25/09/2024

Re: Objection to the Environmental Impact Statement for the Proposed Battery Energy Storage System (BESS) at 5 Holleys Lane, Gulgong NSW – Project (SSD-61460977) – Receiver R-08

Dear Sir/Madam,

I am writing to formally object to the Environmental Impact Statement (EIS) for the proposed Battery Energy Storage System (BESS) Project (SSD-61460977) near my residence located at 148 Beryl Road, where I am identified as Receiver R-08. As a homeowner living only 550 metres from the project site, I have deep concerns about the adverse effects this project will have on my family's health and wellbeing, particularly my wife and 1-year-old son, who are at home more often than I am. The following concerns are based on a detailed review of the EIS and its associated appendices.

1. Noise Impact

The EIS indicates that my property (R-08) will experience noise levels up to 10 dB(A) higher than the Project Noise Trigger Level during certain operational scenarios, particularly at night and during fullload charging/discharging. This exceeds acceptable noise levels and is likely to cause sleep disturbances, especially for my young child. I urge the need for further noise mitigation measures, such as sound barriers and restrictions on construction hours, to be implemented to limit disturbances, particularly during night hours and weekends when my family is most vulnerable to the noise.

Source: Appendix I – Noise and Vibration Impact Assessment, Pages 37, 54.

2. Construction Noise and Sleep Disturbance

During the construction phase, noise levels at my property are predicted to exceed sleep disturbance thresholds by up to 10 dB(A). While most construction will occur during standard hours, any deviations to out-of-hours work could severely impact our sleep and well-being. The EIS does not provide adequate management strategies to mitigate this potential disruption.

Source: Appendix I – Noise and Vibration Impact Assessment, Page 37.

3. Visual Impact

The proposed BESS site will have a significant visual impact on my property. Despite planned vegetation screening, it is unlikely that this will be effective in the short to medium term. I will directly view battery containers and infrastructure until the vegetation matures. This will substantially reduce the aesthetic value of my home and surrounding area. As seen in recent years with the attempts of the Beryl Solar farm failing to adequately screen their development and having to apply for a Modification to their approval to extend the period to establish screening.

As mentioned throughout the document, this development will have on-site lighting and security systems, which will likely extend above the vegetation screen and pose a risk of light pollution to our home and surrounding residents.

Source: Appendix H – Landscape Character and Visual Impact, Pages 18-19.

4. Cumulative Noise Impact

The EIS must adequately address the cumulative impact of noise from nearby renewable energy projects and existing electrical infrastructure, including the Beryl Solar Farm and adjacent substation. The combined noise from multiple sources will likely exacerbate the disturbance we experience, creating a more constant and invasive noise environment than what has been accounted for.

Source: Appendix I – Noise and Vibration Impact Assessment, Section 7.3.

5. Tonal Noise Penalty

The assessment indicates that R-08 will be subjected to a 5 dB(A) tonal noise penalty, which increases the project's disturbance due to specific equipment producing tonal characteristics. The document does not adequately address how this will be mitigated to protect my family's comfort and health.

Source: Beryl BESS EIS Main Report - Part 2, Section 7.6.4.

One significant concern is the need for more commitment within the proposed project to actively mitigate or monitor noise levels in real-time. The only proposed noise monitoring described in the EIS is attended spot checks of noise levels, which have the potential to be heavily biased. Permanent real-time noise monitors should be installed, and a management plan with a trigger action response plan (TARP) should be developed. This plan should govern work activity levels, ensuring that if excessive noise levels are triggered, operations are reduced or ceased until a quieter method of work can be utilised or lesser cumulative noise is present.

6. Impact on Property Values

Although not directly addressed in the EIS, the presence of a large-scale industrial project so close to residential properties is likely to reduce property values in the area. As homeowners, this is a severe concern for my family, as our home is one of our most significant investments. The long-term presence of the BESS and its associated risks and disruptions will detract from the appeal of our area and potentially reduce the value of our property.

7. Increased Traffic During Construction

As indicated in Appendix J of the EIS on traffic and transport, there will be significant traffic disruptions during the construction phase, which is particularly concerning given the narrow and residential nature of the surrounding roads. The increase in the number of heavy vehicles and machinery will present risks to local road users, including pedestrians and children, who regularly use these streets. Additionally, Appendix J does not adequately assess the potential impacts on residents like us who live close to the proposed construction routes.

I request that detailed plans be implemented to mitigate the impact of increased traffic, including restricted hours of construction traffic movement, clear signage, and provisions for road safety.

8. Hazards and Risks to Local Residents

After reviewing the Preliminary Hazard Analysis in Appendix M, I am concerned about the potential hazards associated with the operation of the BESS, particularly given its proximity to residential properties. While the analysis mentions measures to control fire risks and hazardous material management, it does not fully address the increased risk of accidents during the operational phase. My property is approximately 550m from the site, and my family, especially my young son, may be exposed to these risks.

Our home relies solely on rainwater stored in tanks for our drinking water. This proposed project does not mention mitigation strategies to ensure that our water source is not contaminated by leaking fumes or hazardous chemicals during all project phases, particularly during a thermal runaway or fire emergency.

9. Impact on Air Quality During Construction

The construction of the Battery Energy Storage System (BESS) involves significant ground disturbances, transportation of materials, and operation of heavy machinery, all of which can result in increased dust and particulate matter in the air. This could adversely affect air quality, particularly for nearby residents like my family and me. Poor air quality could pose a health risk, especially to young children and individuals with respiratory issues. The EIS needs to adequately address the measures that will be taken to mitigate dust and air quality issues during peak construction periods.

Request: I request that a comprehensive air quality management plan be prepared and implemented, including continuous air monitoring and appropriate dust suppression techniques.

10. Electromagnetic Fields (EMF) Exposure

While the EIS briefly addresses electromagnetic fields (EMF) generated by the project, it concludes that EMF levels are expected to be well within the International Commission on Non-Ionizing Radiation Protection (ICNIRP) guidelines (Section 7.9.3). However, the long-term health effects of EMF exposure, particularly for young children like my son, have not been thoroughly considered. Given the proximity of our home to the project, this is a matter of grave concern.

Request: I request that an independent EMF study be conducted and the findings communicated transparently to nearby residents. Additional EMF shielding measures should be implemented to ensure public safety if necessary.

Conclusion

The proposed project will significantly adversely impact my family's health, quality of life, and property value. The cumulative noise impacts, construction disturbances, visual degradation, and potential risk of hazardous chemicals caused by this project will create an unacceptable living environment for my wife, son, and me. I urge you to reconsider the development plan and implement more stringent mitigation measures to protect the well-being of nearby residents like my family.

Request for Clarification

I have also enclosed a list of questions I request to clarify before further approval is granted for the project. I trust that my objections will be seriously considered, and I look forward to a response addressing my concerns.

Yours sincerely,

Jason Kolar

Appendices: List of Clarification Questions

Traffic and Transport Impact Assessment

- Can you provide more detailed information on how road wear and tear will be managed during construction?
- How will the project ensure that construction vehicles adhere strictly to designated routes, and what penalties or corrective measures will be in place for deviations?
- How will the project manage potential traffic congestion during peak construction times, particularly at critical intersections like Beryl Road and Castlereagh Highway?
- Can you clarify the actual number of estimated peak and normal traffic flows? The numbers shown in the appendices are inconsistent, particularly in the table on page 15 of the Noise and Vibration Impact Assessment.
- The EIS states the use of pump-out septic systems and portable toilets, which both require frequent pumping out to maintain. Do the traffic flow numbers account for these truck movements?

Noise and Vibration Impact Assessment

- What specific noise mitigation measures will be implemented to address night-time operational noise, particularly in residential areas close to the project site?
- Can you clarify how low-frequency noise from the BESS operations will be managed, given its potential impact on nearby residents?
- How were the background noise levels determined, and over what period were the measurements taken? Were these measurements representative of typical conditions in the area?
- What management plan will be in place for any out-of-hours construction work, and how will residents be informed of these activities?
- Will there be any real-time noise monitors installed? Will these monitors be tied to a management plan and TARP-style operational procedure that actively addresses any exceedances in noise levels?
- When raising a complaint or concern with the developer, how can one do so?

Preliminary Hazard Analysis

- In the event of a thermal runaway or Fire, can you explain how our property will be impacted? Will we be evacuated? What/how can we keep our livestock and outdoor pets safe from toxic fumes?
- Is there the possibility that toxic fumes from normal operation or an event could cause contamination to our rainwater tank, which we rely on for drinking water? Is there any plan to provide a testing schedule to ensure our water is not being compromised?
- Could you provide more information on the contingency plans for worst-case scenarios, such as thermal runaway events or battery system failures?
- How will potential toxic gas emissions from battery fires be managed, and what protective measures will be implemented to safeguard nearby residents?

- Could you clarify the reasoning behind the classification of fire risks as "medium" or "low," particularly considering recent global incidents with battery storage systems?
- What specific advanced built-in fire suppression systems are included in containerised solutions? Are there details on the types or capacities of these systems?
- What coordination is planned with local emergency services to ensure their capacity to handle incidents, and have consultations with these services already occurred?
- The document states that the battery technology is lithium-ion phosphate (LFP) and mentions a specific model (Powin Stack750E Centipede) for assessment. Could you confirm if the final supplier will still use this particular model or if other models or manufacturers are being considered? How would changes in technology impact the risk assessment?
- The summary mentions that a thermal runaway event could lead to significant risks but notes that advanced safety features and design controls mitigate these risks. Can you provide more details on how the Battery Management System (BMS) handles early warning and shutdown processes?
- The summary references past incidents (e.g., Victoria Big Battery and PG&E's Elkhorn Battery Storage facility) and mentions that no health hazards were detected. How does the BESS design specifically address lessons learned from these and other similar incidents to enhance safety and minimise community impact?
- The summary recommends a fire safety study with Fire and Rescue NSW (FRNSW). What is the timeline for this study, and how will its findings be integrated into the final design?
- How will emergency response training be conducted, and what specific scenarios will be covered? Will regular drills or training updates be based on evolving best practices?
- The summary references fire tests conducted in 2021 for specific BESS models. Verify that these tests are up-to-date and reflect current standards, as older reports might not capture the latest safety improvements.
- The document lacks detail on specific fire prevention and mitigation measures in relation to battery storage malfunction. While it lists general emergency responses, there is little information on the effectiveness of proposed measures. Can you please confirm what fire suppression methods will be employed?

Landscape Character and Visual Impact Assessment

- Could you provide more detailed timelines for when the proposed vegetation screening will become fully effective?
- What provisions are in place for the ongoing maintenance and replacement of vegetation to ensure it continues to provide adequate screening over the project's life?
- How will potential glare and reflection from the BESS infrastructure be managed, especially for nearby residents and road users?

Main EIS Report

- Can you clarify how climate change resilience has been factored into the project design, particularly with regard to the increased frequency of extreme weather events like heatwaves or storms that could impact battery storage operations?
- What specific measures will be in place to mitigate the risk of bushfires, especially given the proximity to residential properties and the site's rural location?

- Could you elaborate on the economic analysis of job creation? How many jobs will be available locally, and what is the projected duration of these jobs?
- How will the decommissioning process be managed at the end of the BESS's life? Specifically, how will batteries and other infrastructure be recycled or disposed of?
- The summary mentions compliance with various standards and guidelines. How will adherence to these standards be monitored and enforced throughout the lifecycle of the BESS?
- How does this project plan to mitigate the risk of cybersecurity threats affecting the BESS operation?
- It appears the Risk Assessment assumes all safety systems will function perfectly without considering the possibility of system failures or human errors. How can it be guaranteed that such systems will not fail?

Electromagnetic Fields (EMF) Exposure

- Can you clarify how EMF exposure's potential long-term health impacts have been assessed, particularly for sensitive populations like children living near the BESS?
- Will there be continuous monitoring of EMF levels during the project's operational phase? If so, how will the results be communicated to residents?

Cumulative Impacts

- How has the cumulative impact of noise from the BESS and nearby renewable energy projects (e.g., the Beryl Solar Farm) been assessed? Will additional noise mitigation measures be implemented to account for this?
- Could you provide more information on how the cumulative environmental impacts of other projects in the region (e.g., visual, traffic, and biodiversity impacts) have been considered about the BESS?

Flooding and Water Management

- Can you provide further details on how stormwater runoff and potential water contamination from the construction site will be managed, especially given nearby waterways?
- How will the project mitigate localised flooding risks, particularly during extreme rainfall events? Are there contingency plans in place to manage overflow and ensure water quality?
- What are the specific features of the oil containment bund and oily water separation systems? How will these systems be maintained and tested?
- In the event of a septic system failure, what controls will be in place to mitigate contamination of local waterways?

Waste Management

- Could you clarify the specific waste management practices for disposing of battery components and hazardous materials during construction and decommissioning?
- What measures will be taken to ensure that the principles of the circular economy are applied to minimise waste generation and maximise recycling of project materials?

Community Engagement and Social Impact

- How will residents be informed about construction schedules, noise impacts, and traffic disruptions?
- What specific actions will be taken to address concerns raised by residents during community consultations, particularly about health risks, traffic, and visual impacts?
- Given the current housing limitation within the region, how and where does the project anticipate its workforce to live?
- Can you please clarify the calculations presented in 7.11.3.4? It appears that most of the workforce will not be locally based, so the economic stimulus to local businesses will be extremely minimal.