Chris Smith & ASSOCIATES PTY LTD

■ CIVIL ENGINEERS ■ LAND SURVEYORS
■ URBAN & REGIONAL PLANNERS ■ PROJECT MANAGERS

Approved Company
ISO 9001 - Quality System Management System
ISO 14001 - Environmental Management System
ISO 45001 - OH&S Management System

Planning Report

Utility Installation

400 MW Battery & Associated Infrastructure

Baranduda Energy Reserve

Kiewa Valley Highway & Whytes Road, Baranduda

Ref: 22219

Rev. 4 | July 2024

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400 MW Baranduda Battery Energy Storage System
Kiewa Valley Hwy & Whytes Rd, Baranduda

1 Introduction

1.1 Overview

Birdwood Energy, as an investor for **Birdwood Energy Reserve Pty Ltd as Trustee for the Birdwood Energy Reserve Trust** (the applicant) propose to construct a Utility Installation across two (2) properties – at Kiewa Valley Highway and Whytes Road, Baranduda (both properties are referred to jointly within this report as the '*subject site*').

The Utility Installation comprises a 400 MW/1800 MWh Battery Energy Storage System (BESS), control room and substation, as well as associated connection infrastructure, fencing, access and landscaping.

The subject site is 58.6 hectares (ha) in area, and comprises two (2) properties in separate ownership. The southern parcel is privately owned and largely vacant, while the northern property is owned and managed by AusNet, as it contains the Wodonga Terminal Station. The southern parcel is being developed as an industrial estate.

The proposal would cover approximately 15 ha – across both properties (this area of the property is referred to as the *"development site"* herein, distinguished from the subject site).

The development site has been chosen due to its proximity to the Wodonga Terminal Station. The substation connects the 330 kV transmission network, and receives renewable electricity generated by solar and hydro power plants in the region. The proposal would store this electricity for peak-time use by the residents of Wodonga and the wider national electricity market. The proposal will also provide ancillary services to facilitate the integration of further renewable generation into the grid.

The land around the BESS would be leased to the project on a 30-year lease. The nominated DTSO (AusNet Services) will own equipment on minor portions of the development site to house connection assets for the duration of the project.

The Wodonga Terminal Station infrastructure will be extended into the site via an overhead line to facilitate the connection of the BESS.

Chris Smith & Associates (CS&A) have been engaged by Birdwood Energy Reserve to prepare a planning permit application for the proposal. This report is supported by the by the reports and drawings listed below:

- **Plan of Existing Conditions** (Appendix A)
  (by Chris Smith & Associates, Ref: 22219/01, Rev.0)
- **Stormwater Management Plan** (Appendix B)
  (by Chris Smith & Associates, Ref. 22219/SWMP, Rev. 3)
- **Landscape Plan** (Appendix C)
  (by Chris Smith & Associates, Ref: 22219/LP, Rev. 4)
- **Noise Impact Assessment** (Appendix D)
  (by ADP, Ref: MEL3908, Rev. 03)
- **Flora and Fauna Assessment** (Appendix E)
  (by Nature Advisory, Ref: 22115.01 (2.1))
- **Traffic Impact Assessment** (Appendix F)
  (by Traffic Works, Project 220957, Final 2 Report, dated 21/05/24)
- **Risk Management Plan & Fire Safety Study** (Appendix G)
  (by Fire Risk Consultants, Ver. 2, Feb 2024)

- **Equipment Specifications & Factsheets** (Appendix H)
  (by CATL & BYD)
- **Plans of Proposed Development**
  (by Enerven, Rev. 0.2 & AusNet, Rev. 0.1)

1.2 Benefits of the Proposal

The benefits of the proposal are as follows:

- Arbitrages energy on the electricity spot market to reduce overall prices for Victorian households and businesses
- Stores locally and regionally produced electricity for peak-time use by the residents of Wodonga, reducing the need to import electricity from power plants located further away, as part of wider merchant operations in the market.
- Reduces reliance on coal and gas power to meet peak demand by firming renewable supply.
- Improves the profitability of solar farms in the region by storing electricity generated during the day. Several solar farms have been approved and are anticipated to be operational in the short term.
- Provides ancillary services into the market to enable wider renewable penetration.
- Uses new inverter technology to improve network stability and mitigate the impact of retiring synchronous (fossil fuel) generation.
- Creates local job opportunities.
- Injects expenditure into the local area.
- Development of a new land use thereby diversifying the regional economy.
- Assists in meeting the Victorian Government's energy storage targets.
- Is located in close proximity to planned Renewable Energy Zones V1, V6 and N7

1.3 Benefits of the Site

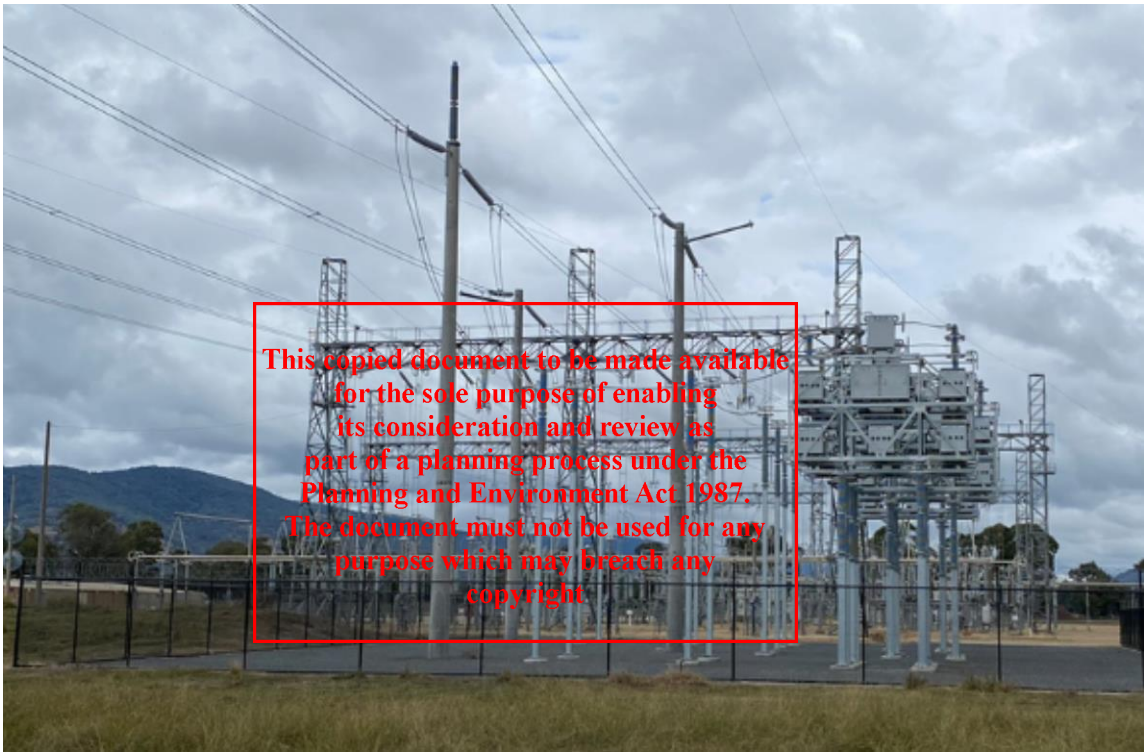
The development site was chosen for the following reasons:

- Proximity to Wodonga Terminal Station enabling a connection without extensive transmission lines
- Land use compatibility within an established industrial area and is part of a planned industrial development
- The site is suitably buffered from any residential zoned land, with a significant distance to the nearest residential land.
- It is relatively flat and well drained.
- It has good existing road access due to the location of the terminal station and industrial park.
- Large portions are free of cultural heritage artefact risk.
- It does not contain any native trees or shrubs.

2 Birdwood Energy Reserve – Company Profile

Birdwood Energy Reserve has been designed to arbitrage energy on the electricity spot market to reduce overall prices for Victorian households and businesses. Birdwood Energy Pty. Ltd. (Birdwood Energy) as the supporter of the project, is a specialist investor in the energy sector which works closely with developers to scale projects for investment, accelerate deployment and integrate batteries, as well as investing into businesses supporting in the sector. Birdwood has a $2 billion portfolio of investments.

Birdwood's team are driven to get the energy infrastructure, in the countries we work in, to Net Zero as fast as possible.



Wodonga Terminal Station
Source: Birdwood Energy website

3 Site & Locality Analysis

3.1 Subject Site

General

The subject site comprises two (2) properties within separate ownership. These properties are addressed as Kiewa Valley Highway and Whytes Road, Baranduda, which are cadastrally identified as Lot 11, PS340793 and Lot 2, PS406394, respectively.

The subject site is irregularly shaped with a total area of 58.6 ha, with frontage to road reserves to the south-west (Kiewa Valley Highway), south-east (Baranduda Drive) and north-east (Whytes Road).

The subject site is generally flat with an elevation of around 170m Australian Height Datum (AHD), with a slight fall to the north and west of the site toward Middle Creek.

The west section of the property contains a structure that was once either a dwelling or shed but is now derelict. The property also contains two (2) dams but is otherwise and is used for low intensity cattle grazing.

The northern parcel comprises the Wodonga Terminal Station, whilst the southern parcel is largely cleared, though it contains two (2) dams adjacent to the development site.

The subject site is zoned for industrial use, and the balance of the site will be preserved for future industrial development independently of this proposal. The development extents of the proposal (relative to the broader land within common ownership) are illustrated in the below figure.

Approximate/Indicative Development Extents shown relative to title
Source: Wodonga City Council GIS viewer

Vegetation

The property has been cleared, possibly for agricultural use. Scattered trees exist in the northwest section of the property, which may be remnant native trees. A single significant tree was identified in the Flora and Fauna Assessment, and this tree is not proposed to be impacted by the development's current design.

There is a planted row of established trees along the Kiewa Valley Highway frontage. Clearing of this tree line will not be required for traffic management purposes.

The subject site
Source: Wodonga City Council GIS viewer

Traffic

The southwest property boundary fronts on to the Kiewa Valley Highway. There is a crossover from the Highway to the property. Kiewa Valley Highway is a two-lane, two-way, sealed road with no posted speed limit. The Highway starts at Mount Beauty, 65 km south of the subject site. It terminates at an intersection with Murray Valley Highway, 2.6 km northeast of the subject site.

The southeast boundary of the site fronts on to Baranduda Drive, while the north-west boundary. Baranduda Drive is a two-way, two-lane, sealed road with no posted speed limit. It begins at an intersection with Kiewa Valley Highway in the west, and travels in an east-west direction. It terminates at an intersection with Whytes Road in the east.

3.2 Baranduda Locality

The development site is approximately 17 ha in area. It is in the northwest portion of the subject site. The development site is cleared, is relatively flat, and contains no trees or shrubs.

General

Baranduda is located to the southeast of Wodonga in the Wodonga Local Government Area. The subject site is within an industrial area. Relative to the subject site, the surrounding land uses are detailed below:

North-west

Middle Creek flows in a northeast direction through the Baranduda locality. The creek runs along the north-western boundary of the subject site. The riparian corridor is accordingly

zoned for public recreation. There is a mapped (unnamed) wetland that exists on the northern side of Middle Creek.

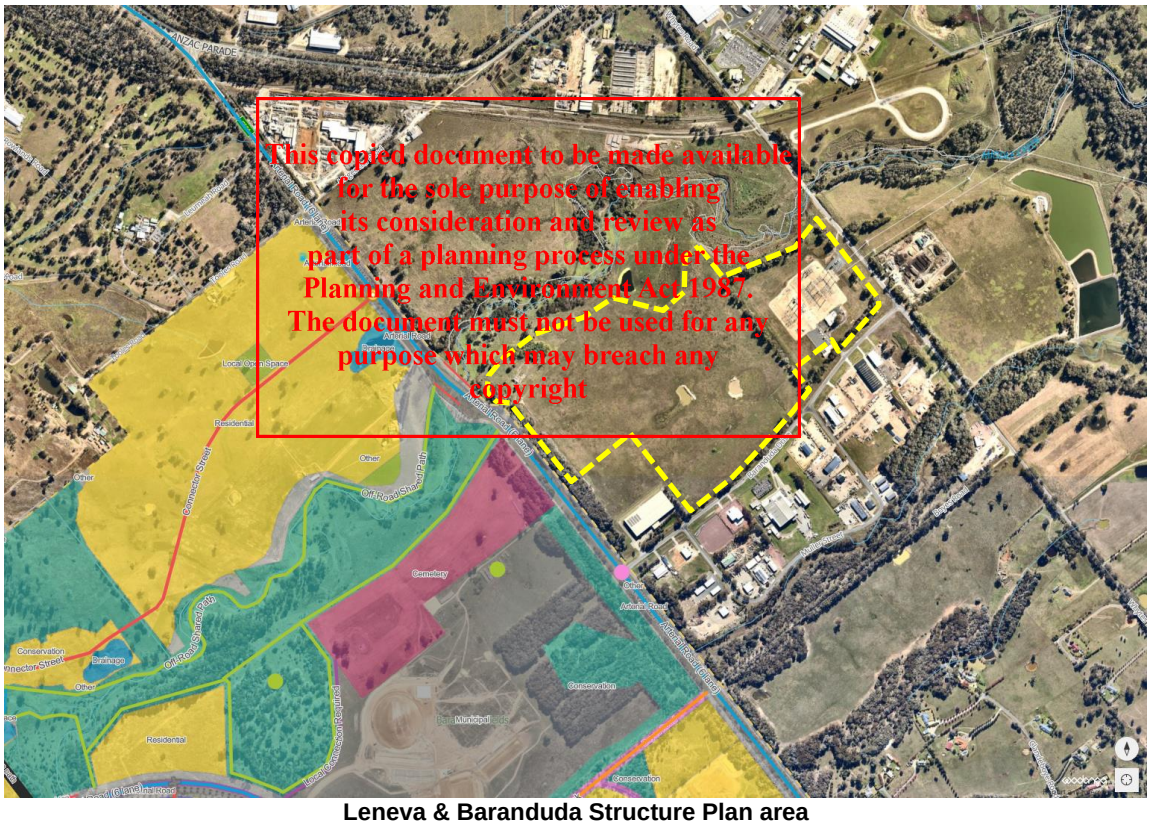
Beyond the Middle Creek is the Albury-Wodonga Military area, which comprises approximately 600 ha of land including accommodation, recreation, administration and operation hubs for the ADF.

North-east

Wodonga Terminal Station adjoins the north-eastern property boundary, which itself has access to Whytes Road along the northern boundary.

Beyond the northern side of Whytes Road is approximately 30 ha of land within the Industrial 1 Zone, which current contains a garden supplies business, but is otherwise vacant.

To the north of this industrial land is a water treatment plant and the Kiewa River biodiversity corridor, with very little built form in this direction due to environmental constraints.



Leneva & Baranduda Structure Plan area
Source: Wodonga City Council GIS viewer

South-east

The southeast property boundary fronts on to Baranduda Drive. Across Baranduda Drive is industrial zoned land which hosts a mix of light-to-medium industrial uses, typically with service industries and storage, with some light manufacturing along Baranduda Drive.

Beyond this industrial land, approximately 550m south-east of the subject site, the land to the east of Boyes Road is within the Urban Growth Zone but is subject to heavy screening through large tracts of an established vegetation corridor.

South-west

The southwest property boundary fronts on to Kiewa Valley Highway. Across the Highway is land that is part of the Leneva & Baranduda Precinct Structure Plan area. Near the Highway it is planned to develop housing, open space, conservation areas and a cemetery. The Baranduda Fields Sporting Complex is currently being constructed.

Topography and Geography

The locality is relatively flat with an elevation of around 170 m AHD. To the east are hills associated with Wodonga Bushland Reserve, which reaches elevations of 390 m AHD. Further east is hilly land in the suburbs of Huon Creek, Castle Creek and Leneva.

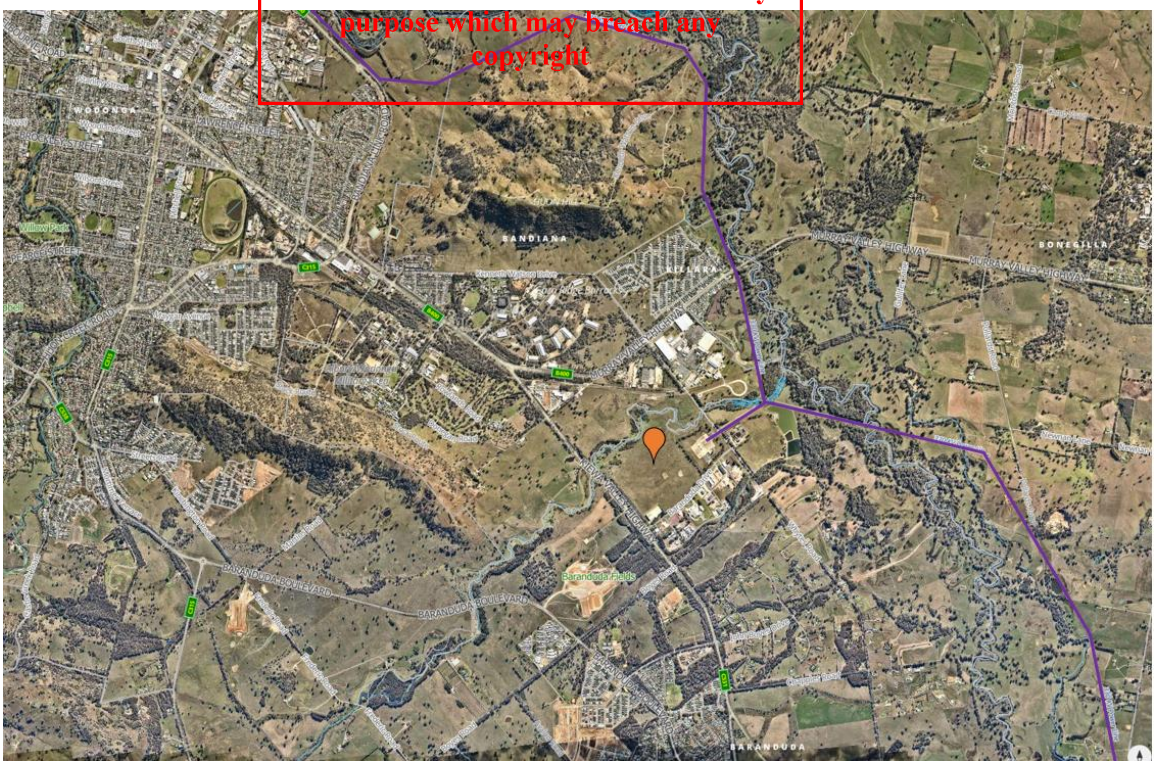
To the south is Baranduda Regional Park, which reaches elevations of up to 720 m AHD. To the west the land is relatively flat along the Kiewa River floodplain.

Electrical Infrastructure Context

The proposal would connect to the Wodonga Terminal Station. The substation connects to 22 kV, 66 kV and 330 kV transmission lines. A 66 kV line connects to the Hume Hydro Power Station.

There are 330 kV lines connect to Jindera substation in the north and Dederang substation in the south.

For a development of this magnitude, connection to the transmission grid will be directly to the 330kV network, via the Wodonga Terminal Station. The connection infrastructure will be a short overhead line between the development substation and WOTS. The location of the 330 kV and 66kV transmission lines, relative to the facility, are shown in the below figure.



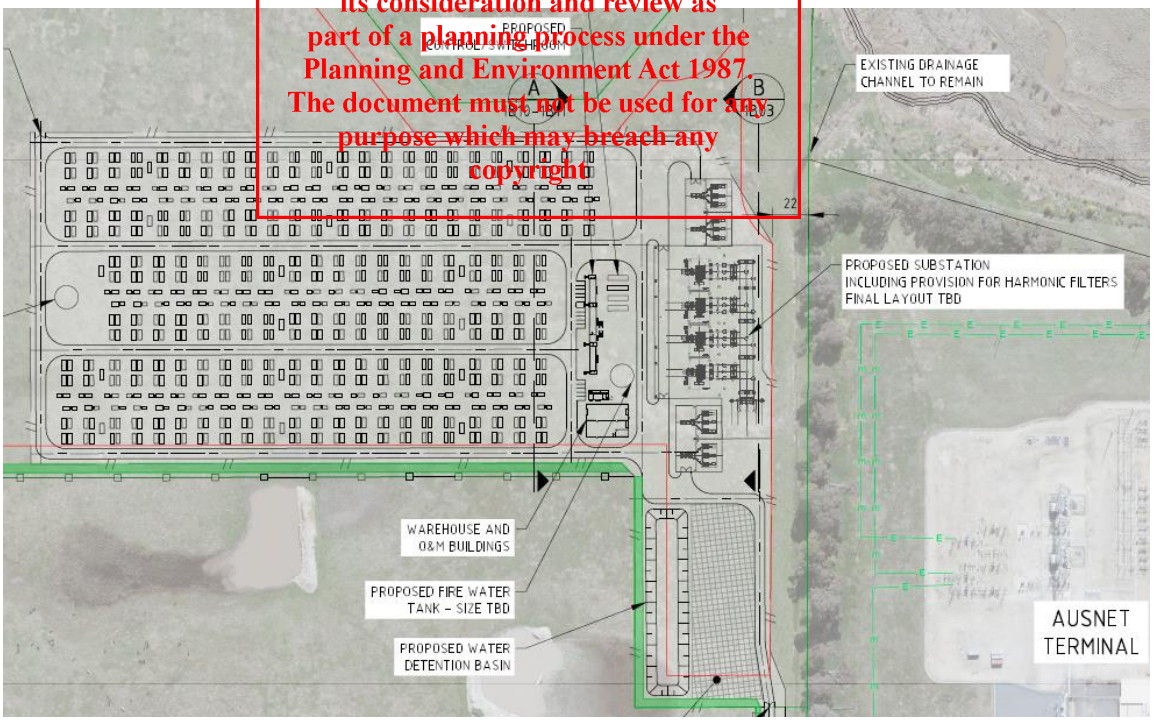
Aerial imagery of the Wodonga and Baranduda localities
Subject site identified with **orange pin**, 330kV transmission lines denoted by **purple line**.

4 The Proposal

4.1 Overview

The proposal is for the establishment of a 400 MW BESS and the associated infrastructure, including substation, consisting of:

- Four-hundred-and-ninety-six (496) **battery containers**.
- One-hundred-and-twenty-four (124) **inverter units.**
- One-hundred-and-twenty-four (124) **medium voltage power station** (MVPS).
- DSTO connection assets including 330 kV disconnectors and an overhead cable take-off gantry.
- 1.8 m high chain mesh and barbed wire fence around the perimeter of the facility with a main gate on Baranduda Drive and an emergency access gate on the northern side.
- Static water tank for fire-fighting purposes.
- New vehicle access from Baranduda Drive.
- Construction of a 25m x 110m retention basin within the proposed facility.
- ~228m long overhead connection between proposed substation and existing Wodonga Terminal Station.
- One (1) lattice tower with a height of 25.67m
- Augmentation works to existing Ausnet Terminal Station (works area is approximately 125m x 30m).



The development layout
Excerpt from proposed development plans by Enerven

Conceptual 3D Render of Proposed Development (subject to detailed design)
Showing conceptual layout of site from south-east corner of proposal

The layout of the proposal is shown in the attached site plan. Detailed information on the substation and connection asset area, as well as the finalised connection alignment would be confirmed at the detail design stage.

The ground under the battery containers and MVPS containers will be an engineered hardstand covered in crushed rock.

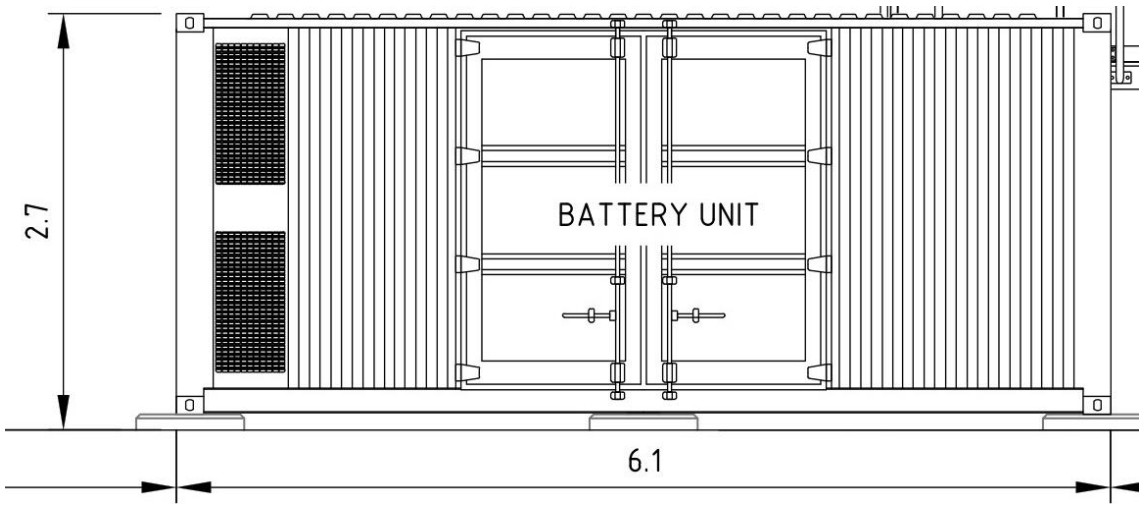
4.2 Proposed Components

Batteries

Four-hundred-and-ninety-six (496) lithium-ion phosphate (LFP) batteries are proposed. Each container is approximately 6.1 m long, 2.5 m wide and 2.7 m tall.

The exterior of each BESS unit will be produced in low-reflective materials that will reduce reflection and glare.

The BESS units are prefabricated and will be transported to the site on semi-trailers or similar road-capable heavy trucks, after being taken via rail from Melbourne to minimise the disruption to highway traffic. Installation via crane is relatively simple, as the equipment does not contain any oil or otherwise hazardous liquids that would potentially contaminate the area. Refer to the attached datasheet for an example BESS skid. Minor variations in physical characteristics and installation layout are possible dependent on the selected BESS vendor and foundation design.



Typical BESS Elevations

Medium Voltage Power Station containers & Inverters

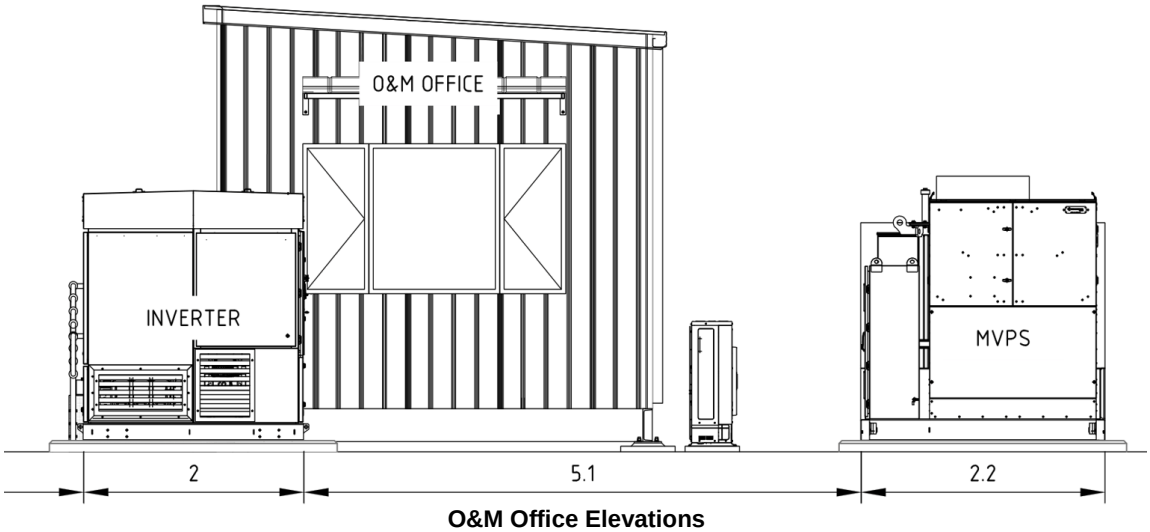
The proposal includes one-hundred-and-twenty-four (124) medium voltage power station (MVPS) and inverters containers, which would be tandem-installed to complement a group of 4 BESS containers, at a 4-to-1 ratio.

Each of the MVPS containers would consist of a transformer and switchgear within a prefabricated container. Each container is about *4.1 m long, 2.3 m wide and 3 m tall*. The typical elevations are shown in the below image – to the right of the O&M Office.

The typical inverter containers would have a length of approximately *3.1 m, with a width of 2.2 m and a height of 3m*. These inverters would be orientated at a perpendicular angle to the BESS containers – generally in a north-south alignment.

The below figure (over page) illustrates the cross sections (from the south) of the MVPS, inverters and the O&M office.

Operations and Maintenance facilities



O&M Office Elevations
Southern elevation shown

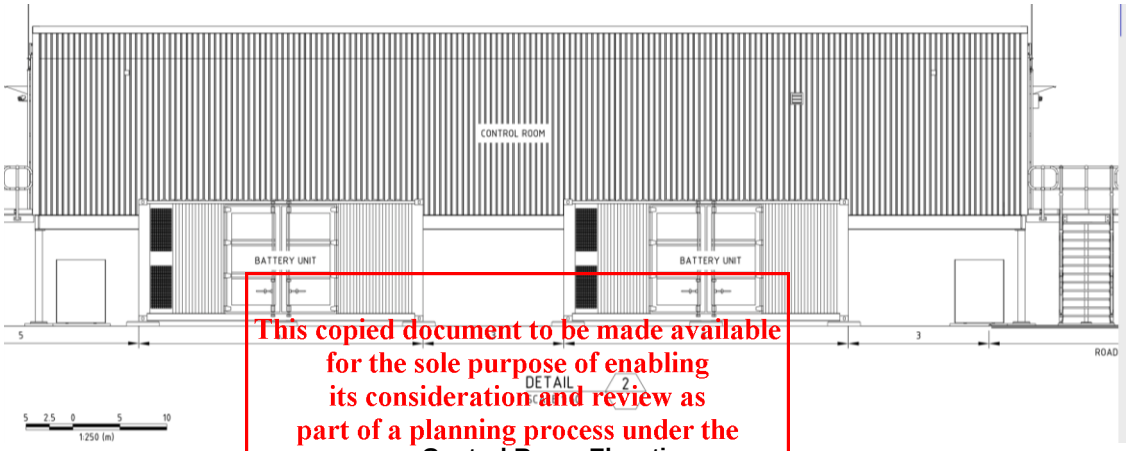
The operations and maintenance (O&M) buildings are standard structures built to the NCC and issued with occupancy permits prior to use. The O&M buildings are where the permanent site operators work from, and may include offices, IT infrastructure, a

kitchenette and ablutions, as well as warehouse space for spare parts and service vehicles. The maximum extent of the O&M facilities will depend on the final O&M arrangements.

Control Room

The proposed includes three (3) tandem-mounted control rooms which would be orientated north-west to south-east, between the proposed car parking and the switching station.

Each of the control rooms would be approximately 14m in length and would be mounted on an elevated frame approximately 2.5m above ground level. The below figure illustrates the elevations of one of the three control rooms.

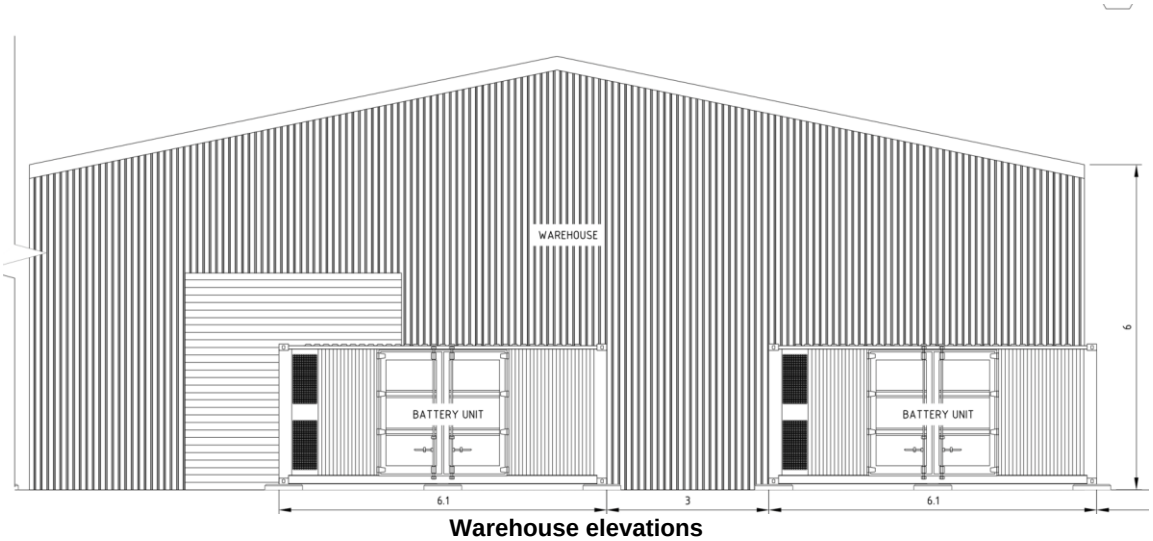


Control Room Elevations
Southern elevation shown

Warehouse

The proposal includes a warehouse to the south of the control rooms and O&M office.

The warehouse would be an unmanned building with a *width of up to 18 metres, a length of up to 24 metres and an eave height of up to approximately 6 metres*.

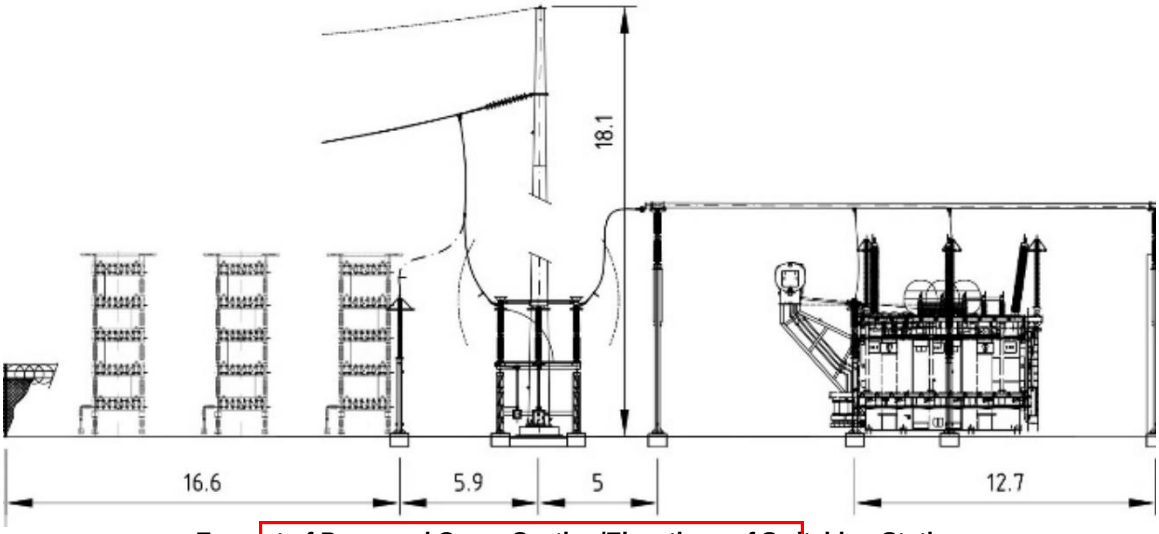


Warehouse elevations

Switching Station

The switching station would be located along the north-eastern boundary of the facility, to the rear of the site.

The switching station would have an approximate footprint of 115 m (east-west) by 62 m (north-south) and would comprise cabling and electrical infrastructure that would be consistent with an electrical substation, including overhead wires, power lines, transformers and other visible infrastructure that is not containerised.

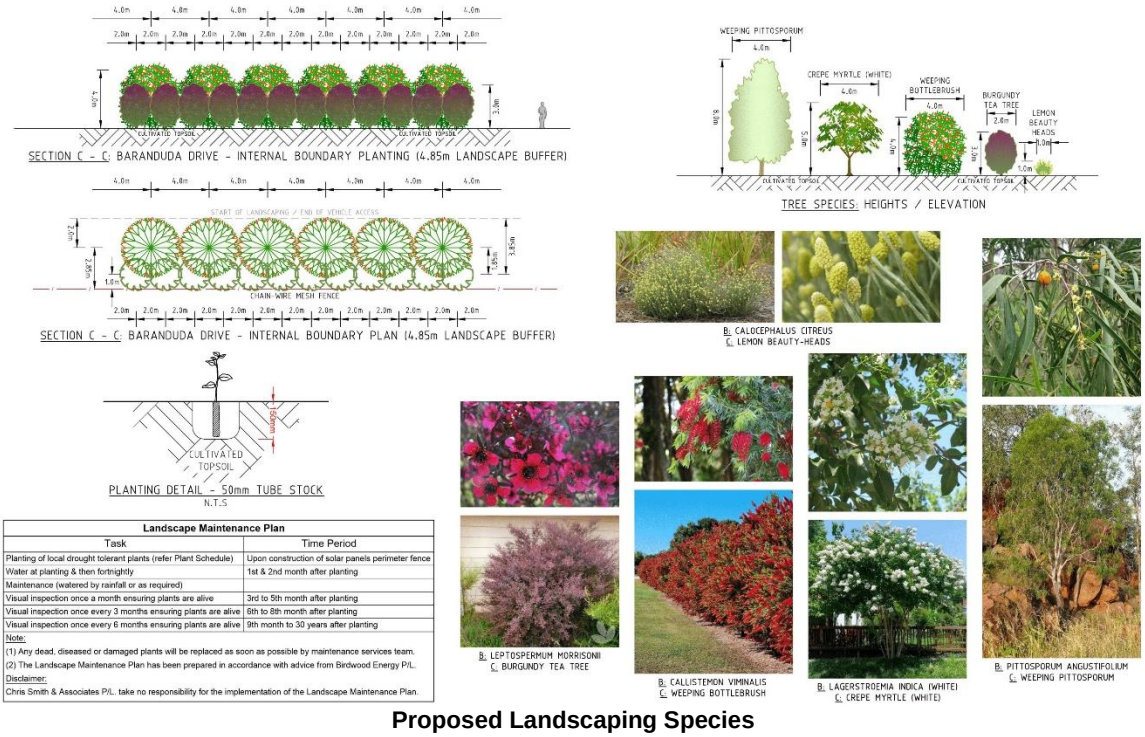


Excerpt of Proposed Cross Section/Elevations of Switching Station

4.3 Proposed Landscaping

A landscaping barrier is proposed on the eastern, and southern sides of the development, as illustrated in the below figure (over page). This landscaping would be generally three (3) rows of a mix of species along the southern boundary and a narrower strip along the accessway to the Baranduda Drive.

The height of the landscaping in relation to the security fence and proposed BESS is shown in the drawing titled "Landscape Layout & Elevations," which is attached to this report.

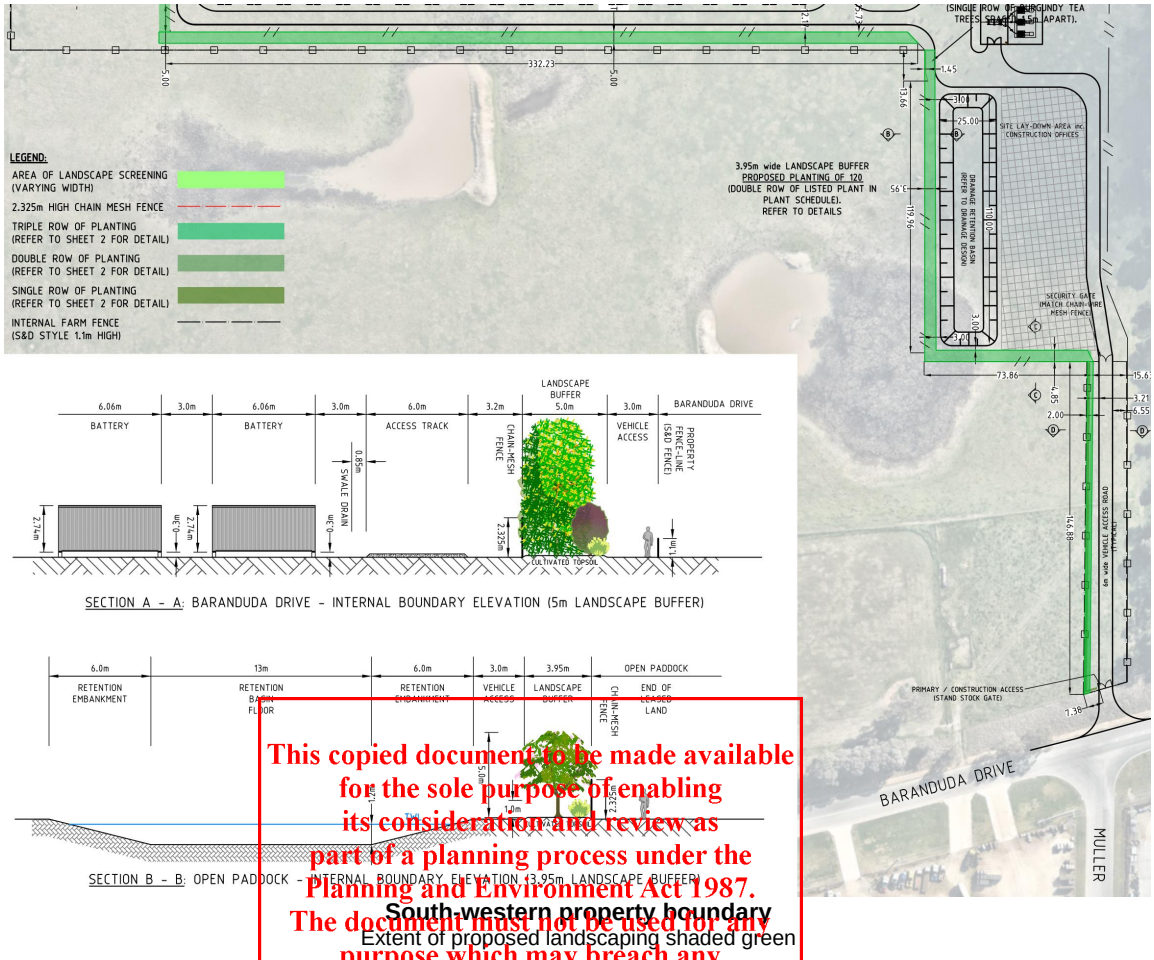


Landscape Maintenance Plan

Task	Time Period
Planting of local drought tolerant plants (refer Plant Schedule)	Upon construction of solar panels perimeter fence
Water at planting & then fortnightly	1st & 2nd month after planting
Maintenance (watered by rainfall or as required)	
Visual inspection once a month ensuring plants are alive	3rd to 5th month after planting
Visual inspection once every 3 months ensuring plants are alive	6th to 8th month after planting
Visual inspection once every 6 months ensuring plants are alive	9th month to 30 years after planting

Note:
(1) Any dead, diseased or damaged plants will be replaced as soon as possible by maintenance services team.
(2) The Landscape Maintenance Plan has been prepared in accordance with advice from Birdwood Energy P/L.
Disclaimer:
Chris Smith & Associates P/L. take no responsibility for the implementation of the Landscape Maintenance Plan.

Proposed Landscaping Species



South-western property boundary
Extent of proposed landscaping shaded green

The landscaping barrier would be outside the perimeter fence and would be protected by a post-and-wire fence to ensure that it is not damaged by stock animals.

The planting schedule would include a mix of fast and slow growth vegetation species to establish screening early and ensure that the landscaping will remain for the duration of the facility's operation once established. The selected species are native and where feasible, indigenous to the local area.

5 Construction, Operation & Decommissioning

5.1 Construction phase

Traffic, access and parking

During construction and operation, the development site will be accessed via a new crossover from Baranduda Drive.

In accordance with Country Fire Association (CFA) requirements, two access points have been provided. The emergency access point is on the northern side of the facility. This access point would not be used – except during an emergency.

During construction, vehicles would either park in the laydown area shown on the Site Plan, or in the car parking area next to the control room. The car parking area next to the control room would be an unsealed area constructed of crushed rock over an engineered hardstand.

Laydown area

The laydown area is likely to consist of the following temporary facilities:

- Amenities block
- Site sheds and offices
- Equipment laydown area
- Waste receptacles
- Spoil stockpile areas
- Storage areas for construction materials

After construction of the proposal, these temporary facilities would be removed from the development site. The laydown area will be partly converted to a stormwater detention basin following construction.

Earthworks

Earthworks would be undertaken to:

- Provide all weather access, internal access ways and hardstand areas.
- Bench (flatten) the site as required
- Provide fill for building pads.
- Place the footings for the battery containers, MVPS, switching station and other infrastructure that forms the proposal.
- Install the security fence posts.

Waste management

The construction waste generated will be mainly limited to hole boring for footings, wire cut-offs and substantial packaging waste. This waste will be disposed of at an appropriate waste management facility.

Timing and staging

Construction will take up to 18 months. 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 transmission connection infrastructure and installation of heavy substation equipment
- Installation of batteries, inverters, and associated infrastructure
- Testing and commissioning

The implementation of the project may be staged, based on project economics at the time of procurement. If staged, the project will be constructed initially as a 0.5C (2-hour) facility, and later extended to 0.25C (4 hours). The staging will involve the construction of the entire facility, with only half the number of battery skids (approximately 240) procured, and space left at each inverter for the addition of 240 more battery skids in the future.

Construction will take place during standard construction hours:

- 7 am to 6 pm Monday to Saturday
- 8 am to 1 pm on Sunday
- No work on public holidays

Other non-noise generating activities including testing and commissioning (using hand power tools) may take place out of business hours.

5.2 Operation Phase

Hours of Operation

Once commissioned, the facility will operate continuously; 24 hours per day, 7 days per week.

Staff

During operation, up to six (6) permanent staff members would work at the proposal. They will be primarily based in the O&M offices and will oversee the electrical operation of the facility, as well as performing various maintenance tasks throughout the battery and substation areas.

Contractor's will access the site on an as-needs basis, which is anticipated to be semi-regularly. Occasional heavy deliveries and use of cranes is anticipated.

Traffic, Access and Parking

During operation, staff and contractors will park in the car parking area near the control room. Light vehicles may be used around the site.

Landscaping and Vegetation Management

During operation the landscaping would be maintained to ensure that it provides an effective visual barrier throughout the life of the proposal.

Vegetation in the development site outside the hardstand will be maintained by contractors as necessary to manage ongoing fire risk.

Waste Management

During operations, it is anticipated that a standard bin service will be required. Any specialised or oversized materials requiring disposal will be transported directly to the relevant facility by the operations staff.

The O&M building will use either mains water and sewerage facilities, or a static rainwater tank and septic system, as determined during detailed design.

5.3 Decommissioning

The BESS containers and MVPS containers have a 30-year design life expectancy (cells may be replaced during operations). If retrofit or upgrade is not proposed at the end of the proposal's useful life, the BESS components will be decommissioned and removed from the site.

The DTSO assets are expected to be subleased by the project to AusNet Services and will be decommissioned at the end of the project's life.

6 Statutory and Strategic Context

Relevant legislation and policies are discussed below.

6.1 Planning and Environment Act 1987

The *Planning and Environment Act 1987* (P&E Act) establishes a framework for planning the use, development, and protection of land in Victoria.

Planning schemes are subordinate legislation to the P&E Act and set out how land may be used and developed. The planning schemes set out the relevant planning controls which determine whether planning approval is required for the use and/or development of land, including vegetation removal. These controls include zones, overlays, particular and general provisions.

Under Clause 72.01-1 (Minister is responsible authority) the Minister for Planning is the responsible authority for the administration and enforcement of the Wodonga Planning Scheme in relation to the use and development of land for:

- Utility installation used to store electricity if the installed capacity is 1 megawatt or greater.

As such, any planning permit application must be lodged with the Minister for Planning for consideration.

6.2 Climate Change Act 2017

The *Climate Change Act 2017* provides Victoria with the legislative foundation to manage climate change risks, maximise the opportunities that arise from decisive action, and drive the transition to a climate-resilient community and economy. It establishes a long-term target of net-zero greenhouse gas emissions by 2050, with five-yearly interim emissions reduction targets. The Victorian Government's foundational target was for emissions in 2020 to be 15–20% below 2005 levels.

It gives effect to most of the commitments set out in the Victorian Government Response to the 2015 Independent Review of the *Climate Change Act 2010*.

The Act requires a Climate Change Strategy every five years to set out how Victoria will meet its emissions reduction targets, adapt to the impacts of climate change and transition to a net zero emissions future.

The Act sits alongside other key Victorian Government energy and climate change initiatives including Building Victoria's Climate Resilience, which is discussed below.

6.3 Renewable Energy (Jobs and Investment) Act 2017

Victoria's current renewable energy targets legislated in the *Renewable Energy (Jobs and Investment) Act 2017* are:

- 25% by 2020 (achieved)
- 40% by 2025
- 50% by 2030

In September 2022 the Victorian Government announced updated renewable energy targets of:

- 65% by 2030
- 95% by 2035

These targets will be legislated under the Act. The proposal would support these targets by providing 400 MW of energy storage. For the project's ultimate configuration, the proponent has selected a longer duration (4 hours) than is typical, as this facility is designed to support large-scale uptake of renewable generation. The proponent is developing various other renewable assets to synergise with this facility.

6.4 Victoria's Climate Change Strategy (2021)

Victoria's Climate Change Strategy (2021) is a roadmap to net-zero emissions and a climate-resilient Victoria by 2050. It was made to give effect to the requirements in Division 1 of Part 5 of the *Climate Change Act 2017*.

The strategy includes the following pledges relating to renewable energy:

- Energy pledge: 50% of Victoria's electricity to come from renewable sources by 2030.
- Whole of Victorian Government pledge: All Victorian Government operations – including schools, hospitals and metropolitan trains and trams will be powered by 100 per cent renewable electricity by 2025. In addition, 400 zero emissions vehicles will be added to the Government fleet by 2023.

The proposal would assist in achieving these pledges by storing electricity generated by operational and future renewable energy facilities for peak-time use.

6.5 Building Victoria's Climate Resilience (2022)

Building Victoria's Climate Resilience (2022) outlines the Victorian Government's current adaptation action and next steps, guided by the adaptation priorities of Victoria's Climate Change Strategy and a five-yearly planning framework established under the *Climate Change Act 2017*. It was made to give effect to the requirements in Division 1 of Part 5 of the *Climate Change Act 2017*.

Victoria's comprehensive and evidence-based approach is centred around adaptation planning for state-wide systems and complementary community-led action.

One of the key priorities for the five-year period from 2022 to 2026 is to examine options to improve energy infrastructure resilience.

The proposal would improve the resilience of the electricity network by storing electricity generated by operational and future renewable energy facilities for peak-time use. Each longer duration battery added to the market, particularly one of this scale, incrementally improves the economics of variable renewable generators, assisting to bring more generators into the market and lower overall energy costs in the long term.

6.6 Hume Regional Climate Change Adaptation Strategy 2021

The Regional Adaptation Strategies (RAS) are five-year practical strategies developed by the community to address the unique challenges and opportunities that climate change brings to Victoria's regions and guide locally relevant practical action.

Victorian communities have come together to lead the development of the RASs (with the support of the Victorian Government and funded by the Sustainability Fund) in each of Victoria's six administrative regions: Barwon South West, Gippsland, Greater Melbourne (Port Phillip), Grampians, Hume, and Loddon Mallee. The RASs provide a tailored place-based approach to build Victoria's resilience by identifying local needs and priorities, and guiding collaborative, localised and practical action over the next five years.

The Hume Regional Climate Change Adaptation Strategy was released in November 2021 is structured under the following themes:

- Theme 1: Preparing for and recovering from emergencies.
- Theme 2: Caring for our natural environment.
- Theme 3: Embracing renewable energy.

- Theme 4: Improving health and wellbeing.
- Theme 5: Enhancing neighbourhoods and the built environment.
- Theme 6: Strengthening the economy and workforce.

The proposal would support Theme 3 by storing electricity generated by operational and future renewable energy facilities for peak-time use.

6.7 Wodonga Council Climate Change Adaptation Action Plan

Wodonga Council's Climate Change Adaptation Action Plan 2022-2027 was adopted on March 21, 2023. The plan contains 49 actions grouped under five themes:

- Strong, Responsible and Sound Leadership
- Sustainable And Forward Thinking
- Healthy, Safe and Resilient Community
- Connected And Engaged Community
- Thriving And Vibrant Community

One of the actions is "Resilience of transmission infrastructure". The proposal would support this action by storing electricity generated by operational and future renewable energy facilities for peak-time use.

6.8 Other Legislation

Other relevant legislation and any implications for the proposal is summarised in the following paragraphs.

Environment Protection and Biodiversity Conservation Act 1999

The ecological assessment found that the proposal is unlikely to impact on any species or communities listed under the EPBC Act. Therefore, referral under the EPBC Act is not required.

Flora and Fauna Guarantee Act 1988

No FFG listed vegetation will be impacted by the proposal. The development proposal will be contained within privately owned land. A protected flora permit will not be required.

Aboriginal Heritage Regulations 2018

'Areas of cultural heritage sensitivity' are defined in the Aboriginal Heritage Regulations 2018 and relate to landforms and soil types where Aboriginal places are more likely to be located. These include land within 200 m of named waterways and land within 50 m of registered Aboriginal cultural heritage places. The development site is south of Middle Creek, therefore, portions of the property are mapped as 'areas of cultural heritage sensitivity.'

The proposal is a high impact activity, and the development site is in an area of cultural heritage sensitivity, as defined under the Aboriginal Heritage Regulations 2018.

Accordingly, a mandatory Cultural Heritage Management Plan is in the advanced stages, preliminary assessment found no Aboriginal cultural heritage or areas likely to contain Aboriginal cultural heritage; therefore, there is no requirement to consider avoidance, minimisation, or management of Aboriginal cultural heritage places.

Dangerous Goods Act 1985 & Dangerous Goods (Storage and Handling) Regulations 2012

A licence under the Dangerous Goods Act 1985 is not required. Section 3.2 of the Worksafe Code of Practice for Storage and Handling of Dangerous Goods 2022 states that the regulations do not apply to batteries that are in use, therefore the proposal is exempt from the requirements of this Act.

7 CFA Design Guidelines and Model Requirements

The facility has been designed in accordance with the Country Fire Authority's 'Design Guidelines and Model Requirements: Renewable Energy Facilities V4' (August 2023) (the Guidelines).

Nevertheless, due to the scale of the proposal, and the proximity to land within the Bushfire Management Overlay, a formal bushfire risk assessment was undertaken by Terra Matrix and the peer reviewed by Fire Risk Consultants, which included a preliminary facility design in accordance with the CFA's Design Guidelines.

8 Planning Permit Triggers

8.1 Land Use Categorisation and Description

The proposal 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".

Ancillary components of the proposal, including the transformers and inverters are considered to form part of the Utility Installation umbrella pursuant to Clause 73.03 (Land Use Terms).

8.2 Permit Triggers

A planning permit is triggered for the proposal pursuant to the following provisions of the Wodonga Planning Scheme.

To Use Land:

- 33.01-1 – … for a Utility Installation in the Industrial 1 Zone (IN1Z).

To undertake Building and Works:

- 33.01-4 – … associated with a section 2 use (utility installation) in the Industrial 1 Zone (IN1Z).
- 42.01-2 – … in the Environmental Significance Overlay 5 (ESO5)

The proposal does not include any advertising signs (Clause 52.05), removal of native vegetation or any other matter requiring a planning permit.

9 Wodonga Planning Scheme

9.1 Municipal Planning Strategy

02.03-2 Environmental and landscape values

The Clause states that to protect biodiversity and natural habitats, Council will:

- *"Avoid further degradation of water quality and fragmentation of native vegetation along urban waterways."*

The subject site is south-east of Middle Creek; however, the proposed development is more than 300 metres from the bank of the creek. The proposal is also accompanied by a stormwater management plan (**Appendix B**), which includes a drainage strategy to ensure that runoff will be managed to pre-development levels.

02.03-3 Environmental risks and amenity

Bushfire

The Clause states that to address bushfire risks, Council will:

- *"Ensure development, including in Lenova Valley and Baranduda growth corridor, mitigates high bushfire risk to an acceptable level.*
- *Encourage development only where bushfire protection measures can be implemented, including through the provision of interface treatments such as roads between residential subdivisions and reserves, subject to bushfire risk."*

The development site is in a Designated Bushfire Prone Area under section 192A of the Building Act 1993. A Risk Management Plan was prepared by Fire Risk Consultants and is provided as **Appendix C** to this report. Bushfire and landscape risk is further discussed in the section on Clause 13.02.

02.03-4 Natural resource management

Catchment management

The Clause states that in managing its catchments, Council will:

- *"Protect downstream water sources and the broader catchment from the impacts of land use and development.*
- *Limit the encroachment of use and development on the Murray River and Kiewa River floodplains and downstream catchments."*

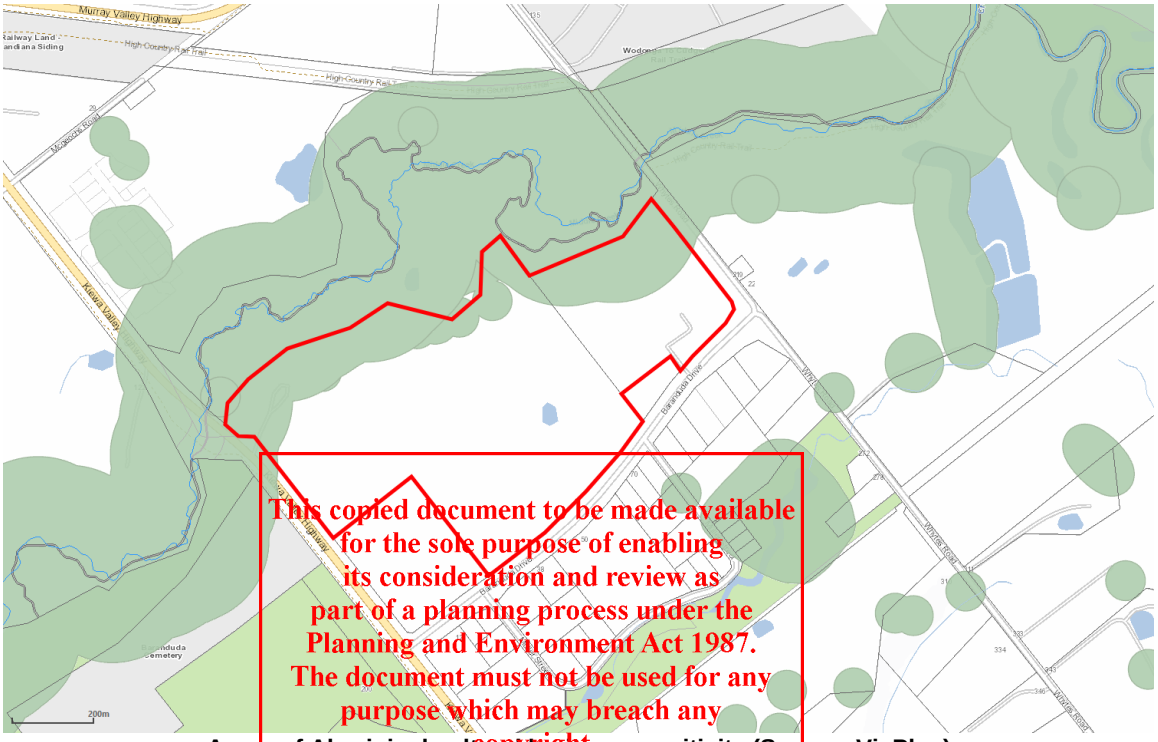
The Kiewa River is 1.4 km west of the development site. The development site is subject to a mapped floodplain under the Planning Scheme. A detailed assessment of the impact on Middle Creek and the Kiewa River are discussed in the section on Clause 12.03-1S.

02.03-5 Built environment and heritage

The north-western portion of the subject site is mapped as being subject to an area of cultural heritage sensitivity, the extents of which are illustrated in the below figure.

'Areas of cultural heritage sensitivity' are defined in the Aboriginal Heritage Regulations 2018 and relate to landforms and soil types where Aboriginal places are more likely to be located. These include land within 200 m of named waterways and land within 50 m of registered Aboriginal cultural heritage places. Middle Creek runs to the north of the subject site, therefore, portions of the property are mapped as 'areas of cultural heritage sensitivity.'

A Cultural Heritage Management Plan has been prepared for the proposal. Discussions with Benchmark Heritage and the registered aboriginal party (Aboriginal Victoria) have informed the design layout of the facility. The current layout has been designed to avoid items of cultural heritage, consequently, the current proposal would not adversely impact Aboriginal cultural heritage.



Areas of Aboriginal cultural heritage sensitivity (Source: VicPlan)

02.03-7 Economic development

The Clause states that in supporting new and emerging industries, Council will:

- *"Support industrial development in the Baranduda industrial precinct, particularly food production, engineering, waste management and public utilities."*

The subject site is within the Baranduda industrial precinct. The proposal is for a private utility (BESS) and a public utility (DSTO switching station). The proposal supports the aims of the Clause by providing a complementary land use that will support the immediate industrial precinct as well as the broader community through stabilisation of the power network.

9.2 Planning Policy Framework

11.01-1S Settlement

The Clause objective is *"To facilitate the sustainable growth and development of Victoria and deliver choice and opportunity for all Victorians through a network of settlements."*

One of the strategies is *"Contributing to net zero greenhouse gas emissions through renewable energy infrastructure and energy efficient urban layout and urban design."*

The proposal supports the sustainable growth and development of Victoria by storing electricity for use by the residents of Wodonga.

The proposal also supports the development of solar farms in the Wodonga region. Solar farms produce electricity at varying rates depending on weather conditions. Therefore, electricity storage is required to meet peak-time demand. The proposal would store electricity from regional renewable sources.

11.01-1R Settlement – Hume

One of the Clause strategies is to *"Facilitate growth and development specifically in the regional cities of Shepparton, Wangaratta, Wodonga and Benalla."*

The proposal would facilitate growth and development in Wodonga by storing electricity for peak-time use by the city's residents.

11.03-2L Leneva Valley and Baranduda growth corridor

One of the Clause strategies is to *"Ensure subdivision and development do not prejudice future urban development."*

The development site is at least 600 m from residential zoned land – within the Leneva and Baranduda Precinct Structure Plan.

The subject is located within the land set aside for the Baranduda Enterprise Precinct, which is suitably separated from the PSP area, with the Kiewa Valley Highway further separating the two distinct land uses. Consequently, the proposal is not expected to prejudice future urban development.

12.01-1S Protection of biodiversity

The Clause objective is: *"To protect and enhance Victoria's biodiversity."*

The development site consists of exotic dominated pasture, there is no native vegetation grasses native trees that would be impacted by the proposal. The only vegetation impacts would be the consequently loss of one (1) yellow box tree, which is a loss on paper, only. The tree would likely be retained but is considered lost due to TPZ encroachment, it should be noted that this TPZ encroachment would be via overhead line, and would not impact the root system of this tree.

12.03-1S River and riparian corridors, waterways, lakes, wetlands and billabongs

The Clause objective is *"To protect and enhance waterway systems including river and riparian corridors, waterways, lakes, wetlands and billabongs."*

The development site is:

- 1.4 km west of the Kiewa River.
- Immediately south of Middle Creek.
- Not within a floodplain.
- South of a wetland, which is on the northern side of Middle Creek.
- Within the North East Catchment area. The North East Regional Catchment Strategy does not contain any strategies relating specifically to the development site.

<u>Construction</u>

Construction of the proposal has the potential to pollute water resources through:

- Erosion and sedimentation
- Contamination from hazardous chemicals used during construction.

To prevent impacts to water resources, a Construction Environmental Management Plan (CEMP) will be prepared prior to the start of construction. Construction of the proposal is not expected to adversely impact on Middle Creek or the Kiewa River.

Operation

At present, all stormwater is retained within the development site or drains into Middle Creek. A Stormwater Management Plan has been prepared for the proposal and is attached to this report. The drainage design has been undertaken to ensure that runoff will be retarded to above pre-development levels.

The proposal includes a control room where staff would work. The control room includes amenities such as toilets, wash basins and kitchen facilities, which would connect to the existing urban sewer system.

13.01-1S Natural hazards and climate change

The Clause objective is *"To minimise the impacts of natural hazards and adapt to the impacts of climate change through risk-based planning."*

The only natural hazard impacting the development site is bushfire risk, which is discussed in the section on Clause 13.02.

13.02-1S Bushfire

The Clause objective is: *"To strengthen the resilience of settlements and communities to bushfire through risk-based planning that prioritises the protection of human life."*

The proposed facility has considered the risk of bushfire and has been designed in accordance with the CFA's bushfire guidelines for renewable energy facilities, which includes dedicated provisions for BESS.

The Clause lists the land uses where bushfire risk should be considered when assessing planning applications. "Utility installation" is not in the list, therefore, the clause does not apply to the proposal.

Nevertheless, the Design Guidelines and Model Requirements for Renewable Energy Facilities (the Guidelines) requires an assessment against this Clause. Consequently, a Fire Risk Assessment, prepared by Fire Risk Consultants has been prepared for the proposal and is attached to this report as **Appendix G**.

13.04-1S Contaminated and potentially contaminated land

The Clause objective is: *"To ensure that contaminated and potentially contaminated land is used and developed safely."*

The subject site is not listed on the Victorian EPA's Priority Sites Register. The development site is not contaminated and therefore the Clause does not apply to the proposal.

13.05-1S Noise

The Clause objective is: *"To assist the management of noise effects on sensitive land uses."*

The subject site is directly adjacent to the Wodonga Terminal Station and within an establishing industrial area. The existing noise environment is dominated by vehicles on the Kialla Valley Highway.

The development site is at least 600 m from the nearest residential zoned land – the south of the site, beyond the Kiewa Valley Highway.

A Noise Impact Assessment was prepared by ADP Consulting for the proposal and is attached to this report as **Appendix D**. The conclusion of the Noise Impact Assessment

was the any impacts on nearby sensitive receptors would not exceed the thresholds allowed by the EPA's noise protocol.

From a land use perspective, the site is within the Industrial 1 Zone, and is directly adjacent to other established uses, along with the Kiewa Valley Highway – which is anticipated to be the primary generator of noise in the Baranduda locality.

13.06-1S Air quality management

The Clause objective is: *"To assist the protection and improvement of air quality."*

Construction

During construction, potential impacts to air quality include:

- An increase in particulate matter, carbon monoxide and nitrogen oxide emissions to the environment due to the combustion of fuel and resulting exhaust emissions.
- An increase in airborne dust to the environment due to:
  - construction operations
  - building material handling activities
  - onsite vehicle movements on unsealed road sand
  - clearing of flora and vegetation exposing dust
- Dust emissions may be generated as a result of earthwork activities, particularly during dry and windy conditions. Excessive dust generation may be detrimental to human health, reduce visual amenity as well as smother vegetation and impact fauna.

Impacts due to the generation of dust and exhaust emissions would be short term and temporary. During construction, air quality impacts would be minimised by the implementation of air quality controls in accordance with 'Managing Urban Stormwater: Soils and construction'.

Operation

Operation of the proposal is not expected to cause any significant adverse air quality impacts.

13.07-1S Land use compatibility

The Clause objective is: *"To protect community amenity, human health and safety while facilitating appropriate commercial, industrial, infrastructure or other uses with potential adverse off-site impacts."*

The development site is in the Industrial Zone 1 and is compatible with the land use objectives of that zone. The surrounding land uses are largely industrial in nature and therefore the proposal is considered compatible with the local area.

The BESS will operate in accordance with health and safety operating procedures and undergo 24-hour monitoring.

Operation of the proposal may pose several hazards, which are discussed below.

Electromagnetic radiation (EMR)

Many components of the proposal produce varying levels of electromagnetic emissions.

Electromagnetic radiation (EMR) is the transfer of energy in the form of a stream of particle or electromagnetic waves. Electric and magnetic fields are present wherever electricity is generated, transmitted, or distributed in cables or powerlines, or consumed in electrical

devices such as TVs, computers or fridges. Since our modern lifestyle depends on the use of electricity, these fields are universally present in our environment.

Depending on its frequency or wavelength, electromagnetic radiation can be arranged into the following general classifications:

- Extremely Low Frequency (ELF)
- Very Low Frequency (VLF)
- Radio Frequency (RF)
- Microwave (MW)

Extremely low frequency radiation is radiation which occupies the lower end of the electromagnetic spectrum, specifically, in the frequency range of 0-3000 Hz. In Australia, electrical infrastructure operates at 50 Hz.

The proposal would produce electric and magnetic fields at a frequency of 50 Hz.

The International Commission on Non-Ionizing Radiation Protection (ICNIRP) has produced guidelines that set a safe upper limit for exposure to electric and magnetic fields.

A study (*ICNIRP. (2020). Guidelines for limiting exposure to electromagnetic fields (100 kHz to 300 GHz). Health Phys, 118(5), 483-524. doi:10.1097/HP.0000000000001210*) was undertaken of the electromagnetic fields produced by solar farms. The highest Extremely Low Frequency-Magnetic Field (ELF MF) levels measured were directly adjacent to the transformers and inverters, which were close to but still below the general public limit set by the ICNIRP.

The proposed BESS would emit electromagnetic fields at similar levels to the transformers and inverters for a solar farm.

The proposal is not expected to cause any adverse impacts through the emission of electromagnetic radiation.

Emergency management

The proposal would be monitored by up to six (6) on-site staff during work hours and monitored remotely during other times.

In the event of a fault or potentially dangerous situation an alarm would automatically report to staff, either those working at the facility or remote staff. There would be no audible alarm at the facility. The procedures and protocols for emergency situations would be set out in the operational management plan for the proposal.

The proposal is not expected to cause any land use conflict or adverse off-site impacts.

14.02-1S Catchment planning and management

The Clause objective is: *"To assist the protection and restoration of catchments, waterways, estuaries, bays, water bodies, groundwater, and the marine environment."*

The development site is south of Middle Creek. Potential impacts on Middle Creek are discussed in the section on Clause 12.03-1S. Based on these construction measures, it is unlikely that there would be any real or perceived catchment impact.

The proposed site office will be connected to reticulated sewer, further limited any potential for contamination or degradation of groundwater.

14.02-2S Water quality

The Clause objective is: *"To protect water quality."*

Impacts on watercourses are discussed in the section on Clause 12.03-1S. The operation of the BESS will not impact groundwater, or the wider catchment by extension.

15.03-1S Heritage conservation

The Clause objective is: *"To ensure the conservation of places of heritage significance."*

A Cultural Heritage Management Plan is currently being prepared in association with the current proposal. Preliminary advice and design changes are anticipated to ensure that the development will avoid any nearby items of cultural heritage.

Consequently, the proposed development would not adversely impact Aboriginal cultural heritage.

17.01-1S Diversified economy

The Clause objective is: *"To strengthen and diversify the economy."*

The proposal would contribute towards the Victorian State Governments renewable energy goals. Energy storage systems improve grid reliability and in turn contribute to lower electricity prices. The proposal would provide instantaneous energy during critical peak times and help to integrate renewable energy generation. The proposal would result in several community benefits, including the capacity to provide energy to households, and create jobs during construction and operation.

Construction of the site will involve local heavy civil, electrical and minor contractors.

17.03-2S Sustainable industry

The Clause objective is: *"To facilitate the sustainable operation of industry."*

The development site is ideally located. It is next to the Wodonga Terminal Station and within an existing industrial area.

19.01-1S Energy supply

The Clause objective is: *"To facilitate appropriate development of energy supply infrastructure."*

The proposal is for critical energy supply infrastructure adjacent to backbone infrastructure in Wodonga. The site represents an ideal site with limited interface conflicts and requiring limited connection infrastructure to immediately connect to the existing substation.

In consideration of the connection requirements for a facility of this scale, there are very few sites capable of supporting a BESS development of this magnitude, in a location that favourably addresses any impacts on the environment or community.

19.01-2S Renewable energy

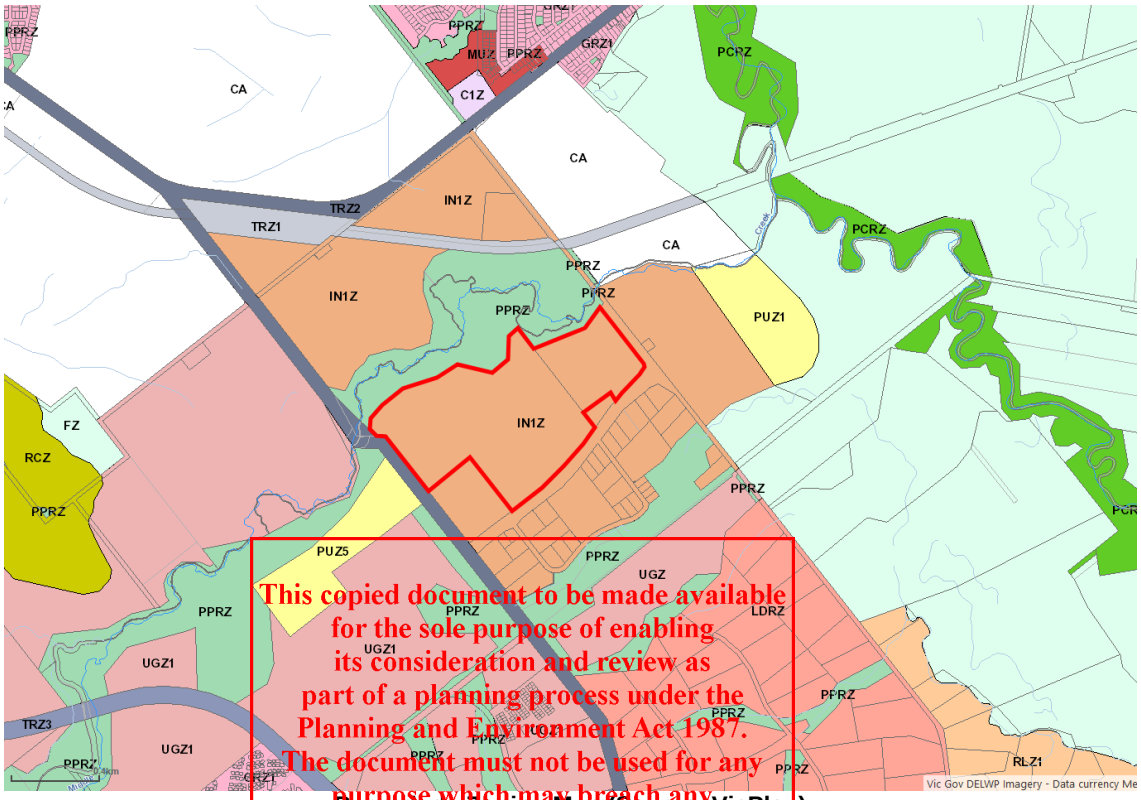
The Clause objective is: *"To support the provision and use of renewable energy in a manner that ensures appropriate siting and design considerations are met."*

The proposal would store electricity generated by existing and future renewable energy generation facilities in the region. In this way, the proposal supports the use of renewable energy.

9.3 Industrial 1 Zone

The subject site, along with much of the surround area, is within the Industrial 1 Zone (IN1Z). Accordingly, the purpose of the IN1Z is:

- *"To implement the Municipal Planning Strategy and the Planning Policy Framework.*
- *To provide for manufacturing industry, the storage and distribution of goods and associated uses in a manner which does not affect the safety and amenity of local communities."*



Baranduda Zoning Map (Source: VicPlan)
Subject site outlined with red line.

The proposal is classified as a 'utility installation' and requires a permit, in accordance with section 2 of Clause 33.01-1. A permit is required for buildings and works associated with a land use listed in section 2 of Clause 33.01-1. The proposal aligns with the purpose of the zone in that it is for a compatible use (utility installation) in an existing industrial area.

33.01-2 Use of land

The application requirements are addressed in the below table:

Requirement	Response
The purpose of the use and the types of processes to be utilised.	The purpose of the use is to store electricity for peak-time use.
The type and quantity of goods to be stored, processed or produced.	N/A
How land not required for immediate use is to be maintained.	N/A – the entire development site would be developed as one stage.
Whether a Development Licence, Operating Licence, Permit or Registration is required from the Environment Protection Authority.	No Development Licence, Operating Licence, Permit or Registration is required from the EPA.

Whether a notification under the Occupational Health and Safety Regulations 2017 is required, a licence under the Dangerous Goods Act 1985 is required, or a fire protection quantity under the Dangerous Goods (Storage and Handling) Regulations 2012 is exceeded.	No notification under the Occupational Health and Safety Regulations 2017 is required.
The likely effects, if any, on the neighbourhood, including: • *Noise levels.* • *Air-borne emissions.* • *Emissions to land or water.* • *Traffic, including the hours of delivery and despatch.* • *Light spill or glare.*	• Noise levels – refer to the section on Clause 13.02-1S. • Air-borne emissions – refer to the section on Clause 13.06-1S. • Emissions to land or water – refer to the section on Clause 12.03-1S. • Traffic, including the hours of delivery and despatch – A Traffic Impact Assessment was prepared for the proposal and is attached to this report. • Light spill or glare – the proposal would not cause light spill or glare.

The decision guidelines are addressed in the below table:

Guideline	Response
The Municipal Planning Strategy and the Planning Policy Framework.	Refer to the relevant sections of this report.
The effect that the use may have on nearby existing or proposed residential areas or other uses which are sensitive to industrial off-site effects, having regard to any comments or directions of the referral authorities.	The development site is over 600 m from residential zoned land. The proposal is not expected to impact on any sensitive land uses.
The effect that nearby industries may have on the proposed use.	Nearby industries would not have any adverse impacts on the proposal.
The drainage of the land.	A Stormwater Management Plan has been prepared for the proposal and is attached to this report.
The availability of and connection to services.	The proposal would connect directly to the Wodonga Terminal Station. Other services are available from the street.
The effect of traffic to be generated on roads.	A Traffic Impact Assessment is attached to this report as Appendix F. The surrounding road network is readily able to support the proposed development and construction traffic.
The interim use of those parts of the land not required for the proposed use.	N/A – all of the development site would be developed as one stage.

33.01-4 Buildings and works

The decision guidelines are addressed in the below table:

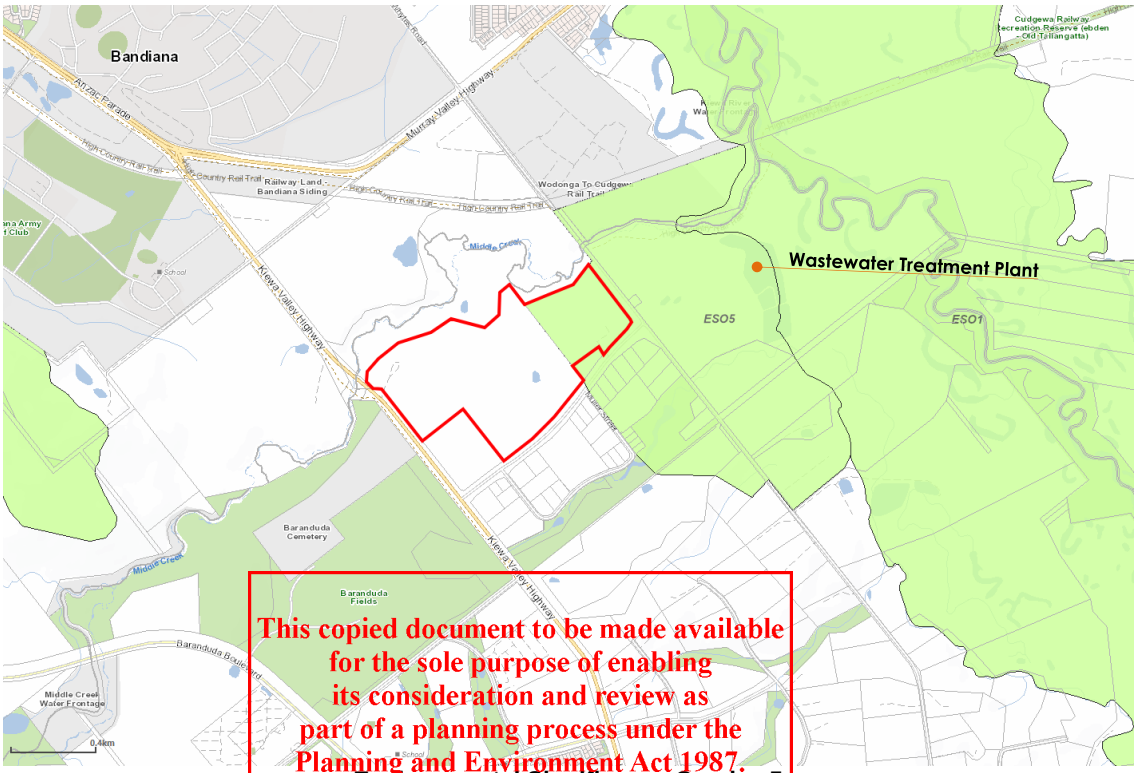
Guideline	Response

The Municipal Planning Strategy and the Planning Policy Framework.	Refer to the relevant sections of this report.
Any natural or cultural values on or near the land.	Portions of the property are mapped as 'areas of cultural heritage sensitivity.' A Cultural Heritage Management Plan is in the final stages of preparation and approval will be obtained prior to planning permit. The development site is next to Middle Creek, which contains natural values. The proposal would not adversely impact on Middle Creek, as detailed in the section of this report on Clause 12.03-1S.
Streetscape character.	The proposal would be accessed via a new crossover from Baranduda Drive. The proposal is not close to Baranduda Drive and would not impact on the streetscape.
Built form.	The proposal is for a utility installation in an industrial area. The built form of the proposal would not adversely impact on the character of the area.
Landscape treatment.	Landscaping is provided along the south-western and south-eastern frontages to the facility. The existing vegetation on the site will adequately screen the development from the north and west.
Interface with non-industrial areas.	The development site is on the northern portion of the subject site. The development site interfaces with Middle Creek, which is a recreational area. The proposal would not adversely impact on Middle Creek, as detailed in the section of this report on Clause 12.03-1S.
Parking and site access.	During construction, vehicles would either park in the laydown area or in the car parking area next to the control room. During operation, vehicles would park in the car parking area next to the control room.
Loading and service areas.	N/A
Outdoor storage.	N/A
Lighting.	The facility would not incorporate lighting.
Stormwater discharge.	At present, all stormwater is retained within the development site or drains into Middle Creek. A Stormwater Management Plan has been prepared for the proposal and is attached to this report. The drainage design has been undertaken to ensure that runoff will be retarded to pre-development levels.

9.4 Environmental Significance Overlay (Clause 42.01)

The northern parcel, containing the Wodonga Terminal Station, is wholly subject to **Schedule 5 of the Environmental Significance Overlay**, which sets out the following purposes as relevant to this application:

- *To identify areas where the development of land may be affected by environmental constraints.*
- *To ensure that development is compatible with identified environmental values.*



Environmental Significance Overlay 5
Location of Wastewater Treatment Facility marked with orange

Schedule 5 to the ESO (ESO5) is set aside to identify the ***Baranduda and West Wodonga Wastewater Treatment Plant Buffer Areas***, due to the treatment plant ponds approximately 750 north-east of the terminal station.

- Pursuant to clause 42.01-2, a permit is required to construct a building or construct or carry out works in the ESO5.
- To this end, the purpose of the ESO5 is *"to protect the Plants from encroachment of development and associated uses which may adversely impact on the ongoing operation of the Plants."*

The proposed use and development is a non-habitable use, and the development that would occur within the ESO5 would be limited to electrical augmentation of the existing terminal station. Consequently, the proposal would not impact the continued operation of the wastewater treatment plant, consistent with the relevant decision guidelines of the ESO and ESO5.

9.5 Bushfire Management Overlay (Clause 44.06)

The development site is not within the Bushfire Management Overlay (BMO). Access to the development site would be via Baranduda Drive, which is not within the BMO.

Whilst there are no mandatory application requirements or decision guidelines imposes on the application as a consequence of the BMO, the site's proximity to BMO-affected land has informed the specialist fire risk assessment and landscape assessment in Clause 13.02 (Bushfire).

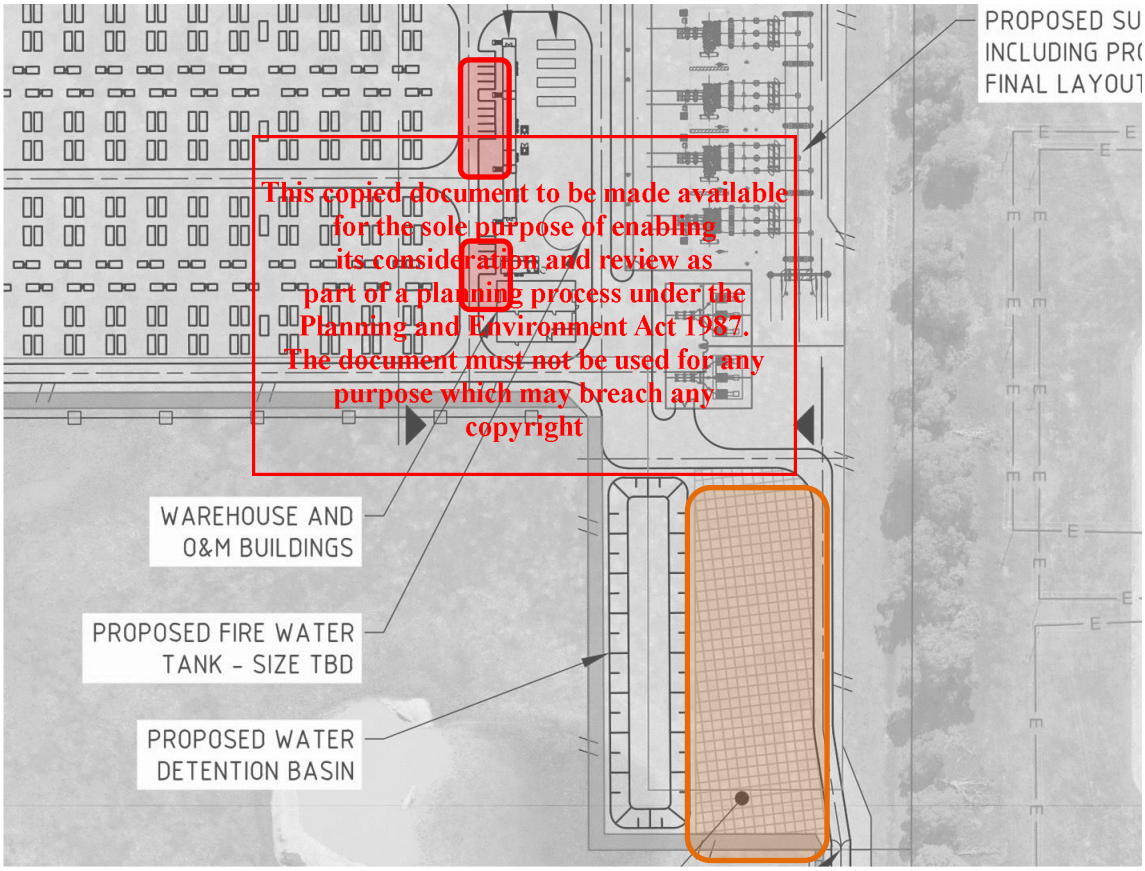
9.6 Signs (Clause 52.05)

No signage is proposed. Should the applicant decide to erect signage once the facility is operational, this would be subject to the relevant provisions of Clause 52.06. However, the subject site is within the IN1Z, which is a **Category 2** zone, which is identified as a low limitation zone that would allow business identification signage up to 8sqm without the need for a planning permit.

In considering the nature of the proposed use, it is highly improbably that a planning permit would ever be triggered for signage in association with this development.

9.7 Car Parking (Clause 52.06)

Table 1 in Clause 52.06 does not prescribe a car parking requirement for a Utility Installation. Therefore, in accordance with Clause 52.06-6, car parking must be provided to the satisfaction of the responsible authority.



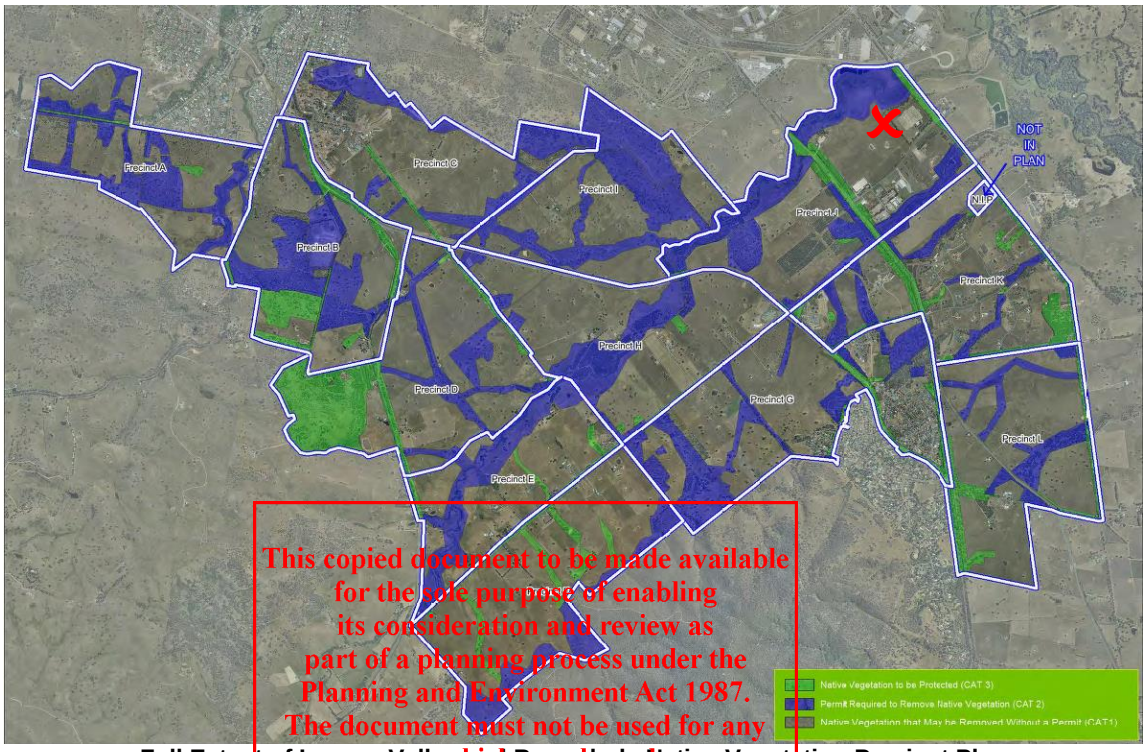
Proposed Car Parking Locations
Fifteen permanent parking spaces outlined **red**, construction car parking spaces outlined **orange**

During operation, the proposal would have six (6) full-time, on-site staff. Contractors would attend the facility to undertake routine inspections and maintenance.

To accommodate for the full-time staff, as well as provided overflow for guests and contractors, fifteen (15) car parking spaces are provided next to the control room. These are considered sufficient to meet and exceed the probable car parking demand during the facility's operation lifespan. During construction, the traffic impact assessment identifies a peak parking demand of forty (40) car parking spaces during the construction phase, which will be achieved through a combination of temporary car parking and the defined laydown area to the south of the facility.

9.8 Native Vegetation Precinct Plan (Clause 52.16)

The subject site is wholly within Precinct J of the *Leneva Valley and Baranduda Native Vegetation Precinct Plan*, prepared in 2005 by the City of Wodonga. Therefore, the provisions of Clause 52.16 apply, and prevail over the provisions of Clause 52.17.



Full Extent of Leneva Valley and Baranduda Native Vegetation Precinct Plan
Proposed vegetation to be removed marked with red 'x'

Precinct J of Leneva Valley and Baranduda Native Vegetation Precinct Plan
Proposed vegetation to be removed marked with red 'x'

The relevant purposes of Clause 52.16 are:

- *To provide for the protection, management and removal of native vegetation through the use of a native vegetation precinct plan incorporated into this scheme.*
- *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 following three step approach in accordance with the Guidelines for the removal, destruction or lopping of native vegetation (Department of Environment, Land, Water and Planning, 2017) (the Guidelines):*
    1. *Avoid the removal, destruction or lopping of native vegetation.*
    2. *Minimise impacts from the removal, destruction or lopping of native vegetation that cannot be avoided.*
    3. *Provide an offset to compensate for the biodiversity impact if a permit is granted to remove, destroy or lop native vegetation.*
- *To manage the removal, destruction or lopping of native vegetation to minimise land and water degradation.*

The proposal includes the consequential loss of one (1) yellow gum, which is within Category 1 (marked with red 'x' in the above figures). The NVPP identifies 3 vegetation categories within the precinct area. The three categories are:

- Category 1 – native vegetation that may be removed without a permit subject to the conditions and requirements of this NVPP (*uncoloured areas*).
- Category 2 – native vegetation that should be retained but may be removed subject to a planning permit (Category 2) and will require offsets (*shaded green*).
- Category 3 – native vegetation that is to be retained and permanently protected as the offsets for the native vegetation removed in Category 1 (*shaded blue*).

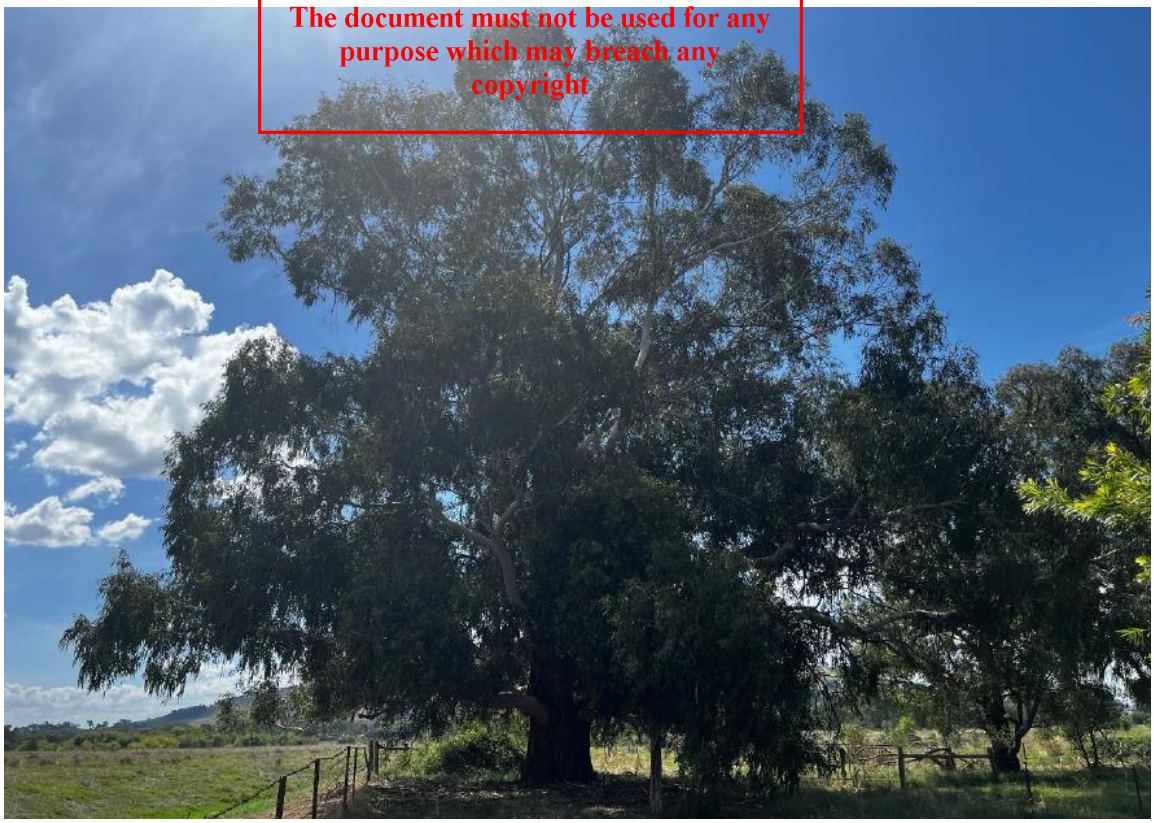


Photo of proposed yellow gum to be impacted

Pursuant to Clause 4.03 of the NVPP, ***a planning permit is not required to remove any native vegetation*** within Precinct 1

9.9 Native Vegetation (Clause 52.17)

The proposal will result in the consequent loss of one (1) yellow box tree. Although this tree is not actively proposed to be removed, due to TPZ encroachment greater than 10% it is considered lost, though it will in all likelihood be retained.

Pursuant to 52.17-1, a permit is required to remove, destroy or lop native vegetation, including dead native vegetation. However, this does not apply:

> *If a native vegetation precinct plan corresponding to the land is incorporated into this scheme and listed in the schedule to Clause 52.16.*

As this site is within the *Leneva Valley and Baranduda Native Vegetation Precinct Plan*, the provisions of Clause 52.17 do not apply. Nevertheless, in considering the three-step approach, the proposed development has been sited on a location that is cleared of native vegetation, largely avoiding and minimising the loss of vegetation, and thus limiting the potential for adverse biodiversity impacts.

Location of proposed yellow gum to be removed

9.10 Bicycle Facilities (Clause 52.34)

No bicycle parking would be provided at the facility.

9.11 Stormwater Management in Urban Development (Cl. 53.18)

The Clause states that: *"An application to construct a building or construct or carry out works:*

- *Must meet all of the objectives of Clauses 53.18-5 and 53.18-6.*
- *Should meet all of the standards of Clauses 53.18-5 and 53.18-6.*

An application must be accompanied by details of the proposed stormwater management system, including drainage works and retention, detention and discharges of stormwater to the drainage system."

The Clause states that: *"The stormwater management system should be designed to:*

- *Meet the current best practice performance objectives for stormwater quality as contained in the Urban Stormwater - Best Practice Environmental Management Guidelines (Victorian Stormwater Committee, 1999).*
- *Minimise the impact of chemical pollutants and other toxicants including by, but not limited to, bunding and covering or roofing of storage, loading and work areas.*
- *Contribute to cooling, improving local habitat and providing attractive and enjoyable spaces."*

Further, pursuant to this clause, *an application should describe how the site will be managed prior to and during the construction period and may set out requirements for managing:*

- *Erosion and sediment.*
- *Stormwater.*
- *Litter, concrete and other construction wastes.*
- *Chemical contamination."*

During construction:

- Erosion and sediment would be managed by implementing the controls contained in 'Managing Urban Stormwater: Soils and construction'.
- Stormwater would be managed by implementing the controls contained in 'Managing Urban Stormwater: Soils and construction'.
- Litter, concrete and other construction wastes would be disposed of at an appropriate facility.
- Chemical contamination would be managed by implementing the controls contained in 'Managing Urban Stormwater: Soils and construction'.

A Stormwater Management Plan (SWMP) has been prepared for the proposal by Chris Smith & Associates and is attached to this report. The SWMP has recommended a retention basin will be constructed adjacent to the laydown area – within the proposed facility. This basin has been sized to ensure that all post-development runoff will be contained within the extent of the proposed facility.

9.12 General Provisions

Clause 65.01 Approval of an application or plan

The matters set out at Section 65 of the Planning Scheme are addressed in various sections of this report. The proposal has been assessed to accord with all relevant guidelines.

10 Conclusion

This report was prepared to support the development of a 400 MW BESS (Utility Installation) and removal of native vegetation. The proposal should be supported for the following reasons:

- The site is an ideal location to co-locate with the Wodonga Terminal Station in an industrial area.
- The proposal would improve the profitability of renewable energy facilities in the region by storing electricity generated during the day. Several solar farms have been approved but not constructed in the area.
- The proposal would store locally and regionally produced electricity for peak-time use by the residents of Wodonga, reducing the need to import electricity from power plants located further away.
- The proposal would reduce reliance on coal and gas power to meet peak demand.
- The proposal would assist in meeting the Victorian Government's energy storage targets.
- The proposal is in the public interest of both the local community and the wider population of Victoria.
- The removal of a single remnant tree and is not expected to result in any adverse environmental impacts.

It is recommended that a permit be issued for the proposal.

Chris Smith & Associates
July 2024