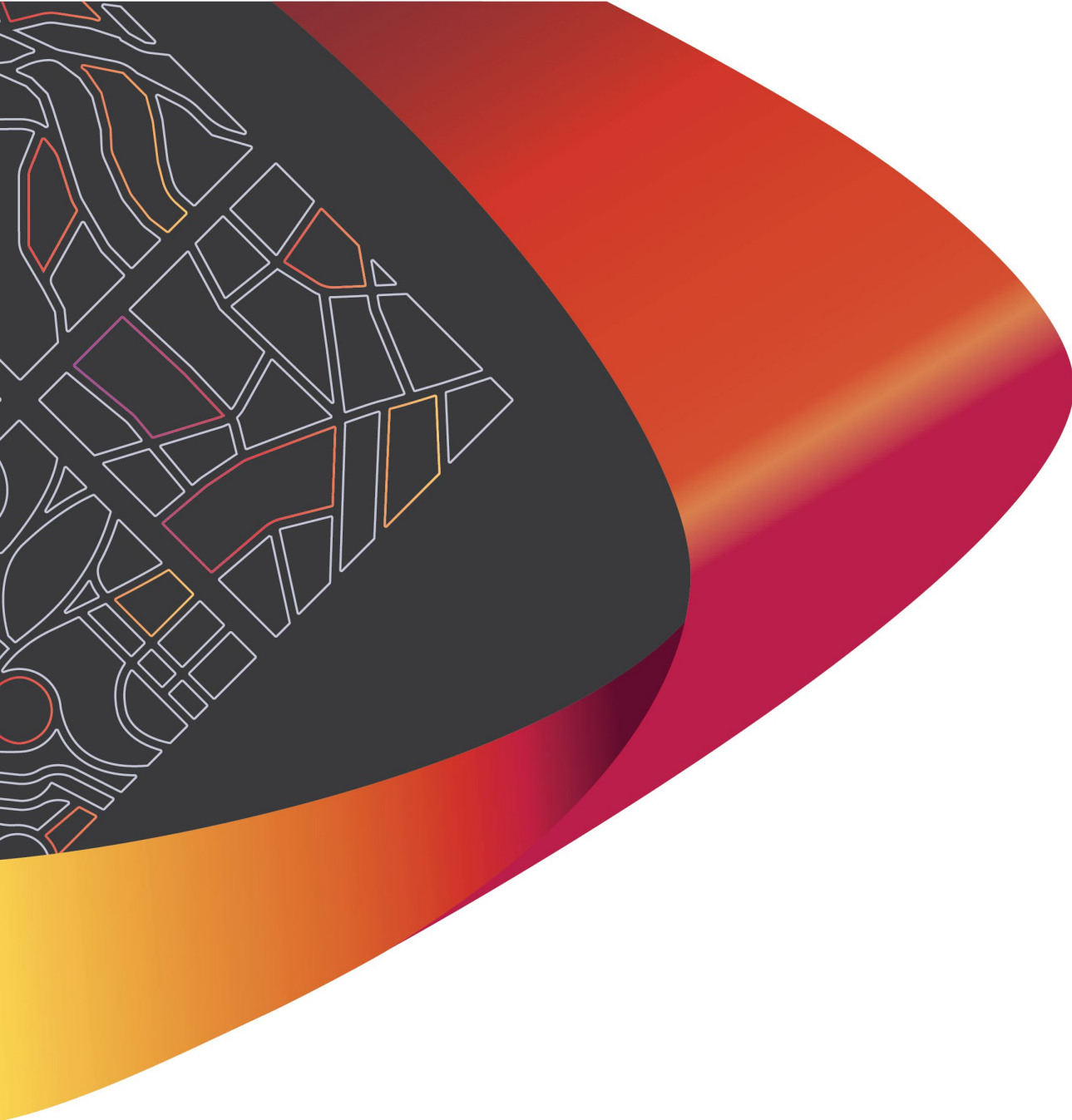




BESS ARCTIC PTY LTD C/- GRANSOLAR DEVELOPMENT
AUSTRALIA

DENILIKUIN EAST BESS

WASTE MANAGEMENT PLAN

Report No: P000824_WMP

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Premise

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1. INTRODUCTION

1.1 Overview

Premise has been commissioned by proponent (Gransolar Group Pty Ltd) to prepare a Waste Management Plan (WMP) to support the construction and operation of 100-Megawatt Battery Energy Storage System (BESS) on land adjacent to the Denilquin Substation. The development is located at 21356 Riverina Highway Denilquin, 2710 (Lot 11 on DP 856212) and is within the Edward River Council (ERC) Local Government Area (LGA). The proposed development is known as the Denilquin East BESS and is a State Significant Development (SSD 61612229).

1.2 Scope

The proposed development is State Significant Development (SSD) under the *State Environmental Planning Policy (Planning Systems) 2021*. This WMP has been prepared to respond to the waste management requirements of the Secretary's Environmental Assessment Requirements (SEARs) dated 28th September 2023.

The Secretary's Environmental Assessment Requirements (SEARs) and attached SEARS advice, issued 28th September 2023, identify the following requirements for the Environmental Impact Statement (EIS) in relation to waste management:

***"Waste** – a waste management plan to identify, quantify and classify the likely waste stream to be generated during construction and operation, and describe the measures to be implemented to manage, reuse, recycle and safely dispose of this waste."*

The requirements of these conditions have been considered in the context of the proposed development as part of this WMP.

1.3 Purpose

This WMP seeks to provide suitable procedures for managing waste during the construction and operation of the project.

The objectives of this WMP are to:

- > Identify, quantify and classify the wastes which are likely to be generated during construction and operation of the proposed development.
- > Minimise the production of waste materials and maximise reuse and recycling in accordance with the waste hierarchy.
- > Maintain the site in a clean and tidy state to reduce the attraction of pest species, impacts on the local environment and negative impacts on visual amenity.
- > Provide measures requiring the dispose of regulated wastes in accordance with NSW and Australian legislative requirements and environmental best practice.

The WMP is to be reviewed and updated in consultation with relevant regulatory agencies prior to work commencing on site and as required in response to the refinement of detailed design. It is a living document and is to be updated on a continual basis, ensuring that procedures for managing waste remain relevant to the proposed development.

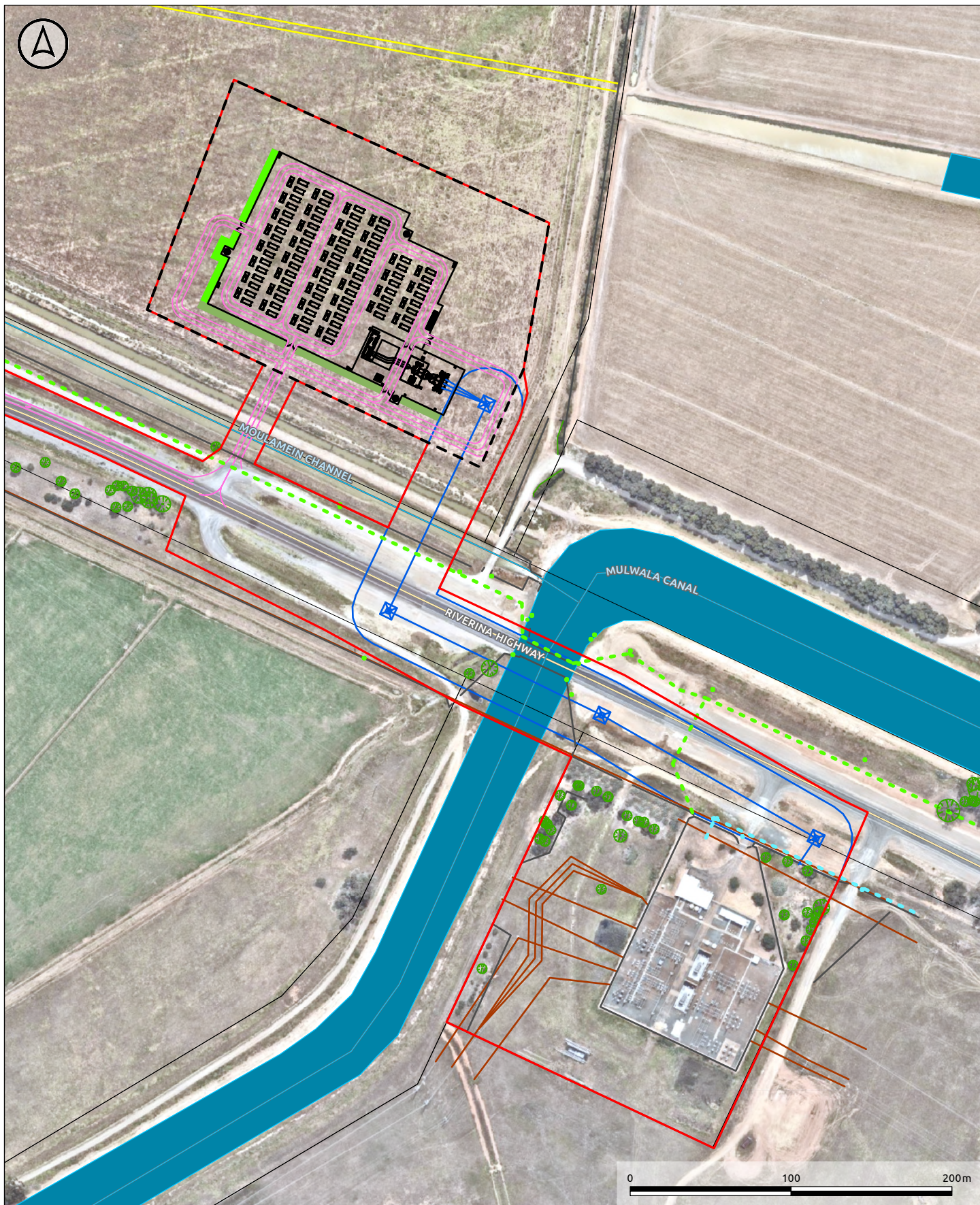
2. PROJECT DESCRIPTION

The proposed development involves the installation of a 100-Megawatt Battery Energy Storage System (BESS) at 21356 Riverina Highway Deniliquin, 2710. The development consists of the installation of:

- > The BESS which includes containerised lithium-ion type batteries that will be manufactured offsite and delivered for installation.
- > Power conversion systems, switchgear and a control building associated with the BESS.
- > Underground power and fibre optic cabling interconnecting the equipment.
- > Cabling and collector units, site office, storage area, internal access tracks, on-site parking, security fencing, lighting and a temporary construction laydown area

An Environmental Impact Statement (EIS) for the proposed development was prepared pursuant to the relevant provisions of the *Environmental Planning and Assessment Act 1979* (the EP&A Act) and *Environmental Planning and Assessment Regulation 2021* (the EP&A Regulation). The EIS assessed the potential impacts of the proposed development and provided further detail of the project's layout and appropriate mitigation measures.





Legend

- Site
- Lease Area Boundary
- Lot
- Road
- Watercourse
- Major Water Body

- BESS Design
- BESS Roads
- Overhead Transmission Line with 45m Buffer
- Existing OH Electrical Lines
- Existing Easement
- Existing Telstra UG Comms

- Existing Transgrid UG Comms
- Landscape 4m
- Landscape 7m


Premise
DENILIKUIN EAST BESS

Figure 1
Subject Site and Development

3. LEGISLATIVE CONTEXT

3.1 Protection of the Environment Operations Act 1997

The *Protection of the Environment Operations Act 1997* (POEO Act) aims to protect, restore and enhance the quality of the environment in NSW, while still having regard to ecologically sustainable development.

With respect to waste management, the POEO Act seeks to reduce risks to human health and to prevent degradation of the environment by the use of mechanisms that promote:

- (i) *pollution prevention and cleaner production,*
- (ii) *the reduction to harmless levels of the discharge of substances likely to cause harm to the environment,*
- (iii) *the elimination of harmful wastes,*
- (iv) *the reduction in the use of materials and the re-use, recovery or recycling of materials,*
- (v) *the making of progressive environmental improvements, including the reduction of pollution at source,*
- (vi) *the monitoring and reporting of environmental quality on a regular basis,*

The POEO Act further provides requirements for the management of waste and details offences related to the pollution. Section 148 of the POEO Act notably provides a duty for persons carrying on activity to immediately notify the relevant authority, NSW Environment Protection Authority (EPA), after they are aware of an incident that material harm to the environment is caused or threatened. Material harm is defined under section 147 of the POEO act as follows:

- (a) *harm to the environment is material if—*
 - (i) *it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or*
 - (ii) *it results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000 (or such other amount as is prescribed by the regulations), and*
- (b) *loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment.*

Offences apply under Section 152 of the POEO Act for failing to notify pollution incidents in accordance with the provisions under Part 5.7.

Section 143 of the POEO Act additionally requires waste to be transported to a place that can lawfully accept it. It is an offence under Section 115 to negligently dispose of waste that may cause harm to the environment, unlawfully transport and deposit waste (e.g., if waste is transported to a place that cannot be used as a waste facility for the waste).

Waste classifications are also defined in Section 49 of the POEO Act. Further detail on waste classification with respect to the EPA Waste Classification Guidelines 2014 (refer to **Section 3.4**).

3.2 Protection of the Environment Operations (Waste) Regulation

The *Protection of the Environment Operations (Waste) Regulation 2014* (POEO Waste Regulation) aims to protect human health and the environment and provides the framework for the waste industry in NSW, including the details of the licencing, reforms and the waste levy system. The POEO Waste Regulation prescribes the wastes (hazardous waste, restricted solid waste etc) that are automatically deemed to be land pollution and the person is guilty of an offence if the waste is illegally dumped.

3.3 Waste Avoidance and Resource Recovery Act 2011

The *Waste Avoidance and Resource Recovery Act 2001* aims to encourage the efficient use of resources and to reduce environmental harm. Waste management for the project must be conducted in accordance with the Act. The project waste management program needs to consider the hierarchy outlined in the Act:

- (a) *Avoidance of unnecessary resource consumption;*
- (b) *Resource recovery (including reuse, reprocessing, recycling and energy recovery); and*
- (c) *Disposal*

This WMP seeks to implement measures to minimise the potential for material harm to the environment resulting from the construction and operation of the project. Waste management and tracking measures, contained in **Section 5** and **Appendix A** of this Plan, seek to ensure that waste produced by the project is appropriately managed and disposed of.

3.4 EPA Waste Classification Guidelines 2014

The EPA Waste Classification Guidelines 2014 (The Waste Classification Guidelines) is comprised of four parts:

- > Part 1: Classifying waste;
- > Part 2: Immobilisation of waste;
- > Part 3: Waste containing radioactive material; and
- > Part 4: Acid sulphate soils.

Part 1 of the guidelines provide details on the classification of waste in accordance with the definitions provided under Section 49 of Schedule 1 of the (POEO Act) including:

- > Special waste;
- > Liquid waste;
- > Hazardous waste;
- > Restricted solid waste;
- > General solid waste (putrescible); and
- > General solid waste (non-putrescible).

The types of waste likely to be produced by the proposed project is detailed in **Section 5.6** of this WMP. Waste is to be tracked in accordance with the waste tracking register in **Appendix A**, which includes a determination of its classification under the Waste Classification Guidelines.

3.5 Deniliquin Local Environmental Plan 2013

The *Deniliquin Local Environmental Plan 2013* (LEP) provides standards for the carrying out of development in the Deniliquin Council LGA and specifies the types of development that are prohibited and permitted within the local area. Some types of development are also regulated by state environmental planning policies (SEPPs) which include additional standards and requirements for carrying out development.

The EIS prepared for the project provides additional detail on the relevant provisions of the LEP and the application of SEPPs.

4. ROLES AND RESPONSIBILITIES

The Site Manager (or other suitably qualified site management representatives as their replacement) with the authority to make immediate decisions, must be available during all hours of operation to ensure appropriate responses to incidents and emergencies are implemented.

The roles and responsibilities for site management representatives and workers at the development are detailed in **Table 1**.

Table 1 – Roles and Responsibilities

Role	Responsibility
Site management representatives (i.e project/site/construction manager, environmental advisor and supervisors)	• Overall responsibility for site management and compliance with the Development Consent and relevant legislation. • Coordinate routine environmental site inspections and maintenance. • Coordinate necessary reporting and regulatory authority liaisons. • Record, notify, investigate and respond to any complaints and/or enquiries and, where necessary, develop and implement corrective actions. • Record, notify, investigate and respond to any environmental incidents and, where necessary, develop and implement corrective actions. • Oversee the implementation of this plan and provide adequate resources to enable implementation of this plan. • Provide adequate environmental inductions/training to Workers regarding their requirements under this plan. • Ensure compliance with measures and requirements of applicable management plans.
Workers	• Ensure familiarity, implementation and compliance with this plan.

Role	Responsibility
(Including all employees, personnel, contractors and subcontractors)	• Work in a manner that will not harm the environment or impact on surrounding receptors. • Report all environmental incidents and complaints to Site Management without delay. • Report any inappropriate operational and/or site management practices to site management representatives without delay.

5. WASTE MANAGEMENT

The following sections outline measures to control waste associated with the proposed development, including nearby waste segregation, handling and storage, expected waste types and classifications, disposal arrangements, and waste management procedures implemented with respect to each expected waste type together with responsibilities and monitoring requirements.

5.1 Waste segregation and separation

The segregation and separation of waste during each phase of the project will support appropriate disposal arrangements and facilitate opportunities to reuse and recycle appropriate waste types, aligning with the EPA's waste hierarchy:

- > Waste Segregation will involve processes whereby waste is to be segregated within the site, being placed into dedication bins (e.g., recycling bins) or laydown areas (e.g., spoil), prior to being either reused onsite or collected and transported by a waste contractor to an appropriately licenced facility.
- > Waste Separation will involve processes whereby wastes will be deposited into a single bin (i.e., where space is not available for placement of multiple bins), prior to being transported offsite by a contractor, sorted and disposed of at an appropriately licenced facility.

5.2 Waste handling and storage

During the construction phase, waste would be stored temporarily on-site in secure covered skips prior to removal to an appropriately licensed waste facility for recycling or disposal to landfill.

Waste generated during the operational phase of the project is expected to be limited to general office waste and food scraps from site staff.

The following measures will apply to the handling and storage of waste within the site:

- > Recyclable or non-recyclable wastes - to be stored in appropriate covered receptacles (e.g. bins or skips) in appropriate locations onsite and contractors commissioned to regularly remove/empty the bins to approved disposal or recycling facilities.

- > Liquid wastes - to be stored in appropriate containers in bunded areas until transported offsite. Bunded areas will have the capacity to hold 110 per cent of the liquid waste volume for bulk storage or 120 per cent of the volume of the largest container for smaller packaged storage.

5.3 Waste classification

Where waste cannot be avoided, reused or recycled it will be classified and appropriate disposal will then occur.

The classification of waste is undertaken in accordance with the Waste Classification Guidelines. This document identifies six classes of waste in Part 1 including: Special, Liquid, Hazardous, Restricted Solid, General Solid (putrescible) and General Solid (non-putrescible) and describes a six-step process to classifying waste.

The six-step process for classifying waste is summarised in **Table 2**.

The generation of waste during the construction and operation of the project is expected to be predominantly classified as general (non-putrescible) waste. An assessment of the likely types of waste is provided via the Waste Management Principles contained in **Section 5.6**.

Table 2 – Waste Classification, Six Step Process

Step	Description
Step 1: Is the waste 'special waste'?	Establish whether the waste is classified as special waste, including: • clinical and related waste • asbestos waste • waste tyres • anything classified as special waste under an EPA gazettal notice
Step 2: Is the waste 'liquid waste'?	Determine whether the waste is classified as liquid waste meaning any waste (other than special waste) that: • has an angle of repose of less than 5 degrees above horizontal • becomes free-flowing at or below 60 degrees Celsius or when it is transported • is generally not capable of being picked up by a spade or shovel • is classified as liquid waste under an EPA gazettal notice.
Step 3: Is the waste pre-classified?	If the waste is neither special nor liquid waste, establish whether the waste has been pre-classified by the EPA. Some commonly generated waste types have been pre-classified as hazardous waste, general solid waste (putrescible) or general solid waste (non-putrescible). These pre-classifications are contained in the definitions of those classifications in Schedule 1 of the POEO Act.

Step	Description
Step 4: Does the waste possess hazardous characteristics?	If the waste is not classified under steps 1 through 3 establish whether it has hazardous characteristics. Examples of hazardous wastes includes explosives, flammable solids, substances liable to spontaneous combustion, oxidizing agents, toxic substances and corrosive substances. Note: Waste must be classified as hazardous if it is a dangerous good under the classes or divisions of the Transport of Dangerous Goods Code.
Step 5: Determining a waste's classification using chemical assessment	If the waste does not have hazardous characteristics, undertake chemical assessment to determine classification.
Step 6: Is the general solid waste putrescible or non-putrescible?	Where chemical assessment of a waste under Step 5 results in classification of the waste as general solid waste, further assessment may be undertaken to determine whether the waste can be classified as 'general solid waste (putrescible)' or 'general solid waste (non-putrescible)'. Otherwise (for example, if the waste generator does not wish to undertake this chemical assessment), the waste must be classified as 'general solid waste (putrescible)'.

5.4 Waste disposal and facilities

Waste generated during each phase of the development is to be disposed of in accordance with the requirements of the POEO Act and the *Waste and Resources Recovery Act 2001*. Following classification all waste generated will be disposed of offsite at an appropriately approved and licensed waste management facility.

It is anticipated that the majority of waste generated by the development would be disposed of at Deniliquin Landfill Depot located at Tip Road, Deniliquin NSW 2710. Where practicable the Applicant will use local facilities to minimise transportation and to ensure the regular removal of waste from site.

The availability of disposal arrangements and the forms of waste accepted by contractors and licenced facilities will be reviewed on a continual basis and at each stage of the project, ensuring that facilities are available to accept and appropriately dispose of the types of waste generated. Waste tracking including records of the types of waste generated, quantities and disposal arrangements will be implemented during each stage of the development and inform reviews on the availability of disposal arrangements (refer to **Section 5.5**).

The likely types of waste generated by each stage of the development and their disposal arrangement is outlined via the Waste Management Principles contained in **Appendix B**.

Future decommissioning of the project would require the removal of all associated infrastructure. Opportunities for recycling of this equipment would be investigated at the time of decommissioning. If

recycling of specific elements is not available, disposal at an approved waste management facility would be undertaken.

5.5 Waste tracking

All wastes, including recyclable materials from the project, will be tracked during each stage of the project.

The transfer and disposal of waste from the development site including the waste type, volume and destination is to be recorded in the waste tracking register provided in **Appendix A**.

The waste tracking register has been prepared in accordance with these requirements and will record the following information:

- > The date and time waste departed the site.
- > The waste classification (special waste, general solid waste, liquid waste, hazardous waste etc.).
- > A description of the waste / recyclable material leaving the site.
- > The quantity of material disposed (either tonnage or volume)
- > The contact information of person(s) who removed the waste.
- > The waste carrier vehicle registration.
- > The company or contractor transporting the waste.
- > The destination including the address and name of the facility receiving the waste.
- > Clarification on the use of the waste and whether the material is to be recycled, stored, treated or disposed.
- > Reference material including receipts or dockets documenting the completion of transfer to a receiving facility including the date, time, type and quantity of waste transferred.

In the event that waste has been removed from the site under an EPA Resource Recovery Order or Exemption, records in relation to that Order or Exemption must be maintained and provided to the principal certifier and Council.

5.6 Estimated waste generation

The quantity and type of waste generated would be dependent on the extent of works required for each stage of the project and vary according to any additional changes made throughout the lifespan of the project.

A review of the extent of works for the project and the proposed design has been undertaken to estimate the quantity of each type of waste generated during the construction and operation of the project.

Indicative waste volumes for each stage of the project are presented in **Table 3**.

The following assumptions have been made when estimating waste quantities:

- > Waste volumes and workforces for each stage of the project have been estimated based on the bill of quantities (BOQ) provided by the client.
- > The construction program for the project anticipates a maximum of 50 workers attending the site 6 days per week for a total maximum period of approximately 3 months. It is anticipated that approximately 2 FTE worked will be required for the BESS during operation.
- > The National Waste Report 2022, prepared by the Department of Agriculture, Water and Environment (2022), provides additional guidance on general waste volumes for the proposed development with a general allowance of 2.95 tonnes per person per year based on data collected between 2020 and 2021.
 - Based on 50 workers attending the site over a 3 month peak construction period this equates to approximately 36.87 tonnes of general waste over the construction period.
 - Based on 2 workers attending the site during the operation this equates to approximately 5.9 tonnes of general waste per year of operation.
- > The *EPA State of the Environment Report 2020* provides estimates urban water demand across NSW. The per capita water demand for regional NSW averaged 212 litres per person per day during 2019-2020.
- > The *National Water Quality Management Strategy 1997, Australian guidelines for Sewerage Systems Effluent Management* details a wastewater production of approximately 70,000 litres per person per year, equivalent to 191.78 litres per day. To provide a conservative estimate of wastewater produced it has been assumed that wastewater will be generated based on a general allowance of 200 litres per person per day.
 - Based on 50 workers attending the site 6 days a week during peak construction this equates to approximately 60,000 litres of water per week and approximately 720,000 litres of water over a 3 month construction period.
 - Based on 2 workers attending the site during the operation this equates to approximately 146,000 litres per year of operation.
- > The actual quantity of waste generated by the project is dependent on the refinement and finalisation of detailed design. Tracking of waste during the construction and operation of the project shall be used to inform reviews of this WMP and the ongoing availability of disposal arrangements. Subsequent updates to this WMP are to be made following the refinement of project design with changes to estimates for resource use and waste generation.

Table 3 – Indicative Only Waste Volumes

Phase	Waste Type	Indicative Quantity
Construction	General Waste ^{1 and 2} (non-recyclable materials)	Two (2) to Three (3) skip bins to accommodate the construction period equivalent to approximately 4 m ³ to 6 m ³ which are emptied weekly. 36.87 tonnes during the construction period based on an allowance of 2.95 tonnes/person/year. ²

Phase	Waste Type	Indicative Quantity
	Recyclable material (cardboard, timber pallets, cable rolls)	Two (2) skip bins to accommodate the construction period equivalent to approximately 4 m ³ to 6 m ³ which are emptied weekly. Limited packaging waste is required as battery components would be delivered pre-assembled.
	Clearing and Grubbing (Cleared Vegetation and Excavated Material)	14,145 m ² (BESS Area) 2,064 m ² . (HV Component) ¹ .
	Excavation and Fill Material (Excavated Material)	619 m ² . (HV Component) ¹ Note: soil excavated for the HV Component will be reutilised for filling compaction and embankments. (i.e., balanced by fill of 619 m ²) 84,025 m ² (Civil Works for Culvert)
	Wastewater ²	720,000 litres during the peak construction period based on an allowance of 200 L/person/day. ²
Operation	General Waste ^{1 and 2} (non-recyclable materials)	Maximum of one skip bin per fortnight equivalent to approximately 2 m ³ or 5.9 tonnes annually.
	Wastewater ²	146,000 litres per year of operation based on an allowance of 200 L/person/day. ²
Decommissioning	Electrical Waste (defective or end-of-life inverters, transformers and BESS)	100 MW battery and associated infrastructure, subject to detailed decommissioning plan.
	Recyclable material (concrete, metal)	Subject to detailed decommissioning plan.
	General Waste (non-recyclable materials)	Subject to detailed decommissioning plan.
¹ Waste volumes are based on estimates provided by the contractor and operator. ² Waste volumes are based on the assumptions made with respect to the National Waste Report 2022, The EPA State of the Environment Report 2020 and the National Water Quality Management Strategy 1997, Australian guidelines for Sewerage Systems, Effluent Management.		

5.7 Waste management procedures

Table 4 outlines procedures for the management of various types of wastes with the potential to be generated by the project.

Table 4 – Waste Management Procedures

Waste Type	Management Procedures
General Waste	• All site personnel will be advised of the Waste Management Plan during inductions and training. • All site personnel will be encouraged to separate waste streams to maximise recycling and reuse opportunities. • No waste burnt or buried on site. • Combustible fuel loads (if required) (e.g. diesel fuel tanks) will be managed onsite to minimise fire risks ensuring compliance with other procedures provided via other management plans. • Securely covered, clearly labelled segregated waste and recycling bins would be provided at strategic locations adjacent to the site construction site office(s) and amenities area. • Site bins will be routinely inspected to ensure there is capacity to contain waste generated during construction and operation. • Waste and recycling bins will be emptied as required. • Onsite general waste and recycling bins will be appropriately covered minimising the potential for pollution and impacts to surrounding amenity. • Specialist waste bins (e.g. steel, timber) will be emptied as required. • All waste leaving the site (e.g. regulated waste) will be entered into a site waste register to track relevant details of the waste being removed from the site.
Spoil	• Topsoil will be stockpiled and reused on-site for rehabilitation. Excess topsoil generated during the construction activities will be retained for use in rehabilitation. • Any excess subsoil that requires removal from the site will be appropriately disposed of at licenced waste facility.
Liquid Waste	• It is anticipated that chemical port-a-loo's will be provided at strategic locations around the site for use by personnel during the construction phase. Where possible these port-a-loo's will be located on a trailer to allow for easy redistribution. Waste from port-a-loo's will be disposed of offsite at a licensed treatment facility.

Waste Type	Management Procedures
	Regulated liquid waste, if generated, will be disposed of at an appropriately licenced facility.
Hazardous Waste	- The waste classification guidelines will be continually reviewed to determine whether waste generated during each phase of the project is classed as hazardous. - No hazardous waste is expected to be stored on-site to enable the proposed development. In consideration of potentially hazardous substances the development has the potential to use the following: - Diesel (Class 3). - Petrol (Class 3). - Lithium-ion batteries (Class 9) - Mineral oil Section 5.7.1 provides further context on hazardous waste management and considers the potential for other hazardous substances to be used during construction and operation of the proposed project. - Fuel containers will be reused as far as practicable. - Fuel containers will be disposed of in accordance with EPA guidelines for hazardous waste as required. - Dangerous or hazardous materials, if stored onsite, would be stored and handled in accordance with <i>AS1940-2004: The storage and handling of flammable and combustible liquids</i>.

5.7.1 Hazardous waste management

Section 3.7 of the *State Environmental Planning Policy (Resilience and Hazards) 2021* (The Hazards SEPP) requires the consideration of current circulars or guidelines prepared by the Department of Planning in determining whether a development is:

- > hazardous storage establishment, hazardous industry or other potentially hazardous industry; or
- > offensive storage establishment, offensive industry or other potentially offensive industry.

The current and most recent guidelines prepared by the Department of Planning, the *Hazardous and Offensive Development Application Guidelines – Applying SEPP 33* (Applying SEPP 33 Guideline; Department of Planning 2011), includes the screening tests to be used to determine whether a development is potentially hazardous development. If the screening tests indicate that a development is potentially hazardous development, a preliminary hazard analysis (PHA) is required to be provided as part of the DA.

The type of screening test to be used is dependent upon the class, as categorised under the Australian Dangerous Goods Code (the ADG code; National Transport Commission 2020) of dangerous goods proposed to be accommodated on-site. The ADG code lists the following classes of dangerous goods:

- > Class 1 Explosive.
- > Class 2 Gases.
- > Class 3 Flammable liquids.
- > Class 4 Flammable solids.
- > Class 5 Oxidising substances and organic peroxides.
- > Class 6 Toxic and Infectious substances.
- > Class 7 Radioactive material.
- > Class 8 Corrosive substances.
- > Class 9 Miscellaneous dangerous substances and articles, including environmentally hazardous substances.

Potentially hazardous materials associated with the development are expected to include:

- > Fuel including diesel (Class 3 – Flammable liquid)
- > Lithium batteries within the BESS structure (Class 9- Miscellaneous dangerous goods)

Screening thresholds for classes of hazardous materials with the potential to be associated with the proposed development are further summarised in **Table 5**, including the relevant UN Code and ADG Code classification, together with the general storage and transportation thresholds.

All hazardous substances including those already kept on site as part of existing operations, together with any additional substances later identified as a requirement following detail design of the proposed development, will be stored in secure containers/pallet bunds, with appropriate signage. The location of these storage areas will be clearly marked on a site plan and copies of Safety Data Sheets (SDS) will be held on-site.

Refuelling of construction equipment if required will be undertaken in a designated refuelling area to minimise the potential for runoff and contamination. Excavations and plant will be refuelled via pods located on contractor light vehicles.

Spill containment kits appropriate for the type and volume of hazardous materials stored or in use, together with staff trained in their implementation would be made readily available during the construction and operation of the development. Any spills or leaks of hazardous materials would be reported to site managers as soon as possible and must be cleaned up immediately to minimise the potential for pollution.

Section 357 of the *Work Health and Safety Regulation 2017* (WHS Regulation) provides an obligation to ensure that spills or leaks of hazardous chemicals are appropriately managed. This includes the provision of a spill containment system to contain any hazardous chemical spills, the prevention of hazards generated by combining different hazardous chemicals and measures to ensure the cleanup of a hazardous chemical

leak or spill. Offences apply under Section 357 of the WHS Regulation for failing to adequately manage contain and clean up hazardous chemical spills or leaks. This is in addition to penalties applying under Section 148 of the POEO Act in relation to incidents that cause or threaten material harm environmental harm to the environment (refer to **Section 3.2**).

All hazardous goods and combustible liquids required as part of the proposed development will be stored and handled in accordance with:

- > all relevant Australian Standards, including *AS 1940: The Storage and Handling of Flammable and Combustible Liquids*;
- > minimum bund volume requirements of 110% of the volume of the largest single stored volume within the bund where applicable; and,
- > the EPA's Environment Protection Manual Technical Bulletin Bunding and Spill Management.

The dangerous goods proposed by the development including indicative quantities and procedures provided in management plans are to be reviewed on a continual basis during the construction and operation phases of the project, ensuring that the relevant screening thresholds are not exceeded and that appropriate management procedures for dangerous goods are in place.



Table 5 – Potential Dangerous Goods and Screening Thresholds

Hazardous Substance		Australian Dangerous Goods Code Classification			Applying SEPP 33 Thresholds									
		UN No.	Class	Packing Group	Indicative Maximum Quantity Stored Onsite (tonnes)	Screening Method and General Screening Thresholds (Table 1 and Table 3)			Combined Transport Movements (Annual)	Transportation Thresholds (Table 2)				
						Combined Storage Threshold	Exceeds Threshold?	Comments / assumptions		Vehicle Movements		Minimum quantity per load (tonne)		Exceeds Threshold?
										Cumulative Annual	Peak Weekly	Bulk	Packages	
Site Wide														
Diesel	GAS OIL or DIESEL FUEL or HEATING OIL, LIGHT	1202	3 (Flammable Liquids)	III	300 kL (Control room Generation	5 tonnes (Figure 9 Graph if greater)	No	N/A	Note: No dedicated transport of fuel is included as part of the proposed development.	>1000	>60	10	No limit	No
Lithium batteries	LITHIUM-ION BATTERIES or LITHIUM METAL BATTERIES	3090, 3091, 3480 or 3481	Class 9 (Miscellaneous dangerous Substances and Articles)	N/A	2,800 T	N/A	No	Class 9 are excluded from risk screening under Table 1 of Applying SEPP 33.	No limit	>1000	>60	No limit	No limit	No

APPENDIX A

WASTE TRACKING REGISTER



Waste Management Plan

Waste Tracking Register

Table 6 – Waste Tracking Register

Date /Time	Waste Classification (Special waste, general solid waste, liquid waste etc.)	Waste Description (concrete, steel, spoil etc.)	Quantity	Contact Information (person(s) who removed the waste)	Waste Vehicle Registration	Transporter (company / contractor)	Receiving Facility (address and name)	Waste Use (recycled, stored, treated, disposed)	Reference (receipt / docket)



APPENDIX B

WASTE MANAGEMENT PRINCIPLES

Denilquin BESS Waste Management Plan

Waste Management Principles

Construction phase

Table 7 – Construction phase

Materials on site		Treatment/reuse/recycling		Disposal
Type of Material	Description	Onsite	Offsite	Residual
Excavated material	Excess soil	Stockpile at a suitable location and re-use on site as fill. Stockpiles have suitable temporary erosion and sediment control measures installed.	Any excess to be re-used off-site	None
Concrete – construction wastes	Surplus pours	Ensure that quantities are correctly estimated prior to pour. Use pre-cast concrete as far as practicable. Crush and use any surplus as fill where possible.	Concrete waste to be separated and collected by concrete recycling contractor	Dispose any surplus to concrete crushing facility for recycling
Timber	Packaging from materials delivered	Nil	Recyclable timber to be separated and collected for recycling by recycling contractor	Any non-recyclable timber

Materials on site		Treatment/reuse/recycling		Disposal
Metals	Wiring off-cuts, packing straps, steel off-cuts, aluminium off-cuts	Nil	Recyclable metal to be separated and collected for recycling by recycling contractor	Nil
Plastic/HDPE	Wrap from materials delivered and packaging	Nil	Collection by recycling contractor for recycling	Dispose non-recyclable material to licensed waste disposal facility
Cardboard	Packaging from materials delivered	Nil	Collection by recycling contractor for recycling	Nil
General Waste	Contractors/work force	All waste streams to be separated and recycled	Collection by recycling contractor for recycling	Dispose non-recyclable material to licensed waste disposal facility

Operational phase

Table 8 – Operational phase

Type of waste to be generated	Proposed on site storage and treatment facilities	Destination
Cardboard packaging / Office paper	Paper and Cardboard to be separated for recycling at source. Paper and Cardboard to be reused where possible, or compacted for recycling	Recycling contractor for recycling
Plastic packaging	Bale up on-site. Storage in waste storage and recycling area(s)	Recycling contractor for recycling. Non-recyclable plastics to be disposed as general waste
Pallets from spare parts	Stored on-site in designated areas suitably screened from public areas	Supplier for reuse

Type of waste to be generated	Proposed on site storage and treatment facilities	Destination
Waste/reject product	Storage in waste storage and recycling area(s) or in racks	Returned to supplier
Recyclable glass, aluminium, metal, and plastic containers	To be separated at source as far as practicable for recycling by recycling contractor	Recycling contractor for recycling
General waste	To be stored in designated bin(s) screened from public areas	Disposed by licenced waste contractor to licenced waste disposal facility
Waste storage and recycling receptacles to be located nearby all generation sources. Waste storage and recycling bins to be clearly labelled. The site manager or representative would be responsible for maintaining the waste storage and recycling area, for ensuring bins are emptied and collected as required, and for ensuring that no contamination of waste streams is occurring.		

Decommissioning phase

Table 9 – Decommissioning phase

Type of waste to be generated	Proposed on site storage and treatment facilities	Destination
Inverters, Transformers and BESS	Inverters and transformers will be removed from the site via a crane onto a semitrailer for e-waste dismantling, recycling, scrapping and safe disposal at an appropriate waste disposal facility. If possible, the transformer can be reconditioned and refurbished for additional service life at another site	A number of opportunities for recycling e-waste are currently emerging and it is expected that by the end of life of the BESS that other options will have developed (noting the significant amount of facilities currently in delivery with similar lifespans as the project site).
Concrete foundations	The concrete foundations will be excavated and the concrete recycled.	Either recycled/reused off site or disposal to a suitable waste facility.

Type of waste to be generated	Proposed on site storage and treatment facilities	Destination
Recyclable glass, aluminium, metal, and plastic containers	To be separated at source as far as practicable for recycling by recycling contractor	Recycling contractor for recycling
General waste	To be stored in designated bin(s) screened from public areas	Disposed by licenced waste contractor to licenced waste disposal facility
Waste storage and recycling receptacles to be located nearby all generation sources. Waste storage and recycling bins to be clearly labelled. The site manager or representative would be responsible for maintaining the waste storage and recycling area, for ensuring bins are emptied and collected as required, and for ensuring that no contamination of waste streams is occurring.		

