



DOC24/683156-4

20 September 2024

NSW Department of Planning, Housing and Infrastructure
Attention: Lauren Clear

Via: Major Projects Portal

Dear Ms Clear

**Oven Mountain Pumped Hydro Energy Storage (SSI-12422997)
EPA comment on Response to Submissions**

Thank you for the request for advice from Public Authority Consultation (PAE-75035987), requesting the review by the NSW Environment Protection Authority (EPA) of the proponent's Response to Submissions (RTS) for the proposed Oven Mountain Pumped Hydro Energy Storage project (SSI-12422997) at 9823 Kempsey Armidale Road, Carrai NSW 2440.

On 12 October 2023, the EPA responded to a request to review the Environmental Impact Statement (EIS) for this proposal and requested further information on the following environmental matters (Reference: DOC23/826952):

- Greenhouse Gas Assessment;
- Waste Management;
- Water Quality; and
- Noise.

On 6 September 2024, the EPA commented in a letter addressing the greenhouse gas assessment in the proponent's RTS (Reference: DOC24/683156-3). This letter provides the EPA's comments on water quality and noise matters.

The EPA has reviewed the following documents:

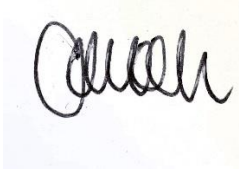
- *Oven Mountain Pumped Hydro Energy Storage Submissions Report* – Submissions Report (version 4) – EMM – 20 August 2024
 - Appendix C – Updated Mitigation Measures
 - Appendix D – Conceptual Landform Design of the Permanent Spoil Emplacement Areas
 - Appendix E – Surface Water Assessment
 - Appendix F – Groundwater Impact Assessment
 - Appendix G – Geochemistry Assessment
 - Appendix I – Noise Assessment
- *Oven Mountain Pumped Hydro Energy Storage Amendment Report* – Amendment Report (version 2) – EMM – 19 August 2024

The EPA has reviewed the documents referred to above and has determined that a majority of EPA's previous comments and concerns have not been addressed. Further information is required for the

EPA to complete an evaluation of the proposal and ensure that environmental matters are addressed appropriately. The matters that require further consideration are discussed in **Attachment A**.

Should you require any further information, please contact Afnan Fazli on (02) 82751455 or email environmentprotection.planning@epa.nsw.gov.au.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Chris Marsh', on a light-colored background.

Chris Marsh
A/Unit Head – Environment Protection Planning
NSW Environment Protection Authority

ATTACHMENT A – EPA detailed comments on RTS

NOISE

Blasting

The proponent has amended the proposal to include blasting for actioning the realignment of certain roads.

Further information required:

1. An indicative blasting schedule needs to be provided including an estimate of how many blasting instances are proposed. This activity will be limited to standard construction hours as per the *Interim Construction Noise Guideline* (ICNG – DECC, 2009)

Reasonable and feasible noise mitigation

In the EPA's October 2023 correspondence reasonable and feasible noise mitigation measures were highlighted, noting that the proposal is a greenfield project in a rural area which has the potential to impact receivers. The EPA regulates construction noise through the ICNG where proponents are to detail all reasonable and feasible (R&F) mitigation measures to manage any predicted exceedances of the project's Noise Management Levels (NMLs). Given there were exceedances for R2 and R27, the EPA requested further information for the proponent to demonstrate all R&F mitigation measures that will be put in place to manage any exceedances in NMLs.

The proponent responded in the RTS that there are no mitigation measures which are cost-effective. However, the EPA considers that a sufficient assessment of reasonable and feasible mitigation measures has not been provided to justify the proponent's proposal not to apply mitigation measures.

Further information required:

1. An assessment of reasonable and feasible mitigation is to be provided, including a justification for any measures that are or are not adopted for the project. The assessment should be consistent with the ICNG.

Construction works outside of recommended standard hours

Section 2.2 and 2.3 of the ICNG details providing justification for works outside of standard construction hours. The EPA requested in the October 2023 correspondence that justification be provided to support works being undertaken outside of recommended standard hours.

Section 2.3 of the ICNG provides guidance for construction works outside of recommended standard hours including reasons and activities which may be considered for works to be conducted outside of recommended standard hours. The justifications in the RTS do not appear to be consistent with the guidance in the ICNG, with the exception of concrete pours being undertaken for engineering purposes.

If 24/7 works are proposed, further detail and stronger justification consistent with the ICNG needs to be provided, including nominating which activities are proposed to be done outside of standard construction hours and a justification that they are required to be done during these times.

Further information required:

1. Additional justification that is consistent with the ICNG needs to be provided for the EPA to consider construction works outside of recommended standard hours.
2. All activities proposed to be conducted outside of standard construction hours are to be nominated and a justification consistent with the ICNG for why they are required to be undertaken outside of standard hours.
3. A proposed schedule detailing the estimated number and timing of concrete pours needs to be provided for the EPA to consider out of hours works for these activities.

WATER QUALITY

Groundwater

The submitted reports do not address the groundwater concerns identified in the EPA's October 2023 correspondence, and issues raised in the EPA's review of Environmental Impact Statement (EIS). Additionally, the proponent has amended the design and capacity of permanent spoil emplacement areas but has not suitably addressed or mitigated the potential impacts resulting from their construction.

There are no groundwater monitoring or mitigation measures presented in the Groundwater Impact Assessment or Permanent Spoil Emplacement report to evaluate groundwater quality impact management and mitigation, at the proposed Permanent Spoil Emplacement Areas (PSE). The RTS proposes that the Lower Reservoir PSE is amended with an increase in size and storage capacity. However, there are no current groundwater monitoring bores in the vicinity of both proposed PSE's and no additional groundwater monitoring bores are proposed to collect baseline data. Therefore, comparisons of infiltrated leachate to baseline groundwater quality cannot be determined.

Further information required:

1. Expand the groundwater monitoring network to assess impacts on groundwater during proposed and ongoing works including:
 - a) collect baseline data prior to determination by drilling new shallow groundwater monitoring bores upgradient of proposed spoil emplacements.
 - b) Include nitrates to the groundwater quality sampling suit for the Lower Permanent Spoil Emplacement where the proposed location for spoil from tunnel blasting activities to be placed.
 - c) It is noted that commitments are made to incorporate and update the existing monitoring network in Water Management Plans that are to be developed post determination. Inclusions of monitoring frequencies and groundwater quality constituents are also proposed.

The underlying geological layer across the plateau areas of the project consists of a weathered fractured unit consisting of Granodiorite and metamorphosed sedimentary rock. The shallow weathering of the bedrock unit has the potential to function as migratory conduits for any leachate generated by the PSE.

Further information required:

2. Provide details of the proposed low permeability compacted surface. A detailed description of liner options should be provided to allow an assessment of how leachate related groundwater impacts will be managed during the project lifetime including:
 - a) descriptions of lining options
 - b) preferred materials
 - c) source of material
 - d) permeability assessments
 - e) construction details and liner thickness
 - f) conditioning details
 - g) how the preferred liner option is to be verified prior to emplacement commencement.

Spoil Management

Large volumes of excavated rock and spoil with the potential to leach naturally occurring metals and other pollutants such as nitrate will require temporary and permanent emplacement. It is unclear if the spoil has been adequately characterised and the RTS has not demonstrated that the proposed methods to manage spoil will adequately manage leachate to avoid or minimise harm.

Further information required:

3. Provide further details of excavated rock and spoil, pollutants and management measures including:
 - a) adequately characterise the material that would be excavated under the proposal, including but not limited to:
 - i analysis of sufficient samples to characterise the volume and extent to be excavated
 - ii analysis of rock samples for all pollutants that have the potential to cause non-trivial harm, including aluminium and iron (i.e. mg/kg) for comparison with leachability testing and to inform erosion and sedimentation risk
 - iii addresses or clarifies reporting inconsistencies identified (i.e. ASLP results presented in two different tables, and BH4B sample/termination depths)

Note: characterisation may be supplemented by analysis of existing rock cores where appropriate.

- b) identify all pollutants that have the potential to be introduced into waste rock during its extraction
- c) develop suitable procedures for handling, storing, treating and disposing of excavated materials
- d) outline mitigation measures and contingencies to be put in place to manage runoff and potential pollution from excavated material yet to be classified
- e) identify the testing frequency, analytical suite and suitability criteria for excavated material prior to emplacement
- f) identify alternative handling and disposal options for material unsuitable for spoil emplacement areas
- g) identify contingency measures for unforeseen impacts from temporary waste rock stockpiles.