Thurgoona Community Action Group
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10 September 2020

Major Projects,
Department of Planning, Industry and Environment,
New South Wales Government.

Re: Hume Battery Energy Storage System (SSD 10460) Environmental Impact Statement

To whom it may concern,

The Thurgoona Community Action Group (TCAG) wishes to lodge the attached submission in regard to the Environmental Impact Statement for the Hume Battery Energy Storage System (SSD 10460), on behalf of the Friends of the Lake Hume Gliders Group (FLHG). TCAG strongly supports this submission and agrees with the concerns raised by the FLHG group. Of particular concern is the proposed use of barbed wire fencing as this will be a permanent hazard and cause of mortality to the squirrel gliders resident in this area. Given this ongoing impact on the squirrel glider population, TCAG believes there should be a Squirrel Glider Management Plan prepared by the proponent of the project (Meridian) prior to approval, which is implemented as part of the conditions of approval.

TCAG looks forward to your consideration of these concerns.

Yours sincerely,

BE O'Connor

Bridget O'Connor
co-Chair, TCAG
on behalf of TCAG member, Chester Merrick

Friends Glider comments on Hume BESS EIS

Environmental Context

Hume Dam is located just downstream of the junction of Murray and Mitta Rivers. The Murray and Mitta river valleys have always been important habitats and corridors for the movement of wildlife and indigenous people. Construction of the dam has restricted this movement for most animals (including gliders), but the establishment of foreshore parklands has partially rectified the connectivity.

Black cockatoos are seen annually moving to winter Tabletop range feeding grounds and returning to the mountains for summer. A pair of rare Regent Honeyeaters was photographed at Lake Hume August 2020 (Woolshed-Thurgoona Landcare Facebook page).

About the "Friends of the Lake Hume Gliders (FLHG)" Group

The group was formed by families of the Lake Hume Village area, with support of their friends, interested in improving the natural environment and helping the struggling Squirrel Glider at Lake Hume Village. It is a sub Group of the Woolshed Thurgoona Landcare Group.

The FLHG focussed on the Crown Land below the Hume Dam spillway. A plan was prepared of the natural resources of the area and changes required to improve it for gliders (eg nest boxes for protection, trees reconnecting corridors to improve range, tree shrubs for food sources and removing barb wire). FYI, the plan "Figure 1 FLHG Corridor enhance -2013" is attached in Appendix 1 (p 5).

In 2013 the group received funding to erect 20 nest boxes and plant 100 trees/shrubs. Since then the group has maintained the site, planted more trees and shrubs, continued woody weed control and monitored nest boxes annually using a pole camera.

Role in the EIS Preparation

In early June 2020 the Jacobs ecologist contacted the FLHG relating to our local knowledge of gliders in the Lake Hume area and our monitoring data. Results of our monitoring between 2013 and 2019 were provided to Jacobs as both data and maps.

Information provided in email discussion with the Jacobs ecologist relating to presence and possible movements of gliders were general to the area, as the group was unaware of the intended location of the Hume BESS. Several of those comments are presented in the EIS acknowledges as "Lucas, FLHG. pers comm. , or similar.

Comments on the EIS

Now the EIS has nominated a proposed site, the group would like to make some specific comments in relation to the squirrel glider population in the Lake Hume Village/Crown spillway area.

Squirrel Gliders

The ecologists has detailed the glider situation and likely impacts of the BESS on them quite well and made numerous appropriate recommendations. The FLHG consider the best way to implement these recommendations, and FLHG concerns documented below, is by a "Lake Hume Glider Management Plan" being prepared and implemented.

The main FLHG concerns are listed below.

1. Barb wire in fencing adjacent, and crossing, glider use area and corridors

In the EIS Biodiversity and Endangered Species sections, several recommendations listed to minimise or make no significant impact on the gliders. It also states -

…. *"important movement corridors are known around the north and south of the development site."* (EIS, p 51). When assessing the impacts of the project, in Section 7.3, Threatened species, the EIS states ….. *"The Squirrel Glider may also be indirectly impacted by fencing and infrastructure associated with the development that is constructed within or close to known movement corridors around the development site. This includes injury and mortality caused by collision with barbed-wire fences. Measures to minimise the potential for impact have been discussed in this report"* (p 52).

Unfortunately recent renewed fencing abutting the northern TSR corridor and crossing the eastern corridor, crossing these two corridors, has a barb wire top strand. We strongly support the removal of barbed-wire measures and look forward to working with Meridian to achieve this outcome**.**

2. Squirrel Gliders are breeding and raising young in the Trout Farm Road area; and using the Trout Farm Road vegetated TSR as a corridor

Appendix D, states … " *Numerous records of nesting <u>surrounding</u> the development site from work undertaken by the local volunteer group Friends of the Lake Hume Squirrel Glider is evidence of a local population. There are foraging, movement and breeding habitats present within the development site"* (p 44, first para). The location and extent of these areas is shown in *Figure 4.2 Key Environmental constraints* (EIS, p 39), copy attached in Appendix 1, p6.

FLHG can confirm from local knowledge and monitoring that Squirrel Gliders are breeding and raising young in the Trout Farm Road area; and using the Trout Farm Road vegetated TSR to move from breeding grounds to feeding areas to the north east near the Sewerage Treatment works.

Evidence of this is summarised in Figure 2, Glider breeding & TSR movement, attached in Appendix 1, p7).

This includes:

- a small glider was found dead adjacent to the Trout Farm Road probably hit by a high load, in September 2015 (see <u>circled red cross on Figure 2</u>, attached p 7). Dr Damien Michael (ANU University) confirmed the specimen was a juvenile Squirrel Glider,

- six (6) gliders were observed in a nestbox No.38, near the location of the roadkill, in the 2016/2017 summer, (see purple circle on Figure 2, attached p 7),
- gliders (up to a group of three (3) were observed in flight at the property of 32 Trout Farm Rd in the 2016/2017 summer, and individuals in 2017/18 summer (see orange triangle on Figure 2, attached p 7), and
- gliders have been observed at nestbox No. 31, once only (see blue circle on Figure 2, attached p 7).

The FLHG monitoring has also shown:

- a steady increase in the total numbers of gliders observed in nestboxes during the annual surveys,
- a drop in numbers for the 2019/2020 monitoring, especially for the Spillway area and the area north of the Trout Farm Road area.

The drop in numbers is attributed to the extreme heat stress during the summer of 2019/2020. Evidence of this is a dead glider found on the ground near a nest box (No 38, see purple circle on Figure 2 after particularly hot windy weather, the time of the Corryong and South East Australia bushfire peak.

Similar concerns have been expressed by local squirrel glider projects and researchers (Squirrel Glider LAMPS, Newsletter 14, 29-2-2020).

It is concluded the present population in the Trout Farm Road Crown land area is vulnerable following the drought and 2019/20 very hot summer.

3. Project noise levels and its effect on gliders in the Crown Spillway area, particularly north- west of the Trout Farm Road

Gliders are a nocturnal animal and require sleep during the day to be able to feed, and avoid predators, at night. Their night time is our day time hours. BESS construction times are Mon –Fri between 7 am to 6pm, and Sat 8 am to 1pm.

Noise and vibration maps presented for the construction stages of the proposed "Northern location" are presented in the Figures 6.1 to 6.3, Appendix H, pp 16-18 (attached). These were interpreted to obtain noise and vibration levels at the Trout Farm Road breeding areas during BESS construction.

Approximate results during construction are:

- construction –Phase 1 (Civic works), 65 – 75 dB(A),
- construction –Phase 2 (Mechanical/structural), average 65 – 70 dB(A), and
- construction –Phase 3 (Electrical), average 55-60 dB(A).

This doesn't include pulse noise of borehole drilling and/or a percussion hammer to excavate 1-2m of granite rock under laying much of the proposed "Northern location".

Table 4.2 from Appendix H, lists acceptable levels of noise (see reproduced below).

Table 4-2 ICNG NMLs for residential receivers

Receiver type	Day (during standard hours)		Day (outside standard hours)		Evening		Night	
	L_{90} (RBL) dB (A)	NML $L_{eq\ 15\ min}$ dB(A)	L_{90} (RBL) dB (A)	NML $L_{eq\ 15\ min}$ dB(A)	L_{90} (RBL) dB (A)	NML $L_{eq\ 15\ min}$ dB(A)	L_{90} (RBL) dB (A)	NML $L_{eq\ 15\ min}$ dB(A)
Residential	35	45	35	40	30	35	30	35

Table 4.2 reveals the 55 dB(A) to 75 dB(A) interpreted figures for construction above, are 20-40 dB(A) above human acceptable values, **rated highly disruptive noise** (EIS, Table 12.2, p83).

FLHG is concerned the **highly disruptive noise** and vibration levels during the construction at the proposed Northern location will may **impact significantly on the glider's day sleep cycle, and importantly, their ability raise and care for their young.**

As concluded above, there is evidence the population in the Trout Farm Road Crown land area is stressed and their population numbers reduced and vulnerable following the drought and very hot 2019/2020 summer. Highly disruptive noise and vibration for the construction stage of up to 48 weeks (8, 20, 20, respectively for Phase 1, 2 and 3), could further seriously impact the Squirrel Glider population of the Trout Farm Road Crown land area.

The FLHG propose the best way to implement the recommendations of the Biodiversity Assessment and reduce the impacts raised above, is by the preparation and implemented of a "Lake Hume Glider Management Plan" for the Lake Hume Village area.

The Plan would be:

- prepared and approved prior to the project receiving Consent, hence a condition of SEARS assessment consent process.
- prepared by the BESS proponent (Meridian), (assume Jacob EIS Ecologist),
- involve input from, and support of, local glider specialists (eg DPIE, Albury Conservation Company, Charles Sturt University and FLHG).

Friends of the Lake Hume Gliders (FLHG)

Sub group of the Woolshed Thurgoona Landcare Group

Collated by Stuart Lucas (FLHG contact person)

APPENDIX 1: Figures and Maps referred to in the Submission

Figure 1 FLHG Corridor enhance -2013

Figure 4.2 Key Environmental constraints (from EIS, Appendix D, p 39)

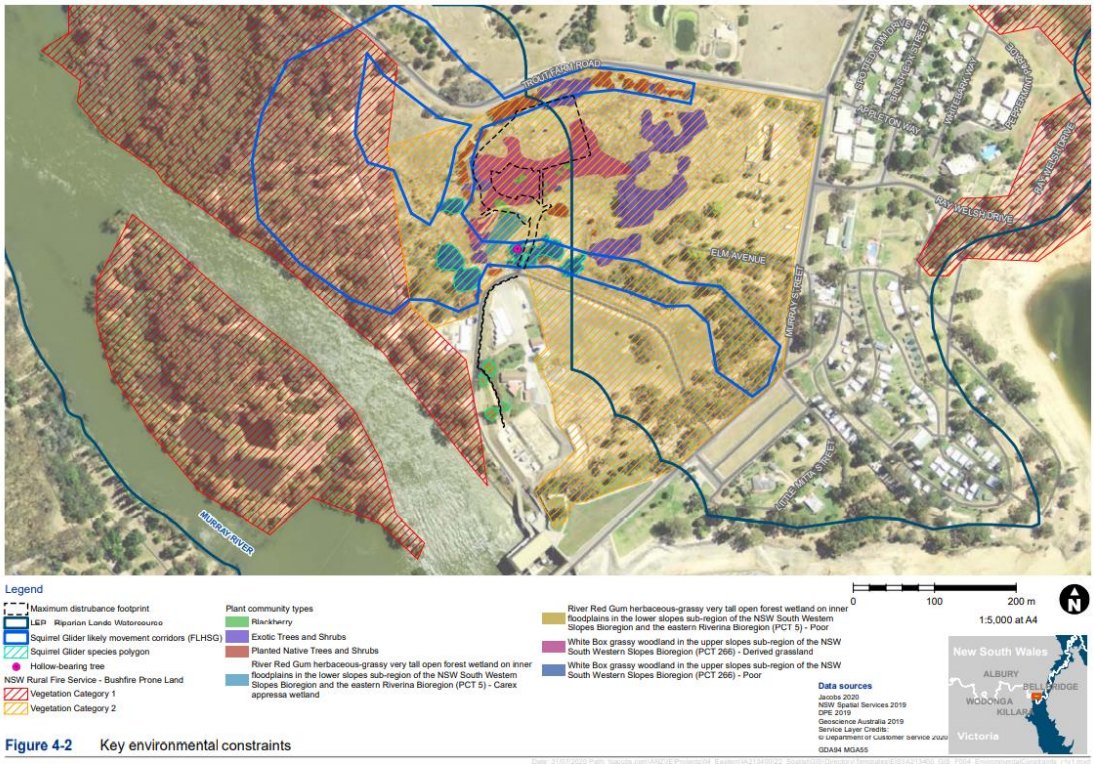

Figure 4-2 Key environmental constraints

Figure 2: Glider breeding & TSR movement