

SHIRE OF
MERREDIN
INNOVATING THE WHEATBELT

Our Ref: A9722

Rebekah Hampson
Land Insights
Level 12, 197 St Georges Terrace
Perth WA 6000

Dear Madam

RE: Lot 5 Robartson Road Merredin Development Application - Variation to Battery Energy Storage System DAP Approval 24/02631

Thank you for your recent application for development approval for a variation to the Battery Energy Storage System DAP Approval 24/02631 granted on 18 April 2024.

In response, I wish to advise you that your application for development approval was considered by the Shire of Merredin Council at its ordinary meeting held on 17 December 2024, where it resolved as follows;

“That Council

- 1. GRANTS development approval in accordance with the *Planning and Development (Local Planning Schemes) Regulations 2015*, for proposed variation to the Development Assessment Panel (DAP) approval granted on the 18th of April 2024 (DAP Ref: 24/02631), for the Battery Energy Storage System in Robartson Road, Merredin, as outlined in Attachment 12.2A, subject to the following conditions;**
 - a) 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.**
 - b) 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.**

- c) The removal of all construction infrastructure once the facility has been completed to the satisfaction of the local government.
- d) The preparation and lodgement of a Drainage Management Plan (DMP) to contain all drainage on site to the satisfaction of the local government.
- e) 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.
- f) Compliance with the Bushfire Management Plan (BMP) dated 14 December 2023 recommendations (including the Bushfire Risk Assessment & Management Report).
- g) Any new crossover to Robartson Road shall be located and constructed to the satisfaction of the local government; and

2. ADVISES the Development Assessment Panel of Councils determination on this matter.

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."

I hope that this now clarifies the Shire's position in relation to this matter. If you have any questions, please do not hesitate to contact me at the Shire office.

Yours faithfully



Peter Zenni
Executive Manager Development Services

18 December 2024

Local Planning Scheme No. 6
Schedule 9
Notice of Determination on Application for Planning Approval

Planning and Development Act 2005.

Shire of Merredin

Determination on Application for Planning Approval

Location: Lot 5 Robartson Road, Merredin WA 6415, Planning approval MDPA 021 (2024)

Lot: 5

Plan/Diagram:

Vol. No:

Folio No:

Application Date: 21/11/2024

Received On: 20/11/2024

Description of proposed development: Construction and Use of Battery Energy Storage System as per plans forming part of approved variation to Development Assessment Panel (DAP) approval, granted on 18th of April 2024 (DAP Ref: 24/02631).

The application for planning approval is:

✓ granted subject to the following conditions:

Conditions:

- a) 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.
- b) The removal of all construction infrastructure once the facility has been completed to the satisfaction of the local government.
- c) The preparation and lodgement of a Drainage Management Plan (DMP) to contain all drainage on site to the satisfaction of the local government.
- d) 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.

Shire of Merredin

Cnr King & Barrack Street, Merredin WA 6415 / PO Box 42, Merredin WA 6415

Office Hours: Monday to Friday 8.30am to 4.30pm

Ph: 08 9041 1611 Fax: 08 9041 2379 Email: admin@merredin.wa.gov.au Web: www.merredin.wa.gov.au

- e) Compliance with the Bushfire Management Plan (BMP) dated 14 December 2023 recommendations (including the Bushfire Risk Assessment & Management Report).
- f) Any new crossover to Robartson Road shall be located and constructed to the satisfaction of the local government; and

Advice Notes

Note 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.

Note 2. 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.

Note 3. 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.

Signed:

Dated: 18/12/2024



Piotr Zenni – Executive Manager Development Services

For and on behalf of the **Shire of Merredin**

Shire of Merredin

Cnr King & Barrack Street, Merredin WA 6415 / PO Box 42, Merredin WA 6415

Office Hours: Monday to Friday 8.30am to 4.30pm

Ph: 08 9041 1611 Fax: 08 9041 2379 Email: admin@merredin.wa.gov.au Web: www.merredin.wa.gov.au

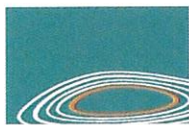
Form 2 – Minor Amendments to Approved Battery Energy Storage System

PREPARED FOR

Nomad Energy

November 2024

SHIRE OF MERREDIN	
This plan forms part of Planning Consent _____	
INDPA 021 (2024)	
for	Chief Executive Officer _____
	Date 17/12/2024



landinsights
PLANNING DESIGN ENVIRONMENT

Prepared by:

Land Insights

PO Box 289

Mt Lawley WA 6929



(08) 9271 8506

admin@landinsights.com.au

Document Name: Met Mast Development Application Rev 1

Document History:

Date	Document Revision	Document Manager	Summary of Document Revision	Client Delivered
Oct-24	Rev0	RH	Draft for Client Review	Oct-24
Nov-24	Rev1	RH	Updates after client review	Nov-24
Nov-24	Rev1a	RH	Updates for Lodgement	Nov-24

Important Note:

"The information contained in this report has been prepared with care by the author(s), or it has been supplied to the author(s) by apparently reliable sources. In either case, the author(s) have no reason to doubt its completeness or accuracy. However, neither the author(s) company nor its employees guarantee the information, nor does it or is it intended to form part of any contract. Accordingly, all interested parties should make their own inquiries to verify the information, as well as any additional or supporting information supplied, and it is the responsibility of interested parties to satisfy themselves in all respects.

This report is for the use only of the party to whom it is addressed. Land Insights disclaims responsibility to any third party acting upon or using the whole or part of its contents."

SHIRE OF MERREDIN	
This plan forms part of Planning Consent	
MDPA 021 (2024)	
Chief Executive Officer	
Date	17/12/2024

Table of Contents

1	INTRODUCTION	1
1.1	BACKGROUND	1
2	THE PROPOSAL	2
2.1	OVERVIEW	2
2.2	COMPONENTS	2
3	CONCLUSION	5





SHIRE OF MERREDIN	
This plan forms part of Planning Consent _____	
MSPA021 (2024)	
Chief Executive Officer _____	
Date	23/12/2024

1 Introduction

1.1 Background

Approval was granted for the Merredin Battery Energy Storage System (BESS) by the Regional Development Assessment Panel (RDAP) on the 18th of April 2024 (DAP Ref: 24/02631) subject to conditions. Further design refinement of the project has been undertaken since the approval and has resulted in minor changes to the layout of the project to achieve optimal design and operation of the facility, as well as compliance with third party assessment (eg. Bushfire Management Plan). It should also be noted that these minor changes to layout and design are improvements in the design and are contained almost wholly within the existing approved footprint of the development.

The site is the subject of a recent subdivision application that has been approved with conditions by the Western Australian Planning Commission (WAPC). As part of the subdivision application process a detailed site survey was undertaken, which has now confirmed the actual site area required for the project. This has resulted in a minor (approximately 6%) increase to the site area. WAPC has been made aware of the minor increase in site size and has confirmed (see Attachment 3) that this minor amendment can be addressed at the deposited plan (1C) stage. The increase in site area facilitates the development of suitable access and crossover requirements for the project. It should also be noted that all electrical and ancillary infrastructure still fits within the original approved footprint granted by the RDAP.

Until all conditions of subdivision approval are met and cleared by the WAPC, a Certificate of Title for the separate Lot will not be issued – most likely not until early next year. This explains why the current landowner of the site has signed this Form 2 of this application. Lodging the application now will advance consideration towards a timely approval, facilitating the appointment of contractors necessary for construction early in 2025.

In submitting this Form 2 application pursuant to r.17(2) as a minor amendment to the current approved development we request that the Shire of Merredin make the determination of the application in line with Schedule 2 clause 77 of the Planning and Development (Local Planning Schemes) Regulations 2015 to agree replacement of the Approved Plans and Elevations with the updated design layout and elevations.

Consistent with the previous DAP application the site remains as an agricultural property and does not contain any areas of remnant vegetation. It should also be noted that the local planning framework has not changed since the original application was approved earlier this year.

This report contains the following Attachments for your consideration

- **Attachment 1 – Signed Form 2**
- **Attachment 2 – Updated Layout Plans and Elevations**

OLD DRAWING	REPLACEMENT DRAWING
MBB – GA - 00 A Overall site general arrangement	J25-0323-EL-GNA-003_C1 Overall site general arrangement

MBB – GA – 01 A132/33kv Substation	J25-0323-EL-GNA-001-D1 132kV Substation
MBB – GA – 02 A BESS general arrangement	J25-0323-EL-GNA-002_C1 BESS general arrangement
MBB – EL – 231011 A Exterior fence & gates elevation	BPER00811-002-DWG-0781_A Fence section & Details BPER00811-0002-DWG-0782_A Gate sections & Details
MBB – EL – 231012 A Switchroom/Control building elevation	J25-0323-EL-ELV-002_A1 Switchroom elevation J25-0323-EL-ELV-003_A1 WP Relay Room Elevation
MBB-EL-231019 A Typical access track cross section	
	BPER00811_0002_DWG-0100_B Site Plan
	BPER00811-0002-DWG-0110_B Development Approval Plan
	J25-0323-EL-ELV-001_A1 132kV Switchyard Elevation
	J25-0323-EL-LAY-008_A1 Construction Compound Layout

- Attachment 3 – WAPC email confirmation

2 The proposal

2.1 Overview

The BESS facility and associated substation and ancillary infrastructure will retain an export capacity of approximately 100MW / 400MWh and is still located adjacent to the existing Merredin Terminal Substation. The proposed changes described in this Form 2 application for the site are minor in nature and do not defer from the intention of the issued approval. No proposed changes to the components that will be on site are proposed and fall within the area that is approved as part of the previously mentioned subdivision application. Some of the changes that have occurred are required by either the manufacturers of the components, or other entities such as Western Power and inform the refinement of the design. The proposed changes are outlined in the following sections. Revised plans are attached (see Appendix 2).

2.2 Components

As outlined in the previous report lodged with the RDAP the components included within the development include the following:

- 110 – 120 Battery containers


SHINE OF MERREDIN

This plan forms part of Planning Consent _____

WSPA 021 (2024)

Chief Executive Officer _____

Date 7/12/2024

SHIRE OF MERREDIN	
This plan forms part of Planning Consent	
MDPA021(2024)	
Chief Executive Officer	
Date	17/12/2024

- 6 Ring Main Units (RMU's) and 28 MV Transformers
- A HV/MW Switchyard
- A Western Power relay room
- Substation (with bunding to approved standards)
- Parking for workers for both the construction and post construction phase
- Operation and 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

2.3 Changes to approved plans

The following describes changes which resulted from design refinement:

Battery Units

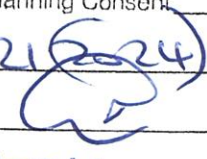
The current RDAP approval shows the battery units aligned in an east-west pattern on the site, design refinement now aligns the battery packs in a north-south pattern over the site. This change will have no significant impact on the site nor its surrounds. The project remains located behind the dam off Robartson Road and adjacent to the existing infrastructure located at the adjacent existing Western Power substation (south of the proposed development). The footprint, size and approximate location of the battery packs, as well as the number within the surveyed site boundary is the same as for the current approved development.

Ring Main Units & MV Transformers

The design refinement has reduced the number of required Ring Main Units to 6 over the site and these will sit between the battery packs as they did in the original approval. There are also 28MV transformers across the site and as per the previous approval these will sit in between the battery packs. This alignment will not have a detrimental effect on the site, nor its surrounds as their location is the same as the current approved development sited in between the battery units on site with the visual impact of the components the same as the previous approval.

HV/MV Switchyard

The refined design in relation to the HV/MV switchyard has seen a small reduction in size and has moved eastwards closer to the BESS units. The switchyard along with other electrical and ancillary equipment sits within the approved footprint of the previously approved development and consists of the same components just in a slightly altered configuration. This slight change in location has occurred as the control room has moved from in between the battery packs and the switchyard to the north of the switchyard. The change in location will have no detrimental effect on the site nor it's surrounds in terms of the management of the facility nor the visual impact of the facility.

SHIRE OF MERREDIN	
This plan forms part of Planning Consent	
WSDA0216024	
Chief Executive Officer	
Date	17/12/2024

Control Room Building

The control room building is moved from the eastern side of the switchyard to the north of the switchyard. The building is consistent with the current approved footprint and as changed it will not have any detrimental effect on the site, nor its surrounds nor the visual impact of the development.

Western Power relay room

Under the previous approval a requirement for a Western Power/Comms Building which is the relay room was shown as *Additional Control Building (if required)* along the southern boundary of the site. The design refinement process and further negotiations with Western Power have indicated the need for this building on site to operate the facility to safe standards. The development of the building has no detrimental effect on the site nor its surrounds. As part of the required infrastructure on the site it blends with the other infrastructure within the approved footprint.

Substation

The substation is moved slightly to the east closer to the BESS facility, a move facilitated by placing the control building/switch room to the north of the switchyard. The substation will be bundled to the appropriate standards within the approved boundary and adjacent to the existing Western Power substation. This redesign has no detrimental impact on the overall visual impact of the development with the components being the same and just moved slightly to the east. The substation will be fenced separately from the BESS facility with an access gate to the north (approximately 6 metres wide), this is a requirement of Western Power to facilitate joint access to the site.

Warehouse and Storage Building

During further design iterations and discussion with the BESS OEM (Tesla) the requirement for a larger warehouse, spare parts and storage building was identified to meet supplier recommendations. This building has moved from the southwestern side of the battery packs to the eastern side of the battery packs. This move will not have a detrimental impact on the overall design of the facility nor the visual impact of the facility as the proposed development will be contained within the existing footprint of the already approved development.

Internal Roads

The updated plans that form part of this application show the internal and access roads required for the BESS facility and other ancillary infrastructure within the site. As mentioned previously a detailed site survey was undertaken as part of the subdivision application, and this increased the footprint of the site slightly to allow for the required space for the internal roads and crossover to the site. The main access to the site is now shown on the plans and is shown to be 6.9 metres in width. A gated entrance to the BESS facility will have 2-way access and will be fenced and gated with the access being approximately 9.1m. Internal roads within the BESS facility are proposed to be 5m and a proposed laydown area to the east of the subject site.

SHIRE OF MERREDIN	
This plan forms part of Planning Consent _____	
WDPA 021 (2024)	
Chief Executive Officer _____	
Date _____	17/12/2024

The substation and control room will be fenced separately with the proposed access road to this area being constructed to a width of 6m with secure gates being located to the north of the substation within the approved development footprint.

Firefighting Infrastructure

A requirement for a tank for bushfire management and risk was detailed in the Bushfire Management Plan (BMP) that formed part of the approval granted by the RDAP on the 18th of April 2024. As part of the design iterations a suitable location was identified for the placement of these tanks and is now shown on the plan in the northwest corner of the development to the west of the operations and maintenance building which is in line with the recommendation from the BMP.

The tank requirement for firefighting purposes on the site, their location in this position is necessary (as per BMP) suitable and has no detrimental effect on the site nor its surrounds. It is located within the current approved footprint of the development.

Operations and Maintenance Building (O&M)

The previous approval showed 2 smaller O&M buildings on the site, as part of the design refinement these buildings have been combined to create 1 O&M building. The combined O&M building has been moved to the north of the control room building and will be fenced along with the BESS facility, separate to the switchyard and control room and remains within the original footprint along with all the other ancillary equipment. The combined O&M building means that there is not a duplication of facilities that are contained within the 1 building and include a workspace with desks, a meeting room, a kitchenette, bathrooms and a SCADA/COMMS and Storage Room. The justification for the components within the O&M building is that the following is required by Tesla and the operator of the BESS facility during the construction phase and for monitoring and maintenance of the facility post construction:

- Tesla requirements as per their on-site maintenance infrastructure requirements (Level 5) minimum of 7 x office desks.
- BoP contractor requirements 2 x office desks
- Owner representative 1 x office desk

Parking & Laydown Area

A laydown area has been identified for the construction phase to the east of the site. This will be used for the construction compound, site office, ablution blocks, water tank, storage units and additional parking and the laydown of equipment during the construction phase. Six (6) constructed and marked parking bays have also been identified to the west of the site, used by workers for operational and maintenance purposes onsite as well as Western Power.

3 Conclusion

This application is seeking to update the current Approved Plans to reflect the process of design refinement for the BESS facility. As noted previously the site has had a detailed survey undertaken as part of an approved subdivision which has led to a small increase of approximately 6% in size of the previously

approved plan, however it should also be noted that the previously approved plan indicated that the boundary was approximate. This increase in the size of the site has meant that the proposal meets requirements in relation to internal roads and the construction of a suitable crossover to the site. The revised plans and supporting Planning Report explain the minor changes which resulted from detailed design refinement. The revision and refinement of the components on the site and all electrical and ancillary equipment is still contained within the original footprint on Lot 5 Robartson Road in the Shire of Merredin as approved by the RDAP on the 18th of April 2024.

There will be no detrimental effect on the site nor its surrounds from this refinement of design, with the components being the same as the previous approval with the re-organisation of layout to ensure that operations on the site are optimal and meet the requirements of those supplying the components and Western Power.

The proposal therefore warrants approval for the following reasons:

- The proposed development as approved is still consistent with both the local and state planning framework as demonstrated in the report that accompanied the RDAP approval on the 18th of April 2024.
- The proposed development still contains the components of the previously approved development, just moved slightly within the approved development footprint and as determined in the previous application it will not have a detrimental visual impact over the site or its surrounds.
- The proposed BESS facility and implementation is still informed and supported by the technical documents that formed part of the approval granted by the RDAP on the 18th of April 2024 and is still subject to the conditions that formed part of that decision

The proposed revision to the layout of development is therefore recommended for consideration by the Shire of Merredin because it meets both state and local planning frameworks objectives and requirements. The changes to the development will allow for a better design layout for optimal operation of the facility.

These minor changes should be supported for approval and this Form 2 application recommended for Approval with the same conditions that formed part of the approval from the RDAP on the 18th of April 2024.

SHIRE OF MERREDIN	
This plan forms part of Planning Consent _____	
_____ <i>W. D. P. G. (2024)</i>	
Chief Executive Officer	
Date	<i>17/12/2024</i>

Attachment 2 – Updated Layout Plans & Elevations



SHIRE OF MERREDIN

This plan forms part of Planning Consent

Chief Executive Officer

Date

14/08/2024
27/12/2024

DRAWING DISCLAIMER
NOT FOR CONSTRUCTION. USED FOR DEVELOPMENT APPROVAL ONLY

BEYOND ELECTRICAL ENGINEERING

MERREDIN BIG BATTERY

SITE PLAN

DATE: 27/12/2024
DRAWN BY: A1
CHECKED BY: B1
PROJECT: BPER00811-0002-DWG-0100

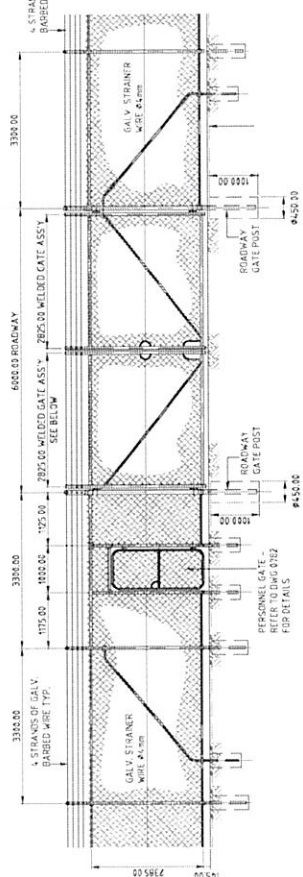
NOT FOR CONSTRUCTION - FOR REVIEW

REVISION	DESCRIPTION	DATE	BY	CHECKED	DATE	BY
1	ISSUED FOR REVIEW	27/12/2024	AG	CE		
2	ISSUED FOR REVIEW	27/12/2024	AG	CE		
3	ISSUED FOR REVIEW	27/12/2024	AG	CE		
4	ISSUED FOR REVIEW	27/12/2024	AG	CE		
5	ISSUED FOR REVIEW	27/12/2024	AG	CE		
6	ISSUED FOR REVIEW	27/12/2024	AG	CE		
7	ISSUED FOR REVIEW	27/12/2024	AG	CE		
8	ISSUED FOR REVIEW	27/12/2024	AG	CE		
9	ISSUED FOR REVIEW	27/12/2024	AG	CE		
10	ISSUED FOR REVIEW	27/12/2024	AG	CE		

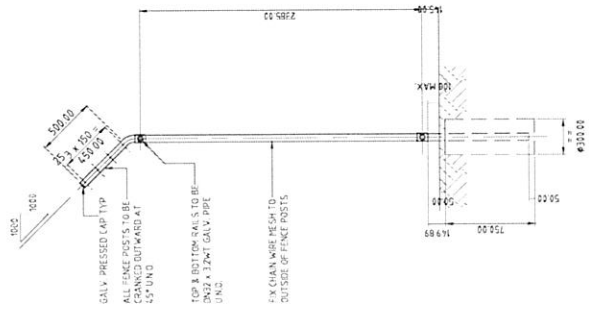


NOTE:
REFER TO DWG-0002 FOR GENERAL NOTES AND LEGEND.

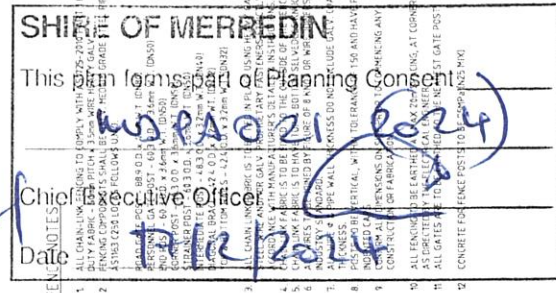
NO.	DATE	DESCRIPTION	BY	CHECKED	DATE	BY
1	27/12/2024	ISSUED FOR REVIEW	AG	CE		
2	27/12/2024	ISSUED FOR REVIEW	AG	CE		
3	27/12/2024	ISSUED FOR REVIEW	AG	CE		
4	27/12/2024	ISSUED FOR REVIEW	AG	CE		
5	27/12/2024	ISSUED FOR REVIEW	AG	CE		
6	27/12/2024	ISSUED FOR REVIEW	AG	CE		
7	27/12/2024	ISSUED FOR REVIEW	AG	CE		
8	27/12/2024	ISSUED FOR REVIEW	AG	CE		
9	27/12/2024	ISSUED FOR REVIEW	AG	CE		
10	27/12/2024	ISSUED FOR REVIEW	AG	CE		



FENCE - GATE ARRGT - ELEVATION
VIEWED FROM OUTSIDE
SCALE: 1/50

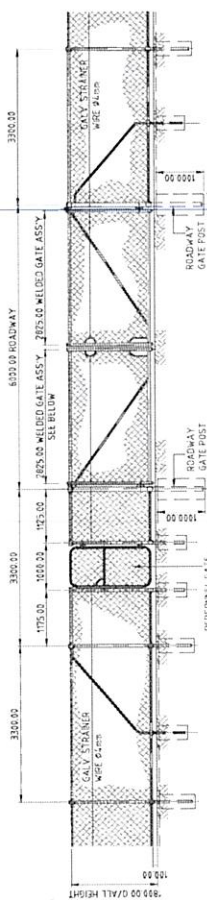


TYP INTERMEDIATE FENCE POST
SCALE 1:20



SHIRT OF MERREDIN

- Chief Executive Officer**
- Date **April 2014**



HARMONIC FILTER ENCLOSURE
FENCE - ELEVATION
SCALE 1:50

SCALE 1/2 (AT)
SCALE INFO REDUCTION

2002 FOR GENERAL NOTES AND LEGEND

NOTE:

BEYOND ELECTRICAL ENGINEERING

NOT FOR CONSTRUCTION - FOR REVIEW

1

TABLE 2.		
----------	--	--

AL AND SHALL ONLY BE USED BY LICENSEE'S CLONING FOR WHOLE

[illegible]

MERRIDIN BIG BATTERY
FENCE SECTIONS AND DETAIL

030301	74	030530	228.2288
--------	----	--------	----------

Beyond

--	--	--	--

FENCE SECTIONS AND DETAILS

KW	CROWN	CHAINED
OW 1000		PY 1000

ENCENV

Electrical Engineering

2017/11/26			

SIGNAL SIZE	DWG NO.	
A1	BPER0811-0002-DWG-0781	A

2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425</
------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	--------

ENGINEI

▶ **การดำเนินงาน**

PM APPD	DOC NUMBER	DOCUMENT
		REFERENCE DOCUMENTS

REVISION DESCRIPTION	DATE	BY
DESIGN		

$\frac{\partial}{\partial t}$	$\frac{\partial}{\partial x}$	$\frac{\partial}{\partial y}$	$\frac{\partial}{\partial z}$
-------------------------------	-------------------------------	-------------------------------	-------------------------------

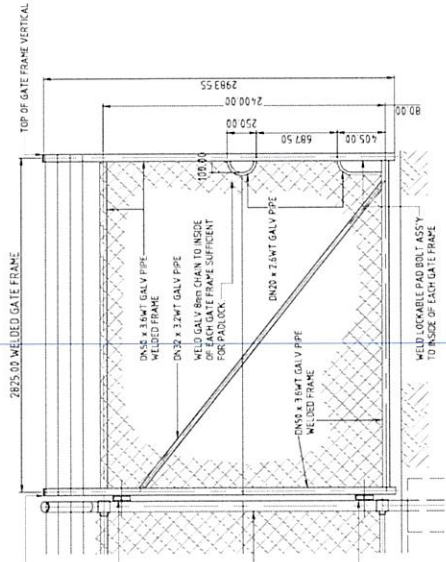
SHIRE OF MERREDIN

This plan forms part of Planning Consent

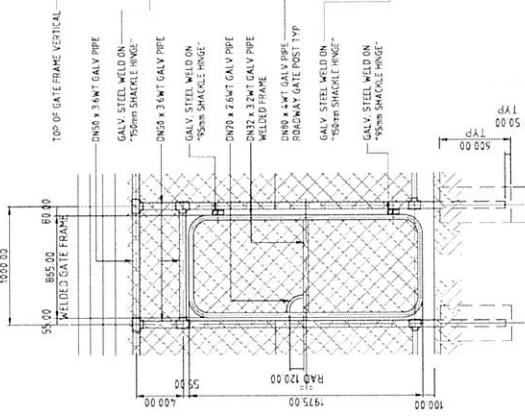
MDPS 021 (2024)

Chief Executive Officer

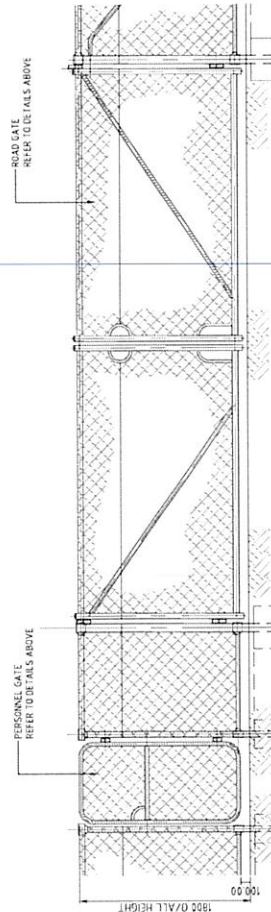
Date 17/12/2024



ROADWAY GATE - ELEVATION
SCALE 1:20



PERSONNEL GATE - ELEVATION
SCALE 1:20



HARMONIC FILTER ENCLOSURE
GATE ARRGT - ELEVATION
SCALE 1:25

NOTE:
1. REFER TO DWG 0002 FOR GENERAL NOTES AND LEGEND
2. REFER TO DWG 0781 FOR FENCE NOTES

NOT FOR CONSTRUCTION - FOR REVIEW				BEYOND ELECTRICAL ENGINEERING			
NO.	REVISION	DATE	BY	NO.	REVISION	DATE	BY
1	ISSUED			1	ISSUED		
2	REVISED			2	REVISED		
3	REVISED			3	REVISED		
4	REVISED			4	REVISED		
5	REVISED			5	REVISED		
6	REVISED			6	REVISED		
7	REVISED			7	REVISED		
8	REVISED			8	REVISED		
9	REVISED			9	REVISED		
10	REVISED			10	REVISED		
11	REVISED			11	REVISED		
12	REVISED			12	REVISED		
13	REVISED			13	REVISED		
14	REVISED			14	REVISED		
15	REVISED			15	REVISED		
16	REVISED			16	REVISED		
17	REVISED			17	REVISED		
18	REVISED			18	REVISED		
19	REVISED			19	REVISED		
20	REVISED			20	REVISED		
21	REVISED			21	REVISED		
22	REVISED			22	REVISED		
23	REVISED			23	REVISED		
24	REVISED			24	REVISED		
25	REVISED			25	REVISED		
26	REVISED			26	REVISED		
27	REVISED			27	REVISED		
28	REVISED			28	REVISED		
29	REVISED			29	REVISED		
30	REVISED			30	REVISED		
31	REVISED			31	REVISED		
32	REVISED			32	REVISED		
33	REVISED			33	REVISED		
34	REVISED			34	REVISED		
35	REVISED			35	REVISED		
36	REVISED			36	REVISED		
37	REVISED			37	REVISED		
38	REVISED			38	REVISED		
39	REVISED			39	REVISED		
40	REVISED			40	REVISED		
41	REVISED			41	REVISED		
42	REVISED			42	REVISED		
43	REVISED			43	REVISED		
44	REVISED			44	REVISED		
45	REVISED			45	REVISED		
46	REVISED			46	REVISED		
47	REVISED			47	REVISED		
48	REVISED			48	REVISED		
49	REVISED			49	REVISED		
50	REVISED			50	REVISED		
51	REVISED			51	REVISED		
52	REVISED			52	REVISED		
53	REVISED			53	REVISED		
54	REVISED			54	REVISED		
55	REVISED			55	REVISED		
56	REVISED			56	REVISED		
57	REVISED			57	REVISED		
58	REVISED			58	REVISED		
59	REVISED			59	REVISED		
60	REVISED			60	REVISED		
61	REVISED			61	REVISED		
62	REVISED			62	REVISED		
63	REVISED			63	REVISED		
64	REVISED			64	REVISED		
65	REVISED			65	REVISED		
66	REVISED			66	REVISED		
67	REVISED			67	REVISED		
68	REVISED			68	REVISED		
69	REVISED			69	REVISED		
70	REVISED			70	REVISED		
71	REVISED			71	REVISED		
72	REVISED			72	REVISED		
73	REVISED			73	REVISED		
74	REVISED			74	REVISED		
75	REVISED			75	REVISED		
76	REVISED			76	REVISED		
77	REVISED			77	REVISED		
78	REVISED			78	REVISED		
79	REVISED			79	REVISED		
80	REVISED			80	REVISED		
81	REVISED			81	REVISED		
82	REVISED			82	REVISED		
83	REVISED			83	REVISED		
84	REVISED			84	REVISED		
85	REVISED			85	REVISED		
86	REVISED			86	REVISED		
87	REVISED			87	REVISED		
88	REVISED			88	REVISED		
89	REVISED			89	REVISED		
90	REVISED			90	REVISED		
91	REVISED			91	REVISED		
92	REVISED			92	REVISED		
93	REVISED			93	REVISED		
94	REVISED			94	REVISED		
95	REVISED			95	REVISED		
96	REVISED			96	REVISED		
97	REVISED			97	REVISED		
98	REVISED			98	REVISED		
99	REVISED			99	REVISED		
100	REVISED			100	REVISED		

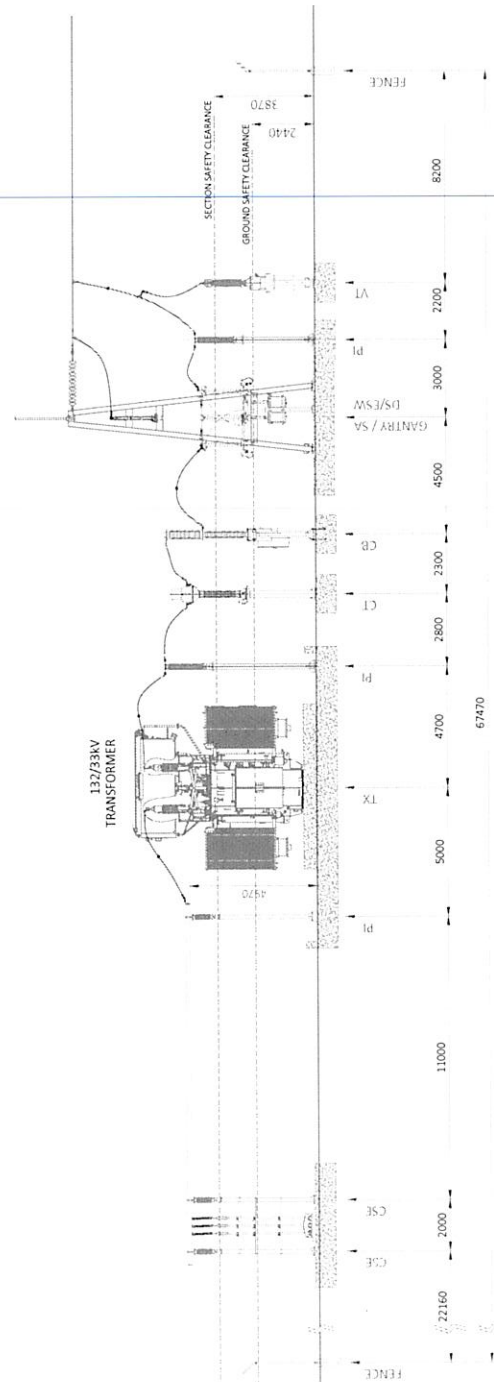
NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. REFER TO DRAWING J25-0323-EL-GNA-002 THE BESS FACILITY GENERAL ARRANGEMENT.
3. REFER TO DRAWING J25-0323-EL-GNA-003 THE OVERALL SITE GENERAL ARRANGEMENT.
4. THE PRELIMINARY SUBSTATION DESIGN CONSIDERS A 2700mm GALVANISED WIRE FENCE, WITH A 500mm CANTED-OUT BARBED WIRE ANTI-CLIMB TOP.
5. SPACERS TO BE INSTALLED AT 2m INTERVALS.
6. FOR BUSBAR AND FLEXIBLE CONDUCTOR SIZES, REFER TO THE BUSBAR CALCULATION REPORT, J25-0323-EL-REP-008.
7. FOR TRANSFORMER BUND DETAILS, REFER TO DRAWINGS J25-0323-EL-DET-001 TO -003.

LEGEND

- CB CIRCUIT BREAKER
- CT CURRENT TRANSFORMER
- VT VOLTAGE TRANSFORMER
- DG DIESEL GENERATOR
- DS DISCONNECTOR
- ESW EARTH SWITCH
- LM COMBINED LIGHTNING / LIGHT MAST
- SA SURGE ARRESTOR
- TX TRANSFORMER
- PI POST INSULATOR
- CSE CABLE SEALING END

MINIMUM ELECTRICAL CLEARANCES	
AUSTRALIAN STANDARD: AS2067:2016	
MINIMUM VOLTAGE	33kV
PHASE - EARTH CLEARANCE	1300
PHASE - PHASE CLEARANCE	1495
GROUND SAFETY CLEARANCE	2440
SECTION SAFETY CLEARANCE	3870
HORIZONTAL WORK SAFETY CLEARANCE	3330
VERTICAL WORK SAFETY CLEARANCE	2770
	1760



Chief Executive Officer
Date 27/12/2024

WSP 021 2024
Merredin part of Planning Consent

PRELIMINARY



Beyond Electrical Engineering
www.beyond.com.au



This drawing is the property of Beyond Electrical Engineering and is not to be reproduced, copied, or used in any way without the written consent of Beyond Electrical Engineering. It is to be used for the purpose of the project described in the title block and is not to be used for any other purpose. It is to be kept secure and not to be loaned, sold, or otherwise disposed of without the written consent of Beyond Electrical Engineering.



Merredin Big Battery
132/33kV Substation & BESS
132kV Substation
ELEVATION

NOT FOR CONSTRUCTION

Drawing Status: PRELIMINARY
Drawing N°: J25-0323-EL-EV-001
Scale: A1 1:100
Rev: A1

Revision Details
Rev: 1
Date: 15/11/2024
VOC: DES
DATE: 15/11/2024

Reference Title
Drawing No.
REG ENG
REG NO.

SWITCHYARD SETOUT POINTS			
MARKER	EASTING	NORTHING	DESCRIPTION
F1	606344.539	650094.594	FENCE
F2	606360.855	650092.817	FENCE
F3	606355.500	650094.832	FENCE
F4	606364.379	650098.214	FENCE
F5	606361.325	650096.201	FENCE
F6	606383.379	650094.592	FENCE
F7	606407.339	650097.539	FENCE
F8	606359.885	650095.132	FENCE
G1	606383.203	650096.262	GANTRY
G2	606391.799	650097.542	GANTRY

KEY MAP

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. REFER TO DRAWING J25-0323-EL-GNA-002 THE BESS FACILITY GENERAL ARRANGEMENT
3. REFER TO DRAWING J25-0323-EL-GNA-003 THE OVERALL SITE GENERAL ARRANGEMENT.
4. THE PRELIMINARY SUBSTATION DESIGN CONSIDERS A 2700mm GALVANISED WIRE FENCE, WITH A 500mm CANTED-OUT BARBED WIRE ANTI-CLIMB TOP.
5. SPACERS TO BE INSTALLED AT 2m INTERVALS
6. FOR BUSBAR AND FLEXIBLE CONDUCTOR SIZES, REFER TO THE BUSBAR CALCULATION REPORT, J25-0323-EL-REP-008.
7. FOR TRANSFORMER BUND DETAILS, REFER TO DRAWINGS J25-0323-EL-DET-001 TO -003.

LEGEND

CB	CIRCUIT BREAKER
CT	CURRENT TRANSFORMER
VT	VOLTAGE TRANSFORMER
DG	DIESEL GENERATOR
DS	DISCONNECTOR
ESW	EARTH SWITCH
LM	COMBINED LIGHTNING / LIGHT MAST
SA	SURGE ARRESTOR
TX	TRANSFORMER
PI	POST INSULATOR
CSE	CABLE SEALING END

SHIRE OF MERREDIN

This plan forms part of Planning Consent

Chief Executive Officer

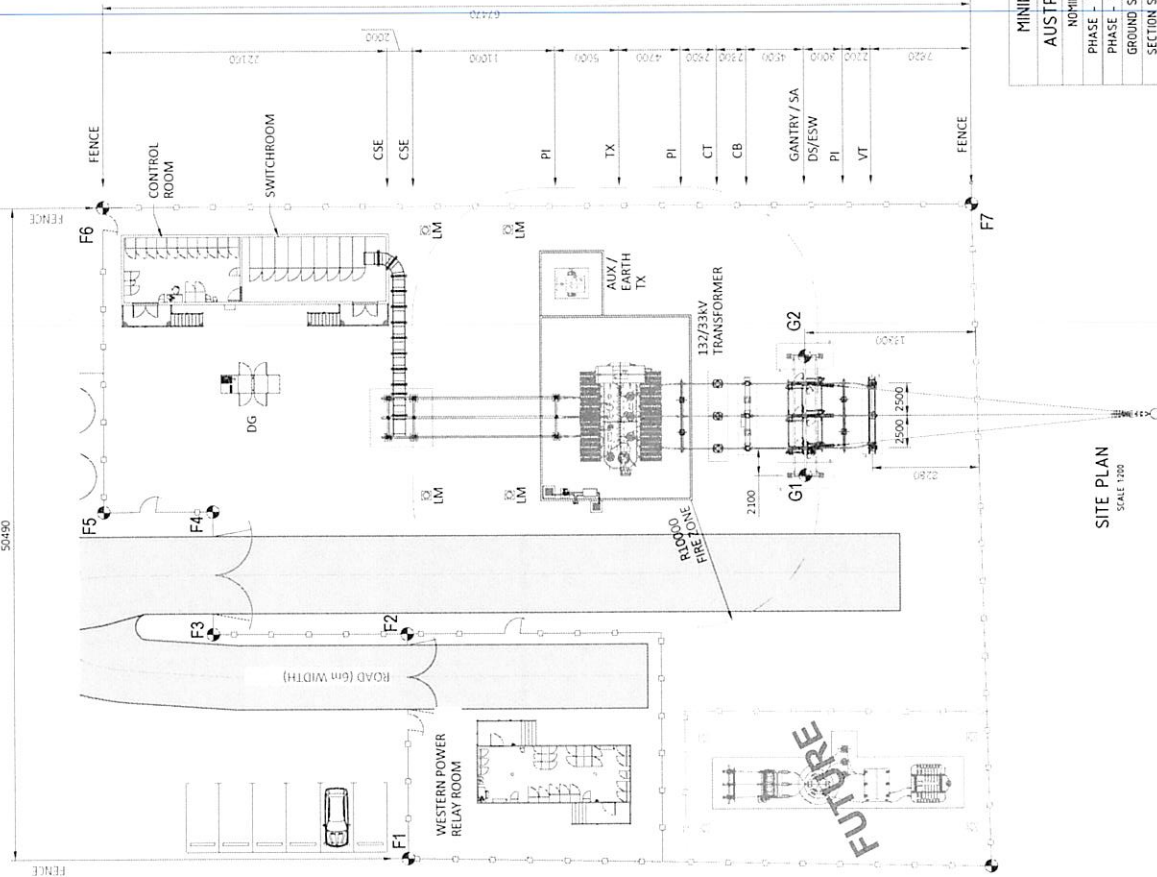
Date

MOPASO21(2024)
17/02/2024

MINIMUM ELECTRICAL CLEARANCES

AUSTRALIAN STANDARD: AS2067:2016	
NOMINAL VOLTAGE	33kV
PHASE - EARTH CLEARANCE	1300
PHASE - PHASE CLEARANCE	1695
GROUND SAFETY CLEARANCE	2440
SECTION SAFETY CLEARANCE	3870
HORIZONTAL WORK SAFETY CLEARANCE	3330
VERTICAL WORK SAFETY CLEARANCE	2770
	1760

SITE PLAN
SCALE 1:200



PRELIMINARY

SCALE BAR 1:200

MERREDIN BIG BATTERY
132/33kV SUBSTATION AND BESS
GENERAL ARRANGEMENT

Beyond
Electrical
Engineering
www.beyondeng.com.au



NOT FOR CONSTRUCTION

Rev	Revised Details	DATE	ENG	CHK	REG	ENG	DWG	NO.	Reference Title
1	ISSUED FOR REVIEW	13/12/2024	VS	VS					
2	ISSUED FOR REVIEW	13/12/2024	VS	VS					
3	ISSUED FOR REVIEW	13/12/2024	VS	VS					
4	ISSUED FOR REVIEW	13/12/2024	VS	VS					
5	ISSUED FOR REVIEW	13/12/2024	VS	VS					
6	ISSUED FOR REVIEW	13/12/2024	VS	VS					
7	ISSUED FOR REVIEW	13/12/2024	VS	VS					
8	ISSUED FOR REVIEW	13/12/2024	VS	VS					
9	ISSUED FOR REVIEW	13/12/2024	VS	VS					
10	ISSUED FOR REVIEW	13/12/2024	VS	VS					
11	ISSUED FOR REVIEW	13/12/2024	VS	VS					
12	ISSUED FOR REVIEW	13/12/2024	VS	VS					
13	ISSUED FOR REVIEW	13/12/2024	VS	VS					
14	ISSUED FOR REVIEW	13/12/2024	VS	VS					
15	ISSUED FOR REVIEW	13/12/2024	VS	VS					

NOTES:

1. REFER TO DRAWING J25-0323-EL-GNA-001 FOR THE GENERAL ARRANGEMENT OF THE ADJACENT 132/33KV SUBSTATION
2. REFER TO DRAWING J25-0323-EL-GNA-003 FOR THE OVERALL SITE GENERAL ARRANGEMENT
3. ALL SHOWN EQUIPMENT AND ROAD LOCATIONS ARE PRELIMINARY, AND ARE SUBJECT TO CHANGE.
4. OTHER SUPPORTING EQUIPMENT TO THE BESS FACILITY TO BE ADDED TO SITE GENERAL ARRANGEMENT, PENDING FURTHER DESIGN
5. THE LINE INDICATED SHOWS THE CLOSEST ANY BATTERY ENERGY STORAGE SYSTEM (BESS) CONTAINERS OR PROPOSED FUTURE AUGMENTATIONS CAN BE TO THE OVERALL SITE BOUNDARY AS PRESCRIBED BY THE BUS-FIRE MANAGEMENT PLAN (BMP 150422)

LEGEND:



BESS FACILITY SUMMARY TABLE

QUANTITY / SPECIFICATION	DESCRIPTION	VALUE
MEGAPACK XL RATING	925kW / 3.91MWh	
INVERTER POWER PER MEGAPACK MAX	1.32MVA	
TOTAL NO. OF MEGAPACKS	110	
TRANSFORMER RATING	4.0MVA	
TOTAL NO. OF TRANSFORMERS	28	
TOTAL BATTERY CAPACITY	107.2MWh / 4.108MWh	
TOTAL INVERTER POWER	12.52MVA	
TOTAL TRANSFORMER POWER	108.8MVA	

SHIRE OF MERREDIN

This plan forms part of Planning Consent

Chief Executive Officer

Date 12/12/2024

NOTE 5

BESS FACILITY PERIMETER FENCE

TOP OF BATTERY



MERREDIN BIG BATTERY
132/33KV SUBSTATION AND BESS
GENERAL ARRANGEMENT

PRELIMINARY
Drawing Status
Drawing No
J25-0323-EL-GNA-002
Scale
A1 NTS
Rev No
C1

NOT FOR CONSTRUCTION

Rev	Revision Details	DATE	DES	ENG	REG	DWG	DWG NO	Reference Title
1	ISSUED FOR REVIEW	15/11/2024	WOC	JS	VN			
2	ISSUED FOR REVIEW	08/10/2024	WOC	JS	VN			
3	ISSUED FOR REVIEW	24/09/2024	JS	JS	VN			
4	ISSUED FOR REVIEW	10/08/2024	JS	JS	VN			



MAIN ACCESS ROAD
6.9m WIDTH
TO SITE ENTRANCE

EXISTING 132kV
OVERHEAD LINE
(18m EASEMENT)

O&M BUILDING
REFER DRAWING
J25-0323-EL-LAY-003

WAREHOUSE &
STORAGE BUILDING
REFER DRAWING
J25-0323-EL-LAY-004

NOTE 4

NOTE 5

NOTE 7

CONTROL ROOM
REFER DRAWING
J25-0323-EL-LAY-001

SWITCHROOM
REFER DRAWING
J25-0323-EL-LAY-001

WESTERN POWER RELAY
ROOM REFER DRAWING
J25-0323-EL-LAY-002

132/33kV SUBSTATION
REFER DRAWING
J25-0323-EL-GNA-001

BESS FACILITY
REFER DRAWING
J25-0323-EL-GNA-002

OVERALL SITE GENERAL ARRANGEMENT
SCALE: 1:500

NOTES:

1. REFER TO DRAWING J25-0323-EL-GNA-001 FOR THE 132/33kV SUBSTATION GENERAL ARRANGEMENT.
2. REFER TO DRAWING J25-0323-EL-GNA-002 FOR THE BESS GENERAL ARRANGEMENT.
3. ALL SHOWN EQUIPMENT AND ROAD LOCATIONS ARE PRELIMINARY, AND ARE SUBJECT TO CHANGE.
4. THE LINE INDICATED SHOWS THE CLOSEST ANY SUBSTATION EQUIPMENT OR CLASS 1-10 BUILDINGS CAN BE TO THE OVERALL SITE BOUNDARY, AS PRESCRIBED BY THE BUSHFIRE MANAGEMENT PLAN (BMP 169042).
5. THE LINE INDICATED SHOWS THE CLOSEST ANY BATTERY ENERGY STORAGE SYSTEM (BESS) CONTAINERS OR PROPOSED FUTURE AUGMENTATIONS CAN BE TO THE OVERALL SITE BOUNDARY, AS PRESCRIBED BY THE BUSHFIRE MANAGEMENT PLAN (BMP 169042).
6. THE 10m PORTION OF THE APZ IMMEDIATELY AROUND THE BESS INFRASTRUCTURE MUST BE ENTIRELY AND PERMANENTLY NON-VEGETATED (SUCH AS SEALED, COMPACTED LIMESTONE, GRAVEL OR MINERAL EARTH).
7. RETAINMENT DAMS IF REQUIRED PER DMP.
8. CONSTRUCTION COMPOUND CONTAINING TEMPORARY ABLUTION BLOCK, SITE OFFICES, MESS ROOM DURING CONSTRUCTION.

LEGEND:

- SITE BOUNDARY
- BAL-29 - 9m SEPARATION DISTANCE FROM BOUNDARY (NOTE 4)
- BAL-125 (10kV/m²) - 21.8m SEPARATION DISTANCE FROM BOUNDARY (NOTE 5 & NOTE 6)
- BESS FACILITY PERIMETER FENCE
- SUBSTATION PERIMETER FENCE
- OVERHEAD LINE EASEMENT
- TEMPORARY LAYDOWN AREA BOUNDARY
- WATER CONTAINMENT POND SAFETY BARRIER (NOTE 7)

TEMPORARY
CONSTRUCTION
COMPOUND &
LAYDOWN AREA
(NOTE 8)

SHIRE OF MERREDIN

This plan forms part of Planning Consent

MDPA 021 (2024)

Chief Executive Officer

Date *17/12/2024*

0 10 20 30 40 50m
SCALE BAR 1:500

PRELIMINARY

Drawing Status
PRELIMINARY
Drawing No
J25-0323-EL-GNA-003
Scale
A1
NTS
Rev N°
C1

**MERREDIN BIG BATTERY
132/33kV SUBSTATION AND BESS
OVERALL SITE
GENERAL ARRANGEMENT**

NOT FOR CONSTRUCTION



**Beyond
Electrical
Engineering**
www.beyondeng.com.au



This drawing and the project information is provided by us at the request of the client. It is for the client's use only and is not to be used for any other purpose. The client is responsible for ensuring that the drawing is used in accordance with the project information. The client is also responsible for ensuring that the drawing is used in accordance with the project information.

Rev	Revised Details	DATE	BY	CHK	ENG	CHK	ENG	CHK	ENG	Reference Title
1		12/11/2024	MOZ	JS	VN					
2		06/12/2024	MOZ	JS	VN					
3		21/08/2024	JS	JS	VN					
4		09/08/2024	JS	JS	VN					

