

TfNSW reference: WST24/00236, SF2024/113475
DPHI reference: SSD-71855714

27 June 2024

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

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

SSD-71855714 – Narrabri Solar Farm - 479 Logans Lane, Narrabri; Request for Secretary's Environmental Assessment Requirements (SEARs)

Thank you for referring the abovementioned request for SEARs to Transport for NSW (TfNSW) seeking comments in relation to the proposed Narrabri Solar Farm located within the Narrabri Local Government Area (LGA).

TNSW has reviewed the Scoping Study prepared for Narrabri Solar Farm by NGH dated June 2024 and provides advice in **Attachment A and Attachment B** to assist in the preparation of an Environmental Impact Study (EIS) and supporting documentation for future lodgement with the Department of Planning, Housing and Infrastructure.

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

Yours faithfully,



Alexandra Power
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SSD-71855714 – Narrabri Solar Farm - 479 Logans Lane, Narrabri

Context

- The site is located in the Narrabri LGA.
- Access will be provided via Bald Hill Road (local road).
- The construction period will be between 12 to 18 months.
- The peak workforce will have 100 workers.
- The proposed haulage route has not been finalised. Two options are being explored from Port of Newcastle and Port of Brisbane.

TfNSW advice

Following review of the *Scoping Report*, TfNSW have identified and recommends the following issues be addressed in the Environmental Assessment:

- A Traffic Impact Assessment (TIA) prepared in accordance with the methodology set out in section 2 of the *RTA Guide to Traffic Generating Developments 2002* and part 12 of *Austroads Guide to Traffic Management* including:
 - Hours, days and periods of construction.
 - Schedule for phasing/staging of the project (including pre-construction, accommodation and ancillary infrastructure works) and identifying the traffic volumes for each stage.
 - Traffic volumes:
 - Surveyed existing background traffic at key intersections. Traffic surveys are to be in accordance with Part 3 *Austroads Guide to Traffic Management* with survey raw data included in the TIA.
 - Project-related traffic volumes (measured as vehicle trips per an hour and per a day) for each stage including pre-construction, construction, operation and decommissioning and identifying the peak period for traffic volumes.
 - Traffic volumes are to also include a description of:
 - Ratio of light vehicles to heavy vehicles.
 - Differentiation of Over Size/Over Mass (OSOM) that do or do not require an NHVR permit proposed times of operation on the State road network.
 - Peak times for existing traffic.
 - Peak times for project-related traffic.
 - Transportation hours.
 - Project related traffic interaction with existing and projected background traffic with annual growth rate applied linearly.
 - The origin, destination and routes for:
 - Employee and contractor light traffic.
 - Heavy vehicle traffic.
 - OSOM vehicle traffic.
 - OSOM high risk loads as identified on TfNSW's website (link below)
<https://www.transport.nsw.gov.au/system/files/media/documents/2022/transport-management-plan-fact-sheet.pdf>

Note: Transport routes are to be identified and a risk assessment undertaken identifying hazards and proposed risk mitigation measures to be employed. Examples of hazards include (but

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not limited to) rail level crossings, low clearance structures over roads and areas identified as having a crash history.

Note: A high risk OSOM loads route analysis is required as part of the TIA. For further information on undertaking a concept route analysis for these movements please refer to Attachment B.

- A description of all non-high risk OSOM vehicles and materials to be transported. The shortest and least trafficked route is to be given priority for movement of materials and machinery to minimise risk and impact to other motorists, so far as is reasonably practicable.
- The impact of generated traffic and measures employed to ensure efficiency and safety on the public road network during construction, operation and decommissioning of the project. This includes enforcement to managing traffic volumes, driver behaviour and access paths to site.
- A turn warrant assessment for the worst-case scenario (ie peak project traffic volumes applied to the identified background traffic at the construction and background peak hour) in accordance with Part 6 of *Austroads Guide to Traffic Management* is to be undertaken at identified key intersections on project routes, project site access and site access points to access ancillary infrastructure.
- The TIA is to detail improvements to the road network, such as road widening and intersection treatments, to cater for and to mitigate the impact of project-related traffic (including accommodation and ancillary infrastructure components) at key intersections with State road network. Proposed road facilities, access and intersection treatments are to be identified and conform with *Austroads Guide to Road Design* and TfNSW Supplements, including safe intersection sight distance. Strategic designs are to include a swept path analysis using the largest vehicle passing through the intersection(s). To assist the proponent in preparing strategic designs, the below link is provided:

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

Note: Swept paths for OSOM vehicles on, entering and existing the State road network are to be on sealed road pavement.

Note: It is the proponent's responsibility to acquire and dedicate land required to accommodate road infrastructure including, but not limited to, footways, structures, stormwater drainage, batters, maintenance access and utilities.

- Local climate conditions that may affect road safety for vehicles used during construction, operation and decommissioning of the project (eg fog, wet weather, etc)
- Measures to be employed to ensure a high level of road safety for daily staff commutes between accommodation and the construction site, specifically addressing the impacts of unsafe driver behaviour and driver fatigue for all stages of the project and how measures employed will be enforced.
- Details of emergency access/egress, including details of:
 - How the access will be managed (i.e gates) to prevent the use of the access by non-emergency related vehicle movements.
 - Identify emergency design vehicle and suitability of the access to accommodate.
 - Provision of sufficient storage at the throat of the access to allow emergency vehicle(s) to store within the access and not within the through lane or shoulder.

Concept Level Route Analysis required for High Risk OSOM

- Route assessment(s) is required for high risk OSOM (as defined on TfNSW website) to deliver components for the project. The concept level route analysis must include:
 - The port or point of origin and the entire route to the site access or intersections required to facilitate the project's high risk OSOM movements.
 - A TIA providing details of all high risk OSOM loads and vehicle configurations for the project.
 - The timeframe and sequencing within the schedule for move
 - Location of pull-over bays / rest areas along high risk OSOM routes (including GPS coordinates) and using swept paths, demonstrate high risk OSOMs can be physically accommodated (in terms of size, width and accessibility) and that physical access and parking is available for other road users.

Expanding on the points above, the concept route assessment is required to include:

- Details of road geometry and alignment along identified transport route/s, such as existing formations, crossings, bridges, intersection treatments and any identified hazards, including:
 - Bridge and culvert assessments 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 site and simultaneously pass through intersections along the proposed transport route/s.
 - 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.

Note: 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).

- 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 type, configuration, load and vehicle configuration:
 - 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.
 - Vehicle configurations.
 - Traffic mitigation measures or road works, modifications, or road upgrades to facilitate the movement of the high risk OSOM(s) associated with the project.
 - Potential high level mitigation measures or commitments to mitigate known traffic, safety and impacts to road users along high risk OSOM route(s) (i.e school bus routes, mining shift changes, TSRs, harvest periods and events).
- Identify and assess implications of any road and rail projects that may be under construction during the indicative schedule for high-risk OSOM movements.

Note: NHVR permits do not cover road works or upgrades and environmental approvals required along any proposed OSOM route. Any road works or upgrades works must be included within the scope of works in the State Significant Development approval to ensure works are constructable.

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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 imposed. In this regard, it is recommended that you engage earlier with TfNSW's Development Services Renewables team to discuss requirements of the route assessment.

Strategic concept designs

- Identify the necessary road upgrades and scope to achieve compliance with Austroads and TfNSW requirements to mitigate the traffic, safety, efficiency and impacts to TfNSW assets on the state classified road network associated with the project. 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*.
- Strategic concept designs will need to be accompanied by swept paths for the largest vehicle required to access the access point or intersection. The swept paths must demonstrate that the largest vehicle can turn concurrently in all turn directions without crossing into the incorrect lane, tracking off the proposed/existing pavement and within the existing intersection treatments (where applicable). Swept paths will be required for the high risk OSOM to demonstrate that the high risk OSOM can be delivered within the existing or proposed pavement and if further pavement widening is required to accommodate these movements.
- The strategic concept designs must identify any acquisition required to facilitate the scope of the road upgrades and road works. The Developer will be responsible for the dedication and acquisition of land if required to accommodate the road infrastructure including, but not limited to, footways, structures, stormwater drainage, batters, maintenance access and utilities, to the satisfaction of TfNSW.

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>