

6 December 2022

TfNSW reference: STH19/00029/09

Your reference: SSI-10033

Iwan Davies
Department of Planning and Environment
By Email: iwan.davies@dpie.nsw.gov.au

SSI-10033 – Environmental Impact Assessment- Shoalhaven Hydro Expansion Main Works

Dear Sir

Transport for NSW (TfNSW) is responding to the Environmental Impact Assessment (EIA) referred on 8 November 2022 via the Major Projects Portal.

TfNSW has reviewed the information and is unable to properly assess possible impacts of the proposed development on the State road network and its users and therefore are unable to provide support at this stage. Details of **additional required information** are set out in **Attachment 1**.

If you have any questions, please contact me on 9595 4624 or email development.south@transport.nsw.gov.au.

Yours faithfully

A handwritten signature in black ink, appearing to read "Anna".

Anna Paul
Development Services Case Officer, Development Services

OFFICIAL

Context

TfNSW notes for this application:

- The key state road is Moss Vale Road/Nowra Road. The project proposes two routes for oversize and overmass vehicles which impact a number of state roads between Port Kembla and the project location.
- The development proposes the expansion of the existing Shoalhaven Pumped Hydro Storage Scheme, which will double the generation capacity of the existing scheme.
- The development proposes site access from two locations. The upper scheme of the project is accessed via Nowra Road/Promised Land Trail intersection, and the lower scheme is accessed via Moss Vale Road/Bendeela Road intersection, then onto local roads including Jacks Corner Road.
- The construction period of the project is a five year duration.
- The development will generate significant construction traffic including truck movements and 450 oversize overmass (OSOM) vehicle movements. The impact of this additional traffic needs to be adequately considered and mitigated.
- The EIA indicates upgrades to the Nowra Road and Promised Land Trail intersection, however limited details have been provided at this stage.
- No upgrades are proposed at the Moss Vale Road/Bendeela Road intersection.
- Any intersection upgrades on the state road network will require the developer to enter into a Works Authorisation Deed (WAD) with TfNSW.
- TfNSW note that a Road Occupancy License for road closures would be required as well as Special Permit would be required.

Comments

TfNSW has reviewed the referred information and provides the following comments to be addressed:

1. OSOM routes

Whilst TfNSW acknowledge some details have been provided on OSOM routes in section 5.9 of the TIA, further information is required to properly assess the application.

- A detailed route survey is required to demonstrate the viability of the routes proposed and identify mitigation measures and strategies required. TfNSW highlight that there 67 bridges to consider for the southern proposed OSOM route and 32 bridges along the northern OSOM route.
- Any changes to the road network required to cater for OSOM movements (e.g., removal of infrastructure, widening works, vegetation removal, etc) must be outlined at this stage to assess the environmental impact of these ancillary works.
- TfNSW hold concerns of the viability of either proposed route for OSOM vehicles, particularly with respect to the 160 tonne generator step up transformer. The

axle configuration of the OSOM vehicle must be provided to allow adequate structural assessment.

- iv. TfNSW suggest discussions with the Special Permits Unit on 1300 656 371 to assess the appropriateness of the routes and identify potential issues. Early consideration of these matters may identify that the proposed routes are not viable, or simply help to avoid unexpected costs and delays at a later stage of the project. It should be noted that the issuing of Special Permit may be subject to route and bridge assessments.

2. Network impacts for heavy vehicles and OSOM

- (a) Consideration of the network and customer impacts of the OSOM, as well as heavy vehicle component of the project, is required, including but not limited to the following:
 - i. Proposed start date for the project
 - ii. Heavy vehicle breakdown mitigation strategies including the availability of a heavy vehicle tow contracted to recover network disruption and mechanic/tyre fitter availability to location, to expedite network disruption
 - iii. Number of OSOM movements per day/week (prediction not indicated)
 - iv. Identified routes for movement (both OSOM and heavy vehicle)
 - v. Site access upgrade (Promised Land Trail works) start date and duration of construction to enable access
 - vi. Any correspondence that has been established with local authorities regarding use/impact/suitability of adjoining road infrastructure
 - vii. Load restrictions on bridges along proposed routes
 - viii. Community consultation to date at this stage, and what has currently been circulated (if anything) to local residents
 - ix. Consideration for further significant environmental impacts (weather events) which may force changes/suspension of works if roads deteriorate as a result.
- (b) The proposed traffic movements along Cambewarra and Barrengarry Mountainous passes requires further consideration:
 - i. Currently Cambewarra Mountain is limited to a section of single lane traffic under traffic control (due to landslide) and Cambewarra and Barrengarry Mountainous passes have a number of sites that are requiring repairs due to landslide following the significant rainfall experienced over the last year. It is likely repairs will not be complete until late 2023. Traffic control and or temporary road closures are likely to be frequent until the repairs are complete next year.
 - ii. There are no load restrictions on this part of the network currently, however their ability to handle OSOM movements needs ample consideration. Both Barrengarry and Cambewarra mountains are sensitive to severe weather events with the results to such events usually being land instability. OSOM movements would be utilising the whole road, noting that the outside of embankments is a weak point and loading from these vehicles

- may cause accelerated deterioration of the sites. TfNSW highlight the ongoing risk with OSOM movements on these mountainous passes due to the weather dependence.
- iii. TfNSW is supportive of the suggestion of the dilapidation report, however additional dilapidation checks/records are recommended especially after periods of heavy weather as deterioration of slopes on Barrengarry Mountain regularly occurs following wet periods or severe weather events.

3. Nowra Road/Promised Land Trail Intersection

TfNSW acknowledge that a potential upgrade is proposed in Appendix B of the EIA, however the plan is indicative and therefore assessment cannot be made with this level of detail.

- i. A strategic design is required, to determine the environmental impacts of the intersection treatment and allow TfNSW to review the proposal. The plan should be based off survey, with scaled details showing lengths of auxiliary lanes, storage, taper lengths, radii used, cadastre, utilities etc.
- ii. The report states that all sight distance checks are preliminary, and a check required prior to construction. Key sight distance checks and analysis needs to be performed prior to approval. This includes ASD, SSD to ensure proposal is in the safest possible location.
- iii. SISD checks should be 1.1m through traffic eye height to turning car at 1.25m. See AGTRD Part 4A Unsignalised and Signalised Intersections Figure 3.2.
- iv. The turn warrant assessment should be updated for the Nowra Road/Promised Land Trail. Currently the posted speed limit is 100km/h and TfNSW have no plans for reduction of the speed limit to ≤ 70 km/h. Using the correct figure, it indicates a higher order turn treatment is warranted and required. TfNSW note that a turning treatment is proposed within the EIA.
- v. A swept path assessment of the design vehicle needs to be undertaken for all movements proposed at the intersection. Any larger check vehicle should also be undertaken.
- vi. The length of storage for turn lanes should be adequate to store the largest heavy vehicle utilising the access under normal traffic conditions.

4. Moss Vale Road/ Bendeela Road Intersection

TfNSW highlight that the TIA indicates a basic right and left turn treatment is required at this intersection, based on the turn warrant assessment. Whilst the TIA comments that *traffic generation by the development would not trigger a higher-order turn treatment in comparison to the turn treatment required under the forecast background traffic*, TfNSW has concerns with the impacts of the project in terms of additional traffic generation at this location and as such a basic left and right turn treatment is required.

- i. A plan layout of any treatment needs to be provided and should show all relevant details i.e. lengths of widened shoulder, offsets, storage, taper lengths, cadastre, utilities etc.
- ii. Whilst sight distance at this intersection looks adequate, a review is required to confirm this.

- iii. A swept path assessment of the design vehicle needs to be undertaken for all movements it is proposed to take. Any larger check vehicle should also be undertaken.
- iv. TfNSW acknowledge that this intersection is within a 60km/h speed zone, with site constraints.

Further to TfNSW correspondence STH19/00029/09, dated 6 December 2022 (attached), additional information has been provided from the Special Permits team regarding the oversize overmass (OSOM) routes proposed within the Environmental Impact Assessment for the project. As discussed, could you please pass on TfNSW comments to the proponent.

There are some major issues with OSOM access between Port Kembla and the site, for both proposed routes. On this basis, prior to TfNSW support of the project, a geometric and structural assessment is required, to demonstrate that all loads (including the generator, tunnel boring machine, larger construction equipment and cranes) can be successfully transported to the project location. TfNSW are not supportive of the Special Permit being obtained as part of conditions of consent, because we cannot guarantee that access to this location for these vehicles is viable.

Further comments are provided below:

1. Regardless of which proposed route is used, there is some extremely difficult sections of road to be traversed including steep grades, narrow and windy roads, which are not suited to OSOM vehicles.
2. One significant concern is Hampden Bridge in Kangaroo Valley, which is not approved for any overmass vehicle and has limited width and height. This means that overmass vehicles will need to travel via the northern route, which again is not suited to OSOM vehicles. This will require full road closures for many of the OSOM vehicles to travel, however due to the narrow windy and undulating road between Moss Vale and Kangaroo Valley, plus the steep downhill grade, there will be significant impact to the community, and depending on what size the loads are, may not be possible.
3. Due to the current constraints on the network there may be significant upgrades required to transport the proposed components to site.

TfNSW would be available to attend a discussion with DPE, the proponent and key TfNSW stakeholders in the new year, if required, to discuss the OSOM concerns raised.

Kind regards,
Anna

Anna Paul
Development Services Case Officer
Community and Place | South Region
Regional and Outer Metropolitan
Transport for NSW