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15 December 2023

Muswellbrook Shire Council,
60-82 Bridge Street,
Muswellbrook NSW 2333

Subject: RAI Response Letter

Dear Hamish,

I refer to the Council's correspondence dated *9 August 2023* requesting additional information regarding the DA 2023/57 lodged for the Battery Energy Storage System(BESS) at 981 New England Highway, Aberdeen.

Firstly, please be advised the site layout along with the BESS design has been slightly modified since last submitted to the council. The following summarises the major changes made;

1. Relocation of BESS 5m further to the south from the existing location. Therefore, the initial north setback has been increased to 15m.
2. Relocation of the proposed driveway to utilise the existing driveway.
3. Replacement of 2.4m high chain mesh fencing with 3m hush panel wall fencing.
4. Increased (10m) landscape buffer around the BESS.
5. Two(2) more BESS have been added to the north-east of the site. Separate Development Applications will be lodged for these two additional facilities.

These have been further explained in the below response.
The following summarises the council's request and our response to it;

1. Vehicle Access

Further information is required to clarify the proposed vehicle access design for Council and Transport for NSW consideration. The SoEE references the use of an existing access while the proposed plans appear to show a new vehicle access location. Any vehicle access should be designed to accommodate largest construction vehicle required to access the site.

Noted.
The access has been updated to utilise the existing access to the site. Refer to ***Attachment A – updated Site Layout Plans***.

A Traffic Study has also been prepared by *Intersect Traffic* providing an assessment of the proposal as requested by *Transport for NSW* under a letter dated *1 August 2023*.
Refer to ***Attachment D – Traffic Impact Assessment***.

2. *Operational Information*

Provide an overview of the battery operating process and the function of the battery and additional buildings/infrastructure in that process.

Please refer to ***Attachment E- Operational Information*** which details the operating process and various components of the BESS and their functioning.

3. *Compound Plans and Elevation*

Council is interested in updated plans and elevations to provide additional details of the proposed development design and appearance. From past experience it is anticipated that the Hunter and Central Coast Planning Panel would have a similar requirement to provide more detailed design information related to the proposed development to assist in its assessment and understanding of its appearance in context with the locality. T To provide improved design information for the proposed development it is requested that:

- *Updated elevations are provided detailing the structures proposed within the compound rather than the outline shapes currently put forward.*
- *The proposed connection/relationship to existing electricity network power line infrastructure should be included in the plan set. Where additional infrastructure or an infrastructure pathway is required to provide a grid connection the details of that infrastructure or proposed construction pathway should be detailed.*
- *Perspective plans or similar conceptual images are provided to assist in considering the appearance of the proposed development and compound in the existing environment.*
- *It would be recommended that perspective images are provided.*
- *It would be in your interest to provide a plan either as part of the architectural plan set or landscape plan set which includes elevations of the compound alongside the proposed landscaping.*
- *Provide design details of the additional battery/development components marked on the Storage room, auxiliary service, power conservation system and control room marked on the plans.*
- *Where the property is open to stock consideration should be given to providing stock proof fencing around the battery landscape area to assist in its establishment and reduce the potential for stock damage.*

The initially submitted plans have now been updated to reflect the following changes;

1. Increase in setback– Earlier sitting at 10m from the northern boundary, the proposed BESS has now been moved to a further 5m, as shown in ***Attachment A – updated Site Layout Plans***.
Therefore, the initial north setback has been increased to 15m. This change is to incorporate better landscape screening.

2. Change in driveway – The previously proposed driveway has been relocated to utilise the existing driveway.

3. Change in the fencing – The initially proposed 2.4m high chain mesh fence has been replaced by 3m high HushPanel wall fencing in Windspray colour. The walls have high acoustic performance and will act as a sound barrier, minimising the noise impact of the proposed BESS on the surrounding developments as well as providing visual screening. Refer to ***Attachment B – updated Compound Details*** and ***Attachment F – Hush Panel Specifications***.

4. Two(2) additional BESS to the site – Two(2) more BESS have been added to the north-east of the site. Separate Development Applications will be lodged for these two additional facilities. Please note that in spite of being subject to separate independent applications, the three BESSs being located on the same site have been assessed as integrated under the various expert reports to determine the cumulative impacts.

Additionally, to address the above concerns from the council, the updated plans, and elevations show the correct survey levels.
The components of the proposed BESS being a prefabricated battery and power cabinet, the elevations only outline the size of the components. Separate specifications for each component have been included in ***Attachment E*** showing the indicative image of the component.
Furthermore, photomontages of the proposed BESS on the site are included in the Landscape documentation, refer to ***Attachment G***. Landscape Documentation also includes the elevation of the proposed facility integrated with the landscaping, as requested above.

The earthworks required for the proposal are only to achieve the proposed pad for BESS, and open-cut trenching to carry transmission lines from the closest source to the facility. These have been further detailed in ***Attachment B – updated Compound Details*** and ***Attachment H - Ausgrid-certified Plans***.
Please note that these earthworks for power connection have already been assessed and approved by Ausgrid.

4. <u>Landscape Plan Detail</u>

It is requested that an updated landscape plan is provided and that the landscaping detail is prepared or informed by landscape architects.

The landscape plan should be prepared to enhance the overall appearance of the site, offset any visual impact, and improve the site appearance when viewed from public land and adjoining property.

Components of the landscape plan and proposed species should include:

- *Incorporate native vegetation.*
- *Where possible use species that are drought resistance and can be effectively maintained.*
- *Provide a mix of trees, shrubs and ground cover to create a visually appealing screen of the proposed development.*
- *When setting the location of the vegetation screening have regard to the electricity easement and any limitations it imposes on the location of landscape screening.*
- *Emphasis screening the proposed development from vantage points from public land/New England Highway. When visiting the site Council Officers observed that the battery site to be at a prominent vantage point when viewed from the New England Highway and were not certain that the proposed landscape plantings would provide the most effective landscape buffer. Council Officers were interested in whether a landscape buffer angled toward the Highway vantage points may provide a more effective visual buffer than the square shaped arrangement of tree plantings proposed.*
- *Have regard to vantage points from the dwelling at the adjoining property to the north and properties on the Southern fringe of Aberdeen. Tall canopy trees may provide the most effective landscaping and visual relief from the proposed development when viewed from these vantage points.*
- *In preparing the landscape plan have regard to prominent view points toward the proposed development and demonstrate how through visual montage or similar viewpoint plans visual screening from these locations has been achieved.*
- *Have regard to bushfire management obligations.*
- *Include details related to the establishment and initial maintenance of plants to ensure that they are effectively established on the site.*
- *Reference ongoing maintenance obligations required to ensure the site is managed in an effective and tidy manner and does not become overgrown.*

To address the above-raised concerns by the council, an updated Landscape documentation has been prepared by Conus Landscape Architects and is attached as ***Attachment G***.

The plans consider the site configuration and provide details regarding the proposed landscaping -species, size, and maintenance schedule.
The documentation also includes the elevation of the proposed BESS along with the proposed landscaping at different growth periods ie., after 1 yr, 5yr, and full growth. It is to be noted that the proposed facility will be mostly

screened from the proposed landscaping within 5 years and will not be visible at all, once the trees reach their mature stage.

Additionally, three(3) viewpoints have been selected from three different points on the New England Highway. Please refer to *pages 6,7, & 8* in ***Attachment G.*** From all the viewpoints, it is evident that the proposed BESS will be fully screened by the proposed landscaping.

The views would not considered to be any different from the dwellings to the north and south. The 10m wide proposed landscaping including tall canopy trees along with the subtle Windspray coloured 3m high hush panel would screen the proposed BESS entirely negating any visual impacts on the surrounding developments.

5. Stormwater Management

Council Roads and Drainage Engineers have raised concern that the proposed level spreader would divert stormwater toward and across the site access hardstand and impact the erosion of its pavement. This should be considered and related updated preliminary stormwater management plans provided.

The updated Stormwater Plan has been included in *sheet 4* of ***Attachment B – updated Compound Details***.

The pad for the proposed development site has been designed to be slightly elevated above the existing ground levels, with the highest corner situated in the northeast and the lowest corner situated in the southwest.
The pad has been graded to be a similar slope to the existing ground levels.
Upstream overland stormwater flows, from the northeast, will be direct will be directed around the northern and eastern sides of the pad via diversion drains.

Once the diversion drains clear the proposed pad and associated batters, level spreaders will be provided to disperse the flows along the contour.

6. Noise Impact Assessment

Noise Impact Assessment should be provided in relation to the proposed development to provide a complete assessment of noise associated with the proposal to have regard to its potential to impact on adjoining property and demonstrate compliance with the Noise Policy for Industry.

A Noise Impact Assessment has been carried in accordance with the NSW Noise Policy and Industry. Please refer to ***Attachment I.***

Two main modeling scenarios were considered in order to achieve the applicable noise criteria at the sensitive residential receptors;

1. Currently selected plant/equipment – only acoustic treatment is a 3m high acoustic barrier wall (hush panel).
2. Currently selected plant/equipment – acoustic barrier plus additional acoustic treatments on BESS battery containers and PCS investors.

Scenario 2 was formed to be the option required to achieve the required noise level criteria, which include quitter equipment selections such as fans, acoustic attenuators, enclosures, and barriers.

It is considered that the driving fundamentals of the detailed design for the Construction Certificate of the noise suppression option would be proven. The plant would not be able to operate unless it was certified for adhering to the noise criteria.

The Noise Planning Level at the boundary will be validated by further noise testing prior to the BESS being operational.

7. ***Preliminary Hazard Analysis***

A Preliminary Hazard Analysis is required to consider the proposed facility against the provisions of Chapter 3 of the State Environmental Planning Policy (Resilience and Hazards) 2021 and guidelines prepared by the Department of Planning and Environment.

Riskcon Engineering Pty Ltd has undertaken the *Chapter 3* assessment under *SEPP (Resilience and Hazard) 2021* for the proposed development (BESS). The analysis indicates that the proposed BESS has a discharge capacity of 5MW which is under/less the threshold of 30MW. As the threshold quantities of the DGs stored and transported are not exceeded, *Chapter 3* of *SEPP(Resilience and Hazard) 2021* is not applicable. The report also conducted a review of the potential of the proposed BESS to cause offense which indicated the site operations would be unlikely to occur at levels, that would cause offense. Refer to ***Attachment J.***

Furthermore, a Fire Incident Management Plan (***Attachment K***) has been prepared which addresses the Fire Protection measures within the batteries and assesses the fire risk associated with the BESS. It concludes that the proposed designs in conjunction with existing fire protection adequately manage the risk.

8. ***Lighting Information and Details***

Council is interested in understanding if the proposed compound would be permanently lit. Where the proposed facility is to be lit details of the scope and intensity of any lighting should be required along with any relevant information to assist Council in reviewing its relationship with adjoining land uses and impact on neighbouring properties.

Sites will be remotely controlled with monitored 24/7 CCTV surveillance.
The BESS will be lit permanently during the night by low-level low illuminating lights.

It is also proposed to install soft white lights for security and maintenance reasons which can be switched on when required.
The colour temperature of the lights is 4000k. The lights will be installed at or below the top height of the battery equipments, facing downward. Night lighting will be dim, and low-key to minimise visual impact, light pollution, and fauna impact.
Standby auxiliary power systems will ensure lighting remains viable in blackout situations.

9. ***Decommissioning Strategy***

A more detailed decommissioning strategy is requested. The decommissioning strategy should include:
a) A timeline commitment to the completion of all decommissioning and rehabilitation work within a reasonable period (12 months recommended) from commencement of its decommissioning.
b) An indication of the works involved.
c) A commitment to prioritising the recycling of waste material where-ever possible.
d) An indication of the standard that the site is to be rehabilitated to at the conclusion of the project. ie. plant and hardstand removed and vegetation established suitable for stock grazing.

The Decommissioning Strategy has been updated to address the council's advice. Please refer to ***Attachment L – updated Decommissioning Strategy***.

10. ***Ausgrid Advice***

AUSGRID referral advice is to be reviewed and a response to the matters raised particularly matters requiring resolution at the DA stage is to be provided.

Refer to the attached Letter from Ausgrid, ***Attachment M***.
This advice confirms that the Ausgrid has been consulted and has approved the connection and associated infrastructure required for the proposed facility. Refer to the certified connection plans attached as ***Attachment H - Ausgrid-certified Plans***.

11. ***Upper Hunter Shire Council Referral Comments***

Through the notification of the development application Council received referral advice from the neighbouring Upper Hunter Shire Council. The Upper Hunter LGA directly adjoins the development site. A copy of the comments are attached for your information. These comments highlight the importance of noise impact and landscaping for Council's assessment and determination of the development application.

The proponent has reviewed the advice received from Upper Hunter Shire Council, and provide the following response to the concerns raised;

1. *Adequate landscape screening being provided to minimise the visual impacts of the development on surrounding properties and public land.*

   Landscaping have been updated from what was previously submitted with the DA, with a 10m wide landscaped area included around the proposed BESS. Please refer to ***Attachment G – updated Landscape Documentation***.
   The landscape document clearly depicts that the proposed facility will be completely screened by the surrounding properties because of the proposed landscaping.

2. *The provision of any required noise mitigation measures to minimise acoustic impacts on nearby residential receivers.*

   The noise impact assessment included as ***Attachment I*** with this letter, adequately addresses the noise impacts associated with the proposed facility. It also recommends various mitigation measures to reduce the noise impacts. One of the major measures is the adoption of the 3m high hush panel wall fencing, which will not only help mitigate the noise released from the battery facility but also act as a visual barrier. Please refer to ***Attachment B – updated Compound Details*** and ***Attachment F – Hush Panel Specifications***.

We hope the above including the updated and additional information satisfies the council's concerns. If you wish to discuss this further, please do not hesitate to contact me.

Yours sincerely

HDB Town Planning & Design

Aprajita Gupta

Senior Town Planner

Enc: Attachment A – updated Site Layout Plans

Attachment B – updated Compound Details

Attachment C – updated Compound Layout

Attachment D – Traffic Impact Assessment

Attachment E – Operational Information

Attachment F – Hush Panel Specifications

Attachment G – updated Landscape Plans

Attachment H – Ausgrid-certified Plans

Attachment I - Noise Impact Assessment

Attachment J – SEEP – RH Report

Attachment K – Fire Risk Management

Attachment L – updated Decommissioning Plan

Attachment M – Ausgrid Advice Letter