Kimberley Resource Recovery Centre

Cleanaway Pty Ltd

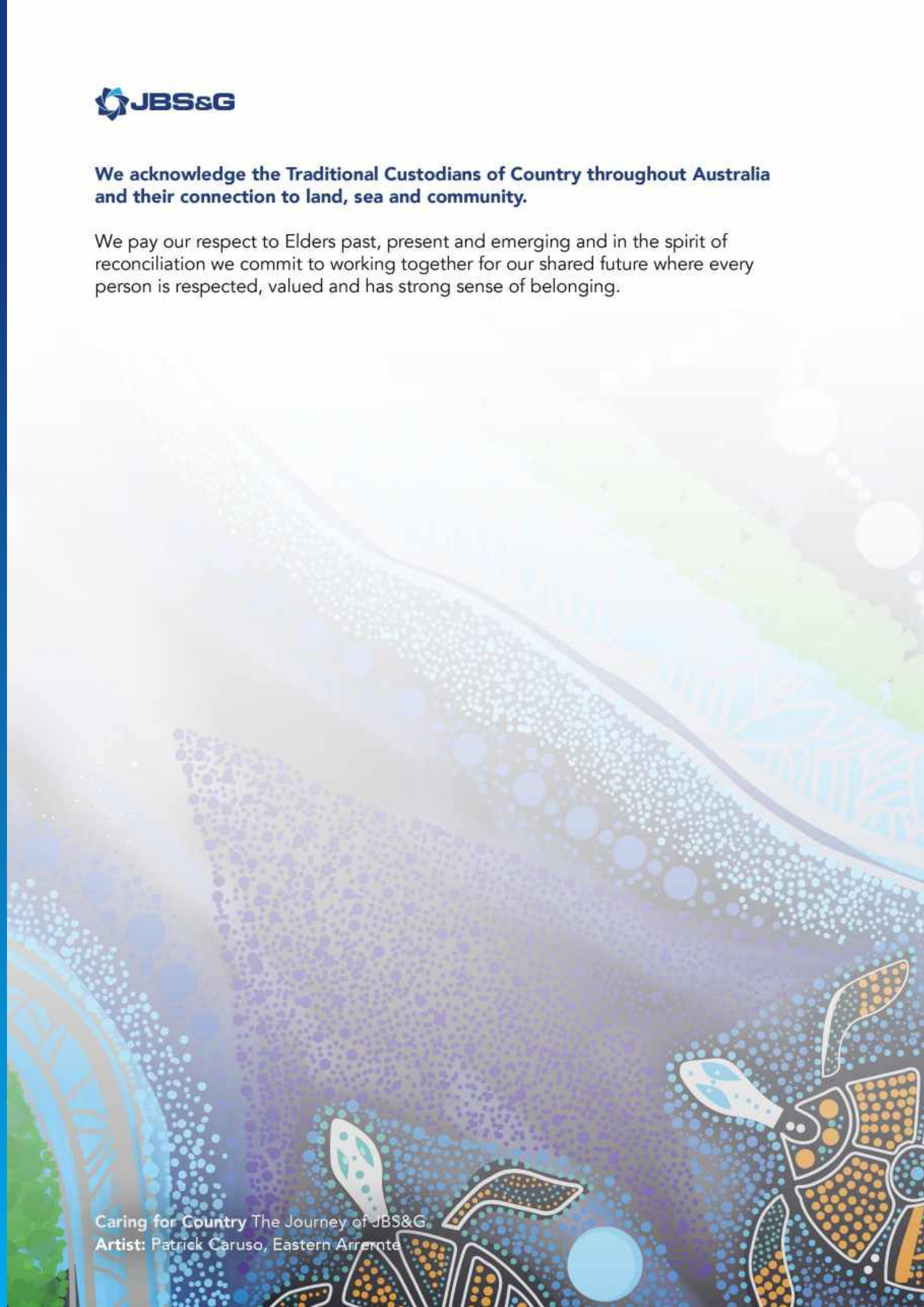
Part V *Environmental Protection Act 1986* – Licence L8991/2016/1 – Licence Amendment Application Supporting Document

70425 | 170,190 (Rev 1)

10 October 2025

We acknowledge the Traditional Custodians of Country throughout Australia and their connection to land, sea and community.

We pay our respect to Elders past, present and emerging and in the spirit of reconciliation we commit to working together for our shared future where every person is respected, valued and has strong sense of belonging.



Caring for Country The Journey of JBS&G
Artist: Patrick Caruso, Eastern Arrernte

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Abbreviations

Term	Definition
ACN	Australian Company Number
DFES	Department of Fire and Emergency Services
DWER	Department of Water and Environmental Regulation
EP Act	*Environmental Protection Act 1986*
HDPE	High-density Polyethylene
IBC	Intermediate Bulk Container
L8991/2016/1	Licence number for the premises
N/A	Not Applicable
PET	Polyethylene Terephthalate
RRC	Resource Recovery Centre

1. Introduction

1.1 Background

Cleanaway Pty Ltd (Cleanaway) operates the Kimberley Resource Recovery Centre (RRC) (the premises), located at 18 Archer Street, Minyirr, in the Shire of Broome. Cleanaway holds Licence L8991/2016/1 for the premises issued by the Department of Water and Environmental Regulation (DWER) under Part V of the *Environmental Protection Act 1986* (EP Act). Activities undertaken at the premises fall within two categories – Category 61: Liquid waste facility, and Category 62: Solid waste depot.

The premises serves as a liquid and solid waste storage and treatment facility. Commercial, industrial and domestic waste is collected, and then stored and processed at the premises before being transported off-site.

Infrastructure on-site includes administration buildings, a former workshop (now used for storage), a 55,000 L bunded storage tank, a 35,000 L self-bunded waste oil storage tank, temporary storage area for Intermediate Bulk Containers (IBCs), washdown bay, staff lunch room, corrugated iron sheds, as well as parking, storage and laydown areas (refer to **Appendix A**).

Waste trucks deposit waste into two covered transfer points. From here, recyclable commingled materials are transferred into the main shed via a conveyor belt and are processed by mechanical and manual separators into specific streams of glass, ferrous metal, aluminium, clear plastics (Code 1) and other plastics (Code 2), mixed paper and cardboard. Plastics are fed along another conveyor belt. Once sorted, the material is baled for transportation to recycling markets for re-processing into new products or disposed to a licensed landfill.

Cleanaway is seeking approval to amend the waste accepted, processed and contained at the premises. Cleanaway are also seeking an administrative change to their licence (change in entity name).

1.2 Purpose and Scope

This document together with the completed DWER application form constitutes an application to amend Licence L8991/2016/1 under Part V of the EP Act. **Table 1-1** provides an overview of the application form supporting attachments and the relevant sections of this document that address each item.

Table 1-1: Application attachments

Application Form Attachments	Attached
Attachment 1A: Proof of occupier status	N/A *
Attachment 1B: ASIC company extract	Appendix B
Attachment 1C: Authorisation to act as a representative of the occupier	N/A
Attachment 2: Premises maps	**Appendix A**
Attachment 3A: Environmental commissioning plan	N/A *
Attachment 3B: Proposed activities	Section 2
Attachment 3C: Map of area proposed to be cleared (only applicable if clearing is proposed)	N/A – Clearing is not proposed.
Attachment 3D: Additional information for clearing assessment	N/A – Clearing is not proposed.
Attachment 4: Marine surveys (only applicable if marine surveys included in application)	N/A – Marine surveys are not part of the application.

Application Form Attachments	Attached
Attachment 5: Other approvals and consultation documentation	N/A – Relevant approvals in place. The Department of Fire and Emergency Services (DFES) were consulted on the 29 April 2025 about a Fire Risk Assessment Report (**Appendix D**).
Attachment 6A: Emissions and discharges	Refer to Section 4
Attachment 6B: Waste acceptance	Refer to Section 2.3
Attachment 7: Siting and location	Refer to Section 3
Attachment 8: Additional information submitted	This document
Attachment 8B: Premises layout plan	Refer to **Appendix A**
Attachment 9: Category-specific checklist(s)	N/A – The premises categories do not have any specific checklists.
Attachment 10: Proposed fee calculation	Refer to Appendix C
Attachment 11: Request for exemption from publication	N/A – No request required

(1) *According to DWER Application form, Completion Matrix

The scope of the licence amendment application is to:

- Change the assessed production capacity of the premises (**Section 2.2**);
- Change the entity name on the licence (**Section 2.1**);
- Amend the waste acceptance requirements in Condition 1, Table 1 (**Section 2.3**);
- Amend the waste processing requirements in Condition 3, Table 2 (**Section 2.4**);
- Change containment infrastructure used at the premises specified in Condition 4, Table 3 (**Section 2.5**); and
- Update the premises maps in Schedule 1 (**Section 2.6**).

A Fire Risk Assessment Report is also attached to this application (**Appendix D**). This assessment is required due to the flammable nature of waste/recyclables are stored at the premises (i.e., baled cardboard). The site is also located in a bushfire prone area (refer to **Table 3-1**).

1.3 Applicant Details

The applicant's details are shown in **Table 1-2.**

Table 1-2: Application details

Detail	Response
Applicant name:	Cleanaway Co Pty Ltd
Trading as:	Cleanaway
ACN:	127 853 561
Registered business address:	Level 4, 441 St Kilda Road MELBOURNE VIC 3004
Authorised representative:	Bart Downe Environmental Business Partner 0498 377 767 bart.downe@cleanaway.com.au

1.4 Premises Details

The premises is located at 18 Archer Street, Minyirr, WA, 6725. The premises details are summarised in **Table 1-3** below, and the location is shown on the Premises Maps in **Appendix A**.

Table 1-3: Premises details

Aspect	Details
Premises name:	Cleanaway Kimberley Resource Recovery Centre
Site description:	Lot 25 on Diagram 93915
Site address:	18 Archer Street, Minyirr, WA, 6725
Occupier status:	Lease holder
Local Government Authority area:	Shire of Broome

2. Proposed Licence Amendments

Cleanaway is requesting several amendments to the existing licence. These amendments are detailed in the sections below.

2.1 Entity Name

Cleanaway is requesting a transfer of the licence from Cleanaway Co Pty Ltd (ACN 127 853 561) to Cleanaway Pty Ltd (ACN 000 164 938). This is an administrative transfer between entities in Cleanaway and does not represent the transfer of the licence to a new occupier.

2.2 Production Capacity

Cleanaway is proposing to amend the prescribed premises production capacity, with a proposed increase in the assessed production capacity for Category 61 (liquid waste facility) from 10,000 tonnes per annum period to 30,000 tonnes per annum period (refer to **Table 2-1**). The proposed increase in Category 61 production is required to accommodate an increase in expected volumes from customers.

Table 2-1: Proposed increase in assessed production capacity for Category 61

Prescribed Premises Category	Existing Assessed Production Capacity	Proposed Assessed Production Capacity
Category 61: Liquid waste facility	10,000 tonnes per annum period	**30,000 tonnes per annum period**
Category 62: Solid waste depot	10,000 tonnes per annum period	10,000 tonnes per annum period

2.3 Waste Acceptance

Cleanaway is requesting several amendments to the waste acceptance requirements specified in Condition 1 (Table 1: Waste Acceptance) of the licence, as described in **Table 2-2**. The proposed amendment to the licence (acceptance of "Oily Sludge") is required to facilitate acceptance of this new waste stream from customers in the Kimberley.

Table 2-2: Proposed waste acceptance amendments

Waste Type	Waste Code	Quantity Limit	Specification	Justification for change
Inert waste type1	N/A	Combined total of 10,000 tonnes per annual period	• Scrap metal and aluminium cans. • Directed to the Materials Recycling Facility Shed Receival Conveyor for sorting or stored temporally until delivery to the Materials Recycling Facility Shed.	No proposed changes
Inert waste type 2	N/A		• Glass, HDPE and PET plastics. • Directed to the **Baling Shed** ~~Materials Recycling Facility Shed Receival Conveyor~~ for **baling** ~~sorting~~ or stored temporally until delivery to the **Baling Shed** ~~Materials Recycling Facility Shed~~.	Waste to be baled instead of sorted.

Waste Type	Waste Code	Quantity Limit	Specification	Justification for change
Putrescible waste	N/A		• Paper and cardboard. • Directed to the **Baling Shed** ~~Materials Recycling Facility Shed Receival Conveyor~~ for **baling** ~~sorting~~ or stored temporally until delivery to the **Baling Shed** ~~Materials Recycling Facility Shed~~.	Waste to be baled instead of sorted.
Waste mineral oils unfit for their intended use	J100	Combined total of ~~10,000~~ **30,000** tonnes per annual period	• Tankered onto the premises and transferred into the Oily Water Tank or **Oil Tank or Grease Trap Tank or Septic tank** ~~Self Bunded Waste Oil Tank~~; or • Delivered onto the premises packaged in Intermediate Bulk Containers (IBC's) or other smaller packages.	To facilitate acceptance of a new waste stream (oily sludge) from customers in the Kimberley.
Waste oil and water mixtures or emulsions, and hydrocarbon and water mixtures or emulsions	J120			
Car and truck wash waters	L100			
Waste from grease traps	K110			
Septage wastes	K210			
Oily Sludge	**J180**			

2.4 Waste Processing

Cleanaway is requesting the following amendments to the waste processing requirements specified in Condition 3 (Table 2: Waste Processing) of the licence, as described in **Table 2-3**. These amendments are required to improve the storage of waste by ensuring no material is stored in the open. With the new process, comingled waste will be received and processed entirely within the building and baled material will be stored in enclosed shipping containers.

Table 2-3: Proposed waste processing amendments

Waste Type	Process	Process Requirements	Justification for change
Inert waste type1	Receipt, handling, ~~mechanical sorting, hand sorting and physical~~ storage **and baling** prior to off-site disposal or recycling.	Only to be receipted, consolidated, stored and handled within the **Baling Shed** ~~a hardstand area capable of preventing surface run-off from entering the hardstand.~~	Baling and storage instead of sorting.
Inert waste type 2			
Putrescible waste			
Waste mineral oils unfit for their intended use	Receipt, handling and physical storage.	Only to be receipted, consolidated, stored and handled within a bunded hardstand area capable of preventing surface run-off from entering the hardstand.	No proposed changes
Waste oil and water mixtures or emulsions, and hydrocarbon and water mixtures or emulsions			
Car and truck wash waters			

Waste Type	Process	Process Requirements	Justification for change
Waste from grease traps			
Septage wastes			

2.5 Containment Infrastructure

Cleanaway is requesting the following amendments to the containment infrastructure specified in Condition 4 (Table 3: Containment Infrastructure) of the licence, as described in **Table 2-4**. The amendments are required as additional containers are required to improve storage, reduce the fire risk from baled product storage and improve the quality of baled product as the material is not stored outside.

Table 2-4: Proposed containment infrastructure amendments

Vessel or Compound (as Shown in Schedule 1)	Material	Requirements	Justification for Proposed Change
Existing Infrastructure			
~~T1 - 55,000 litre above ground tank~~ **T4 – 2,400 L ISO Tank Container**	Waste oily water	Sealed tank within a bunded hardstand area lined to achieve a permeability of less than 10^{-9} m/s or equivalent and capable of preventing surface run-off from entering the bunded hardstand.	Relabelling and change of type of containment infrastructure (see attached premises map, **Appendix A**).
~~T2 - 35,000 litre above ground tank~~ **T3 – 2,400 L ISO Tank Container**	Waste oil	~~Self- bunded tank within a hardstand area lined to achieve a permeability of less than 10^{-9} m/s or equivalent.~~ **Sealed tank within a bunded hardstand area lined to achieve a permeability of less than 10^{-9} m/s or equivalent and capable of preventing surface run-off from entering the bunded hardstand**	Relabelling and change of type of containment infrastructure (see attached premises map, **Appendix A**).
T3- Packaged Transit Area – maximum of 40 IBC's stored at any one time	Waste oil, oily Water or wash water	Bunded hardstand area lined to achieve a permeability of less than 10^{-9} m/s or equivalent and capable of preventing surface run-off from entering the bunded hardstand	No change
T4 - ~~Materials Recycling Facility Shed~~ **Baling Shed**	Inert and putrescible recyclable material	Hardstand area lined to achieve a permeability of less than 10^{-9} m/s or equivalent.	Relabelling (see attached premises map, **Appendix A**). No change to the requirements.
Proposed New Infrastructure			
T2 – 2,400L ISO Tank Container	**K210 Septage wastes**	**Sealed tank within a bunded hardstand area lined to achieve a permeability of less than 10^{-9} m/s or equivalent and capable of preventing surface run-off from entering the bunded hardstand.**	Specifying appropriate containment infrastructure for waste already accepted at the premises.
T1 – 2,400L ISO Tank Container	**Waste from Grease traps K110**	**Sealed tank within a bunded hardstand area lined to achieve a permeability of less than 10^{-9} m/s or equivalent and capable of preventing surface run-off from entering the bunded hardstand.**	Specifying appropriate containment infrastructure for waste already accepted at the premises.

Vessel or Compound (as Shown in Schedule 1)	Material	Requirements	Justification for Proposed Change
Bale Storage	**Baled Inert and putrescible recyclable material**	**Stored in 5 x 40 ft sea containers C1 – C5 (see attached premises map, Appendix A).**	Sea containers are required to improve storage, reduce the fire risk from baled product storage and improve the quality of baled product as the material is not stored outside.

2.6 Site Plans

Updated premises maps are provided in **Appendix A** that show:

1. The premises boundary – no change from the current licence.
2. Layout of buildings – no proposed construction of buildings.
3. Proposed changes in containment infrastructure.
4. Location of existing washdown bay.
5. Location of fire hose reel.

3. Environmental Siting

The premises is located on Lot 25 on Diagram 93915, 18 Archer Street, Minyirr WA 6725, approximately 1.5 km south-west of Broome in the Kimberley region of Western Australia.

Table 3-1 provides a summary of potential sensitive and environmental receptors that may be impacted by the proposed activities. No significant changes to the environmental setting have been identified since the last assessment was carried out by DWER when the licence amended in August 2020.

Table 3-1: Sensitive human and environmental receptors

Receptor Type/Classification	Data Source used in Assessment	Distance and Direction from Prescribed Premises Boundary
Other industrial premises	Aerial imagery	Adjacent to the premises
Habitat Resort, Broome	Aerial imagery	Approximately 395 m south-east
Broome Golf Club	Aerial imagery	Approximately 815 m south-east
Groundwater abstraction bore (181021)	DWER, 2025	Approximately 30 m south-east
Underlying Aquifer: Level 0: Canning Broome Saline Level 1: Canning – Broome Level 2: Canning - Wallal	DWER, 2025	Underlying
Proclaimed Broome Groundwater Resource	DWER-085	Underlying
Surface Water Resource Cape Leveque Coast	DWER-081 DWER-082	At the premises
Bush Fire Prone Area	OBRM-001	At the premises
Heritage places: Aboriginal Heritage Register Identifier: ACH-00012410 Register Name: LINTAPITJIN/LOT 2065PORT DR	City of Broome, 2025	At the premises
Heritage places: Aboriginal Heritage (Historic) (Historic) Identifier: ACH-00030274, ACH-00012886 (Historic) Name: LSC11, ILLANGARAMI	City of Broome, 2025	At the premises

As identified by Table 3-1, the premises is located within a Bush Fire Prone Area. A Fire Assessment was undertaken by Stantec (2025) for the premises (**Appendix D**).

4. Emissions and Discharges

The key emissions and discharges and associated actual or likely pathways during premises operation are detailed in **Table 4-1**. The table also details the proposed control measures to assist in controlling these emissions, where necessary.

Table 4-1: Emissions and Discharges

Emission or Discharge type	Source of Emission or Discharge	Volume and Frequency	Potential Pathways	Proposed Controls	Location on Premises Layout Plan (Appendix A)
Odour	Waste stored and processed at the site	10,000 tonnes per annum (of waste coming into the premises)	Air, wind dispersion	Waste will be handled inside the baling shed	Baling Shed
Potentially contaminated stormwater	Rainfall Leaks from containment infrastructure	Dependent on rainfall (mean rainfall yearly for Broome is 631.6 mm [BOM, 2025])	Runoff, seepage into ground (soil) and groundwater	Sealed surface and bunded areas where hydrocarbons/waste liquid are stored. After rainfall, bunds are emptied of stormwater after rain event using vacuum tanker truck and disposed to a licenced waste treatment plant.	Rear of premises
Contaminated washdown water	Washdown bay	Dependent on the number of vehicles washed down (maximum of 14 vehicles a day)	Runoff, seepage into ground (soil) and groundwater	The washdown bay is fully bunded and has a 5000L underground tank. Vacuum tanker truck to be used to empty the tank contents for disposed to a licenced waste treatment plant.	Rear of premises
Waste and leachate	Emissions through seepage, leaks and spills of waste from storage, process and handling areas	10,000 tonnes per annum (of waste coming into the premises)	Runoff, seepage into ground (soil) and groundwater Litter	Sealed and bunded surface at the premises. Enclosed transfer points.	Rear of premises C1 & C2
Noise	Machinery and vehicle operations	Approximately 14 vehicles a day	Air	The premises is in an industrial area, away from sensitive receptors such as schools, residences	Entire premises shown on Premises Map (**Appendix A**)

Emission or Discharge type	Source of Emission or Discharge	Volume and Frequency	Potential Pathways	Proposed Controls	Location on Premises Layout Plan (Appendix A)
				and childcare facilities.	

5. Limitations

Scope of services

This report ("the report") has been prepared by JBS&G in accordance with the scope of services set out in the contract, or as otherwise agreed, between the Client and JBS&G. In some circumstances, a range of factors such as time, budget, access and/or site disturbance constraints may have limited the scope of services. This report is strictly limited to the matters stated in it and is not to be read as extending, by implication, to any other matter in connection with the matters addressed in it.

Reliance on data

In preparing the report, JBS&G has relied upon data and other information provided by the Client and other individuals and organisations, most of which are referred to in the report ("the data"). Except as otherwise expressly stated in the report, JBS&G has not verified the accuracy or completeness of the data. To the extent that the statements, opinions, facts, information, conclusions and/or recommendations in the report ("conclusions") are based in whole or part on the data, those conclusions are contingent upon the accuracy and completeness of the data. JBS&G has also not attempted to determine whether any material matter has been omitted from the data. JBS&G will not be liable in relation to incorrect conclusions should any data, information or condition be incorrect or have been concealed, withheld, misrepresented or otherwise not fully disclosed to JBS&G. The making of any assumption does not imply that JBS&G has made any enquiry to verify the correctness of that assumption.

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Environmental conclusions

Within the limitations imposed by the scope of services, the preparation of this report has been undertaken and performed in a professional manner, in accordance with generally accepted environmental consulting practices. No other warranty, whether express or implied, is made, including to any third parties, and no liability will be accepted for use or interpretation of this report by any third party.

The advice herein relates only to this project and all results conclusions and recommendations made should be reviewed by a competent person with experience in environmental approvals/management, before being used for any other purpose.

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6. References

Bureau of Meteorology (BOM) (2025). Online Climate Data. Monthly Rainfall - 003003 - Bureau of Meteorology. Accessed September 2025.

City of Broome (2025). Online Mapping (Intramaps). https://broome.spatial.t1cloud.com/spatial/intramaps/?configId=587caba1-53ed-4d91-ba11-45153556f7cf&project=de29158f-20f7-4a8c-9238-c4f8a7f3deab. Accessed August 2025.

The Department of Water and Environmental Regulation (DWER) (2025). https://maps.water.wa.gov.au/#/webmap/register. Accessed August 2025.

The Western Australian Government (2025). SLIP Maps. Locate V5 Accessed September 2025.

Appendix A Premises Maps

Legend

- Premises boundary
- Cadastral boundary (LGATE - 002)

Roads (LGATE - 195)

- Minor road

JBS&G

0 10 metres

Cleanaway Broome
18 Archer St
Minyirr WA 6725

MAP OF THE BOUNDARY OF THE PRESCRIBED PREMISES

Job Number: 70425		Scale 1:500 at A3		
Client: Cleanaway		Coord. Sys. GDA2020 MGA Zone 51		
Drawn By: jcrute	Checked By: T Parker	Version: Rev A	Date: 05-Sep-2025	**FIGURE: 1**

Document Path: C:\Users\jcrute\JBS&G Australia\JBS&G - DCS - Internal - Documents\Projects\Cleanaway\70425 Kimberley RRC Licence Amendment\GIS\02_MapProjects\70425_Kimberley_RRC_License Amendment_R01.aprx
Image Reference: www.nearmap.com© - Imagery Date: 13. May 2025.
Layout: 70425_A3P_01_Premises boundary

Legend

- Premises boundary
- Cadastral boundary (LGATE - 002)

Roads (LGATE - 195)

- Minor road

Storage areas

- Bailing shed
- Container
- Fire hose reel
- Tanks
- Wash Bay

JBS&G

0 10 metres

Job Number: 70425		Scale 1:500 at A3	
Client: Cleanaway		Coord. Sys. GDA2020 MGA Zone 51	
Drawn By: jcrute	Checked By: T Parker	Version: Rev A	Date: 07-Oct-2025

Cleanaway Broome
18 Archer St
Minyirr WA 6725

MAP OF THE STORAGE AREAS

FIGURE: 2

Document Path: C:\Users\jcrute\JBS&G Australia\JBS&G - DCS - Internal - Documents\Projects\Cleanaway\70425 Kimberley RRC Licence Amendment\GIS\02_MapProjects\70425_Kimberley_RRC_License Amendment_R01.aprx
Image Reference: www.nearmap.com© - Imagery Date: 13. May 2025.
Layout: 70425_A3P_02_Storage areas

Appendix B ASIC Company Extract

ASIC
Australian Securities & Investments Commission

Current Company Extract

Name: CLEANAWAY PTY LTD
ACN: 000 164 938

Date/Time: 10 September 2025 AEST 04:56:06 PM

This extract contains information derived from the Australian Securities and Investments Commission's (ASIC) database under section 1274A of the Corporations Act 2001.

Please advise ASIC of any error or omission which you may identify.

EXTRACT

Organisation Details		Document Number
Current Organisation Details		
Name:	CLEANAWAY PTY LTD	029115286
ACN:	000 164 938	
ABN:	79000164938	
Registered in:	New South Wales	
Registration date:	11/11/1955	
Next review date:	31/08/2026	
Name start date:	01/02/2016	
Previous state number:	04230542	
Status:	Registered	
Company type:	Australian Proprietary Company	
Class:	Limited By Shares	
Subclass:	Proprietary Company	

Address Details		Document Number
Current		
Registered address:	Level 4, 441 St Kilda Road, MELBOURNE VIC 3004	2E3108213
Start date:	16/02/2016	
Principal Place Of Business address:	Level 4, 441 St Kilda Road, MELBOURNE VIC 3004	2E3108213
Start date:	01/02/2016	

Contact Address	
Section 146A of the Corporations Act 2001 states 'A contact address is the address to which communications and notices are sent from ASIC to the company'.	
Current	
Address:	Level 4, 441 St Kilda Road, MELBOURNE VIC 3004
Start date:	12/05/2015

Officeholders and Other Roles		Document Number
Director		
Name:	[redacted]	2EDH15148
Address:		
Born:		
Appointment date:	05/03/2021	
Name:	[redacted]	2EWR64768
Address:		
Born:		
Appointment date:	01/03/2022	
Secretary		
Name:	[redacted]	7E6040198
Address:		
Born:		

Appointment date:	03/03/2014	
Name:	[redacted]	1EUQ75223
Address:		
Born:		
Appointment date:	01/11/2020	

Ultimate Holding Company

Name:	CLEANAWAY WASTE MANAGEMENT LIMITED	7E1122870
ACN:	101 155 220	
ABN:	74101155220	

Share Information

Share Structure

Class	Description	Number issued	Total amount paid	Total amount unpaid	Document number
ORD	ORDINARY SHARES	1000000	2000000.00	0.00	00016493D

Members

Note: For each class of shares issued by a proprietary company, ASIC records the details of the top twenty members of the class (based on shareholdings). The details of any other members holding the same number of shares as the twentieth ranked member will also be recorded by ASIC on the database. Where available, historical records show that a member has ceased to be ranked amongst the top twenty members. This may, but does not necessarily mean, that they have ceased to be a member of the company.

Name: RUBUS INTERMEDIATE ONE PTY LIMITED
ACN: 120 361 686
Address: Level 4, 441 St Kilda Road, MELBOURNE VIC 3004

Class	Number held	Beneficially held	Paid	Document number
ORD	1000000	yes	FULLY	2E3196221

Financial Reports

Balance date	Report due date	AGM due date	Extended AGM due	AGM held date	Outstanding	Document number
30/06/1999	31/10/1999			28/10/1999	no	013771831
30/06/2000	31/10/2000			29/09/2000	no	016182622
30/06/2001	31/10/2001			22/11/2001	no	017672885
30/06/2002	31/10/2002				no	018554968
30/06/2003	31/10/2003			31/10/2003	no	019748918
30/06/2004	31/10/2004				no	020729298
30/06/2005	31/10/2005				no	022466117

30/06/2006	30/11/2006				no	023515193

Documents

Note: Where no Date Processed is shown, the document in question has not been processed. In these instances care should be taken in using information that may be updated by the document when it is processed. Where the Date Processed is shown but there is a zero under No Pages, the document has been processed but a copy is not yet available.

Date received	Form type	Date processed	Number of pages	Effective date	Document number
26/04/2023	352 Assumption Deed Relating To Class Order	10/05/2023	24	26/04/2023	031066694
27/11/2023	484E Change To Company Details Appointment Or Cessation Of A Company Officeholder	27/11/2023	2	27/11/2023	7ECL85655

*****End of Extract of 3 Pages*****

Appendix C Proposed Fee Calculation

Licence amendment fee components: premises component

Category	Description	Capacity	Capacity Range
61	Liquid waste facility	30,000 tonnes per annual period	30,000 tonnes per annual period
62	Solid waste depot	10,000 tonnes per annual period	10,000 tonnes per annual period

Licence amendment fee components:

Category and Capacity	Unit	Unit Value	Fee
61 - Liquid waste facility: More than 10 000 but not more than 100 000 tonnes per year	45	[redacted]	
62 - Solid waste depot: More than 5 000 tonnes per year	40		
Total			

Licence amendment fee

Total Licence Amendment Fee
[redacted]

Appendix D Fire Risk Assessment Report

Broome MRF Upgrade
Fire Risk Assessment Report

17 September 2025

Ref: 301252088

PREPARED FOR:

[redacted]

Cleanaway Pty Ltd

PREPARED BY:

Stephen King

Stantec

Revision Schedule

Revision No.	Date	Description	Prepared by	Reviewed	Approved
P01	2025.01.13	Issue for Client Review	[redacted]		
P02	2025.02.25	Amended document to account for amendments to existing facility in lieu of constructing a new structure			
C01	2025.04.03	Issue for DFES workshop			
C02	2025.06.12	Update post DFES workshop, includes two options: • Option 1 – storage reconfiguration • Option 2 - increased storage			
C03	2025.09.17	Update to reflect process reconfiguration			

Disclaimer

The conclusions in the report are Stantec's professional opinion, as of the time of the report, and concerning the scope described in the report. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. The report relates solely to the specific project for which Stantec was retained and the stated purpose for which the report was prepared. The report is not to be used or relied on for any variation or extension of the project, or for any other project or purpose, and any unauthorised use or reliance is at the recipient's own risk.

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Contents

Abbreviations

Abbreviations	Full Name
AS	Australian Standard
BCA	Building Code of Australia
CRWM	Co-mingled Recyclable Waste Material
DFES	Department of Fire & Emergency Services
DWER	Department of Water and Environmental Regulation
L/s	Litres per second (flow rate)
FRA	Fire Risk Assessment
FEMP	Fire & Emergency Management Plan
FIP	Fire Indicator Panel (referred to as “main FDCIE” in current AS 1670.1:2018)
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
IR	Infra-red
MCP	Manual Call Point
SFIP	Sub-Fire Indicator Panel
VESDA	Very Early Smoke Detection Apparatus (trade name for product supplied by Xtralis)

1. Introduction

1.1 Purpose

Stantec have been engaged by Cleanaway Pty Ltd to facilitate a Fire Risk Assessment (FRA) process for the upgrade of the existing Cleanaway site at 18 Archer Street, Broome WA, 6725, as part of the Licence requirements by the Department of Water and Environmental Regulation (DWER). The proposal relates to the amendments to the existing processing shed and the rearrangement of equipment.

The Fire Risk Assessment Report identifies the likely ignition and fuel sources expected to be present in the facility, the anticipated impact of different fire events, potential physical and procedural control measures available, and outlines the proposed outcomes for the building to achieve an acceptable level of risk agreed by key stakeholders. Earlier revisions of this report and engagement with DFES on 29 April 2025 considered the fire risk associated with two operational scenarios involving changes to onsite storage:

- Option 1: Revised Material Recovery Facility with modified onsite storage configuration
- Option 2: Revised Material Recovery Facility with increased and modified onsite storage

Subsequently, the scope of the project has been amended to convert the existing MRF to a Baling Shed / Transfer Station for baling of co-mingled waste with on-site storage at the rear of the site prior to transport to off-site processing facilities.

1.2 Stakeholders

The key Internal and External Stakeholders for the project comprise the following people and organisations:

Table 1-1: Fire Risk Assessment Report Team and Stakeholders

Organisation		Person/s	Role
Cleanaway Pty Ltd		[redacted]	Client Representative
Department of Fire & Emergency Services	Built Environment Branch Fire Safety Officers		Fire Brigade Advice
Stantec			Fire Engineer

Stantec wishes to acknowledge the assistance provided by the Fire Risk Assessment Report team in preparing this document.

1.3 Sources of Information

The following primary sources of information have been used in the preparation of this document, in addition to other documents identified in Section 7:

- Building Code of Australia, Volume One, 2022 (BCA) [1]
- DFES Guidance Note: GN:04, Fire Prevention and Management in a Materials Recycling Facility [2]
- EPA Victoria [3] and Fire and Rescue NSW [4] guidelines for fire safety in waste facilities
- Site information regarding existing fire protection systems and operation
- Fire risk assessment briefing and review session with Stantec, Cleanaway Pty Ltd and Department of Fire & Emergency Services Built Environment Branch on *29 April 2025*, refer to minutes included in Appendix A

1.4 Qualifications and Limitations

This report has been prepared in accordance with recommended standards and practices generally accepted by building design professionals and as recommended in the International Fire Engineering Guidelines [5], and the relevant State Government publications applicable to this type of facility. The following subsections outline the assumptions, limitations and simplifications which apply to the assessments.

1.4.1 Limitations

The following limitations will apply to the Fire Risk Assessment Report undertaken.

- The assessment does not assess property protection and associated business continuity or asset management issues. The assessment is confined to life safety issues.
- The report assumes a complete and operational building and does not address protection of the building during construction, renovation or demolition.
- The Fire Risk Assessment Report is specific to this project. The findings and outcomes of this document shall not be used outside the scope of this project. This report is not a detailed assessment of the requirements under AS 1940:2017 [6] associated with on-site flammable and combustible liquid storage.
- The analysis is limited to the assessment of single / accidental fires as intended by the BCA. Multiple fires, severe acts of malice intent, terrorism, sabotage, or by wilful interference with fire and life safety systems are considered outside the scope of this assessment.
- The building is considered to be compliant with the requirements of the BCA, by way of a combination of compliance with the Deemed-to-Satisfy provisions of the BCA applicable at the time of design, and a number of Performance Solutions to address deviations from the Deemed-to-Satisfy provisions, presented in a Fire Engineering Report prepared by Intuitive Consulting Engineering Solutions.

1.4.2 Assumptions

The primary assumptions used in order to prepare the fire engineering strategy are outlined below. Assumptions are based on practices nominated in the International Fire Engineering Guidelines [5] and incorporate practical simplifications in order to maintain a simple analysis that is representative of a real fire and life safety situation. Assumptions are:

- Only one fire will occur at a time.
- All essential services, equipment services and strategies will be maintained to the operational capacity to which they were designed and will correctly function during a fire situation.
- Prevention of arson, sabotage, and acts of malice are considered to be addressed by security systems and management procedures for the facility.
- Occupants will become aware of the fire through fire cues from the alarm system, respond to the cue, cope with the cue and attempt to avoid the fire, as intended by the BCA for safe evacuation.

A copy of the report will be provided to all stakeholders, in particular the building owners and managers to ensure they are aware that the relevant limitations and to confirm their ongoing maintenance and training obligations.

Staff are expected to be familiar with the location of exits and egress routes, the fire safety systems and the alarm systems/notifications as required in accordance with Regulation 3.10 of the Occupational Safety and Health Regulations 1996, and Australian Standard AS 3745 Planning for Emergencies in Facilities [7].

2. Site Description

2.1 Building Details

The existing Cleanaway Broome site includes a number of buildings including the existing Material Recovery Facility (MRF) and a Finished Bales Storage Shed as shown in Figure 2-1. The existing MRF building is approximately 255 m^2 and the storage shed has a capacity of approximately 50 m^3 for the finished bales storage. The site processes an estimated 30 tons of waste weekly, with a storage capacity of the finished product estimated to be 40 tons.

This Fire Risk Assessment Report is for the modification of the existing Material Recovery Facility to be converted to a Baling Shed. As per the Building Code of Australia (BCA) classification, the proposed building would be classified as a Class 8 occupancy. Due to the facility potentially presenting special problems of firefighting, due to the nature of the contents and processes, special hazard provisions are considered per BCA Clause E1D17.

Figure 2-1 - Site Configuration

The existing building / proposed Baling Shed building layout is a rectangular space measuring approximately 16 metres by 15.5 metres and will be provided with new 2.4-metre-high push walls along two sides of the building, at the rear and opposite the baling machine. Vehicle access is provided from the west if the building via a sliding door and a roller shutter, with bales extracted through a roller shutter door for transfer to storage containers via forklift.

Along the north of the building, the baling process occurs equipment is arranged in sequence from right to left as shown in Figure 2-2, starting with a new feed hopper via incline conveyor to the baler. A removable barrier separates this equipment line from the main tipping floor below.

The central portion of the building comprises the tipping floor with an approximate area of 100 m^2, with an identified stockpile area for a nominal stockpile of approximately 50 m^3, bounded by the push walls at the south and east of the building. Personnel access to the space behind the push walls is provided via the southern face of the building, to allow staff to carry out inspections and tidy up any material which may have tipped over the push walls.

Operationally, cardboard and plastic are placed into the feed hopper by forklift or loader, which is carried along the incline conveyor into the baler for compaction. Bales are removed by forklift through the western roller shutter for transfer to the storage containers.

The building layout for the proposed baling shed is as shown in Figure 2-2.

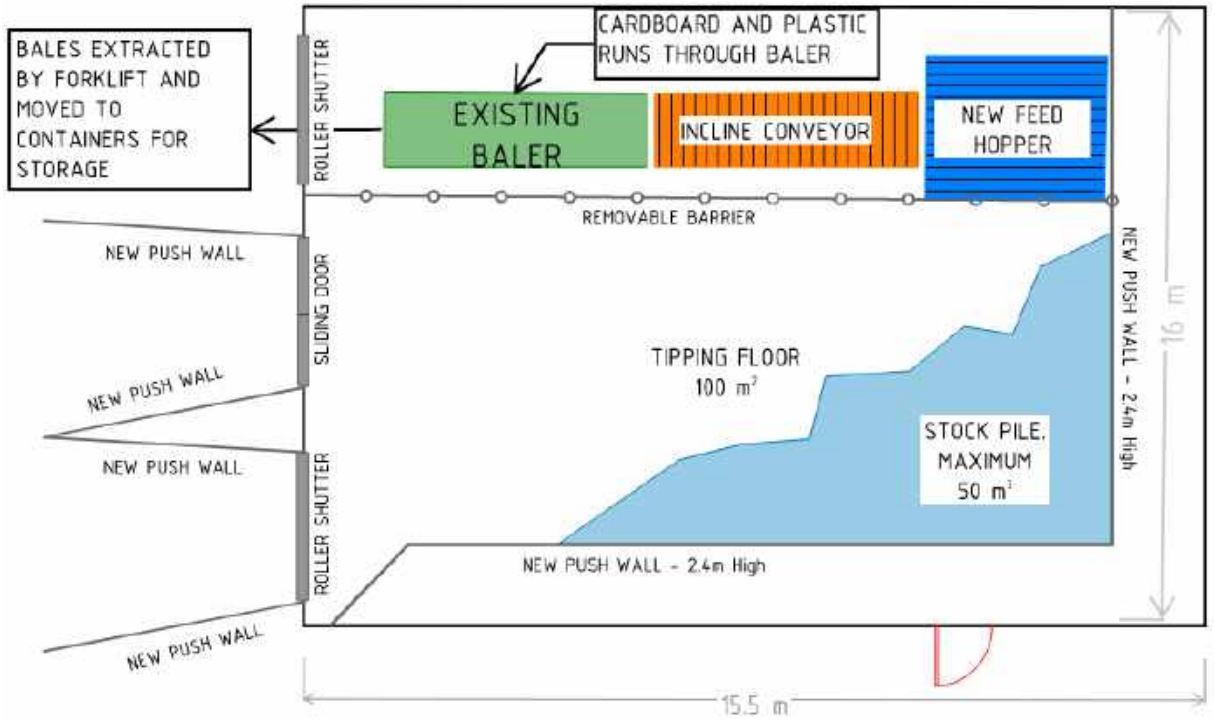

Figure 2-2: Existing Structure - Proposed Baling Shed – Plan View

2.2 Occupant Numbers and Characteristics

The site operates between 6:00 am and 6:00 pm, seven days a week, including inbound and outbound deliveries and processing of waste.

Machinery operators and static staff are provided with two-way communication via radio.

Staff numbers during these hours include the following personnel:

- 1 mobile and static equipment operator in the waste transfer station who operates the front-end loader and baler
- 2 maintenance staff

Due to the nature of the work undertaken, staff are able bodied and are provided with job specific and generalised emergency response training.

2.3 Active Fire Protection Systems

The BCA Deemed-to-Satisfy provisions (Clause E1D13) require additional active fire protection systems in fire compartments which exceed 2,000 m^2 floor area or 12,000 m^3 volume, where combustible goods with an aggregate volume exceeding 1,000 m^3 and stored higher than 4 m. Similarly, DFES Guidance Note: GN04 and the FRNSW Fire Safety Guidelines in Waste Facilities recommend fire sprinkler protection to waste management facilities with a floor area exceeding 1,000 m^2.

The floor area for the existing building is approximately 255 m^2 and does not trigger the requirement or recommendation for fire sprinkler protection under the BCA Deemed-to-Satisfy provisions or fire brigade guidance documents.

Further, as the floor area is less than 500 m^2, the building does not require fire hydrant protection under the BCA Deemed-to-Satisfy provisions via Clause E1D2. The Deemed-to-Satisfy provisions expect that in the event of a fire in a small building, the attending fire brigade would utilise street hydrants connected to the municipal water supply.

The DFES Guidance Note and the FRNSW Guidelines require both require fire hydrant protection to non-sprinklered buildings and Open Yards used for stockpiles as given in Table 2-1. Each document includes the same table.

Table 2-1: Fire Hydrant Requirement

Fire Compartment Floor Area (non-sprinklered building)	Area of Open Yard (for stockpiles)	Number of fire hydrants required to flow
≤ 500 m^2	≤ 3,000 m^2	2
> 500 m^2 ≤ 5,000 m^2	> 3,000 m^2 ≤ 9,000 m^2	3
> 5,000 m^2 ≤ 10,000 m^2	> 9,000 m^2 ≤ 27,000 m^2	4
> 10,000 m^2	> 27,000 m^2	5 or more

The Baling Shed is to be provided with Fire Detection and Alarm system to warn all occupants of the fire and to evacuate the facility, including the provision of manual call points.

Fire hose reels and portable fire extinguishers are to be provided throughout the facility.

2.4 Facility Operation

2.4.1 Large Fixed and Mobile Equipment

The operations for the site include the following equipment:

- Garbage Trucks, 6-tonne Mini Loader
- A new feed hopper
- An inclined conveyor that feeds the automatic baler with co-mingled wastes
- Automatic baler with manual ties on the northwestern side (internal)
- Battery / electric / LP Gas operated forklift,
- 1 x front-end loader for loading of compactor conveyor and baler feed hopper

2.4.2 Waste Transfer / Baling Process

The process within the proposed Baling Shed is as described below:

1. Baling Shed (Tipping Floor):

   The co-mingled waste is unloaded from the garbage trucks in front of the building and transferred to the tipping floor by loaders. The storage volume on tipping floor area will be limited to a maximum of 50 m^3 and the received co-mingled waste will be processed / baled the same day

2. Feed Hopper

   Excavators, compact track loaders, or forklifts are used on the tipping floor to transfer the materials to the feed hopper at the base of the conveyor.

3. Conveyor System:

   A belt conveyor, approximately 12.5 metres in length, is used to transport materials to the baler.

4. Baling:

   The baler compresses the co-mingled waste into compacted bales, which are tied and extruded towards the front of the building.

   Completed bales are transferred to dedicated 40’ storage containers at the rear of the site, and transferred to trucks for removal and off-site processing.

5. Shipment Station:

   Forklifts are used to remove the finished bales to storage containers located at the rear end of the site for storage and outbound delivery.

3. Risk Assessment Process

3.1 Context and Objectives

The primary objective of this Fire Risk Assessment Report is to determine and agree between Stakeholders that the level of residual risk due to fire is acceptable, based on a site-specific assessment, with consideration of the physical features of the site and the fire safety provisions. The process includes identification of potential fire risks present at the facility, identifying various control measures available to reduce the risk where required, including elimination through physical construction, implementation of regular management process, and identification personnel response in the event of a fire.

The Fire Risk Assessment Report, and outcomes of the assessment, including the development of a Fire and Emergency Management Plan (FEMP) and DFES endorsement of the process and FEMP form part of the approval documentation for the Licence amendment with DWER.

3.2 Risk Rating Matrix

The overall "Risk Rating" for a particular scenario is determined based on the combination of the "Likelihood" of an event occurring, and the "Consequence" of the outcome of the event.

Table 3-1: Fire Risk Rating

Risk Rating Class						
		Consequence				
Likelihood		1	2	3	4	5
		INSIGNIFICANT	MINOR	MODERATE	SIGNIFICANT	MAJOR
A	ALMOST CERTAIN	MODERATE	HIGH	HIGH	EXTREME	EXTREME
B	LIKELY	MODERATE	MODERATE	HIGH	HIGH	EXTREME
C	POSSIBLE	LOW	MODERATE	MODERATE	HIGH	HIGH
D	UNLIKELY	LOW	LOW	MODERATE	MODERATE	HIGH
E	RARE	LOW	LOW	LOW	MODERATE	MODERATE

3.3 Likelihood Ratings

The "Likelihood" for difference scenarios occurring, as used in the risk assessment are presented below, based on a qualitative description of likelihood.

Table 3-2: Definition of Likelihood used for Risk Assessment

Almost certain:	A	Will occur during the lifetime of the building, regardless of maintenance or human error
Likely:	B	Strong possibility that the event will occur during the lifetime of the building
Moderate:	C	Probable that the event will occur during the lifetime of the building
Unlikely:	D	Not expected to occur during the lifetime of the facility based on reasonable standards of maintenance and management in use
Rare:	E	Unlikely that conditions will arise that would result in the event occurring during the lifetime of the building

3.4 Consequence Ratings

The “Consequence” for different outcomes are outlined below in Table 3-3 and Table 3-4 below, however on the basis that the building contains few occupants and are provided with egress points which are within the distances prescribed under the BCA Deemed-to-Satisfy provisions, life safety considerations are not directly included in the risk assessment.

Table 3-3: Categorisation of Consequence, Life Safety Considerations

Major:	5	Fatality of persons beyond the area of fire origin
Significant:	4	Multiple injuries to persons beyond the area of fire origin requiring emergency medical treatment and hospitalisation
Moderate:	3	Injuries to persons beyond the area of fire origin requiring emergency services assistance
Minor:	2	Triage / first aid to persons beyond the area of fire origin
Insignificant:	1	Inconvenience to persons beyond the area of fire origin (i.e. evacuation required)

Table 3-4: Categorisation of Consequence, Property Protection Considerations

Major:	5	Full replacement of building, spread to adjoining properties
Significant:	4	Full refurbishment or replacement of the building
Moderate:	3	Replacement of fixed equipment or large mobile plant
Minor:	2	Facility offline for short period for minor repairs or investigation
Insignificant:	1	Localised damage, operations resume within one business day

3.5 Acceptance Criteria

Table 3-5 defines the basis on which the need for additional treatment is determined, presenting a risk level which is considered acceptable to relevant Stakeholders. The risk rating will determine whether additional treatments are required in order to reduce the risk of a particular scenario / outcome.

Table 3-5: Risk Treatment Priority

Treatment Priority	
Risk Rating	**Treatment**
EXTREME	Immediate attention required
HIGH	Additional controls required to reduce the risk to moderate or below
MODERATE	Maximum acceptable level of risk. Additional controls may be implemented to improve.
LOW	Risks managed by routine procedures.

4. Risk Identification Process

4.1 Ignition Sources

Ignition sources which have been identified for different fire scenarios at the Baling Shed are outlined below, with an outline of the potential likelihood based on configuration of equipment.

- Pressure or puncture of batteries or small electronic equipment containing batteries.
- Friction from conveyor machinery.
- Vehicle engine heat or friction from waste movers.
- Radiant heat from another fire source (i.e. spread between areas), or airborne embers from an external fire.
- Smoking.
- Faulty electrical wires and equipment faults

4.2 Fuel Sources

Potential fuel sources identified within the facility include the following:

- Primary waste pile, contaminated / unsorted recyclables and general waste
  - Individual items at surface
  - Buried or not immediately separable
- Vehicle fire
  - Delivery truck
  - Forklift, front-end loader, utility vehicles
- Materials on conveyors
- Baled materials
- Dry and unmanaged vegetation
- Flammable liquid fuel storage for the mobile equipment

4.3 Control Measures Available

4.3.1 Permanent / Fixed Controls

The following permanent fixed control measures are available to mitigate against ignition or fire spread:

- Pile dimensions limited by the space available in the building and push wall separation between incline conveyor and baler discharge
- Separation between motor and belts on conveyors
- Sea containers for storage of bales

4.3.2 Systems and Equipment for Intervention

The following systems and equipment have been considered as part of the risk assessment as potential controls based on existing provisions or potential site upgrades to identify the occurrence of a fire and undertake intervention:

- Fire hydrant system in accordance with AS 2419.1 based on street hydrants or potential on-site feed or attack hydrants
- Fire extinguishers in accordance with AS 2444
- Spill kits for response to flammable or hazardous liquid spills with spill response procedures in place
- Front-end loader with grapple available for removal of flaming objects or separation of piles
- Provision of on-site water monitors for wet-down burning products or pre-wet other fuel loads
- Fire sprinkler protection or ceiling level pre-wetting sprinkler system

4.3.3 Management Procedures and Personnel Response

Management procedures in place, or available, to limit potential size or impact of a fire include the following:

- The material recovery facility is designated as non-smoking sites for employees, contractors and visitors.
- Adherence to a vehicle speed limit of 20 km/hr within the facility
- Pile size limitations. Pile volumes will be limited to a volume of less than 50 m3 and a maximum height of 4 metres in accordance with the limitations of BCA E1D13 and Clause 7.3.1 of the DFES GN:04 Guidance Note [2]
- Provision of a “Quarantine” area external to the building for removal of waste in the event of a fire
- Adherence to storage limitations.

Response by personnel in the event of a fire is a critical mitigation measure to control potential fire spread. The emergency response procedures are to include the following:

- Removal of burning material using mobile equipment to a location achieving a minimum separation distance of 10 metres from the pile outside the main structure
- Use of hose reels to wet down burning products, or pre-wet other fuel loads
- Use of on-site water monitors to wet down burning products or pre-wet other fuel loads – if provided
- Use of ceiling level open sprinklers to wet down burning products or pre-wet other fuel loads – if provided
- Monitor and ensure separation of piles to comply with defined storage limits
- Fire warden training, including the use of portable fire extinguishers and identification of fire events
- Maintaining clear pathways for egress and firefighter access
- Use of two-way radios to stop processing in the facility in the event of a fire
- Process all material prior to leaving the facility such that no unprocessed pile is left when the facility is unattended.
- Use of Manual Call Points to initiate Fire Brigade response prior to potential thermal detector activation

Emergency Procedures are to be developed and documented for the site in accordance with the recommended outcomes of the Fire Risk Assessment.

4.3.4 Control Measures to Mitigate Stormwater Contamination

Kerbing will be provided to the perimeter of the concrete pad for the MRF structure to limit contamination of stormwater from a fire event, providing time for setup of temporary bunding in the event of an extended fire.

5. Risk Assessment

The following table presents the qualitative risk assessment as it applies to the Baling Shed. The table identifies the potential fire hazards that exist with the building and operation based on the existing control measures and operation. The table presents the risk rating based on qualitative inputs as outlined in Table 3-2, Table 3-3, and Table 3-4 to determine the risk rating in accordance with Table 3-1, and identifies the risk reduction associated with various control measures, presented as “post-treatment” risk ratings. This risk rating includes a score based on multiplication of the consequence (1-5) and likelihood (1-5) for a given scenario, which demonstrates that some scenarios include a reduction in risk whilst remaining within the same risk classification.

Table 5-1: Risk Assessment

Scenario	Location and Time	Fuel Load or Fire Source	Extent of Fire Growth	Ignition Source(s)	Physical Control Measures	Management Control Measures	Site Personnel Intervention	Fire Brigade Intervention	Likelihood	Consequence	Risk Rating	Additional Controls	Residual Likelihood	Residual Consequence	Residual Risk Rating
1	Baling Shed - Tipping Operation Normal operating hours	Tipping Vehicle	Tipping Vehicle Fire - confined to vehicle	Electrical Failure, Mechanical failure, Brake failure, Absence of spark arrestors	Push walls in front of the sliding door and roller shutter door CCTV Security coverage	Monitoring vehicle as they enter facility. Vehicle speed limit of 20km/hr enforced within the facility. Designated as a No Smoking/No Open Flame Zone Ensure the use of vehicles fitted with spark arrestors	Use of appropriate (ABE type) fire extinguisher for incipient vehicle fire Removal of combustible material from near the vehicle on fire.	Use of street hydrants and fire appliance to apply water to fire.	Moderate (C)	Moderate (3)	Moderate (9)	Ensure compliance with management controls and personnel response Ensure proper housekeeping throughout the facility Provision of the Fire Hose Reel system in accordance with AS 2441 as a first attack fire-fighting system.	Unlikely (D)	Minor (2)	Low (4)
2	Baling Shed Normal operating hours	Waste Pile, Metals like cans with combustible / flammable contaminants, Rags and waste with oil/paint residues	Confined to initial ignition source and localised fuel	Batteries, flares, Friction from Waste movers, Spontaneous combustion of the waste pile	Single pile limited to 50 m^3. Push walls of 2.4m high Volume of waste processed per week is approximately 30 ton	Nil, materials co-mingled with general waste (single pile). Operator training and procedures to minimise scraping on ground Education process to limit likelihood of battery as ignition source.	Removal of burning material from pile to remote area, external to building. Call Fire Brigade on 000	Use of street hydrants and fire appliance to apply water to fire.	Moderate (C)	Moderate (3)	Moderate (9)	Use of an appropriate (ABE type) fire extinguisher for an incipient waste pile fire at the Transfer station / Tipping Floor Provision of Fire Hose Reel system in accordance with AS 2441 as a first attack fire-fighting system. The volume of waste processed within the facility is not to exceed beyond the Licenced quantity. The sliding door and the roller shutter door is to be kept open during operational hours.	Moderate (C)	Minor (2)	Moderate (6)
3	Mechanical Conveyor System - Baling Shed Normal operating hours	Waste Pile on Conveyor	Confined to initial ignition source and localised fuel	Friction from Waste movers, Friction from conveyor belt slipping and misalignment, Overheated motors or drive units	Single pile limited to 50 m^3.	Operator training and procedures to minimise scraping on tipping station	Removal of burning material from pile to remote area, external to building. Call Fire Brigade on 000	Use of street hydrants and fire appliance to apply water to fire.	Moderate (C)	Minor (2)	Moderate (6)	Rubber toe to be fitted to Waste movers to reduce potential for sparking. Emergency Stop Button for the incline Mechanical Conveyors. Weatherproof Manual call point to be installed at the External wall of the Baling Shed building.	Unlikely (D)	Minor (2)	Low (4)

Scenario	Location and Time	Fuel Load or Fire Source	Extent of Fire Growth	Ignition Source(s)	Physical Control Measures	Management Control Measures	Site Personnel Intervention	Fire Brigade Intervention	Likelihood	Consequence	Risk Rating	Additional Controls	Residual Likelihood	Residual Consequence	Residual Risk Rating
4	Baling Shed Normal operating hours	Waste Pile on the Conveyor	Spread to involve significant portion of pile, beyond initial object. Unable to be removed safely before spread, unnoticed or fast-growing.	Batteries, flares Friction from conveyor belt slipping and misalignment, Overheated motors or drive units Faulty Electrical Wires and poorly maintained equipment	Emergency Stop Button for the Mechanical Conveyors Fire Detection System within the building	Nil, materials co-mingled with general waste (single pile). Education process to limit likelihood of battery as ignition source. Stockpile located on opposite side of Baling Shed from baling machine and conveyor.	Raise alert to other staff. Remove uninvolved material from vicinity of fire. Use of Appropriate fire extinguisher for fire extinguishment	Use of street hydrants and fire appliance to apply water to fire.	Moderate (C)	Moderate (3)	Moderate (9)	Provide Fire Hosereel system for fire brigade use and staff use to apply cooling water to the fire and dampen surrounding areas. Provide Direct Brigade Alarm connection for fire detection system. Manual call points to be provided in clearly visible areas so that staff can initiate early alarm of fire. Interlinking the fire detection and alarm system with the conveyor system, enabling conveyor shutdown when fire is detected.	Moderate (C)	Minor (2)	Moderate (6)
5	Baling Shed After hours	Waste on the Conveyor	Involvement of all materials on conveyor. Unable to be removed safely before spread, unnoticed or fast-growing.	Batteries, flares Friction from Front-end Loader Spontaneous combustion of the waste pile	Emergency Stop Button	Baling Shed to be kept clear at end of each day.	Nil. Limited staff on site.	Use of street hydrants and fire appliance to apply water to fire.	Unlikely (D)	Moderate (3)	Moderate (6)	Ensure management controls and staff actions to ensure that all waste will be processed prior to leaving the site/during the shift hours. Ensure that no waste are stockpiled overnight external to the building and within the building. All waste processed is to be moved to the containerised storage at the rear of the site	Rare (E)	Minor (2)	Low (2)
6	Baling Shed After hours	Waste Pile at the Tipping Floor	Spread to involve significant portion of pile, beyond initial object. Unable to be removed safely before spread, unnoticed or fast-growing.	Batteries, flares Friction from Front-end Loader Spontaneous combustion of the waste pile	Pile limited to 50 m^3. Push walls to rear of pile and clear space around front and side of pile.	Operational Hours 6am to 6pm No waste will be stock piled overnight Operator training on waste handling on the tipping Floor	Nil. Limited staff on site.	Use of street hydrants and fire appliance to apply water to fire.	Unlikely (D)	Moderate (3)	Moderate (6)	Ensure management controls and staff actions to ensure staff remain on site for minimum period following final vehicle / waste movements. Ensure that no waste are stockpiled overnight external to the building and within the building. If pile is retained, underate inspection of pile with IR camera for hot spots prior to leaving site, if any waste is stockpiled at the tipping floor. Provide fire detection to building to initiate automatic fire brigade notification. Provide containerised storage of the finished product at the rear of the site	Unlikely (D)	Minor (2)	Low (4)

Scenario	Location and Time	Fuel Load or Fire Source	Extent of Fire Growth	Ignition Source(s)	Physical Control Measures	Management Control Measures	Site Personnel Intervention	Fire Brigade Intervention	Likelihood	Consequence	Risk Rating	Additional Controls	Residual Likelihood	Residual Consequence	Residual Risk Rating
7	Baling Shed Normal operating hours	Waste in Baler Feed Hopper	Involvement of all materials in hopper and feed conveyor. Loss of baler.	Friction within the moving components of the hopper Friction from conveyor belts Ignited cardboard waste prior to loading	Nil	Visual monitoring of materials by operator to avoid loading of burning materials. Operator training and procedures to monitor condition of baler and shutoff in the early stages of a fire.	Removal of burning material from pile to remote area, external to building. Use of on-site equipment for pre-wetting of materials or increased extinguishing capacity.	Use of street hydrants and fire appliance to apply water to fire.	Unlikely (D)	Significant (4)	Moderate (8)	Provision of on-site Fire Hose reel and staff use to apply cooling water to the fire and dampen surrounding areas. The sliding door and the roller shutter door is to be kept open during operational hours. If intended to be closed, the sliding door is to be able to be opened manually under a force of not more than 110N	Unlikely (D)	Minor (2)	Low (4)
8	Baling Shed Normal hours	Baled waste	Spread to involve significant portion of pile, beyond initial object. Unable to be removed safely before spread, unnoticed or fast-growing.	Batteries, flares Friction from Front-end Loader	Single pile limited to 50 m^3.	Operational Hours 6am to 6pm Education process to limit likelihood of battery as ignition source. Movement of waste to	Nil. Limited staff on site.	Use of street hydrants and fire appliance to apply water to fire.	Moderate (C)	Significant (4)	High (12)	All waste to be processed prior to leaving site. No waste pile to be left open overnight. Include inspection of pile with IR camera for hot spots prior to leaving site. Baled waste to be moved to the designated containerised storage allocated for each waste type. Use of effective signage designating waste type and quantity to be stored in each container.	Unlikely (D)	Minor (2)	Low (4)
9	Baling Shed Normal operating hours	Embers from bushfire causing ignition of material in Baling Shed building.	Involvement of all materials in Baling Shed structure, loss of equipment and structure.	Embers from bushfire	Building structure designed to minimise accumulation of debris.	Fire break noted along rear of property. Ensure fire break is maintained.	Monitor bushfire smoke and ember path where fire does not pose a danger to personnel.	Use of street hydrants and fire appliance to apply water to fire.	Moderate (C)	Moderate (3)	Moderate (9)	Cease all activities and Close main doors to the processing building/Baling Shed in the event of a bushfire to reduce the potential for embers causing ignition inside the building. Close the doors of the products storage containers in the event of a bushfire alert.	Unlikely (D)	Moderate (3)	Moderate (6)
10	Baling Shed After hours	Embers from bushfire causing ignition of material in Baling Shed building.	Involvement of all materials in MRF structure, loss of equipment and structure.	Embers from bushfire	Building structure designed to minimise accumulation of debris. Doors closed after hours.	Fire break noted along rear of property. Ensure fire break is maintained. Community warnings and emergency warning informations	Nil. Limited staff on site.	Use of street hydrants and fire appliance to apply water to fire.	Unlikely (D)	Moderate (3)	Moderate (6)	Close main doors to processing building and the product storage containers in the event of a bushfire alert and at the end of the day shift to reduce the potential for embers causing ignition inside the building and the storage areas. All waste to be processed prior to leaving site. reducing the amount of fuel load within the building. No waste piles to be left open	Unlikely (D)	Moderate (3)	Moderate (6)

Scenario	Location and Time	Fuel Load or Fire Source	Extent of Fire Growth	Ignition Source(s)	Physical Control Measures	Management Control Measures	Site Personnel Intervention	Fire Brigade Intervention	Likelihood	Consequence	Risk Rating	Additional Controls	Residual Likelihood	Residual Consequence	Residual Risk Rating
11	Bale Storage Normal Operating Hours After hours	Loose storage of Contaminated baled waste	Involvement of all materials witin the storage area	Residual heat from baling or transfer (e.g. friction from baling wire on ground)	Nil	Nil	Use of on-site equipment for pre-wetting of materials or increased extinguishing capacity. Call fire brigade on 000	Use of street hydrants and fire appliance to apply water to fire.	Moderate (C)	Moderate (3)	Moderate (9)	Fire Protection strategy based on containerised storage in lieu of loose storage. Provide Fire Hosereel system for staff use to apply cooling water to the fire and dampen surrounding areas. Use of effective signage designating waste type and quantity to be stored in each container. Provision of a small aperture on the container wall for the direct application of the water to tackle the fire by flooding without opening the container doors.	Unlikely (D)	Minor (2)	Low (4)
12	Storage of finished products After hours	Loose storage of Contaminated baled waste	Involvement of all materials witin the storage area	Spontaneous combustion of the baled waste	Nil	Nil	Nil. Limited staff on site. Call fire brigade on 000	Use of street hydrants and fire appliance to apply water to fire.	Moderate (C)	Moderate (3)	Moderate (9)	Fire Protection strategy based on containerised storage in lieu of loose storage. Close the doors of the products storage containers after each shift Provision of a small aperture on the container wall for the direct application of the water to tackle the fire by flooding without opening the container doors.	Unlikely (D)	Minor (2)	Low (4)

6. Outcomes of Assessment

6.1 Physical Characteristics

6.1.1 Site or Building Configuration

The following physical characteristics are to be provided to support the fire risk assessment outcomes:

- Provision of permanent markings or physical barriers for management of pile size.
- Maintenance of boundary vegetation and weed control

6.1.2 Systems and Equipment

The following fire safety systems and equipment are to be provided:

- Provision of on-site Fire Hose Reel system in accordance with AS 2441 as a first attack fire-fighting system.
- Provision of containerised storage for the finished products, thus limiting the spread of fire between the storage, refer Figure 6-1. Each container shall be provided with a small aperture (nominally 450 mm x 450 mm) at each end of the container, allowing direct application of water by the fire service to combat the fire by flooding without the need to open the container doors.
- Portable fire extinguishers in accordance with the requirements of AS 2444.
- Provide on-site IR camera(s) to allow monitoring of any unprocessed waste piles within the feed hopper and the conveyors prior to leaving site.
- Provision of rubber toe fitted to waste movers/ front end loader bucket to reduce the potential for sparking while loading and unloading of the waste materials and the baled waste.
- Interlinking the fire detection and alarm system with the conveyor system, enabling conveyor shutdown when fire is detected.
- Weatherproof manual call point easily accessible from the waste transfer station on the external wall of the Baling Shed

In addition to the measures provided to support the baling and containerised co-mingled waste storage, portable fire extinguishers are required in order to satisfy the fire protection equipment provisions under AS 1940:2017 [6] for the combustible liquid storage in ISO containers at the rear of the site. At least two 9 kg powder-type extinguishers are to be provided, with a maximum travel distance of 15 m to access an extinguisher.

Figure 6-1 illustrates the proposed container storage arrangement for the onsite storage of the finished product.

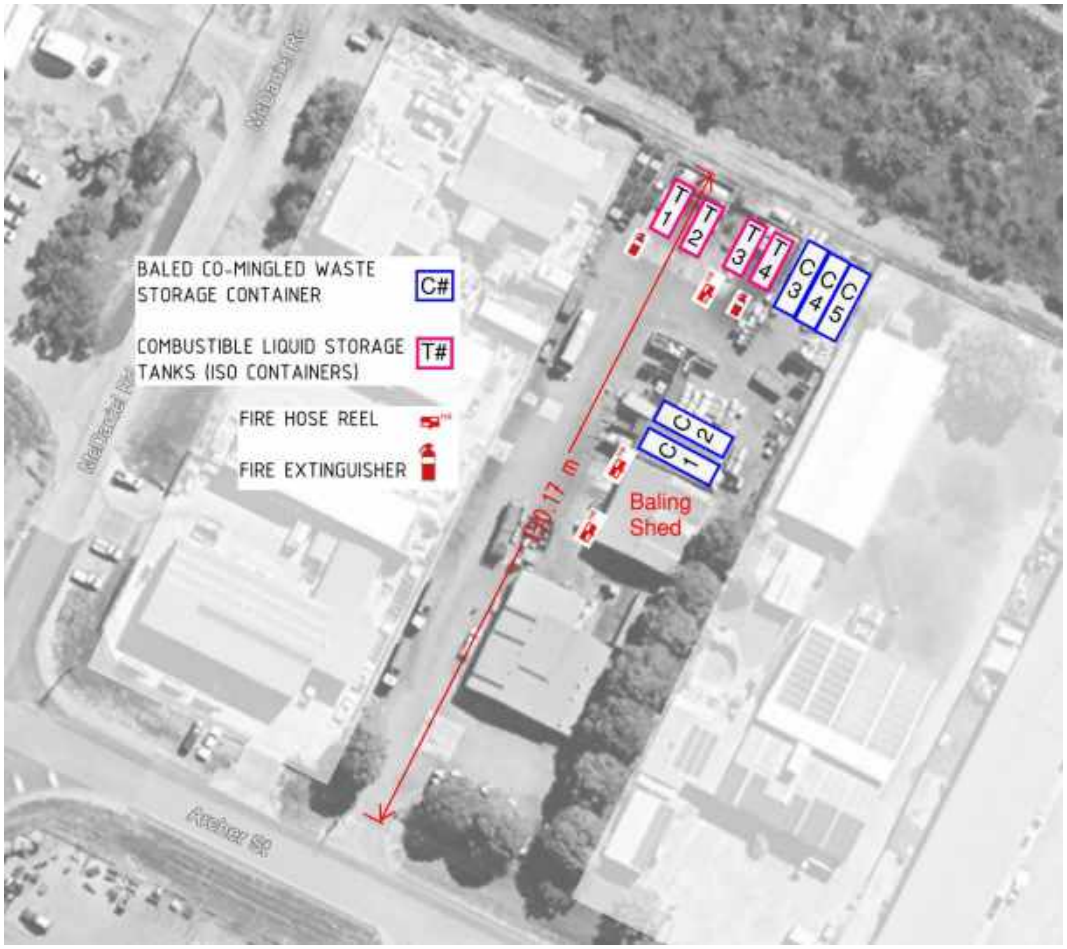

Figure 6-1: Proposed Site Storage Configuration

6.2 Management Requirements

6.2.1 Site Information Collation or Development

To assist with emergency response, site information shall be provided and readily available at the main entrance. This information shall include information about the configuration of storage and processing equipment, stormwater run-off paths and isolation provisions, emergency contacts, and fire system information.

6.2.2 Day-to-Day Management

Day-to-day management requirements are to include the following key features:

- Ensure all mechanical equipment used for transfer of waste, and in particular removal and isolation of burning materials, are operational prior to accepting deliveries
- Ensure all communication devices are operational
- The sliding door, roller shutter doors, and swing door of the Baling Shed (ex-Material Recovery Facility) shall remain open during standard operational hours.
- The sliding door shall be capable of being opened manually with a force not exceeding 110 N.
- Visually inspect drive motors and contact belts for obvious signs of wear or fraying prior to equipment starting
- Waste shall not be stockpiled overnight either within the building or in external areas

- Review capacity of on-site storage in shipping containers against outbound delivery vehicle schedules to ensure all finished product can be accommodated within designated areas. Delivery vehicles and vehicles containing compacted waste are not to be stored on site.
- Design storage spaces to hold at least a week's worth of baled materials, taking into consideration the facility's processing capabilities and material flow.
- Where pile restriction is managed using painted delineation, daily visual inspection of storage limitation markings on tipping floor and push walls to ensure compliance with storage limits.
- Visual inspection of waste piles and hoppers prior to leaving site to identify any hot-spots and allow investigation
- Ensuring compliance with applicable provisions under AS 1940:2017 [6] for the on-site combustible liquid storage tanks, including minimum separation distance from combustible liquid storage tanks and on-site protected places or boundaries, provision of signage and GHS labelling to identify the type and quantity of liquid
- Use of effective signage designating waste type and quantity to be stored in each container
- Ensure clear access for fire department vehicles and personnel, including marked fire lanes and unobstructed entry points.

6.2.3 Maintenance Provisions

The following key maintenance considerations are to be adhered to:

- Maintain all fire equipment in accordance with the requirements of AS 1851:2012 [8].
- Maintain all equipment in accordance with the frequencies and level of maintenance recommended by the manufacturer.
- Maintain all exit and emergency lighting in accordance with AS 2293.1:2005 [9].

6.2.4 Training and Housekeeping

Ensure that all staff are provided with first attack firefighting training, including identification of fire starts, the use of Manual Call Points, the use of portable fire extinguishers and the use of fire hose reels.

Provision of training for staff to include the location and use of site emergency information documents.

7. References

[1] ABCB, National Construction Code Series, Volume 1, Building Code of Australia 2022, Class 2 to Class 9 buildings, Canberra: ABCB, 2022.

[2] DFES HAZMAT Branch, Guidance Note: GN04 | Fire Prevention and Management in a Materials Recycling Facility, Version 1 ed., Perth: Department of Fire & Emergency Services, 2021.

[3] Environmental Protection Authority Victoria, Management and Storage of Combustible Recyclable and Waste Materials - Guideline | Publication 1667.3, Melbourne: State Government of Victoria, 2021.

[4] Fire and Rescue NSW, Fire Safety Guideline: Fire Safety in Waste Facilities, Sydney: State Government of New South Wales, 2020.

[5] Australian Building Codes Board, International Fire Engineering Guidelines - Edition 2005, ACT: ABCB, 2005.

[6] Standards Australia, Australian Standard 1940:2017 - The Storage and Handling of Flammable and Combustible Liquids (incorporating Amendment 2), Sydney: Standards Australia, 2021.

[7] Standards Australia, Australian Standard AS 3745:2010 - Planning for Emergencies in Facilities, Sydney: Standards Australia, 2010.

[8] Standards Australia, Australian Standard 1851:2012 - Routine Service of Fire Protection Systems and Equipment, Sydney: Standards Australia, 2012.

[9] Standards Australia, Australian Standard 2293.1:2005 - Emergency and Escape Lighting and Exit Signs for Buildings, Part 1: System Design Installation and Maintenance, Sydney: Standards Australia, 2005.

[10] Australian Building Codes Board, National Construction Code Series, Volume 1: The Building Code of Australia 2019 Amendment 1, Canberra, ACT: ABCB, 2020.

[11] Standards Australia, Australian Standard 2419.1:2005 - Fire Hydrant Installations, Part 1: System Design, Installation and Commissioning, Sydney: Standards Australia, 2005.

Appendices

Fire Brigade Meeting Minutes

Meeting Minutes

Project:	Cleanaway Broome - Waste Transfer Station Extension
Project No:	301251654
Meeting No:	001
Meeting held on:	29 April 2025, at 11.00 am via Teams

Present

[redacted]

PM	Department of Fire & Emergency Services	DFES
BOR	Department of Fire & Emergency Services	DFES
LE	Cleanaway	CWY
AL	Cleanaway	CWY
SDK	Stantec	STN
SP	Stantec	STN

[redacted]

Distribution

Attendees

Minutes		Action
1.	Introduction	
	The purpose of the meeting was to introduce the proposed works to the existing waste management facility at the existing Cleanaway site, at 18 Archer Street, Broome, and to review the preliminary Fire Risk Assessment document prepared by Stantec with DFES as the key external stakeholders. The project aims to enhance the efficiency of the existing material recovery facility and storage. This building is used for the collection of either paper/cardboard, plastic, and steel waste and comingled general recycling for compaction and transfer to off-site processing locations. Two options are under consideration: • Option 1 – modification to on-site storage configuration (i.e. adding containers for storage of baled product) • Option 2 – increased on-site storage The preliminary Fire Risk Assessment document specified the provision of a proposed Fire Hydrant system based on a new connection to the water corporation street main with an onsite feed hydrant. However, as they (Cleanaway) intend to move out of the site at Archer Street, they are not keen on installing hydrants and prefer the provision of a Fire Hose Reel system. The Fire Risk Assessment is to be updated and recirculated to accommodate any queries, comments arising from the meeting, or requested amendments based on the minimum requirement of the provision of the hose reel.	Note

Minutes		Action
2.	Building Summary and Risk Assessment Process	
	SDK (STN) provided a summary of the project, noting that Cleanaway initially planned to construct a new dome-structured MRF at the existing Archer Street site. However, the scope of the project has been rationalised. The current approach involves upgrading the existing MRF building with minimal site changes and introducing container-based storage at the rear of the site in lieu of loose storage (Option 1). SDK (STN) provided an overview of the site, highlighting the existing buildings, fire hydrant system infrastructure, and operation of the material recovery facility. Key site and project features include the following: • The floor area of the existing material recovery facility is approximately 255 m^2 and does not trigger the requirement for sprinklers or fire hydrants. • The fire protection will rely on street fire hydrants for hydrant coverage and existing fire extinguishers. • A new fire hose reel system to the site to improve first attack firefighting provisions. • The fire protection strategy is based on the use of container storage. As part of the future augmentation work and potential increased storage, which triggers licence amendments through DWER, potential fire upgrades (Option 2) will be considered as follows: • Installation of a new incoming fire main with a feed hydrant at the site entry to reduce response time, though this would require extended hose lengths. • A hydrant main along the site boundary with feed hydrants, designed for coverage using hoses up to 60 m in length. • A proposed flow rate of 15 L/s (instead of the standard 20 L/s) for the non-mandatory system, pending DFES endorsement. Flow testing indicates the current system can deliver 20 L/s at 200 kPa, which is near the operational limit. • Continued use of containerised storage. • Implementation of management procedures in line with the updated Fire Risk Assessment.	Note
	SDK (STN) summarised the risk assessment methodology as presented in the Fire Risk Assessment report, including identification of ignition sources and fuel loads and building operation (i.e. likelihood and consequence of different events), the risk rating matrix, acceptance criteria, and various control measures used to determine the “post-treatment” risk rating.	Note
	DFES did not raise any concerns with the proposed risk assessment methodology and presentation of the outcomes. The proposed fire protection strategy, based on the container storage as a temporary protection measure, is supported. The proposed flow rate of 15 L/s instead of the 20 L/s as a non-required fire hydrant system is considered reasonable, however, the preference by DFES is to achieve 20 L/s	Note

Minutes		Action
3.	Risk Assessment Review and Queries	
	The risk assessment as provided to attendees prior to the meeting was reviewed to allow comments and additional risks to be identified. The following additional risk scenarios were identified by DFES for consideration and inclusion: • Consideration of a small aperture in the container design to allow direct water application using a high-pressure hose or fire hydrant for fire suppression by flooding without the need to open container doors. • The provision of fire hose reels is to be tailored to specific risk zones within the site to ensure effective first-response capability. • Confirmation is required to ensure that waste delivery and removal vehicles are not left on-site outside of operational hours, to reduce fire load and associated risks.	Note
	PM (DFES) queried on the actions to be followed during an extreme bushfire warning scenario. LE and AL (CWY) confirmed that in the event of an extreme bushfire warning scenario, the proposed response includes ceasing all operations within the facility and closing all container doors.	Note
	All attendees expressed in-principle support for the preliminary fire risk assessment, subject to the inclusion of the following two fire protection options: 1. Option 1: Fire protection through containerised storage, supported by the installation of a fire hose reel system and the use of existing portable fire extinguishers. 2. Option 2: Enhanced fire protection in accordance with *AS 2419.1:2021*, involving the installation of a fire main along the western boundary and two external twin-head fire hydrants, in conjunction with the continued use of containerised storage.	Note
	BOR and PM (DFES) the updated Fire Risk Assessment to be submitted through the BEB document submission portal with a note to clarify the purpose and highlight the attendees in the review session. PM (DFES) noted that he would arrange for referral to the Superintendent in Bunbury.	DFES
4.	Actions	
	Stantec to prepare meeting minutes and circulate the updated Fire Risk Assessment document.	Stantec
	PM (DFES) to circulate for review by the Bunbury Superintendent	PM (DFES)

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Rev No.	Copies	Recipient	Date
1	1: Electronic	Cleanaway	10/10/2025

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