

28 April 2026

Jess Watson  
Department of Planning, Housing and Infrastructure

Via: Major Projects Portal

**EPA Advice on Environmental Impact Statement – Lake Lyell Pumped Hydro Energy Storage – SSI-77018220**

Dear Jess

I am writing in response to your request for the NSW Environment Protection Authority (EPA) to review the Environmental Impact Statement (EIS) for the proposed Lake Lyell Pumped Hydro Energy Storage (Application SSI-77018220) located 5km west from the city of Lithgow.

The EPA has reviewed the following documents:

- *Lake Lyell Pumped Hydro Energy Storage* – EMM Consulting & Energy Australia – 25 February 2026.
- *Appendix G – Groundwater impact assessment* (Version 4) - EMM Consulting – 24 November 2025.
- *Appendix I – Excavated rock management strategy* (Version 4) – EMM Consulting – 28 November 2025.
- *Appendix S2 – Greenhouse gas Assessment – EMM Consulting* (Version 3) - EMM Consulting – 27 November 2025.
- *Appendix V – Contamination preliminary site investigation* (Version 5) – EMM Consulting – 21 November 2025.
- *Appendix X – Climate Change Risk Assessment* (Version 4) - EMM Consulting – 28 November 2025.
- *Appendix Y – Waste Management assessment* (Versions 3) – EMM Consulting – 19 November 2025.

The EPA understands the proposal is for the construction and operations of a pumped hydro energy storage system consisting of:

- The construction of an upper reservoir and dam with a storage volume of 5.3 GL.
- Pumped hydro generation components including a single vertical inlet/outlet shaft structure 7 metres in diameter and 170metres deep, underground powerhouse located in an underground cavern containing two reversible pump-turbines, generators and control valves.

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NSW Environment Protection Authority

As the environmental steward and regulator of our State we are committed to a sustainable future. Join us on our mission to protect tomorrow together.

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- Construction of underground tunnels and portals that include the main access tunnel approximately 7.5 metres wide and 8.2 metres tall and about 600 metres long, emergency cable and ventilation tunnel.
- Construction of workers accommodation camp and other ancillary facilities, upgrade to roads, access tracks and other associated infrastructure.

Based on the information provided, the proposal will require an environment protection licence under section 43 of the *Protection of the Environment Operations Act 1997* (POEO Act) for Electricity Generation clause 17 of Schedule 1 of the POEO Act.

The EPA advises that the surface water and noise and vibration impact assessments are still being reviewed by the EPA. The EPA will provide further advice on noise and surface water once it has been completed.

The EPA has reviewed the EIS and notes that it does not provide the information required to allow us to complete our assessment. The EPA has the following comments and recommendations:

**1. Matters to be addressed prior to determination (Attachment A)**

- a. Greenhouse Gas

**2. Matters to be addressed with conditions**

The EPA recommends the Department of Planning, Housing and Infrastructure (DPHI) consider conditions addressing groundwater and contaminated land in Attachment B. Additional conditions may be provided following review of the additional information requested in Attachment A for Greenhouse gas.

**3. Minor matters**

- a. Diesel generators

The EPA understands that during the construction phase diesel generators will be used until a connection to the existing network is established. DPHI and the applicant should be made aware that any diesel generators used during the construction phase of the project will need to comply with the requirements in the *Protection of the Environment (Clean Air) Regulation 2022* (Clean Air Regulation). The Clean Air Regulation requires all plant, including stationary reciprocating internal combustion engines (e.g., diesel generators) operating on a licensed premises to comply with air impurities standard of concentration (i.e. emissions limits) outlined in Schedule 2.

For operational back-up generators, the applicant should be made aware of the exemptions in Section 73 of the Clean Air Regulation for emergency electricity generation from the air impurities standard of concentration for nitrogen dioxide (NO<sub>2</sub>) and nitric oxide (NO) in Schedule 2, Part 2, Divisions 3. Where back-up diesel generators operate more than 200 hours per year the exemption in Section 73 do not apply. The EPA considers the operation of generators to include all activities and scheduled testing if the internal combustion engines are turned on and would count towards the 200-hour threshold.

If you have any questions about this request, please contact Nick Vlasoff via email at [environmentprotection.planning@epa.nsw.gov.au](mailto:environmentprotection.planning@epa.nsw.gov.au).

Yours sincerely



**CHRISTIE JACKSON**  
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**NSW Environment Protection Authority**

## **ATTACHMENT A – MATTERS TO BE ADDRESSED PRIOR TO DETERMINATION**

The EPA recommends that DPHI requires the applicant to address the matters in this attachment prior to determination of the application and provision of recommended conditions.

### **Greenhouse Gas (GHG)**

#### **1. Include details of GHG mitigation measures**

The Applicant reported generic greenhouse gas mitigation measures for the Lyell Lake Pumped Hydro in Section 4.5 of the GHG report. The effects of the other mitigation measures, as identified in Section 4.4.1, have not been quantified.

Detailed analysis of the mitigation strategy was not provided. No proposed timing has been outlined for the implementation of these proposed measures.

In accordance with the Large Emitters Guide, mitigation measures to avoid, reduce and substitute Scope 1, Scope 2, and Scope 3 emissions must be identified and assessed during the planning phase of the project.

For Scope 1 and 2 emissions in particular, the proposed measures should reflect the full range of best-practice design, technology, and management options, consistent with the greenhouse gas mitigation hierarchy.

To meet the requirements outlined in Sections 4.3.1 to 4.3.3 and Section 4.4 of the Large Emitters Guide, the Applicant is to undertake both qualitative and quantitative (if possible) assessments of opportunities to reduce GHG emissions. Where possible, emissions reductions associated with proposed mitigation measures are to be quantified to demonstrate their effectiveness. Measures to monitor and report on emissions and mitigation performance are to be proposed.

#### **Recommendation:**

The EPA recommends that DPHI require the Applicant to expand and provide detailed information on the proposed greenhouse gas mitigation strategy, in accordance with Section 4.3.1 to 4.3.3 and Section 4.4 of the Large Emitters Guide.

#### **2. Include outcome of independent expert review**

The GHG assessment mentioned that an independent expert review has not been commissioned because the effective (net) emissions from the project under normal operational conditions will be much lower than 100,000 t CO<sub>2</sub>-e per year.

The Large Emitters Guide mentions that projects with scope 1 and 2 emissions exceeding 100,000 tonnes CO<sub>2</sub>-e per year at any time over the operational life of the project, require mitigation assessments to be verified by an independent expert reviewer.

To be consistent with the requirements of the large emitters guide, the Applicant is to provide evidence that the independent and suitable qualified expert reviewer has verified the mitigation measures proposed for the Project.

Box 12 of the Large Emitters Guide sets out factors to consider when selecting and engaging independent expert reviewers.

#### **Recommendation:**

The EPA recommends that DPHI require the Applicant to include evidence of an independent expert review's comments on mitigation measures.

### 3. Climate Change Risk Assessment

The EPA acknowledges that a climate change risk assessment was provided to support the EIS. The EPA does not have further comments on this while guidance material on climate change risk assessment is being developed. The Applicant should be made aware that the EPA will progressively require licensees to prepare, implement and report progress against climate change mitigation and adaption plans (CCMAP's). Licensees will be required to publish their plans and progress reports and update their plans every three years.

## ATTACHMENT B – RECOMMENDED CONDITOINS

The EPA recommends that DPHI consider the following conditions as part of their determination of the application, should the project be approved.

### Groundwater management

#### 1. Provide a comprehensive Water Management Plan

Prior to the commencement of construction, the Applicant must prepare and implement a Water Management Plan for the development, to the satisfaction of the Planning Secretary. The Plan must be prepared by suitably qualified and experienced person/s and in consultation with DCCEE Water Group and the EPA. The Plan must include, but not be limited to, the following:

- a. details of water use, metering, treatment, storage, disposal and on-site management, including transfers between water storages.
- b. a fit-for-purpose Groundwater Monitoring Program for levels and quality, including nutrients, metals and any other site-specific contaminants of concern, with details of:
  - baseline groundwater level and quality data with data gap analysis.
  - the timing for bore installation and commencement of monitoring.
  - the monitoring frequency and analyte suite.
  - the reporting and assessment requirements for monitoring results.
  - the number, construction details and surveyed locations of all monitoring bores including new bores to be installed around proposed water storages, construction areas and spoil management areas.
  - groundwater impact assessment criteria and trigger levels for identifying any potentially adverse impacts on groundwater quality, groundwater dependent ecosystems, connected surface water, and other groundwater users.
  - a Trigger Action Response Plan for investigating and responding to any exceedance of the groundwater impact assessment criteria.
  - management and mitigation measures for groundwater impacts associated with excavation, blasting, spoil emplacement, water storages, waste management areas, seepage and any acid and metalliferous drainage or mobilisation of metals and nutrients.

Note: These recommended conditions relate to groundwater management only. The Water Management Plan should also include a Surface Water Management Plan to support an integrated, whole-of-site water management framework.

### Contaminated Land

An Unexpected Finds Protocol must be developed for the site to outline procedures to follow if unexpected contamination is found during works at the site. The Unexpected Finds Protocol must be written by, or reviewed and approved by, a consultant certified by either of the following schemes:

- Environment Institute of Australia and New Zealand – Certified Environmental Practitioner (Site Contamination (CEnvP(SC))); or
- Soil Science Australia – Certified Professional Soil Scientist Contaminated Site Assessment and Management (CPSS CSAM)