LG Ref: MDPA002 (2024)
DAP Ref: DAP/24/02631

Enquiries: (08) 6551 9919

Rebekah Hampson
Land Insights
Level 6/191 St Georges Terrace
PERTH WA 6000

Dear Rebekah

**REGIONAL DAP - SHIRE OF MERREDIN - DAP APPLICATION - MDPA002 (2024) - DETERMINATION**

| | |
|---|---|
| Property Location: | Lot 5 Robartson Road, Merredin |
| Application Details: | Battery Energy Storage System (BESS) |

Thank you for your Form 1 Development Assessment Panel (DAP) application and plans submitted to the Shire of Merredin on 12 January 2024 for the above-mentioned development.

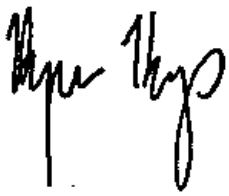
This application was considered by the Regional DAP at its meeting held on 18 April 2024, where in accordance with the provisions of the Shire of Merredin Local Planning Scheme No.6, it was resolved to **approve** the application as per the attached notice of determination.

Should the applicant not be satisfied by this decision, an application may be made to amend or cancel this planning approval in accordance with regulation 17 and 17A of the *Planning and Development (Development Assessment Panels) Regulations 2011*.

Please also be advised that there is a right of review by the State Administrative Tribunal in accordance with Part 14 of the *Planning and Development Act 2005*. Such an application must be made within 28 days of the determination, in accordance with the *State Administrative Tribunal Act 2004*.

Should you have any queries with respect to the conditions of approval, please contact Paul Bashall on behalf of the Shire of Merredin on 08 9041 1611.

Yours sincerely,



**DAP executive director**

29 April 2024

Encl. DAP Determination Notice
Approved Plans

Cc: Paul Bashall
Shire of Merredin

***Planning and Development Act 2005***

**Shire of Merredin Local Planning Scheme No.6**

**Regional Development Assessment Panel**

# Determination on Development Assessment Panel Application for Planning Approval

**Property Location:** Lot 5 Robartson Road, Merredin
**Application Details:** Battery Energy Storage System (BESS)

In accordance with regulation 8 of the *Planning and Development (Development Assessment Panels) Regulations 2011*, the above application for planning approval was **granted** on 18 April 2024, subject to the following:

**Approve** DAP Application reference DAP/24/02631 and accompanying plans (Attachment 12.2A) in accordance with Clause 68 of Schedule 2 (Deemed Provisions) of the *Planning and Development (Local Planning Schemes) Regulations 2015*, and the provisions of **Clause** 3.4.2 (b) of the Shire of Merredin Local Planning Scheme No. 6, subject to the following conditions:

**Conditions**

1. If the development, the subject of this approval, is not substantially commenced within a period of 4 years from the date of the approval, the approval will lapse and be of no further effect. For the purposes of this condition, the term “substantially commenced” has the meaning given to it in the Planning and Development (Local Planning Schemes) Regulations 2015 as amended from time to time.

2. The submission and approval of a dedicated Construction Management Plan (CMP), including a transport impact assessment, details showing the proposed interim and longer-term facilities including building/structure setbacks, carparking facility, landscaping/ screening etc, to the satisfaction of the local government.

3. The removal of all construction infrastructure once the facility has been completed to the satisfaction of the local government.

4. The preparation and lodgement of a Drainage Management Plan (DMP) to contain all drainage on site to the satisfaction of the local government.

5. The design and location of on-site effluent systems for the construction phase as well as the longer term to be designed and located to the satisfaction of the local government.

6. Compliance with the Bushfire Management Plan (BMP) dated 14 December 2023 recommendations (including the Bushfire Risk Assessment & Management Report).

7. Any new crossover to Robartson Road shall be located and constructed to the satisfaction of the local government.

**Advice Notes**

1. If an applicant or owner is aggrieved by this determination, there is a right of review by the State Administrative Tribunal in accordance with the *Planning and* Development *Act 2005* Part 14. An application must be made within 28 days of the determination.

2. The applicant is advised that granting of development approval does not constitute a building permit and that an application for relevant building permits must be submitted to the Shire of Merredin and be approved before any work requiring a building permit can commence on site.

Where an approval has so lapsed, no development shall be carried out without further approval having first been sought and obtained, unless the applicant has applied and obtained Development Assessment Panel approval to extend the approval term under regulation 17(1)(a) or local government approval under regulation 17A of the *Planning and Development (Development Assessment Panels) Regulations 2011*.

PROPOSED

# BATTERY ENERGY STORAGE SYSTEM

PREPARED FOR NOMAD ENERGY

LOT 5 ROBARTSON ROAD, MERREDIN

DECEMBER 2023

landinsights
PLANNING DESIGN ENVIRONMENT

Prepared by:
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Document Name: 1130b_MerredinBESS_RH_Rev1
Document History:

| Date | Document Revision | Document Manager | Summary of Document Revision | Client Delivered |
|---|---|---|---|---|
| Dec-23 | 0 | RH | Initial Draft | Dec-23 |
| Dec-23 | 1 | RH | Client comments incorporated | Dec-23 |
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**Important Note:**

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COVER PHOTO:

Proposed BESS site, with Western Power Merredin Terminal, Merredin Energy Peaking Plant and Merredin Solar Farm in the background.

Photo credit: Land Insights, November 2023

# table of contents

# 1.0 introduction

## 1.1 BACKGROUND AND CONTEXT

Land Insights act for Nomad Energy, who are seeking development approval to establish a Battery Energy Storage System (BESS) at Lot 5 (on Diagram 67824) Robartson Road, Merredin (the "subject site"). The proposed development will consist of the BESS facility (comprised of battery packs, inverters, transformers and control systems) and the associated high voltage substation and additional switch room(s)/control building(s), laydown areas, staff car parking, required firefighting equipment, internal roads and a perimeter fence. The BESS project will connect to Western Power's transmission network at the adjacent Merredin Terminal.

The Shire of Merredin has become the renewable energy focus for the wheatbelt and Western Australia. It pioneered wind turbines and solar farms generating green energy to replace greenhouse gas emitting sources, and now the next iteration is in the storage and redistribution of this energy via battery energy storage systems (BESS). The area is continuing to advance the cooperative practices of energy farms and conventional farming.

The subject site is an agricultural property, does not contain any areas of remnant vegetation and is currently used for cropping and sheep grazing purposes It is located approximately 7.5km south-west of the centre of the town of Merredin and comprises a land area of approximately 61.51ha. Only a small portion (approximately 4ha) of this lot, immediately adjacent to the Merredin Terminal sub-station, will be utilised for the development. The proximity to Western Power's Merredin Terminal substation was a key consideration when selecting the site location, and will result in relatively minor works being required to connect the proposed facility to the South West Interconnector System (SWIS). The BESS facility will be accessed off Robartson road and will be securely fenced.

## 1.2 ABOUT NOMAD ENERGY

Nomad Energy is an Australian company who has developed more than 500MW of renewable energy projects globally, including Western Australia's largest operational solar farm (Merredin Solar Farm). Nomad Energy has partnered with Atmos Renewables on this project, who are one of the top 5 largest owner / operators of utility-scale renewable energy facilities in Australia and currently hold generation assets with a gross capacity in excess of 1.7GW. A core feature of the Nomad – Atmos partnership is the intent to develop, build, own and operate the assets we develop. This strategy demonstrates our long-term approach to the assets, the local communities in which they are situated and to the electricity market this project will ultimately support. The partnership has offices in Perth, Melbourne and Sydney and has over 30 employees across Australia.

## 1.3 LAND DESCRIPTION

The subject site is approximately 260km east of Perth and 7.5 kilometres southwest of Merredin. It is surrounded predominantly by other agricultural properties to the north and west, Western Power's Merredin Terminal to the south and Merredin Solar Farm to the east/ southeast. The subject site is in close proximity to other energy infrastructure assets being the Merredin Energy dual-fuel peaking plant and Merredin Solar Farm (the largest operating solar farm in Western Australia).

The site comprises one single freehold land. An easement (refer to yellow hatch) affects a portion of the lot, and there is one reserve (Merredin Nature Reserve, green hatch) abutting the eastern boundary. Table 1 below outlines the Certificate of Title details for the subject site that forms part of this application, and a copy of the Title can be found at Appendix A of this report.

***Table 1 – Certificate of Title details***

| Lot | Volume / Folio | Registered Proprietor |
|---|---|---|
| Lot 5 | 1695 / 263 | Ross Milton Robartson |

### EXISTING USE

The site is located on cleared and disturbed land which is currently used as a rural farming property, predominantly for cropping and sheep grazing.

As shown below in Figure 1 & 2 – Site Context/Location the site is cleared of vegetation, will have minimal visual impact on neighbouring properties and is located adjacent to the north of the Western Power terminal, making this site highly suitable for the proposed BESS facility.

## SURROUNDING LAND

Surrounding land uses include energy infrastructure (Western Power's Merredin Terminal), energy generation facilities (Merredin Energy peaking plant and Merredin Solar Farm) as well as agricultural (cropping and grazing) land. The closest sensitive receptor is over 2km away from the site. To the south and east of the subject site sits the energy infrastructure assets mentioned previously, to the north east of the subject site at Lot 15490 is a lot reserved Parks and Recreation under the Shire of Merredin Local Planning Scheme No.6, known as Merredin Nature Reserve. Given the nature of the facility it is unlikely that there will be any offsite impacts and the balance of the Lot will be retained for rural / agricultural purposes.

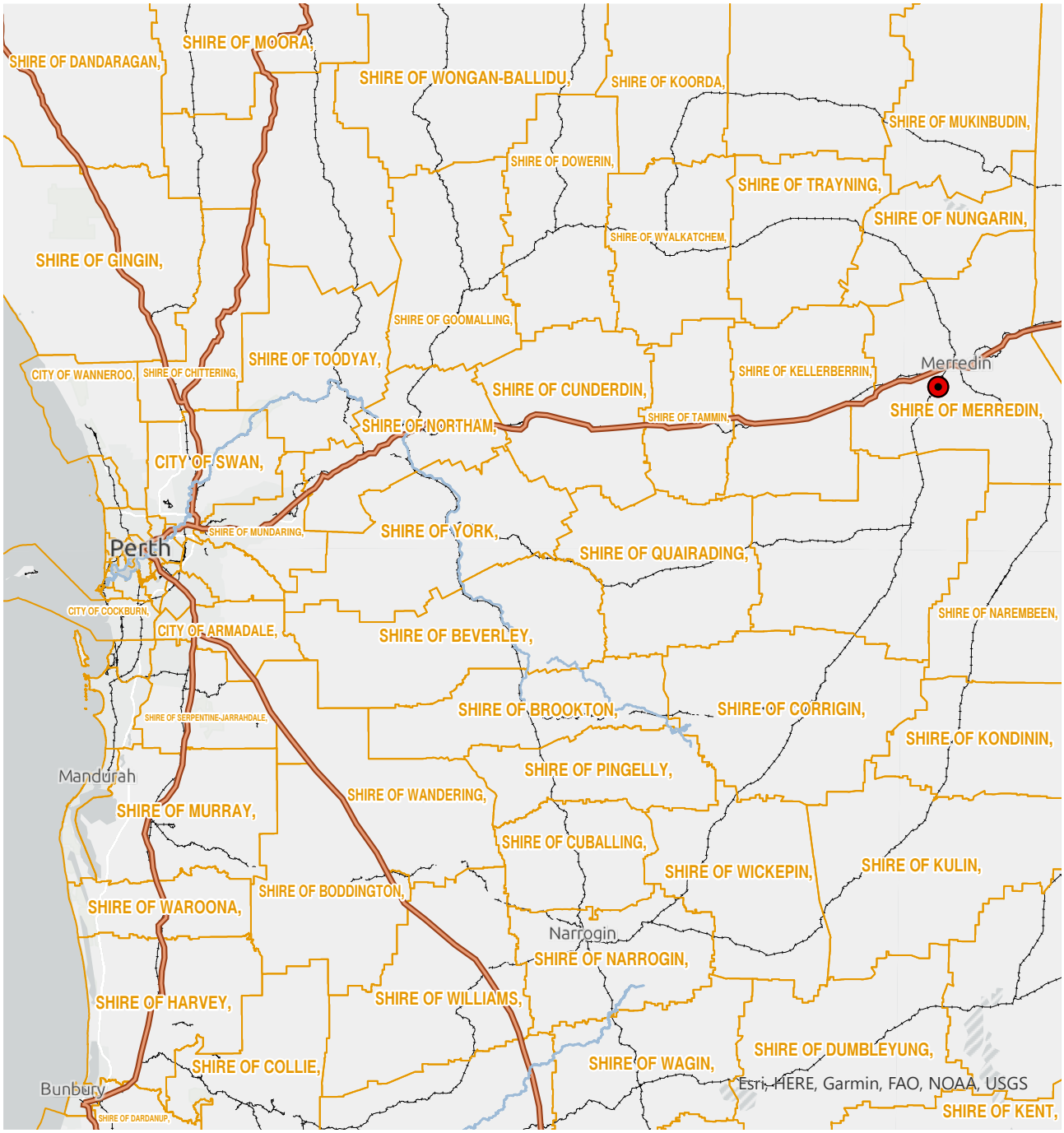



Figure 1: Site Location

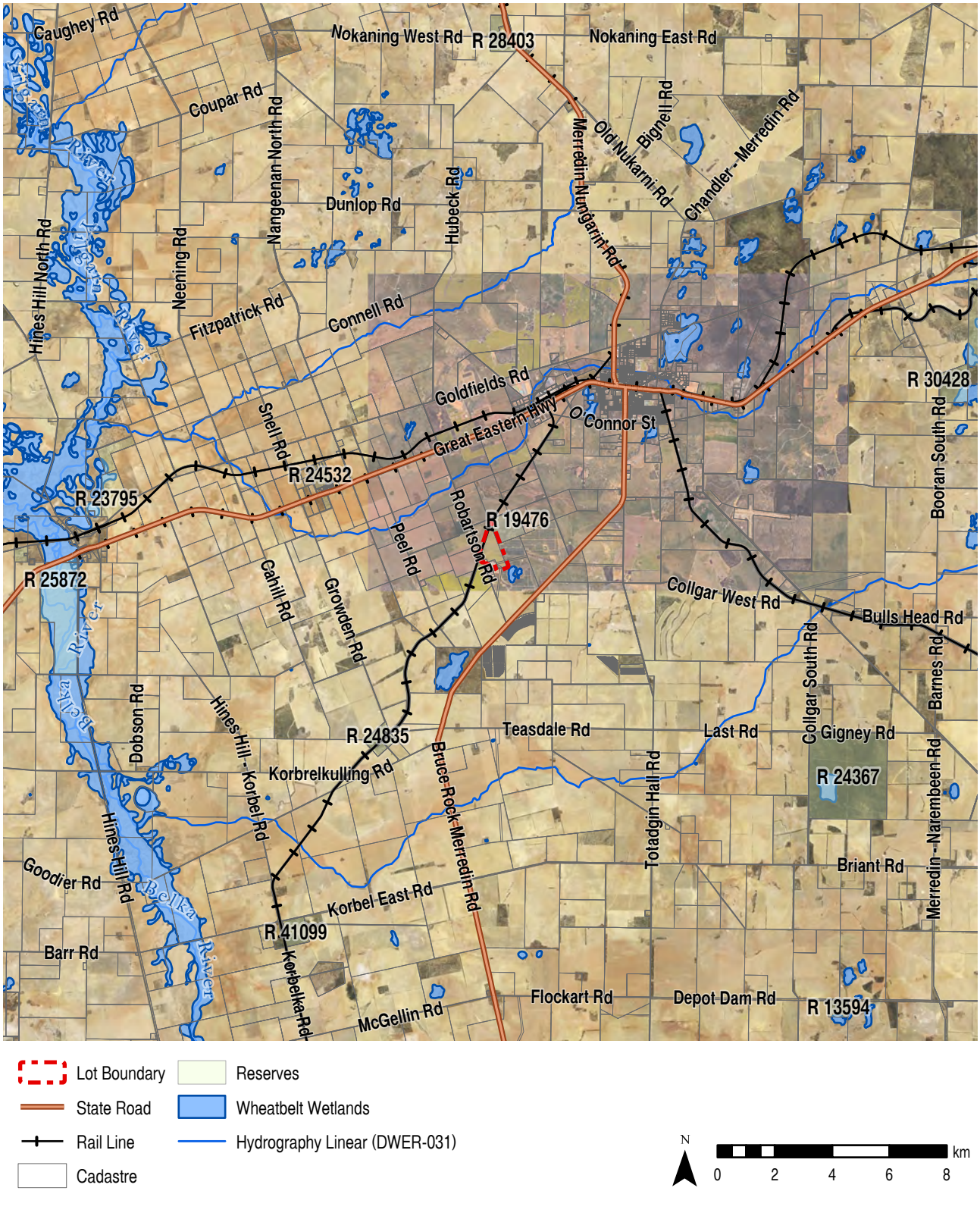



Figure 2: Site Context


Figure 3a: Site and Surrounds


Lot Boundary
Rail Line
Cadastre
Access Road (6.5m)
Battery Development Extent

N

0 25 50 75 100 125 m

Figure 3b: Site Detail

# 2.0 the proposal

## 2.1 OVERVIEW

The proposed BESS facility and associated sub-station and ancillary infrastructure will have an export capacity of approximately 100MW / 400MWh. The proposed BESS is located adjacent to the existing Merredin Terminal Substation, which facilitates a least-impact connection to the South West Interconnected System (SWIS), and with access via a new internal road off Robartson Road, Merredin. The proposed BESS facility will take approximately 12 – 18 months to construct, with a peak construction workforce of approximately 50. The connection of the proposed onsite substation to the adjoining Merredin Terminal is a separate matter to this application and is currently being negotiated by the proponent and Western Power.

## 2.2 PRE-LODGEMENT LIAISON & CONSULTATION

A pre-lodgement conversation was undertaken with the Shire Administration to inform them of the upcoming project. This discussion indicated that the Shire is keen to facilitate renewable energy projects, particularly where they can be located in a precinct, adjacent to existing facilities, subject to normal planning and assessment processes. Am informal pre-application meeting was also undertaken with the Shire representative on the 23rd of November in relation to the application.

The proponent has also been in ongoing discussions with Western Power regarding the project parameters and the proposed connection to the adjoining Merredin Terminal.

No pre-lodgement consultation was deemed necessary with surrounding landowners in this instance as the surrounding land is owned by either the Registered Proprietor of the subject site or that of the adjoining solar farm in this emerging energy precinct, coupled with the small footprint of the BESS and limited potential impacts to the amenity of the area from its development. Relevant parties will have an opportunity to comment on the proposal during the statutory advertising period.

## 2.3 COMPONENTS

As stated above the BESS facility will have an export capacity of approximately 100MW/400MWh and the subject site infrastructure will include:

- 110-120 Battery containers
- 28-30 Ring Main Units (RMU's) – containing transformers and switchrooms
- A HV/MV Switchyard
- A Control Room building
- A Western Power relay room
- Substation (with bunding to approved standards)
- Parking for workers for both the construction and post construction phase
- Operation & Maintenance building
- Spare parts building
- Internal roads (built to the required standards of both the Shire and Bushfire Requirements)
- Firefighting infrastructure (to standards outlined in the Bushfire Management Plan)
- Development to support the construction phase - construction compound containing an ablution block, meeting room and crib room for onsite construction

workforce.

Appendix B – Layout Plans and Specifications of Equipment (Drawings MBB-GA-00 to MBB-GA) shows how the facility will be laid out over the subject site and the specification and elevations for the components that will be installed. The battery container units and ring-main units (RMU's) will sit on top of concrete pads. The switchyard /control room building is shown in drawing MBB-EL-231012 as a combined substation, these buildings may become separate structures following detail design. The switchyard/control room building is currently designed to be raised off the ground, however, it should be noted that this structure may be constructed on concrete plinths similar to the battery containers and RMU's. The layout as depicted in Appendix B is to be refined once an agreement with the battery manufacturer has been finalised and a construction contractor appointed.

## 2.4 CONSTRUCTION

The construction phase will take approximately 12 – 18 months and the peak workforce on site at any one time is anticipated to be 50 workers. Construction will commence with site preparation works (levelling, grubbing as required) and creating the access to the Robartson Road. A lay down area and construction staff parking area as well as temporary site offices, ablutions and welfare will be installed during this phase, as shown on plan MBB-GA-01 *HV Substation General Arrangement*.

As shown on plan MBB-GA-01 there is sufficient room on the subject site for the parking of private vehicles associated with the workforce to park on site, there is also sufficient area on the subject site for laydown areas during the construction period.

Nomad Energy will appoint a contractor to construct and install the facility with the contractor being responsible for adherence to all approvals and relevant standards along with an approved Construction Management Plan, which will be reviewed and endorsed by the Shire prior to development commencing. The principal construction contractor will be the Construction Design and Management (CDM) coordinator for the project and will be responsible for all site access and health and safety inductions.

Temporary development will be required during the construction phase of the project. This may include:

- Main office and meeting room
- Ablution block
- Crib room
- Water tanks (both for use onsite and bushfire)
- Car Park
- Construction laydown area.

During the construction phase it is expected that both a local and specialist/technical workforce will be utilised. The specialist/technical workforce will be sourced from outside of the Shire, however local workers will be used where possible. The workforce will be accommodated within the townsite during the 12 – 18 month construction phase.

## 2.5 OPERATIONS

The facility will be largely autonomous and unmanned once operational, with locally based contractors/ employees responsible for the ongoing management of the site. Remote monitoring of the facility will also occur to ensure that the facility is operating in accordance with Western Power's technical rules and in accordance with AEMO guidelines. The site operation and maintenance workforce will ensure the facility is operating as intended.

Once operational, only occasional maintenance personnel visits to the site will be required.

## 2.6 ACCESS

Access to the subject site will be via Robartson Road, utilising an existing farm crossing adjacent to the farm dam and firebreak. An upgraded crossover and access road will be constructed in this location, and will be built to both Shire and required bushfire standards. The subject site will be fully fenced for security reasons with only those who need to be on site for operations or maintenance permitted access once the facility is operational.

## 2.7 STAFFING

It is estimated that up to 150 people will be employed during the full construction phase, with a peak manpower requirement of approximately 50 people onsite. Once the project is complete operation will be largely autonomous and the site will be unmanned, with only operation and maintenance personnel visiting the site a few times a year or as required if an unplanned maintenance activity is required. There is sufficient room on the subject site for the

parking of staff that might visit the site and any additional workers that may be required on site for maintenance and upgrades that may be required during the life of the facility.

## 2.8 COMMUNITY AND ECONOMIC BENEFITS

The project is a major investment in the State and local economy, as well as a step towards a lower carbon future. It will benefit both local and wider communities.

Contract negotiations with Western Power are underway and will continue however these are of a commercial nature and not central to the consideration of the development application and from an implementation perspective.

The facility will use local, regional or Western Australian labour and materials as much as possible. However, the batteries will be made overseas and technical specialists will be needed for their installation and commissioning.

The project will create economic and employment opportunities for Merredin residents, including accommodation/housing and local goods and services during the construction period. The proponent will invite local companies to bid for jobs such as electrical, security, ground work, and mechanical work. This will provide work for local companies and their employees during the construction phase. The facility will also create local jobs for maintenance and monitoring after the development.

# 3.0 strategic considerations

## 3.1 STATE PLANNING STRATEGY 2050

The State Planning Strategy "highlights the principles, strategic goals and strategic directions that are important to the land-use planning and development of Western Australia".

The strategy further states under point 2.3 Energy that:

- Effective and flexible planning, policy and regulatory frameworks provide an enabling environment for investment and the uptake of new technologies.
- Existing and emerging industries are encouraged to locate in appropriate regional areas to encourage economic diversification.
- With global and domestic pressures likely to cause further increases in the cost of fossil fuels, it is in Western Australia's long-term interest to develop a diverse energy supply mix, including the use of renewable fuel sources.
- Renewable energy initiatives help to mitigate the risks from climate change, lessen fossil fuel use and reduce greenhouse emissions.

The development of the proposed BESS facility meets the objectives of the State Planning Strategy 2050 in that the facility will provide a source of clean energy within the Shire and the broader SWIS.

## 3.2 STRATEGY UPDATE: WESTERN AUSTRALIA'S FUTURE BATTERY AND CRITICAL MINERALS INDUSTRIES NOVEMBER 2020 – NOVEMBER 2022

This strategy was developed by the Department of Jobs, Tourism, Science and Innovation (JTSI) and states at Priority 4 to support energy storage applications that consider or address:

- Increasing the uptake of battery energy storage will support new industry development opportunities.
- Large and small-scale batteries offer opportunities for low cost, low emissions energy, and will form a large part of Western Australia's energy transformation into the future.
- The increasing uptake of batteries in rural and remote communities, as well as emerging applications in mining, defence and other advanced manufacturing industries will help to create new jobs, skills and technological capabilities in the assembly, installation and management of energy storage in Western Australia

With the next steps to be to:

- Promote the uptake and integration of batteries across a range of settings and industries in Western Australia.
- Support enhanced workforce capability in the assembly, installation, and management of batteries.

The proposed development of this facility within a rural area energy hub is delivering the priorities outlined within the strategy in relation to development of the proposed BESS facility.

# 4.0 Planning Framework

## 4.1 POSITION STATEMENT: RENEWABLE ENERGY FACILITIES

This policy identifies assessment measures to facilitate appropriate development of renewable energy facilities. It seeks to ensure that proposed facilities are located in areas that are suitable and minimise the impact on the environment, natural landscape and urban areas while maximising energy production and operational efficiency.

The objectives of the position statement are to:

- Outline key planning and environmental considerations for the location, siting and design of renewable energy facilities.
- Promote the consistent consideration and assessment of renewable energy facilities
- Facilitate appropriate development of renewable energy facilities while minimising any potential impact upon the environment, natural landscape, and urban areas
- Encourage informed public engagement early in the renewable energy facility planning process

Under Clause 6 of the position statement a definition of a Renewable Energy Facility is outlined and is as follows:

Renewable energy facility means premises used to generate energy from a renewable energy source and includes any building or other structure used in, or relating to, the generation of energy by a renewable resource. It does not include renewable energy electricity generation where the energy produced principally supplies a domestic and/or business premises and any on selling to the grid is secondary.

Clause 5.3 of the position statement relates to renewable energy facility proposals and includes matters that should be considered when assessing proposals, these include:

- Community consultation
- Environmental Impact
- Visual and Landscape impact
- Noise Impact
- Public and aviation safety
- Heritage
- Construction impact

The clauses and matters that are applicable to this application are detailed in the Table 2 below:

***Table 2 – Response to Position Statement on Renewable Energy***

| Clause | Response |
|---|---|
| 5.3.1 Community consultation<br><br>Early consultation with the community and stakeholders by the proponents is encouraged to ensure that the proposal is compatible with existing land uses on and near the site. | Given the location of the facility adjacent to the existing Merredin Terminal Station and its location on existing cleared agricultural land, consultation with the community was not seen as required in this instance. Further, the economic benefit to the Shire and the community along with the greater benefit to the residents within the Shire in being able to source clean energy to power their homes and businesses is seen as a benefit to the community. |
| The local government should be consulted with respect to the community consultation program. | Land Insights has been consulting with the Shire in regard to the proposed development and met with the Shire on the 23rd of November 2023 to discuss the proposed facility. |
| 5.3.2 Environmental Impact<br><br>An environmental survey of the site should be conducted prior to the commencement of the renewable energy facility design. The type, location and significance of flora and fauna, particularly rare and endangered or threatened communities that may be impacted, should be described and mapped so that remnant vegetation and sensitive areas can be avoided. | The subject site is currently used for cropping and grazing and is cleared with no pockets of remnant vegetation contained on site. The facility will not have a detrimental affect on the environment rather the facility provides a greater capacity for renewable energy for not only the Shire but also the State to meet its proposed renewable targets for 2050. A qualified botanist reviewed the site, and it was determined that there was no requirement for a flora/fauna survey in this instance. |

| Clause | Response |
|---|---|
| Facilities should be located near the grid to minimise clearing of vegetation for grid connection power lines. Solar arrays over a large area may have significant effect on the clearing of native vegetation. Already cleared farming land may offer a practical solution to minimise any environmental impact. | The proposed facility is adjacent to the existing Merredin Terminal Station so there is no requirement for the clearing of vegetation for a grid connection. The site is already cleared for agricultural purposes meaning that the proposed development will have minimal, if any, environmental impact. |
| 5.3.3 Visual and Landscape impact<br><br>The location and siting of a renewable energy facility may require a visual and landscape impact assessment that addresses:<br><br>• landscape significance and sensitivity to change, site earthworks, topography, extent of cut and fill, the extent and type of vegetation, clearing and rehabilitation areas, land use patterns, built form character, public amenity and community values. | The subject site is cleared, and the proposed development application will sit approximately 140m from Robartson Road (to the east) behind an existing dam and adjacent to the Merredin Terminal station. There are no residential buildings within the immediate surrounds of the subject site which means that the impact of the facility on its surrounds will be minimal. The closest house is over 2km away meaning there are no sensitive receptors nearby. A visual assessment of the proposal has been undertaken (refer to section 6 of this document), which concluded minimal, if any, visual impact. |
| • likely impact on views including the visibility of the facility using view shed analysis and simulations of views from significant viewing locations including residential areas, major scenic drives and lookouts | Given the location of the proposed development within an area that is largely cleared for agricultural purposes and adjacent to the existing Merredin Terminal station the proposed development will not have an impact on any significant views and it not located near any residential houses nor major scenic drives. |
| • layout of the facility including the number, height, scale, spacing, colour, surface reflectivity and design of components, including any ancillary buildings, signage, access roads, and incidental facilities<br>• measures proposed to minimise unwanted, unacceptable or adverse visual impacts.<br>• Visual Landscape Planning in WA: a manual for evaluation, assessment, siting and design, (November 2007) and the Australian Wind Energy Association and the Australian Council of National Trusts Publication Wind Farms and Landscape Values (2005) provide detailed guidance on visual landscape impact assessments. | Plans of the proposed development are provided with this application.<br><br>Given the proposed development is adjacent with the existing Merredin Terminal station which already has infrastructure in place of a similar nature it is unlikely that the additional infrastructure proposed to be located on site will have an unacceptable or adverse visual affect.<br><br>A visual assessment of the proposal has been undertaken (refer to section 6 of this document), which concluded minimal, if any, visual impact. |

| Clause | Response |
|---|---|
| Some locations may hold Aboriginal heritage, natural or historic heritage significance which may impact site suitability. An assessment should address:<br>• local archaeological and ethnographic records<br>• any impact upon the natural environment that have aesthetic, historical, scientific or social significance or other special value for the present and future community<br>• any impact upon the historic heritage characteristics of adjoining/nearby places with an impact assessment of the proposal undertaken where relevant.<br>Consultation with the Department of Planning, Lands and Heritage may be required if heritage issues are identified. Appropriate consultation should be undertaken with respect to Aboriginal heritage matters. | A review of the relevant layers of the Department for Planning Lands and Heritage databases and other relevant documentation did not find any areas of Aboriginal Heritage, natural and historic significance. As such the trigger for consultation with the DPLH at this stage has not been reached. The DPLH will likely be consulted during the statutory advertising period. |

| Clause | Response |
|---|---|
| 5.3.7 Construction impact<br><br>It is important to accommodate the full scope of works to occur on the site in the development of a renewable energy facility. Consideration needs be given to potential staging that may occur including one type of renewable energy being subsequently complemented by a second type of renewable energy to supplement continuity of feed into the grid, for example, wind turbines supplemented by solar arrays on the same site.<br><br>Key matters that should be addressed during the construction phase are: | The construction impact will not be as significant as when the adjoining solar farm was constructed. It is predicted that over the period of 12 to 18 months that there will be an estimated 300 truck movements in total, delivering the batteries and associated infrastructure for the site. The majority of these deliveries will occur in the early to mid stages of the construction phase.<br><br>During the construction phase it is expected that, at the peak, there will only need to be 50 workers arriving (between 6-8am) and leaving (between 4-6pm) the subject site. |
| a site construction management plan that identifies standards and procedures for the construction of the development including the management of environmental emissions such as dust and noise | A Construction Management Plan (CMP) can be implemented as a Condition of Approval by the Shire and the Joint Development Assessment Panel. The CMP will be in line with the Shire's requirements and will include the standards and procedures for the construction of the proposed development including the environmental emissions such as dust and noise that might occur during the construction phase.<br><br>The CMP will also deal with matters such as traffic movements and stormwater that can be assessed once final detailed design has been undertaken. |

| Clause | Response |
|---|---|
| site disturbance should be minimised during construction through careful siting and measures to address erosion, drainage run-off, flooding, water quality, retention of remnant vegetation, stabilisation of top soil, and weed and disease hygiene. | The proposed development has been designed to sensitively respond to the subject site and site disturbance will be minimised during the construction phase. The design reflects the best possible use of the subject site taking into account all of the various matters outlined under this point. |
| vehicle and machinery access and movement. A decommissioning program should be separately developed in relation to removal of the facility and any rehabilitation requirements. | A Traffic Impact Statement has not been produced for this development given the low level of vehicle movements that are proposed over the construction timeframe and it should be noted, as mentioned previously, truck movements will be significantly less than during the construction of the surrounding solar farm. The internal roads will be constructed to a standard that will allow for easy onsite movement of the trucks delivering the battery packs and associated infrastructure and for ease of turnaround and access and egress.<br><br>Further as shown on the plans there is sufficient area for the required staff to park on the subject site.<br><br>The life of the proposed facility is expected to be up to 30 years. If/when the facility is decommissioned the infrastructure can be removed and the land returned for farming purposes - it is unlikely that rehabilitation will be required. |

## 4.2 STATE PLANNING POLICY 2.0 – ENVIRONMENT AND NATURAL RESOURCES (SPP2.0)

The policy states that:

> *Western Australia is one of the most biologically diverse regions in the world, home to a broad range of ecological communities and species, and natural landscapes. The States vast areas encompass rich and extensive agricultural, pastoral, marine and mineral resources. The protection and wise management of the environment and natural resources of the State are of paramount importance if we are to maintain our lifestyle now and into the future.*

SPP 2.0 further states that:

> *Careful assessment will be required to resolve conflicts between land use and protection of natural resources, giving consideration to the potential impacts on the environment, community lifestyle preferences, and economic values. This requires an understanding of the competing pressures of development and environmental protection, together with the economics of sustainable land use and management practices, advances in technology, and the priorities of the community.*

Clause 5.6 of SPP 2.0 relates to Agricultural Land and Rangelands and states that:

> *Planning strategies, schemes and decision making should:*
>
> - *Protect and enhance areas of agricultural significance, having regard to State, regional and local issues and characteristics, and to the requirements of Statement of Planning Policy No.11: Agricultural and Rural Land Use Planning*
> - *Consider the natural resource capability of rangelands and agricultural lands*
> - *Diversify compatible land use activities in agricultural areas and rangelands based on principles of sustainability and recognizing the capability and capacity of the land to support those uses.*

The proposed development meets these objectives in that the subject site is already cleared and used for broad acre cropping and grazing and is not in an area of agricultural significance with the balance of the subject site still used

for existing agricultural purposes. Further, the proposed development will allow the diversification of land use on the principle of sustainability by providing a green energy facility within the locality and broader surrounds.

Clause 5.10 of SPP 2.0 relates to Greenhouse Gas Emission and Energy Efficiency and states:

> *There is a widespread awareness of the need to increase the efficiency with which energy is used in Western Australia, including the need to reduce our reliance on energy produced from non-renewable resources such as fossil fuels. The primary objective is to reduce greenhouse gas emission by means (but not limited to) increasing energy efficiency, decreasing reliance on non-renewable fuels, and increasing usage of renewable energy sources.*
>
> *Planning strategies, schemes and decision making should:*
>
> - *Promote energy efficient development and urban design incorporating such issues as energy efficient building design, walkable neighbourhoods, higher densities in areas accessible to high quality public transport, local access to employment, retail and community facilities, and orientation of building lots for solar efficiency.*
> - *Support the retention of existing vegetation and revegetation in subdivision and development proposals.*
> - *Support the use of alternative energy generation, including renewable energy, where appropriate.*
> - *Support the adoption of adaptation measures that may be required to respond to climate change.*

The proposed development meets the objectives outlined under the Greenhouse Gas Emission and Energy efficiency clause in that the development of the BESS facility does not involve the removal of any remnant vegetation and is a form of alternative energy generation and storage which is a form of renewable energy and is a measure that is responding to climate change.

Clause 6 of SPP2.0 relates to the Implementation of the policy and states that:

Implementation will also occur through the day-to-day process of decision-making on subdivision and development applications, and the actions of other State agencies in carrying out their responsibilities. Local Governments and State agencies will need to take account of these policy measures to ensure integrated decision-making and in the planning and management of the environment and natural resources.

The proposed development meets the requirements of SPP 2.0 in that the proposed development will help reduce the need to rely on traditional energy forms and the introduction of a renewable facility. Further as the proposed development is adjacent to the existing Merredin Terminal station.

## 4.3 STATE PLANNING POLICY 2.5 – RURAL PLANNING (SPP2.5)

The purpose of this policy is to protect and preserve Western Australia's rural land assets due to the importance of their economic, natural resource, food production, environmental and landscape values. In terms of the proposed solar farm development compliance with SPP2.5 and compatibility with surrounding rural land uses.

The objectives of SPP2.5 are outlined and addressed in the Table 3 below:

***Table 3 – Response to Objectives of SPP2.5***

| Objective | Response |
|---|---|
| Support existing, expanded and future primary production through the protection of rural land, particularly priority agricultural land and land required for animal premises and/or the production of food; | The subject site is not identified as priority agricultural land in the Local Planning Strategy or other applicable documents. Once the BESS facility and associated substation and infrastructure is operational, the remainder of the lot can be used for cropping and grazing. The facility will be fully fenced to ensure that it is protected. |
| Provide investment security for existing, expanded and future primary production and promote economic growth and regional development on rural land for rural land uses; | The proposed BESS facility will promote economic growth and regional development through the development of a new land use and the protection of energy for the region.<br>The proposed farm will increase the workforce during the construction phase, this will occur in terms of accommodation options but also the workers spending money within the Shire. |
| Outside the Perth and Peel planning regions, secure significant basic raw material resources and provide for their extraction | Extraction of basic raw materials is not proposed. |
| Provide a planning framework that comprehensively considers rural land and land uses, and facilities consistent and timely decision-making | The local planning framework is addressed under Section 3.2 of this report. |
| Avoid and minimise land use conflicts | Surrounding land uses are typically broad acre farming and grazing, the Merredin Terminal station and an operating solar farm. It is considered that the proposed BESS facility will not result in significant land use conflicts within the broader area instead being located in a precinct with existing power generation infrastructure. |
| Promote sustainable settlement in, and adjacent to, existing urban areas; and | The subject site is not proposing urban development. |
| Protect and sustainably manage environmental, landscape and water resource assets. | The proposed development will not have any detrimental effects on the environment, landscape, water nor resource assets. Instead, the proposed development the proposed facility will allow for the protection of the environment through the production of green energy. |

Section 5.5 of SPP2.5 relates to regional variation, economic opportunities and regional development it states that:

> *Western Australia is a large and diverse State with regional variations of climate, economic activity, cultural values, demographic characteristics and environmental conditions. The WAPC's decisions will be guided by the need to provide economic opportunities for rural communities and to protect the States primary production and natural resource assets. WAPC policy is to:*
>
> > *(a) continue to promote rural zones in schemes as flexible zones that cater for a wide range of land uses that may support primary production, regional facilities, environmental protections and cultural pursuits*

The proposed BESS facility meets the above Section 5.5 of the policy in that:

- The proposal is providing economic opportunities for the Shire and will not have a detrimental effect on the State's primary production and natural resource

assets.

- The proposal represents a regional facility and therefore flexibility within the General Farming Zone considered by both the Shire and the WAPC can be supportive of this land use.

Section 5.12 relates to preventing and managing impacts in land use planning and states that:

> *Planning decision makers need to consider the broad suitability of land uses and the ability to manage offsite impacts prior to determining whether the use of a buffer is necessary.*

Section 5.12.1 relates to Avoiding Land Use conflict and outlines the matters that planning decision makers shall take to avoid lad use conflict which are outlined in the Table 4 below:

***Table 4 – Objectives of Avoiding Land Use Conflict***

| Objective | Response |
|---|---|
| Where an existing land use that may generate impacts is broadly compatible with surrounding zones and land uses, a separation distance should be indicated in a local planning strategy so there is broad awareness of the land use | The subject site is not identified as priority agricultural land in the Local Planning Strategy nor any other associated documents.<br><br>The BESS facility is expected to generate little to no impact on its surrounds and therefore a separation distance from the solar farm to other uses within the General Farming zone is highly unlikely to be required.<br><br>Further, no farmhouses are located within close proximity of the project, coupled with it being adjacent to the Merredin Terminal station, means that the location is highly suitable as the development will blend in with the existing operating development. |
| Where a development is proposed for a land use that may generate offsite impacts, there should be application of the separation distances used in environmental policy and health guidance, prescribed standards, accepted industry standards and/or Codes of Practice, followed by considering<br><br>Whether the site is capable of accommodating the land use and/or<br><br>Whether surrounding rural land is suitable, and can be used to meet the separation distances between the nearest sensitive land use and/or zone, and would not limit future rural land uses; and<br><br>Whether if clauses (i) and/or (ii) are met, a statutory buffer is not required | The subject site is capable of accommodating the proposed land use and suitable separation distances in regard to bushfire and other requirements are adhered to.<br><br>The proposed development meets both clauses (i) and (ii) and therefore a statutory buffer is not required. |
| where a development is proposed for a land use that may generate off-site impacts and does not meet the standard outlined in clause 5.12.1 (b) then more detailed consideration of off-site impacts will be required, in accordance with clause 5.12.3 of this policy; and | It is unlikely that the proposed BESS facility will generate offsite impacts. Rather, the proposed facility will enhance and reduce off site impacts by providing green energy to Shire and the State to meet Net Zero targets. |
| where a development is proposed that could be contemplated in the zone, and has been assessed under clause 5.12.3 as having unacceptable off-site impacts that cannot be further mitigated or managed, the proposal should be refused | Not applicable to this proposal |

## 4.4 STATE PLANNING POLICY 3.7 – PLANNING IN BUSHFIRE PRONE AREAS (SPP3.7)

Although the subject site is not within a bushfire prone area as shown in Figure 4 – Bushfire Prone Areas shown below, given the nature of the proposed development and for safety reasons a bushfire management plan and risk assessment has been undertaken to ensure that all safety measures are complied with and so that the correct recommended firefighting equipment can be kept on site should an incident occur.

The intent of SPP3.7 is to:

> *Implement effective, risk-based land use planning and development to preserve life and reduce impact of bushfire on property and infrastructure.*
>
> *Policy measure 5 of SPP3.7 relates to the policy objectives and are as follows:*
>
> *5.1 Avoid any increase in the threat of bushfire to people, property and infrastructure. The preservation of life and the management of bushfire impact are paramount.*
>
> *5.2 Reduce vulnerability to bushfire through the identification and consideration of bushfire risks in decision making at all stages of the planning and development process.*
>
> *5.3 Ensure that higher order strategic planning documents, strategic planning proposals, subdivision and development application take into account bushfire protection requirements and include specified bushfire protection measures.*
>
> *5.4 Achieve an appropriate balance between bushfire risk management measures and, biodiversity conservation values, environmental protection and biodiversity management and landscape amenity, with consideration of the potential impacts of climate change.*

The proposed development meets the objectives of the policy in that it will:

- Not increase the threat of bushfire to people, property and infrastructure and as part of the application the preservation of life and the management of the possible bushfire impact are paramount.
- It will reduce the vulnerability of bushfire over the subject site through the identification and consideration of bushfire risks through all stages of the planning and development process.
- The proposed development application will take into account bushfire protection requirements, and it will include specified bushfire protection measures within the applicable Bushfire Management Plan.
- The proposed development is aiming to achieve through careful design, a balance between bushfire risk management measures, biodiversity and conservation values, environmental protection and biodiversity management and landscape amenity.
- A specialist risk assessment has been undertaken in regard to the BESS facility with appropriate measures identified in relation to risk and management of the facility in relation to bushfire.

Policy measure 6.2 of SPP3.7 relates to development applications and states that:

- *Strategic planning proposals, subdivision and development applications within designated bushfire prone areas relating to land that has or will have a Bushfire Hazard Level (BHL) above low and/or where a Bushfire Attack Level (BAL) rating above BAL-LOW apply, are to comply with these policy measures.*
- *Any strategic planning proposal, subdivision or development application in an area to which policy measure 6.2 a) applies, that has or will, on completion, have a moderate BHL and/ or where BAL-12.5 to BAL-29 applies, may be considered for approval where it can be undertaken in accordance with policy measures 6.3, 6.4 or 6.5.*
- *This policy also applies where an area is not yet designated as a bushfire prone area but is proposed to be developed in a way that introduces a bushfire hazard, as outlined in the Guidelines.*

Although the subject site does not contain any areas mapped as bushfire prone, given the nature of the proposed facility it was considered best practice to undertake both a bushfire assessment and a risk assessment so that all relevant safety

measures are considered and addressed.

Policy measure 6.5 relates to information that is required to accompany a development application and states that:

> *Any development application to which policy measure 6.2 applies is to be accompanied by the following information in accordance with the Guidelines:*
>
> *a) (i) a BAL assessment. BAL assessments should be prepared by an accredited Level 1 BAL Assessor or a Bushfire Planning Practitioner unless otherwise exempted in the Guidelines; or*
>
> *(ii) a BAL Contour Map that has been prepared for an approved subdivision clearly showing the indicative acceptable BAL rating across the subject site, in accordance with the Guidelines. BAL Contour Maps should be prepared by an accredited Bushfire Planning Practitioner*
>
> *b) the identification of any bushfire hazard issues arising from the BAL Contour Map or the BAL assessment; and c) an assessment against the bushfire protection criteria requirements contained within the Guidelines demonstrating compliance within the boundary of the development site*
>
> *This information can be provided in the form of a Bushfire Management Plan or an amended Bushfire Management Plan where one has been previously endorsed.*

Under Clause 6.6 of SPP3.7 relates to vulnerable or high-risk land uses in areas where BAL-12.5 to BAL-29 apply and although the subject site is not within a bushfire prone area clause 6.6.1 states that:

> *Development applications should include an emergency evacuation plan for proposed occupants and/or risk management plan for any flammable on-site hazards.*

Given the above the appropriate risk assessment has been undertaken for the subject site.

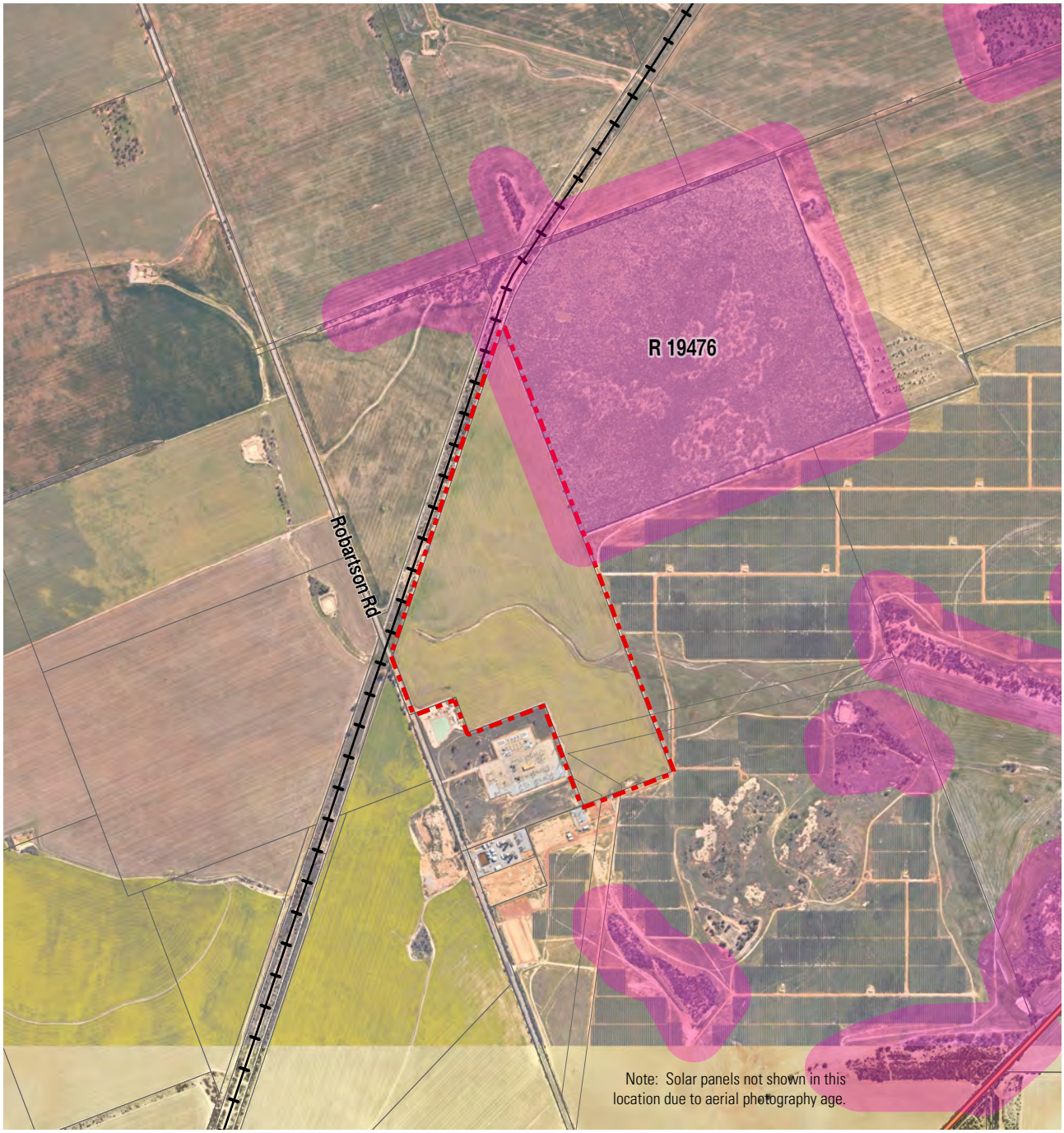



Figure 4: Bushfire Prone Areas

## 4.5 OTHER MATTERS TO BE CONSIDERED (C67 DEEMED PROVISIONS)

Clause 67(2) of the Deemed Provisions of the Planning and Development (Local Planning Schemes) Regulations 2015 (Regulations) sets out the matters for which due regard is to be given when considering a development application. Refer to Table 5 below for an assessment against the matters to be considered.

***Table 5 – Other Matters to be Considered***

| Matters to be considered | Response |
|---|---|
| the aims of the provisions of this Scheme and any other local planning scheme operating within the Scheme area; | This section outlines in detail how the proposed development meets the aims and provisions of the Shire's Local Planning Scheme No.6 (LPS6). |
| the requirements of orderly and proper planning including any proposed local planning scheme or amendment to this Scheme that has been advertised under the Planning and Development (Local Planning Scheme) Regulations 2015 or any other proposed planning instrument that the local government is seriously considering adopting or approving; | The proposed development meets the requirements of orderly and proper planning in that it meets the aims and objectives of the current local planning scheme.<br>The Shire does not currently have any local planning policies applicable to the current development.<br>The proposed development also meets the aims and objectives of both Federal and Commonwealth objectives for Australia and Western Australia to become net zero. |
| any approved State Planning Policy | As outlined in Section 3.1 of this report the proposed development meets the requirements of the State's planning policies applicable to this development. |
| any environmental protection policy approved under the Environmental Protection Act 1986 section 31(d) | There are no relevant EPP's applicable to this area. |
| any policy of the Commission | All applicable policies and position statements of the Commission have been addressed under Section 4 of this report. |
| any policy of the State | All applicable planning policies of the State have been addressed under Section 4 of this report. Further the proposed development meets the requirements of the State Governments aim to be net zero by 2050. |
| any local planning policy for the Scheme area | All applicable local planning policies have been addressed under Section 4 of this report. |
| any structure plan, activity centre plan or local development plan that relates to the development | There are no applicable structure plans, activity centre plans or local development plans in regard to the proposed development. |
| any report or review of the local planning scheme that has been published under the Planning and Development (Local Planning Schemes) Regulations 2015 | Not Applicable |
| in the case of land reserved under this Scheme, the objectives for the reserve and the additional and permitted uses identified in this Scheme for the reserve | Not applicable |
| the built heritage conservation of any place that is of cultural significance | A search of the applicable databases and documentation did not identify any built heritage nor any place that is of cultural significance. |
| the effect of the proposal on the cultural heritage significance of the area in which the development is located | The proposed development will have no detrimental effect on the cultural heritage significance of the area. |
| the compatibility of the development with its setting including the relationship of the development on adjoining land or on other land in the locality including, but not limited to, the likely effect of height, bulk, scale, orientation and appearance of the development | The proposed development is compatible with its setting in that the proposed development is adjacent to with the Merredin Terminal station and is compatible with that already existing built form. |

| Matters to be considered | Response |
|---|---|
| The amenity of the locality including the following –<br>• Environmental impacts of the development<br>• The character of the locality<br>• Social impacts of the development | The proposed development will have negligible environmental impact over the subject site. The site is currently cleared of remnant vegetation and used for grazing and cropping purposes.<br>The proposed development will not have an impact on the character of the locality. The broadacre farming that surrounds the subject site will not be affected by the development and the character of the rural area will not be affected. Further, as mentioned previously, the siting of the development adjacent to the existing Merredin Terminal means that the development is well sited within the area.<br>There will be no social impacts of the proposed development. In the long term only a small number of workers will be required to maintain the development which will provide employment opportunities for residents of the Shire. |
| The likely effect of the development on the natural environment or water resources and any means that are proposed to protect or to mitigate impacts on the natural environment or the water resource | As stated previously the proposed development has been carefully designed so that the BESS facility will be located on cleared cropping and grazing land adjacent to the Merredin Terminal. |
| Whether adequate provision has been made for the landscaping of the land to which the application relates and whether any trees or other vegetation on the land should be preserved | The subject site has already been wholly cleared. |

| Matters to be considered | Response |
|---|---|
| The suitability of the land for the development taking into account the possible risk of flooding, tidal inundation, subsidence, landslip, bushfire, soil erosion, land degradation or any other risk | The land has been selected by the proponent due to the suitability of the site for the proposed development and its location near the Merredin Terminal station. A bushfire management plan and risk management has been undertaken to ensure that the proposed development is suitable on the subject site.<br>The subject site is not subject to any of the other identified risks. |
| The suitability of the land for the development taking into account the possible risk to human health or safety | There is no risk to human health in regard to the proposed development |
| The adequacy of -<br>• The proposed means of access and egress from the site; and<br>• Arrangements for the loading, unloading, manoeuvring and parking of vehicles | Access and egress to the subject site will be upgraded to suitable standards to allow for private and truck movements during the construction phase and the subsequent operation phase. Requirements will be confirmed once a construction manager is appointed, with upgrades done to the Shire of Merredin requirements.<br>There is sufficient room on the subject site for loading and unloading of trucks and laydown areas and the parking of vehicles. |

| Matters to be considered | Response |
|---|---|
| The amount of traffic likely to be generated by the development, particularly in relation to the capacity of the road system in the locality and the probable effect on traffic flow and safety | It is expected that over the construction period of 12 – 18 months that there will be approximately 300 truck movements to and from the site. It is estimated that there will be a construction workforce of approximately 150 workers over the course of the project, with a peak workforce of no more than 50 people. The peak numbers of movements for these workers will be during the am period of approximately 7 – 8am and then the pm period between 4 – 6 pm as workers arrive in the morning to commence working and then leave in the pm period. |
| The availability and adequacy for the development of the following –<br>• Public transport services<br>• Public utility services<br>• Storage, management and collection of waste<br>• Access for pedestrians and cyclists (including end of trip storage, toilet and shower facilities)<br>• Access by older people with disability | There are no public transport options to the subject site as it is located remotely outside the town of Merredin. |
| The potential loss of any community service or benefit resulting from the development other that the potential loss that may result from economic competition between new and existing businesses | There will be no loss of any community service or benefit. |
| The history of the site where development is to be located | The site is a multigeneration agricultural property used for cropping and grazing. This agricultural land use will continue on the majority balance of the site once the BESS is operational. |

| Matters to be considered | Response |
|---|---|
| The impact of the development on the community as a whole notwithstanding the impact of the development on particular individuals | The proposed development will not have a detrimental effect on the community or any particular individuals. The development is seen as adding value to the community with the Shire potentially becoming a green hub in the Wheatbelt region. There will be opportunities for short-term and long-term employment as a result of the project. |
| Any submissions received on the application | |
| Za) the comments or submissions received from an authority consulted under clause 66 | |
| Zb) any other planning consideration the local government considers appropriate | All planning considerations have been addressed. |

## 4.6 SHIRE OF MERREDIN LOCAL PLANNING SCHEME NO.6

Under LPS6 the subject site is zoned General Farming zone.

The Shire of Merredin's LPS6 was gazetted by the Minister for Planning in June 2011. Under LPS6 the subject site is zone 'General Farming' zone with the objectives of the General Farming zone outlined under Clause 3.2.11 being:

*3.2.11.1 To provide for a range of rural pursuits that are compatible with the capability of the land and retain the rural character and amenity of the locality.*

*3.2.11.2 To protect land from urban uses that may jeopardise the future use of that land for other planned purposes that are compatible with the zoning.*

*3.2.11.3 To support sustainable farming practices and the retention of remnant vegetation.*

*3.2.11.4 To prevent any development that may affect the viability of a holding.*

*3.2.11.5 To encourage small scale, low impact tourist accommodation in rural locations.*

*3.2.11.6 To encourage a diversification of rural activities that will reduce the dependency of the rural sector on traditional crops.*

*3.2.11.7 To support the creation of homestead lots in accordance with adopted Local Planning Policy.*

*3.2.11.8 To support mining activities where an environmental management plan has been prepared and is acceptable to the local government and the Environmental Protection Authority.*

*3.2.11.9 To preclude the disposal of used tyres or any other material that may be detrimental to the quality of the land.*

The proposed battery facility and associated works meet the objectives of the General Rural zone in that the proposed development is:

- Compatible with the capability of the land and will not have a detrimental affect on the rural character of the area nor the amenity of the locality.
- The facility will not jeopardise the future use of the land for other planned purposes that are compatible with the zoning.
- The subject site is cleared of remnant vegetation and will have no effect on sustainable farming practices.
- The development will not have any affect on the viability of land holdings.

Clause 4.13 of the Shire's LPS6 relates to development in the General Farming zone and states:

*All proposals for development in the General Faming zone must have regard to both on-site and off-site impacts and, where necessary, should be accompanied by information identifying –*

- *Environmental values and environmental risks*
- *The potential for land use conflict*
- *The potential impacts and restrictions on allowed uses on adjacent or nearby locations*
- *The separation distances and/or buffer relating to a potentially incompatible land use which needs to be provided on- site and the appropriate conditions relating to subdivision and development.*

The proposed BESS facility meets these requirements as:

- The location of the BESS facility on cleared land that contains no pockets of remnant vegetation, and the facility will not have any detrimental environmental effect with on-site or off-site. Rather the proposed facility within a precinct with the existing Merredin Terminal station will provide the Shire and the state with a source of clean green energy as the State moves towards net zero and therefore the environmental value that will be produced offsite is of an extremely high value.
- There is no potential for land use conflict as the proposed facility is within a power generation precinct with energy related infrastructure.
- There are no potential impacts nor proposed restrictions on allowed uses on adjacent land broad acre cropping, grazing and other farming practices will be able to continue to occur on the surrounding land.
- Appropriate buffers will be put in place in relation to the BESS facility in regard to applicable separation distances and these will be contained within the

fence that will protect the facility.

### LAND USE CLASSIFICATION UNDER LPS6

Under the Shire LPS6 renewable energy facility is not a use that is listed within the zoning table, Clause 3.4.2 of LPS6 addresses this matter by stating that:

If a person proposes to carry out on land any use that is not specifically mentioned in the Zoning Table and cannot reasonably be determined as falling within the type, class or genus of activity of any other use category the local government may –

- determine that the use is consistent with the objectives of the particular zone and is therefore permitted;
- determine that the use may be consistent with the objectives of the particular zone and thereafter follow the advertising procedures of clause 64 of the deemed provisions in considering an application for development approval; or AMD 5 GG 04/07/17
- determine that the use is not consistent with the objectives of the particular zone and is therefore not permitted.

Land Insights and the proponent request that the Shire and the Joint Development Assessment Panel consider that the proposed use of the subject site is either consistent or may be consistent with the General Farming zone and therefore allow this application to be considered. In support of this request it should be noted that the siting of the proposed facility is adjacent to similar energy-related infrastructure, Merredin Solar Farm, Merredin Terminal and Merredin Energy dual fuel peaking plant. The rationale for determining the consistency with the General Farming zone are outlined within this report.

## 4.7 LOCAL PLANNING STRATEGY (LPS)

The subject site is located within the General Agriculture category under the Shire of Merredin's Local Planning Strategy which was endorsed in 2007. Under the LPS no objectives are provided for this use and simply states under Clause 4.3.4 in relation to rural areas within the Shire that:

> *rural land should be protected from proposals that might compromise agricultural viability such as ad-hoc subdivision and incompatible use or development.*

The proposed facility within an energy precinct comprising Merredin Solar Farm, Merredin Terminal and Merredin Energy dual fuel peaking plant As such it will not compromise agricultural viability and is not an incompatible use or development.

# 5.0 site conditions

## 5.1 SITE SELECTION

The proposed site was selected for the following key reasons:

- It is adjacent to Western Power's Merredin Terminal – a 33kV, 66kV, 132kV and 220kV terminal substation which has numerous existing energy infrastructure, including the 220kV transmission line which feeds the Goldfields and runs back to Muja.
- This part of the SWIS may benefit from a utility-scale BESS facility offsetting potential augmentation works otherwise required by Western Power.
- The close proximity of Merredin Terminal means that the cable route to connect the proposed BESS facility to the SWIS is less than 100m, resulting in minimal impacts and requirements from required transmission infrastructure.
- The site is cleared and has been used for cropping and grazing for over 100 years, meaning there's negligible impact to neighbouring native vegetation and biodiversity.
- The site is adjacent to other generation facilities, being the Merredin Energy dual fuel peaking plant and Merredin Solar Farm (the State's largest operational solar farm).
- There is good access to the site from existing public highways, minimising disruption to the community during construction as no new roads will need to be constructed.

Within the proposed site boundary, there is adequate space to accommodate future expansion if required, the infrastructure layout has been designed to optimise space whilst preserving a suitable Asset Protection Zone and keeping the transmission cable route back to Merredin Terminal to a minimum.

No clearing is required within the site and given the relatively flat nature of the site, minimal cut and fill earthworks will be required to effectively prepare the site for the proposed infrastructure.

## 5.2 TOPOGRAPHY AND LANDSCAPE

The subject site is essentially flat with very little change in the landscape over the subject site and in particular where the BESS facility is proposed to be located. Further, as mentioned previously in this report the subject site is currently fully cleared and is currently used for cropping and grazing. Further the location of the BESS facility adjacent to the existing Merredin Terminal substation will mean that the proposed facility will blend in to the already existing use. This is considered further in Section 6 of this report (Visual Assessment).

## 5.3 AGRICULTURAL LAND USE

The subject site is not identified in the Shire LPS nor Strategy as of being a high agricultural value. The proposed facility will only impact a small portion of the subject site, being approximately 4ha of a 61.5ha site. This means that the existing agricultural land use can keep operating over the majority (>93%) of the subject site with only a small loss of agricultural land.

Figures 6a and 6b show the land capability for these agricultural land uses across the site, along with an assessment of agricultural land to be lost to the Wheatbelt region as a result of the proposal.

An assessment of land qualities relevant to the construction phase of the project (wind erosion and water erosion) indicate that the site is not significant susceptible to these potential impacts.

## 5.4 VEGETATION AND ECOLOGICAL COMMUNITIES

The subject site contains no remnant vegetation and is cleared and used for grazing and cropping purposes. The Wheatbelt Threatened Ecological Community is present in the area, and additionally, past flora surveys have identified threatened and rare species within areas of remnant vegetation as shown in Figure 7.

The site and proposal were discussed with a qualified botanist (who has previously assessed the Merredin Solar Farm site) in regards to potential impacts of the project, and it was determined that no spring surveys were required due the cleared agricultural nature of the site and surrounding areas. The establishment of the BESS facility is not expected to have any impact on any TEC.

## 5.5 WATER RESOURCES

A creek runs to the north of the proposed development however this does not impact the subject site. An existing farm dam is located directly to the west of the proposed BESS facility on Western Power land, and the owner of the subject site will grant an easement across the access track to provide ongoing access to the dam for agricultural purposes. The landowner

has agreed to the form of easement, and this will be implemented following receipt of Development Approval.

## 5.6 HERITAGE

A review of the Department for Planning Lands and Heritages found no Aboriginal Heritage sites on the subject site nor are there any areas of European Heritage on or near the subject site. An archaeological and ethnographic survey was undertaken on the adjoining site prior to the development of the Merredin Solar Farm. This survey concluded that there were no Aboriginal sites of interest on the property – and given the similar nature of the land adjacent a similar conclusion is expected. Development that has the potential to impact on any Aboriginal heritage site (whether discovered or not) is currently governed by the Aboriginal Heritage Act 1972, which could require additional consideration.

## 5.7 SEPARATION DISTANCES

At this stage no separation distances are prescribed under legislation or policy for the proposed facility other than for bushfire requirements which can easily be accommodated on the subject site. As shown on Figure 8 – Nearby Houses – Sensitive Receptors a 2km buffer has been placed around the proposed facility with the nearest houses falling outside of this buffer.

## 5.8 BUSHFIRE

Although the subject site is not covered by an identified bushfire prone area as shown in Figure 4 – Bushfire Prone Areas above, an appropriate and applicable risk assessment has been undertaken to ensure that appropriate emergency plans and equipment are on site should any issues arise in relation to the BESS facility.

## 5.9 TRAFFIC AND TRANSPORT

A traffic impact assessment has not been undertaken for the proposed facility due to the small number of traffic movements, both by truck and private vehicles that will be undertaken throughout the 12-18 month construction phase of the project, with at most 5-6 movements per day at the peak construction period. Once the technical details of the proposal are finalised, a construction manager and contractor appointed, a detailed Traffic Impact Assessment will be prepared for the Shire to review and approve.

Post the construction phase there will be minimal car movements to and from the site with the facility largely being monitored autonomously and unmanned.

During the life of the project there will be periods when the infrastructure on the subject site will need to be maintained, serviced and in some instances upgraded. During these periods there will be a slight increase in traffic movements however it will not have a significant impact on the surrounding road network nor on the access and egress to the subject site.

## 5.10 CONSTRUCTION MANAGEMENT PLAN

It is suggested that a Construction Management Plan be prepared prior to on-site work commencing. This will ensure that the management of the site is appropriate for the construction phases and methodologies required to implement the project. The Construction Management will review the management actions identified as part of the Development Assessment process, and provide further details on site-specific management as required.

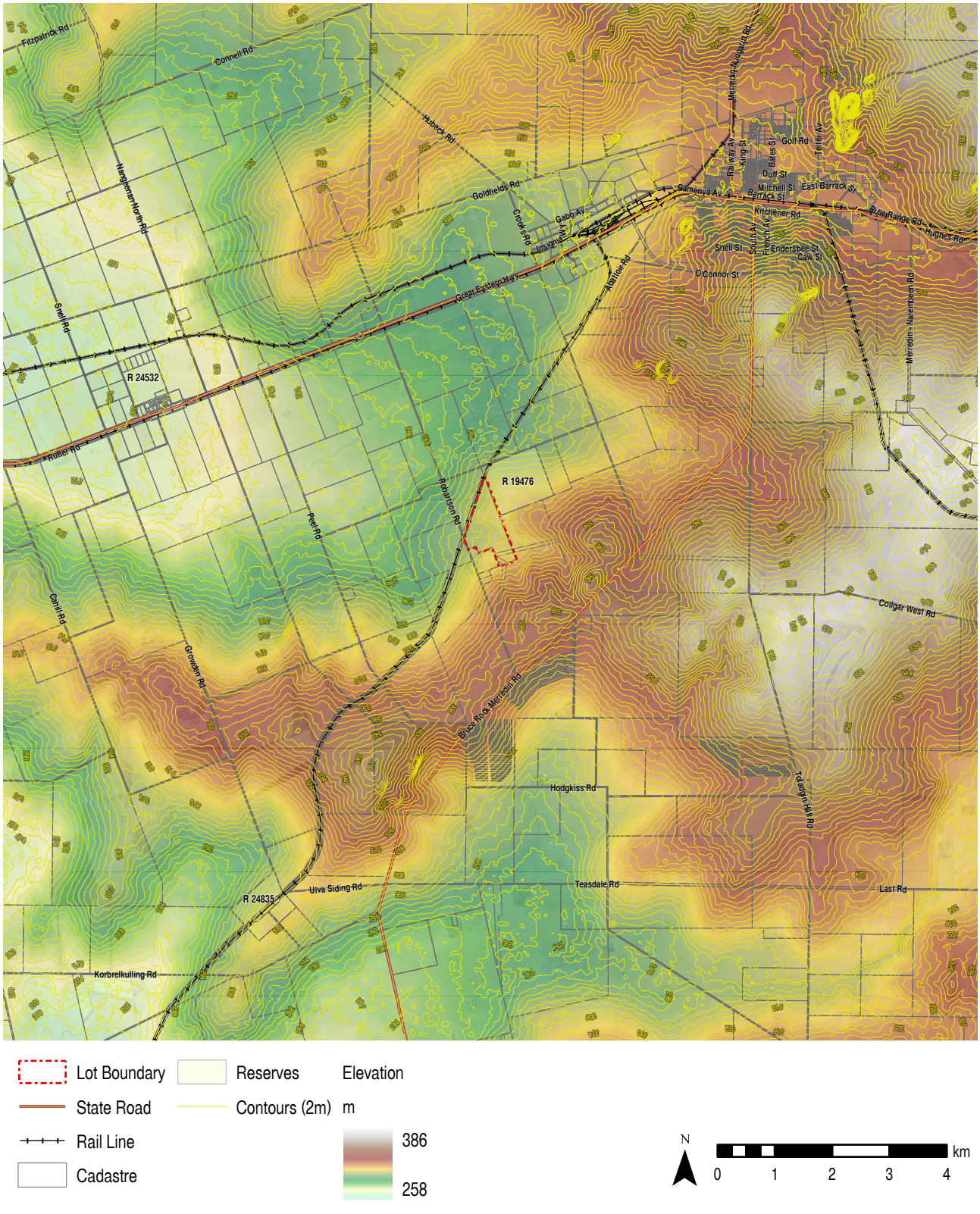
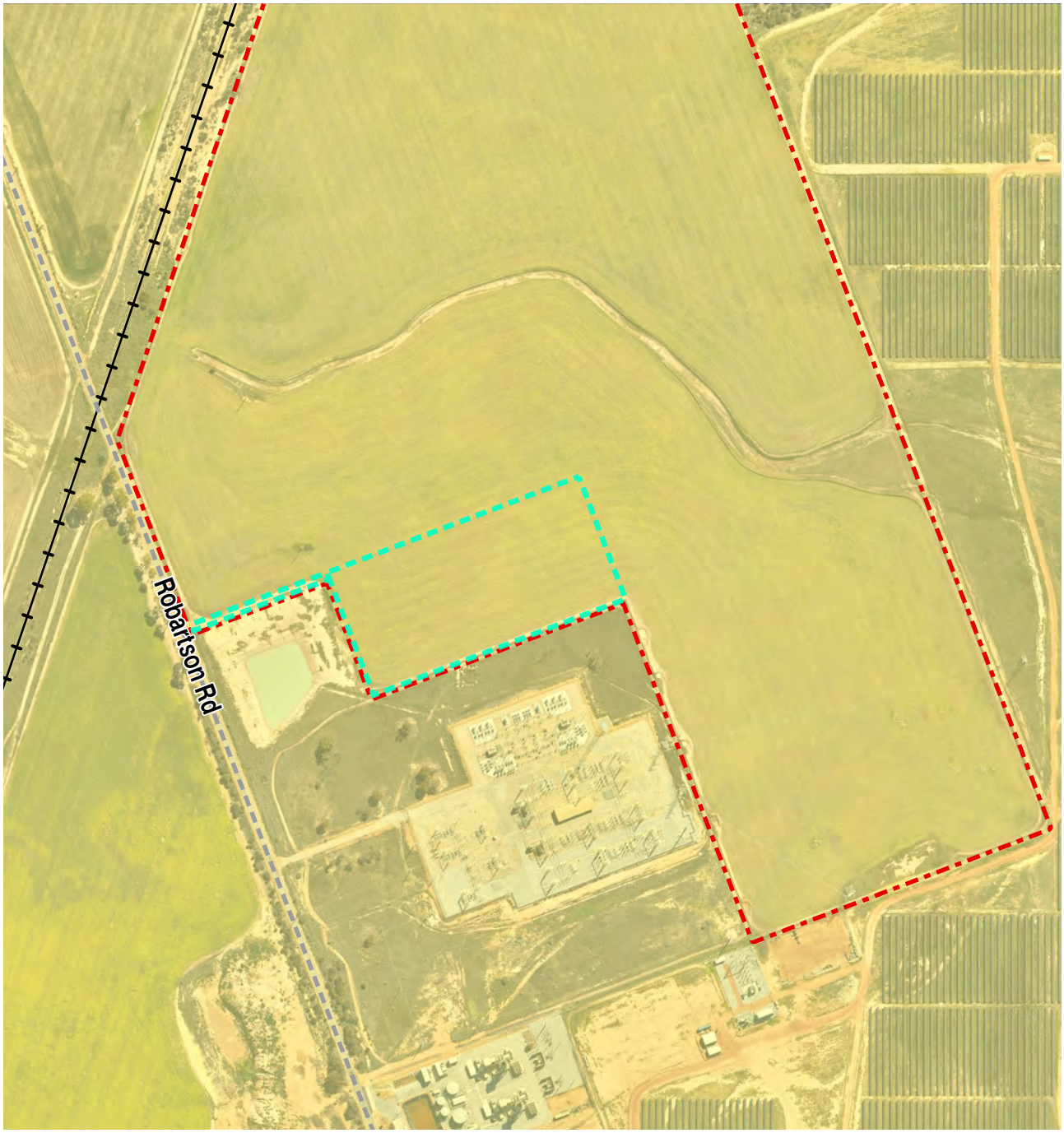



Figure 5: Topography




Battery Project Area
Lot Boundary
Rail Line
Local Road

**Grazing Land - Shire of Merredin**

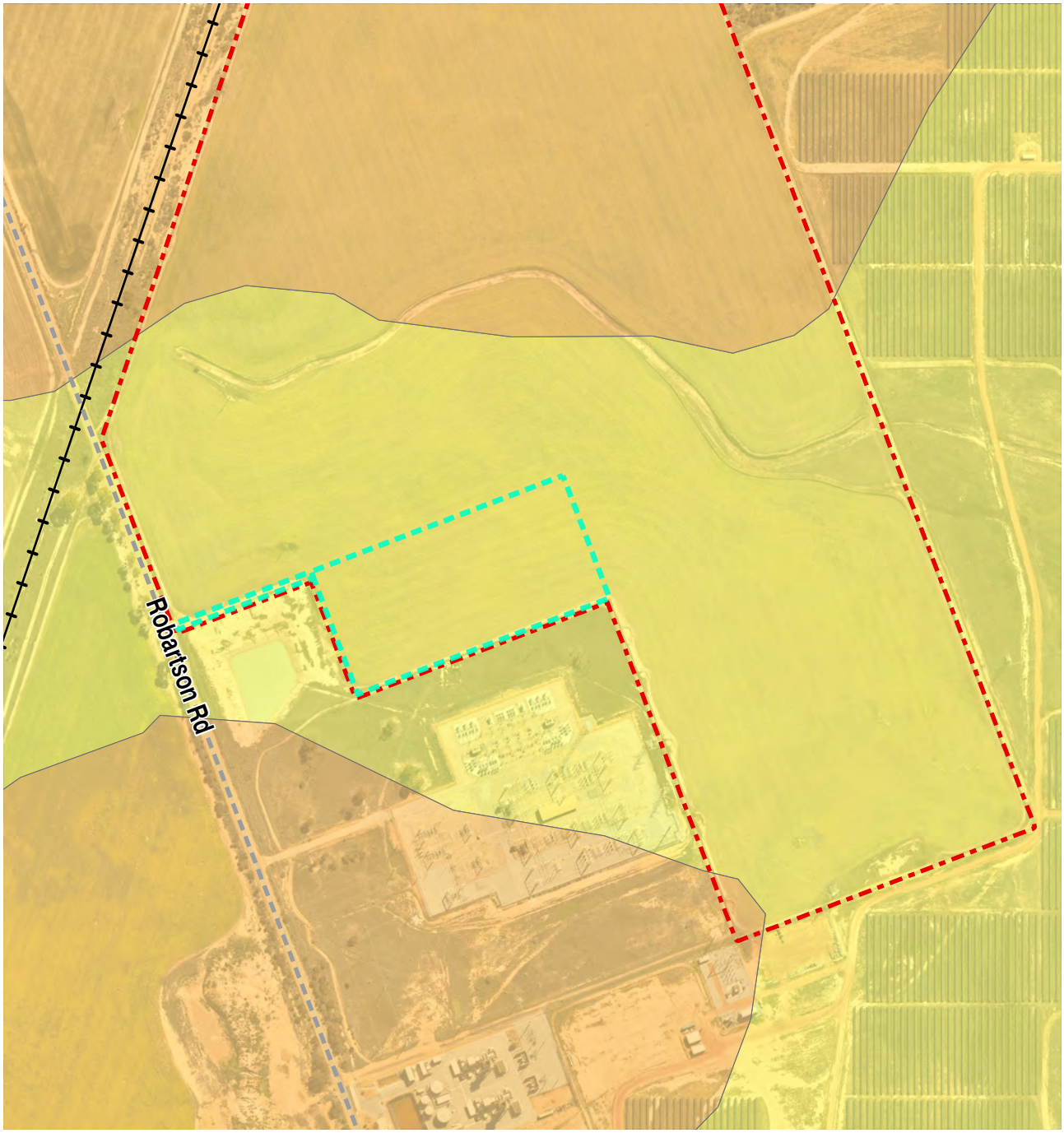
A1 - >70% of the land has high to very high capability
A2 - 50-70% of the land has high to very high capability
B1 - >70% of the land has moderate to very high capability
B2 - 50-70% of the land has moderate to very high capability
C1 - 50-70% of the land has low to very low capability
C2 - >70% of the land has low to very low capability

**Battery Site-Grazing Area Percentage**

| Land Type | Area (ha) | Area % |
|---|---|---|
| Battery Site | **3.38** | |
| Agricultural land | 329223.90 | 0.0010 |
| B1/B2 land | 235570.79 | 0.0014 |
| C1/C2 land | 72597.48 | 0.0047 |

N
0 50 100 150 200 m

Figure 6a: Land Capability - Grazing




Battery Project Area
Lot Boundary
Rail Line
Local Road

**Cropping Land - Shire of Merredin**

B1 - >70% of the land has moderate to very high capability

B2 - 50-70% of the land has moderate to very high capability

C1 - 50-70% of the land has low to very low capability

C2 - >70% of the land has low to very low capability

**Battery Site-Cropping Area Percentage**

| Land Type | Area (ha) | Area % |
|---|---|---|
| Battery Site | **3.38** | |
| Agricultural land | 329223.90 | 0.0010 |
| B1/B2 land | 247337.55 | 0.0014 |
| C1/C2 land | 81886.35 | 0.0041 |

N

0 50 100 150 200 250 m

Figure 6b: Land Capability - Cropping

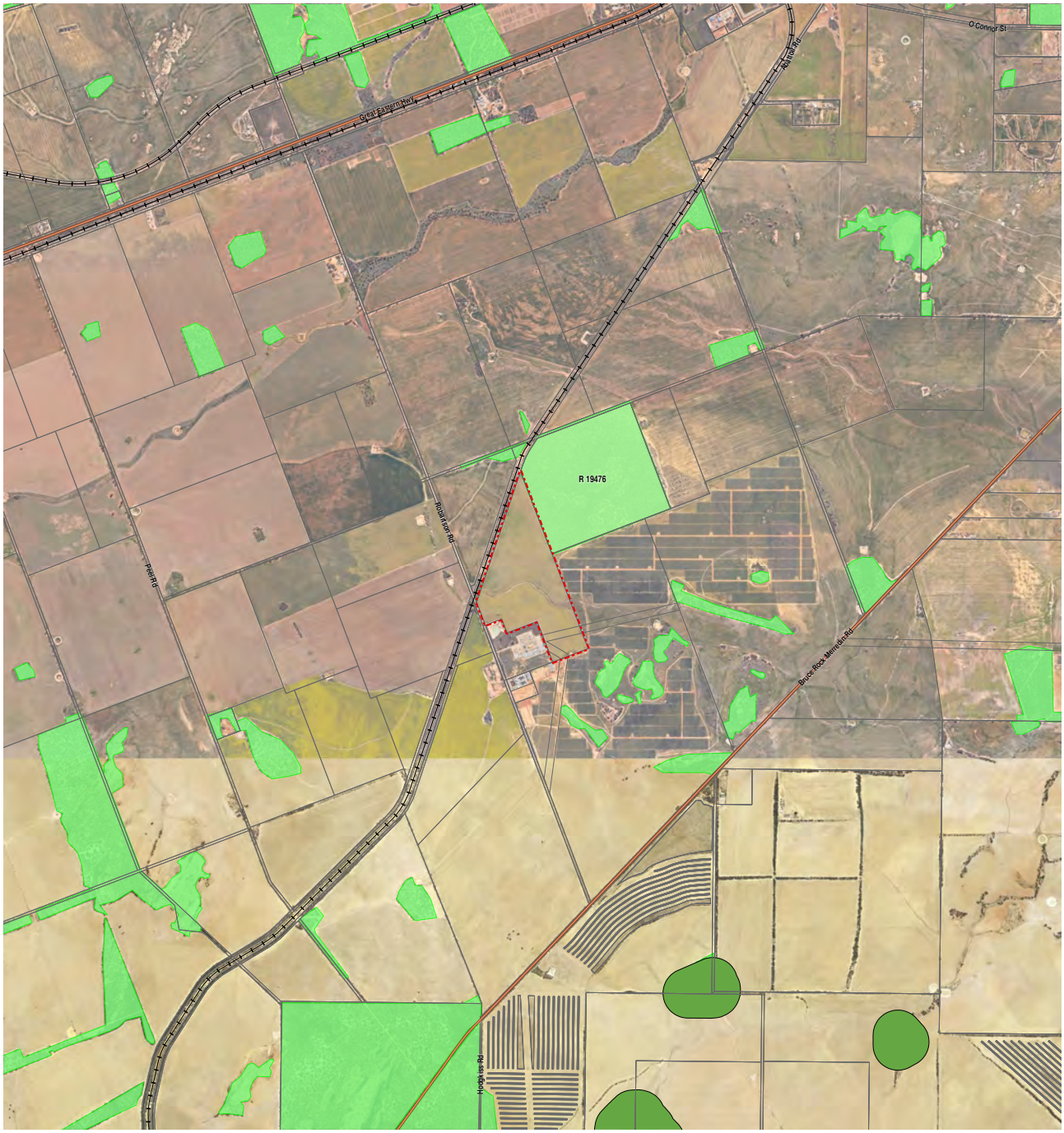



Figure 7: Remnant Vegetation & TECs

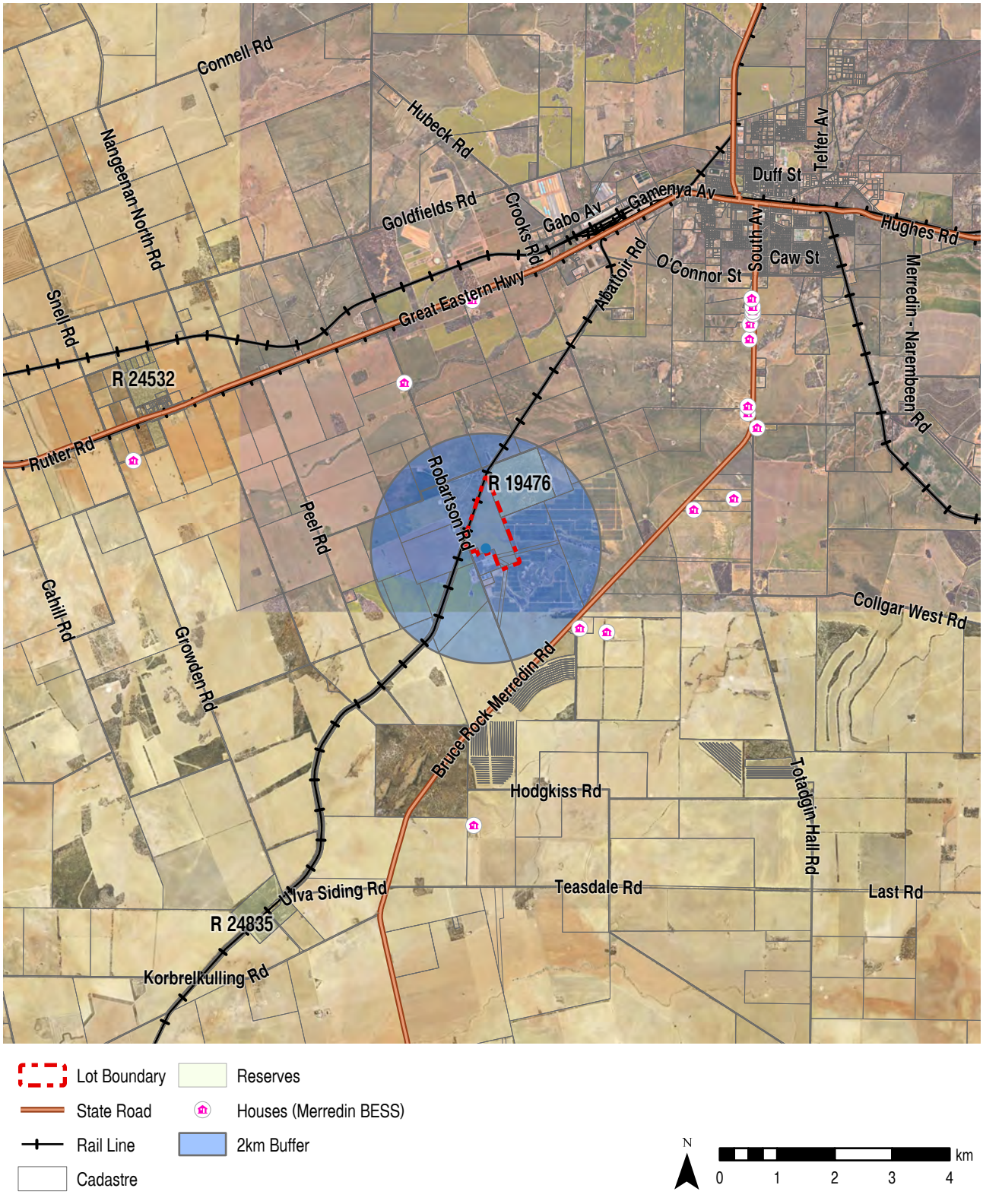



Figure 8: Nearby Houses

# 6.0 Visual assessment

## 6.1 VISUAL ASSESSMENT CONTEXT

The Merredin townsite is in the eastern Wheatbelt region of WA. This area is in an agricultural area of predominant cropping lands with the landscape having been heavily cleared of native vegetation for this purpose. The landscape is now rolling with a visually strong horizontal scale for many of the significant views. These views are often dominated by skylines (views of big skies) and flat or slightly sloping fields. Trees are sparse with many relegated to fringing fields, roads or rail corridors. Patches of remnant vegetation provide skyline borders. The adjoining solar farm is visible but is viewed as part of a modified rural landscape.

It is not a natural landscape, but in its modified form represents the impact of clearing on a broad scale to create large broad acre farms.

In such a landscape it is not always possible to visually hide or blend a large infrastructure element, however the large scale of fields and views provides a dilution of impacting elements, and in this context the locality of the BESS is adjacent to a dam, energy infrastructure (Western Power's Merredin Terminal) and energy generation facilities (Merredin Energy peaking plant and Merredin Solar Farm). These elements are prescribing a 'new' landscape for the locality, one of green or renewable energy generation, distribution and storage.

The facility is contained in modular format as an array of containers. There are spaced for the purposes of cooling and related operational considerations however this will also result in the facility being seen as one element of modules sitting on the land. In a similar way, a number of farming properties in this locality have stored objects in open viewed areas, many of these are assessed to be visible from the public domain.

The terrain is rolling and there are few trees. The actual site of the BESS is however screened on the west and south by the dam and the switchyard which separate it from Robartson Road which is the closest public road. The Perth - Adelaide Railway runs to the northwest but is almost 0.5 km away.

There are already a number of visual elements such as the dam, the solar farm and the switchyard which occupy views across the land and so the BESS might be considered just another, the next instalment to the transformed landscape.

## 6.2 TECHNIQUE

The viewing points to be identified as the basis for determining visual aesthetic impact are part of the scene analysis technique. This technique has 5 steps:

- This describes the aesthetic qualities and overall scenery of the place;
- Identifies points where views would be taken to hold representative public values for the landscape aesthetics;
- Describes scenes from each Viewing Point in terms of the pre and post development scenery, values and sensitivity.
- The change between pre and post development represents the impact which is described in terms of low, medium or high acceptability of impact.
- Analysis of the impact leads to the consideration of management or mitigation as the opportunity or capability of the surroundings to be modified, or the design to be revised to reduce impact.

Five viewing points are identified as the basis for undertaking the Visual Assessment Landscape Impact study, given the nature of the project and the

- Context of the location
- Adjacent structures and features
- Limited public access in surrounding areas
- Altered landscape scenery in existence.

## 6.3 ASSESSMENT OF THE PROJECT AND THE SETTING

A simple assessment can be completed as follows.

### CONTEXT OF THE LOCATION

The site and surroundings are extensively cleared cropping land. It is therefore already heavily modified and has several instances of structures and industrial scale installation.

### ADJACENT STRUCTURES AND FEATURES

The site is located adjacent to a farm dam, and a switching and transformer yard. These structures already introduce a discordant change to what was a flat agricultural field landscape character. The large solar farm to the east introduces a monumental scale to the area which is not a dominant visual element because PV are horizontal and follow the terrain. The BESS is therefore a small additional shift in scenery change.

### LIMITED PUBLIC ACCESS TO VICINITY

The site is separated from the public viewing domain which is largely limited to sections along Robartson Road.

### ALTERED LANDSCAPE

The development of renewable energy facilities into the Merredin landscape heralds a scenery transformation of which there may be emerging a new synonymity of this technology, its aesthetic and the place values of Merredin.

### VIEWPOINT DESCRIPTIONS

- VP 1 – from rail reserve noting this is no longer used.
- VP 2 – from an internal farm track east of the BESS.
- VP 3 – from road to the south of the farm.
- VP 4 – Robartson Rd south of the BESS.
- VP 5 - Robartson Rd near rail crossing

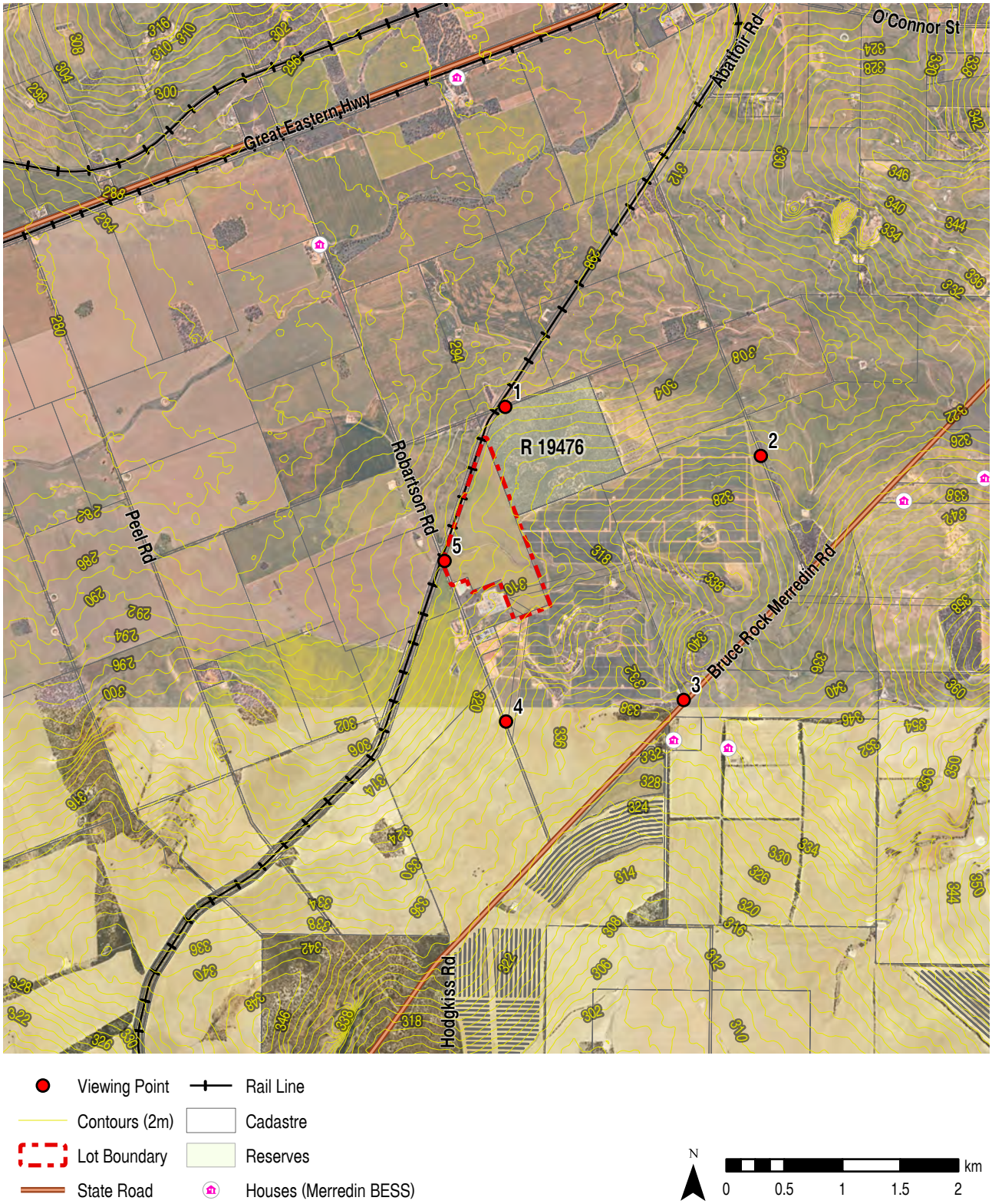



Figure 9: Viewpoints

## 6.4 ASSESSMENT OUTCOMES

The following table summarises the assessment of visual impact from each of the designated viewing points.

| VP | Visual Experience | Public Sensitivity | Acceptability L, M, H | Management/Mitigation |
|---|---|---|---|---|
| 1 | Possible glimpses of BESS however intervening scrub and physical distance may relegate it to a minor component of any scene from VP 1 | Low | Not visible and therefore unlikely to cause perceptible visual impact issues. H | None needed. |
| 2 | Direct views of BESS unlikely | Low | Not visible and unlikely to cause perceptible visual impact issues. H | None needed. |
| 3 | Direct views of BESS structure across fields. | Low | Not visible and unlikely to cause perceptible visual impact issues. H | None needed. |
| 4 | Scenery may have long middle ground visibility of BESS as a glimpse and minor part of the current collective view of dam and switching yard. | Medium | Possibly visible but unlikely to cause unacceptable visual impact issues. H | Improve the density of planting along the Robartson Road reserve. |
| 5 | Closest to BESS, will be seen in front of the switchyard and may be seen as part of an ensemble of the current collective view of dam and switching yard. | Medium | Solar panels visible in middle ground beyond highway screening vegetation. M-H | Screen planting along the reserve of Robartson Road will reduce visibility. |

*VP4 looking towards the site*

*VP5 looking towards the site*

*Proposed BESS site (approx, orange) within existing visual context*

## 6.5 CONCLUSION

The Visual Impact Landscape Assessment concludes that the BESS, whilst visible as part of the scenery of the place would not be visible from all but VP 4 & 5. That view is described as part of the overall assembly of switchyard and dam and transmission lines for VP 5 and as a glimpse from VP 4.

In the circumstances therefore the visual impact of the battery is very limited overall and likely to be viewed as an additional industrial element of a recently changed rural scene, and a small part of that scene at that.

Should the VILA be considered to merit management the surroundings of the BESS and/or its design could be reviewed to explore the following mitigations:

- Install the BESS on a low pad
- Select lighter and muted colours such as sage green, sky blue, white or beige
- Limited screen planting to the road reserve especially where VP is closest (VP 5) to the BESS although it is noted views are not strongly influenced.

# 7.0 Assessment and management

## 7.1 RISK AND MITIGATION FRAMEWORK

A risk assessment has been undertaken to review the environmental and amenity risks potentially associated with the project. The assessment is based on the criteria in the Department of Water and Environmental Regulation's Guidance Statement: Risk Assessments (2017). The risk rating will be determined in accordance with the risk matrix below.

| Likelihood | Consequence | | | | |
|---|---|---|---|---|---|
| | Slight | Minor | Moderate | Major | Severe |
| Almost certain | Medium | High | High | Extreme | Extreme |
| Likely | Medium | Medium | High | High | Extreme |
| Possible | Low | Medium | Medium | High | Extreme |
| Unlikely | Low | Medium | Medium | Medium | High |
| Rare | Low | Low | Medium | Medium | High |

Source: DWER, 2017

The following criteria has been used to determine the likelihood and consequence of the risk occurring.

| Likelihood | | Consequence | |
|---|---|---|---|
| Almost certain | The risk event is expected to occur in most circumstances. | Severe | On-site impacts: catastrophic (significant impact to the environment)<br>Off-site impacts local scale: high level or above<br>Off-site impacts wider scale: mid-level or above<br>Mid to long term or permanent impact to an area of high conservation value or special significance^<br>Significant long-term damage/loss of ecosystem function and loss of individuals of species locally |
| Likely | The risk event will probably occur in most circumstances. | Major | On-site impacts: high level (moderate impact to the environment)<br>Off-site impacts local scale: mid-level<br>Off-site impacts wider scale: low level<br>Short term impact to an area of high conservation value or special significance^<br>Moderate damage to ecosystem function and major loss of individuals of species locally. |
| Possible | The risk event could occur at some time. | Moderate | On-site impacts: mid-level (Minor adverse effect to the environment)<br>Off-site impacts local scale: low level<br>Off-site impacts wider scale: minimal<br>Moderate loss of individuals of species locally. |
| Unlikely | The risk event will probably not occur in most circumstances. | Minor | Off-site impacts local scale: minimal<br>Off-site impacts wider scale: not detectable<br>Minor number of individuals of species may be affected locally. |
| Rare | The risk event may only occur in exceptional circumstances. | Slight | On-site impact: minimal (No discernible adverse impact). |

Source: DWER, 2017

^ Determination of areas of high conservation value or special significance should be informed by the Guidance Statement: Environmental Siting.

*'onsite' means within the Lot boundary.

In considering the response or mitigation and residual risk associated with the project, the EPA mitigation hierarchy for environmental factors has been followed. This proposes the following:

## AVOID

Avoid the adverse environmental impact altogether. This may include reducing the footprint or changing the location of the footprint to avoid areas with high environmental values.

## MINIMISE

Limit the degree or magnitude of the adverse impact. This may include reducing the footprint or carefully selecting technologies, processes (such as re-use of waste products) and management measures (such as bunding or dust and noise control measures) to reduce the impact.

## REHABILITATE

Repair, rehabilitate or restore the impacted site as soon as possible. Adequate rehabilitation information is integral to the mitigation hierarchy to ensure early identification of knowledge gaps and risk as well as development of criteria and research to meet objectives.

## OFFSET

Undertake a measure or measures to provide a compensatory environmental benefit or reduction in environmental impact to counterbalance significant adverse environmental impacts from implementation of a proposal. The measure(s) are taken after all reasonable mitigation measures have been applied and a significant environmental risk or impact remains. Offsets are not appropriate for all proposals and will be determined on a proposal-by-proposal basis.

## 7.2 POTENTIAL IMPACTS, MITIGATION AND RESIDUAL RISK

The outcomes of an Impact Assessment are described below, including a response or mitigation to potential impacts. Based on the outcomes of the assessment, it is considered that there are no significant residual impacts as a result of the proposed development.

| Feature | Potential Impact | Response or mitigation | Residual Risk |
|---|---|---|---|
| Landscape and Visual Impact | Potential for impact on visual amenity for nearby sensitive land uses (houses) and the surrounding rural area. | The Visual Analysis of Landscape impact concludes that the BESS, whilst visible as part of the scenery of the place would not be visible from all but VP 4 & 5. That view is described as part of the overall assembly of switchyard and dam and transmission lines for VP 5 and as a glimpse from VP 4.<br><br>In the circumstances therefore the visual impact of the battery is very limited overall and likely to be viewed as an additional industrial element of a recently changed rural scene, and a small part of that scene at that. The panels themselves are a minor element, visible but aligned to the terrain from most vantages. | Low |
| Soil management | Potential for erosion and degradation of soil qualities. | Construction of the BESS will result in some soil disturbance through movement of machinery across the land and during construction work. There may be some potential for soil erosion as the soil becomes disturbed, however the soil types on the property have low potential for wind and water erosion and instability which will help manage this issue.<br><br>Soil disturbance and erosion can be managed during the construction phase using water to suppress the creation of dust (and wind erosion). Following construction, the likelihood of soil disturbance will be low. | Low |
| Vegetation and habitat | Removal and degradation of native vegetation and habitat for native fauna.<br><br>Potential impact to threatened species including Threatened and Priority Flora, Threatened and Priority Fauna and Threatened Ecological Communities. | The site is already cleared of native vegetation.<br><br>Therefore, it is concluded that the proposed development will not have a significant impact to native flora and fauna. | Low |

| Feature | Potential Impact | Response or mitigation | Residual Risk |
|---|---|---|---|
| Water resources and drainage | Modification and degradation of surface and groundwater features and modification to drainage flow (either increase or decrease in flow) which can have impacts downstream. | There are no concerns about flooding on the property (flood risk and waterlogging risk is low) and natural flow of water will continue in the existing arrangements, utilising the existing drainage lines across the site.<br><br>Runoff from the site will be retained and prevented from leaving the site. This is particularly important in regard to the adjoining farm dam, and it will be a priority to protect this water source. A detailed technical drainage plan will be prepared to complement a construction management plan. | Low |
| Separation distances | Small separation distances can affect nearby sensitive land uses (such as residential dwellings). | The closest sensitive receptor is located over 2km to the site.<br><br>As can be seen below, the potential impacts associated with noise, dust, visual amenity, odour and reflection will be minimal and, as such, impacts to nearby sensitive land uses will be low. | Low |
| Dust | The potential for the creation of dust from the operation which may reach adjoining properties and sensitive land uses. | There is the potential for some dust during the construction phase of the project, however given the surrounding agricultural/industrial land uses this is likely to have minimal impact. The closest sensitive receptor is located over 2km to the site.<br><br>Once the site if fully constructed there will be no dust generated.<br><br>Dust mitigation will be addressed in the Construction Management Plan. | Low |
| Noise | The potential for the creation of noise from the operation which may reach adjoining properties and sensitive land uses. | Some noise will be emitted during construction, largely from machinery and vehicles.<br><br>The battery system will generate some noise once operational – largely from the BESS containers and cooling systems. The final technical details of the battery system are to be refined, and these will come with relevant noise data sheets. Once received, a detailed Noise Assessment can be undertaken. It should be noted however that the nearest sensitive receptor is over 2km away from the site, and the adjoining electrical generation infrastructure can also emit noise. On an initial assessment is it not considered noise will be a significant issue. | Medium |
| Odour | The potential for the creation of odours which may reach adjoining properties. | There will be no odour emitted from the site during either the construction or operational phase.<br><br>Onsite temporary toilet facilities will be maintained as per the standard required. They will only be located on site for a short time (during the construction phase) and will be removed afterwards. | Low |

| Feature | Potential Impact | Response or mitigation | Residual Risk |
|---|---|---|---|
| Fire | Impacts from bushfire or equipment fires | Although the subject site is not designated as bushfire prone under SPP3.7 (as shown in the mapping) the proposal has been assessed under Clause 6.6 of SPP3.7 as the proposal is seen as high risk and triggers the need for assessment and reporting in relation to a Bushfire Management Plan (BMP) and an additional Risk Assessment. This has been completed and is attached at Appendix C.<br><br>Post the construction phase the proposed development will be largely autonomous with people only located on the site during periods of scheduled/unscheduled maintenance and therefore the proposed development will not be habitable and not occupied for substantial extended periods of time. | Low |
| Traffic and access | Impact on local roads from construction traffic | The construction period is between 12-18 months, and a maximum of only 5-6 heavy vehicle movements per day will be accessing the site at peak construction periods.<br><br>Once the technical details of the proposal are finalised, a construction manager and contractor appointed, a detailed Traffic Impact Assessment will be prepared for the Shire to review and approve. | Low |
| Heritage | Impact on Aboriginal or European Heritage sites. | There are no known or registered heritage sites on or nearby to the site. Furthermore, the site has been heavily disturbed by cropping activities over a long period of time, reducing the likelihood of any Aboriginal archaeological being present. Nevertheless, should any archaeological sites be uncovered during the construction phase, work will need to stop and appropriate action undertaken in accordance with relevant legislation. | Low |
| Waste Management | Waste from the site not being appropriate controlled or disposed of. | The construction contractor will identify and store any recyclable materials in appropriate on-site bins for removal from the site as required. Other waste management measures will be outlined in the Construction Management Plan. There will be minimal waste generation once the site is operational. This will be managed by the site operator as required. | Low |

# 8.0 Conclusion

This application and supporting planning report presents the merits and suitability of the Nomad Energy BESS facility for the location on a portion of Lot 5 Robartson Road, Merredin and located adjacent to the existing Merredin Terminal station.

This report and its appendices comprehensively demonstrate that the proposed development is consistent with the applicable planning framework and the proposed facility can be approved and is consistent with the objectives of the General Faming zone within the Shire.

The proposal warrants approval for the following reasons:

- The subject site is cleared and relatively flat with no remnant vegetation contained on the subject site.
- The proposed development will also not have any adverse impacts on surrounding land or vegetation once the facility is operational.
- The proposed development will only occur on a small portion of agricultural land leaving the majority of the lot to continue to be used for rural purposes.
- As outlined under the visual assessment and due to the location of the neighbouring existing Merredin Terminal, Merredin Energy peaking plant and Merredin Solar Farm, the proposed development will not have a detrimental affect on the visual landscape within the immediate surrounds.