TfNSW reference: WST24/00164/001, SF2024/084864
DPHI reference: SSD-70055958

7 May 2024

Department of Planning, Housing & Infrastructure
Locked Bag 5022
PARRAMATTA NSW 2124

Attention: James Bellamy (james.bellamy@dpie.nsw.gov.au)

SSD-70055958 – Nyngan Battery Energy Storage System – East Nyngan Road, Nyngan NSW 2825

Thank you for referring the abovementioned request for SEARs to Transport for NSW (TfNSW) seeking comments in relation to the proposed Nyngan Battery Energy Storage System (BESS) located within the Bogan Shire Local Government Areas (LGA).

TfNSW has reviewed the Scoping Study prepared for Nyngan BESS by Pitt and Sherry dated 22 April 2024 and provides advice in **Attachment A** to assist in the preparation of the EIS and supporting documentation for the future lodgement of the application with the Department of Planning, Housing and Infrastructure.

If you have any questions or wish to discuss this matter further, please contact Ruvimbo Timba on 1300 019 680 or email development.renewables@transport.nsw.gov.au

Yours faithfully,

Alexandra Power
Team Leader Development Services Renewables
Community and Place
Region West Regional & Outer Metropolitan Division

Attachment A

SSD-70055958 – Nyngan Battery Energy Storage System – East Nyngan Road, Nyngan NSW 2825

Context

-The site is located in the Bogan Shire LGA in the suburb of Nyngan and spans across multiple lots.

- The proposed site access is off East Nyngan Road (local road).

- The development will have a peak work force of 80 workers.

- The construction time frame will be between 14 to 16 months with a peak construction period of between 4 to 6 months.

- The proposed OSOM route has not been finalised.

- At present there is limited information on the proposed traffic generation.

TfNSW advice

The Environmental Impact Study to be submitted as part of the environmental planning process will need to include the following:

Requirements for the Environmental Impact Statement

In relation to the EIS TfNSW requires the identification of ancillary infrastructure such as Electricity Transmission Lines that are crossing the state classified road network or rail infrastructure within TfNSW remit. In respect to this matter the following information is required:

- The heights or depths (under boring) a clearance envelope of 6.5m is required for OSOMs,
- The method for construction,
- Potential traffic mitigation measures for construction,
- location of infrastructure within or adjacent to the road reserve,
- If excavation or fill will be required adjacent or within the road corridor, and
- Access required to construct and maintain the infrastructure.

Access points or access tracks required for Electricity Transmission Lines (ETLs) or other infrastructure.

- Access points or access tracks required for ETLs or other infrastructure will require the same level of assessment as the primary project access point and will need to address the matters outlined within this letter for this type of access with the state classified road. Strategic designs and swept path analysis will be required for these types of accesses.

Traffic Impact Assessment
The TIA is to be tailored to the scope of the proposed development and include, but not be limited to, the following:

- Traffic volumes including:
  - Existing background traffic based on traffic surveys undertaken at the intersection with the state classified road network and collected in accordance with AGtTM Part 3 with the relevant raw data provided with the TIA,
  - Project-related traffic primarily for peak of construction (worst-case scenario),
  - Projected cumulative traffic at peak of construction.
  - Inclusion of the growth rate applied to the year of peak of construction.
  - Assessment of the turn warrants within AGtTM Part 6. Applying the worst-case scenario base case (network AM/PM peak), annual growth rate, cumulative background and turning traffic occurring simultaneously at peak of construction and utilising the AM/PM project peak hour during peak of construction.
  - Assess the Safe Intersection Sight Distance (SISD) in accordance with Part 4A of AGtRD and TfNSW supplements.
  - Provide swept path analysis for the design vehicle in accordance with Austroads identifying the concurrent movements in all turn directions at the key intersections with the state classified road that form part of the project routes.
  - Identify the necessary road network infrastructure upgrades that are required to cater for and mitigate the impact of project related traffic at the key state classified road intersections that form part of the project construction routes the required treatments must be informed by the requirements of this SEARs (for instance, road widening and/or intersection treatments).

    In this regard, strategic design drawing/s are to be submitted with the SSD application for any identified road infrastructure and access upgrades. Any identified road infrastructure upgrades will need to be to the satisfaction of TfNSW. Works must be appropriately designed in accordance with Austroads Guide to Road Design for the existing posted speed limit, including provision of Safe Intersection Sight Distance (SISD).

    Note: The design needs to comply with TfNSW Strategic design requirements for DAs, TfNSW technical directions, supplements, corridor strategies and Austroads and any other applicable TfNSW policies/strategies. To assist you in preparing the designs, please refer to link below:

    https://roads-waterways.transport.nsw.gov.au/business-industry/partners-suppliers/documents/planning-principles/strategic-design-fact-sheet-02-2022.pdf

- Traffic characteristics including:
  - Number and ratio of heavy vehicles to light vehicles,
  - Peak times for existing traffic,
  - Peak times for project-related traffic including commuter periods,
  - Proposed hours for transportation and haulage,
  - Interactions between existing and project-related traffic.

- Identify the heavy vehicle design vehicle and OSOM that do not require an NHVR permit.
- Identify the single vehicle trips required for each type of vehicle required to access the site during the AM/PM project peak and network peak.
- Include traffic volumes associated with input and outputs required during the construction of the development.

- Capacity analysis using *Austroads Guide to Road Design* at intersections with classified (State) road/s, and where relevant, analysis of any other intersections along the proposed transport route/s.
- Cumulative impacts:
  - Identify and assess implications of any road and rail projects that may occur during OSOM movements on proposed OSOM routes.
  - Identify projects that will have overlapping construction periods and assess the cumulative traffic impacts with emphasis on the following:
    - Cumulative impacts from traffic generated from construction workforces in terms of origin-destination routes, access, AM/PM peaks where they overlap with other projects.
    - Cumulative impacts of heavy vehicle movements in terms of AM/PM peaks and routes where there is an overlap with other projects.
    - Cumulative impacts and consideration in relation to timing of movements of OSOMs where other projects will utilise the same routes as proposed for this development. Please note, given the high number of renewable energy and other large scale projects requiring haulage of OSOM components on the road network, restrictions, and limitations on OSOM movements may be in imposed. In this regard, it is recommended that you engage earlier with TfNSW's Freight Branch – Special Permits team to discuss access needs and timing.
- Identify accommodation (and transport) needs and facilities available within the local region, to service the project staff, in addition to understanding the cumulative impacts of concurrent accommodation (and transport) needs of staff from other projects. Details of measures employed to promote and enforce safe commuter traffic movements are to be included.
- Road safety assessment of haulage route/s.
  - Where road safety concerns are identified at specific locations on haulage routes, TfNSW suggests the TIA be supported by a targeted Road Safety Audit undertaken by suitably qualified persons in accordance with *Austroads Guidelines*.
- A review of crash data along the identified transport route/s for the most recent 5 year reporting period and an assessment of road safety along the proposed transport route/s considering the safe systems principles adopted under *Future Transport 2056.*

- Project schedule:
  - Hours and days of work, number of shifts and start and end times,
  - Identify the approximate project's targeted construction commencement date/s, scheduling, and peak of construction.
  - Identify the phases and stages of the project, including construction, operation and decommissioning.
- The origins, destinations and routes for:
  - Commuter (employee and contractor) light vehicles and pool vehicles (including. shuttle buses),
  - Heavy (haulage) vehicles,
  - OSOM vehicles.
- Impact on rail corridors and level crossings along transport route/s detailing any proposed interface treatments, where applicable.

Concept Level Route Analysis

- Heavy vehicle and OSOM routes:
  - In addition to the requested TIA, Separate Concept-level route analysis based on high-level swept path drawings to Identify the return routes for OSOM movements and indicate locations where civil works are needed and indicative pinch points.
  - The TIA is required to include details of OSOM movements, including volumes, times for OSOM movements to occur and identify the location of pull-over bays / rest areas on OSOM routes (including GPS coordinates) and confirmation such facilities can physically accommodate (in terms of size, width and accessibility) the largest OSOM vehicle.
  - Undertake a logistics route analysis that includes:
    - Details of the road geometry and alignment along the identified transport route/s, including existing formations, crossings, bridges, intersection treatments and any identified hazards, including:
      - Available sight distances at the site access and nearby intersections and any constraint to achieving the required sight distance for the posted speed limit.
      - An assessment of turn treatment warrants in accordance with *Austroads Guide to Traffic Management* Part 6 and *Austroads Guide to Road Design* Part 4A for intersections on identified transport route/s, identifying the existence of the minimum basic turn treatments and addressing the need for any warranted higher order treatments.
      - Bridge Assessments for any at risk bridges on the classified road network due to dimensions and weight of OSOM vehicles.
      - Swept path analysis demonstrating the largest design vehicle can enter and leave the development, and simultaneously pass through intersections along the proposed transport route/s.

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The design vehicle templates used in the swept path analysis software are also requested in order for TfNSW to review the performance within the software (e.g. Autodesk Vehicle Tracking or Transoft AutoTURN).

- Highlighting each at-risk road structures that the haulage route crosses including bridges, traffic signals, signage, major culverts, and minor culverts that may not meet the desirable cover to cater for proposed axle loads.
- National Heavy Vehicle Regulator (NHVR) approved routes identified on the Restricted Access Maps (RAV MAP) are to be utilised for the heavy vehicle routes for the proposed development. Please note NHVR permits do not cover civil works required along any proposed OSOM route. Any works required along the OSOM route must be included within the scope of works in the SSD to ensure the development is constructable.

– Identify and provide the following measurements parameters of OSOM components / materials to be moved:

- Identify types and numbers of high risk OSOM vehicles proposed to be used for the project.
- Overall combination load length, width, height and mass (gcm, tare, weight to axle and payload) for components and nominated vehicles.
- Wheelbase dimensions,
- Maximum trailer articulation angle(s),
- Minimum overhang heights above the road surface,

Strategic Design

- Identify the necessary road network infrastructure upgrades that are required to cater for and mitigate the high risk OSOM movements along the OSOM route that are on the state classified road network (for instance, road widening and/or intersection treatments).

  In this regard, strategic design drawing/s are to be submitted with the SSD application for any identified road infrastructure and access upgrades. Any identified road infrastructure upgrades will need to be to the satisfaction of TfNSW and Council. Works must be appropriately designed in accordance with *Austroads Guide to Road Design.*

  Note: The design needs to comply with TfNSW Strategic design requirements for DAs, TfNSW technical directions, supplements, corridor strategies and Austroads and any other applicable TfNSW policies/strategies. To assist you in preparing the designs, please refer to link below:

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