Transport for NSW

WST23/00206/01| SF2023/241305

Energy Assessments
Department of Planning & Environment
Locked Bag 5022
PARRAMATTA NSW 2124

Attention:Kurtis Wathen

21 December 2023

SSD-65479959: Request for Secretary's Environmental Assessment Requirements (SEARs) for Stratford Pumped Hydro for Gloucester, within Mid-Coast Council LGA

Dear Kurtis Wathen,

Thank you for referring the abovementioned request for SEARs via the NSW Major Projects Planning Portal on 14 of December 2023 inviting comment from Transport for NSW (TfNSW).

TfNSW has reviewed the Scoping Report, prepared by Yancoal dated November 2023 prepared for the prospective Stratford Pumped Hydro and Solar development comprising:

- an underground pumped hydro power station and upper and lower reservoirs;
- a solar photovoltaic energy generation facility with an estimated capacity of 330 MW; and
- associated infrastructure, including grid connection and ancillary infrastructure.

TfNSW key interests are the safety and efficiency of the transport network, the needs of our customers and the integration of land use and transport in accordance with the *Future Transport Strategy 2056*.

To ensure that TfNSW's key interests are addressed, TfNSW requests that any future application be submitted with an Environmental Impact Assessment (EIA) containing a Traffic Impact Assessment (TIA), prepared by a suitably qualified person/s in accordance with the Austroads Guide to Traffic Management Part 12, Australian Standards and any complementary TfNSW Supplements, and *Roads and Maritime Guide to Traffic Generating Developments*. The TIA should contain information listed in Attachment A: Traffic Impact Assessment (TIA).

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.

In addition to the requested TIA, due to the significant scope of the transport logistics for OSOM transit, a concept-level route analysis is required to be provided with the SSD application based on high-level 3D swept path analysis to generally indicate locations where civil works are likely to be required. The route analysis is to include at a minimum the following:

- Identify the OSOM route to be utilised and any indicative pinch points within the network vertically, horizontally and laterally and the potential civil works required to accommodate the OSOM vehicles.
- The logistics assessment is to highlight 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.

- Provide bridge assessments for any at risk bridges on the classified road network due to the dimensions of the laden load.
- Identify Pull-over Bay/layby locations (including GPS coordinates) and whether the pull-over bay/layby can physically accommodate the laden components (in terms of size, width and accessibility) for the largest OSOM laden components.
- The design vehicle templates used with the swept path analysis software are also requested for TfNSW to review the performance within the software.
- Provide the following measurements parameters of the OSOM components / materials to be moved:
  - Identify all the types of OSOM vehicles proposed to be used for the project.
  - Overall (component and nominated vehicles) combination length, width, height and mass.
  - Maximum component length, widths, heights and mass, maximum load heights (clearance to overhead obstructions such as structures, utilities and vegetation),
  - Wheelbase dimensions,
  - Maximum trailer articulation angle(s),
  - Minimum overhang heights above the road surface,
  - Axle loads and axle group loads in terms of both tonnes and Equivalent Standard Axles (refer to Austroads Guide to Pavement Technology).
- In relation to Port of Newcastle, OSOM (vehicles requiring escort) not exceeding 5.3m must incorporate the Inner-City Bypass as a part of the route assessment.
- Provide an indicative timing for commencement of OSOM movement.

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.

It should be noted that NHVR permits do not cover the civil works required along any proposed OSOM route. Any works required along the OSOM route must be included within the scope of works for the SSD to ensure that the development is constructable.

TfNSW encourages early discussions with proponents regarding the traffic and network matters associated with State Significant Development. If you wish to discuss this matter further, please contact the undersigned on ph. 1300 019 680.

Yours faithfully,

Alexandra Power
Team Leader Development Services (Renewable Resources)
West Region | Community and Place
Regional and Outer Metropolitan

Attachment A: Traffic Impact Assessment (TIA)

The purpose of the TIA is to address the impact of traffic generation on the public road network and measures employed to ensure traffic efficiency and road safety during construction, operation and decommissioning of the project.

The requested TIA should be tailored to the scope of the proposed development and include, but not be limited to, the following:

- Identify the timeframe for the schedule of works (commencement year and completion year) overlapping timeframe of components during construction (to capture worst case scenario) and identify the construction hours for the project.
- Detailed plans identifying the proposed location of any:
  - Project-related infrastructure within and outside of the project boundary.
  - Transmission line infrastructure, or any other project-related structures, within a road reserve. Include demarcation of local and classified road reserves.
  - Identify the key access roads with the classified road network required for the project (including any access required from classified road network for components being constructed outside of the project area) and justification of additional access required to a classified road in accordance with section 2.119 of *State Environmental Planning Policy (Transport and Infrastructure) 2021*.
  - The Scoping Report identifies that ancillary infrastructure and temporary facilities are to be provided on-site including (but not limited to) laydown areas. The TIA should identify the source for input materials and quantify the traffic generation associated with the haulage of the source materials.
- Cumulative impacts:
  - An assessment should be undertaken as a part of the EIS and TIA to identify the projects that will have overlapping construction periods and assess the cumulative traffic impacts with emphasis on the following:
  - The cumulative impacts from traffic generated from the construction workforces in terms of the origin-destination routes, access, AM/PM peaks where there is overlap with other projects.
  - The 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 the timing of movements of OSOMs where other projects will be utilising the same routes as proposed for this development.
- Heavy vehicle and OSOM routes:
  - Identify the return routes for OSOMs.
  - 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.
  - Further include details on the number of OSOM movements, the intended time for OSOM movements to occur, and GPS coordinates along the proposed routes for pinch points, traffic management measures and pull-over bays / rest areas along the OSOM routes.
  - Identifying road and rail projects occurring along the OSOM route within the anticipated schedule for the movement of the OSOM components. Inclusive of any impacts (e.g civil works or obstructions) that could impede the movement of the OSOM components due to the concurrent road and rail projects occurring along the nominated OSOM route(s).

- Project schedule:
  - Hours and days of work, number of shifts and start and end times,
  - Phases and stages of the project, including construction, operation and decommissioning.
- Traffic volumes including:
  - Existing background traffic,
  - Project-related traffic for each phase or stage of the project,
  - Projected cumulative traffic at commencement of operation, and a 10-year horizon post-commencement.
- 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,

    Note: If there is a reliance on shuttle buses/carpooling proposed to mitigate peak traffic volumes for the AM/PM peak of construction then the TIA is required to detail how the shuttle busing/carpooling commitment will be achieved through strategies, protocols, and the like. If carpooling and shuttle bus strategies cannot be supported by detailed methods/procedures that are achievable, enforceable, and practicable, then the shuttle bus/carpooling methods would not be viable and would require the TIA to be amended to assess the worst-case scenario during peak of construction.
  - Proposed hours for transportation and haulage, project-related traffic, cumulative background traffic inclusive of other major projects that have coinciding timeframes and inclusion of the growth rate for background traffic for the peak construction period.
  - Traffic count surveys should be undertaken for a minimum of one full day (preference seven days for improved accuracy of data). The traffic count survey is required to be collected outside of public holidays, events and school holidays. The traffic counts should be collected at each key intersections with the state classified road network forming part of the construction routes and must be collected in accordance with *Part 3 of Austroads Guide to Road Design*. The data (i.e tube counts) obtained from the traffic count survey should be provided as an appendix to the TIA for the project and used to inform the background traffic counts within the base case (existing background) scenario.
  - Provide a breakdown of the calculations and assumptions for light vehicles, heavy vehicles requiring escort, heavy vehicles and heavy vehicles requiring NHVR permit and that are exempt from the escort requirements. All these vehicle types should be factored into the traffic generation during AM/PM peaks for the project.
  - Specify the design vehicles for the project (identifying the relevant types of heavy / OSOM / specialist vehicles and shuttle buses)
  - Interactions between existing and project-related traffic. cumulative background traffic inclusive of other major projects that have coinciding timeframes and inclusion of the growth rate for background traffic for the peak construction period.
  - The AM/PM peaks are required to be measured based on a single trip from origin to destination as a one-way vehicular movement from one point to another excluding the return journey.
- Capacity analysis using SIDRA or other relevant application, to identify an acceptable Level of Service (LOS) at intersections with the classified (State) road, and where relevant, analysis of any other intersections along the proposed transport route/s.

- The origins, destinations and routes for:
  - Commuter (employee and contractor) light vehicles and pool vehicles,
  - Heavy (haulage) vehicles,
  - OSOM vehicles.
- Road safety assessment of key haulage route/s.
  - Where road safety concerns are identified at a specific location along the proposed haulage routes, TfNSW suggests that the TIA be supported by a targeted Road Safety Audit undertaken by suitably qualified persons in accordance with the *Austroads Guidelines.*
- Identify the necessary road network infrastructure upgrades that are required to cater for and mitigate the impact of project related traffic on both the local and classified road network for the development (for instance, road widening and/or intersection treatments). In this regard, preliminary concept drawings should be submitted with the SSD application for any identified road infrastructure upgrades. It should be noted that any identified road infrastructure upgrades will need to be to the satisfaction of TfNSW and Council.
- Proposed road facilities, access and intersection treatments are to be identified and be in accordance with Austroads Guide to Road Design:

  –Austroads Guide to Traffic Management Part 6- turn warrants assessment based on background traffic volumes, plus growth rate, plus the cumulative traffic volumes for the project and any coinciding projects. The turn warrants should be plotted on the corresponding turn warrants figure (reference

  –Part 3 and Part 4 of Austroads Guide to Road Design

  Note: Speed zone reductions are not supported as a measure for managing the construction traffic during the construction period. Temporary speed zone reductions are reserved only for road works and work within the road reserve.
- Proposed road facilities, access and intersection treatments are to be identified and be in accordance with Austroads Guide to Road Design including provision of Safe Intersection Sight Distance (SISD) in accordance with Part 4A, TfNSW supplements to Austroads Part 3, based on the accurate design speed (posted speed zone +10km/hr) and reaction time. Measures are required to be identified to ensure SISD is achieved in accordance with Austroads and TfNSW supplements. TfNSW requires compliance with SISD.
- Consideration of the local climate conditions that may affect road safety during the life of the project (e.g. fog, wet and dry weather, icy road conditions).
- The layout of the internal road network, parking facilities and infrastructure.
- Impact on rail corridors and level crossings detailing any proposed interface treatments.
- Impact on public transport (public and school bus routes) and consideration for alternative transport modes such as carpooling and shuttle buses during construction.
- Identification and assessment of potential environmental impacts of the project, such as blasting, lighting, visual, noise, dust and drainage on the function and integrity of all affected public roads.

Emergency access to a State classified road

- Must identify how the access will be managed (i.e gates) to prevent the use of the access for other vehicles associated with the development during peak of construction and operation.
- Identify the emergency design vehicle and provide a swept path analysis identifying concurrent movements can occur into and out of the access.

- Provision of sufficient storage at the throat of the access to allow for the emergency vehicle to store within the access and not within the through lane or shoulder.
- Provide a strategic design of the emergency access.
- Identify compliance with SISD for the design speed (posted speed+10km/hr) in accordance with *Austroads Guide to Road Design Part 3*

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.