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Dalvui Battery Energy Storage System (BESS)

Planning Permit Application

Tilt Renewables

Reference: 511010

Revision: 3

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Document prepared by:

Aurecon Australasia Pty Ltd

ABN 54 005 139 873

Aurecon Centre

Level 8, 850 Collins Street

Docklands, Melbourne VIC 3008

PO Box 23061

Docklands VIC 8012

Australia

T +61 3 9975 3000

F +61 3 9975 3444

E melbourne@aurecongroup.com

W aurecongroup.com

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Name	Georgia Whelan	Name	Greta Thraves
Title	Consultant	Title	Manager

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1 Introduction

1.1 Overview

This report has been prepared on behalf of Tilt Renewables Australia Pty Ltd (the Proponent) to support a Planning Permit Application for the development of the Dalvui Battery Energy Storage System (BESS) (the Project). The Project, located in Terang, western Victoria, will help maintain reliable and affordable energy supply and reduce the frequency of blackouts and the need for load shedding in instances of supply imbalance.

The purpose of this report is to:

- Highlight the Project's background and opportunity
- Provide an overview of the Project
- Provide a description of the Project land, locality and a detailed Project description
- Outline the relevant planning regulatory framework relating to the proposed buildings and works
- Present a comprehensive planning assessment of the Project.

This planning application report seeks approval for the following:

- For use and to construct a building and carry out works for a Utility Installation pursuant to Clause 35.07 Farming Zone.
- Business identification signage in a Farming Zone (Category 4 – sensitive areas) pursuant to Clause 52.05 *Signs*.

This planning permit application is supported by the following attached documentation:

- Planning Permit Application form, covering letter and prescribed fee
- Certificate of Title and Plan of Subdivision (Appendix B)
- Site Layout Plan and typical elevation plans showing the proposed development (Appendix A).

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2 Project Area and Locality

The Project is located in the Western District of Victoria, situated to the north east of the town of Terang and approximately 210 km south west of the Melbourne Central Business District (refer to Figure 2-1). The Local Government Authority, which covers the entire Project Area is the Shire of Corangamite.

The Project Area identified in Figure 2-1 is comprised of three parcels, with land required for the key BESS infrastructure proposed at 500 Dalvui Lane Terang 3264. Associated connection works are proposed at the Terang Terminal Station (TGTS), to connect to the BESS via an underground cable and site access and road upgrades and construction laydown areas are proposed within the identified Project Area.

The Site Layout Plan provides detail on the siting of the BESS, upgrades at the TGTS and proposed road upgrades and underground cable i.e. the proposed works in Appendix A.



Figure 2-1 Project Area

Each element, Title Numbers, Property Standard Parcel Identifiers (SPI) and Property Numbers for each parcel to be developed are below in Table 2-1. The parcel reference numbers in Table 2-1 correspond to the references in Figure 2-2. A full copy of the Certificates of Title is attached to this Planning Permit Application (refer to Appendix B).

Table 2-1 Title particulars

	Parcel ref. 1	Parcel ref. 2	Parcel ref. 3
Land owner	Private Landholder	Corangamite Shire Council Land	AusNet Services Property
Project requirements	BESS and supporting infrastructure	Road upgrade and underground cable	Connection works at TGTS
Title No.	Vol: 09747 Fol: 944 Vol: 10189 Fol: 254	N/A	Vol: 08295 Fol: 144
Address	500 Dalvui Lane Terang 3264	N/A	Littles Lane, Terang, 3264

	Parcel ref. 1	Parcel ref. 2	Parcel ref. 3
Property Standard Property Identifier (SPI)	Lot 2 PS543673	2009	Lot 1 TP337263
Property Number	10035	NCPR	3164

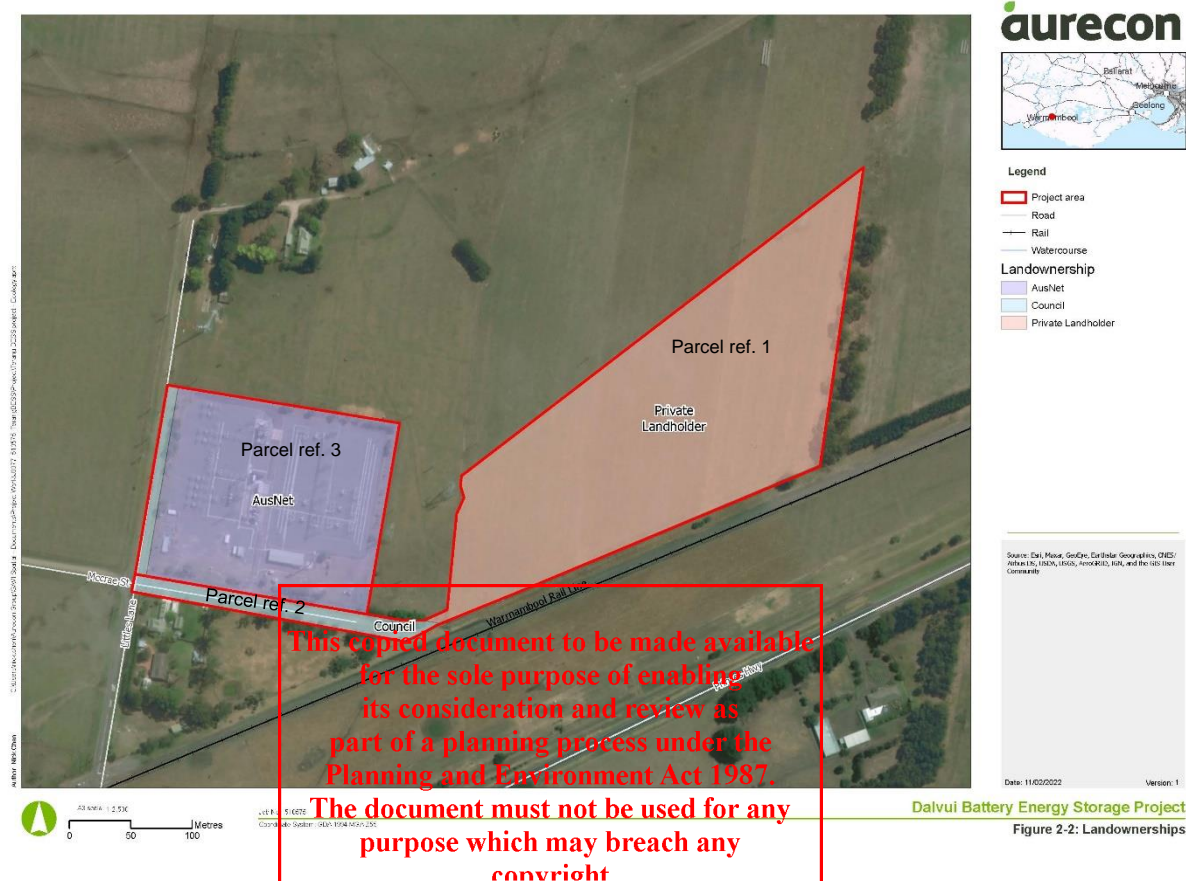


Figure 2-2 Land Ownership

There are no other encumbrances, restrictions or caveats registered on the Certificates of Title that would impact on the current footprint options of the BESS or associated works.

Land within the Project Area outside the TGTS is affected by the Farming Zone 1 (FZ1) under the Planning Scheme. Historically, this land has been used as private agricultural land, comprised exclusively of introduced pasture grasses. The TGTS is currently zoned Public Use Zone – Service and Utility (PUZ1) and supports mostly electrical infrastructure. Ausnet Services is the Public Land Manager of this land pursuant to Clause 73.01 (General Terms) of the Planning Scheme. Parcel 3, owned by AusNet Services, extends further north of the TGTS into land use for farming purposes.

The Princes Highway is a primary arterial road generally aligned north-east to south-west to the south of the Project Area, providing connection to major centres including (but not limited to) Colac, Geelong and Melbourne to the east and Warrnambool and Portland to the west. Little's Lane will provide access from Princes Highway to the TGTS while McCrae Street will provide access to the Dalvui BESS site. Both Little's Lane and McCrae Street are local roads managed by Council.

The surrounding area generally consists of agricultural land. There is existing undeveloped residential land parcel on McCrae Street, located south-west of the Project Area. This area is zoned General Residential Zone (GRZ) and included within the Development Plan Overlay - Schedule 6 General Residential Zone (DPO6). To the east of the Project Area is the Dalvui Racecourse and Recreation Reserve and directly south is the Warrnambool Railway Line.

Native vegetation is limited to three small patches comprising of Blackwood (*Acacia melanoxylon*) adjacent to the Project Area. One patch is located within the adjoining Warrnambool Railway Line corridor to the south

of the Project Area and two small patches at the northern end of the adjoining tree line to the east of the Project Area. Each patch is classified as Scoria Cone Woodland (EVC 894) and of low quality. There are no scattered trees recorded in the Project Area.

The Project Area is located within an area of Aboriginal cultural heritage sensitivity. There are no Victorian Heritage Register site (VHR), Victorian Heritage Inventory (VHI) or Heritage Overlays (HO) within the Project Area.

Images of the Project Area are shown in Figure 2-3 to Figure 2-8.



Figure 2-3 Introduced pasture in private land (eastern portion of Project Area)



Figure 2-4 Planted Sugar Gums adjacent to eastern boundary of Project Area



Figure 2-5 Patch of native Blackwood in rail reserve, south of Project Area



Figure 2-6 Planted trees and introduced grasses along McCrae Street and inside the TTS



Figure 2-7 Introduced grasses in rail reserve at potential access location at end of McCrae Street



Figure 2-8 Excavation works north of the TTS

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3 Project Justification

The Proponent intends to install a BESS in Terang to help maintain reliable and affordable energy supply for Victoria. The intention is to combine the operation of the Delvui BESS with renewable energy generation to support Victoria's transition away from reliance on fossil fuels. When complete, the Project will enable the allocation of power to key locations during blackouts due to power shortages, thereby enhancing the resilience of existing power supply network.

The Project supports the objectives of the following International and Australian policies.

3.1 Government Policy

3.1.1 Paris Climate Accord

Australia has a range of initiatives aimed at meeting its climate change targets, improving the environment and supporting an effective international response.

The Paris Agreement is a symbol of countries' commitment to a low-carbon, climate resilient future. On 10 November 2016, Australia ratified the Paris Agreement and the Doha Amendment to the Kyoto Protocol, reinforcing its commitment to action on climate change. The transition of energy production to renewables is key to achieving the objectives of the Paris Agreement.

The Commonwealth Government's recent commitment to net zero emissions by 2050 as outlined in *'Australia's Long Term Emissions Reduction Plan'* (October 2021) includes acknowledgement of the potential for energy storage to play a role in creating a reliable renewable energy supply for Australia. Projects like the proposed Dalvui BESS support the transition to renewables, ensuring reliable, accessible and cost effective options.

3.1.2 Victorian Renewable Energy Action Plan

The Renewable Energy Action Plan (REAP) sets out how Victoria will ensure a renewable, affordable and reliable energy supply, which uses large-scale renewable energy technology and ensures grid stability. The REAP specifically supports commercial investments in energy storage. Implementation of the REAP will support Victoria's pathway from a carbon-intensive to net zero emissions energy sector by 2050, with current renewable energy generation targets of 40% by 2025.

The REAP focuses on the following key areas:

- Supporting sector growth
- Empowering communities and consumers
- Modernising our energy system

The Victorian Government has since increased the Victorian Renewable Energy Target (VRET) to 50% by 2030. The increased target of 50% by 2030 has been legislated in the *Renewable Energy (Jobs and Investment) Act 2017* (Vic).

The Victorian Government established the Victorian Renewable Energy Auction Scheme in 2017 (VREAS) to support achievement of the VRET. The Victorian Government is currently conducting a market sounding process to examine options to meet the VRET target of 40% of renewable energy generation in Victoria by 2025 (VRET II). VRET II will also support the renewable energy supply chain, deliver more affordable, reliable energy supply and create new jobs and investment. This market sounding process will assist in preparing a suitable framework for a second auction round.

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3.2 Battery Energy Storage Technology Overview

Batteries provide an opportunity to store energy generated from another source. Coupling batteries with renewable energy generation allows that energy to be stored during times of low demand and released at times of peak demand. Batteries most commonly use lithium to store the electricity until it is ready to be distributed to the network.

The Project is expected to have an indicative capacity up to 196MW and will provide a range of valuable functions to the electricity market and network. The Project will provide fast frequency response to the National Electricity Market (NEM) and be an energy reserve to augment power supplied in Victoria. The technology will allow for:

- Energy “time shifting” from times of high supply, e.g. during peak renewable production to periods of high demand
- Network support via a range of potential functions including Fast Frequency Response, Reactive Power Support and Voltage Stability.

In order to achieve International, National and State Government objectives, the Dalvui BESS could commence construction as soon as practical in 2024.

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4 Project Description

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4.1 Design Overview

The final siting and layout of the Project will be determined as part of a detailed design process post planning approval and once a preferred BESS supplier has been selected. The Project may be constructed at once, or as part of a phased development. Ongoing technological advancements in battery energy storage will mean future BESS systems will likely be more compact and efficient compared to those currently on the market. Accordingly, design assumptions used for this planning assessment and outlined below represent a 'worst case' scenario.

4.1.1 Key BESS Components

The following components are key to the proposed works:

- Battery Pack Containers with an output of 196 MW / 392 MWh with indicative dimensions of 1830mm in width, 10940 mm in length and 2600mm in height.
- Up to two 66kV transformers with indicative dimensions of 14800mm in width, 11100mm in length and 8000mm in height (one within the TGTS and one within the BESS site). The indicative locations are shown on the Site Layout Plan (Figure 4-2) within the TGTS and one potential location within the BESS site.
- 33kV transformers with indicative dimensions of 2820mm in width, 2960mm in length and 2900mm in height
- 3.5MW inverters with indicative dimensions of 9300mm in width, 2620mm in length and 2600mm in height
- 33kV capacitor bank with indicative dimensions of 15830mm in length, 1440mm in width and 4000mm in height

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4.1.2 Key Ancillary Components

The following ancillary components are proposed to support the operation of the BESS:

- Upgrade of the eastern section of McCrae Street, connecting to the BESS via an existing access point
- Upgrades to the existing TGTS to include the option of a 66kV transformer on site
- Underground 66 kV transmission lines along Littles Lanes and McCrae Street
- Transformers and invertors
- Security fencing
- Internal access tracks
- Civil infrastructure such as drainage channels
- Fire fighting infrastructure (i.e. water tanks) as required by the CFA guidelines
- Operations and maintenance building (including staff office)
- Car parking
- Business identification signage

The Proponent will be undertaking the works in the TGTS on behalf of the public land manager (Ausnet Services).

Figure 4-1 below provides indicative illustrations of battery storage units, inverter and MV transformer station., while Figure 4-2 Dalvui Site Layout Plan illustrates the Site Layout Plan. The Site Layout Plan, Indicative BESS Design and typical elevation plans for the BESS infrastructure are included in Appendix A of this report.



Figure 4-1 Example of battery storage units, inverter and transformer station

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Dalvui BESS
Indicative Site Layout Plan

Figure 4-2 Dalvui Site Layout Plan



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4.2 Project Details

This section outlines details of the Project subject to planning approval.

4.2.1 Construction Timeframe

The indicative construction timeframe is estimated to extend over an 18-month period. It is anticipated that the construction activities will occur in the following phases:

- Site mobilisation
- Site clearing, fencing and establishment of laydown area
- Construction of batteries, inverters and associated infrastructure
- Construction of transmission connection
- Testing and commissioning

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4.2.2 Operations and Maintenance Requirements

The Proponent submitted a connection enquiry to AEMO on 8 July 2020. Registration as an intending participant commenced in September 2020 and the registration response including welcome letter and approval letter was received on 8 January 2021.

The proposed BESS is expected to have an operational phase of approximately 25 years, operating 24 hours a day, 7 days a week. This will require a range of operations and maintenance activities to be undertaken on a rolling maintenance program post planning approval including:

- Inspecting battery systems, power connection and security; and
- Undertaking electrical maintenance

For scheduled maintenance, approximately two full time personnel will be on site over the operational period.

4.2.3 Site Access

It is expected key BESS materials and infrastructure will be delivered to three port options and transported to site via the Princes Highway. The three port options are the Port of Portland, Port of Melbourne and/or the Port of Geelong. Following appointment of a Delivery Contractor, specific access routes will then be confirmed and adopted for the construction phase of the Project.

It is anticipated that materials and infrastructure will travel on road from the ports to Princes Highway → Littles Lane → McCrae Street (to the Project Area). The majority of vehicles expected to service the site during construction include a size up to and including 19m semi-trailer trucks and 19m truck and quad dogs. The 19m semi-trailer and 19m truck and dog combination trucks are anticipated to appropriately access the site via the proposed access route noting:

- One-way movements (at a time) are required at the Littles Lane / McCrae Street intersection
- Minor road widening (include (gravel or paved shoulder, pavement widening, etc.) is recommended at Littles Lane / McCrae Street to accommodate vehicle swept paths (refer to Figure 4-3)
- The road widening (include (gravel or paved shoulder, pavement widening, etc.) on McCrae Street allows for vehicles to prop while other vehicles traverse the one-way width at the site's access frontage to McCrae Street.

Staff access routes to the proposed BESS facility are largely similar to the above construction vehicle and delivery routes.

Any required traffic management and mitigation works are to be identified and addressed by way of an approved Traffic Management Plan (TMP).

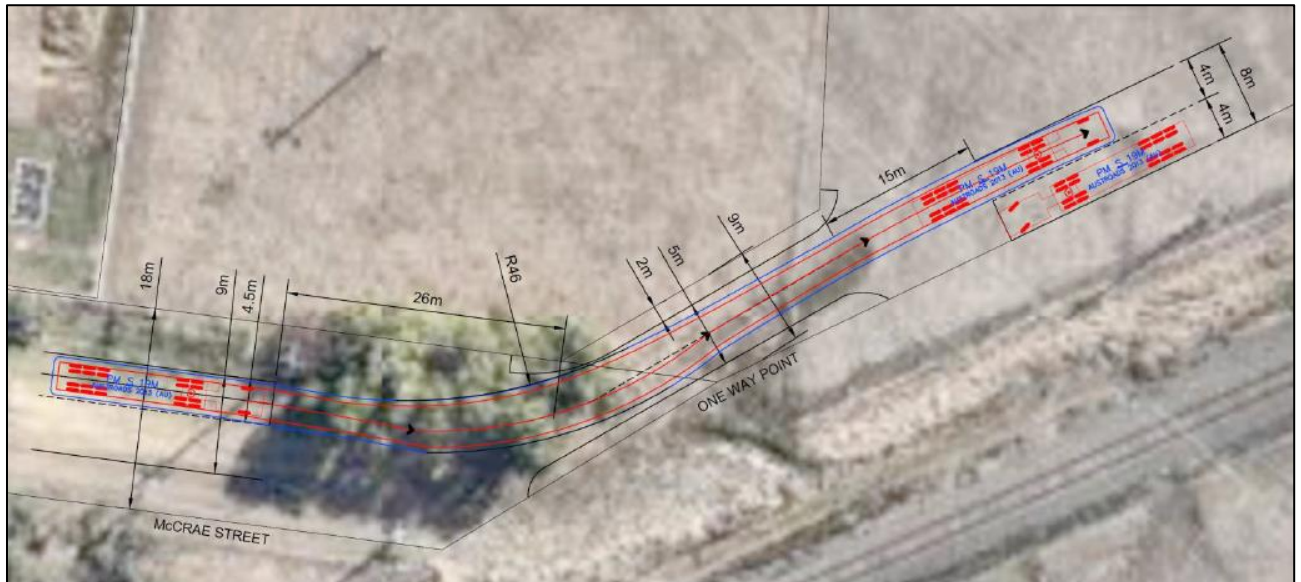


Figure 4-3: 19m semi-trailer swept path (McCrae St left turn into site access)

4.3 Design Progression

The site selection and design progression process has been robust to ensure the optimal site and design for a BESS.

The site was selected due to its land use compatibility, proximity to grid connection infrastructure (the existing TGTS) and good access from the Princes Highway. The Project Area has no native vegetation nor historic and cultural heritage therefore avoiding impacts to important environmental aspects. Drainage has been interrogated to minimise potential risk of flooding both within the Project Area and on adjacent land.

The proposed use compliments the existing infrastructure uses in the vicinity including the proposed Terang BESS, whilst avoiding unreasonable cumulative impacts. The assessment against the planning policies relevant to the Project includes consideration of the cumulative impact as a result of the proposed Terang BESS located north-west of the Project Area.

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5 Planning Context and Controls

The relevant provisions in the Planning Scheme have been considered below in the assessment of the Project. To determine whether the Project supports the planning scheme provisions, a number of environmental assessments have been undertaken. These include:

- Appendix C - Ecology Assessment (Aurecon, 2022)
- Appendix D - Traffic Impact Assessment (Aurecon, 2022)
- Appendix E – Noise Assessment (Sonus, 2022)
- Appendix F – Surface Water Impact Assessment (Aurecon, 2022)
- Appendix G – Environmental Management Framework (Aurecon, 2022)
- Appendix H – Bushfire Risk Assessment (Aurecon, 2022)
- Appendix I – Landscape and Visual Impact Assessment (Aurecon, 2022)
- Appendix J – Preliminary Hazard Risk Assessment (Aurecon, 2022)

5.1 Land Use Definitions

The Project is defined as a Utility Installation pursuant to Clause 73.03 (Land Use Terms) of the Planning Scheme. The definition of a Utility Installation includes *“transmission, distribution and storage of power”*.

The underground 66 kV transmission lines would normally be defined as a Minor Utility Installation pursuant to Clause 73.03 (Land Use Terms) and not require approval for use or development under Clause 62.01 – Uses not Requiring a Permit and Clause 62.02 – Building and Works of the Planning Scheme. However, the underground transmission lines are considered ancillary to the proposed Utility Installation as they connect two components of the proposal.

Proposed transformers and invertors are undefined in the planning scheme, however are also considered ancillary to the proposed Utility Installation.

The upgrades to the existing TGTS to include the option of a transformer are also considered ancillary to the proposed Utility Installation, however does not trigger a planning permit as the works are associated with a section 1 use in the Public Use Zone - Schedule 1 (Services and Utility) and are undertaken on behalf of the public land manager (Ausnet Services)

It is proposed to widen, upgrade and link existing internal access roads, connecting the Project site to McCrae Street via an existing access point. Permanent site carparking is also proposed. *Clause 62.01 – Uses not Requiring a Permit* and *Clause 62.02 – Building and Works* of the Planning Scheme, requires no planning approval for a Road or Roadworks except within the Urban Floodway Zone and a Public Conservation and Resource Zone. As no use, building or works are proposed in these zones, no approval is required for the widening and upgrade of roads to facilitate the Project.

5.2 Zone Provisions

The Project Area is within the Farming Zone (FZ) and Public Use Zone Schedule 1 (PUZ1) pursuant to the Corangamite Planning Scheme (refer to Figure 5-1).

5.2.1 Clause 35.07 – Farming Zone

The purpose of the FZ (where relevant) is:

- *To provide for the use of land for agriculture.*

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- *To encourage the retention of productive agricultural land.*
- *To ensure that non-agricultural uses, including dwellings, do not adversely affect the use of land for agriculture.*
- *To encourage the retention of employment and population to support rural communities.*
- *To encourage use and development of land based on comprehensive and sustainable land management practices and infrastructure provision.*
- *To provide for the use and development of land for the specific purposes identified in a schedule to this zone*

Pursuant to Clause 35.07 (FZ), planning approval is required for a Section 2 use and buildings and works for a Utility Installation.

There are no exemptions from notice and review within the FZ.

Before deciding on an application to construct a building or construct or carry out works, the responsible authority must consider the decision guidelines of the FZ, as appropriate:

- *The Municipal Planning Strategy and the Planning Policy Framework.*
- *Any Regional Catchment Strategy and associated plan applying to the land.*
- *The capability of the land to accommodate the proposed use or development, including the disposal of effluent.*
- *How the use or development relates to sustainable land management.*
- *Whether the site is suitable for the use or development and whether the proposal is compatible with adjoining and nearby land uses.*
- *How the use and development makes use of existing infrastructure and services*
- *The impact of the proposal on the natural physical features and resources of the area, in particular on soil and water quality.*
- *The impact of the use or development on the flora and fauna on the site and its surrounds.*
- *The need to protect and enhance the biodiversity of the area, including the retention of vegetation and faunal habitat and the need to revegetate land including riparian buffers along waterways, gullies, ridgelines, property boundaries and saline discharge and recharge area.*
- *The location of on-site effluent disposal areas to minimise the impact of nutrient loads on waterways and native vegetation*
- *The need to locate buildings in one area to avoid any adverse impacts on surrounding agricultural uses and to minimise the loss of productive agricultural land.*
- *The impact of the siting, design, height, bulk, colours and materials to be used, on the natural environment, major roads, vistas and water features and the measures to be undertaken to minimise any adverse impacts.*
- *The impact on the character and appearance of the area or features of architectural, historic or scientific significance or of natural scenic beauty or importance.*
- *The location and design of existing and proposed infrastructure including roads, gas, water, drainage, telecommunications and sewerage facilities.*
- *Whether the use and development will require traffic management measures.*

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Legend

- Project area
- LGA
- Locality
- Planning Zones**
 - FZ - Farming Zone
 - GRZ - General Residential Zone
 - PUZ1 - Public Use Zone Service and Utility
 - TRZ1 - Transport Zone 1
 - TRZ2 - Transport Zone 2

Basemap: Esri
Data Source: ViMap (2022)

Date: 22/02/2022

Version: 1

Daivui BESS Project

Land Use Zones



C:\Users\cherry\Documents\Project\Work\0012_510575_Tilt\BESS\Project\Planning\BESS project - Planning.dwg

Author: Nils Oler



A3 scale: 1:5,000
0 50 100 Metres

Job No: 510575
Coordinate System: GDA 1994 MGA Zone 55

Figure 5-1 Project Area Zones

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Assessment against Farming Zone decision guidelines

The planning application is consistent with the decision guidelines of the FZ as assessed in Table 5-1 below.

Table 5-1 Assessment against Farming Zone decision guidelines

Decision Guideline	Response
<i>The Municipal Planning Strategy and the Planning Policy Framework.</i>	The Project aims to support renewable energy generation in the future by storing energy (such as renewable energy). The Project further supports sustainable development and energy use for Victoria. See Section 5.6 and Section 5.7 for further information.
<i>Any Regional Catchment Strategy and associated plan applying to the land.</i>	The Project Area is located within the Mount Emu Creek catchment, a sub-catchment of the Hopkins River. Both Mount Emu Creek and the Hopkins River are within the Murray and Western Plains segment as defined by the State Environment Protection Policy (Waters) (SEPP (Waters)) under the Environment Protection Act 1970. In accordance with the SEPPs, both waterways have existing poor water quality conditions. The Project will not impact on the water quality of these two waterbodies.
<i>The capability of the land to accommodate the proposed use or development, including the disposal of effluent.</i>	
<i>How the use or development relates to sustainable land management.</i>	
<i>Whether the site is suitable for the use or development and whether the proposal is compatible with adjoining and nearby land uses.</i>	The Project is complementary and compatible with the current and adjoining land uses. The TGTS, located to the west of the Project Area, will provide both a transmission and distribution connection for the Project to the wider network. As part of the Project, works are proposed to upgrade the TGTS to allow the BESS to utilise this existing infrastructure.
<i>How the use and development makes use of existing infrastructure and services</i>	
<i>The impact of the proposal on the natural physical features and resources of the area, in particular on soil and water quality.</i>	Due to the limited area of native vegetation, absence of any significant habitats and long agricultural use of the Project Area and surrounds, it was determined the Project is unlikely to impact on significant environmental and biodiversity values in the area. Due to the significant distance to existing waterbodies, it is considered unlikely that the Project will impact on nutrient load or saline discharge to waterways and riparian buffers along waterways. The Project will not create effluent and any wastewater or sewage will be disposed of in accordance with EPA guidelines; avoiding potential impacts to local waterbodies and vegetation.
<i>The impact of the use or development on the flora and fauna on the site and its surrounds.</i>	
<i>The need to protect and enhance the biodiversity of the area, including the retention of vegetation and faunal habitat and the need to revegetate land including riparian buffers along waterways, gullies, ridgelines, property boundaries and saline discharge and recharge area.</i>	
<i>The location of on-site effluent disposal areas to minimise the impact of nutrient loads on waterways and native vegetation</i>	
<i>The need to locate buildings in one area to avoid any adverse impacts on surrounding agricultural uses and to minimise the loss of productive agricultural land.</i>	Although within the FZ, the Project will not have an adverse impact on surrounding agricultural uses. It has been specifically placed to take advantage of adjacent infrastructure to minimise the impact of the Project on agricultural land. Further, the potential impact of the Project on agricultural activity is considered minimal due to the relatively small size and low productive value of the land, with agricultural employment not effected.

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Decision Guideline	Response
<i>The impact of the siting, design, height, bulk, colours and materials to be used, on the natural environment, major roads, vistas and water features and the measures to be undertaken to minimise any adverse impacts.</i>	Given some of the surrounding area has been developed for energy purposes (TGTS), the impact on the character and appearance of the area is expected to be minimal. The colours and materials of the BESS will minimise visual impacts.
<i>The impact on the character and appearance of the area or features of architectural, historic or scientific significance or of natural scenic beauty or importance.</i>	
<i>The location and design of existing and proposed infrastructure including roads, gas, water, drainage, telecommunications and sewerage facilities.</i>	
<i>Whether the use and development will require traffic management measures.</i>	Appropriate measures will be undertaken during construction to minimise traffic impacts which will likely be implemented through a TMP. Local road widening (gravel or paved shoulder, pavement widening, etc.) is recommended on both Little Lane and McCrae Street to provide passing areas for management of these truck movements.

5.2.2 Clause 36.01 – Public Use Zone

The purpose of the Public use Zone (PUZ) (where relevant) is:

- *To recognise public land use for public utility and community services and facilities.*
- *To provide for associated uses that are consistent with the intent of the public land reservation or purpose.*

Pursuant to Clause 36.01 (PUZ), planning approval is not required for a Section 1 use (Utility Installation) provided the use is consistent with the intent of the public land reservation as outlined in the 'table of public land use' in Clause 36.01-6. The land within the Project Area zoned PUZ1 has the intent of the public land reservation as Service and Utility.

The Project is consistent with the purpose of the PUZ1. As the works will be undertaken by Tilt Renewables Australia Pty Ltd on behalf of the public land manager (Ausnet Services) no planning approval is required for use or buildings and works.

5.3 Overlay Provisions

The proposal is not directly affected by any overlays as there are no overlays across the Project Area. As such, no additional planning permit requirements were identified.

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5.4 Particular Provisions

The following provisions also apply to the Project.

5.4.1 Clause 52.02 - Easements, Restrictions and Reserves

Clause 52.02 applies to a development that proposes create, vary or remove an easement or restriction, or acquire an easement or remove a right of way

The purpose of this clause is:

- *To enable the removal and variation of an easement or restrictions to enable a use or development that complies with the planning scheme after the interests of affected people are considered.*

The Project Area includes the following encumbered easement and beneficiaries:

- Transmission of Electricity
- Telephone Wires

Refer to Appendix B for placement of easements.

Assessment against Easements, Restrictions and Reserves decision guidelines

There are no encumbrances, restrictions or caveats registered on the Certificates of Titles that would impact on the current footprint option of the BESS.

Pursuant to Clause 52.02, planning approval is not required as the Project will not alter an easement within the Project Area.

5.4.2 Clause 52.05 - Signs

Clause 52.05 aims to regulate the development signs and associated structures.

The purpose of this Clause is to:

- *Ensures signs are compatible with the amenity and visual appearance of an area, including the existing or desired future character.*
- *Ensure that signs do not cause loss of amenity or adversely affect the natural or built environment or the safety, appearance or efficiency of a road.*

Sign requirements in the FZ are classified as Category 4 – Sensitive areas.

Pursuant to Clause 52.05 planning approval is required for business identification signs and must be restricted to a total display area not exceeding 3 sqm.

This planning application is seeking approval for business identification signage not exceeding 3 sqm on site.

The indicative dimensions of the business identification signage will be 1.5m (width) by 1m (length) and will sit 0.75m above the ground. The sign will be a self-supporting structure located at the entrance to the site on McCrae Street, shown in the Site Layout Plan at Appendix A. The sign will be used to identify the facility as the Dalvui Battery Energy Storage System and identity Tilt Renewables (logo will be displayed) as the owner and operator of the facility. The sign will include a contact number for the facility and display the Personal Protective Equipment required to be worn to enter the site. The sign will be non-reflective and not be illuminated, electric or animated.

Assessment against Clause 52.05 decision guidelines

Under Category 4, directional signs are permitted on the premises without planning approval.

All business identification signage will be designed in a way that is constant and compatible with the setting and does not compromise or obstruct any views (from a safety perspective). All business identification signs on site will not exceed 3 sqm as specified in the condition.

All other signs would require planning approval, except those specified in Clause 52.05-10. Clause 52.05-10 signs exempt from planning approval that are applicable to this Project include:

- Signs controlling traffic on a public road
- Signs required by statute or regulation, provided it is strictly in accordance with the requirement.

5.4.3 Clause 52.06 – Car Parking

Clause 52.06 applies to a new use, an increase in the floor area or site area of an existing use or an increase to an existing use by the measures specified in the clause.

The relevant purposes of Clause 52.06 are:

- *To ensure the provision of an appropriate number of car parking spaces having regard to the demand likely to be generated, the activities on the land and the nature of the locality.*
- *To ensure that car parking does not adversely affect the amenity of the locality.*
- *To ensure that the design and location of car parking is of a high standard, creates a safe environment for users and enables easy and efficient use.*

Assessment against Clause 52.06 decision guidelines

Pursuant to Clause 52.06, the provision for car parking is required prior to the commencement of a new use. Although the number of car parking spaces required for the Proposal is not specified under this clause, a sufficient amount of car parking must be provided to the satisfaction of the Responsible Authority under Clause 52.06-6.

A Traffic Impact Assessment (TIA) (refer to Appendix D) was conducted by June (February 2022) that assessed permanent parking requirements of the Project.

An indicative number of permanent onsite parking (15 car parking spaces total) has been proposed as part of the Project and is sufficient to cater for the number of site personal required during the operation phase of the Project (1-2 personnel). The final number of permanent car-parking spaces will be confirmed during detailed design.

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5.4.4 Clause 52.17 – Native Vegetation

Clause 52.17 (Native Vegetation) seeks to ensure that there is no net loss to biodiversity as a result of the removal, destruction or lopping of native vegetation. This is achieved by applying the *Guidelines for the removal, destruction or lopping of native vegetation* (Department of Environment, Land, Water and Planning, 2017).

Planning approval is required to remove, destroy or lop any native vegetation, including dead vegetation.

Assessment against Clause 52.17 decision guidelines

An Ecology Assessment was undertaken by Aurecon (February 2022) (Refer to Appendix C Ecology Assessment). The field assessment confirmed the presence of three small patches of native vegetation adjacent to the Project Area, two adjacent the north-east corner and one adjacent to the southern boundary of the Project Area. Each comprised of Blackwood as the only native component (refer to Figure 5-2).

No scattered trees (as defined in Clause 52.17) were recorded in the Project Area. Native eucalypts recorded in and adjacent to the Project Area were deemed to be planted (for amenity) and therefore exempt from planning approval as per the planted vegetation exemption outlined in Clause 52.17.

The TIA proposes construction, operation and maintenance phase vehicles to appropriately access the site via Princes Highway, Littles Lane and McCrae Street provided the corner of McCrae Street is widened to accommodate 19m semi-trailer trucks and 19m truck and dog combination trucks (refer to Appendix D Traffic Impact Assessment). As a result of the road widening include (gravel or paved shoulder, pavement widening, etc.), vegetation removal will be unavoidable. However, the vegetation has been assessed as planted for amenity purposes and therefore not subject to the provisions of the planning scheme.

Pursuant to Clause 52.17, no planning approval is required for impacts to or removal of native vegetation and as such no offsets are required.

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Figure 5-2 Project Area and Native Vegetation

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5.5 General Provisions

5.5.1 Clause 66.02 (Use and Development Referrals)

In accordance with Clause 66.02-4 *Major electricity line or easement* the construction of a building or construction or carrying out of works on land within 60 m of a major electricity transmission line (220 Kilovolts or more) or an electricity transmission easement requires a referral to the relevant electricity transmission authority (AusNet Services) as a determining referral authority. A 220kv transmission line extends across the northern boundary of the Project Area, therefore a referral will be required to AusNet Services.

In accordance with Clause 66.02-7 (Industry, Utility Installation or Warehouse), the following applications must be referred to The Victorian WorkCover Authority as a determining authority. To use land for an Industry, Utility Installation or Warehouse where the fire protection quantity is exceeded under the Dangerous Goods (Storage and Handling) Regulations 2012. The Project is likely to exceed UN Class 9 for the use of Lithium Ion. The application must therefore be referred to WorkSafe Victoria as the Victorian WorkCover Authority.

A Preliminary Hazard Risk Assessment was prepared by Aurecon (refer to Appendix J) that assesses risks associated with the storage and handling of dangerous goods. No other referrals will be required in accordance with Clause 66.02.

5.6 Planning Policy Framework (PPF)

The State's PPF contains the overarching state level policies that apply across Victoria. The following clauses are identified as being applicable to this proposal.

- Clause 13 Environmental Risks and Amenities
 - Clause 13.02-1S Bushfire planning: *aims to strengthen the resilience of settlements and communities to bushfire through risk-based planning that prioritises the protection of human life.*
 - Clause 13.04-1S Contaminated and potentially contaminated land: *to ensure that potentially contaminated land is suitable for its intended future use and development, and that contaminated land is used safely.*
 - Clause 13.07-1S Land use compatibility: *protects community amenity, human health and safety while facilitating appropriate commercial, industrial, infrastructure or other uses with potential adverse off-site impacts.*
- Clause 14 Natural Resource Management
 - Clause 14.01-1S Protection of agricultural land: *protect the state's agricultural base by preserving productive farmland.*
- Clause 17 Economic Development
 - Clause 17.01-1S Diversified economy: *aims to strength and diversify the economy.*
 - Clause 17.01-2S Innovation and research: *creates opportunities for innovation and the knowledge economy within existing and emerging industries, research, and education.*
- Clause 19 Infrastructure
 - Clause 19.01-1S Energy supply: *facilitates appropriate development of energy supply infrastructure.*
 - Clause 19.01-2S Renewable energy: *promotes the provision of renewable energy in a manner that ensures appropriate siting and design considerations are met.*
 - Clause 19.03-2S Infrastructure design and provision: *aims to provide timely, efficient and cost-effective development infrastructure that meets the needs of the community.*

Assessment against the PPF

The aforementioned policies relate to the general state-wide provisions of the Planning Scheme and are generally relevant to the Project. The principle of land use and development have been adhered to and it is considered the Project meets the strategic directions of the PPF.

The Project is consistent with the relevant provisions of the PPF on the following basis:

- The Project does not increase the bushfire risk to nearby communities as it does not introduce building elements that are considered a bushfire hazard. Additionally, the vegetation, topographic and climatic conditions of the proposed site have been identified as being of low bushfire hazard. Further, a 10 m vegetation clearance buffer will be accommodated as part of the final design and maintained during operation.
- The design and siting of the Project will comply with all relevant standards and guidelines, including but not limited to the *CFA guidelines for renewable energy facilities* (CFA 2021) (or it's latest version) *Dangerous Goods Act 1985* and the *Dangerous Goods (Storage and Handling) Regulations 2012*. This will include siting requirements and relevant ventilation and fire suppression standards associated with battery storage systems.
- The Project supports the objective of facilitating the appropriate development of energy supply infrastructure. The Project takes advantage of established infrastructure that connects the BESS to the grid.
- The Project will use the latest BESS technology to provide a safe, efficient and reliable electricity system. The Project is deemed compatible with adjoining and nearby land uses thus adverse impacts to surrounding community amenity, human health and safety are minimised.
- State Planning Policy encourages development that will provide for a strong and innovative economy and will contribute to the well-being of communities and the State. The Project is consistent with this objective, as a total of approximately \$235.5 million will be invested in the area and \$23.5 million (10%) will be retained in the local region (Corangamite Shire, Colac-Otway Shire, Moyne Shire and Warrnambool City City). This level of investment will support 150 direct and 240 indirect Full Time Equivalent (FTE) positions over the 18-month construction period. Once operational, seven direct and 20 indirect FTE jobs will be supported by the facility.
- The Project harnesses emerging and innovative economic opportunities related to renewable energy supply and infrastructure and improves economic diversity and sustainability outcomes in the region.
- The Project sees the creation of jobs during construction and operation and for the purpose of maintenance. The provision of an estimated 165 full time equivalent (FTE) jobs will be created through the construction phase and 11 FTE jobs to operate the Dalvui BESS site. It is estimated that construction workers will inject \$2.2 million in additional spending to the regional economy, which in turn will support approximately 15 FTE's in the service industry within the local region. This improves access to jobs in the region and in turn, positively contributing to the well-being of communities and the State overall.
- Historically, the land has been used as private agricultural land, comprised exclusively of introduced pasture grasses. The site is currently used for cropping, with the potential of grazing limited to a few livestock. The potential impact of the Project on agricultural activity is likely to be minimal due to the following factors:
 - Only 4ha of land will be required to accommodate the facility
 - The land is unirrigated, cleared and considered of relatively low productive value
 - No agricultural jobs will be lost associated with the leased land
 - The landowner will be compensated for hosting the Project through annual lease payments. These payments would result in higher incomes compared with continuation of existing agricultural activities across the subject land, and
 - The land can be rehabilitated to its original condition at the end of the Project's life (decommissioning) when all above ground infrastructure will be removed, allowing farming activities to recommence.

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5.7 Local Planning Policy Framework (LPPF)

The LPPF contains the Municipal Strategic Statement (MSS) and Local Planning Policies (LPP). It presents a strategic vision for the community and other stakeholders and identifies long term directions regarding land use and development in the municipality.

5.7.1 Municipal Strategic Statement and Local Planning Policy

The Corangamite MSS includes policy direction that reflects the diverse land uses and development intensity in the municipality. The policies are general in nature and rely on the application of the LPPF policies to achieve the broad strategic direction of the MSS.

The MSS outlines the strategic vision for land use, environment, housing, activity centres, transport and infrastructure and community facilities for Corangamite.

The objectives and strategies summarised below are relevant to the proposal.

- Clause 21.03 Environmental and Landscape Values: *supports the implementation of technology that improves energy efficiency.*
- Clause 21.04 Environmental risks: *encourages development that will contribute to the reduction of greenhouse gas emissions.*
- Clause 21.07 Economic development: *supports the creation of new and alternative energy related jobs and investments within the municipality. It seeks to make use of existing energy infrastructure and distribution networks.*
- Clause 21.08 Transport and Infrastructure: *supports the provision of infrastructure (including infrastructure associated with energy supply) that enhances sustainability of the community at locations that allow for the utilisation of existing infrastructure.*

Assessment against the MSS

The Project will make use of the latest BESS technology to achieve the best outcomes in terms of safety, efficiency and reliability. It will contribute to a low carbon future while providing the community with greater resilience in the face of climate change and blackouts due to temporary loss of power supply.

The Project will help stimulate the local economy by providing jobs during construction and operation.

5.8 Stakeholder and Community Engagement

5.8.1 Community

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Two community drop-in information sessions were held in Terang with approximately 10 attendees over the two sessions. The drop-in information sessions were held at the Terang Civic Hall, at the following times:

- Friday 11 February 3pm – 7pm
- Saturday 12 February 9am – 1pm

This early community engagement was undertaken to:

- make people aware of Tilt Renewables' intention to apply for a planning permit for the Project
- provide early and accurate information about the Project
- provide an opportunity for community members to talk with Tilt Renewables about the Project, and hear any concerns they may have
- obtain feedback about how best to share the benefits of the Project with the community
- understand how people wish to be informed about the Project moving forward

In addition to the drop-in information sessions, information about the proposed Project and planning permit application were communicated using a range of different tools and activities to maximise awareness and understanding about the Project. Communication tools included:

- Project website dalvui bess.com.au
- A1 posters displaying key information about the Project at the drop-in information sessions
- Dalvui BESS Project Fact Sheet (available on the Project website and at the drop-in information sessions)
- General BESS FAQs (available on the Project website and at the drop-in information sessions)
- Four advertisements of the drop-in information sessions in local newspapers the *Terang Express* and *Camperdown Chronicle* – also advertised on local radio
- Advertisement of the drop-in information sessions on the Council website
- Approximately 25 letters sent to neighbours of the Project
- Project feedback form (available on the Project website and at the drop-in information sessions)

Table 5-2 below outlines the general sentiment towards the Project from verbal feedback received by the attendees of the drop-in information sessions.

Table 5-2 Community Sentiment

Sentiment towards the Project	No. of people
Positive	4
Negative	3
Neutral	3

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Verbal feedback and written feedback at the drop-in information sessions was recorded by Tilt Renewables staff. Figure 5-3 below shows the number of times key topics were raised.

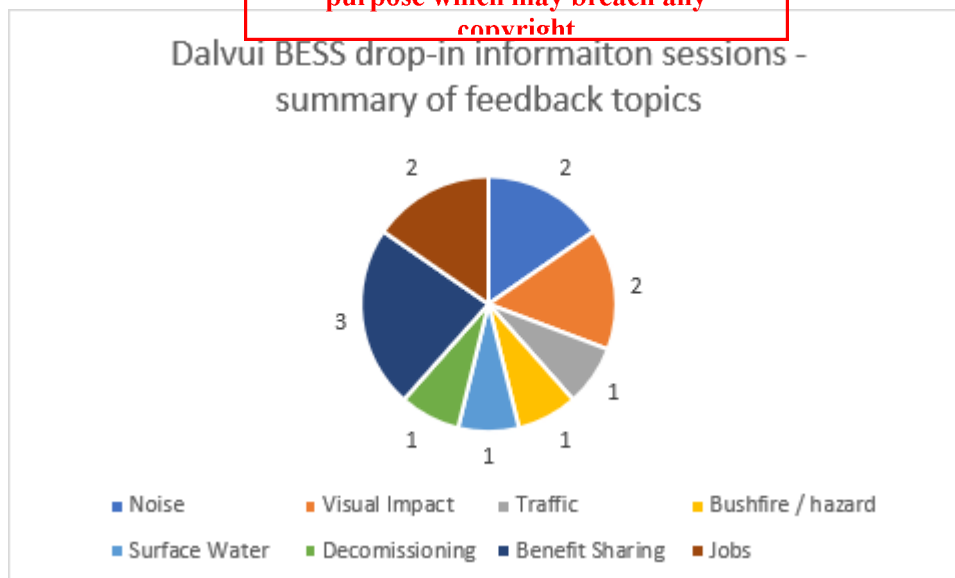


Figure 5-3 Summary of feedback topics

5.8.2 Department of Environment, Land, Water and Planning

A pre-application meeting was held with the Department of Environment, Land, Water and Planning (DELWP) on 27 November 2020. The purpose of the meeting was to introduce the Project and discuss the Proponent's approach to the planning permit application, accompanying environmental assessments and

community engagement. No major issues were raised by DELWP during the meeting. DELWP were satisfied with the approach outlined.

Since this meeting, informal discussions on the Project have been had with DELWP.

5.8.3 Corangamite Shire Council

A pre-application meeting was held with Corangamite Shire Council on 21 October 2020 to introduce the Project and discuss approach to gaining planning approval and community engagement. Further, the Proponent briefed the Councillors on the Project at a Councillor Briefing Session held on 8 December 2020. The Proponent provided an overview of the Project and approach to the planning approval and sort feedback on the approach to community engagement. Since this meeting, informal updates on the Project have been provided to Corangamite Shire Council.

5.8.4 Country Fire Authority

A meeting was held with the Country Fire Authority (CFA) on 25 February 2021. The purpose of the meeting was to introduce the Project generally and discuss the requirements of the *CFA guidelines for renewable energy facilities (CFA 2021)* as they apply to the Project.

It was identified that a second emergency access is preferred for BESS Projects. A second 'emergency only' gated access is proposed on the eastern boundary of the Project Area (shown on the Site Layout Plan at Appendix A). The final location of the second 'emergency only' gated access will be determined during detailed design.

The Proponent proactively offered a site familiarisation visit for relevant members of the CFA once the Project has been constructed.

A further meeting was held with the CFA on 22 February 2022 to further discuss the requirements of the *CFA guidelines for renewable energy facilities (CFA 2021)* as they apply to the Project.

Subsequent to submission of the Planning application, the CFA has released an updated version of the guidelines *CFA guidelines for renewable energy facilities (CFA 2022)*. The RFI request from DELWP dated 16 March 2022 has requested further information may be provided with the guidelines. This has been reflected in the updated Preliminary Hazard Assessment (Appendix J).

5.8.5 Eastern Maar Aboriginal Corporation

A meeting occurred between the Proponent and Eastern Maar Aboriginal Corporation (EMAC) on 1 December 2020. This was an opportunity to introduce the Project to EMAC and discuss and agree upon an approach for the Cultural Heritage Management Plan (CHMP) field Investigations.

A follow up meeting was held with EMAC on 17 February 2021 to discuss the findings of the CHMP field investigations.

A complex CHMP assessment has been prepared in consultation with the EMAC. The EMAC proposed a single management condition for a cultural awareness induction to be provided to contractors by EMAC prior to works commencing. This has been included in the proposed CHMP.

5.8.6 VicTrack

VicTrack was initially consulted with on the Project (via phone call and emails) in September 2020 to discuss requirements of developing the Project adjacent to a rail corridor. The *VicTrack Rail Development Interface Guidelines* were discussed as they apply to the Project and the Project's detained design will be in accordance with these guidelines.

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5.8.7 Victorian WorkCover Authority

The Proponent contacted the Victorian WorkCover Authority (WorkSafe) in October 2021, seeking any comments or considerations on the Project. To assist with WorkSafe's assessment of the application, the Proponent subsequently prepared a Preliminary Hazard Risk Assessment (contained at Appendix J).

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6 Summary of Environmental Assessments

6.1 Ecological Considerations

An Ecological Assessment was undertaken in February 2022 to assess the biodiversity values in the Project Area, including an assessment of any potential impacts to native vegetation and/or significant flora, fauna and ecological communities. It included a desktop and site investigation, which determined that the Project Area was largely farmland, dominated by introduced pasture grass.

Native vegetation was limited to three small patches of Blackwood (*Acacia melanoxylon*); one patch which occurred in the adjoining rail reserve to the south of the Project Area, and two small patches which occurred at the northern end of the adjoining tree line to the east of the Project Area. Each of these three patches were classified as Scoria Cone Woodland (EVC 894) of low quality. No native scattered trees were recorded in the Project Area.

Due to the limited area of native vegetation, absence of any significant habitats and long agricultural use of the Project Area and surrounds, it was determined that no threatened flora, fauna or ecological communities are likely to occur in the Project Area. As such, there are no implications for the Project under the *Environment Protection and Biodiversity Conservation Act 1999*, *Environment Effects Act 1978* or *Flora and Fauna Guarantee Act 1988*.

No further ecological assessments are required to inform the environmental planning approvals for the Project.

Refer to Appendix C for the Ecology Assessment.

6.2 Aboriginal Cultural Heritage

An Aboriginal cultural heritage assessment was undertaken in February 2021 to determine the presence of areas of cultural heritage sensitivity, recommend measures to avoid impacts and determine legislative requirements.

The Project Area is within an area of Aboriginal cultural heritage sensitivity and as such a CHMP is required as stipulated under the *Aboriginal Heritage Act 2006*.

To inform the CHMP, a desktop assessment found there are no existing Aboriginal places in the activity area. The volcanic plain is considered to have low archaeological potential. Following this, a Standard Assessment was undertaken however, no new Aboriginal places were identified. Finally, a Complex Assessment, involving the excavation of a single 1 x 1 metre (m) test pit (TP) and 14 0.5 x 0.5 m shovel test pits (STPs) was completed. No Aboriginal cultural material was identified as a result of the excavations.

A CHMP was lodged with EMAC in May 2022 and will assist in the management of any Aboriginal cultural material identified within the Project Area during construction. As a CHMP is required, planning permits, licences and work authorities cannot be issued unless the CHMP has been approved for the activity.

6.3 Historic Heritage

A historic heritage desktop assessment was undertaken in January 2021 to determine the presence of places or objects of Commonwealth, State or local significance, recommend measures to avoid impacts and determine legislative requirements.

A review of relevant historic heritage registers did not identify any historic heritage places or values within the Project Area.

No registered heritage places or objects are within the Project Area and as such no approvals are required under the *Heritage Act 2017*.

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- Under a conservative assessment, the anticipated construction phase traffic movements result in a net zero impact to operational service levels along Princes Highway. Significant traffic volume increase is detected on Littles Lane and McCrae Street compared to the low existing traffic, however the total traffic volume during construction phase on both roads are still very low.
- Against existing traffic movements on Princes Highway, Littles Lane and McCrae Street, operational and maintenance phase associated staff vehicle movements could not be expected to notably impact on the function or safety of the Princes Highway access points and/or Princes Highway, on Littles Lane and McCrae Street.
- The traffic generated from operation and maintenance of the facility will be minimal as staff will only be required periodically. The provision of 15 indicative car parking spaces is deemed appropriate considering Clause 52.06 of the Corangamite Planning Scheme, however the final number of car parking spaces required will be determined during detailed design.
- The Project complies with access requirements of the CFA. A Bushfire Management Plan and Emergency Management Plan are recommended to be completed in consultation with the CFA.

Table 3 Assessment Against the CFA Guidelines

CFA Guidelines	The Project Design
1. Location and siting within landscape (Section 5.3.1)	As per section 6.1, the Project site is a grassland used historically for agriculture. It is assumed that no peat is found in the Project Area or surrounding areas. However, the site is within a BPA and hence additional controls to prevent bush fire damage will be considered.
2. Layout (Section 5.3.1)	The final design and layout will contain easily accessible fire service infrastructure and safe evaluation points in accordance with NFPA 855 as per Section 6.5. The fire safety study results and model requirements from Section 6.2.1 of the CFA guidelines will also be incorporated into the final design.
3. Fuel Load and vegetation on site (Section 5.3.1)	There is limited vegetation in the Project Area, comprising mostly grassland. The vegetation screening will consider vegetation with fire-retardant properties. The grass on site will be maintained at or below 100 mm during Fire Danger Period. All vehicles will be equipped with appropriate firefighting equipment.
4. Infrastructure (Section 5.3.1)	As per section 6.5 the BESS infrastructure will comply with UL 9540 and NFPA855. The site will be appropriately signed for dangerous goods as per CFA and NFPA 855 guidelines.
5. Site activities and Operations (Section 5.3.1)	Site activities may pose a fire hazard during construction and commissioning phases. These hazards will be managed through design and installation of appropriate de-energising and isolation systems during the detailed design phase for compliance with NFPA 855 as per section 6.5.
6. Site occupancy (Section 5.3.1)	Construction period (initial 18 months): approximately 5.4 personnel per day. Operation period (25 years post construction): approximately 2 personnel per day. These personnel will be considered vulnerable occupants. They will be trained as mitigation personnel as per NFPA 855. The site administrative buildings and car park will be built with adequate separation from the BESS infrastructure and adequate fire mitigation equipment and evacuation points will be in place as per NFPA 855.
7. Local weather conditions (Section 5.3.1)	Mean maximum temperature of 19 °C and a mean minimum of 7.4 °. Mean annual rainfall of 727 mm with >1 mm of rain on 108 days. Wind speed averages to approximately 20 km/h annually. Fire danger period for Corangamite Shire is typically from December to April. This will be taken into consideration when tasks with high fire risk are to be performed.
8. Electrical hazards (Section 5.3.1)	Project to be certified with UL 9540 as per section 6.5. This will identify and mitigate or manage electrical hazards.
9. Chemical hazards (Section 5.3.1)	Project to be certified with UL 9540 as per section 6.5. This will identify and mitigate or manage chemical hazards.
10. Potential fire spread (Section 5.3.1)	The site will be designed to comply with NFPA 855 which outlines battery separation, containment, fire detection and suppression systems and explosion control system requirements. As per section

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CFA Guidelines	The Project Design
	6.5 of this report, the BESS will be equipped with a BMS. Fire safety study results will also be incorporated to the final design.
11. Mechanical damage (Section 5.3.1)	Fencing and battery containment barriers to be designed as per NFPA 855 to prevent mechanical damage to batteries.
12. Landscape hazards (Section 5.3.1)	Ember protection to be implemented in battery containment facilities and the vegetation screening to prevent embers creating internal fires on site. Flood risk will be considered in emergency planning. It has been assumed that there is minimal seismic activity in the area.
13. Fire Safety Study and modelling (Section 5.3.1)	A fire safety study will be undertaken during detailed design stage to determine adequate fire mitigation system requirement and fire water requirement.
14. Facility Location (Section 6.1.1)	Please see item 1 in this table. As per section 6.5, assessment against Clause 13.02-1S is not required for this project.
15. Emergency Vehicle Access (Section 6.2.1)	Please see item 2 in this table.
16. Firefighting water supply (Section 6.2.2)	The fire water system is yet to be designed. Water supply volume required is to be determined during detailed design post a fire safety study. Potential to install a ring main fire water supply and locate fire hydrants as per NFPA 855 and CFA requirements. The final design will incorporate the model requirements from Section 6.2.2 of CFA including fire hydrant model requirements.
17. Landscape Screening and On-Site Vegetation (Section 6.2.3)	its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any conversion.
18. Fire Breaks (Section 6.2.4)	A 10m fire break is to be implemented as part of the Project's detailed design. The fire break is to meet NFPA 855 compliance standard.
19. Design Specific to BESS (Section 6.2.5)	Non-combustible, floor to ceiling partition walls (thermal barriers between battery racks (stacked modules) within battery containers will be considered. The facility will be designed to comply with FM Global Property Loss Prevention Data Sheet 5-33 (2020) Electrical Energy Storage Systems.
20. Fire Detection and Suppression Systems (Section 7.1.1)	Please see items 5 and 10 in this table.
21. Fire Risk Management (Section 7.1.2)	In accordance with the CFA guidelines, fire risk management is to be implemented by adhering to any conditions during the Fire Danger Period. Conditions include remaining on designated tracks for driving and restricted smoking areas. Appropriate permits to be obtained if required.
22. Personnel Training (Section 7.1.3)	Site personnel to be equipped with first aid and fire mitigation training including CFA's training modules for bushfire safety.
23. Emergency Management (Section 7.1.4)	Emergency Management Plan to be prepared as per the CFA guidelines prior to commissioning. Reliable communication devices to be installed for use in the event of a power failure.

CFA Guidelines	The Project Design
	CFA to be notified at least 7 days prior to commissioning.
24. Occupational Health and Safety (Section 7.1.5)	Safe work procedures and standard operating procedures to be developed for on-site personnel encompassing hazard management, security, ignition source control, maintenance and emergency procedures.
25. Vegetation and Fuel Management (Section 8.1)	Please see item 3 in this table.
26. Maintenance (Section 8.2)	Maintenance to be conducted to meet Australian standards and manufacturers requirements. Any work that may create an ignition source will be under 'hot work' permits.
27. Dangerous goods storage and handling (Section 8.3)	Appropriate signage to be used as per CFA and NFPA 855.
28. Facility and System Monitoring (Section 8.4)	Please see item 10 of this table.
29. Risk Management Review (Section 8.5)	Facility operators to develop or review the Risk, Fire and Emergency management plans.
30. Fire Management Plan (Section 9)	Will be developed per CFA guidelines during detailed design.
31. Emergency Management Plan (Section 10.1)	Will be developed per CFA guidelines during detailed design.
32. Emergency Information for Responders (Section 10.2)	Will be developed per CFA guidelines during detailed design.
33. Personnel Training (Section 10.3)	Will be done per CFA guidelines during onboarding of operators for commissioning and operation.
34. Emergency Exercises (Section 10.4)	Will be done per CFA guidelines during onboarding of operators for commissioning and operation.
35. Reviewing Emergency Management Plans (Section 10.5)	Will be performed per CFA guidelines during commissioning and site operation.
36. Bushfire Emergency Planing (Section 11)	Will be performed per CFA guidelines during commissioning and site operation.

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6.6 Noise

An environmental noise assessment was undertaken in June 2022 to determine if the noise criteria in 1826.4: *Noise limit and assessment protocol for the control of noise from commercial, industrial and trade premises and entertainment venues* (EPA, 2021) (the protocol) can be achieved (refer to Appendix E):

The findings are as follows:

- Based on historical meteorological data specific to the Dalvui site, the highest required cooling fan speed is 40% (based on the use of Tesla Megapacks).
- Cumulative impacts have been considered including the proposed Terang BESS to the north at 70 Littles Lane and the existing terminal station to the west.
- A tone is detectable and varies in frequency based on the speed of the cooling fans of the Tesla Megapacks. Therefore, there is the potential for the noise from a single Megapack to include the character of tonality as defined under the Protocol. However, as the cooling fans of each of the 168 Megapacks operate independently, the fans will be operating at a range of speeds and therefore a tone corresponding to a particular fan speed is unlikely to be detectable at residences.

- The noise prediction assessment has determined the Project can achieve the noise criteria in the *Noise limit and assessment protocol for the control of noise from commercial, industrial and trade premises and entertainment venues* with attenuators on the inlet and discharge of the Megapack cooling fans. The noise criteria could also be achieved with a combination of attenuators, noise barriers and fan selection.
- A pre-construction noise assessment will be undertaken to confirm compliance can be achieved for the final layout / battery model, once the detailed design and BESS supplier has been appointed.

6.7 Surface Water

A desktop surface water assessment was undertaken in June 2022 to predict the Project's impact on existing hydrology and flooding conditions (refer to Appendix F).

The findings are as follows:

- Surface water quality impacts as a result of sediment mobilisation and possible chemical spills and leaks are considered low due to distance and lack of sensitive water courses. Appropriate management of the identified surface quality impacts will result in minimal residual surface water quality impacts.
- Cumulative impacts on drainage and flooding as a result of the Project and the proposed Terang BESS development located north-west of the Project Area were considered. Overland flows from both Projects flow towards the Warrnambool railway line and mitigation measures may be required as part of detailed design.
- The Project is considered to pose a low impact as excavations are the only anticipated earthworks and there are no requirements for tunnelling. Foundations are anticipated to be constructed to a depth of 600mm, excavations should be kept to the order of 1m deep.

A number of mitigation measures have been proposed to alleviate impacts. These include:

- Drainage designs should adhere to the infrastructure design manual in particular, the major drainage system is designed to convey flows resulting from storms with a 1% Annual Exceedance Probability (AEP) and minor drainage system to convey flows from storms of at least 20% AEP.
- Design should adhere to the Vic Track Rail Development Interface Guidelines, which states that “the stormwater management system must be designed to divert stormwater runoff from the entire property subject to development (including all pervious and impervious areas) away from the rail corridor.”
- Any potential impacts are required to adhere to the *Environment Protection Act 1970* and SEPP (Waters) to reduce surface water pollution.
- An Erosion and Sediment Plan should be prepared to reduce soil erosion and mobilisation of sediments from the site during earthworks activities. The Erosion and Sediment Plan should conform with EPA Publication 1894 for additional mitigation measures.
- A construction environmental management plan (CEMP) should be prepared to identify the steps necessary to mitigate, avoid or manage potential risk associated with the local hydrology and water quality.
- A CEMP should be prepared to outline proper waste management / disposal procedures. Procedures should be prepared in accordance with EPA Publication 1820.

6.8 Landscape and Visual

A Landscape and Visual Impact Assessment (LVIA) was prepared and included in Appendix H (2022). The assessment examined the existing landscape and visual conditions of the Study Area (both physical and statutory) and compared this to the level of visual modification due to the Project.

The landscape character dominating within the Study Area is rural. This has been assessed to have the ability to absorb change as proposed by the Project, given the high level of human modification already experienced. The visual impacts of the Project were assessed as very low to low adverse impacts for most viewpoints during operation, including those viewpoints near residential properties.

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From viewpoint 2 (VP2) a private residential property on Princes Highway would be considered to experience moderate adverse visual impacts during operation due to proximity to the Project, parallel viewing angle and extent of Project components visible. Once the proposed vegetation screening matures, the residual visual impacts reduce for most of the viewpoints. The Project components do not intrude nor are in contrast to the size, scale and geographical extent to those within the existing TGTS.

To assist the detailed design process, recommendations have been provided for mitigation and management measures to reduce potential visual impacts as a result of the Project during construction and operation.

Mitigation measures are based on minimising the level of intrusion that the Project has on its existing landscape setting and is subject to further detailed design, operational and safety requirements. The mitigation measures for the Project include minimising disturbance to existing vegetation in and around the Site, planting low-level vegetation where possible to soften views, and using materials and colours on structures to blend into the existing environment where possible.

A landscape plan has been prepared to sit within the LVIA to illustrate how the proposed landscaping will provide mitigation of the visual impact of the Project.

As identified in section 6.6 an acoustic barrier is not currently required, however a final noise assessment will confirm this once detailed design has been undertaken and a BESS supplier has been selected. Any acoustic barrier that may be required has been assessed as having no change to the level of visual modification proposed by the baseline Project elements.

6.9 Preliminary Hazard Risk

A Preliminary Hazard Assessment (PHA) was prepared to identify hazards and assess the risk associated with storage and handling of dangerous goods at the proposed Project site (refer to Appendix J)

The preliminary hazardous materials risk screening process concluded that the quantity of lithium-ion batteries expected to be present on site exceeds the Placarding, Manifest and Fire Protection Quantity Thresholds. This implies necessary steps need to be taken in order to adhere to the relevant dangerous goods regulations. Several of the other materials expected to be present on site also require steps to be taken to adhere to the required regulations.

Subsequent hazard identification and Preliminary Hazard Analysis were conducted in accordance with WorkSafe Victoria's published guide: *A Guide to Risk Control Plans (2017)*. The process identified eight (8) hazards associated with the BESS and associated equipment, of which six (6) potential hazards had potentially significant off-site risks. All identified hazards are manageable through appropriate technical and management safeguards which reduce the residual risk to a manageable level and make it unlikely that a significant off-site risk is posed.

From the PHA, it was determined that subject to the implementation of recommended risk mitigations, technical and safety measures, the Project will not constitute a hazardous industry. The PHA recommends that the following appropriate technical safeguards are implemented in the detailed design of the BESS:

- Containers and infrastructure for BESS must be provided with appropriate spill containment (bundling or otherwise) that includes provision for management of fire water runoff.
- Confirm the cooling system allows the BESS to operate in all temperature conditions expected for the location.
- Applicable site flood risk levels to be utilised during detailed design phase to minimise flood risk to the Project.
- The Project should satisfy the applicable requirements for lightning protection specified in AS/NZ 1768 once constructed.

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7 Conclusion

As outlined in this report, the Dalvui BESS will support the Victorian Government's provision for energy supply and provide a key link for the region to progress towards a future of enhanced energy resilience.

The Project provides a key opportunity for development beside an existing energy infrastructure on previously disturbed land. When considering a number of environmental factors, the Project poses limited negative off-site impacts. The Project is considered to have met the current requirements and policy direction of the Corangamite Planning Scheme.

The Project directly responds to the need identified by the Victorian government (announced through the amendments to the *National Electricity (Victoria) Act 2005*) to provide reliable energy supply for South East Australia during high demand periods, through the facilitation of network upgrades and connections.

In terms of economic development, the Project will generate construction jobs and on-going employment opportunity at the site which will contribute to the local economy, particularly in the current economic context.

Overall, this application presents the attributes that are outlined in the relevant State and local planning objectives. It appropriately addresses the strategic directives of the Corangamite Planning Scheme in terms of technology advances, diverse employment opportunities and climate change resilience.

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Appendix A – Site Layout Plan and Site Elevations

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Appendix B – Certificate of Title

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Appendix C – Ecology Assessment

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Appendix D – Traffic Impact Assessment

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Appendix E – Noise Impact Assessment

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Appendix F – Surface Water Impact Assessment

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Appendix G - Bushfire Risk Assessment

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Appendix H - Landscape and Visual Impact Assessment

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Appendix I - Environmental Management Framework

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Appendix J - Preliminary Hazard Risk Assessment

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Document prepared by

Aurecon Australasia Pty Ltd

ABN 54 005 139 873

Aurecon Centre

Level 8, 850 Collins Street

Docklands, Melbourne VIC 3008

PO Box 23061

Docklands VIC 8012

Australia

T +61 3 9975 3000

F +61 3 9975 3444

E melbourne@aurecongroup.com

W aurecongroup.com

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