Department of Planning, Housing and Infrastructure

Our ref: SSD-67983064

Mr Darren Nelson
Managing Director
Calibre Metals Pty Ltd
30 Mallee Road,
Springvale NSW 2650

24 July 2025

Subject: Request for additional information

Dear Mr Nelson,

I refer to the Department of Planning, Housing and Infrastructure's (the Department) letter correspondence (dated 12 June 2025) and recent meeting with the Applicant on 19 June 2025 to discuss the proposed Wagga Wagga Lithium-Ion Battery Recycling Facility (SSD-67983064).

The Department requires you to provide additional information to address the supplementary issues raised in **Attachment 1**, which should be considered in conjunction with the Department's previous correspondence when preparing your response to submissions (RtS).

In addition, the Department suggests coordinating a meeting with you to further discuss the key issues, particularly relating to hazards matters that have been raised. This meeting should occur prior to your submitting your RtS.

If you have any questions, please contact Ellen Luu on (02) 8275 1037 or via email at ellen.luu@planning.nsw.gov.au.

Yours sincerely

Lindsey Blecher
Team Leader
Industry Assessments

as delegate for the Planning Secretary

Attachment 1

Hazards

1. To further understand the facility's processing operations and potential off-site risks, the Department is requesting further information in relation to the battery discharging process and storage, as follows:

   a) indicate the locations for this process within the site layout diagram

   b) identify the maximum volume of saltwater solution (i.e. the discharging solution) involved for this process across all batches and per batch. The current information only indicated 400kg of LIB can be held within the enclosed bin

   c) confirm how many bins of LIB are expected to be discharging at any one time

   d) confirm the basis for the identified maximum discharging time of 60 minutes and demonstrate that this is adequate to ensure sufficient discharge, and confirm what procedures will be in place to verify LIB cells are sufficiently discharged

   e) noting that the rate of discharge will depend on the brine concentration, and uncontrolled discharge can lead to thermal runaway, confirm how the process will be controlled to prevent thermal runaway

   f) confirm that the only discharge mechanism will be electrochemical, meaning that residual energy from LIB cells will only be used for the electrolysis of the discharging solution, and estimate the maximum quantity of hydrogen and chlorine which could be emitted under the worst-case scenario per batch.

2. During the 19 June 2025 meeting, the Applicant noted the discharging step is included as a precautionary management measure, and that non-discharged cells could safely be fed directly into the shredding process due to the shredding being conducted under a nitrogen-rich atmosphere (inert blanket). However, based on additional information provided by the Applicant, it appears that the shredding process does not appear be nitrogen blanketed. Please confirm whether nitrogen blanketing is available during the shredding process.

3. For the Applicant's information, the Department's Hazards Team understands through reviewing hazards studies from other developments involving LIB cells that thermal runaway in LIB cells is a self-propagating exothermic reaction initiated by internal or external stressors, such as mechanical damage, or electrical faults and therefore thermal runaway could occur during shredding.

   Unlike conventional combustion, this process does not require atmospheric oxygen; instead, oxygen is liberated in situ. The released oxygen can react with volatile organic compounds and the generation of heat and a complex mixture of flammable gases. Therefore, nitrogen blanketing could provide mitigation of a hazardous event but does not address the root cause of thermal runaway. The effectiveness would likely depend on the scale of the shredding process and the concentrations of nitrogen maintained. Therefore, it remains uncertain how the inert blanket could limit the scale of thermal runaway. As such, please provide the following information:

   a) confirm the throughput of the shredding process, whether it will occur in batches, and the size of each batch

b) identify the worst-case scenario for thermal runaway occurring within the shredding process. Consider whether hydrogen fluoride could be generated and emitted from the shredding process and confirm the relevant safeguards specifically to prevent or mitigate the thermal runway if it happens during shredding process. Literature review indicates that the discharging process is crucial in reducing the risk of thermal runaway. As such refer to question 1d above, it is critical to understand the basis of 60-minute discharge and how to ensure the battery is adequate discharged before shredding

c) provide further details of how nitrogen blanketing is applied to the shredding process, including nitrogen concentrations and control measures.

4. Please provide an estimate of the material composition and particle size distribution of powders from the fines after the hammer mill onwards (intermediaries before black mass and the final black mass itself) and assess if these powders can be considered combustible dust. If so, identify the safeguards in preventing or mitigating dust explosions.