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Jonathan Kerr
Senior Planning Officer
Transport Assessments
Department of Planning and Environment

(via the Major Projects Planning Portal)

Dear Jonathan

**M7 Motorway – Mod 6 Widening – (SSI 663 Mod 6)
EPA advice on EIS for the modification**

I am writing to you in reply to the Department of Planning and Environment's (DPE) invitation to the NSW Environment Protection Authority (EPA) to provide comment on the Environmental Impact Statement (EIS) for the above modification request to widen the M7 (former Western Sydney Orbital) across 26 kilometres between Oakhurst/Glendenning in the north and Prestons in the south

The EPA understands that project involves:

- widening the existing four lane motorway to six lanes (one extra lane in each direction) by extending predominantly in the median;
- widening 43 existing north-bound and south-bound bridges, including sub-structures;
- vegetation clearing and removal in the widening and construction areas;
- upgrades and additions to existing noise walls;
- utilities works and upgrades to draining infrastructure; and
- adjustments to Intelligent Transport Systems to accommodate the new lane configurations.

Based on the information provided, the proposal will require an environment protection licence (EPL) under the *Protection of the Environment Operations Act 1997* (POEO Act) under clause 35 of Schedule 1 for Road construction. Under clause 35, an activity requires a licence for construction of roads (including the widening or rerouting of existing roads) and any related tunnels, earthworks and cuttings, that has four or more traffic lanes for a continuous length of at least 1 kilometre – where the road is in a metropolitan area and is classified, or proposed to be classified, as a freeway or tollway under the *Roads Act 1993*.


The EPA has reviewed relevant EIS documents including:

- *Westlink M7 Widening Modification Report*, (Modification 6), prepared for TfNSW, dated 3 August 2022 (the Modification Report)
- *Noise and vibration technical Report*, prepared by AECOM, dated 28 July 2022 (the NVTR)
- *Surface Water and Flooding Impact Assessment*, prepared by Lyall & Associates, dated July 2022 (the SWFIA)
- *Contamination Impact Assessment Technical Report*, prepared by AECOM, dated 14 July 2022 (the contamination assessment)

Attached at **Appendix A** are the EPA's comments on noise and vibration, surface water quality, and contamination.

Should you require clarification of any of the above please contact Anna Timbrell on 9274 6345 or email anna.timbrell@epa.nsw.gov.au

Yours sincerely



ALEKSANDRA YOUNG
Unit Head
Regulatory Operations Metro

APPENDIX A

1. Noise and Vibration

The EPA review of the *Noise and Vibration Technical Report* (NVTR) focussed on the noise mitigation measures in the NVTR.

It is noted that extensive works will be required outside the standard construction hours in the *Interim Construction Noise Guideline* (EPA, 2009) (ICNG) to limit impacts on the traffic network during peak periods, for worker and road user safety, and where a Road Occupancy Licence is needed.

Section 4.2 of the NVTR predicts significant and widespread construction noise impacts along the project route, particularly for out of hours works (OOHW). The NVTR also predicts significant potential for sleep disturbance impacts from construction activities during the night-time period. Some vibration-intensive activities may occur within the minimum distances for human comfort. While construction-related road traffic is not expected to appreciably increase existing traffic volumes on the M7, **the EPA advises that all feasible and reasonable noise mitigation and management measures should be implemented to address any noise impacts from construction traffic utilising the local road network, particularly during OOHW.**

The NVTR has indicated, in Section 4.5, significant relative increases in noise levels on the local road network where traffic detours are in place on the M7 to allow some works, such as bridge widening. While these increases (from approximately 2 to nearly 8 dBA) on local roads will most likely be clearly noticeable, they will also be accompanied – in some cases – by a corresponding reduction in traffic noise from the closure of the M7, being one of the dominant noise sources in the project vicinity. Changes of this nature are likely to give rise to community reaction and **the EPA recommends that all feasible and reasonable measures, including respite periods – such as those put forward in Section 4.5 of the NVTR – are implemented to address noise impacts from traffic that is detoured off the M7 wherever practicable.**

A range of noise and vibration mitigation and management measures and work practices are outlined in Section 6 of the NVTR, including the preparation of a Construction Noise and Vibration Management Plan which details the impacts from construction works and activities associated with the project together with measures to address these impacts. All construction activities should take place during the recommended standard hours in the ICNG wherever practicable, and strong justification must be provided for all OOHW for reasons other than convenience. A key challenge for this project will be to maintain a high degree of community engagement during the construction stage of the project and provide opportunities for the community to influence certain aspects, such as mitigation, respite periods, etc.

The EPA understands that a number of conditions in the existing Western Sydney Orbital project approval (SSI 663) are proposed to be modified, or new conditions added, to account for the proposed modification as outlined in Section 8.2, Table 8-1 of the Modification Report. A proposed change to Condition 91 relating to the installation of noise mitigation measures refers to the *Environmental Criteria for Road Traffic Noise* which has been superseded and replaced by the *NSW Road Noise Policy* (DECCW, 2011) (RNP). The EPA is not able to provide any specific advice on the appropriateness or otherwise of this proposed change as it is unclear which residences the proposed changes apply to, and the operational traffic noise impacts at those residences under the current RNP. **The EPA recommends that DPE carefully consider the implications of the proposed changes to the condition in the context of the project and the current RNP, and all conditions should be updated to refer to current policy guidance.**

2. Water Quality

The EPA's review of the *Surface Water and Flooding Impact Assessment* (SWFIA) has found that the stormwater assessment is not based on appropriate guidelines and objectives. Water quality criteria are not clear for developing post-approval plans or detailed designs for identified contaminated areas. Details are outlined below. **The EPA recommends that further information is provided on these matters to inform the post-approval management plans.** This is outlined as follows:

2.1 The proposed erosion and sediment controls do not reference relevant guidelines

Chapter 7 of the Modification Report states that *"the estimated soil loss from the proposed modification correlates to 'Soil Loss Class 2' and a 'Low Erosion Hazard' as per the classifications set out in Table 4.2 of the Blue Book (DPIE, 2004) [sic]"* and that *"the average annual soil loss from each area would not exceed the threshold value and therefore would not trigger the need for a sediment retention basin"*.

Section 6.1.3 of the SWFIA also states that *"subject to the outcomes of the further water quality assessment during detailed design, enhanced erosion and sediment control measures may be required to meet additional site-specific discharge criteria that may be identified. These enhanced erosion and sediment control measures will need to be incorporated into the Soil and Water Management Plan (SWMP)."*

The proposed erosion and sediment controls may be suitable in uncontaminated areas. However, **the EPA recommends that *Managing Urban Stormwater: Soils and Construction, Volume 2D Main road construction* (DECC 2008) is referenced when developing the SWMP.**

2.2 The criteria for treated runoff discharging during construction is not suitable

The SWFIA adopts the *Managing Urban Stormwater Volume 1* total suspended solids (TSS) concentrations of no greater than 50 mg/L for treated runoff discharging during construction. This criterion is outdated and does not provide an appropriate basis for developing erosion and sediment controls. The SWFIA also states that: *"...further assessment would be based on the results of water quality monitoring in the receiving watercourses"* (Section 6.1.3). Water quality in potentially degraded waterways would not provide a basis for developing assessment criteria as this may result in poor environmental performance. With the proposal to not use sediment basins (where runoff can be collected and sampled) it is also unclear how discharge quality would be measured on site.

The EPA recommends that the following further information is provided:

- **Appropriate assessment criteria and how they would be measured**, including ANZG (2018) and, where relevant, *Performance criteria for protecting and improving the blue grid in the Wianamatta – South Creek catchment* DPIE (2022). It should be noted that discharge criteria for similar sites in this area of Sydney have achieved around 30 to 40 mg/L TSS.
- **How discharge quality would be measured on site.**

2.3 Mitigation measures for contaminated areas are not considered

Erosion and sediment controls based on Landcom (2004) and DECC (2008) are generally not adequate for areas of moderate to high contamination risk due to risk of dissolved and sediment attached contaminants entering stormwater. The Modification Report proposes mitigation measures including targeted Detailed Site Investigations (DSIs), implementation of a Soil and Water Management Plan (SWMP) and procedures for the management of saline soils and potential inland acid sulphate soils, that would minimise the risk of adverse impacts to ecological and human receptors during construction. The SWFIA does not consider the potential need for

different erosion and sediment controls in areas of contamination, e.g. it does not propose sediment basins or other possible options to deal with potentially contaminated runoff.

The EPA recommends the following:

- **Further information is provided on appropriate erosion and sediment controls suitable for contaminated areas and on appropriate assessment criteria and how they would be measured if discharges are proposed.** Criteria must be based on ANZG (2018) and, where relevant, *Performance criteria for protecting and improving the blue grid in the Wianamatta – South Creek catchment* (DPIE, 2022).
- **The proponent considers options to avoid contaminated stormwater discharges in the first instance.**
- **Any proposed controlled discharges are adequately treated to achieve the appropriate ambient water quality outcomes based on ANZG (2018) and, where relevant, DPIE (2022).**
- **The proponent considers the need for stormwater containment/basins or other mitigation measures to prevent contaminated stormwater entering waterways.** Any basin used must be appropriately sized to mitigate risks identified through the detailed site investigation and that managed overflows only occur as a result of large rainfall events.
- **Appropriate management criteria and responses to identify and manage water pollution risks associated with potentially contaminated stormwater are developed.**
- **The proponent includes surface water monitoring in moderate to high contamination risk areas that include all pollutants potentially present at non-trivial levels.**
- **Enhanced sediment and erosion controls are implemented as a precautionary approach in identified lower contamination risk areas.**

2.4 More information should be provided on the Dewatering Management Plan (DMP)

The SWFIA proposes that, during detailed construction planning, a dewatering management plan (DMP) would be prepared that sets out the procedures for the discharge of surface water runoff that is retained in sediment controls and exposed excavations. The DMP would be prepared in accordance with the *Technical Guideline – Environmental Management of Construction Site Dewatering* (RTA 2011).

The EPA recommends that further information is provided on a dewatering assessment based on ANZG (2018) and DPIE (2022), in particular in areas of contamination, including the assessment criteria and management measures to achieve the criteria, e.g. management of any leached pollutants from contaminated soils into stormwater collected in workings, including collection and treatment or disposal offsite.

2.5 Management of contaminated groundwater must be considered

A total of forty-three bridges at twenty-three locations would require widening as part of the proposed modification. The Modification Report states that there is potential for contaminated groundwater to be encountered while bridge pilings are being constructed. It is a requirement under Transport for NSW's *QA Specification B59* that temporary casings are to be used if groundwater is encountered during construction works. The use of temporary casings would reduce the volume of groundwater required to be dewatered. The extracted groundwater is expected to be disposed of off-site.

The EPA recommends:

- **that temporary casings are used during construction works;**
- **that *Managing Urban Stormwater, Soils and Construction, Volume 2D: Main road construction* is referenced when developing the proposed SWMP for these bridges and where relevant, *Managing Urban Stormwater: Soils and construction - Volume 2A - Installation of services*; and**
- **that extracted contaminated groundwater is not discharged to waters.**

2.6 Appropriate assessment criteria for operation stage stormwater must be considered

The Modification Report generally concludes that there is negligible difference in the ability of the current operational stormwater quality controls to meet the water quality objectives between pre- and post-proposed modification conditions. The report also states that: *“in the instance that during detailed design it cannot be demonstrated that the existing operational stormwater quality controls would be effective in mitigating potential impacts in accordance with the above requirements, then additional mitigation measures would be identified and implemented. Such measures may include the provision of additional measures such as pollutant control devices upstream of the existing controls or the conversion of a small number of existing water quality basins to bioretention basins that are highly effective in the retention of TP and TN. Mitigation measures identified in Section 7.5.6 (of the Modification Report) would be implemented.”*

The EPA recommends that further information is provided on the use of appropriate assessment criteria, i.e. based on ANZG (2018) and, for waterways in the Wianamatta – South Creek catchment, *Performance criteria for protecting and improving the blue grid in the Wianamatta – South Creek catchment* (DPIE 2022). These criteria should form the basis of the detailed design assessments when reviewing existing operational stormwater controls.

3. Contamination

The contamination assessment is a preliminary investigation involving a desktop review of current and previous land uses along the alignment with a mixture of historical aerial review, maps, business directory records, and previous site investigations across the study area.

The assessment noted limited information regarding the construction of the existing M7 Westlink. Available investigations undertaken prior to the construction of the motorway (pre-2003) indicated that site inspections and intrusive soil investigations were conducted at areas considered to be high risk of contamination from site activities. However, not all reports for these investigations were obtained, and available information was limited. As such it is not known if identified contamination was remediated. The assessment has assumed that contaminated material was either taken off site or remains inside the existing M7 corridor in isolated areas. As an example, the report notes there is anecdotal evidence that contaminated material is capped under a mound at the M5 interchange (south of the project).

Similarly, there is no information regarding the source of imported fill material. The report has assumed it is either virgin excavated natural material (VENM) or excavated natural material (ENM).

The report divided the alignment into five precincts and assessed the likelihood of risk from contaminants of potential concern at three work areas: along the median, at bridge widening locations, and at ancillary facility sites. This was presented in Tables 17, 18 and 19 of the contamination assessment report, with source areas of potential contaminants identified from current and prior land uses. The areas of potential concern include a former landfill site described as ‘high risk’. The EPA notes that a detailed site investigation (DSI) targeting areas of concern had commenced along the median but had not been completed at the time the contamination assessment was written. The report states that the DSI is due to be completed by mid-August 2022.

The EPA requests that the outcomes of the detailed investigation(s) be provided as part of a Response to Submissions to indicate whether contamination has been found to be present, if the nature and extent of that contamination has been determined, and if remediation is required.

The EPA also recommends that an Unexpected Finds Protocol be prepared to ensure that any unexpected contamination encountered during construction works are appropriately managed.