epilepsy are quite likely to have a seizure if they miss their prescribed medication even for a day or two, particularly when this omission is combined with inadequate rest, irregular meals, and alcohol or other substances. Even without omitted doses of medication, alcohol misuse, especially if combined with inadequate sleep, may precipitate a seizure in someone with epilepsy.

20.2 General assessment and management guidelines

20.2.1 Screening for substance misuse disorders

The Alcohol Use Disorders Identification Test (AUDIT) is a useful tool to screen for a spectrum of alcohol misuse, and is included in Firefighter Health Assessment Questionnaires. The questionnaire should be used in combination with clinical judgement, as some people may understate their alcohol use in the context of an employment health assessment. If a firefighter has a total score of >8 on the AUDIT, the accuracy of the high[score] questions should be checked with the firefighter and additional questions should be asked to help determine the potential for alcohol dependence. A score of >8 indicates strong likelihood of hazardous or harmful alcohol consumption, and requires careful assessment.

20.2.2 Assessment of firefighters with misuse disorders

Careful individual assessment is required for firefighters with declared or suspected misuse of alcohol or other substances (illicit, prescribed or over the counter). The standard is also intended to apply to firefighters seeking to resume duty after a period of treatment or if referral for assessment of fitness to perform firefighting duties is made after a positive test undertaken under FRNSW Alcohol and Other Drugs Policy.

In employment health assessments, people may understate or even deny substance use for fear of the consequences of disclosure. Acute and chronic cognitive effects of some substance use may also lead to difficulty in obtaining an accurate history and identification of substance misuse. Assessment should therefore incorporate a range of indicators of substance use in addition to self reporting.

The opinion of an appropriate specialist, such as an addiction medicine specialist or addiction psychiatrist may be required. Neuropsychological assessment may be indicated. Firefighters with a dual diagnosis (substance use disorder combined with a mental illness) require specialist assessment due to the complexity of issues.

Specialised assessment requires consideration of the firefighter's substance use history, previous treatment episodes, readiness to change, signs of harmful alcohol and other drug use, signs of intoxication or withdrawal, mental health, cognitive function, psychosocial history, occupational history, legal issues, support networks, response to treatment and level of insight.

Occasional use of drugs also requires very careful assessment. In particular, the FRNSW Occupational Physician must be satisfied that such use is not going to affect a firefighter in their performance of firefighting duties, and that it is unlikely to result in a positive drug or alcohol test at work or other breach of FRNSW's Alcohol and Other Drug Policy. After appropriate specialist assessment, firefighters who have been determined to have nonproblematic use of alcohol or other drugs (use at a rate, level, time and in a context that represents no evident or identifiable risk or problem for the individual in the workplace), a tailored approach to assessing fitness to perform firefighting duties and return to work is required. This may include counselling, negative tests before returning to work and follow up workplace testing.

For firefighters assessed as having anything other than nonproblematic use of alcohol or other drugs (e.g. abuse or dependence), the medical criteria as outlined in Table 14 must be met. Return to work will also be subject to a comprehensive return to work plan, which will include details regarding follow up workplace testing.

Chronic misuse of alcohol or drugs is not compatible with undertaking firefighting duties safely. Firefighters should be classed as Temporarily Unfit to Perform Firefighting Duties while their condition is assessed and treated.

20.2.3 Remission

Fit to Perform Firefighting Duties Subject to Review may be considered if there is evidence of remission:

- a strong response to treatment, **and**
- **well documented** abstinence and recovery.

For the purpose of this standard, remission is defined by:

- an abstinence from illicit drugs, **or**
- the use of other substances, such as alcohol, has reduced in frequency to the point where it is **unlikely** to cause impairment or result in a positive test at work.

Remission should be confirmed by biological monitoring (e.g. urine drug tests, alcohol breath test, carbohydrate deficient transferrin, liver function tests, full blood count) over a period of at least 3– 6 months, depending on the severity and complexity of the presentation.

The following must be considered when assessing fitness to perform firefighting duties:

- the firefighter's substance use history
- response to treatment
- level of insight
- FRNSW's Alcohol and Other Drugs Policy.

Firefighters with severe substance use problems, with previous high rates of relapse and fluctuation in stabilisation, would not be considered medically fit to undertake firefighting duties.

20.2.4 Firefighters being treated for opioid dependence

Stable doses of buprenorphine and methadone for opioid dependency may not result in impairment, providing the dose is stable and there is no abuse of other drugs that could cause impairment.

Impairment due to unsanctioned use of opioids or other substances must be considered in determining medical fitness for duty.

Firefighters treated with buprenorphine or methadone should be referred for assessment by an appropriate specialist, such as an addiction medicine specialist or addiction psychiatrist. The opinion of a clinical psychologist experienced in substance misuse may be of additional benefit. Fitness to perform firefighting duties will be determined by the FRNSW Occupational Physician, taking into account information provided from the specialist assessment(s).

Short acting opioids may cause fluctuations in blood levels of opioids, which are considered to be not compatible with operational duties.

20.2.5 Drug and alcohol screening

Drug and alcohol screening does not form part of periodic health assessments; however, testing may occur as part of a return to work program for a substance misuse condition, for objective confirmation of abstinence. Where drug testing is required, urine drug testing will be used. Other tests may include alcohol breath testing, and other biomarkers such as full blood count, liver function tests and carbohydrate deficient transferrin.

If a firefighter is suspected of being intoxicated by alcohol or drugs at the time of assessment, the assessing doctor should assess them and enquire of possible reasons for their condition. If drug or alcohol intoxication is suspected or admitted to by the firefighter, the doctor should cease the examination, classify the firefighter as Temporarily Unfit to Perform Firefighting Duties and must contact the designated FRNSW person so that Workplace Standards can be notified.

20.2.6 Applicants

Applicants will not usually have the benefit of experience with the psychological stressors of firefighting duties. Any applicant deemed to be in remission from a substance misuse disorder must be assessed very carefully regarding their psychological resilience, risk of relapse and if the psychological stressors of operational duties would increase any such risk.

Table 14 Medical criteria for operational firefighters – substance misuse^a

Condition	Criteria
AUDIT questionnaire	Score of 8–15. The firefighter may be managed within the consultation by providing simple advice and information on alcohol guidelines and risk factors. They may be classified as Fit to Perform Firefighting Duties if, on overall assessment, the risk is considered to be low. If there are any concerns, the firefighter should be classified as Fit to Perform Firefighting Duties Subject to Review. Score of 16–19. The firefighter may be managed with a combination of simple advice, counselling and monitoring. Follow up and referral to the firefighter's GP are required and the GP should be provided with a copy of this standard. They should be classified as Fit to Perform Firefighting Duties Subject to Review or Temporarily Unfit to Perform Firefighting Duties, pending further assessment. Score of ≥20, or where combined scores on questions 4, 5, and 6 are >4. The firefighter should be referred for specialist service assessment for consideration of treatment and an opinion regarding prognosis. (If the FRNSW nominated specialist recommends treatment, and the firefighter is willing to engage in treatment, the firefighter should be referred back to their GP for referral to an appropriate treatment provider. All treatment providers should be provided with this standard for substance misuse.) The firefighter should be classed as Temporarily Unfit to Perform Firefighting Duties, pending further assessment. Firefighters not willing to engage in treatment should be classed as Permanently Unfit to Perform Firefighting Duties.
Substance misuse	A firefighter is not Fit to Perform Firefighting Duties if there is evidence of illicit drug use, or abuse or dependence of any substance. Fit to Perform Firefighting Duties Subject to Review, with at least annual review, may be determined by the FRNSW Occupational Physician, taking into account the opinion of an appropriate specialist (such as an addiction medicine specialist or addiction psychiatrist) as to whether the following criteria are met: - the firefighter is involved in a treatment program and has been in remission for a minimum of 3–6 months (refer to the text for the definition of remission), and - biological monitoring confirms remission, and - there is an absence of cognitive impairments, and - there is an absence of end organ effects that impact on medical fitness for operational duties (as described elsewhere in this standard), and - the risk of further illicit drug use or other substance misuse is assessed as being low.

FRNSW = Fire & Rescue NSW; GP = general practitioner

a It is important that assessing doctors familiarise themselves with both the general information above and the tabulated standards before making an assessment of a person's medical fitness for duty.

20.3 **Bibliography**

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National Drug Research Institute, Australian Institute of Criminology. *National amphetamine type stimulant strategy background paper*, Monograph Series No. 69, November 2007.

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21 **Vestibular disorders**

21.1 **Relevance to firefighting duties**

Many tasks undertaken by firefighters require good balance. In addition, a lack of balance may lead to serious injury in the firefighting environment. Situations include climbing and working from ladders, working at heights, working in awkward spaces and in awkward positions, stooping, looking overhead, and negotiating uneven and slippery surfaces in poor visibility conditions. Loss of balance causing acute incapacity in an operational situation jeopardises the safety of the individual firefighter, their crew and members of the public.

A number of conditions may affect balance, including diseases of the vestibular system, abnormal proprioception or disorders of the central nervous system, particularly of the extra pyramidal system and cerebellum. Blackouts or presyncope resulting from cardiac and other causes are not dealt with in this chapter (refer to Section 10, Blackouts, Section 11, Cardiovascular disorders (syncope) and Section 12, Diabetes).

Of most significance are recurrent vestibular conditions that can result in sudden, unheralded attacks of vertigo. Some vestibular disorders also affect hearing (refer to Section 13, Hearing).

21.2 **General assessment and management guidelines**

A firefighter who suffers unheralded attacks of vertigo is not medically fit to perform firefighting duties.

Vestibular disorders may change between the asymptomatic and symptomatic state with little warning. The subsequent vestibular dysfunction can occur suddenly and result in acute incapacity.

21.2.1 **Meniere's disease**

Meniere's disease often results in recurrent vertigo despite treatment. The timing and frequency of the attacks vary. Some individuals can regularly predict when they will have an attack. Others note a completely random pattern. One in 25 people with Meniere's disease also experience drop attacks – sudden falls without loss of consciousness. The natural history is one of progression in the affected ear associated with increasing hearing loss. In extreme cases, total loss of vestibular function and partial loss of cochlear function can occur in the affected ear. Attacks are often heralded by a sense of fullness in the affected ear; however, quick egress from emergency or hostile environments is not always practicable. Meniere's disease may not be compatible with operational duties in the long run.

21.2.2 **Benign paroxysmal positional vertigo**

Symptoms of benign paroxysmal positional vertigo (BPPV) are typically triggered by changing head position, lying down, turning over in bed and sitting up from lying, and by stooping or extending the neck to look up. Given the emergency nature of firefighting duties, which may require frequent variation of posture and working in awkward positions, symptoms of BPPV may be precipitated by firefighting duties and firefighters would

usually be required to be symptom free for a minimum of 6 months before a return to firefighting duties can be considered.

21.2.3 Central causes

Given the increased risk in those with underlying cardiovascular disease of precipitation of acute cardiovascular events with firefighting, the clinical history should be considered carefully, and the possibility of a cerebrovascular cause for vertigo or other balance problems may need to be considered if clinically appropriate. Note that cerebellar infarction is the main differential diagnosis for vestibular neuritis.

For central causes of vertigo (such as stroke or transient ischaemic attack) please refer to Section 15, Neurological disorders.

21.2.4 Acute peripheral vestibulopathy – vestibular neuritis (syn vestibular neuronitis, neurolabyrinthitis) and labyrinthitis

Vestibular neuritis and labyrinthitis are thought to result mostly from viral infections. Generally, they are self limiting conditions; however, symptoms such as vertigo may become persistent in some individuals. Where symptoms persist, medical fitness to resume firefighting duties will be assessed by the FRNSW Occupational Physician on a case by case basis; however, a significant symptom free period will be required before resuming operational duties. Persistence of symptoms beyond 2–3 months should prompt review of diagnosis.

Table 15 Medical criteria for operational firefighters – vestibular disorders

Condition	Criteria
Meniere's disease	A firefighter is not Fit to Perform Firefighting Duties if they have Meniere's or suspected Meniere's disease. Fit to Perform Firefighting Duties Subject to Review may be determined, taking into account information provided by the treating ENT specialist, including response to treatment and whether the following criteria are met: - the firefighter has been free of vertigo for 12 months, and - the hearing standard is met.
Benign paroxysmal positional vertigo (BPPV)	A firefighter is not Fit to Perform Firefighting Duties if they have BPPV in any direction. Fit to Perform Firefighting Duties Subject to Review may be determined, taking into account information provided by the treating GP and/or ENT specialist, including response to treatment, pattern of disease and whether the following criterion is met: the firefighter has been free of vertigo for at least 6 months. A shorter period may be considered by the FRNSW Occupational Physician, taking into the account information provided by an ENT specialist if further episodes after appropriate treatment is considered unlikely.

ENT = ears, nose and throat; FRNSW = Fire & Rescue NSW; GP = general practitioner

21.3 **Bibliography**

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22 **Vision and eye disorders**

22.1 **Relevance to operational duties**

Firefighting requires good eyesight, specifically acuity and fields. Firefighting duties are often undertaken under emergency and adverse conditions that impact on visibility, such as smoke, poor weather and at night. Failure to adequately see and respond to imminently hazardous situations jeopardises the safety of the firefighter and others dependent on the firefighter for their safety.

Driving of the appliance, particularly in emergency mode is also a major consideration in assessing visual fitness.

The following visual attributes are required:

- **Visual acuity.** Good visual acuity is crucial to driving safely in emergency mode. Good acuity is also essential for other tasks, including those undertaken in conditions of poor visibility, so that a firefighter may be operationally effective. Good acuity is crucial for tasks such as reading street signs and chemical placards, and identifying casualties and hazards to firefighters when moving through the incident ground. Abnormal vision may impact on reaction time, mobility and casualty recognition.
- **Visual fields.** Good peripheral vision is crucial to driving safely under emergency conditions and for working on roads near traffic. However peripheral vision is of limited importance in many firefighting situations because of personal protective equipment limiting the fields of vision.
- **Colour vision.** All colour vision tasks for firefighting were risk assessed by Dr John Parkes in 2009 and none were deemed safety critical. Risk mitigation in relation to these task include crew members working together and not in isolation, positional cues, use of monitors instead of detection papers, written labels or symbols in addition to colours on cylinders, and judicious purchasing of certain equipment. The same risk assessment also determined that colour vision is not essential to safe driving due to redundancy of traffic lights, based on the position of red and green lights.

22.2 **General management guidelines**

22.2.1 **Visual acuity**

For the purpose of this standard, visual acuity is defined as a firefighter's clarity of vision with or without corrective glasses or contact lenses. However, given the risk and consequence of damaged or dislodged visual aids, a minimum uncorrected visual acuity requirement has been set. If the visual acuity standard is not met at initial assessment, the firefighter may be referred to an optometrist or ophthalmologist for further assessment.

Assessment method

Visual acuity should be measured for each eye separately, then binocular without optical correction. If correction is needed, acuity should be retested with appropriate corrective lenses. (Refer to Figure 52.)

Acuity should be tested using a standard visual acuity chart (Snellen or equivalent, with five letters on the 6/12 line). Standard charts should be placed 6 metres from the person tested, or 3 metres for other calibrated charts. More than two errors in reading the letters of any line is regarded as a failure to read that line. The standard is

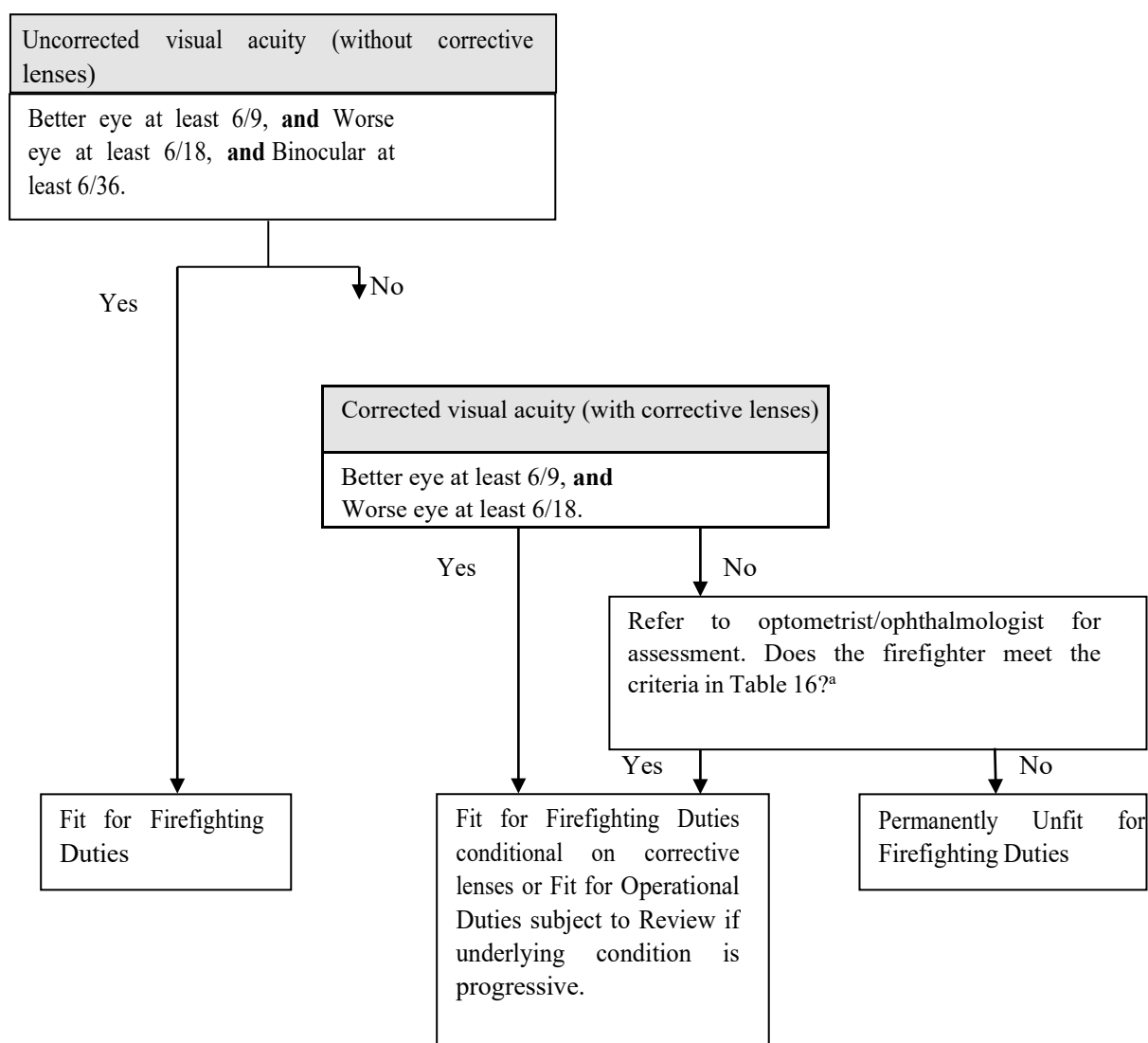
not met if visual acuity is worse than 6/9 in the better eye, or worse than 6/18 in either eye (uncorrected or corrected). There is some flexibility providing the visual acuity in the better eye, with or without correction is 6/9 or better, taking into account the opinion of an optometrist or ophthalmologist. A copy of *Inherent requirements* (Part 2 of Health Standard) should be included in the referral to the assessing optometrist or ophthalmologist

In addition, firefighters who meet the standard corrected with glasses or contact lenses must meet a minimum uncorrected standard of 6/36 or better binocular, so that a minimum level of vision is present should their visual aids become damaged or dislodged during operational duties.

All firefighters who meet the standard with correction are encouraged to carry a spare pair of glasses on duty.

Corrective glasses and contact lenses may be worn with personal protective equipment. Custom made frames clip into the self contained breathing apparatus mask (see Figure 53).

Figure 52 Vision assessment method



a Must still meet uncorrected binocular at least 6/36.

Figure 53 **Corrective lenses***Breathing apparatus corrective lens frames**Breathing apparatus corrective lens frames clipped into mask*

22.2.2 Visual fields

For the purpose of this standard, visual fields are defined as a measure of the extent of peripheral (side) vision. Visual fields may be reduced as a result of many neurological or ocular diseases or injuries.

Assessment method

Visual fields may initially be screened by confrontation. Sit close to and directly opposite the person and instruct the person to cover one eye. Occlude your opposite eye like a mirror image. Ask the person to fixate on your non occluded eye and to count the number of fingers held up in each of the four corners of your own visual field. Other extreme upper, lower and side points may also be tested. Repeat for the other eye.

Confrontation is an imprecise test. Any person who has, or is suspected of having, a visual field defect should be referred for assessment by an optometrist or ophthalmologist. Assessment will involve automated perimetry using an automated static perimeter (Kinetic Goldman Visual Field, Humphrey Field Analyser, Medmont M700, Octopus).

22.2.3 Monocular vision

People with monocular vision have a reduction of visual field due to obstruction of the medial visual field by the nose. This may be compensated for by increased scanning and head movements.

Persons with monocular vision usually have satisfactory depth perception on the basis of monocular cues; however, any loss of depth perception from lack of stereopsis (a binocular cue) is not expected to affect a firefighters' ability to safely perform the inherent requirements of operational duties.

Persons with monocular vision do not meet the criteria for an unconditional commercial vehicle driver licence. However, in some cases, a conditional licence may be granted, taking into account the nature of the driving task and information provided by the treating ophthalmologist or optometrist.

The current medical guidelines for commercial vehicle drivers do not specifically take into account emergency driving conditions. There is an increased dependence on visual cues when driving under emergency conditions. Good quality cues are relied on, as large amounts of visual and other information must be acted on quickly by the driver. Those with monocular vision are therefore permanently restricted from driving in emergency mode. This also takes into consideration that the appliance is driven with passengers.

A firefighter with monocular vision may undertake all firefighting duties except in relation to driving the appliance in emergency mode (as outlined above), subject to assessment by an ophthalmologist and conditions outlined in Table 16 being met.

22.2.4 Sudden loss of unilateral vision

A firefighter who has lost an eye or most of the vision in an eye on a long term basis has to adapt to their new visual circumstances and reestablish depth perception. They should therefore be classed as Temporarily Unfit to Perform Firefighting Duties for an appropriate period (usually 6 months) and be assessed for monocular vision.

22.2.5 Colour vision

Defective colour vision mainly affects the perception of red and green colours. Various degrees of colour vision affect up to 5% of men. Based on the above mentioned risk assessment of tasks requiring colour vision, colour vision is still assessed, but carries no medical fitness for duty implications. Where an abnormality of colour vision is confirmed, the individual is counselled about the impairment and how this impacts on particular tasks.

Assessment method – for applicants only

Colour vision is initially screened using 12 Ishihara plates; ≥ 3 errors per 12 plates constitutes a fail. No colour lenses or sunglasses should be used when testing. If the firefighter fails the Ishihara test, they should undergo further testing with the Farnsworth D15 test. Failure of the Farnsworth D15 indicates a deficiency of surface colour recognition.

Applicants who fail the Farnsworth D15 are given a Fire & Rescue NSW (FRNSW) fact sheet explaining how their colour vision abnormality affects particular tasks requiring colour vision. Once read, they must then sign a statement to indicate that they have read and understood the information given. Should they be unsure about any aspect of the information, they should contact a FRNSW Occupational Physician before signing the statement.

Colour vision testing is not required for incumbent firefighters.

22.2.6 Other

Diplopia

A firefighter with permanent diplopia is Permanently Unfit to Perform Firefighting Duties. Transient diplopia requires appropriate medical assessment for any underlying cause relevant to firefighting as outlined in this standard.

Nystagmus

A firefighter with nystagmus must meet the visual acuity standard. Any underlying cause must be assessed to ensure that there is no other condition that would render the firefighter Unfit to Perform Firefighting Duties as per this standard.

Table 16 Medical criteria for operational firefighters – vision

Visual attribute	Standard
Acuity	A firefighter is not Fit to Perform Firefighting Duties if: - visual acuity is worse than 6/9 in the better eye, or - visual acuity is worse than 6/18 in either eye. Fit to Perform Firefighting Duties may be determined if: - the standard is met with corrective lenses, and - uncorrected binocular visual acuity is no worse than 6/36. Fit to Perform Firefighting Duties may be considered taking into account the opinion of an optometrist or ophthalmologist if:

	• vision is worse than 6/18 in the worse eye, provided that visual acuity in the better eye is 6/9 or better, and • uncorrected binocular visual acuity is no worse than 6/36. Fit to Perform Firefighting Duties Subject to Review may be recommended if the underlying disorder is progressive.
Visual attribute	Standard
Visual fields	A firefighter is not Fit to Perform Firefighting Duties if there is a visual field defect. Fit to Perform Firefighting Duties or Fit to Perform Firefighting Duties Subject to Review may be determined, taking into account the opinion of an optometrist or ophthalmologist, and as to whether the following criteria are met: • if the binocular visual field has an extent of at least 140 degrees within 10 degrees above and below the horizontal midline, and • there is no significant visual field loss (scotoma, hemianopia, quadrantanopia) that is likely to impact on the effective and safe undertaking of operational duties, and • the visual field loss is static and unlikely to progress rapidly.
Monocular vision	A firefighter is not Fit to Perform Firefighting Duties if they have monocular vision. If the following criteria are met, a permanent restriction on emergency driving is applicable. If the driver licensing authority has granted a conditional commercial vehicle driver licence, the appliance may be driven under non emergency conditions, subject to FRNSW being able to accommodate this job modification. Fit to Perform Firefighting Duties Subject to Review and subject to the above job modification may be determined, taking into account the opinion of an ophthalmologist as to whether the following criteria are met: • uncorrected visual acuity in the better eye is $\geq 6/9$, and • at least 6 months have passed since the onset of the impairment and the firefighter has adjusted well to being monocular, and • visual field in the good eye is normal, and • there is no underlying disease of the good eye that would reasonably be expected to deteriorate rapidly.
Colour vision – for applicants only	Refer to text.
Diplopia, nystagmus	Refer to text.

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SCHEDULE 7 – RETAINED TO PERMANENT FIREFIGHTER PATHWAY



Retained to Permanent Firefighter Pathway

Recruitment Campaign - 2024

Assessment Strategy



Preamble

The 2023 Retained Award has codified a Retained to Permanent Pathway, with the requirement for a working party to report back with the details of this pathway.

40.5. Retained to Permanent (Full-time) Pathway

- 40.5.1. Any Retained Firefighter with 48 months (4 years) of service at the time of the opening of an intake round for Permanent Firefighters, will be entitled to be considered for a Permanent Firefighter position in a sperate, Retained-only stream as part of the Department's general intake round, subject to the following provisions:
 - 40.5.1.1. Up to 25% of the number of positions in each general intake round are to be set aside for Retained Firefighters. This number may be changed at any time through agreement between the Parties.
 - 40.5.1.1.1. At the commencement of each general intake round, the Department must notify the workforce of the percentage of positions in that intake round that will be set aside for Retained Firefighters in line with Clause 40.5 of this Award.
 - 40.5.1.2. Eligible Retained Firefighters are to apply through the usual intake process and indicate that they are a current Retained Firefighter with Fire & Rescue NSW.
 - 40.5.1.3. All Retained Firefighters who apply will be set aside and compete internally for the up to 25% of positions set aside for Retained Firefighters.
 - 40.5.1.4. Selection to the position will be via a merit-based selection process which will be determined by the parties via consultation in accordance with Clause 8, Consultation, within 3 months of the commencement of this Award.
 - 40.5.1.5. If there are more Retained Firefighter candidates than positions, those who are unsuccessful will be placed into the general intake pool and will compete with the general public for the remaining Permanent Firefighter positions.
 - 40.5.1.6. If there are fewer successful Retained Firefighter candidates than positions, the surplus Retained positions will be transferred to the general intake and be available for those competing in that intake.
- As per Section 40.5.1.4 the working group has met a number times and determined via productive consultation between the FBEU and FRNSW the merit-based selection process and finalised its recommendations for the Joint Consultative Committee.
- The Retained to Permanent Pathway aims to improve attraction and retention to the Retained ranks. Retained firefighters are trained professional firefighters working in an on-call capacity from diverse backgrounds. The Pathway aims ensure that Retained firefighters feel valued as a contributor to the organisation, and in turn are highly motivated to continue their career with FRNSW.
- This document outlines the Assessment Strategy for the Retained to Permanent Firefighter Pathway Recruitment Campaign. This document provides guidance for the Retained to Permanent Firefighter Pathway advertising, selection, and onboarding process.



Selection Criteria

Essential Requirements (eligibility):

- Minimum 4 years cumulative service as a Retained Firefighter with Fire and Rescue NSW within the 7 year period at the time of applications closing. Noting that LWOP and periods not employed by FRNSW do not count as cumulative service. Noting no detriment to Covid vaccine mandate leave.
- Valid NSW Driver's Licence – minimum Provision Licence (Green P2)
- Demerit Points:
 - No more than 7 demerit points accrued for full licence holders (6 remaining)
 - No more than 1 demerit point accrued for provisional licence holders (6 remaining)
- Medium Rigid (MR) licence, or willingness to obtain prior to commencement in a Recruit Class.

Behavioural Capabilities

Focus capabilities (and required level) for the role of Retained Firefighter, as per the NSW Public Sector Capability Framework:

- Act with Integrity (intermediate): be ethical and professional, and uphold and promote the public sector values
- Communicate Effectively (intermediate): communicate clearly, actively listen to others, and respond with understanding and respect (written and verbal communication)
- Commit to Customer Service (intermediate): provide customer-focused services in line with public sector and organisational objectives (community engagement)
- Demonstrate Accountability (intermediate): be proactive and responsible for own actions, and adhere to legislation, policy and guidelines (self-motivated and rule- following)
- Technology (foundational): understand and use available technologies to maximise efficiencies and effectiveness

Other role-specific abilities & attributes:

- Problem solving
- Team-work and collaboration
- Interpersonal / engagement skills
- Alignment with, and commitment to, FRNSW values
- Resilience
- Understanding of the role requirements and challenges
- Physical fitness / strength

All selection criteria will be assessed across a range of assessments, completed at various stages of the recruitment process. To be deemed successful, candidates will need to demonstrate they meet the required level at each assessment step:

1. Application (eligibility questions)
2. Video Interview (screening / shortlisting)
3. Physical Aptitude Test (PAT)
4. Assessment Centre (panel interview and group task)



Video Interview

Candidates who meet all eligibility criteria in their initial application will be invited to complete a video interview. This involves answering a pre-recorded question, which focuses on verbal communication skills, understanding of and alignment to FRNSW values.

The Video Interview question is pre-recorded and presented to all candidates the same way (via an online platform); candidates may complete their response online, at a time of their choosing (within a provided date range).

A practice question will be provided which can be attempted multiple times until the candidate is feeling comfortable to progress with the assessed question.

Two (2) minutes preparation time will be provided before the recording of the response commences to allow time to process the question, reflect on the proposed answer and make some brief notes.

Physical Aptitude Test (PAT)

Candidates who pass the Video Interview will be invited to participate in the Physical Aptitude Test (PAT) if they have not completed a Health & Safety PAT within the 13 months prior to their application.

Previous failure of the PAT does not prevent someone from redoing it in any timeframe.

Regional PATs may be adopted where 40 or more people are available to participate. If the volume can not be reached the Regional PAT will not go forward. In the absence of a Regional PAT, the PAT will be conducted within the GSA.

Assessment Centre

Candidates who pass the Physical Aptitude Test will be invited to attend the Assessment Centre. The Assessment Centre is a series of activities designed to assess critical skills and behavioural capabilities required in the role. The Assessment Centre includes:

Panel Interview

Candidates will meet with a two-person panel and will be asked to answer a series of behavioural based questions, relevant to the capacities of the role.

Group Task

Candidates will be placed in groups and asked to discuss a shared fictional scenario with their fellow colleagues. This activity explores the ability to problem solve, work in a team environment, and communicate effectively with others.

Pre-employment Checks

Candidates who successfully progress through all assessments will be placed into a pool for allocation into a Permanent Firefighter Recruit Class.



To ensure the information gathered through the pre-employment checks is current, these checks will be initiated when the candidate is being considered for placement in a specific Recruit Class (as per the standard PFF recruitment process).

Pre-employment checks will include:

Reference Checks:

- Two (2) reference checks, one of which must be from a current FRNSW supervisor/manager who has directly observed and can comment on the candidate's work performance (i.e. Deputy Captain, Captain, Station Officer, Duty Commander or Zone Commander).
- Personal or character references are not accepted.
- An additional reference check from a third referee will be obtained to validate any concerns raised in the first two reference checks.

Conduct & Service Check, as per the FRNSW Employment Screening Policy:

1. Service Check via FRNSW HR Advisory Team to review the following service information:
 - Sick leave in last 12 months (days, occasions, and instances of unsupported leave)
 - Workers compensation outstanding claims
 - P-file notations re. unsatisfactory service within the last 12 months
2. Conduct Check via Professional Standard Branch (PSB) to confirm if any adverse findings against the employee within the last 12 months (including any pending matters)
 - Anything flagged in the conduct & service check as being detrimental to the employee - the hiring manager is to contact the Firefighter to ask for them to contextualise what was flagged and provide any further information to assist in the discretionary decision of the hiring manager.

Medical Assessment:

Full pre-employment medical assessments are not required for existing Retained Firefighters unless certain criteria are met.

The candidate's medical file will be reviewed by the FRNSW Health & Medical Team to determine any current injury, illness or restrictions in place, and advise what assessment is required. If an assessment is required, the degree of medical assessment will be based on the individual's situation which may range from a full medical assessment to specific assessments based on the nature of the injury or illness.

If nothing is identified via the file review, the medical assessment will not be required.

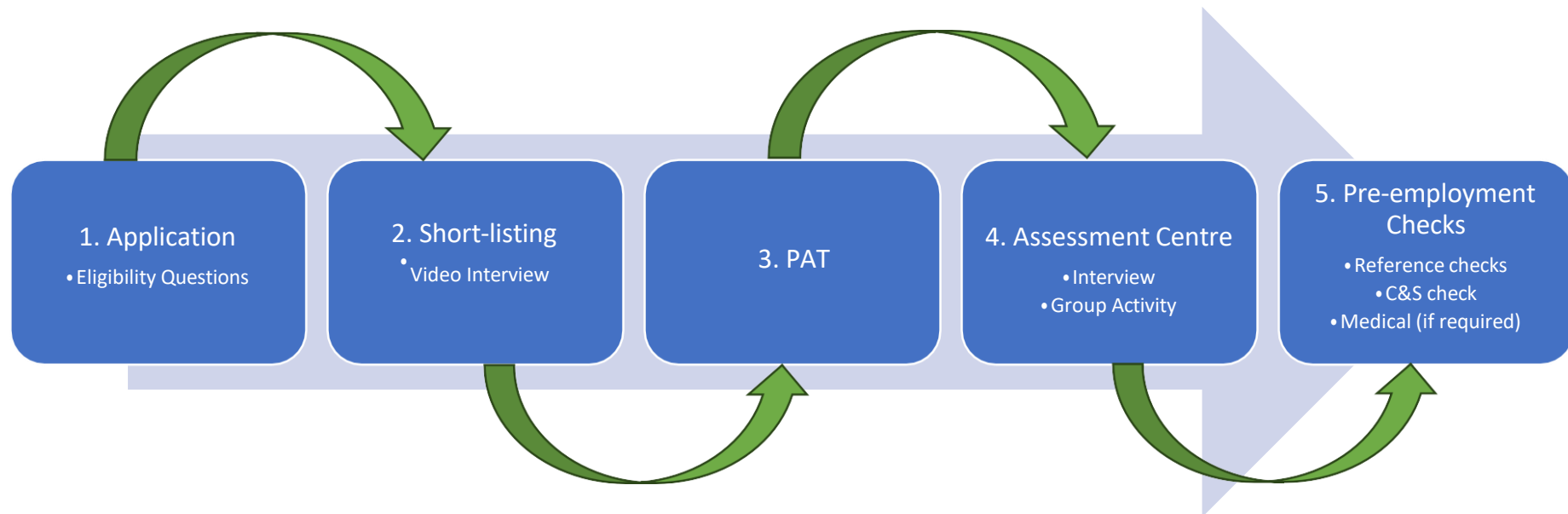


Assessment Matrix

	Application	Screening	PAT	Assessment Centre		Pre-Employment Checks	
		Video Interview	Physical Aptitude Test	Interview	Group Activity	Reference Checks	Conduct & Service Check
Eligibility							
Min 4 years service	X						X
NSW Driver's Licence	X						
Demerit Points	X						
Focus Capabilities							
Act with integrity				X		X	
Communicate effectively		X			X	X	
Commit to customer service				X		X	
Demonstrate accountability				X		X	
Job Specific Skills/Attributes							
Problem solving					X	X	
Team work					X	X	
Resilience / stress management				X		X	
Alignment to values		X		X		X	
Physical fitness/strength			X				
Conduct							
Conduct, service, PSB records							X



End to End Assessment Process



Each stage is progressive, meaning candidates will need to meet the requirements of each stage to progress to the next stage.



Scoring Methodology

Method	Assessing	Scoring Methodology
Application	Eligibility	Meets / does not meet
Video Interview	Behavioural capabilities / attributes*	Likert scale (1 - 5): pass mark of 3 (acceptable) on each capability assessed
Physical Aptitude Test	Physical fitness / strength	Meets / does not meet
Assessment Centre	Behavioural capabilities / attributes*	Likert scale (1 - 5): pass mark of 3 (acceptable) on each capability assessed
Pre-employment Checks	Confirming conduct, service, performance, medical record	Meets / does not meet

*Assessment of behavioural capabilities (assessed via the Video Interview and Assessment Centre) will utilise a 5-point Likert rating scale to reflect the level of capability demonstrated:

5 – Very strong	The candidate provided an excellent response demonstrating above level capability.
4 – Strong	The candidate provided a thorough response which demonstrated solid capability at the required level.
3 – Acceptable	The candidate provided a satisfactory response which met the standard required.
2 – Limited	The candidate provided limited evidence of the required level of capability and would require development.
1 – Poor	The candidate did not demonstrate competence at the required level or demonstrated negative behaviours. The candidate would require significant development.

Determination of scores is based on pre-defined behavioural indicators according to the required level, taken from the NSW Public Sector Capability Framework and the Retained Firefighter role description / role analysis.



Ranking

Up to 25% of Permanent Firefighter vacancies can be allocated to successful Retained Firefighters via the Pathways Recruitment. Prior to each Recruitment round, FRNSW must notify the Retained workforce of the number of positions which will be available in that recruitment round.

For the FY24/25, Recruit Classes will cater to a maximum of 240 Recruits, meaning up to 60 Retained Firefighters can be selected in the 2024 Pathways recruitment campaign. The precise number to be set aside for the Retained to Permanent Pathway will be notified in line with the Award requirements.

To be deemed successful, candidates must:

- Meet all eligibility requirements
- Achieve scores of at least 3 (acceptable) on all behavioural capabilities assessed in the Video Interview and Assessment Centre (panel -interview and group task)
- Meet requirements at the PAT (pass/fail)
- Pass all pre-employment checks

Assuming the number selected is 25%, should more than 60 candidates meet the above criteria, totalled scores from the video interview, interview and group task will be ranked, and the top 60 candidates will be deemed successful.

Should multiple candidates who have met requirements achieve the same score at the 60th rank, those candidates will be considered successful and will progress.



Unsuccessful Candidates

Candidates deemed unsuccessful can elect to transfer their application into the same general intake round of the external Permanent Firefighter recruitment campaign, to be considered alongside external candidates. These Retained Firefighters will be required to complete and pass the initial online testing stage of the general campaign but will not be required to re-sit any assessments they met requirements on during the Retained to Permanent Pathway recruitment process (i.e. satisfactory results from the video interview, PAT and/or Assessment Centre remain valid and can be carried over).

Questions

Should any candidates or prospective candidates have questions about their individual circumstances or with any of the contents of this Strategy, please get in touch with FRNSW at SustainableOncallFirefighterProgram@ifre.nsw.gov.au or with the FBEU at garnott@fbeu.net, and your question will either be answered or directed to the best person to answer your question.

I. TAYLOR *J, President*
D. CHIN *J, Vice-President*
J. McDONALD, *Commissioner*

SERIAL C10126

**ENTERPRISE AGREEMENTS APPROVED
BY THE INDUSTRIAL RELATIONS COMMISSION**

(Published pursuant to s.45(2) of the *Industrial Relations Act 1996*)

EA25/08 - State Super Enterprise Agreement 2024-2027

Made Between: SAS Trustee Corporation Staff Agency, also known as State Super -&- Non-executive employees of the SAS Trustee Corporation Staff Agency.

New/Variation: Variation to EA24/08

Approval/Commencement Date: Approved 18 July 2025 / commenced 1 July 2024

Description of Employees: The agreement applies to all non-executive employees employed by the SAS Trustee Corporation Staff Agency, also known as State Super, located at offices at Level 21, 83 Clarence Street, Sydney NSW 2000 and at Level 10, 101 Crown Street, Wollongong NSW 2500.

Nominal Term: 36 Months.

Printed by the authority of the Industrial Registrar.