



# Hume Battery Energy Storage System

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State Significant Development Assessment

SSD 10460

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# Executive Summary

Meridian Energy Australia Pty Ltd (Meridian) proposes to develop a new 20 megawatt (MW) / 40 MW-hour (MWh) battery energy storage system (BESS) within the existing Hume Dam Hydro Power Station (Hume HPS) site, which is located approximately 10 kilometres (km) east of Albury in the Riverina Murray region of NSW

The project involves the construction of a large-scale battery to store energy generated by the nearby Hume HPS, and would connect to the electricity grid via an existing switchyard on the site.

The project is located on a 56.8 hectare site owned by WaterNSW which comprises undulating terrain predominantly cleared of native vegetation. The proposed development footprint within the site is 1.4 hectares and approximately 500 metres from the existing Hume HPS. The nearest residences are located approximately 250 metres north of the site beyond Trout Farm Road and 300 m east within Lake Hume Village.

The project has been designed to largely avoid key constraints, including remnant native vegetation, heritage items, and visual impacts on nearby receivers.

The project would support the operations of the Hume HPS by storing electricity from hydropower during low demand periods and feeding back into the network when market demands are high. The project would therefore facilitate the supply of dispatchable electricity, generated from an established renewable energy source that would otherwise be limited by water release regulations. The project would be the first of its kind in Australia to couple hydro power with a battery and would represent a proof-of-concept solution to dispatchable energy generation challenges.

## Statutory Context

The project is classified as State significant development under Section 4.36 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). Consequently, the Minister for Planning and Public Spaces is the consent authority for the development. However, under the Minister's delegation of 9 March 2020, the Executive Director, Energy, Industry and Compliance, may determine the development application.

## Engagement

The Department exhibited the Environmental Impact Statement (EIS) for the project and received 6 public submissions (2 objections and 4 providing comments). Objections principally related to biodiversity, heritage, visual and noise impacts.

Advice was also received from 15 government agencies, including Albury City Council which supports the project. No agencies objected, subject to the recommended conditions of consent.

In response to agency advice and public submissions, Meridian amended the project layout and proposed additional mitigation measures to reduce potential impacts on biodiversity, Aboriginal heritage and visual amenity for nearby residents.

## Assessment

The Department has assessed the merits of the project in accordance with the requirements of the *Environmental Planning and Assessment Act 1979*. Based on its assessment, it considers the key assessment issues to be biodiversity and noise.

The project has been designed to largely avoid impacts on native vegetation and threatened species in the locality. All residual impacts (including disturbance of 0.43 ha native vegetation, and 0.02 ha Squirrel Glider habitat) would be offset in accordance with the NSW Biodiversity Offset Scheme.

Noise impacts during operation of the project are predicted to be within relevant criteria, however during the construction phase some residences are predicted to experience noise levels above the 'noise affected criterion' (but below the 'highly noise affected criterion'). These exceedances would be for short periods only and would occur within standard daytime construction hours. The Applicant has committed to implementing a range of noise mitigation measures, including temporary noise barriers around the site and limiting the use of noisy equipment during construction.

Views from surrounding residences would largely be screened by topography and existing vegetation. Views from public viewpoints and vistas would not be significant due to distance, intervening topography and vegetation and the location of the facility within a broader site already used for electricity generation.

To address the residual impacts of the project, including Aboriginal cultural heritage, historic heritage, water resources and hazards, the Department has recommended a range of stringent conditions, developed in conjunction with agencies, to ensure these impacts are effectively minimised or offset to meet acceptable standards.

## **Summary**

Overall, the Department considers the site to be appropriate for the proposed battery storage facility as it is co-located with Hume HPS, would provide the storage of energy for the Hume HPS and is located adjacent to the existing electricity network.

The project is also consistent with the NSW's *Climate Change Policy Framework* and *NSW Net Zero Plan Stage 1: 2020 – 2030*, as it would contribute 40 MWh of renewable energy to the National Electricity Market. Importantly, the facility would dispatch energy to the grid when the Hume HPS is restricted by water release regulations, which would increase grid stability and energy security.

The project would also provide flow-on benefits to the region and NSW as a whole, including up to 40 construction jobs and a capital investment of \$32 million. Albury City Council is also supportive of the project due to its environmental and economic benefits for the local and broader community.

The Department considers that the project would not result in any significant impacts on the local community or the environment, and any residual impacts can be managed through the implementation of the recommended conditions. On balance, the Department considers that the benefits of the project to the State of NSW significantly outweigh any residual impacts, and is therefore in the public interest and should be approved, subject to strict conditions of consent.

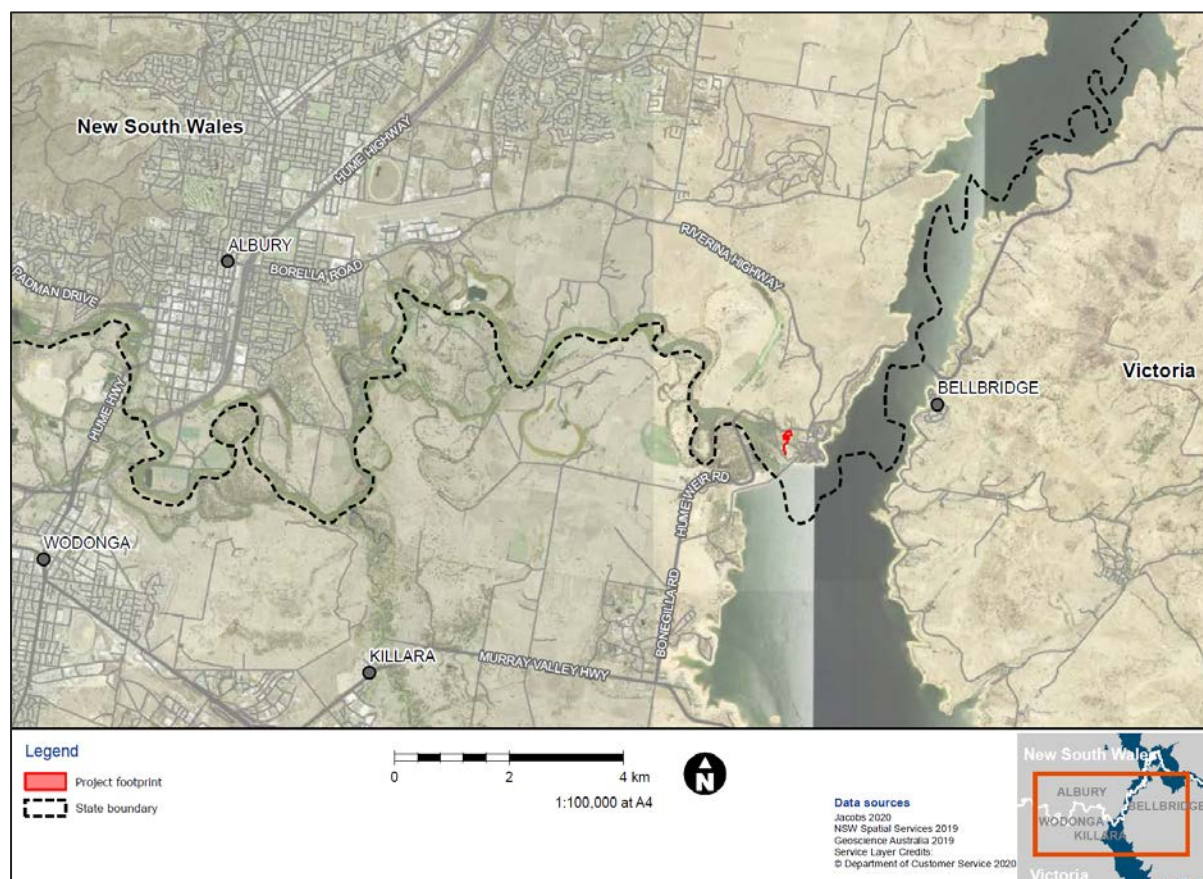
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# 1 The Project

Meridian Energy Australia Pty Ltd (Meridian) proposes to develop a new State significant development (SSD) battery energy storage system (BESS) approximately 10 kilometres (km) east of Albury in the Albury City local government area (LGA) (see **Figure 1**).



**Figure 1 | Regional Context Map**

The project involves the construction of a new BESS with a storage capacity of approximately 40 MWh, which would deliver a capacity of 20 MW for up to two hours.

The BESS would be situated adjacent to the Hume Dam Hydro Power Station (Hume HPS) and would connect via underground cabling to the existing switchyard for the Hume HPS. The Hume HPS connects to both Albury, via TransGrid's existing 132 kV transmission line, and to Wodonga, via Ausnet Services' existing 66 kV transmission line.

The BESS would provide energy storage for surplus energy from the Hume HPS, created during release of environmental and agricultural water flows from the reservoir when demand from the electricity network is low.

The key components of the project are summarised in **Table 1**, shown in **Figure 3**, and described in detail in the Environmental Impact Statement (EIS) (see **Appendix B**), Response to Submissions Report (see **Appendix E**) and additional information provided during the Department's assessment of the project (see **Appendix C**). **Figure 2** shows the site, **Figure 4** shows the location of surrounding receivers and **Figure 5** provides an example of a typical BESS (illustrative only).



View from Hume Dam



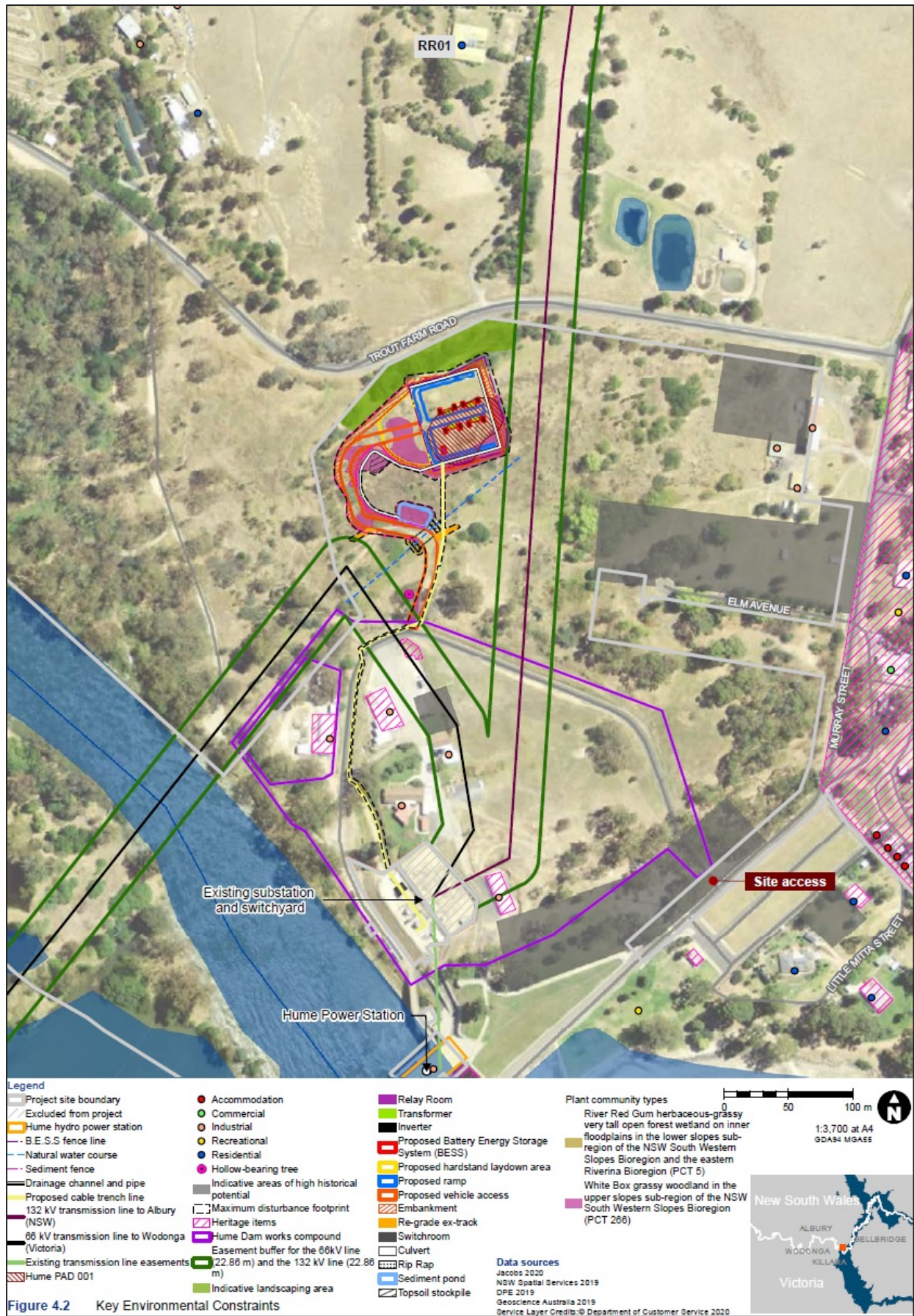
View from Trout Farm Road

**Figure 2 | Project Site**

**Table 1 | Main Components of the Project**

Aspect	Description
<b>Project Summary</b>	<p>The project includes:</p> <ul style="list-style-type: none"> <li>96 lithium-ion battery stacks (up to 2.5 m high), including heating ventilation and air conditioning (HVAC) units, 8 inverter units (up to 2.5 m high) and 6 transformers (up to 3.2 m high);</li> <li>an on-site switchroom and 400 m of 11 kV underground cabling, connecting to the existing substation for the Hume HPS;</li> <li>upgrades to the switchyard of the existing substation; and</li> <li>construction of access tracks from the existing WaterNSW access road, and perimeter security fencing.</li> </ul>
<b>Project area</b>	56.8 ha (with a 1.4 ha development footprint)
<b>Access Route</b>	All vehicles would access the site via the Riverina Highway and Murray Street.
<b>Site entry and road upgrades</b>	<ul style="list-style-type: none"> <li>An existing site entry point on Murray Street would be used to access the site.</li> <li>No road upgrades are proposed.</li> </ul>
<b>Construction</b>	<p>The construction period could last for up to 9 months.</p> <p>Construction hours would be limited to Monday to Friday 7 am to 6 pm, and Saturday 8 am to 1 pm.</p>
<b>Operation</b>	The expected operational life of the infrastructure is approximately 20 years. However, the project may involve infrastructure upgrades that could extend the operational life.
<b>Decommissioning and rehabilitation</b>	The project includes decommissioning at the end of the project life, which would involve removing all infrastructure.
<b>Hours of operation</b>	<ul style="list-style-type: none"> <li>The BESS would operate 24 hours per day, 7 days per week.</li> <li>Maintenance would be undertaken Monday to Friday 7 am to 6 pm, and Saturday 8 am to 1 pm.</li> </ul>
<b>Employment</b>	Up to 40 construction jobs and 2 operational jobs
<b>Capital Investment Value</b>	\$32 million







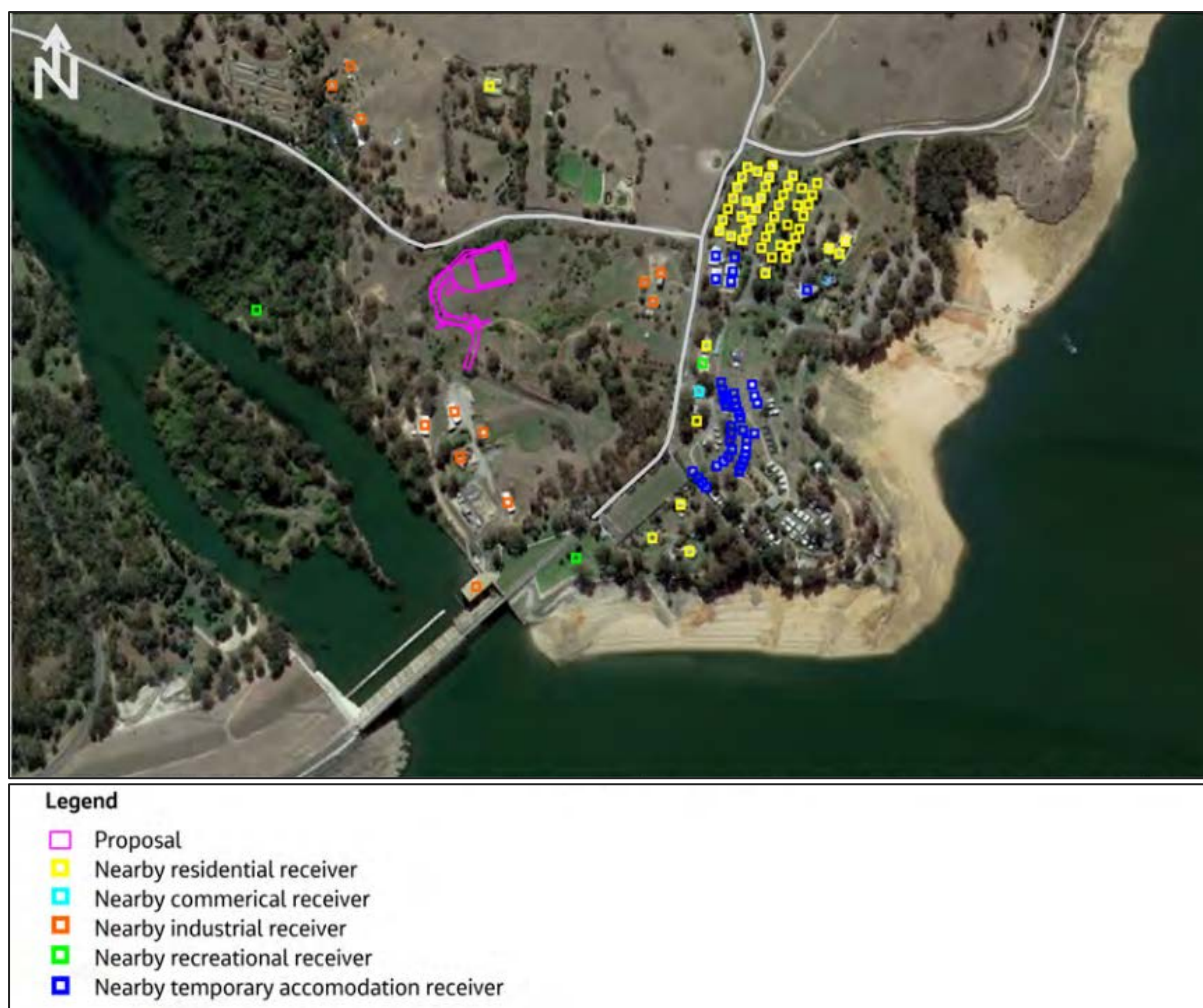


Figure 4 | Location of nearby receivers



Figure 5 | Illustrative image of a BESS (not specific to the Hume BESS project)

## 2 Strategic Context

### 2.1 Site and Surrounds

The project is located on a 56.8 hectare (ha) site in the Riverina Murray region of NSW. The site (as shown in **Figure 3**) is zoned RU2 (Rural Landscape) under the *Albury Local Environmental Plan 2010* (Albury LEP). The site is owned by WaterNSW, with the Hume HPS, associated substation and WaterNSW offices all adjacent to the proposed development.

The site comprises undulating terrain predominantly cleared of native vegetation. The site lies approximately 300 m to the north of the Murray River. Whilst no mapped watercourses exist within the site, a number of minor drainage lines traverse the site in a west to southwest direction.

The proposed development footprint within the site is approximately 1.4 ha and was designed to largely avoid key constraints, including impacts to remnant native vegetation, Squirrel Glider habitat, heritage items, and to reduce visual impacts on nearby receivers.

Adjacent land use zones include RU2 – Rural Landscape, R5 – Rural Village, SP2 – Infrastructure (Sewerage Systems) and W2 – Recreational Waterways. Trout Farm Road is to the north of the site, with adjacent land being zoned RU2, largely used for rural lifestyle blocks, small-scale agriculture and aquaculture, and SP2 – Infrastructure, housing the Lake Hume Village Sewage Treatment Works.

Murray Street runs north-south, approximately 300 m to the east of the development footprint, separating Lake Hume Village centre from the site. There are 50 non-associated residential residences (mostly associated with the village) and three short term accommodation providers within 1 km of the development footprint.

### 2.2 Energy Context

In 2019, NSW derived approximately 18.7 % of its energy from renewable sources. The rest was derived from fossil fuels, including 76.7 % from coal and 4.1 % from gas. With no current plans for the development of new coal power stations in NSW combined with the rapid growth in the development of renewable energy sources, NSW requires additional firm supply, such as batteries and pumped hydro, for dispatchable energy.

This is highlighted in the 2017 *Independent Review into the Future Security of the National Electricity Market* (the Finkel Review), which outlines a strategic approach to ensuring an orderly transition from traditional power generation to lower emissions power generation, noting a corresponding investment in new dispatchable capacity being required to maintain system reliability.

The 2019 *NSW Electricity Strategy* reports that firmed renewables are the lowest cost option to replace aging coal power stations, and that without additional private investment in firming technologies, NSW faces a risk of not meeting its Energy Security Target following the planned closure of the Liddell Power Station in 2023.

AEMO's 2020 *Integrated System Plan* (ISP) forecasts that the National Energy Market (NEM) will need up to 19 gigawatts (GW) of new, dispatchable resources to firm renewables over the next 20 years. The ISP also states that 'shallow storage batteries', such as the proposed Hume BESS, are required initially, in order to provide firming capacity and to support intra-day energy shifting.

The Department's *Riverina Murray Regional Plan 2036* identifies renewable energy as a priority growth sector and promotes the diversification of energy supplies for the region through renewable energy generation. Council also promotes business and industry participation in clean and renewable energy initiatives as a key theme for an enhanced natural environment in the *Albury 2030 Community Strategic Plan*.

The Hume BESS broadly responds to the need for increased dispatchable electricity supplies to support the transition from traditional power generation, derived from fossil fuels, to renewable sources across NSW. Whilst this battery has a relatively small capacity in terms of its contribution to the broader network, it makes an important contribution to the viability of an ageing renewable energy source, Hume HPS.

## 3 Statutory Context

### 3.1 State Significant Development

The project is classified as State significant development under Section 4.36 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). This is because it triggers the criteria in Clause 20 of Schedule 1 of *State Environmental Planning Policy (State and Regional Development) 2011* (SRD SEPP), as it is development for the purpose of electricity generating works with a capital investment value of more than \$30 million.

Consequently, the Minister for Planning and Public Spaces is the consent authority for the development. However, under the Minister's delegation of 9 March 2020, the Executive Director, Energy, Industry and Compliance, may determine the development application as Council did not object, there were less than fifty unique submissions from the general public objecting to the proposal, and a political donations disclosure statement has not been made.

### 3.2 Amended Application

In accordance with Clause 55 of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulations), a development application can be amended at any time before the application is determined. Meridian has sought to amend its application, the details of which are summarised in **section 4.4**.

The Department considers that it can accept the amended application for the following reasons:

- the project's capacity and development footprint would not increase;
- the project amendments have reduced the impacts of the project as a whole;
- the amended application directly responds to the key issues raised in submissions received by the Department during the exhibition of the original application;
- Meridian has assessed the impacts of the amended project (see **Appendix C** and **Appendix E**);
- the Department made the additional information available online and sent it to the relevant agencies for comment; and
- matters raised by the community and relevant agencies regarding the amended application have been considered by the Department, and the Department is satisfied that these concerns could be addressed by the recommended conditions of consent.

### 3.3 Permissibility

The site is located wholly within land zoned RU2 Rural Landscape under the Albury LEP, the provisions of which are discussed in **section 5**. The RU2 zone includes various land uses that are prohibited, and land uses that are permitted with and without consent. Electricity generating works, which includes electricity storage, is not expressly listed as a prohibited land use and is therefore a permissible land use with consent under the LEP zoning table for the RU2 zone.

Moreover, electricity generating works are regulated by *State Environmental Planning Policy (Infrastructure) 2007* (Infrastructure SEPP). Under the Infrastructure SEPP, electricity generating works are permissible on any land in a prescribed rural, industrial or special use zone. Land zoned RU2 Rural Landscape is a prescribed rural zone pursuant to the Infrastructure SEPP. Consequently, the project is permissible with development consent.

### 3.4 Integrated and Other Approvals

Under Section 4.41 of the EP&A Act, a number of other approvals are integrated into the SSD approval process, and therefore are not required to be separately obtained for the project.

Under Section 4.42 of the EP&A Act, a number of further approvals may be required, but must be substantially consistent with any development consent for the project.

The project would require approval under the *Protection of the Environment Operations Act 1997*, as the project would involve work on land scheduled under an existing Environment Protection Licence (EPL).

Notwithstanding, the Department has consulted with relevant government agencies, considered their advice in its assessment of the project, and has recommended conditions of consent to address these matters (see **Appendix G**).

Meridian has not referred the project to the Commonwealth Minister for the Environment under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) as it considers surveys undertaken to date have not identified any significant impacts on matters of national environmental significance listed under the EPBC Act.

### 3.5 Mandatory Matters for Consideration

Section 4.15 of the EP&A Act outlines the matters that a consent authority must take into consideration when determining development applications. These matters are summarised as:

- the provisions of environmental planning instruments (including draft instruments), development control plans, planning agreements, and the EP&A Regulations;
- the environmental, social and economic impacts of the development;
- the suitability of the site;
- any submissions; and
- the public interest, including the objects in the EP&A Act and the encouragement of ecologically sustainable development (ESD).

The Department has considered all of these matters in its assessment of the project, as well as Meridian's consideration of environmental planning instruments in its EIS, as summarised in **section 5** of this report. The Department has also considered relevant provisions of the environmental planning



instruments in **Appendix F**, and concluded that the project is consistent with objectives of those instruments.

## 4 Engagement

### 4.1 Department's engagement

The Department publicly exhibited the EIS from 13 August 2020 until 10 September 2020, advertised the exhibition in the *Albury Border Mail*, and notified adjoining landowners adjacent to the project boundary in accordance with the requirements of the EP&A Act and Regulation.

The Department consulted with Council and the relevant government agencies throughout the assessment. The Department notified and sought comment from TransGrid and Transport for NSW (TfNSW) in accordance with the Infrastructure SEPP, as discussed further in **section 4.5**.

### 4.2 Meridian's Engagement

Meridian undertook its own engagement with the surrounding community as detailed in the EIS, including emails, phone calls and letters to residents and businesses in the area and distribution of a flyer. A project website was established, in addition to a dedicated phone number and email. Meridian also undertook consultation with the Department, relevant government agencies and electricity network providers during the assessment process.

### 4.3 Summary and Submissions Report

During the exhibition of the EIS, the Department received 6 submissions, including 4 from the general public (2 objections and 2 providing comment) and 2 from special interest groups (both providing comment). Advice was also received from 15 government agencies, including Albury City Council.

Full copies of the agency advice, public submissions and special interest group comments are attached in **Appendix D**.

Meridian provided a response to all matters raised in submissions on the project (see **Appendix E**) and has also provided additional information during the Department's assessment (see **Appendix C**).

### 4.4 Amended Application

Following consideration of submissions on the project, Meridian amended its application in October 2020, as detailed in the Response to Submissions (see **Appendix E**).

The amended application includes:

- refinements to the site layout, including reorientation of battery units, inverters and transformers;
- increasing the number of battery units from 80 to 96;
- increased size of sediment pond by 150 m<sup>3</sup>;
- realignment of cabling infrastructure; and
- provision of vegetation buffer to the north of the site.

Project amendments are described in **Table 3**.

Despite the proposed increase in the number of the battery units, the development footprint and the capacity of the project would remain the same. Meridian advised that as a result of additional refinements in technology, the project would instead use more battery units of smaller capacity to provide the same storage.

The Department provided the Response to Submissions Report to relevant government agencies for review and comment. The Response to Submissions Report was also made available on the Department's website. As the project amendments would not increase the impacts of the project as a whole, the Department did not exhibit the amended development application or the Response to Submissions Report.

The Department received feedback from two members of the community that they had concerns about the proposed project amendments and maintained their objection to the project. Concerns largely focused on the increased number of battery units, noise and site selection. These issues are further discussed in **section 5**.

**Table 3 | Amendments to the project during the assessment process**

Aspect	EIS (October 2019)	Final Proposed Project
Storage Capacity (Delivery Capacity)	40 MWh (20 MW)	40 MWh (20 MW)
Battery units	80	96
Battery arrangement	Benched arrangement, with BESS units in an east-west orientation	Level arrangement with BESS units in a north-south orientation
Location of noise generating equipment	Inverters and transformers throughout BESS site	Inverters and transformers located centrally within the BESS site, further from Trout Farm Road
Alignment of transmission cable trench	Potential impact to on-site heritage items	Avoidance of heritage items by running trench parallel to access road
Distance from nearest receiver (no change)	250 m	250 m
Sediment Pond Capacity	100 m <sup>3</sup>	250 m <sup>3</sup>
Security fencing	Use of barbed wire on security fence	No use of barbed wire on security fence
Vegetation buffer	No additional vegetation planting proposed	Vegetation planting on northern boundary, in consultation with WaterNSW

## 4.5 Key issues – Government Agencies

**WaterNSW** initially raised concerns regarding potential impacts to its property, including stormwater, erosion and sediment control, biodiversity and heritage, with particular reference to the Nissen Huts.

Meridian has since amended the transmission easement to ensure that potential impacts on heritage items are minimised, by aligning the transmission cable trench with a stretch of the existing access road.

Meridian also committed to development of a Soil and Water Management Plan and expansion of the sediment basin from 100 m<sup>3</sup> to 250 m<sup>3</sup>.

WaterNSW confirmed that it had no residual issues following review of the Response to Submissions Report, and has recommended a range of conditions which have been incorporated into the conditions of consent.

**Heritage NSW (Aboriginal Cultural Heritage)** supports the proposed program of test excavation of the identified Potential Archaeological Deposit (PAD) and has requested that this work be undertaken prior to approval. Meridian has committed to undertaking post approval test excavation in accordance with the *Code of Practice for Archaeological Investigation in NSW (DECWW 2010)*, with results used to inform decisions for managing the PAD in consultation with Heritage NSW. The Department is satisfied with Meridian's approach and has included a Heritage Management Plan in the recommended conditions, as discussed in **section 5** below.

The Department's **Water Group** (DPIE Water) requested preparation of a Construction Environmental Management Plan and that a sediment control dam be used during the construction phase of the project. Meridian has accepted these requirements and the Department has recommended conditions to address the matters raised by DPIE Water, which are discussed in **section 5**.

The Department's **Biodiversity Conservation Division** (BCD) initially requested further information on Meridian's Biodiversity Development Assessment Report (BDAR) regarding on-site vegetation, threatened species and proposed mitigation measures. However, BCD has indicated it is satisfied with a revised BDAR submitted by Meridian and the Department has incorporated its recommended conditions in the instrument of consent. Biodiversity matters are further discussed in **section 5**.

**Transport for NSW** (TfNSW) requested preparation of a detailed Traffic Management Plan in consultation with Council and TfNSW. Meridian has accepted this recommendation, which the Department has included in the recommended conditions of consent.

The **Environmental Protection Authority** (EPA) confirmed that the switchyard associated with the Hume HPS is subject to an existing Environmental Protection Licence (EPL). EPA advised that, should the project be approved, Meridian would need to request variation of the existing EPL for any ancillary works associated with the switchyard. In its response, Meridian accepted this recommendation and EPA confirmed it had no residual concerns.

**TransGrid** sought additional details regarding underground cabling and raised concerns about the project's encroachment on its easement to the east of the development footprint. Meridian has since amended the site layout so that TransGrid's easement would not be impacted, and TransGrid confirmed that it has no additional concerns.

**Fire & Rescue NSW** (FRNSW) and **Rural Fire Service** (RFS) requested a detailed Emergency Response Plan be developed for the site and that the operators consult with the Local Emergency Management Committee (LEMC), which the Department has incorporated into the recommended conditions of consent.

**Albury City Council** supports the project on the grounds that the project would support affordable, reliable and clean energy and improve energy security in regional NSW while supporting investment in regional infrastructure.

The **Department of Industries – Agriculture, Heritage Council of NSW, Regional NSW – Mining, Murray Darling Basin Authority (MDBA), Mineral Exploration & Geoscience (MEG)** and the Department's **Crown Lands Division** raised no concerns regarding the project.

#### 4.6 Key Issues – Community and Special Interest Groups

Of the six submissions received from the public, two objected and four provided comment on the project. Four submissions were received from the local community of Lake Hume Village, including the two objections, and two comments were received from elsewhere in the Greater Albury region.

Two objections and one submission providing comment were received from neighbours adjacent to the site. The key issues raised in these submissions related to biodiversity, heritage, hazards, visual and noise impacts.

Submissions expressed concerns that the project may pose a hazard to nearby residents. In particular, concerns were raised about potential fire, explosions and gas leaks. Concerns were also raised that no staff would be present on the site during operations, and emergency response would therefore be delayed. This issue and issues regarding hazards and risks are discussed further in **section 5**.

The owner of a Trout Farm, directly north of the site, raised concerns about the potential impacts of the project on its water supply pipelines from the Hume Dam. In its response, Meridian confirmed that the project would not require earthworks in the vicinity of the supply pipelines, and that damage to the pipes would not occur.

Two submissions raised concerns about the potential impacts of the project on Aboriginal heritage. Aboriginal cultural heritage matters are discussed further in **section 5**.

The Department also received two submissions from Special Interest Groups, **Thurgoona Community Action Group** and **Friends of the Lake Hume Gliders**, concerning the local Squirrel Glider population. Both groups highlighted the potential impacts arising from the use of barbed wire fencing, and from the impacts of project noise during construction and operation, requesting involvement in the development of a Squirrel Glider Management Plan. In response, Meridian has committed to the avoidance of barbed wire fencing on the site. Noise and biodiversity impacts are further discussed in **section 5**.

## 5 Assessment

The Department has undertaken a detailed assessment of the merits of the project. The key constraints for the project are shown in **Figure 3**. The Department has considered the full range of potential impacts associated with the project and has included a summary of the conclusions in **Table 4**. A list of the key documents that informed the Department's assessment is provided in **Appendix A**.

**Table 4 | Department's assessment of potential impacts**

Findings	Recommendations
<b>Biodiversity</b>	
<ul style="list-style-type: none"> <li>Most public submissions received raised concerns about the project's potential impact on biodiversity and, in particular, impacts on the local Squirrel Glider population.</li> <li>The site is set within a predominantly cleared rural landscape with small stands of planted and remnant native vegetation.</li> <li>The project layout has been designed to minimise impacts on remnant native vegetation, including roadside vegetation to the north of the development footprint.</li> <li>However, the project would disturb up to 0.42 ha of White Box grassy woodland vegetation (PCT 266 – a threatened ecological community) and 0.01 ha of River Red gum tall open forest wetland (PCT 5). The native vegetation to be removed has been assessed as being of poor quality.</li> <li>The project would be situated adjacent to a known movement corridor for the Squirrel Glider, which is listed as vulnerable under the BC Act. The Department notes that Meridian has limited clearing of potential Squirrel Glider habitat to 0.02 ha and would retain a hollow bearing tree that may be used by gliders on the site.</li> <li>Local community group, Friends of the Lake Hume Gliders has undertaken works on site to improve habitat for Squirrel Gliders, including the planting of trees and placement of nesting boxes both within and outside of the site.</li> <li>BCD and community submissions raised concerns about the use of barbed wire fencing on the local Squirrel Glider population. As discussed in <b>section 4.4</b>, Meridian has since committed to avoiding the use of barbed wire fencing.</li> <li>Community submissions also raised concerns about the impact of noise from the project on Squirrel Gliders. Construction noise impacts would be temporary, with peak noise estimated to last for 3 weeks during site levelling and would be mitigated with temporary noise screening between work areas and identified squirrel glider corridors. The Department considers that noise from the project during operation would not be continuous and would not be uncharacteristic of other development in the immediate area, such as the Hume HPS and switchyard. As such, the Department considers that the impact of noise on Squirrel Gliders at the site is not significant.</li> <li>The Department is satisfied that impacts on the local Squirrel Glider can be appropriately managed, and has recommended conditions requiring Meridian to develop a Biodiversity Management Plan in consultation with BCD prior to construction.</li> <li>The site is not considered to include potential Koala habitat.</li> <li>The disturbance of native vegetation on the site would result in the requirement to offset 2 ecosystem credits and 1 species credit under the <i>Biodiversity Conservation Act 2016</i>. The final credit requirement would be retired in accordance with the <i>NSW Biodiversity Offset Scheme</i> which may include acquiring or retiring biodiversity credits, making payments in an offset fund or funding a biodiversity conservation action.</li> <li>With these measures, both BCD and the Department consider that the project is unlikely to result in a significant impact on the biodiversity values of the locality.</li> </ul>	<ul style="list-style-type: none"> <li>Retire the applicable biodiversity offset credits in accordance with the Biodiversity Offset Scheme.</li> <li>Prepare and implement a Biodiversity Management Plan prior to construction and in consultation with BCD, including measures to minimise impacts on Squirrel Gliders.</li> </ul>
<b>Traffic and Transport</b>	
<ul style="list-style-type: none"> <li>The transport route for heavy vehicles for the project is via the Riverina Highway (a State road managed by TfNSW) and Murray Street (a local road managed by Albury City Council). All traffic would enter the site via a single, existing site access point currently used by WaterNSW.</li> </ul>	<ul style="list-style-type: none"> <li>Restrict the number and size of vehicles during construction to peak volumes identified in this report.</li> </ul>



Findings	Recommendations
<ul style="list-style-type: none"> <li>The main increase in traffic would occur over the 9 month construction phase of the project and would generate up to 48 light vehicle movements and 12 heavy vehicle movements per day.</li> <li>Operational traffic would be negligible as the facility would be unstaffed and managed remotely. Maintenance would occur up to twice a year by 2 staff.</li> <li>No road upgrades are needed for the project and no oversize vehicles would be required during the construction phase. No upgrades are required to the site access.</li> <li>Transport for NSW (TfNSW) has recommended a range of conditions including the preparation of a detailed Construction Traffic Management Plan (CTMP), which have been incorporated into the recommended conditions of consent.</li> <li>The Department has recommended conditions requiring Meridian to undertake pre- and post-construction dilapidation surveys of Murray Street, and to repair any damage to the local road network as a result of construction traffic.</li> <li>Council raised no concerns relating to traffic and transport and with the implementation of a TMP, the Department and TfNSW are satisfied that the project would not result in significant impacts on the road network capacity, efficiency or safety.</li> </ul>	<ul style="list-style-type: none"> <li>Restrict access to the designated transport route.</li> <li>Ensure the length of vehicles does not exceed 19 m.</li> <li>Require a Traffic Management Plan (TMP) to be prepared in consultation with Council and TfNSW.</li> <li>Undertake road dilapidation surveys of Murray Street and repair any damage identified, to the satisfaction of Council.</li> </ul>
Land Use	
<ul style="list-style-type: none"> <li>The project site is owned by WaterNSW and is generally used in conjunction with the management of the adjacent Hume Dam. The site also contains the Hume HPS and associated switchyard and WaterNSW offices.</li> <li>The project area and land to the north, south and west are zoned RU2 Rural Landscape and land to the east is zoned RU5 Village under the Albury LEP. The BESS facility is a permissible land use with consent under the LEP zoning table.</li> <li>The principal land uses surrounding the project include tourist accommodation, low intensity farming, a sewage treatment facility, habitat protection, recreational uses including water sports as well as some individual residences located on the larger surrounding rural properties.</li> <li>The project area is categorised Class 6 in terms of land and soil capability and would therefore only be suitable for limited grazing with no cultivation. To the west of the site is a Category 3 travelling stock reserve, which is infrequently used for travelling stock or emergency management.</li> <li>The recommended conditions of consent include measures to manage amenity impacts such as noise, dust and visual impacts and potential traffic impacts.</li> <li>Noting the above, the Department is satisfied that the project would not conflict with established land uses in the locality subject to implementation of mitigations measures, which will be included as recommended conditions of consent.</li> </ul>	<ul style="list-style-type: none"> <li>Require implementation of mitigation measures relating to noise, visual amenity, water resources, traffic and biodiversity.</li> </ul>
Noise & Vibration	
<ul style="list-style-type: none"> <li>Three public submissions, including two submissions from residence RR01, raised concerns about the potential noise impacts of the project.</li> <li>The closest sensitive receiver (RR01) is located approximately 250 m to the north of the project site and shown in <b>Figure 4</b> above.</li> <li>Noise generated by the proposed construction, upgrading and decommissioning activities associated with the project would be below the 'highly noise affected' criterion of 75 dB(A) in EPA's <i>Interim Construction Noise Guideline</i> (ICNG) at all nearby residences.</li> <li>Without mitigation, up to 18 non-associated residential receivers, and two commercial accommodation providers may experience noise levels above the 'noise affected criterion' of 45 dB(A) in the ICNG, however these exceedances would be limited to standard daytime construction hours and would vary between the following stages of the project:</li> </ul>	<ul style="list-style-type: none"> <li>Minimise noise generated by the construction, upgrading or decommissioning activities on site in accordance with best practice requirements outlined in the ICNG.</li> <li>Restrict construction hours to Monday to Friday, 7am – 6 pm</li> </ul>

Findings	Recommendations
<ul style="list-style-type: none"> <li>Phase 1 would involve civil works, would last for eight weeks and result in maximum noise levels of up to 57 dB(A) for two non-associated receivers (RR01 and IN02) to the north along Trout Farm Road. Another 16 non-associated residential receivers and two commercial accommodation providers to the east would experience noise levels of between 45 dB(A) and 55 dB(A);</li> <li>Phase 2 would involve mechanical and structural works, would last for 20 weeks and result in noise levels between 45 dB(A) and 53 dB(A) for nine non-associated residential receivers and two commercial accommodation providers; and</li> <li>Phase 3 would not result in any exceedances of the noise affected criterion.</li> <li>Meridian has committed to implementing a suite of noise control measures including temporary noise barriers (such as a noise wall) and routine monitoring of construction noise to ensure the efficacy of mitigation measures. Routine monitoring would be undertaken in accordance with practices set out in the ICNG and would occur at the commencement of construction works and at commencement of operations to ensure respective mitigations measures are adequate.</li> <li>Noise from traffic associated with construction of the project was assessed as negligible and would comply with the criteria in the <i>Construction Noise &amp; Vibration Guideline (RMS 2016)</i>.</li> <li>The operation of the project would comfortably comply with the applicable project specific noise levels (i.e. 35 dB(A)) and the sleep disturbance criteria (i.e. 45 dB(A)) in the EPA's <i>Noise Policy for Industry</i> at all residential receivers with the noise at the nearest residential receiver, RR01, predicted to be no greater than 31 dB(A) which is only marginally above background noise levels.</li> <li>Impacts from vibration on nearby buildings (including residences) were found to be unlikely due to the separation distances. Compaction activities within the vicinity of heritage structures would be subject to additional monitoring and the Department considers this approach to be appropriate.</li> <li>To protect the amenity of the local community, the Department has recommended conditions requiring Meridian to minimise and monitor noise during construction, upgrading and decommissioning by implementing the noise mitigation measures outlined in the EIS as well as the best practice noise mitigation work practices set out in the ICNG.</li> </ul>	<p>and Saturday, 8 am – 1 pm.</p>
Visual	
<ul style="list-style-type: none"> <li>The total development footprint of the BESS facility itself would be 1.2 ha, with battery units and inverters up to 2.5 m, and four transformers up to 3.2m, which is a similar size to agricultural sheds commonly used in the area.</li> <li>The EIS contains a visual impact assessment (VIA) based on five representative viewpoints, including a representative viewpoint from the driveway of RR01 (VP04), along Trout Farm Road, and viewpoints from vistas along Lake Hume Dam (VP01 and VP05) – see <b>Figure 2</b>.</li> </ul> <p><u>Landscape</u></p> <ul style="list-style-type: none"> <li>The BESS infrastructure is located within the site of the Hume HPS, substation and associated electrical infrastructure. The nearest residence is located 250 m to the north of the site, and Lake Hume Village centre is located 300 m east.</li> <li>The BESS would not be visible from the village due to topography, intervening vegetation and infrastructure.</li> <li>The BESS would be visible from the Hume Dam walkway and viewing platform.</li> <li>The VIA identified that the project would have a moderate impact on users of the viewing platform and walkway, however the Department notes the presence of the Hume HPS infrastructure foreground of views from Hume Dam, and that views would be fragmenting by intervening mature vegetation. The Department considers that the visual impact of the project from these viewpoints would not be significant.</li> </ul>	<ul style="list-style-type: none"> <li>Ensure that external lighting is minimised and complies with relevant Australian Standards.</li> <li>Prohibit any signage or advertising on the site, unless for safety purposes.</li> <li>Implement a vegetation buffer at the site in consultation with RR01 and WaterNSW.</li> </ul>

## Findings

## Recommendations

- Whilst public submissions raised concerns about the project's visual impact on motorists using Trout Farm Road, neither TfNSW nor Council raised this concern in their submissions. Views of the project for vehicles travelling along Trout Farm Road would be largely screened by existing mature roadside vegetation, with the VIA assessing impacts on road users as negligible.
- Potential glare impacts on residences and publicly accessible areas were found to be low and would be minimised with use of non-reflective surface materials where possible. The Department would also require the BESS to avoid unnecessary external lighting and signage, and to ensure that the visual appearance of infrastructure (including paint colours) blends in as far as possible with the surrounding landscape.

### Residences

- The nearest non-associated residence, RR01, is located 250 m to the north of the site along Trout Farm Road. The owners of RR01 made submissions objecting to the project on visual impact grounds, that the project would impact on a potential future residence and that existing vegetation is deciduous and therefore would not mitigate visual impacts at all times.
- No other residences in the area would have significant views of the project and there would not be views of the project from the Lake Hume Village centre to the east.
- The existing residence at RR01 is setback from the roadside by 190 m, located in an elevated position and surrounded by dense vegetation. The Department considers this residence is unlikely to have views of the project.
- The Department also notes that Meridian has committed to consult with RR01 regarding the implementation of additional vegetation screening along the northern boundary of the BESS to further minimise views of the project from the property.
- In regard to the potential for another dwelling on the RR01 property, the Department notes that no development applications are approved or on foot for a secondary dwelling, and that there are restrictions on subdivisions in the RU2 zone.
- Notwithstanding, the Department considers that any secondary dwelling, if approved by Council, could be designed and oriented in such a way to minimise any potential visual impacts. The additional visual mitigation proposed by Meridian would also further reduce any potential visual impact.
- Given the above, the Department considers that the visual impact of the project on the surrounding residences and road users to be acceptable and generally consistent with the current land uses on the site.

### Commercial Receivers

- There are three short-term accommodation providers located within 1 km of the project, 'Lake Hume Resort', 'Lake Hume Tourist Park' and 'Lakeview Villas'.
- The nearest accommodation provider is located approximately 350 m southwest of the site.
- The project would not result in visual impacts on these commercial receivers, due to intervening vegetation, buildings and topography. Additionally, buildings and facilities associated with the three local accommodation providers typically focus views toward Lake Hume Reservoir, and not toward the project site.
- As such, the Department is satisfied that the project would not result in visual impacts to nearby commercial receivers.

## Water and Erosion

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| <ul style="list-style-type: none"><li>• No mapped watercourses traverse the site but there are minor drainage lines on the site, and the project would be located approximately 300 m from the Murray River.</li><li>• As the project would be situated downstream of the Lake Hume Reservoir, there would be no impact on the operation or water quality of the reservoir and associated dam.</li></ul> | <ul style="list-style-type: none"><li>• Design, construct and maintain the project to reduce impacts on surface water.</li><li>• Minimise soil erosion in accordance with</li></ul> |
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Findings	Recommendations
<ul style="list-style-type: none"> <li>Meridian estimates that approximately 10,000 m<sup>3</sup> of material would be required to be cut and filled in order to level the site. There is no waste excavated material anticipated, and any erosion and sedimentation risks associated with the project can be effectively managed by using best practice controls during construction.</li> <li>DPIE Water requested a sediment control dam be used during construction, and that a construction environmental management plan be prepared by Meridian prior to construction, which Meridian accepted.</li> <li>WaterNSW raised concerns about stormwater management, requesting a Soil and Water Management Plan be prepared by Meridian prior to construction, and that the proposed sediment basin is retained post-construction for use as a bioretention basin, to which Meridian has agreed.</li> <li>Fuels and chemicals would be stored to prevent water pollution.</li> <li>The project is not expected to affect groundwater or groundwater dependent ecosystems, and the Murray Darling Basin Authority is satisfied that the project is unlikely to have a detrimental effect on the Murray River. Whilst WaterNSW initially raised concerns about stormwater from the project having potential to affect a nearby wetland, WaterNSW was satisfied with Meridian's proposal to increase the size of the sediment basin from 100m<sup>3</sup> to 250m<sup>3</sup>, limiting potential downstream impacts.</li> <li>The elevation of the BESS means it would not be affected by flooding. While the on-site access road would cross minor drainage lines, those crossings would be designed to reduce flooding impacts.</li> <li>The project would require approximately 60,000 litres of water during construction (primarily for dust suppression) and the project would not require water during operation. A static water supply (45,000 litres) would be established and maintained for fire protection.</li> <li>Subject to the recommended conditions, the Department and relevant government agencies consider that the project would not result in any significant impacts on water resources.</li> </ul>	<p><i>Managing Stormwater: Soils and Construction Manual</i> (Landcom, 2004) and ensure that the project is constructed and maintained to avoid erosion on site.</p> <ul style="list-style-type: none"> <li>Prepare a Soil and Water Management Plan, to the satisfaction of WaterNSW.</li> </ul>
Hazards	
<ul style="list-style-type: none"> <li>Concerns about project safety were raised in a number of public submissions, particularly in relation to potential issues with lithium ion batteries, and that the project would not be attended during operations.</li> <li>Meridian undertook screening against State Environmental Planning Policy 33 (<i>Hazardous and Offensive Development</i>) (SEPP 33) and confirmed the project was not categorised as 'potentially hazardous' or 'potentially offensive' development under the SEPP.</li> <li>The BESS would incorporate a range of standard safety measures and design features including an automatic fire suppression system, with battery cells designed to self-isolate in the event of a safety issue, preventing the spread of fire between battery cells.</li> <li>Whilst there would be no Meridian staff on site during operations, continuous remote monitoring of the facility would identify any system issues and staff would be available 24-hours a day to respond to any issues or emergencies on the site.</li> <li>In the event that gas release is detected, such as battery gassing associated with a thermal runaway event, gas detection technology would trigger an automatic shutdown of the system.</li> <li>A strobe and alarm would be fitted to the BESS. In the event of any safety incident, in addition to immediately alerting remote monitoring staff, a strobe and alarm would alert WaterNSW staff and nearby residents of any safety issues.</li> <li>The project site is identified as bushfire prone land. The project layout includes trafficable, defensible spaces for fire-fighting purposes and a 45,000 litre water supply tank. Recommended conditions require Meridian to comply with RFS's</li> </ul>	<ul style="list-style-type: none"> <li>Prepare an Emergency Plan to the satisfaction of RFS and Fire and Rescue NSW.</li> <li>Store and handle all liquid chemicals, fuels and oils used on-site in accordance with all relevant Australian Standards and the EPA's <i>Storing and Handling of Liquids: Environmental Protection – Participants Handbook</i>.</li> <li>Ensure that the development complies with the relevant asset protection zone requirements as approved by the RFS.</li> </ul>

## Findings

## Recommendations

*Planning for Bushfire Protection* and prepare an Emergency Plan to manage the fire risk.

- The Department and RFS are satisfied that the bushfire risks can be suitably controlled through the implementation of standard fire management procedures.
- The project would comply with the *International Commission on Non-Ionizing Radiation Protection* (ICNIRP) guidelines for electric, magnetic and electromagnetic fields.
- Subject to the recommended conditions, the Department is satisfied that risks associated with the facility would be negligible and are no different to other battery facilities successfully and safely operating in Australia.

## Heritage

### Aboriginal Cultural Heritage

- Two public submissions raised concerns about the potential impacts of the project on Aboriginal heritage.
- Meridian undertook an Aboriginal Cultural Heritage (ACH) Assessment in consultation with Registered Aboriginal Parties (RAPs), and in accordance with the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales* (OEH 2011).
- No Aboriginal sites have previously been recorded in the project area, however surveys identified one potential archaeological deposit (PAD) on the site.
- Heritage NSW supports Meridian's proposed program of test excavation of the PAD to identify any subsurface archaeological material but has requested that this work be undertaken prior to approval.
- Meridian has committed to undertaking post approval test excavation in accordance with the *Code of Practice for Archaeological Investigation in NSW* (DECWW 2010), with results used to inform decisions for managing the PAD in consultation with Heritage NSW and RAPs.
- The Department is satisfied with Meridian's approach noting that the likelihood of any significant artefacts on the site is low given that:
  - the PAD appears likely to have been previously disturbed based on historic photos showing a worker village established in the immediate vicinity of the PAD;
  - Meridian's predictive modelling indicates isolated stone artefacts as the most common type of site in the vicinity; and
  - no construction would commence on the site until completion of the archaeological test excavation and an agreed approach to managing any artefacts is implemented in accordance with applicable guidelines and in consultation with RAPs.
- The recommended conditions include a Heritage Management Plan, to be developed in consultation with the RAPs and Heritage NSW.
- If Aboriginal artefacts or skeletal material are subsequently identified during construction of the project, all work would cease, and an unexpected finds procedure would be implemented.
- With these measures, the Department considers that the project is unlikely to result in significant impacts on the heritage values of the locality.

### Historic Heritage

- WaterNSW raised concerns regarding potential impacts to heritage items occurring within the project site, but outside the development footprint.
- There are no heritage items listed on Commonwealth, National, State or Local registers located within project area, however several State heritage items were identified within the vicinity of the project including the Hume Dam and its associated buildings such as Nissen huts and other cottages.
- A Conservation Management Plan (CMP) prepared for the Hume Dam in 2013 included a schedule of heritage significance surrounding the project area. The

- Undertake test excavations prior to development commencing in accordance with *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW*.
- Prepare and implement a Heritage Management Plan, in consultation with Registered Aboriginal Parties, Heritage NSW and WaterNSW.



Findings	Recommendations
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proposed location of the BESS is on vacant land and is outside of the heritage precincts covered by the CMP.

- The Heritage Council provided advice that a Heritage Management Plan, including an unexpected finds protocol, be prepared for the project prior to construction.
- Given the above, the Department considers that the project would not have any adverse impacts on any heritage items within the vicinity of the site, subject to the inclusion of appropriate conditions of consent.

### Socio-Economic Impacts

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| <ul style="list-style-type: none"> <li>• The project would generate direct and indirect benefits to the local community, including:             <ul style="list-style-type: none"> <li>– up to 40 jobs during the 9 month construction period;</li> <li>– expenditure on accommodation and businesses in the local economy by workers who would reside in Lake Hume Village or elsewhere in Albury LGA; and</li> <li>– the procurement of goods and services by Meridian and associated contractors.</li> </ul> </li> <li>• Whilst Meridian has demonstrated that Lake Hume Village holds sufficient accommodation to house the construction workforce, it has committed to consulting with accommodation providers to minimise impact on the local tourism industry during peak periods.</li> <li>• The project is unlikely to result in increased demand on community services and infrastructure such as roads, given that Meridian would be required to repair any damage to local roads resulting from the construction of the project and the facility would only require infrequent maintenance visits during operations.</li> <li>• Overall, the Department considers that the project would result in economic benefits for the local community.</li> </ul> | <ul style="list-style-type: none"> <li>• No specific conditions required</li> </ul> |
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### Land Values

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| <ul style="list-style-type: none"> <li>• Some submissions raised concerns about adverse impacts of the project on land values, particularly due to visual impacts.</li> <li>• However, the Department notes that:             <ul style="list-style-type: none"> <li>– property values are influenced by a number of external market factors;</li> <li>– the project is permissible with development under the Albury LEP and Infrastructure SEPP;</li> <li>– a detailed assessment of the merits of the project (this assessment) has found that the project is unlikely to generate significant economic, environmental or social impacts;</li> <li>– the Department considers that the visual impacts of the project on the surrounding residences and road users would not be significant (see above); and</li> <li>– the impacts of the project can be further minimised by imposing suitable conditions on the project, and requiring a range of standard mitigation measures, such as vegetation screening, to be implemented.</li> </ul> </li> <li>• Accordingly, the Department considers the project would not result in any significant or widespread reduction in land values in the areas surrounding the project.</li> </ul> | <ul style="list-style-type: none"> <li>• No specific conditions required</li> </ul> |
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## 6 Recommended Conditions

The Department has prepared recommended conditions of consent for the project (see **Appendix H**).

The Department consulted with Meridian and relevant government agencies on the conditions for the project, including Albury City Council.

These conditions are required to:

- prevent, minimise and/or offset adverse impacts of the project;
- ensure standards and performance measures for acceptable environmental performance;
- ensure regular monitoring and reporting; and
- provide for the ongoing environmental management of the project.

The recommended conditions use a risk-based approach that focuses on performance-based outcomes. This reflects current government policy and the fact that the BESS would require relatively limited ongoing environmental management once the project has commenced operations.

In line with this approach, the Department has recommended conditions to minimise traffic, noise, visual amenity, water, flooding, biodiversity, heritage and bushfire impacts, and required the following management plans be prepared and implemented:

- Traffic Management Plan;
- Biodiversity Management Plan;
- Heritage Management Plan;
- Soil and Water Management Plan;
- Landscaping Plan; and
- Emergency Plan.

The recommended conditions also require Meridian to provide detailed final layout plans to the Department prior to construction.

Other key recommended conditions include:

- *biodiversity offsets* – retiring biodiversity offset credits in accordance with the *NSW Biodiversity Offsets Scheme*;
- *operating hours* – undertaking construction, upgrading or decommissioning activities on-site during standard construction hours, unless these activities are inaudible at non-associated receivers;
- *visual* – minimising the off-site visual and lighting impacts of the project, including the provision of vegetation screening between the site and Trout Farm Road, and ensuring the visual appearance of all ancillary infrastructure (including paint colours) blends in as far as possible with the surrounding landscape;
- *roads* – requiring the maintenance and repair of any damage caused during construction, upgrades or decommissioning activities;
- *water and flooding* – ensuring the BESS and ancillary infrastructure are designed, constructed and maintained to reduce impacts on surface water, flooding and groundwater at the site; and
- *fire* – ensure that the development complies with the relevant asset protection requirements in the RFS's *Planning for Bushfire Protection 2019*.

## 7 Evaluation

The Department has assessed the development application, EIS, submissions, Response to Submissions Report and additional information provided by Meridian and advice from relevant government agencies. The Department has also considered the objectives and relevant considerations under section 4.15 of the EP&A Act.

The project is located in a rural setting and the site is currently used for electricity production. The site is in proximity to the Riverina Highway and has direct access to the electricity network via the adjacent Hume HPS switchyard.

The Department considers the site to be appropriate for a BESS, as it has ready access to nearby renewable energy resources at Hume HPS and there is available capacity on the electricity network. Importantly, the project would improve the viability of the Hume HPS by increasing dispatchable electricity supply to Albury and Wodonga during periods of high demand and would contribute to grid stability.

The project has an investment value of \$32 million and would generate 40 construction jobs, supporting employment for the region, and increased economic activity through spending at businesses that provide goods and services to support construction activities. The project is supported by Council on the grounds that it would contribute to affordable, reliable and clean energy with investment in regional infrastructure.

The project has been designed to largely avoid key constraints, including amenity impacts on local residents, heritage items, remnant native vegetation and Squirrel Glider habitat. Any residual impacts would be relatively minor and can be managed through the recommended conditions of consent.

The Department considers that the visual impact of the project on the surrounding residences and road users to be acceptable and generally consistent with the current land uses on the site, and any views from surrounding residences would be largely screened by topography and existing vegetation.

The Department acknowledges amendments to the project made by Meridian to further reduce impacts by avoiding the use of barbed wire on site, realigning the transmission line trench, increasing the size of the on-site sediment basin and relocating inverters and transformers centrally within the site further away from non-associated residences on Trout Farm Road.

In addition to these project amendments, Meridian has committed to additional mitigation in consultation with residence RR01 and WaterNSW, namely the implementation of vegetation screening along the northern boundary of the site to further minimise any residual amenity impacts on nearby residences.

Following amendments to the project, the Department is satisfied that the BESS is unlikely to have significant amenity impacts on surrounding residences. The Department also notes that Albury City Council is supported of the project.

The Department considers that the project achieves an appropriate balance between maximising the efficiency of an existing renewable energy resource and minimising the potential impacts on surrounding land uses and the environment. On balance, the Department considers that the project is in the public interest and should be approved, subject to the recommended conditions of consent (see **Appendix H**).

## 8 Recommendation

It is recommended that the **Executive Director, Energy, Industry and Compliance**, as delegate of the Minister for Planning and Public Spaces:

- **considers** the findings and recommendations of this report;
- **accepts and adopts** all of the findings and recommendations in this report as the reasons for making the decision to grant consent to the application;
- **agrees** with the key reasons for approval listed in the notice of decision;
- **grants consent** for the application in respect of the Hume Battery Energy Storage System (SSD 10460), subject to the conditions in the attached development consent; and
- **signs** the attached development consent and recommended conditions of consent (see **Appendix H**)

### Recommended by:



20/1/2021

**Rob Beckett**  
Environmental Assessment Officer  
Energy Assessments



20/1/2021

**Karl Okorn**  
Team Leader  
Energy Assessments



20/1/2021

**Iwan Davies**  
A/Director  
Energy Assessments

## 9 Determination

The recommendation is **Adopted / Not adopted** by:



21 January 2021

**Mike Young**  
Executive Director  
Energy, Industry and Compliance

# Appendices

## Appendix A – List of referenced documents

Hume Battery Energy Storage System Environmental Impact Statement, Jacobs, 31 July 2020

Hume Battery Energy Storage System, Response to Submissions, Jacobs, 9 October 2020

Hume Battery Energy Storage System Additional Information, Jacobs, 12 November 2020

Hume Battery Energy Storage System Additional Information, Jacobs, 19 November 2020



## **Appendix B – Environmental Impact Statement**

See the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/33566>

## Appendix C – Additional Information

See the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/33566>

## Appendix D – Submissions

See the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/33566>

## **Appendix E – Response to Submissions Report**

See the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/33566>

## Appendix F – Statutory Considerations

In line with the requirements of Section 4.15 of the EP&A Act, the Department's assessment of the project has given detailed consideration to a number of statutory requirements. These include:

- the objects found in Section 1.3 of the EP&A Act; and
- the matters listed under Section 4.15(1) of the EP&A Act, including applicable environmental planning instruments and regulations.

The Department has considered all of these matters in its assessment of the project and has provided a summary of this assessment below.

Aspect	Summary
Objects of the EP&A Act	<p>The objects of most relevance to the Minister's decision on whether to approve the project are found in Section 1.3(a), (b), (c), (e) and (f) of the EP&amp;A Act.</p> <p>The Department considers the project encourages the proper development of natural resources (Object 1.3(a)) and the promotion of orderly and economic use of land (Object 1.3(c)), particularly as the project:</p> <ul style="list-style-type: none"><li>• is a dispatchable, renewable energy storage system with the potential to increase grid stability and energy security;</li><li>• is a permissible land use on the subject land;</li><li>• is located in a logical location to be collocated with the Hume HPS;</li><li>• is able to be managed such that the impacts of the project could be adequately minimised, managed, or at least compensated for, to an acceptable standard;</li><li>• would generate up to 40 construction jobs;</li><li>• would contribute to a more diverse local industry, thereby supporting the local economy and community;</li><li>• would not fragment or alienate resource lands in the LGA; and</li><li>• is consistent with the goals of NSW's <i>Climate Change Policy Framework</i> and <i>Net Zero Plan Stage 1: 2020 – 2030</i> and would assist in meeting Australia's renewable energy targets whilst reducing greenhouse gas emissions.</li></ul> <p>The Department has considered the encouragement of ESD (Object 1.3 (b)) in its assessment of the project. This assessment integrates all significant socio-economic and environmental considerations and seeks to avoid any potential serious or irreversible environmental damage, based on an assessment of risk-weighted consequences.</p> <p>In addition, the Department considers that appropriately designed BESS facility development, in itself, is consistent with many of the principles of ESD. Meridian has also considered the project against the principles of ESD. Following its consideration, the Department considers that the project can be carried out in a manner that is consistent with the principles of ESD.</p> <p>Consideration of environmental protection (Object 1.3(e)) is provided in <b>section 5</b> of this report. Following its consideration, the Department considers that the project could be undertaken in a manner that would at least maintain the biodiversity values of the locality over the medium to long term and would not significantly impact threatened species and ecological communities of the locality. The Department is also satisfied that any residual biodiversity impacts could be managed and/or mitigated by imposing appropriate conditions and retiring the required biodiversity offset credits.</p> <p>Consideration of the sustainable management of built and cultural heritage (Object 1.3(f)) is also provided in <b>section 5</b> of this report. Following its consideration, the Department</p>

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	<p>considers the project would not significantly impact the built or cultural heritage of the locality, and any residual impacts can be managed and/or mitigated by imposing appropriate conditions</p>
State Significant Development	<p>Under Section 4.36 of the EP&amp;A Act the project is considered a State Significant Development. The Minister for Planning and Public Spaces is the consent authority for the development. Under the Minister's delegation of 9 March 2020, the Executive Director, Energy, Resources and Compliance, may determine the project.</p>
Environmental Planning Instruments	<p>The Albury Local Environment Plan (LEP) 2012 applies and is discussed in section 2.1 and 3.3 of this report, particularly regarding permissibility and land use zoning. The Project is permissible under the Albury LEP as well as under the Infrastructure SEPP. In accordance with the Infrastructure SEPP, the Department has given written notice of the project to TransGrid and TfNSW.</p> <p>Meridian completed a preliminary risk screening in accordance with SEPP No. 33 – Hazardous and Offensive Development and confirmed the project was not categorised as potentially hazardous or potentially offensive development.</p> <p>The Department has considered the provisions of the <i>SEPP (Primary Production and Rural Development) 2019</i>. Of relevance to the project, the SEPP aims to facilitate the orderly economic use and development of lands for primary production, to reduce land use conflict and sterilisation of rural land and to identify State significant agricultural land. While the location of State significant agricultural land has not been finalised, the Department has considered all of these matters in <b>section 5</b> of this report.</p> <p>The Department has considered the provisions of <i>SEPP No. 55 – Remediation of Land</i>. A preliminary assessment of the land found no contaminated land within the project site, and the Department is satisfied the site is suitable for the development.</p> <p>Albury City Council is not listed under SEPP No. 44 – Koala Habitat Protection (SEPP 44) and there is no Koala Plan of Management for the Albury LGA. Meridian's assessment concluded that the vegetation within the site is not considered potential Koala habitat, and the Department has considered this in <b>section 5</b> of this report.</p>

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## **Appendix G – Recommended Instrument of Consent**

See the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/33566>