

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright



**ADVERTISED
PLAN**

**Agricultural Assessment Report
YANGERY BESS**

Prepared: J Shovelton

Final: December 17, 2025

Document control and status

Revision	Status	Date	Author	Recipient
1	Draft	4/12/2025	Jim Shovelton	Tarek Osman
2	Final	17/12/2025	Jim Shovelton	Tarek Osman

Meridian Agriculture Pty Limited
ABN 69 093 095 875 ACN 093 095 875
96 Harbours Rd Yendon VIC 5323

Yangery BESS. Agricultural Assessment

Meridian Agriculture

Agricultural Assessment Report

Yangery BESS

Executive Summary

This Agricultural Assessment Report examines the impact of the installation of a Battery Energy Storage System (BESS) at Yangery, on a range of agricultural considerations.

The BESS will occupy 3.2 ha of a 23.21 ha allotment. The area is productive, having good soils and an extended growing season, but the small footprint will result in an insignificant reduction in agricultural production and an insignificant reduction in turnover of local suppliers. The development of the BESS needs to be seen in the context of the loss of 43 or so hectares from agriculture, within a 1500m radius of the site of this soil type, that have been alienated for residential dwellings.

The proposed BESS would have no long - term detrimental effects on the productive capacity of the soil, nor would it have a significant impact on the overall productivity of the region or State, nor impact on the ability of neighbouring businesses to operate.

The loss of agricultural productivity due to the construction of the BESS will have a negligible impact on the turnover of local service providers.

The ability to diversify income from non-farming activities has the potential to significantly improve the viability of the farming operation as income streams from energy infrastructure are not influenced by adverse seasonal or market conditions.

Background

An agricultural assessment of the site for the Yangery BESS has been requested by South Energy on behalf of Yangery BESS, Pty. Ltd.

The BESS, a 120 MW, 4-hour Battery Energy Storage System, will be located at the corner of Tower Hill Road and Conns Lane Road, Yangery, adjacent to the existing Koroit Zone Substation.

The site is located in the Farming Zone at the western boundary of the Warrnambool City Council.

The Council's strategies for renewable energy facilities (other than wind energy facilities) are outlined in Ordinance 19.01 and Ordinance 53.13 of its Planning Scheme.

Ordinance 19.01's objective is:

"To facilitate the appropriate development of energy supply infrastructure".

Ordinance 53.13's objective is:

- *To facilitate the establishment and expansion of renewable energy facilities in appropriate locations with minimal impact on the amenity of the area.*

Clause 53.13-3 lists the guidelines that the Council will use to assess applications under this

Yangery BESS. Agricultural Assessment

Meridian Agriculture

Ordinance. The guidelines that relate to agriculture are:

- The impact of the proposal on strategically important agricultural land and
- The impact of the proposal on the protection of declared irrigation districts.

State Policy documents

The planning scheme requires that the provisions of the following document should be considered where relevant:

- *Solar Energy Facilities Design and Development Guideline* Department of Environment, Land, Water and Planning, October 2022.

This document requires the following considerations for solar energy facilities:

- To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.
- To encourage diversity in primary industry enterprises and systems appropriate for the area.
- To minimise the fragmentation and alienation of resource lands.
- To minimise conflict between land uses within this zone and land uses within adjoining zones.

While the *Solar Energy Facilities Design and Development Guideline* is intended for solar developments, in the absence of a dedicated guideline for BESS projects, this document has been used as a reference in this analysis.

Further, the report also considers aspects including:

- the impact on the loss of the site if it has high quality soils, particularly soils that are niche to a type of crop or other agricultural activity.
- the potential loss of reliable, accessible water (such as irrigated areas) and its impact at a local or regional scale.
- the impact of fragmentation and a change of land use to non-agriculture activity on local and regional productivity and output.
- the impact of a change of land use on recent and/or current efforts to modernise and reform agricultural activity in the area.
- whether the land has specifically been set aside or defined for agricultural use and development in a planning scheme or other strategic document.
- whether the change in land use is to the detriment of a government's previous or existing investment and support for the site or the area.
- whether the proposed battery energy storage facility can co-locate with other agricultural activity, to help diversify farm income without reducing productivity.

Information was sought from the owner of the land parcel regarding soil types, soil characteristics and historical agricultural productivity. Historical satellite imagery was examined. A site inspection was not undertaken.

Site Location

The BESS site is located at Yangery, 8.5 km northwest of Warrnambool. It is in the Warrnambool LGA and abuts the Moyne LGA on an allotment of 23.21 ha. (Figure 1).

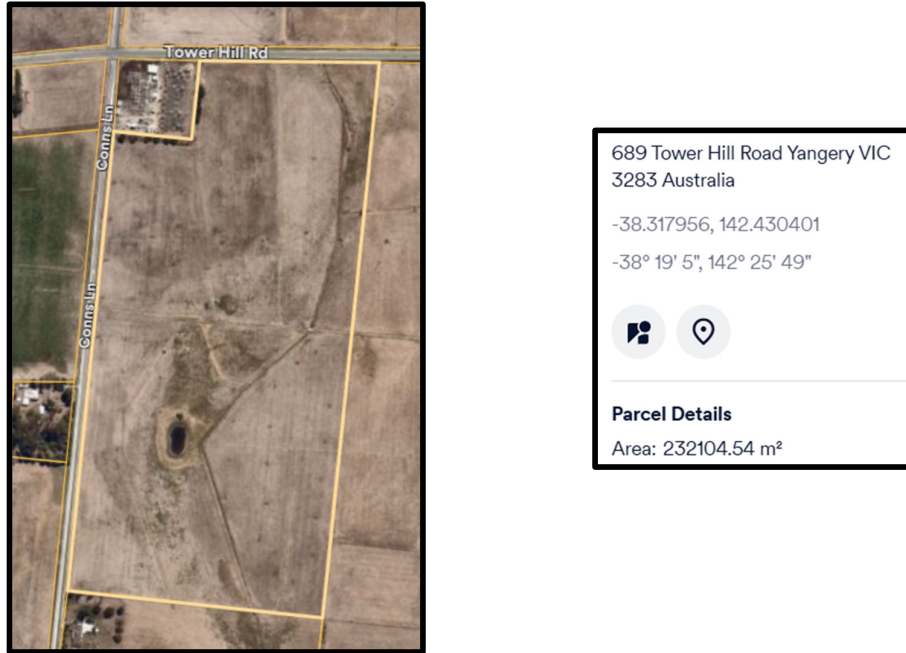


Figure 1 Yangery site allotment

The BESS will occupy 3.2 ha of the allotment, with an additional 2 ha identified for potential future expansion. (Figure 2). The initial phase of the project is shown at the northern and eastern ends of the allotment. The area for future expansion is indicated by the blue rectangles.

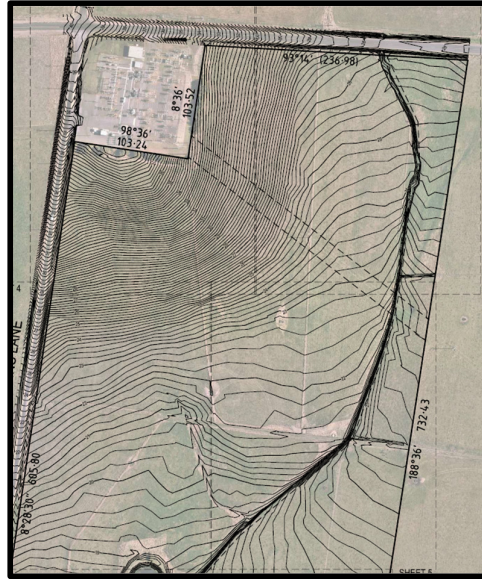


Figure 2 Location of BESS and associated infrastructure

Site Characteristics

Topography

The site gently slopes to the southeast - the contours are shown in Figure 4. There is a drop of about 7m from Tower Hill Road to the southern extent of the BESS.



The soils on the site are derived from Tower Hill volcanics (Qvv). Soils derived from newer volcanics basalt (Qvn) are common to the north of the site.

No detailed soil surveys have been undertaken in the Yangery area but the generalised soil types for the area in the Atlas of Australian Soils² are described as:

“dark friable earths with the soil classification GN 4.42”

GN 4.42 soils are sodic mesotrophic brown chromosols. They are duplex soils (loam over clay) like all chromosols, but with a sodic B horizon. The A horizon is not strongly bleached and/or the B horizon is not strongly acidic. The sodic subsoil restricts infiltration and rooting depth and there is a moderate risk of waterlogging. Structural decline is likely if these soils are cultivated when wet. Figure 5 and 6 are examples of the soil found at the site. (Images provided).

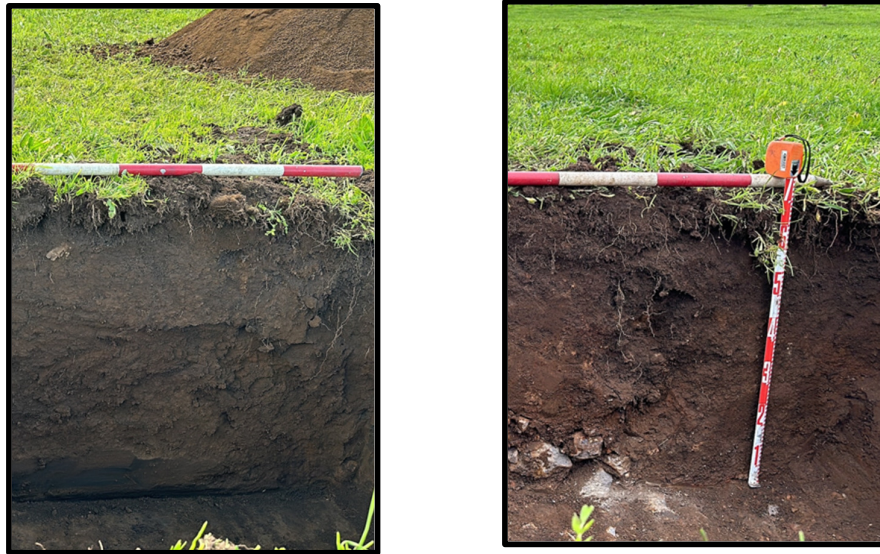


Figure 5 and 6. Soil profiles at BESS site

These soils are good quality soils with the potential for good pasture yields and high stock carrying capacity with adequate management (see later) and are typical of the soils around Tower Hill.

Agricultural Use

The proposed site was originally part of a dairy farm. The current owner has owned the property for 30 years. It is currently used to agist young dairy cattle with silage being cut from the property on a regular basis, when there is excess spring growth. While there is a small dam on the land parcel, stock water is provided from water reticulated to troughs.

Dairy heifers are agisted on the property from an age of six months (150 kg/head) to 22 months (475 kg/head). Estimated carrying capacity of the site is approximate as stock are removed during silage harvesting. However, based on an average DSE³ rating over the 16-month period

² <https://data.csiro.au/collection/csiro:40340?tab=data>

³ Dry Sheep Equivalent is a standard animal (non lactating/non pregnant 50 kg sheep) that is used to compare carrying capacity, profitability, etc., between different stock types. For example, one breeding ewe is equivalent to two DSE over a year and a cow and calf is equivalent to 17 DSE over a year.

of 7 – 8 DSE/head this would equate to an annual stocking rate of around 16 – 18 DSE/ha. This a high stocking rate compared many other areas in the state and is consistent with benchmark stocking rate figures developed by Saul and Kearney⁴ which are based on good agronomy and reliable long growing seasons.

Because dairy agistment is a niche activity, a better assessment of the potential loss of production is to look at the impact on the reduction in numbers of breeding cattle from the construction of the BESS.

Breeding cattle have an annual average DSE rating of around 16 DSE. Therefore, the BESS will result in the reduction of about 3 breeding cows. This an insignificant number compared to the State's herd.

According to the latest national data from Australian Bureau of Statistics, as of 30 June 2024 there were about 2.866 million beef cattle in Victoria⁵.

Agricultural Productivity

It is likely that the remaining area will continue to be used for agistment in the immediate future. Other alternative uses would be cattle grazing. The small size of the allotment does not lend itself to broadacre cropping and there is no infrastructure for sheep production.

It should be noted that there is permanent loss of agricultural land through subdivision and the construction of rural dwellings and infrastructure. To put this loss into context, the area occupied by houses and their curtilage, within a 1500m radius of the BESS site, is approximately 43 ha (30 establishments). This area is significantly greater than the area earmarked for the BESS.

Impact on regional/local economy

It is not relevant to consider the loss in value of production to the economy Shire as or the Region *per se*, because neither the Shire nor the Region directly benefit from this production. The small reduction in production volume has no direct effect on the local economy. Theoretically there will be a loss of retail margin to local suppliers, but the amount would be insignificant to the profitability of these retailers.

Irrigation

The site is not in a defined irrigation district.

Agrovoltaic considerations

There will be the opportunity for grazing to be undertaken on the area not required for the BESS, thus minimizing the loss of agricultural productivity on the site.

Impact on agricultural use of land

The topsoil will be stripped to a depth of 200mm-500mm during the construction of the BESS and stockpiled for future use for site rehabilitation at decommissioning.

⁴ Saul G.R and Kearney, G.A (2003) Potential carrying capacity of grazed pastures in southern Australia, Department of Natural Resources and Environment, Victoria.

⁵ www.abs.gov.au/statistics/industry/agriculture/australian-agriculture-livestock/latest-release?

A Decommissioning Management Plan will be prepared towards the end of the Battery project's life, focusing on site rehabilitation.

At decommissioning of the BESS, the foundations for the BESS will be removed and the topsoil replaced. The exposed subsoil should be assessed for compaction and treated prior to the replacement of the topsoil. Fertility of the topsoil will decline over time, but this decline can be corrected through the addition of suitable amendments, as required. If these activities are undertaken there should be no long-term detrimental impact from the BESS on the future productivity of the site.

Cumulative impacts.

There are unlikely to be any cumulative effects on agriculture from the establishment of a BESS at this scale of infrastructure development. In fact, the construction of the BESS will add value to the stability of energy supply in the Region and be consistent with the Council's Ordinance:

To facilitate the appropriate development of energy supply infrastructure

The Yangery BESS Project is expected to charge and discharge stored energy sufficient to power the equivalent of approximately 42,000 households for a 4-hour discharge cycle.

Conclusions

The proposed Yangery BESS, 8.5 km northwest of Warrnambool will cover an area of 3 ha of a 23 ha allotment.

The site has no strategic importance. It is in the Farming Zone (FZ) of the Warrnambool City Council and is not specifically mentioned in any planning scheme as being of high value agricultural land, nor has the land been subject to government programs that would limit the ability of the facility to proceed.

The site has been used grazing with occasional fodder conservation and its removal from agriculture will have an insignificant impact on the Region's and the State's agricultural production and is unlikely to impact on the activities of surrounding farming properties. There will be an insignificant loss of retail margin to providers from the loss of sales associated with the construction of the BESS.

The soils are of good quality, and the construction of a BESS will have no long-term detrimental impact on soil properties if remedial activities are undertaken at decommissioning.

J Shovelton
Senior Consultant
Meridian Agriculture

17 December 2025