

12 June 2025

Shaun Williams
Industry Assessments
Planning and Assessment Division
Department of Planning, Housing and Infrastructure

Via: Major Projects Portal

**EPA Advice on Environmental Impact Statement Glendenning Road Data Centre –
SSD 73761707**

Dear Mr Williams

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 Glendenning Road Data Centre (Application SSD 73761707) at 2 Glendenning Road, Glendenning.

The EPA has reviewed the following documents:

- *Environmental Impact Statement: Glendenning Road Data Centre SSD-737617-7* (version 5) – Willowtree Planning – 18 March 2025 (**EIS**)
- *Ecologically Sustainable Development Report, 231262 GLENDENNING ROAD DATA CENTRE* - LCI consultants - 27 February 2025 (**ESD report**)
- *Glendenning Road Data Centre Air Quality Impact Assessment Issues for Public Exhibition – SSDA 73761707* – Northstar - 26 February 2025 (**AQIA**)

The EPA understands the proposal is for:

- construction and operation of three (3) five (5) storey data centre buildings (DC01, DC02 and DC03) and associated infrastructure, with a total power consumption of approximately 235MW.
- Staged construction of the data centre buildings, with total diesel fuel storage of 2,736,030L within underground bulk fuel storage tanks and generator day tanks; 97 back-up diesel generators, 2940 kg lithium batteries in-use, three internal substations & four oil type transformers.

Based on the information provided, the proposal will require an environment protection licence under the *Protection of the Environment Operations Act 1997* (POEO Act) for the scheduled activity of Chemical storage.

The EPA has reviewed the EIS and further information is required to allow us to complete our assessment. The EPA's comments and recommendations are detailed in **Attachment A** and relate to:

- Greenhouse Gas (GHG) Assessment

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.

Phone:
131 555

Email:
info@epa.nsw.gov.au

Website:
epa.nsw.gov.au

Visit:
6 Parramatta Square
10 Darcy Street
Parramatta NSW 2150

Mail:
Locked Bag 5022
Parramatta NSW 2124

- Noise
- Waste Storage
- Fire and emergency response

If you have any questions about this request, please contact Afnan Fazli via email at environmentprotection.planning@epa.nsw.gov.au.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Christie Jackson', written in a cursive style.

Christie Jackson
Unit Head – Environment Protection Planning
NSW Environment Protection Authority

ATTACHMENT A – EPA requirements and comments on Glendenning Road Data Centre EIS

Greenhouse Gas Assessment

The EPA has reviewed the GHG component of the ESD report and has the following comments:

1. Consistent with the requirements in the Large Emitters Guide, input data and assumptions used to estimate GHG emissions should be provided and justified.

Estimated greenhouse gas emissions for stages DC01, DC02 and DC03 are provided in Section 5.5 of the ESD report. The ESD report specifies that values for DC02 and DC03 are based on interpolation/extrapolation of emissions for DC01. However, it is unclear if these values are representative of the planned operational throughput (e.g., projected demand) or as designed (maximum demand).

Consistent with section 4.4.1 of the *NSW Guide for Large Emitters* (large emitters guide), the GHG assessment must clearly document the assumptions, data and methods applied in the estimation of emissions. It must provide sufficient supporting information to allow the calculation of scope 1 and 2 emissions to be replicated, with information disaggregated for each operation. For example, the GHG assessment should include the number of backup generators, quantity of fuel consumed for the testing regime and annual electricity consumption. The EPA is requesting additional information since the ESD report hasn't included input data and assumptions used to estimate GHG emissions.

Recommendation:

- a. Consistent with the requirements in the large emitters guide, sufficient supporting information must be provided to allow the calculation of scope 1 and 2 emissions to be replicated.
- b. The GHG assessment should include a discussion and proof that scope 2 emissions have been estimated using the most recent projected emission factors for Australia's electricity grid.

2. The revised GHG assessment should include emission reduction goals and more comprehensive evaluation of GHG mitigation measures.

The GHG assessment did not include a discussion on emission reduction goals. Furthermore, the ESD report hasn't demonstrated that the proposed GHG abatement measures have been evaluated against the mitigation hierarchy in the large emitters guide.

The EPA expects applicants to demonstrate in the revised GHG assessment how they have considered and applied the mitigation hierarchy shown in Figure 1 of the large emitters guide. To demonstrate use of GHG mitigation hierarchy, the revised GHG assessment should include details of feasibility assessment of proposed GHG mitigation measures in accordance with section 4.3.2 of the large emitters guide.

The revised GHG assessment should also include the applicant's commitment to purchase electricity that is 100% backed by renewable sources during the project's life.

Recommendation: The applicant should discuss and confirm their commitment to purchase electricity that is 100% backed by renewable sources during the project's life.

3. Applicant to be informed that the EPA considers indirect emissions due to electricity use within the premises as Scope 2 emissions.

If approved, the proposal will trigger environment protection licence requirements under '*chemical storage*' in accordance with Schedule 1 of the *Protection of the Environment Operations (POEO) Act*.

The EPA's current position is that for licensing and assessment purposes, indirect GHG emissions due to electricity use (by the operator and lessees) within a licensed premises are Scope 2 emissions.

This is consistent with the NSW EPA's regulatory approach whereby the EPA regulates all activities and operations within the premises. The licensee is responsible for managing emissions and potential environmental impacts due to activities undertaken within a licensed premises.

It is the EPA's position that the applicant:

- can influence the final project design to avoid, reduce and substitute emissions as far as is feasible and practicable.
- will have the power to purchase electricity that is backed by renewable sources for all operations within the premises.

Recommendation: The applicant be made aware that for licensing and assessment purposes, the EPA considers that indirect GHG emissions due to electricity use (by the operator and lessees) within a licensed premises are Scope 2 emissions. This does not preclude the applicant from following relevant guidelines or fulfilling their obligations under other regulatory frameworks.

4. Applicant should submit a revised GHG assessment prepared consistent with the requirements in the *NSW Guide for Large Emitters*.

The proposed development requires an environment protection licence (EPL) as they will be storing more than 2,000 tonnes of diesel once DC03 has been constructed. Based on the power consumption forecast of 235 MW, the proposed data centre (DC01, DC02 and DC03) is likely to result in total Scope 1 and Scope 2 emissions above the 25,000 tonnes CO₂-e threshold in the large emitters guide. Therefore, the EPA is to consider the requirements of the large emitters guide when assessing this application.

As per points above, the ESD report does not include sufficient information and has not been prepared consistent with the large emitters guide. Prior to determination, the Applicant should submit a revised GHG assessment consistent with requirements in the large emitters guide.

Recommendation:

- a. A revised GHG assessment consistent with principles and requirements in the *NSW Guide for Large Emitters* should be provided prior to determination.
- b. If the total Scope 1 and Scope 2 emissions are predicted to be more than 100,000 tonnes CO₂-e at any time over the operational life of the project, the mitigation assessment is to be verified by an independent expert reviewer. This is consistent with section 4.7 of the large emitters guide.

Noise

The EPA has reviewed the noise impact assessment (NIA) and it does not appear to fulfill the requirements of the *Noise Policy for Industry* (EPA 2017, NPfI), with issues identified concerning background noise monitoring, consideration of annoying characteristics, assessment locations, noise modelling inputs and the assessment of impacts.

1. Licensing Considerations

The EPA notes that the premises will require an EPL due to the capacity to store diesel fuel, and not electricity generation. Operational noise associated with all activities carried out on the premises are to be assessed and will be regulated through the EPL.

Recommendation: The EPA notes that as the premises will be required to be licensed under the POEO Act, operational noise associated with all activities on the premises is required to be assessed. This includes assessment of emergency generators.

2. Exceedances of project noise trigger levels

Table 27 of the NIA states that *“Where the calculated noise levels are within +/- 2 dB of the specified level given above, the criteria will be considered achieved. The reason for this is because a 1-2 dB difference is difficult to perceive subjectively.”* The EPA notes that this statement is not in line with the NPfI. The NPfI requires that if predicted noise levels are above the project noise trigger level, all feasible and reasonable mitigation is applied prior to assessment of residual impacts.

Additionally, predicted noise levels for Scenario 06 have not been compared against the project noise trigger levels. Based on the predicted noise levels, exceedances of up to 17dB are predicted, and as such, all reasonable and feasible mitigation should be considered.

The EPA notes that the consideration of ‘reasonable’ mitigation involves considering whether the overall noise benefits outweigh the overall adverse social, economic and environmental effects, and can include a discussion of the duration and frequency of the predicted exceedances along with any other relevant consideration. This level of mitigation may not be required for the assessment of emergency situations.

Recommendation: The EPA requests the Applicant compare all predicted levels against the Project Noise Trigger Level (PNTLs), and where exceedances are identified, consider all reasonable and feasible mitigation before assessing residual impacts.

3. Modelling inputs

Under Section 5.4, the descriptions of Scenarios 4 and 5 state that *“The modelled location of the generator / load bank represents the worst-case assessment for this scenario. The modelled generator / load bank location is not intended to restrict generator testing operations to this one specific location.”* The modelled generator is presented in Figure 13 as located in the northwestern corner of the proposal. While this appears to be the worst-case assessment scenario for NCA 1, for NCAs 2 and 3 the worst-case generators are likely to be different due to their different orientations to the premises. As the generator testing is not intended to be restricted to that one specific location, the assessment indicates an unknown level of risk, which should be addressed by further consideration of the worst-case configuration for NCAs 2 and 3.

Recommendation: The EPA requests the Applicant provides the predicted noise levels for the worst-case generator testing scenarios proposed.

4. Assessment locations

Predicted noise levels for emergency generator operation (Scenario 6), presented in Table 28 of the NIA, shows that there are multiple exceedances of the PNTLs. The noise contours presented in Appendix D indicate that there are additional receivers exceeding the PNTLs that have not been included in the extent of the maps. The assessment should identify all receivers predicted to be above the PNTL for each assessed scenario.

Additionally, the noise contours in Appendix D indicate that there are receivers further set back from Phillip Parkway receiving similar impacts to the assessed receivers adjacent to the road. Since these set back receivers are further from these roads, the existing traffic noise level correction applied may result in more stringent PNTLs or may not be applicable. The predicted noise levels for these receivers have not been tabulated, and the EPA cannot confirm whether the PNTLs would be achieved without the inclusion of the existing traffic noise correction. As such, there is a risk that the most affected receivers (with the greatest difference between PNTL and predicted impact) may not have been identified.

Recommendation:

- a. The EPA requests the Applicant provides the predicted noise levels for all receivers predicted to experience noise levels above the PNTLs for all assessed scenarios.
- b. The EPA requests the Applicant identify and assess impacts against the most-affected receivers. In practice, this may not just be the closest receivers, as the receivers further away from roads may experience similar impacts from the premises with less influence from the existing traffic noise level correction in the derivation of PNTLs.

5. Annoying characteristics of noise

Section 5.6 is unclear on whether the third-octave measurements taken to inform the assessment of low frequency noise includes the operation and testing of the emergency generators. Annoying characteristics from noise associated with all activities undertaken on the premises are to be assessed.

Recommendation: The EPA recommends that DPHI request the Applicant to clarify whether all relevant noise sources associated with the proposal have been included in the assessment of annoying characteristics of noise.

6. Background noise monitoring

The unattended noise monitors used to determine background noise levels for NCA 1 and 2 appear to be in or directly adjacent to foliage. Fact Sheet B of the NPfI specifically states that "Data loggers should be sited as far away from trees as practicable to avoid noise produced by wind blowing through foliage". The microphone also appears to be located higher than the 1.2 - 1.5m height above ground level specified in Fact Sheet B and potentially influenced by a greater exposure to traffic noise. As such, there is potential that the background noise levels used to inform the PNTLs are excessively influenced by foliage noise and/or traffic noise, and as a result, may be unrepresentative of the surrounding environment.

Recommendation: The EPA requests the Applicant justify whether the background noise monitoring undertaken for NCA 1 and 2 is appropriate.

7. Construction Noise

Section 4.4 of the NIA notes that out-of-hours works may be required where works '*are determined to comply with the relevant Noise Management Level (NML) at the most affected sensitive receiver*'. Section 2.3 of the Interim Construction Noise Guideline (ICNG) does not include this as a reason for undertaking works outside standard construction hours.

Recommendation: The EPA recommends the applicant considers whether any request for works outside standard construction hours meets the requirements outlined in Section 2.3 of the ICNG.

Waste Storage

The applicant has undertaken a Preliminary Risk Screening Report (Appendix 22) rather than a Preliminary Hazards Assessment and a Dangerous Goods Compliance Report. It has identified that within the three dedicated battery storage areas across the three data centre buildings which will hold a maximum quantity of 6000 kg of new and 6000kg of spent Lithium-ion batteries. The report states that these batteries are not considered dangerous goods since they are connected to the electrical circuit and in-use. It is unclear how this applies to both the new and the spent Lithium-ion batteries and details about disposal of the spent batteries.

Lithium batteries can present a fire risk due to thermal runaway. In addition, the proposal may trigger clause 42(3) Waste storage under Schedule 1 of the POEO Act should there be more than 5 tonnes of hazardous waste (e.g. spent Lithium-ion batteries) stored at the site at any one time. The reports indicate that a maximum quantity of spent Lithium-ion batteries of 6000kg may be stored in the three storage areas across the three data centre building.

Recommendation: The EPA requests the Applicant clarify the expected quantity of spent Lithium-ion batteries stored at the site at any one time.

Fire and emergency response

The Civil and Stormwater Design Report (Appendix 20) indicates that an On-Site Detention (OSD) system has not been provided for the proposed development as the subject site is located in an OSD-exempt location as confirmed by Blacktown City Council. This report covers spill containment for the transformer room should oil spill occur including fire runoff water and measures for bulk fuel tank fill bays.

The proponent's reports refer to AS 1940:2017 for fuel storage, including secondary containment and fill points. As per the Waste Storage category above, Lithium batteries can present a fire risk due to thermal runaway. Should an emergency fire occur, run-off from water and fire-fighting foam may end up in the stormwater drain unless appropriate measures are in place to manage this situation.

Recommendation: The EPA requests the Applicant consider the emergency situation of a potential battery fire and what measures will be appropriate to manage the potential risk of firefighting run-off.