
Appendix I.6a

Bushfire assessment report



INTEGRATED RESOURCE RECOVERY CENTRE

State Significant Development – SSD 71547218

Bushfire Assessment Report

Central Waste Plant Pty Limited

Kurri Kurri NSW

February 2025

Prepared for:

EMM Consulting Pty Limited
Level 3 175 Scott Street
NEWCASTLE NSW 2300

Prepared by:

Cool Burn Pty Ltd
ABN: 61 645 633 236
WANERS BAY NSW 2282

Ref: J317 Kurri Kurri Integrated Resource Recovery Centre

Document Control:

Version	Description	Date	Author	Reviewed
1.0	Draft	02 December 2024	D Milburn	D Pedersen 
1.1	Final	12 February 2025		

**Disclaimer**

Cool Burn Pty Ltd has prepared this document based on the information provided by the Client/recipient and has endeavoured to ensure that all information presented in this document is correct and current. Cool Burn advises that there are factors outside Cool Burn current knowledge or control which can affect the Client/recipient's project planning. Cool Burn does not warrant that the document is free from error or omissions arising from these factors and does not accept liability for any such errors or omissions. The scope of services has been defined in consultation with the Client/recipient by time and budgetary constraints imposed by the Client/recipient, and the availability of other data on the project. Changes to available information, legislation and schedules are made on an ongoing basis and readers should obtain up to date information. To the fullest extent possible Cool Burn expressly excludes any express or implied warranty as to condition, fitness, merchantability or suitability of this document and limits its liability for direct or consequential loss at Cool Burn's option to re-supplying the document or the cost of correcting the document. In no event shall Cool Burn's responses to questions or any other information in this document be deemed to be incorporated into any legally binding agreement without the express written consent of Cool Burn. The information in this document is proprietary. The Client/recipient, its designated representatives or relevant statutory authorities may use this document for the specific project for which this report was prepared. It should not be otherwise referenced without permission.

EXECUTIVE SUMMARY

EMM Consulting Pty Limited (EMM), on behalf of Central Waste Station Pty Ltd, has engaged Cool Burn Fire and Ecology to prepare a Bushfire Assessment Report to satisfy the Planning Secretary's Environmental Assessment Requirements (SEARs) issued for the proposed development of an Integrated Resource Recovery Centre (IRRC) in Kurri Kurri NSW (the Project).

The Project includes the demolition and construction of new buildings and infrastructure, and extensions / additions to existing buildings including the materials processing shed.

The Project will be assessed as State Significant Development (SSD-7157218) under State Environmental Planning Policy (Planning Systems) 2021. Accordingly, an EIS is required for the Project under the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act). This Bushfire Assessment Report (BAR) has been prepared as part of the EIS to assess the potential bushfire risk and associated impacts from constructing and operating the IRRC.

The site contains Category 2 Bushfire Prone Land (BFPL) associated with Swamp Creek that runs along the northern property boundary (Forested Wetland). BFPL also occurs to the east (Grassland) and to the southwest of the Project's lot boundary (Forest). The topography of the development site is generally flat. There is slight localised relief occurring from the southwest to the northeast.

The proposed development can apply acceptable solutions to satisfy the performance criteria for protection measures including Asset Protection Zone (APZ) and defensible space, access, landscaping, water supply, construction and emergency management arrangements.

A minimum 12m APZ will be maintained along the northern and eastern lot boundaries. Negotiations with landowners / managers to the east must be sought to ensure the APZ is maintained as it is not wholly within the Project boundary. APZs will be maintained in perpetuity (or until the facility is decommissioned) and will be included in the Landscape Management Plan.

There are no specific bushfire protection requirements for project-related infrastructure. All buildings of Class 5 – 8 to be constructed for the Project will have safe, all weather access to and from the public road system for attending firefighters and to allow occupant egress. They will have adequate services of water.

Standard access and water supply recommendations have been provided and will satisfy the performance criteria of PBP 2019 given their implementation. The Project will provide safe access to the northern and eastern bushland interface that supports capacity for fully loaded (23 tonne) firefighting vehicles and appropriate turning points.

A Bushfire Emergency Management and Evacuation Plan (BEMEP), developed in accordance with the NSW RFS *Guide to Developing a Bushfire Emergency Management and Evacuation Plan* (2014), has been prepared for the construction and operation stages. The BEMEP details the mitigation measures

associated with the construction and operation of the project, and relevant recommendations made in this report.

This bushfire assessment report demonstrates the combination of bushfire protection measures for the Project design (based upon the development type and the level of bush fire risk) will assist asset protection during a bushfire and contribute to the safety of firefighters and during the passage of a fire front. The protection measures also serve to limit the ability of a fire originating within the IRRC from spreading to the surrounding bushland.

Early consultation with the Cessnock RFS Fire Control Centre and Cessnock Fire and Rescue NSW is encouraged and recommended by this report.

Contents

1.	INTRODUCTION	1
1.1	PROPOSAL OVERVIEW	1
1.2	PURPOSE AND SCOPE OF THIS DOCUMENT	4
1.3	BUSHFIRE PLANNING	4
1.3.1	Approach	4
1.3.2	Planning for Bush Fire Protection 2019	5
1.3.3	Commercial and industrial development	5
1.3.4	Building classification	6
2.	BUSHFIRE ASSESSMENT	7
2.1	SITE DETAILS AND LAND USE	7
2.2	WEATHER	8
2.3	FIRE HISTORY AND IGNITION	8
2.4	BUSHFIRE PRONE LAND	8
2.5	VEGETATION	11
2.6	TOPOGRAPHY	13
3.	BUSHFIRE PROTECTION MEASURES	15
3.1	APPLICATION	15
3.2	ASSET PROTECTION ZONES	16
3.3	LANDSCAPING	17
3.4	CONSTRUCTION	17
3.5	ACCESS	18
3.6	WATER AND UTILITIES	19
3.7	EMERGENCY MANAGEMENT AND EVACUATION PLANNING	21
3.8	CONSULTATION	21
4.	SUMMARY AND CONCLUSION	23
5.	REFERENCES	25
ATTACHMENT 1.	SITE PLAN	27
ATTACHMENT 2.	FIRE HYDRANT PLAN	28
ATTACHMENT 3.	VEHICULAR TURNING OPTIONS	29

Tables and Figures

Table 1: Planning Secretary's Environmental Assessment Requirements.....	4
Table 2: Site details.....	7
Table 3: Inner Protection Area standards.....	17
Table 4: Summary of Recommendations	23
Figure 1: Project location	3
Figure 2: Bushfire Prone Land	10
Figure 3: Vegetation and topography	14

1. INTRODUCTION

EMM Consulting Pty Limited (EMM), on behalf of Central Waste Station Pty Ltd, has engaged Cool Burn Fire and Ecology (Cool Burn) to prepare a Bushfire Assessment Report to satisfy the Planning Secretary's Environmental Assessment Requirements (SEARs) issued for the proposed development of an Integrated Resource Recovery Centre (IRRC) in Kurri Kurri NSW.

Cool Burn is recognised by the Fire Protection Association Australia (FPAA) as a suitably qualified consultant in bushfire risk assessment.

1.1 PROPOSAL OVERVIEW

Central Waste Station Pty Ltd operates a resource recovery facility (RRF) owned by Central Waste Plant Pty Ltd (CWP) at 8 Styles Street in Kurri Kurri NSW. The most recent development consent (Cessnock Council Development Application (DA) 8/2019/568) in relation to the existing RRF allows a material throughput of 90,000 tonnes per annum (tpa) of General Solid Waste (non-putrescible) with up to 30,000 tonnes of material stored on site at any time and 24 hours per day, 6 days per week operations. The RRF is capable of a significantly higher throughput than is permitted under the existing development approval, which constrains the company's ability to achieve greater volumes of resource recovery for the region. The facility currently has to operate during reduced hours to avoid exceeding the annual throughput tonnage limit.

As such, CWP is applying for an expansion of the RRF operations to allow:

- A material throughput of up to 450,000 tpa
- On site storage of up to 40,000 tonnes of material
- Operating hours of 24 hours per day, 7 days per week.

The RRF operational processes will remain generally the same. However, changes to the site are proposed to optimise the RRF operations and to allow further sorting and processing on site to increase the value of dispatched recovered materials. The revised site will occupy 1, 8 and 10 Styles Street and 145 and 147 Mitchell Avenue (the site) (*Figure 1*). The larger site and higher waste throughput is referred to as the Integrated Resource Recovery Centre (IRRC, 'the Project').

Project infrastructure will include:

- A resource recovery facility – automated material processing plant enclosure (existing building with proposed extension), waste receival shed, covered material storage bays (addition of awnings), yard processing and water management basin

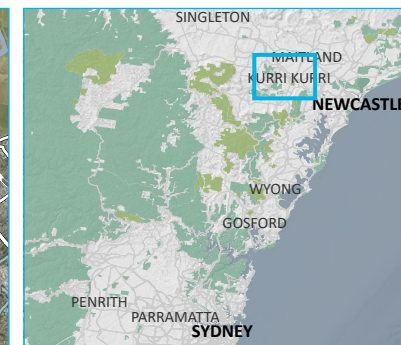
- Metal processing facility – the existing workshop will be converted into a metal processing shed with equipment and storage bunkers
- Auxiliary operations area – incoming and outgoing weighbridges with offices situated on top
- Residual waste recovery plant – shed with residual water recovery plant and storage
- IRRC main entry / exit onto Mitchell Avenue

A Site Plan with the proposed infrastructure layout and building additions / extensions has been provided in *Attachment 1*. More information on project infrastructure can be found in Chapter 3 the Environmental Impact Statement (EIS).

\\emm.local\drive\2023\2230029 - CWS Kurri Kurri Integrated Resource Recovery Centre\GIS\02_Maps_EIS_Coolburn\B001_ProjectLocation\20250115_03.aprx 17/01/2025



Source: EMM (2025); DCSSS (2024); GA (2009); ESRI (2025); ABS (2021)



- KEY**
- Site boundary
 - Lot area
 - Existing environment
 - Rail line
 - Major road
 - Named watercourse
 - Named waterbody
 - NPWS reserve
 - State forest
 - Local government area

- INSET KEY**
- Major road
 - NPWS reserve
 - State forest

Location

Kurri Kurri Integrated Resource Recovery Centre
Bushfire Assessment Report
Figure 1



1.2 PURPOSE AND SCOPE OF THIS DOCUMENT

The Project will be assessed as State Significant Development (SSD-7157218) under State Environmental Planning Policy (Planning Systems) 2021. Accordingly, an EIS is required for the Project under the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act).

This Bushfire Assessment Report (BAR) has been prepared as part of the EIS to assess the potential bushfire risk and associated impacts from constructing and operating the IRRC (the scope). It addresses the SEARs issued by the Secretary of the Department of Planning, Housing and Infrastructure (DPHI) which were issued on 28 June 2024.

The BAR will:

- Address the SEARs relevant to bushfire under the Key Issue 14, listed in *Table 1* below
- Describe the existing environment and consider the suitability of the site with respect to bushfire
- Assess the impacts of constructing and operating the project on bushfire risk
- Recommend measures to mitigate and manage the impacts identified.

Table 1: Planning Secretary's Environmental Assessment Requirements

Planning Secretary's Environmental Assessment Requirements SSD – 7157218	Section
Key Issue 14 - Bushfire	
A bushfire assessment report that addresses the aims and objectives of Planning for Bushfire Protection 2019:	
- details of proposed operational access for emergency services personnel	3.4
- details of emergency and evacuation arrangements for occupants / visitors	3.7
- a Bushfire Emergency Management and Evacuation Plan prepared in accordance with the relevant RFS guidance.	3.7

1.3 BUSHFIRE PLANNING

1.3.1 Approach

The bushfire assessment will be prepared for the long-term and ongoing planning for the Project, covering design and approvals principles, construction, and operation. From a bushfire context, bushfire planning must ensure that the proposed activities and land uses are appropriately located to minimise the risk to life and property from bushfire attack. Services and infrastructure that facilitate effective suppression of bushfire also need to be identified and provided for.

Bushfire planning includes a review of the potential opportunities and land use (proposed development) and considers the following legislation, guidelines, plans and spatial information:

- *Environmental Planning and Assessment Act 1979* (EP&A Act)

- NSW Rural Fires Act 1997 (RF Act)
- NSW RFS Planning for Bushfire Protection 2019 (PBP 2019)
- Australian Standard 3959-2018 Construction of buildings in bushfire-prone areas (AS3959)
- Australian Standard 2419.1-2021 Fire hydrant installations (AS2419.1)
- National Association of Steel-framed Housing (NASH Standard)
- Lower Hunter Bushfire Risk Management Plan
- Bushfire history (SEED geo-mapping).

1.3.2 Planning for Bush Fire Protection 2019

The BAR aims to address the requirements of the SEARs Key Issue of Bushfire in accordance with the provisions of Planning for Bushfire Protection 2019 (PBP 2019). PBP 2019 is applicable to all development on bush fire prone land (BFPL) in NSW and all development on bush fire prone land must satisfy the aims and objectives of PBP 2019. The overall aim of PBP 2019 is to provide for the protection of life (including firefighters) and to minimise impacts on property from the threat of bush fire.

State Significant Development proposals are exempt from requiring a Bushfire Safety Authority (BFSA) from the Commissioner of NSW RFS. However, there is a requirement to identify the extent to which the proposed development conforms with or deviates from the relevant provisions of PBP 2019 in accordance with the response from the NSW RFS in the Request for SEARs.

To comply with PBP 2019, the Project would require the following conditions to be met:

- Satisfy the aim and objectives of PBP 2019
- Consider the requirements and recommendations listed within PBP 2019 for the specific purpose for the development -
 - Chapter 2.4.2 State significant development and infrastructure
 - Chapter 8.3.10 Commercial and Industrial Development
- Detail appropriate Bushfire Protection Measures (BPM's) that satisfy the relevant performance criteria.

An assessment was undertaken to determine whether the Project will meet the threshold for potentially hazardous industry in accordance with the State Environmental Planning Policy (Resilience and Hazards) 2021. It was determined that the Project is below the threshold for hazardous industry. Therefore, Chapter 8.3.9 Hazardous Industry (PBP 2019) does not apply to this bushfire assessment.

1.3.3 Commercial and industrial development

Commercial and industrial development on BFPL (Chapter 8.3.10, PBP 2019) development is addressed through the aim and objectives of PBP (Chapter 1 PBP 2019). A suitable package of BPMs should be proposed commensurate with the assessed level of risk to the development. The scale of the

development and numbers of people likely to be occupying the building will be directly relevant to the BPMs proposed.

The provisions within Chapter 7 of PBP 2019 (infill development) should be used as a base for the development of a package of measures. Each development will be assessed on its own individual merits.

1.3.4 Building classification

Buildings of Class 5 to 8 (as per National Construction Code 2022 (NCC)), which includes the office building, processing factories and warehouses will be assessed under Chapter 8.3.1 of PBP 2019. The NCC does not provide for any bushfire specific performance requirements for these particular classes of buildings. As such AS3959-2018 (Construction of buildings in bushfire prone areas) and the National Association of Steel Housing (NASH) Standard are not considered as a set of Deemed to Satisfy provisions, however compliance with AS3959 and the NASH Standard must be considered when meeting the aims and objectives of PBP 2019.

All Class 10 structures which includes storage sheds and containers, and amenities facilities will be assessed under Chapter 8.3.2.

2. BUSHFIRE ASSESSMENT

2.1 SITE DETAILS AND LAND USE

The IRRC will be located at 1, 8 and 10 Styles Street, and 145 and 147 Mitchell Avenue in Kurri Kurri NSW (the site) and situated within the Cessnock Local Government Area (*Figure 1*). The main access and project address will be 147 Mitchell Avenue. Styles Street is a short no through road that terminates in a cul-de-sac. It is connected to Mitchell Avenue which is a main thoroughfare (<12m width), all weather sealed road connecting Government Road to the Kurri Kurri Central Business District. The area is designated for, and occupied by, industrial use facilities. Residential properties occur approximately 260m west of the site.

The northern site boundary runs adjacent to Swamp Creek, which flows west to east and is a tributary of the Hunter River. It is characterised by riparian / forest wetland vegetation and has a mix of native shrubs and exotic weeds in the understorey. Agricultural grasslands are the predominant land use immediately to the east of the site, and to the north of Swamp Creek. The vegetation has connectivity to larger tracts of vegetation mapped as bushfire prone land.

The site details for the IRRC have been provided in *Table 2*.

Table 2: Site details

Kurri Kurri Integrated Resource Recovery Centre	
Primary project address	147 Mitchell Avenue KURRI KURRI NSW 2327
Lot / address details	• Lot 1 DP1128108 (1 Styles Street) • Lot 1 DP1309128 (8 Styles Street) • Lot 6 DP1251190 (10 Styles Street) • Lot 3 DP586741 (147 Mitchell Avenue) • Lot 4 DP586741 (145 Mitchell Avenue)
Local Government Area	Cessnock City Council
Zoning	E5 Heavy Industrial
Bushfire Prone Land	Category 2, Buffer
Proposed development	Industrial
Approval pathway	State Significant Development Application
Building classification	Class 5 – 8, Class 10

2.2 WEATHER

The IRRC is located within the Greater Hunter Fire Weather District. The Greater Hunter and Cessnock LGA has an accepted fire danger rating (Fire Danger Index (FDI)) of 100 and a Grassfire Danger Index (GFDI) of 130 (NSW RFS Community Resilience, May 2017).

The Cessnock LGA has mean maximum and minimum temperatures of 30.4° and 17.1° in January and 17.6° and 4.3° in July. Annual rainfall averages 744mm with mean rainfall highest in February (103mm) and lowest in August (9mm)¹.

The bushfire season generally runs from September through November although statutorily extends to March most seasons due to hot summer temperatures and coastal winds. Prevailing climatic conditions associated to the bushfire peak season are northwest winds with high temperatures and low humidity. South to southeast winds become more prominent over November and December.

2.3 FIRE HISTORY AND IGNITION

The area has an active fire history. In 2016/17 the Kurri Kurri bushfire burnt 707ha of land. This fire reached the northern site boundary and travelled down the eastern boundary to Mitchell Avenue where it was contained (geo.seed.nsw.gov.au). Several other fires have been recorded in the locality, primarily within the large tracts of forested vegetation that occur to the north along the Hunter Expressway. The Alcan Fire was another large bushfire to impact the area in 2002/03. The fire came within 1.8km of the development site and burnt 786ha of land northeast of Kurri Kurri.

The main source of bushfire ignition in NSW is lightning strike. Other sources of ignition that could impact the site include fire escape from legal or illegal fires and arson. Fires of human origin account for the majority of ignitions after lightning (Geoscience Australia 2022).

Resource recovery centres can be subject to (and the source of) fires due to the type of materials being transported to these facilities. Incorrectly disposed batteries and gas cannisters are common causes of ignition within resource recovery centres (AFAC 2022).

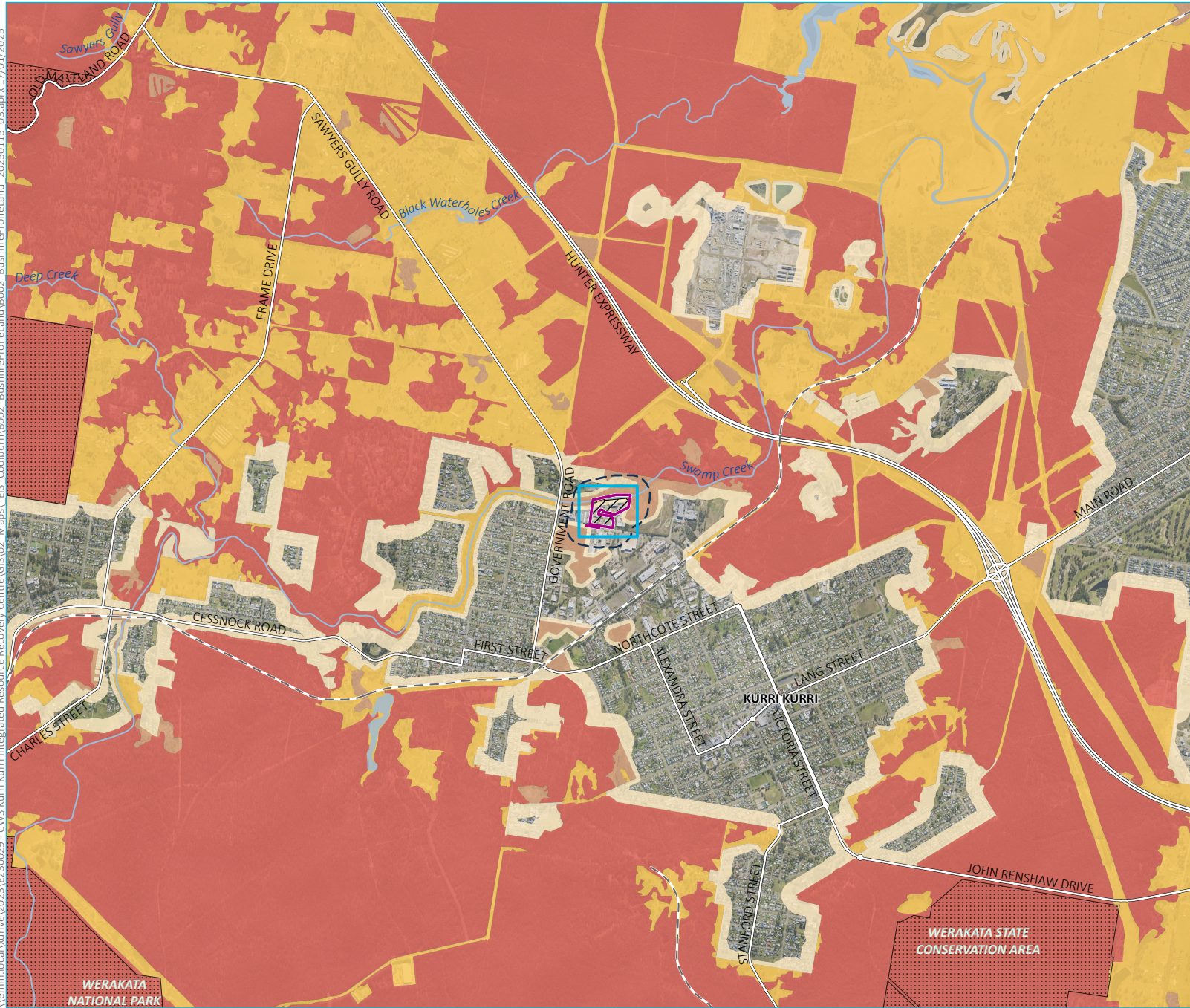
2.4 BUSHFIRE PRONE LAND

Bushfire Prone Land (BFPL) is land identified and mapped by Council, and certified by the Commissioner of the RFS, that can support a bushfire or is subject to bushfire attack. Bushfire prone land maps provide a trigger for development assessment provisions. Any land parcels affected must apply the legislative requirements for development on bushfire prone lands.

¹Source: bom.gov.au Station # 061260

The site contains Category 2 BFPL along the rear (northern) boundary associated to the vegetation of Swamp Creek (*Figure 2*). This BFPL extends east of the site along the eastern boundary where the buffer area (30m) extends into the site. Category 2 BFPL also occurs to the southwest approximately 50m from the Project boundary. Category 1 BFPL occurs north of Swamp Creek, approximately 150m from the Lot boundary which is associated to larger tracts of Forest vegetation.

\\emm.local\ydrive\2023\I2 30029 - CWS Kurri Kurri Integrated Resource Recovery Centre\GIS\02 Maps\ EIS_Coolburn\B002_BushfireProneLand_20250115_03.aprx 17/01/2025



Source: EMM (2025); DCSSS (2024); GA (2009); ESRI (2025); NSWrfS (2024)



KEY

- Site boundary
- Proposed disturbance footprint
- 140 m buffer
- Bushfire prone land category
 - Vegetation Buffer
 - Vegetation category 1
 - Vegetation category 2
 - Vegetation category 3
- Existing environment
 - Rail line
 - Major road
 - Named watercourse
 - Named waterbody
 - NPWS reserve

Bushfire prone land

Kurri Kurri Integrated Resource Recovery Centre
Bushfire Assessment Report
Figure 2

2.5 VEGETATION

The bushfire behaviour assessment methodology assesses the vegetation classification on and surrounding the area proposed for development out to 140 metres, in accordance with the system for classification of vegetation contained in PBP 2019. Predominant vegetation (the hazard) is classified by structure or formation using the system adopted by Keith (2004) and by the general description using PBP 2019.

The predominant hazardous vegetation occurs along Swamp Creek at the north of the site (*Figure 3*) and extends down the western boundary for approximately 40m. The vegetation has been identified as Plant Community Type (PCT) 4039 *Hunter Range Creekflat Apple-Red Gum Forest* (EMM 2024). The classification of this vegetation for bushfire risk in accordance with PBP 2019 is *Forested Wetland* (NSW Government 2024). The vegetation is dominated by Red Gum and Casuarina species within a riparian complex and contains various riparian weeds including *Cinnamomum camphora* (Camphor Laurel) and *Ligustrum sinense* (Small-leaved Privet). The understorey is characteristic of a watercourse with a combination of grasses, rushes, and sedges. The fire behaviour in this vegetation is likely to run parallel to the proposed development along the creek in a west – east plane.

An area of managed vegetation (mown grass) occurs between the Project's northern access track and the hazardous vegetation (*Plate 1*).

Grassland and sporadic eucalypt trees occur to the east of the site for approximately 130m where it abuts a tributary watercourse to Swamp Creek also vegetated by PCT 4039 (*Plate 2*). Although trees are present in this area, the predominant bushfire behaviour will be dictated by the grasslands. The vegetation classification in accordance with PBP 2019 for this area is *Grassland*. The tributary travels south towards Mitchell Avenue then west back towards Styles Street to approximately 50m from the property boundary.

Vegetation to the southwest of the site across Mitchell Avenue has been mapped by State Vegetation Type Mapping as PCT 3985 *Coastal Floodplain Swamp Paperbark Forest* (geo.seed.nsw.gov.au). This vegetation occurs approximately 50m from the corner of the development boundary and approximately 105m from the closest proposed building being the weighbridge and offices (EMM 2024). The classification of this vegetation for bushfire risk in accordance with PBP 2019 is *Forest* (NSW Government 2024).

A thin strip of isolated trees occurs along Mitchell Avenue within the road reserve next to the site boundary. These few trees exist within a managed area and are not considered to pose a bushfire hazard to the Project. Further east a thin strip of vegetation occurs within the road reserve of Mitchell Avenue. This vegetation occurs approximately 40m from the site boundary and approximately 90m from the closest proposed building, being the residual materials processing shed.

All vegetation described above is identified as of high biodiversity value and is recorded in the NSW Government Biodiversity Values mapping. The following threatened ecological community legislative listings apply:

- PCT 4039 –
 - *River-Flat Eucalyptus Forest on coastal floodplains of the NSW North Coast, Sydney Basin and South East Corner bioregions* Endangered Ecological Community (BC Act)
 - *River-Flat Eucalyptus Forest on coastal floodplains of southern New South Wales and eastern Victoria* Critically Endangered Ecological Community (EPBC Act).
- PCT 3985 –
 - *Swamp Oak Floodplain Forest of the NSW North Coast, Sydney Basin and South East Corner bioregions; and Swamp Sclerophyll Forest on Coastal Floodplains* Endangered Ecological Communities (BC Act)
 - *Coastal Swamp Oak (Casuarina glauca) Forest of South-east Queensland and New South Wales; and Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland* Endangered Ecological Communities (EPBC Act).

Vegetation mapping has been provided in *Figure 3*.



Plate 1: Forested Wetland along Swamp Creek with a managed grass buffer (source EMM 2024)



Plate 2: Grassland to the east with sporadic eucalypt trees

2.6 TOPOGRAPHY

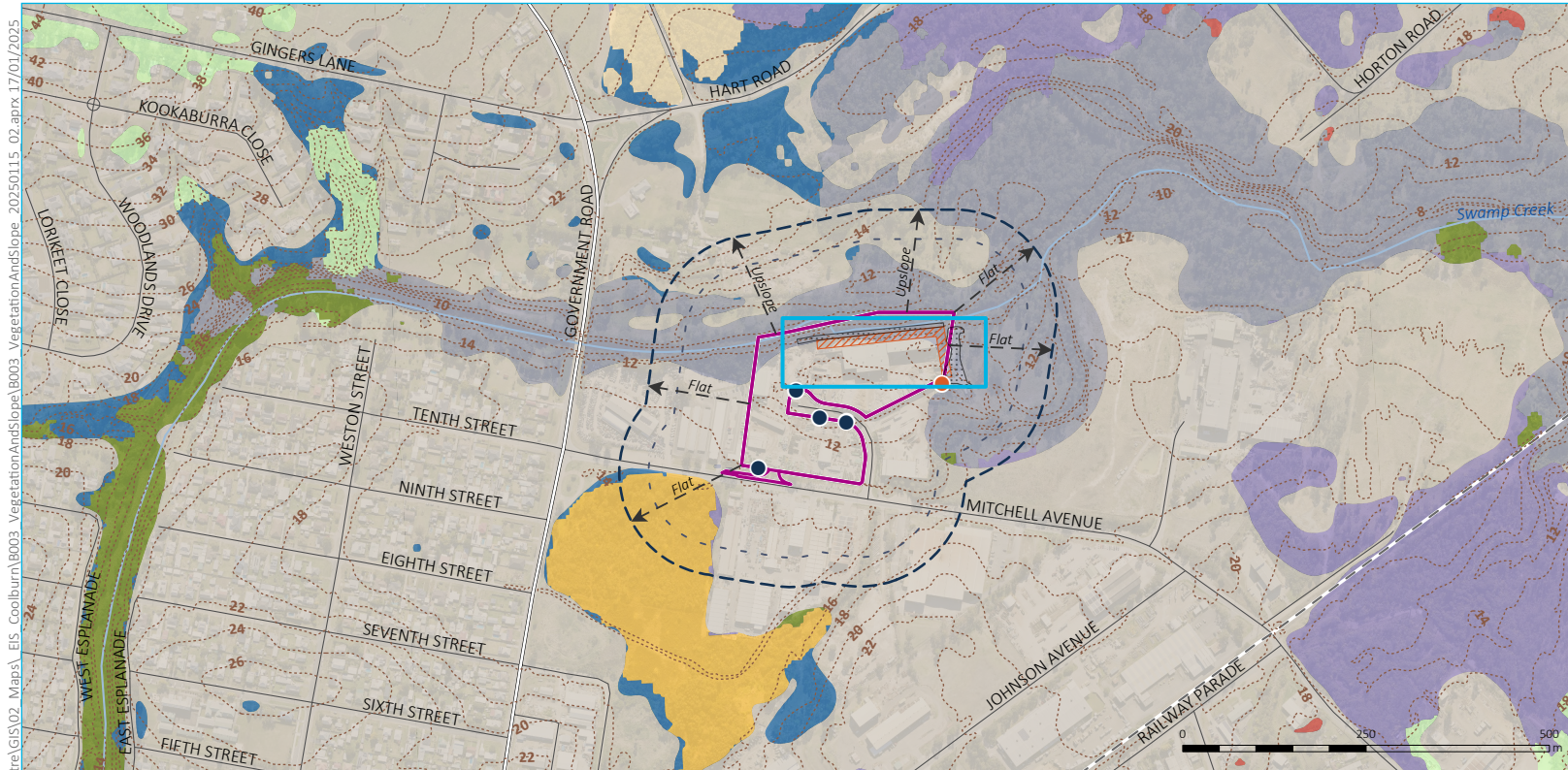
The bushfire behaviour assessment methodology assesses the effective slope of the land on and surrounding the property, out to 100 metres from the boundaries of the site using the assessment method described in Appendix 1 of PBP 2019. The effective slope is the slope of the ground under the hazard (vegetation), not the slope between the vegetation and the building (the site slope).

The topography of the site was analysed through geospatial information data (EMM 2024), publicly available data (sixmaps), and verified through a site visit to identify both the average and maximum slopes under hazardous vegetation (effective slope).

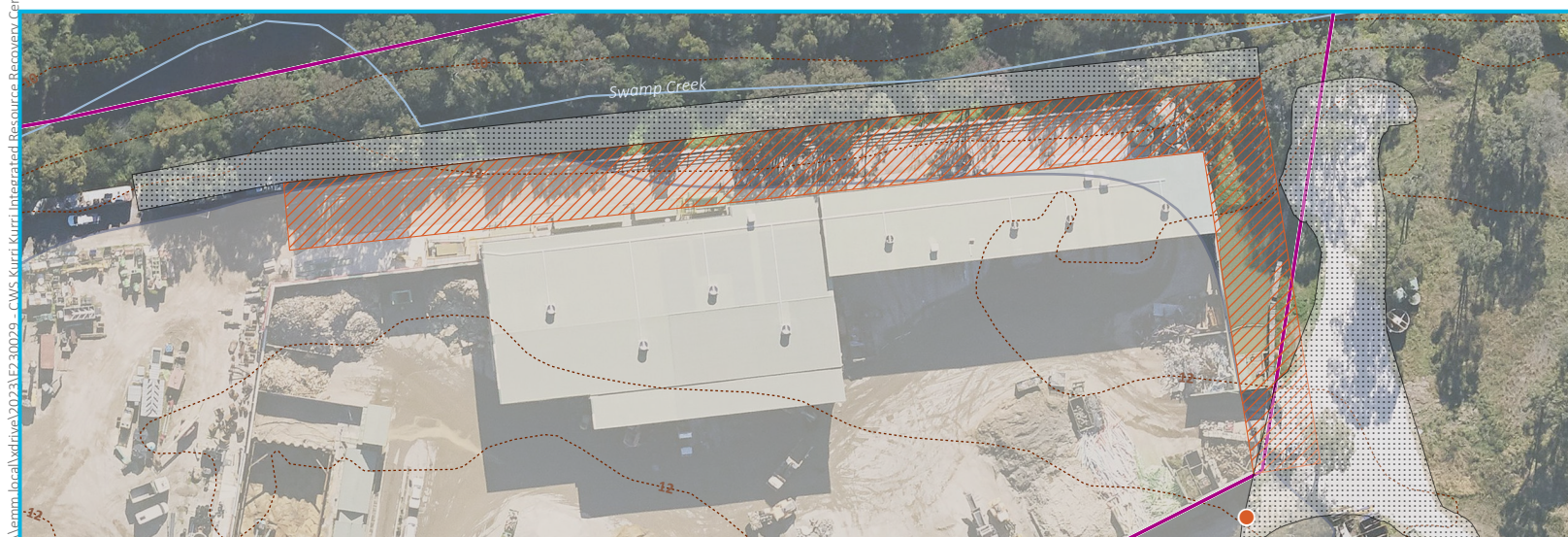
Overall, the development site is generally flat. There is slight localised relief occurring from the southwest to the northeast. The conservatively assessed slope category 0 – 5° downslope has been calculated to model fire behaviour.

There is a short rise in elevation from Swamp Creek to the edge/upper creek bank and adjacent to the northern access track, however the vegetation is managed (*Plate 1*) and is unlikely to influence the bushfire behaviour. The effective slope is confined to the creek bed parallel to the Project.

Topography mapping has been provided in *Figure 3*.



- KEY**
- Site boundary
 - 12 m setback from existing facility
 - 100 m buffer
 - 140 m buffer
 - Managed vegetation
 - Slope arrow
 - Emergency access
 - Site access
 - Plant community type
 - Non-native
 - PCT 3328 | Lower Hunter Red Gum-Paperbark Riverflat Forest
 - PCT 3433 | Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest
 - PCT 3630 | Kurri Sand Heathy Woodland
 - PCT 3631 | Kurri Sand-Clay Woodland
 - PCT 3985 | Coastal Floodplain Swamp Paperbark Scrub
 - PCT 3998 | Lower North Creekflat Mahogany Swamp Forest
 - PCT 4036 | Hunter Coast Lake Flats Apple Forest
 - PCT 4039 | Hunter Range Creekflat Apple-Red Gum Forest
 - Existing environment
 - Rail line
 - == Major road
 - Minor road
 - ... Topographic contour (2 m interval)
 - Named watercourse



Vegetation and slope

Kurri Kurri Integrated Resource Recovery Centre
Bushfire Assessment Report
Figure 3

3. BUSHFIRE PROTECTION MEASURES

3.1 APPLICATION

The IRRC will be assessed under Chapter 8.3.10 of PBP 2019 (Commercial and Industrial Development). In accordance with Chapter 8.3.10, the provisions of Chapter 7 (Infill Development) will be considered when developing suitable Bushfire Protection Measures (BPMs) for the Project.

Provisions for BPMs relate to (*Plate 3*):

- Asset Protection Zone (APZ) and landscape management actions (including, but not limited to slashing, mowing, landscaping & garden maintenance and fire breaks) required to protect assets and prevent the spread of fire
- Building and construction requirements, commensurate with the purpose/use and constructions of the structures and, where applicable, the quantified bushfire attack level (BAL) ratings
- Access provisions (e.g. public access, property access and fire trails)
- Water supply and utilities (power) provisions
- Emergency management and evacuation planning arrangements.

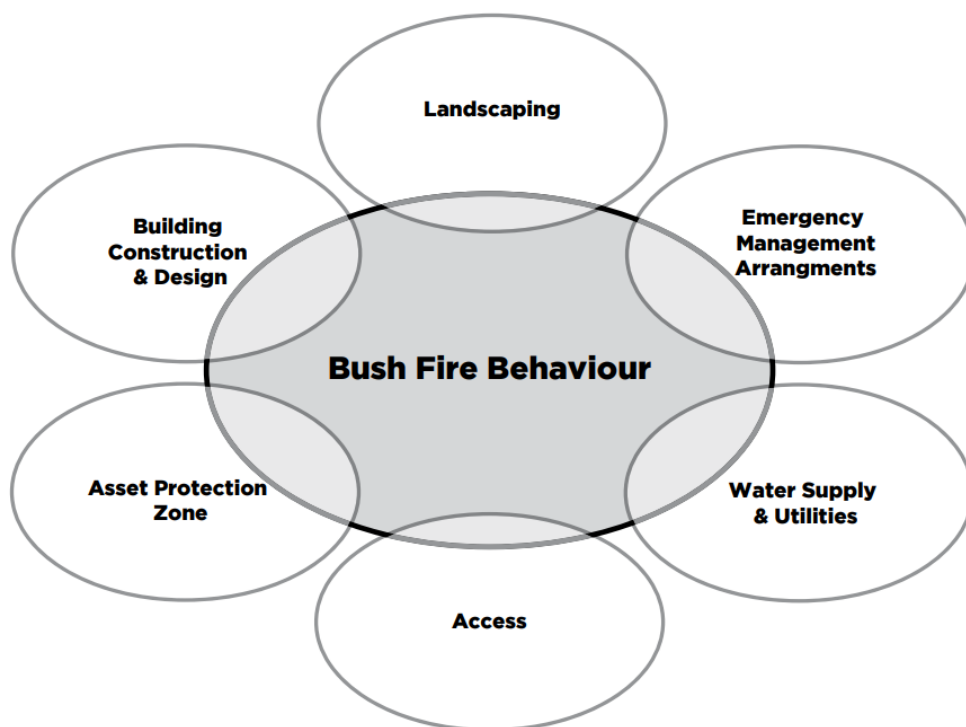


Plate 3: Bushfire Protection Measures

3.2 ASSET PROTECTION ZONES

The APZ is a fuel-reduced, physical separation between structures / assets and bushfire hazards, which would provide sufficient space and maintain reduced fuel loads to ensure radiant heat level exposure is below critical limits and prevent direct flame contact to any Project related structure.

An APZ provides a safer area for firefighters to defend assets. Additionally, an APZ provides an area to prevent any fire occurring within structures (e.g. combustible waste fire) to ignite and spread into the surrounding vegetation and subsequently be the cause for a bushfire.

The existing materials storage shed and the proposed extensions and awnings can achieve a minimum 12m APZ setback along the hazardous vegetation interface to the north and east (*Figure 3*) and will meet the minimum requirements of Table A1.12.2 of PBP 2019 to achieve a radiant heat exposure of 29kW/m² or less, defined as Bushfire Attack Level BAL 29. A 12m minimum APZ will also ensure a defensible space is provided for attending firefighters, and suitable access to this space must be provided (see *Section 3.5*).

The existing workshop backs on to the western Lot boundary and no space is provided between the hazardous vegetation behind the building (being in the neighbouring Lot). This building will be in the flame zone (BAL – FZ). As the building is existing and not a new development, it is not subject to the requirements of APZ standards in accordance with PBP 2019. CWP must accept the risk of damage or loss from bushfires to this building with the implementation of other mitigating factors.

An APZ is not required along the western boundary (south of the metals processing shed), along the southern boundary, or along the eastern boundary with Syles Street, as these areas are developed and have no vegetation.

All APZs are wholly within the boundaries of the development except for the eastern boundary against the Grassland. Negotiations with the landowners must be sought to ensure the APZ along this boundary is maintained².

All APZs will be maintained in perpetuity (or until the facility is decommissioned) and in accordance with the APZ standards Appendix 4 of PBP 2019 (see *Section 3.2* below). Ongoing maintenance of vegetation within the APZ should be included in the Landscape Management Plan. The APZ should remain clear of flammable materials at all times (avoid stockpiling).

The Project design has capacity to meet the acceptable solutions for APZ in PBP 2019 and firefighting vehicles are provided with safe, all-weather access to structures and hazard vegetation.

² Or until such time that the proposed Lot boundary adjustment is finalised and the APZ is wholly within the new Lot boundary.

3.3 LANDSCAPING

The site should be established and managed to the prescribed standards for an Inner Protection Area (IPA) as detailed in PBP 2019 Appendix 4, and described below in *Table 3*:

Table 3: Inner Protection Area standards

Inner Protection Area Standards	
Trees:	• Tree canopy cover should be less than 15% at maturity • Trees at maturity should not touch or overhang the building • Lower limbs should be removed up to a height of 2m above the ground • Tree canopies should be separated by 2 to 5m • Preference should be given to smooth barked and evergreen trees.
Shrubs	• Large discontinuities or gaps in the vegetation to slow down or break the progress of fire towards buildings should be provided • Shrubs should not be located under trees • Shrubs should not form more than 10% ground cover • Clumps of shrubs should be separated from exposed windows and doors by a distance of at least twice the height of the vegetation.
Grass	• Grass should be kept mown or slashed (as a guide grass should be kept to no more than 100mm in height) • Leaves and vegetation debris should be removed.

Landscaping requirements should be incorporated into a Landscape Management Plan, to ensure the activities are delivered with regularity and the above criteria can be consistently achieved. This includes the APZ to the north where it interfaces vegetation associated to the Forested Wetland. This APZ would benefit from the removal and ongoing management of exotic vegetation (Camphor Laurels and Small-leaved Provet etc.) to maximise available setback distances from hazardous vegetation (native).

Any fencing and gates installed for the Project need to be made of non-combustible material only.

Given establishment and management of landscaping to the above standards, the Project will demonstrate the acceptable solutions for Landscaping in PBP 2019.

3.4 CONSTRUCTION

The intent of construction standards measures is to ensure appropriate design and construction of buildings enhance their survivability from bush fires.

There are no specific bushfire protection requirements for project-related infrastructure (Class 5 – 8 buildings). The general fire safety construction provisions are taken as acceptable solutions however construction requirements for bushfire protection need to be considered on a case-by-case basis (PBP 2019).

The materials processing shed and the workshop / metal processing shed (proposed material change of use³) are existing structures, constructed of non-combustible materials, and contain no openable windows. No amendments or modifications will be made to these existing structures. The proposed extensions and awning additions to the materials processing shed will be constructed of non-combustible materials (concrete and metal) (Drawing A106 Issue G).

The offices above the weighbridge (Class 5 building) are located within 100m from bushfire prone vegetation and will have a BAL 12.5 rating. They will be constructed of non-combustible materials (concrete and metal) (Drawing A103 issue G). The residual materials processing shed will similarly be constructed from non-combustible materials. Consideration should be given to the provision of screens over openable windows, and doors, for ember protection.

Where fitted, screens for windows and doors shall have a mesh or perforated sheet made of corrosion-resistant steel, bronze or aluminium. The frame supporting the mesh or perforated sheet shall be made from metal and metal fixings (AS3959).

In accordance with Chapter 8.3.1 of PBP 2019, all buildings of Class 5 – 8 to be constructed for the Project will have safe, all weather access to and from the public road system for attending firefighters and to allow occupant egress. They will have adequate services of water. Evacuation of the site will be supported by emergency management arrangements (*Section 3.7*). Hazardous materials should not be stored at or near of the offices.

The Project construction design has capacity to satisfy the aims and objectives of PBP 2019.

3.5 ACCESS

The intent of access measures is to provide safe access to/from the public road system and water supply for firefighters providing property protection during a bushfire, and for occupant egress for evacuation.

The development has two access points, Mitchell Avenue and Styles Street (*Figure 3*). These access roads are all weather sealed public roads that are approximately 11m and 13m wide respectively. Styles Street is a no through road that terminates in a cul-de-sac approximately 195m from Mitchell Avenue intersection. The cul-de-sac is >12m diameter and provides adequate turning capacity for heavy vehicles.

Property access to the northern property boundary and bushland interface provides a defensible space between the material processing shed and the hazard vegetation on Swamp Creek. Firefighting vehicles will be able to safely access this area and an unobstructed path will be provided to the most distant part of the materials processing shed, being the northeast corner of the building. A turning point for vehicles

³ The workshop / metal processing shed will be converted from an existing workshop. Whilst this is considered a material change of use, the general use of this building will still be industrial.

accessing the northern boundary will be established at the western extent of the materials processing shed to allow firefighting vehicles to safely turn. This will be in the proximity to the trailer parking in the northwest corner of the site. The turning point will meet the prescribed standards provided in Appendix 3 of PBP 2019 and will be kept clear of obstruction.

The grassland interfacing the eastern boundary can be accessed by an existing track that extends northeast from Styles Street into Lot 12 DP1234688, between the Project and the landscaping supplies facility at 4 Styles Street. This track is approximately 120m long and 6m wide and terminates at a gravel track and hardstand on the adjoining property that runs north towards Swamp Creek. A turning head will be required at the end of the access track. This will be kept clear of obstruction to ensure it can be used at any time.

All access tracks and roads will be two-wheel all weather tracks and have capacity to carry fully loaded (23 tonne) firefighting vehicles. Access to hydrants is available along Styles Street and internal hydrants are available (*Attachment 2*). Hydrants are also available along the northern side of the materials processing shed (see *Section 3.6 Water and Utilities*).

The following recommendations apply to access for the Project:

- The Project will provide a safe access to the northern and eastern bushland interface that supports capacity for fully loaded (23 tonne) firefighting vehicles. A turning point for attending vehicles to this area will meet the prescribed standards provided in Appendix 3 of PBP 2019 (*Attachment 3*)
- A vehicle turning head will be established in accordance with Appendix 3 of PBP 2019 (*Attachment 3*) at the end of the access track to the eastern grassland interface to allow for the safe access and egress of firefighting vehicles
- Traffic management devices (sliding gates) at entry points will not impede firefighting vehicles (e.g., electronically controlled gates will have a manual override in the event of power failure).

Given implementation of the above recommendations, the Project design will meet the acceptable solutions for access detailed in PBP 2019 and firefighting vehicles are provided with safe, all-weather access to structures and hazard vegetation.

3.6 WATER AND UTILITIES

The intent of water and utilities is to provide an adequate water supply for firefighting purposes and ensure the location of electricity and gas services limits the possibility of ignition of surrounding bush land or the fabric of buildings.

The IRRRC site has reticulated water supply. Hydrants are available on Mitchell Avenue and Styles Street. Four double pillar hydrants are also available along the northern side of the materials processing shed (*Plate 4*) (*Attachment 2*).

The water supply will be accessible and reliable for firefighting operations. The following standards apply to water supplies:

- Fire hydrant design, sizing, flows and pressures will comply with AS 2419.1-2021
- All above-ground water service pipes external to the building will be metal, including and up to any taps.

The site is provided with underground electrical transmission lines to limit the possibility of ignition of the surrounding vegetation or materials and equipment onsite. Reticulated or bottled gas services will not be used onsite.

The following standards apply to utilities:

- No part of a tree is closer to a power line than the distance set out in accordance with the specifications in ISSC3 *Guideline for Managing Vegetation Near Power Lines*

The Project will provide adequate services of water for the protection of structures and suppression of bushfire and will locate electricity so as not to contribute to the risk of fire. The Project will meet the acceptable solutions for Water and Utilities in PBP 2019.



Plate 4: Hydrants on the northern side of the material processing shed

3.7 EMERGENCY MANAGEMENT AND EVACUATION PLANNING

The SEARs requirements include preparation of a Bushfire Emergency Management and Evacuation Plan (BEMEP) in accordance with the NSW RFS *Guide to Developing a Bushfire Emergency Management and Evacuation Plan* (2014). A BEMEP has been developed for the Project. It details the mitigation measures associated with the construction and operation of the Project, and relevant recommendations made in this report, including:

- Detailed measures to identify, prevent, and mitigate fires igniting (ignition sources) e.g.:
 - hot works permits for works which may result in the ignition of fire
 - hot works not to be carried on Extreme or catastrophic Fire Danger Rating days or Total Fire Ban days, or when local authorities or the Site Manager deems weather conditions too dangerous
- Roles, responsibilities, and 24-hour emergency contact details including alternative telephone contact
- Inductions for construction personnel and operational employees on bushfire risk management and other fire related risks that could present at the project site, the project bushfire contingency plan and emergency response procedures
- Availability of fire-suppression equipment, access, and water including site infrastructure plans and site access and internal road plans
- Location of hazards (physical, chemical, electrical) that will impact on the firefighting operations and procedures to manage any identified hazards during firefighting
- Storage, maintenance, and appropriate signage of fuels and other flammable materials
- Notification of the local NSW RFS Fire Control Centre for any works that have the potential to ignite surrounding vegetation, proposed to be carried out during a bush-fire fire danger period to ensure weather conditions are appropriate
- Situational awareness and evacuation planning, including:
 - how situational awareness will be managed (bushfire alert levels, local fire weather information sources and details)
 - fire response and evacuation matrix
 - evacuation procedures, evacuation routes, and neighbourhood safer places
- Additional matters as agreed and required by the NSW RFS District Office.

The Project demonstrates the acceptable solutions for emergency management and evacuation planning in PBP 2019.

3.8 CONSULTATION

In accordance with the SEARS, preparation of the EIS must include relevant service providers and agencies. Early consultation with the Cessnock RFS Fire Control Centre and Cessnock Fire and Rescue

NSW is recommended. The Bushfire Assessment Report and BEMEP should be provided to these agencies for review and comment.

Consultation with the RFS and Fire and Rescue, and other stakeholders regarding bushfire management and planning, can be ongoing and details of any consultation (meetings, workshops, etc.) should be recorded.

4. SUMMARY AND CONCLUSION

The proposed development can apply acceptable solutions to satisfy the performance criteria for protection measures including APZ and defensible space, access, landscaping, water supply, construction and emergency management arrangements.

This bushfire assessment report demonstrates the combination of bushfire protection measures for the Project design (based upon the development type and the level of bush fire risk) will assist building protection during a bushfire and contribute to the safety of firefighters and during the passage of a fire front. The protection measures also serve to limit the ability of a fire originating within the IRRRC from spreading to the surrounding bushland.

The bushfire protection measures and recommendations made in this report have been summarised in *Table 4*. Given the implementation of these recommendations, the Project will demonstrate the aims and objectives and specific performance criteria of PBP 2019.

Table 4: Summary of Recommendations

Bushfire Protection Measure	Section	Recommendations
Asset Protection Zone	3.2	- A minimum 12m APZ must be maintained along the northern and eastern lot boundaries. - Negotiations with the landowners / managers to the east must be sought to ensure the APZ along this boundary is maintained. - APZs will be maintained in perpetuity (or until the facility is decommissioned). - Ongoing maintenance of vegetation within the APZ will be included in the Landscape Management Plan.
Landscaping	3.3	- Landscaping will be established and maintained in accordance with Appendix 4 PBP 2019 for an Inner Protection Area and the RFS Standards for Asset Protection Zones (Appendix 4), these works and the performance criteria should be detailed and delivered within the Landscape Management Plan. - Any fencing and gates installed for the Project need to be made of non-combustible material only.
Construction	3.4	- Hazardous materials should not be stored at or near of the offices. - Where fitted, screens shall be made of corrosion-resistant steel, bronze or aluminium. The frame shall be made from metal with metal fixings.
Access	3.5	- The Project will provide a safe access to the northern and eastern bushland interface that supports capacity for fully loaded (23 tonne) firefighting vehicles. - A turning point will be established for firefighting vehicles accessing the northern boundary in accordance with Appendix 3 of PBP 2019. - A vehicle turning head will be established in accordance with Appendix 3 of PBP 2019 at the end of the access track to the eastern grassland interface to allow for the safe access and egress of firefighting vehicles. - Turning points / heads will be kept clear of obstruction. - Traffic management devices (sliding gates) at entry points will not impede firefighting vehicles.

Water and utilities	3.6	• A Fire hydrant design, sizing, flows and pressures will comply with AS 2419.1-2021. • All above-ground water service pipes external to the building will be metal, including and up to any taps. • No part of a tree is closer to a power line than the distance set out in accordance with the specifications in ISSC3 Guideline for Managing Vegetation Near Power Lines
Emergency management and evacuation	3.7	• The Bushfire Emergency Management and Evacuation Plan is implemented for construction and operational activities.

5. REFERENCES

Australasian Fire and Emergency Service Authorities Council Limited, 2022. *Fire Safety in Waste management Facilities* (AFAC Publication No. 3095). AFAC, Melbourne, Victoria.

EMM Consulting, 2024. *BDAR Waiver Request - Central Waste Plant Integrated Resource Recovery Centre*. Newcastle NSW.

Geoscience Australia, 2023. Bushfire. <https://www.ga.gov.au/education/natural-hazards/bushfire>

Hines. F, Tolhurst. K, Wilson. A and McCarthy, G 2010. *Overall fuel hazard assessment guide, 4th edition July 2010*. Fire and adaptive management, report no. 82. Published by the Victorian Government Department of Sustainability and Environment Melbourne, July 2010.

Keith, David., 2004. *Ocean Shores to Desert Dunes – The Native Vegetation of New South Wales and the ACT*. The Department of Environment and Climate Change.

NSW Government, 2024. *BioNet Vegetation Classification*, viewed 23 September 2024. Department of Planning, Housing and Infrastructure. <https://vegetation.bionet.nsw.gov.au/>

NSW Government, 2024. *NSW Planning Portal*, viewed 15 November 2024. Department of Planning, Housing and Infrastructure. <https://www.planningportal.nsw.gov.au/>

NSW Government, 2024. *State Vegetation Type Mapping*, viewed 12 November 2024. Department of Planning, Housing and Infrastructure. <https://datasets.seed.nsw.gov.au/dataset/nsw-state-vegetation-type-map>

NSW Rural Fire Service, 2014. *Development Planning, A guide to developing a Bush Fire Emergency Management and Evacuation Plan*. NSW Rural Fire Service, State of NSW.

NSW Rural Fire Service, 2015. *Guide for Bushfire Prone Land Mapping*.

NSW Rural Fire Service, 2019. *NSW Local Government Areas FDI. Community Resilience*. Fire Weather Districts and FDI for NSW Local Government Areas- for use with Planning for Bush Fire Protection. https://www.rfs.nsw.gov.au/_data/assets/pdf_file/0007/55285/Local-government-areas-and-FDI.pdf

NSW Rural Fire Service RFS, (n.d.). *Standards for Asset Protection Zones*. Retrieved from https://www.rfs.nsw.gov.au/_data/assets/pdf_file/0010/13321/Standards-for-Asset-Protection-Zones.pdf

Specht, R.L., 1970. *Vegetation*. Pages 44–67 in Leeper, G.W. (ed.), "Australian Environment", 4th edn. Melbourne University Press, Melbourne.

State of New South Wales through the NSW Rural Fire Service, 2019. *Planning for Bush Fire Protection, A guide for councils, planners, fire authorities and developers.*

Standards Australia, 2018. AS 3959: 2018. *Construction of buildings in bushfire-prone areas*, Sydney, NSW.

ATTACHMENT 1. SITE PLAN



- KEY**
- Site boundary
 - Development footprint
 - Site access type**
 - ✚ Emergency access
 - ⊞ Site access
 - Proposed feature
 - Building feature**
 - Existing to be retained
 - Proposed site feature

Project layout

CWS Kurri Kurri Integrated
Resource Recovery Centre
Environmental Impact Statement
Figure 3.2

ATTACHMENT 2. FIRE HYDRANT PLAN

AMENDMENTS

A	ISSUED FOR INFO	20.06.23

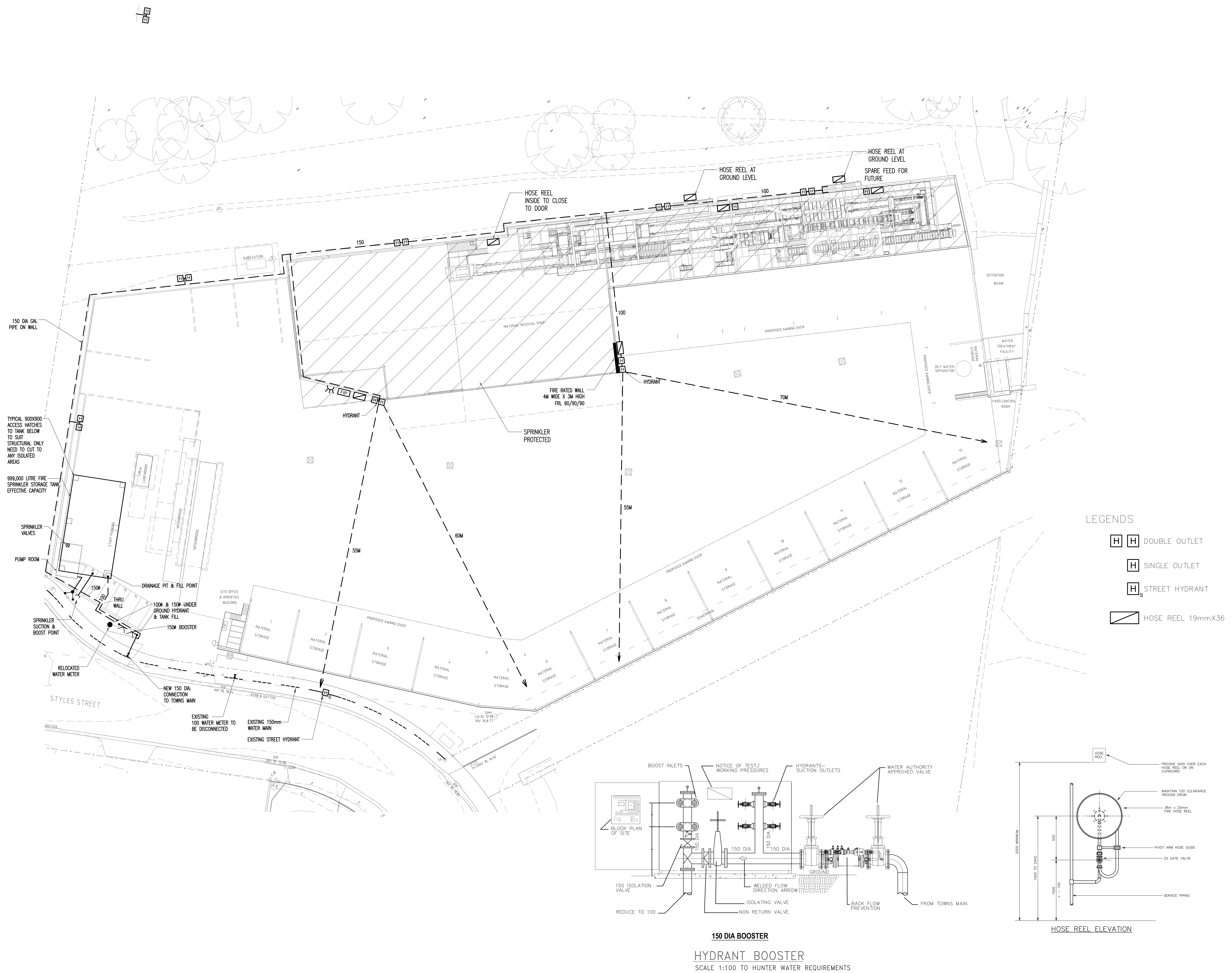
**PARAMOUNT FIRE
CONSULTANTS**
4 MACARTNEY STREET
ERMINGTON 2115
TELEPHONE: (02) 9684-6609
FACSIMILE : (02) 9638-4584

INDUSTRIAL DEVELOPMENT
8 STYLES ST
KURRI KURRI, NSW, 2327

TITLE	SITE PLAN HYDRANT HOSE REEL
-------	--------------------------------

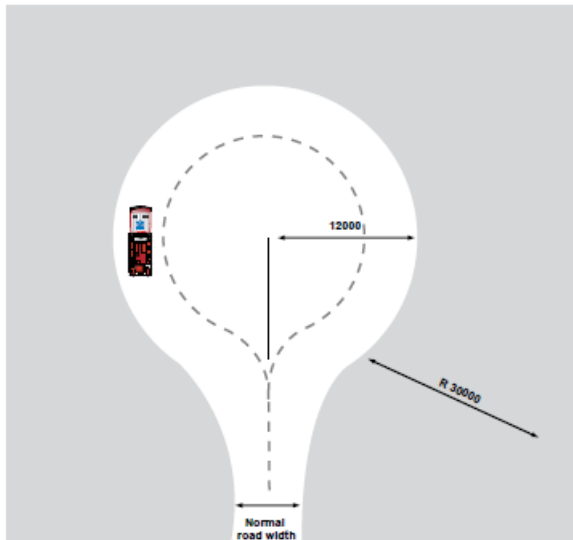
DRAWN PFC	
DATE	SCALE

SEPT. 2021	1:250 @ A0
JOB No FS-05	ISSUE A

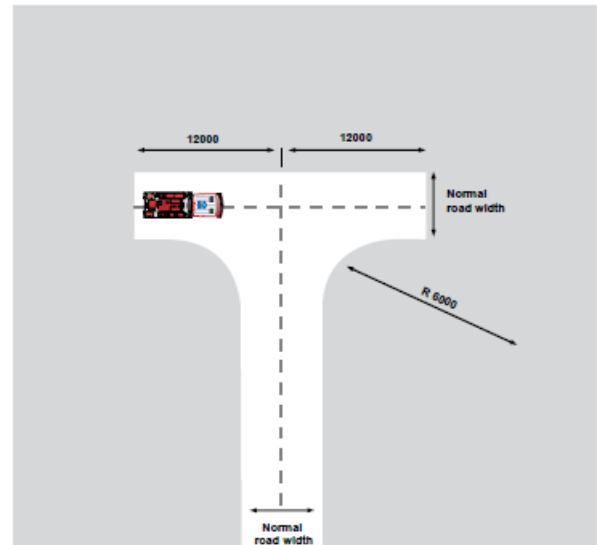


ATTACHMENT 3. VEHICULAR TURNING OPTIONS

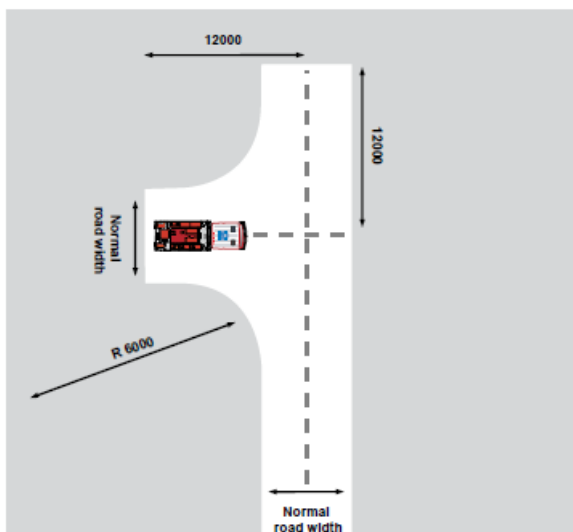
Type A



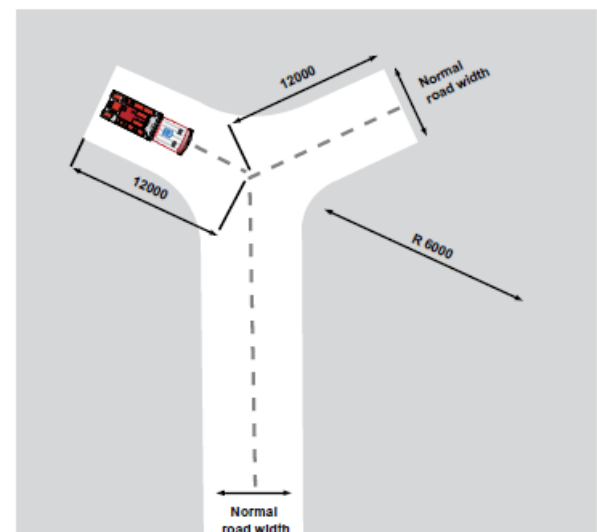
Type B



Type C



Type D



Source: Appendix 3 PBP 2019

Appendix I.6b

Bushfire emergency management and evacuation plan



Bushfire Emergency Management and Evacuation Plan

Integrated Resource Recovery Centre

147 Mitchell Avenue, Kurri Kurri NSW

Prepared for

Central Waste Plant Pty Limited

Facility Details

Facility Name:	Kurri Kurri Integrated Resource Recovery Centre
Client Details:	Central Waste Plant Pty Limited
Project Address	147 Mitchell Avenue KURRI KURRI NSW 2327
Lot & DP:	• Lot 1 DP1128108 (1 Styles Street) • Lot 1 DP1309128 (8 Styles Street) • Lot 6 DP1251190 (10 Styles Street) • Lot 3 DP586741 (147 Mitchell Street) • Lot 4 DP586741 (145 Mitchell Street)
Local Government Area	Cessnock City Council
Zoning	E5 Heavy Industrial
Bushfire Prone Land	Category 2, Buffer
Building Classifications	Class 5 – 8, Class 10

Document Control:

Version	Date	Description	Author	Reviewer
1.0	04 December 2024	Bushfire Emergency Management and Evacuation Plan	D Milburn	D Pedersen
1.1	12 February 2025			

TO BE REVIEWED ANNUALLY

Prepared by:

Cool Burn Pty Ltd

ABN: 61 645 633 236

Warners Bay NSW 2282

Disclaimer

Cool Burn Pty Ltd has prepared this document based on the information provided by the Client/recipient and has endeavoured to ensure that all information presented in this document is correct and current. Cool Burn advises that there are factors outside Cool Burn current knowledge or control which can affect the Client/recipient's project planning. Cool Burn does not warrant that the document is free from error or omissions arising from these factors and does not accept liability for any such errors or omissions. The scope of services has been defined in consultation with the Client/recipient by time and budgetary constraints imposed by the Client/recipient, and the availability of other data on the project. Changes to available information, legislation and schedules are made on an ongoing basis and readers should obtain up to date information. To the fullest extent possible Cool Burn expressly excludes any express or implied warranty as to condition, fitness, merchantability, or suitability of this document and limits its liability for direct or consequential loss at Cool Burn's option to re-supplying the document or the cost of correcting the document. In no event shall Cool Burn's responses to questions or any other information in this document be deemed to be incorporated into any legally binding agreement without the express written consent of Cool Burn. The information in this document is proprietary. The Client/recipient, its designated representatives or relevant statutory authorities may use this document for the specific project for which this report was prepared. It should not be otherwise referenced without permission.

Contents

1.	OVERVIEW	1
2.	CONTACT INFORMATION	1
3.	FACILITY DETAILS	2
3.1	LOCATION.....	2
3.2	FACILITY INFRASTRUCTURE.....	2
4.	ROLES AND RESPONSIBILITIES	3
5.	EMERGENCY CONTACT INFORMATION	3
6.	PREVENTION / IGNITION MANAGEMENT	4
7.	HAZARDOUS MATERIALS	5
8.	FIRE SUPPRESSION AND ACCESS	5
9.	SITUATIONAL AWARENESS	6
10.	FIRE RESPONSE MATRIX	8
11.	EVACUATION PROCEDURE	9
12.	EVACUATION ROUTES	10
	ATTACHMENT 1: MAPPING	12

1. Overview

This Bushfire Emergency Management and Evacuation Management Plan (BEMEP) has been prepared for the Integrated Resource Recovery Centre (IRRC) at 147 Mitchell Avenue in Kurri Kurri NSW. This Plan has been designed to assist Central Waste Station Pty Ltd to protect life and property in the event of a bushfire emergency and provide suitable emergency management and evacuation arrangements for occupants. It has been developed in accordance with the *NSW RFS Guide to developing a Bush Fire Emergency Management and Evacuation Plan 2014* and *NSW RFS Planning for Bushfire Protection 2019* (PBP 2019).

The BEMEP is provided as a *template* to satisfy the Planning Secretary's Environmental Assessment Requirements (SEARs) issued for the proposed development of the Integrated Resource Recovery Centre. It is expected that the details within the BEMEP will be updated with relevant information following development consent and prior to construction activities.

2. Contact Information

The contact information of key personnel at the IRRC is provided in *Table 1*.

IN THE EVENT OF A BUSHFIRE EMERGENCY THE PRIMARY COURSE OF ACTION IS **EVACUATION**

Table 1: Contact information

Contact Details	
Roles	Contact number
Chief Executive	<i>To be provided</i>
General Manager (Critical personnel)	<i>To be provided</i>
Facility Operations Manager (Critical personnel)	<i>To be provided</i>
Group Safety Manager (Critical personnel)	<i>To be provided</i>

The BEMEP is to be provided to the NSW RFS district office (Cessnock) and Fire and Rescue NSW (Kurri Kurri) prior to commencement of operations, and should be reviewed internally on an annual basis and updated as necessary.

3. Facility Details

3.1 Location

The IRRC will be operated from 147 Mitchell Avenue. Construction and operation will occur over five Lot titles:

- Lot 1 DP1128108 - 1 Styles Street
- Lot 1 DP1309128 - 8 Styles Street
- Lot 6 DP1251190 - 10 Styles Street
- Lot 3 DP586741 - 147 Mitchell Street
- Lot 4 DP586741 - 145 Mitchell Street.

3.2 Facility Infrastructure

The facility will construct and operate the following infrastructure:

- A resource recovery facility – automated material processing plant enclosure (existing building with proposed extension), waste receival shed, covered material storage bays (addition of awnings), yard processing and water management basin
- Metal processing facility – the existing workshop will be converted into a metal processing shed with equipment and storage bunkers
- Auxiliary operations area – incoming and outgoing weighbridges with offices situated on top
- Residual waste recovery plant – shed with residual water recovery plant and storage
- IRRC main entry / exit onto Mitchell Avenue

A Site Plan with the proposed infrastructure layout and building additions / extensions has been provided in *Attachment 1*. The facility information details are provided below in *Table 2*.

Table 2: Facility information

FACILITY INFORMATION	
Facility type:	Resource Recovery Centre
Buildings and structures	The facility will contain • Material processing shed • Metal processing shed / workshop • Residual materials processing shed • Weighbridge • Office • Storage bays with awning covers
Operational workforce*	74 FTE
Maximum number of occupants*	<i>To be provided</i>
Number of vulnerable occupants*	<i>To be provided</i>

*Subject to change

4. Roles and Responsibilities

The General Manager (or delegate) will be responsible for monitoring bushfire activity (situational awareness) and will enact this plan if required in accordance with the Fire Response Matrix (*Table 6*). Should the General Manager or delegate not be available, the HSE manager will assume the role or assign responsibility. The role of the Manager and those directly supporting the Manager are considered as critical personnel. The Manager may choose to delegate this responsibility to another person who has been suitably trained by the organisation (e.g., Facility Operations Manager).

Up-to-date contact details should be provided in a map (a Pre-Incident Plan or PIP) and displayed in the Site Office and a manifest box at the site entrance for quick reference for attending emergency services.

The roles and responsibilities of key personnel to implement emergency procedures are detailed below in *Table 3*.

Table 3: Roles and responsibilities

POSITION	RESPONSIBILITY
General Manager	Situational awareness, emergency services contact, coordination of evacuation procedures.
Facility Operations Manager	Assume the role of Manager or delegate if the Manager is unavailable.
Group Safety Manager	Provide assistance to the Manager if required.

5. Emergency Contact Information

Contact information for relevant emergency services in the event of a bushfire emergency are detailed below in *Table 4*. The table includes the RFS Bushfire Information Line and the Fires Near Me application / website to support situational awareness during times of elevated bushfire danger.

Table 4: Emergency services contact information

DEPARTMENT	NUMBER
All emergencies – Fire, Police, Ambulance	CALL 000
NSW Rural Fire Service – Cessnock Local Fire Control Centre	02 4015 0000
NSW Rural Fire Service – Bushfire Information Line	1800 679 737 (1800 NSW RFS)
Fires Near Me Application	https://www.rfs.nsw.gov.au/fire-information/fires-near-me

Fire and Rescue NSW (Cessnock)	02 4979 3755
Kurri Kurri Hospital	02 4936 3200
State Emergency Services (Cessnock SES)	132 500
Ambulance – Kurri Kurri Ambulance Station	02 4937 4555
Kurri Kurri Police Station	02 6 4937 1593
Cessnock Police Station	02 4991 0199
Cessnock City Council (including after hours emergency)	02 4993 4100

6. Prevention / Ignition Management

Potential ignition sources should be identified and managed for high-risk activities onsite, including individual contractors within their individual/company risk assessments. This is to be managed during construction through the Construction Management Plan (CMP), and post construction through ongoing operational or health and safety management planning utilising task or activity specific risk assessments (Job Loss Analysis / Safe Work Method Statement etc.).

Examples of high-risk activities include (but aren't limited to) hot works (e.g., grinding and welding), vegetation slashing, and vehicles traversing long grass. Such activities should be thoroughly risk assessed on elevated Fire Danger Rating (FDR) days and delay of these activities is recommended.

No high-risk activities are to be carried out on total fire ban days (TOBANS), or Extreme or Catastrophic FDR days.

Activities that have the potential to cause ignition must include appropriate suppression and management tools. This may include exclusion areas (free of combustible materials), fire suppression devices (extinguishers etc.), and smoke alarms.

Resource recovery centres can be subject to (and the source of) fires due to the type of materials being transported to these facilities. Flammable waste materials should be sorted and stored in an appropriate location away from the bushland interface, contain an exclusion area, with fire suppression systems / devices available.

The RFS must be notified within 24hrs of any high risk works that are proposed to be carried out during a bushfire danger period that have the potential to ignite surrounding vegetation, to confirm weather conditions are appropriate and emergency support is available. The facility must also demonstrate awareness of operations that may be carried out on days of Total Fire Ban, and any prohibited activities or exemptions that are notified by the Commissioner of the NSW RFS.

7. Hazardous Materials

Hazardous materials (*Table 5*) are required for onsite operations. The storage of these chemicals is to be clearly indicated by appropriate Hazmat signage and detailed on a Pre-Incident Plan (PIP) to inform attending emergency services in the event of a bushfire.

The location of these materials (*Attachment 1*) should be detailed in a map (a Pre-Incident Plan or PIP) and displayed in each Site Office and a manifest box at the site entrance for quick reference.

Table 5: Hazardous materials

Hazardous Materials of IRRRC	
Hazardous materials storage	Water treatment • Hydro 225 Acidic pH agent (150L) • Hydro 790 pH control agent (150L) • Chlorine (sodium hypochlorite) (150L) • Coagulant (150L)
	Workshop • VPS Brake Parts Cleaner (<100kg) • Motortech Lachnam Spray Enamel (<100kg) • WD Spray Lube Multispray - Aerosol (<50kg) • Lubricants (1,100L)
	Paint shop • Lacnam T192-Wax-Grease-Remover (<50kg) • Lacnam T192 Enamel Thinners (<50kg) • Lacnam 720-Iso-Free-Part-A (• Lacnam 720-Iso-Free-Part-B-Hardener • Lacnam enamel primer (<100kg) • Valspar AU500 PU Activator
	Fabrication shop • Inert welding gas (Argon) (<1,000kg) • Oxygen (<1,000kg) • Acetylene gas (<1,000kg)

8. Fire Suppression and Access

Fire suppression

The facility will have hydrants located around the materials processing shed including along the northern side of the building where the site interfaces with the vegetation of Swamp Creek. Hydrants are also located on Styles Street and Mitchell Avenue. Fire hoses will be located throughout the facility.

Employees should be trained in the use of extinguishers and fire hoses, and they should only be used if the fire is small, and containment is achievable. All employees should be trained in the assessment and engagement of any fire situation.

The location of all suppression devices and tanks described above should be illustrated in a map (a Pre-Incident Plan or PIP) and displayed in each Site Office and a manifest box at the site entrance for quick reference.

Access

The facility has two access points, Mitchell Avenue and Styles Street (*Attachment 1*). These access roads are all weather sealed public roads that are approximately 11m and 13m wide respectively. Style Street is a no through road that terminates in a cul-de-sac providing adequate turning capacity for heavy vehicles.

Access to the northern property boundary can be achieved through the site past the workshop / metals processing shed. The turning point for firefighting vehicles is located at the beginning of this northern access track, there is no turning point at the end. The eastern boundary can be accessed by an existing track that extends northeast from Styles Street into Lot 12 DP1234688, between the Project and the landscaping supplies facility at 4 Styles Street. This track is approximately 120m long and 6m wide. The turning head is at the immediate end of this track where it enters the gravel hardstand.

Access tracks, turning points, and emergency exit points should be illustrated in a map (a Pre-Incident Plan or PIP) and displayed in each Site Office and a manifest box at the site entrance for quick reference.

9. Situational Awareness

A high level of situational awareness is necessary, particularly during extreme and catastrophic fire danger periods, total fire ban days, and when a bushfire threat exists. Situational awareness includes a review of the evacuation triggers from the fire response matrix (*Table 6*), along with the extent and location of the bushfire threat. Situational awareness is the responsibility of the Manager.

Evacuation of the facility may be required. If a bushfire occurs in the vicinity or threatens the facility -

THE SAFEST OPTION IN A BUSHFIRE EVENT IS TO LEAVE EARLY

NSW RFS issue bushfire level alerts, and these will also be monitored by the Manager. The three levels of alert issued:

	Advice A fire has started. There is no immediate danger. Stay up to date in case the situation changes.
---	--

	Watch and Act There is a heightened level of threat. Conditions are changing and the Manager need to start taking action now to protect staff, residents and visitors.
	Emergency Warning An Emergency Warning is the highest level of Bush Fire Alert. The site may be in danger and need to take action immediately. Any delay now puts lives at risk.

It is important to stay informed of local fire weather conditions and alerts and not rely on one form of communication as mobile phone coverage and power can fail during major incidents. Tune in to local media including radio, official social media feeds, apps and websites, such as:

- [Hazards Near Me \(www.nsw.gov.au/emergency\)](http://www.nsw.gov.au/emergency)
- [Fires near me NSW RFS Fires Near Me \(nsw.gov.au\)](http://nsw.gov.au)
- Major Fire Updates - NSW Rural Fire Service (during times of major incident activity, such as during bush and grass fires (<https://www.rfs.nsw.gov.au/fire-information/major-fire-updates>))
- Find and tune in to local radio stations AM - ABC 1233 / FM - ABC 106.1.

If a bushfire warning exists, or a fire is observed in the locality or onsite, the following actions should be taken:

- In the event of a bushfire onsite or close by – RAISE ALARM (Manager) AND CALL 000
- Review triggers for evacuation (Fire Response Matrix **Section 10**)
- Determine bushfire threat (Fires Near Me, NSW RFS Bushfire Information Line)
- If required, follow BEMEP or relevant emergency management authority instruction and evacuate the facility.

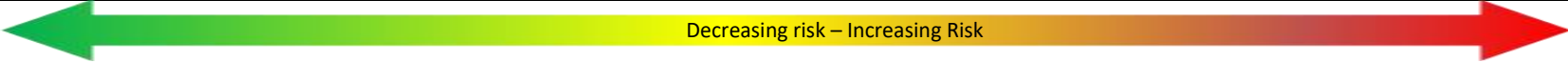
10. Fire Response Matrix

The following is provided as a guide for site emergency evacuation. Evacuate only if safe to do so. If fires are within the region, monitor situational awareness.

Table 6: IRRRC Fire Response Matrix



Observation/ situation	Bush Fire Danger Rating (FDR)				
	Moderate Plan and prepare	High Be ready to act	TOTAL Fire Ban Declared	Extreme Take action now	Catastrophic Leave bushfire risk areas
Out of control fire <10 km from site	- Situational awareness - Prepare for evacuation, move occupants to emergency assembly point - Seek instruction from Manager and emergency services	- Situational awareness - Prepare for evacuation, move occupants to emergency assembly point - Seek instruction from Manager and emergency services		- Evacuate all non-essential and vulnerable employees - Situational awareness - Seek instruction from Manager and emergency services	- Evacuate all non-essential and vulnerable employees - Situational awareness - Provide assistance to emergency services - Prepare to evacuate essential personnel to safe refuge
Out of control fire within 20 km of site	- Situational awareness - Normal operation - Seek instruction from Manager	- Situational awareness - Normal operation - Prepare for evacuation, consider evacuating vulnerable employees - Seek instruction from Manager		- Situational awareness - Prepare for evacuation, consider evacuating all non-essential and vulnerable employees - Seek instruction from Manager and emergency services	- Evacuate all non-essential and vulnerable employees - Situational awareness - Provide assistance to emergency services - Prepare to evacuate essential personnel to safe refuge
Bushfires within Cessnock region but not considered a direct concern	- Situational awareness - Normal operation	- Situational awareness - Normal operation		- Situational awareness - Consider evacuating all non-essential and vulnerable employees - Seek instruction from Manager	- Prepare for evacuation - Consider evacuating all non-essential and vulnerable employees - Situational awareness - Provide assistance to emergency services
No Fires within Region	- Situational awareness - Normal operation	- Situational awareness - Normal operation		- Situational awareness - Consider evacuating all vulnerable employees	- Situational awareness - Consider evacuating vulnerable employees - Provide assistance to emergency services



11. Evacuation Procedure

The ultimate objective to protect human life and safety is to minimise site occupation during catastrophic fire days and when bushfire warnings (advice, watch and act, or emergency warning) are current and affect the locality (early evacuation). Non-essential and vulnerable employees should avoid attending the facility during elevated bushfire risk days (extreme or catastrophic) and thus avoid site emergency evacuation. Only essential staff would remain during these times.

Instructions on evacuation are provided below.

Authority to evacuate can be directed by:

- Instructions from the NSW Police or Fire Authority (NSW Rural Fire Service or Fire and Rescue NSW)
- Instruction from Manager.

Evacuate if directed & it is safe to do so. Communicate evacuation and destination.

- Evacuate if instructed and safe to do so
- Calmly move to the nearest emergency assembly area
- Manager to seek direction (situational awareness) from emergency services / RFS before commencing evacuation
- Upon instruction and confirmation of safe passage, evacuating occupants depart site via PRIMARY evacuation route to the Weston Workers Club at 1 Government Road, Weston NSW.
- If primary evacuation route is blocked or considered dangerous, or if directed by emergency services / RFS and safe passage confirmed, depart site via the ALTERNATIVE evacuation route to the Kurri Kurri Netball Courts at 119 Maitland Street, Kurri Kurri NSW.

Emergency assembly area and transportation

The emergency assembly area is located beside the main entrance to the IRRC on Mitchell Avenue, as identified in *Attachment 1*.

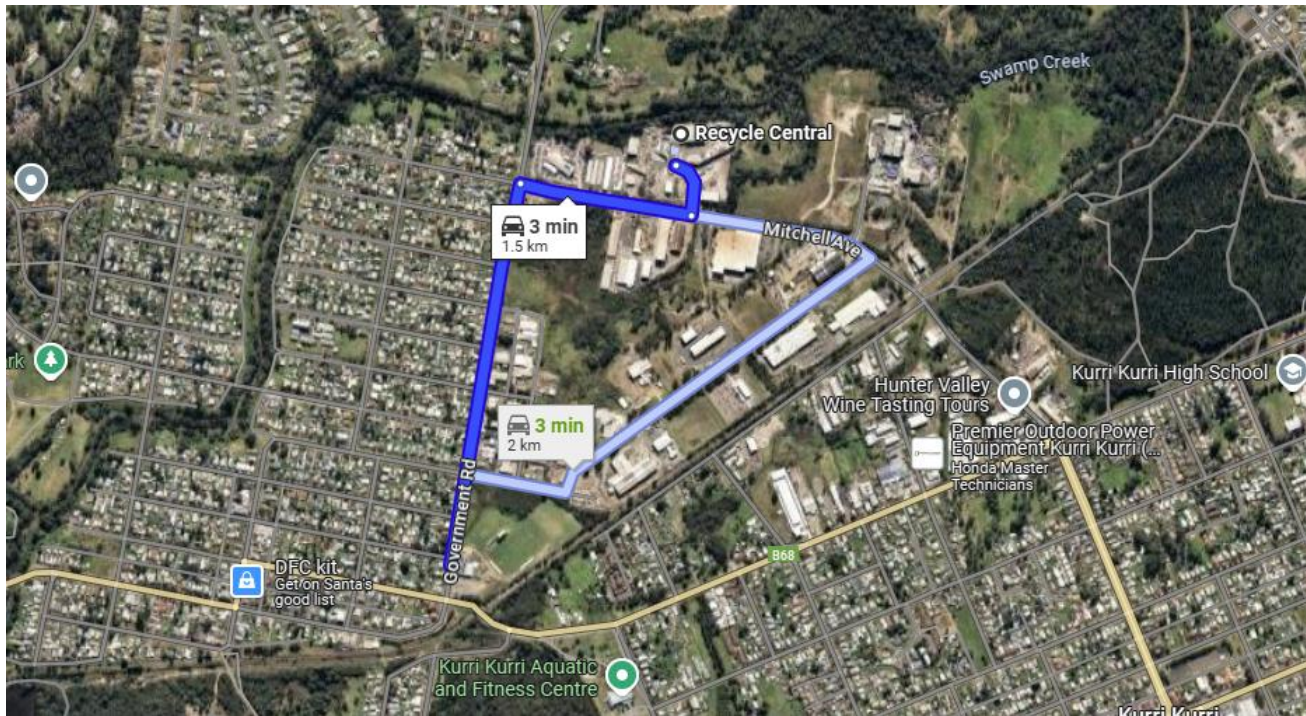
Transportation must be available, on any given day, to support evacuation of the maximum number of persons that could be present within the IRRC.

All vulnerable persons and their needs must be considered.

12. Evacuation Routes

PRIMARY EVACUATION ROUTE

Location: Weston Workers Club, 1 Government Road Weston NSW.



DIRECTIONS

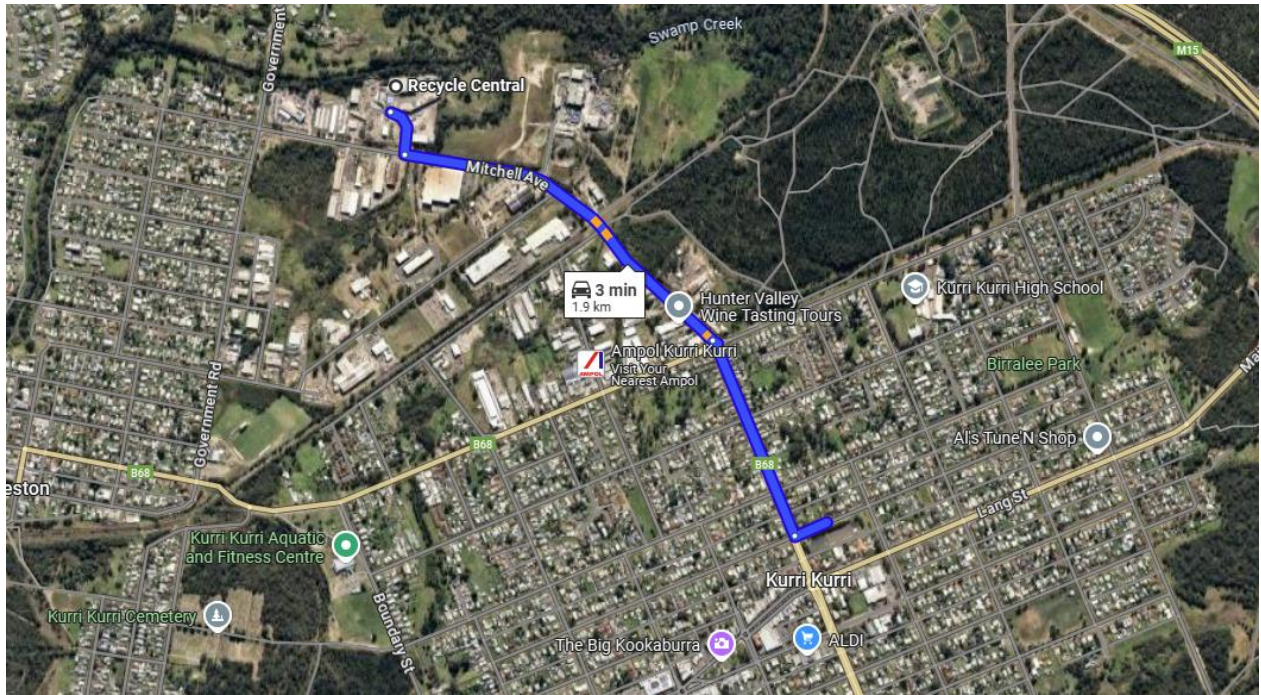
From the emergency assembly area, head west on Mitchell Avenue for 150m.

Turn left on to Government Road and travel for 950m.

The workers club will be on the left.

ALTERNATE EVACUATION ROUTE

Location: Kurri Kurri Netball Courts, 119 Maitland Street Kurri Kurri NSW



DIRECTIONS

From the emergency assembly area, head east on Mitchell Avenue for 1.1km.

At the roundabout, continue straight onto Mitchell Avenue / B68 for 600m.

Turn left on to Maitland Street and travel for 100m.

The netball courts will be on the right.

ATTACHMENT 1: MAPPING

Function	Sqm	Carspace Calc.	Carspaces Required	Carspaces Provided	Notes
Ground Floor Office Area (Excl. Weighbridge)	116.0	1 per 30m ²	3.86		
1st Floor Office Area	386.2	1 per 30m ²	12.9		
2nd Floor Office Area	386.2	1 per 30m ²	12.9		
Processing Shed Extension Area	545.3m ²	1 per 75m ²	7.42		
Residual Material Processing Shed	4 800	1 per 75m ²	64		
			Total 101.08 (101)	50	

