



Our reference: P-523210-F1H2
Contact: Robert Craig
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Ingrid Berzins
NSW Department of Planning and Environment

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Dear Ingrid,

SSI-8863-Mod-2 – Western Harbour Tunnel – Construction Methodology Change

I refer to the Department's request for comments in relation to the subject modification application which seeks to change the proposed method of construction across Sydney Harbour from an Immersed Tube Tunnel (IMT) methodology to a Tunnel Boring Machine (TBM) methodology for the proposed Western Harbour Tunnel Stage 2 works.

It is understood that the modification application includes a proposed construction support site on part of the Boral site at 39a-43 Mackellar Street, Emu Plains. The construction support site will produce concrete segments and culverts that line the TBM tunnel, including related concrete batching, casting of segments, culverts and other concrete elements as well as storage for the project.

The following comments are provided for the Department's consideration regarding the modification application, specifically in relation to the proposal as it relates to the Penrith local government area, being the proposed construction support site at Emu Plains.

1. Details of Proposal

- No plans have been provided which detail the proposed earthworks, buildings and structures, including a detailed site layout. This detail is necessary to suitably assess the potential impacts of the proposal and to understand how the proposal will correlate with the broader Boral site operations.
- Details of the decommissioning of the proposed facility should also be provided due to the intended temporary nature of the facility.

2. Heavy Vehicle Access

- The proposed construction methodology is unclear in terms of heavy vehicle access and how this will impact on Council's road network. There is mention that vehicles 'possibly' up to B-Doubles in size will be used and that the new roundabout at Old Bathurst Road and Smith Street has been assessed in terms of traffic modelling and swept paths. However, no swept paths have been provided in this regard.

- Council has been referred NHVR (National Heavy Vehicle Regulator) permit applications for concrete plant to be transported to the Boral site at Emu Plains via OSOM (Oversize and/or Overmass) vehicles. Council has requested swept paths for these permit applications but has not yet received any responses which demonstrate safe travel for OSOM vehicles to and from the Boral site. It appears that the design and construction of the new roundabout at Old Bathurst Road and Smith Street by Transport for NSW (TfNSW) does not accommodate OSOM vehicles despite there being a long history of OSOM vehicle travel to and from the Boral site.
- Concerning outcomes have resulted from pre-existing NHVR permits for OSOM vehicle travel that were established prior to the roundabout. Haulage operators have removed signs from the splitter/refuge island on the Smith Street leg of the roundabout and incorrectly replaced the signs in the wrong positions. This has also resulted in damage to the lock socket mechanisms which hold the signs in place. The most recent replacement of the signs by a vehicle operator left the signs unsecured, meaning they could be moved or removed at any time. Due to the number of different NHVR permit holders, Council is currently unable to determine those responsible.
- More specific information needs to be provided in terms of intended heavy vehicle configurations, including type, dimensions and mass to assess potential impacts on Council's road network along the proposed transport routes. This includes the need for a swept path assessment of all vehicle types required to access the site (including OSOM vehicles, if proposed). An understanding of the dimensions of the pre-cast tunnel segments would assist in terms of determining the vehicle sizes required for the proposed construction support site.

3. Traffic Management

- The following two routes to and from the site are proposed:
 - Route A: Railway Street, Lee Street, Smith Street, Old Bathurst Road, Great Western Highway, Russell Street and M4 Motorway;
 - Route B: Railway Street, Lee Street, Smith Street, Old Bathurst Road, Russell Street and M4 Motorway.
- It is understood that both routes would be used interchangeably depending on site operations. This arrangement is not supported by Council as Route A passes through a longer length of residential area, including schools, playing fields and a shopping centre. This would also require an increased number of heavy vehicle movements through the signalised intersection at Old Bathurst Road and the Great Western Highway, which is undesirable due to the number of school children and commuter traffic that use this intersection. Route B should be used as the primary route for all heavy vehicle movements given its lower impact through primarily an industrial area. Route A should only be used in exceptional circumstances (e.g. road closures along Route B).
- In addition to the above, the hours of operation for heavy vehicle movements should be restricted in accordance with the development consent conditions currently applying to the Boral site operations (DA93/89, as amended), as outlined below.



15. All truck movements generated by operation are restricted to the following times and transport routes:

5:00am - 7:00am & 6:00 pm – 10:00pm	Railway Street, Lee Street, Smith Street, Old Bathurst Road Great Western Highway and Mulgoa Road
7:00am – 6:00pm.	Railway Street, Lee Street, Smith Street, Old Bathurst Road Great Western Highway, Russell Street (South), M4 Motorway and Railway Street, Lee Street, Smith Street, Old Bathurst Road Great Western Highway, Mulgoa road and Railway Street, Lee Street, Smith Street, Old Bathurst Road, Russell Street (North and South), M4 Motorway

As amended on 02 December 1996 under Section 102 of the Environmental Planning and Assessment Act 1979.

16. Truck movements along Russell Street are denied between the hours of 7:00pm and 7:00am.

- The proposed changes to on-street parking in Lee Street require the submission of swept path drawings and a signage and line marking plan to Council for approval by the Local Traffic Committee prior to implementation.

4. Floodplain Management

- The flood assessment undertaken is a qualitative assessment based on Council's "Nepean River Flood Study 2018" and Infrastructure NSW's "Hawkesbury-Nepean River Regional Flood Study 2019". The assessment reviews the flooding behaviour of 5%, 2% and 1% AEP storm events. There is no flood impact assessment, including flood modelling, to quantify any adverse flood impacts from the proposed development. Detailed flood modelling and a flood impact assessment will be required to assess the potential for any adverse flood impacts.
- The site is affected by the mainstream 1% AEP design flood event. The mainstream 1% AEP flood depths range from 0.3m to 2m. Infrastructure NSW (now the NSW Reconstruction Authority) will soon (within the next 2-3 months) release an updated Hawkesbury-Nepean River Flood Study which indicates much higher 1% AEP flood levels than the flood levels predicted in the aforementioned 2018 and 2019 flood studies. This new flood information for the site will need to be obtained from Infrastructure NSW. Infrastructure NSW released interim results to Councils in the Hawkesbury-Nepean catchment, and Council has reviewed the results and is fully aware of the increased flood levels. However, Council cannot share this new flood information due to the confidentiality agreement signed by Council.
- Due to the site's proximity to the Nepean River, the flood impact assessment should consider higher design flood events, including the PMF. This assessment should address the stability of the equipment and materials proposed to be stored on the site and its impact on the river during major flood events.
- A Flood Evacuation Management Plan should be prepared to ensure all workers are evacuated prior to any flood emergency. The Flood Evacuation Management Plan will need to be submitted to the SES for review and comment.

5. Noise Impacts

- The submitted “Technical Working Paper – Construction Noise and Vibration” satisfactorily addresses potential noise impacts which may arise from both the construction phase and operational phase at the Emu Plains site, as well as vibration and construction traffic which may be generated as a result of the proposed development. Furthermore, the duration of the acoustic monitoring is deemed to be satisfactory, as is as the surrounding potential sensitive receivers which have been identified.
- It is identified in Section 7.1 of the assessment that construction traffic noise will adversely impact on two nearby sensitive residential receivers, and it has been recommended that further consultation with the residents be undertaken to establish appropriate mitigation measures. Further detail is required in this regard to clarify the potential mitigation measures that could be implemented to minimise any impacts on the affected receivers in terms of noise, or to demonstrate that where possible, the adopted noise criteria can be satisfied.

6. Land Contamination

- The submitted “Preliminary Site Investigation” provides an adequate review of the site history, as well as addressing potential previous land uses which may pose a high risk in terms of contaminant exposure, including historic fill imported to the site from unknown sources which may include waste materials such as asbestos containing materials and migration of impacted groundwater to the site from industrial facilities located immediately to the south. The investigation concludes that the site is generally of a low risk, and that construction works can be completed through implementation of appropriate waste management and preparation of an Unexpected Finds Protocol.
- The investigation has recommended that the moderate to high contamination risks associated with the site be addressed via a Detailed Site Investigation. This must be undertaken prior to the commencement of any works that would result in disturbance to moderate to high risk areas of the site, including the risk of asbestos containing materials having been historically imported to the site, and potential migration of impacted groundwater to the site from nearby industrial facilities to the south. The Detailed Site Investigation should be referred to Council for review at the appropriate phase of the development and to enable registration of the documentation against the land title of the property.

7. Biodiversity Impacts

- A review of historical imagery shows that the vegetation present on the site was not there in 1986, 1975, 1947 or 1943, and therefore the vegetation present is likely to be planted vegetation. The disturbance to the soil profile from extensive management is unlikely to suggest that the vegetation is regrowth vegetation.
- The submitted BDAR (Biodiversity Development Assessment Report) has assigned the vegetation to a native vegetation community and has determined the loss of vegetation will result in an offset requirement and requires offsets for the Southern Myotis (*Myotis Macropus*) as this species has been assumed present. Overall, the assessment and findings outlined in

the BDAR are satisfactory.

- Should there be an opportunity at the conclusion of the project, an area similar in size to the vegetation removed should be re-vegetated to ameliorate for the loss of habitat in the Penrith local government area. In this regard, there is a known grey-headed flying-fox camp located near Emu Heights (approximately 1.8km from the site) that is still being occupied following recent floods. Replacement of foraging habitat will assist in maintaining future habitat resources for this species.

Thank you for providing Council with the opportunity to comment on this proposal.

Should you wish to discuss any aspect of Council's comments, please do not hesitate to contact me on (02) 4732 7593.

Yours sincerely,



Robert Craig
Principal Planner