DOC21/281530 13 April 2021

Mr Jonathan Blackmore
Senior Planner
Transport Assessments
Department of Planning, Industry and Environment
GPO Box 39
Sydney NSW 2001

Email jonathan.blackmore@dpie.nsw.gov.au

Dear Mr Blackmore

Moorebank Avenue Realignment (SSI 10053)
Advice on Environmental Impact Statement (EIS)

I am writing to you in reply to your invitation to the NSW Environment Protection Authority (EPA) to provide comment on the Environmental Impact Statement (EIS) for the above project.

The EPA understand the project involves relocating Moorebank Avenue from its current alignment between the Moorebank Precinct West and East (MPW and MPE) sites, to the east of the MPE site. The new 4-lane, 3-kilometre road is to be constructed by Sydney Intermodal Terminal Alliance but will be handed to Transport for NSW (TfNSW) once operational. The existing Moorebank Avenue will have restricted access to the Moorebank Logistics Park (MLP) only. Construction is expected to take 16 months.

The EPA notes that the project site and surrounding Moorebank Precinct were previously occupied by the Department of Defence, and that the Holsworthy Barracks, located 30 metres south of the project footprint, has been identified as a source of per- and polyfluoroalkyl substances (PFAS) contamination to the Georges River and Anzac Creek.

The EPA has reviewed relevant sections of the EIS including:

- *Environment Impact Statement*, v3 Final, dated 1 March 2021, prepared by EMM Consulting (EIS main report)
- *Noise and Vibration Impact Assessment*, version Final, dated 8 February 2021, prepared by EMM (NVIA)
- *Preliminary Site Investigation*, v1 Final, dated 30 October 2020, prepared by EMM (PSI)
- *Water Assessment*, v4 Final, dated 4 February 2021, prepared by EMM

The EPA's comments on noise and vibration, water and contamination are provided at **Appendix A**.

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

13 April 2021

ELIZABETH WATSON
A/Unit Head – Regulatory Operations Metro West

APPENDIX A – Detailed comments on noise and vibration, water and contamination

APPENDIX A – Detailed comments on noise and vibration, water and contamination

1. Noise and Vibration

The new road alignment will be closer to the residential receivers in Wattle Grove than the existing alignment. The EPA notes that the predicted operational noise levels identified in the *Noise and Vibration Impact Assessment* (NVIA) – including cumulative traffic with the MLP – do not exceed the *Road Noise Policy* (DECCW, 2011) 'new road' criteria.

The construction noise levels are predicted to exceed the Noise Management Levels set out in the *Interim Construction Noise Guideline* (EPA ,2009) by up to 9 dBA. Appropriate mitigation measures are identified in Section 6 of the NVIA and **the EPA recommends that the proponent be required to adopt all appropriate reasonable and feasible measures to avoid or minimise construction noise impacts to sensitive receivers.**

Construction is also proposed during standard construction hours and **the EPA recommends these standard construction hours are adopted in the conditions of approval.**

It is noted that Figure 1.3 of the NVIA shows that a noise wall will be located on the northern end of the road realignment. However, Section ES6.2 of the NVIA states that no additional mitigation is required for operational impacts and Section 5.6 states "No additional mitigation in the form of acoustic barriers along the north-east corner of the roadway or façade treatments is warranted for the Defence buildings identified". **The EPA requests that the discrepancy in the NVIA regarding the installation of a noise wall at the northern end of the road alignment be clarified as part of the Response to Submissions (RtS).**

The Secretary's Environmental Assessment Requirements (SEARs) for the project state that the cumulative noise impacts should include: "*An assessment of cumulative impacts associated with any existing development and any developments having been granted development consent, but which have not commenced*" (Requirement 4 of SEAR 3 'Noise & Vibration'). However, cumulative construction noise impacts with the MPE and MPW sites have not been included in the NVIA. **The EPA requests that an assessment of cumulative construction noise impacts be provided as part of the RtS.**

2. Water

The EIS identified a high potential for widespread on-site soil and surface water contamination. The *Preliminary Site Investigation* (PSI) identified a number of potential contamination areas within the project footprint including:

- the south-westernmost extent of the project site, where significant filling has occurred as well as storage of materials and equipment associated with railway operations and infrastructure;
- the disused rail spur that crosses the southern portion of the project site, in a north-south orientation and where asbestos containing materials (ACM), ash and slag were previously observed. Elevated concentrations of lead were reported adjacent the rail spur within Moorebank Precinct East (MPE);
- ACM reported in soils across MPE including adjacent to the Project site. ACM was also observed on the ground surface in the southern portion of the Project site during the site inspection;
- Anzac Creek surface water and sediment, which may be impacted by pre- and poly-fluoroalkyl substances (PFAS) and other contaminants of potential concern from the neighbouring Holsworthy Barracks; and
- the former grenade range in the south-eastern portion of the project site, which may not have been fully remediated for unexploded ordnance (UXO), explosive ordinance (EO) and Explosive Ordnance Waste (EOW).

Contaminants of concern include PFAS, hydrocarbons, heavy metals, polycyclic aromatic hydrocarbons, benzene, toluene, ethylbenzene, xylenes, polychlorinated biphenyls, pesticides, herbicides, explosive ordinance waste, ash and slag.

The PSI reports that water samples from Anzac Creek had PFAS concentrations greater than the human health drinking water guidelines but below recreational use guidelines. The EIS does not specify the PFAS concentrations observed or assess potential waterway risks with reference to the ecological guideline values for PFAS.

To understand potential water pollution risks and inform a characterisation of the expected quality of any proposed discharges to waters (as required to address Requirement 4 of SEAR 5 'Water – Quality') **the EPA requests that the RtS provides details of the soil and water contaminant levels, with reference to relevant guideline values.**

Requirement 6 of SEAR 5 'Water – Quality' requires the applicant to demonstrate that all practical measures to avoid or minimise water pollution and protect human health and the environment from harm are investigated and implemented. However, the EIS provides limited details of these measures, including those associated with activities within contaminated areas such as the proposed instream works in Anzac Creek.

The Water Assessment (at Appendix G) recommends that stockpiled material in and around the southern end of the project footprint is removed and a clearance survey conducted to remove explosive ordinance waste. The PSI (at Appendix F) also recommends a targeted investigation for waste classification of soils and sediment required to be excavated. However, it is unclear when these recommendations would be implemented.

The EIS proposes construction stage erosion and sediment controls consistent with *Managing Urban Stormwater, Soils and Construction, Volume 1* (Landcom, 2004) and *Volume 2D: Main road construction* (DECC, 2008). The Water Assessment states that these controls may include sediment basins, indicating that basin locations and sizing would be determined at detailed design.

It appears that construction stage discharges are proposed. However, all reasonable and feasible options to avoid discharges (e.g. stormwater reuse for dust suppression or irrigation) would need to be implemented before a discharge to waters is considered. The EIS states "Stormwater collected in temporary sedimentation basins and/or permanent bioretention basins may be recycled for construction purposes such as dust suppression." However, it is unclear to what extent stormwater reuse would be prioritised over discharges to waters.

Notwithstanding these issues, the measures recommended by Landcom (2004) and DECC (2008) are designed to manage uncontaminated sediment and may not be appropriate for contaminated soils and stormwater. In this context, alternative or additional mitigation measures may need to be considered for works in contaminated areas (e.g. enhanced erosion controls, increased sediment basin sizing, additional treatment).

To address Requirement 6 of SEAR 5 'Water – Quality', the EPA recommends that the RtS provides details of the proposed water pollution mitigation measures, demonstrating that all practical and reasonable measures to avoid or minimise water pollution and protect human health and the environment from harm are investigated and implemented, including:

- **scheduling of removal of contaminated materials;**
- **details of options to avoid discharges (e.g. tankering contaminated wastewater for offsite disposal, reusing stormwater for dust suppression and irrigation);**
- **options to avoid contaminated stormwater discharges (e.g. full capture and reuse or);**
- **details of proposed source control measures (e.g. removal of highly contaminated material for off-site disposal, bunding, enhanced erosion controls to minimise mobilisation of pollutants from contaminated areas);**
- **details of appropriate treatment of any proposed controlled discharges, targeting the pollutants of concern; and**

- **specifying the design capacity of proposed sediment basins and providing justification for this with reference to relevant guidance and in relation to any contamination risks.**

Requirements 2, 3 and 4 of the SEAR 5 'Water – Quality' relate to assessing the water pollution impacts of the proposal:

2. *Demonstrate how construction and operation of the project will, to the extent that the project can influence:*
    a. *where the NSW WQOs* [water quality objectives] *for receiving waters are currently being met, they will continue to be protected; and*
    b. *where the NSW WQOs are not currently being met, activities will work toward their achievement over time.*
3. *Justify, if required, why the WQOs cannot be maintained or achieved overtime.*
4. *Identify and estimate the quality and quantity of pollutants that may be discharged and an analysis of the likely nature and degree of impact that any discharge(s) may have on the receiving environment.*

The EIS does not characterise proposed discharges or assess the potential impact consistent with the *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*.

A characterisation of the quality of any proposed discharges would be required to address Requirement 4 of SEAR 5 'Water – Quality'. This characterisation could be based on monitoring data from the proposal site and/or a risk assessment of the potential pollutant sources at the site, including potential contaminated areas.

The Water Assessment indicates that the receiving waterways currently have good water quality, with pollutant levels generally below the relevant guideline values (or within the guideline range). It is likely therefore that the environmental values are currently being achieved.

The EIS does not predict the water quality outcomes in the receiving waterways or demonstrate that the environmental values would be maintained.

The EPA recommends that the RtS includes a Water Pollution Impact Assessment consistent with the *Australian and New Zealand Guidelines for Fresh and Marine Water Quality* and commensurate with the potential water pollution risk. This assessment should:

- **characterise the quality of proposed discharges in terms of the concentrations and loads of all pollutant present at non-trivial levels (this could be based on relevant monitoring data and/or a risk assessment of the potential pollutant sources at the site);**
- **assess the potential impact of discharges on the environmental values of the receiving waterway with reference to the relevant *Australian and New Zealand Guidelines for Fresh and Marine Water Quality* guideline values for slightly to moderately disturbed ecosystems, including for typical through to worst-case scenarios;**
- **demonstrate that proposed discharges would be managed to:**
    - **where the NSW WQOs for receiving waters are currently being met, they will continue to be protected; and**
    - **where the NSW WQOs are not currently being met, activities will work toward their achievement over time.**

Requirement 8 of SEAR 5 'Water – Quality' requires the applicant to identify proposed monitoring and indicators of surface and groundwater quality.

The EIS states that a construction phase surface water monitoring program would be developed as part of a post-approval *Surface Water Management Plan*, and would include details of:

- visual inspection for potential spills or deficient controls;
- monitoring sites (e.g. sediment basins and receiving waters);
- monitoring frequency and conditions (e.g. wet weather or site overflow);

- monitoring suite (typically pH, total suspended solids, turbidity, oil and grease); and
- reporting requirements.

The EPA recommends that the RtS includes details of the proposed surface water monitoring programme, ensuring the monitoring suite and sites are appropriate to detect and inform management of potential water pollution risks associated with contaminated areas.

3. Contamination

As noted above, the PSI identified a number of potential contaminants of concern across a broad area. It also noted that fragments of explosive ordnance waste were observed during the project site inspection, which could result in leaching of metals into the surrounding soils and surface water. The EIS further stated that potential of explosive and unexploded ordnance is less likely as the area has been subject to some survey and remediation work, however, it cannot be precluded.

The project site is not identified as being part of the Air Services Australia National PFAS Management Program. However, a small portion of the southern site area, consistent with the alignment of Anzac Creek, was identified as being within the Holsworthy Barracks (including Liverpool Fire Station) NSW Government PFAS Investigation Site. Anzac Creek was also identified as a potential pathway for the migration of PFAS contamination.

The Liverpool Fire Station – a former Department of Defence (DoD) fire station – located approximately 320 metres to the north of the project was also identified as a source of PFAS contamination. Information published by the DoD indicates that a human health risk assessment and PFAS area management plan are currently being prepared for Holsworthy Barracks.

A Detailed Site Investigation (DSI) and a Remedial Action Plan (RAP) have not been provided as part of this EIS despite numerous contaminants of potential concern being identified. Therefore, contamination at the site has not been properly assessed and the EIS has not addressed Requirement 3 of SEAR 4 'Soils and Contamination'. Several management measures were proposed but these are considered inadequate since a proper assessment of human health and ecological risks from contamination has not yet been completed.

Despite an insufficient contamination assessment, the proponent is proposing the following mitigation measures for the Project post-approval:

- a Contamination Management Plan, within CEMP, which will provide details for the ongoing management and maintenance of contamination management and mitigation measures during the construction phase of the project;
- the classification and appropriate removal/disposal of the stockpiled materials observed in and around the southern portion of the project site;
- a clearance survey and removal of exploded ordnance waste observed in and around the southern portion of the project site;
- targeted investigation of any areas of soil/sediment disturbance proposed as part of the development;
- the preparation of Unexpected Finds Protocol within the CEMP; and
- an acid sulphate soil monitoring program within the CMP which will be maintained during construction.

As part of the RtS, the EPA requires the proponent to submit an assessment of the presence of ordnances prepared by a suitably qualified expert on ordnances and a sampling and analysis quality plan (SAQP) for Detailed Site Investigations.

Other mitigation measures proposed by the proponent such as a Contamination Management Plan may be conditioned as part of an approval.

The EPA considers that the inadequacy of the contamination assessment underlines the importance of engaging a NSW EPA-accredited Site Auditor throughout the duration of works

for this project to ensure that any work required in relation to contamination is appropriately managed.

The EPA recommends the following conditions of approval:

1. The Proponent must engage a **NSW EPA-accredited Site Auditor** throughout the duration of works to ensure that any work required in relation to soil or groundwater contamination is appropriately managed. If work is to be completed in stages, the site auditor must confirm satisfactory completion of each stage by the issuance of Interim Audit Advice/s.

2. A **Construction Environmental Management Plan** (**CEMP**) must be prepared to be consistent with the *Environmental Management Plan Guideline for Infrastructure Projects* (Department of Planning, Industry and Environment, 2020).

3. The **Contamination Management CEMP Sub-Plan** must:
   (a) provide details for mitigation and management measures for contamination encountered during the construction phase of the Project;
   (b) be prepared, or reviewed and approved, by consultants certified under either the Environment Institute of Australia and New Zealand's Certified Environmental Practitioner (Site Contamination) scheme (CEnvP(SC)) or the Soil Science Australia Certified Professional Soil Scientist Contaminated Site Assessment and Management (CPSS CSAM) scheme;
   (c) include acid sulfate soil monitoring program and unexpected finds protocol; and
   (d) be reviewed and certified appropriate by a NSW EPA accredited Site Auditor.

   Construction must not commence until the **Contamination Management CEMP Sub-Plan** and the **Interim Audit Advice** or **Section B Site Audit Statement** certifying the appropriateness of the CEMP Sub-Plan for Contamination have been accepted by the Planning Secretary.

4. A **Detailed Site Investigation** must be conducted to determine the full nature and extent of contamination. The site investigation must be undertaken, and the subsequent report/s, must:
   (a) be prepared, or reviewed and approved, by consultants certified under either the Environment Institute of Australia and New Zealand's Certified Environmental Practitioner (Site Contamination) scheme (CEnvP(SC)) or the Soil Science Australia Certified Professional Soil Scientist Contaminated Site Assessment and Management (CPSS CSAM) scheme.
   (b) be prepared in accordance with the relevant guidelines made or approved by the EPA under section 105 of the *Contaminated Land Management Act 1997*.

5. Prior to construction, the proponent must provide the EPA with a copy of all reports to date relating to the assessment of per- and poly-fluoroalkyl substances (PFAS) undertaken for the development and in relation to contamination from the development.

6. Should the potential risk to off-site receptors due to PFAS contamination be identified, the proponent must contact the EPA within 1 month of PFAS identification to discuss requirements for community consultation.

7. If, in accordance with the relevant guidelines made or approved by the EPA under section 105 of the *Contaminated Land Management Act 1997*, a **Remedial Action Plan** (RAP) is required to address the contamination to ensure the site is suitable for the propose use, the Proponent must prepare a **RAP** prior to commencing with the remediation.

   If a RAP is required, then prior to implementation of the **RAP,** an **interim audit advice** or a **Section B Site Audit Statement** prepared by a NSW EPA Accredited Site Auditor must be provided to the consent authority to certify the site can be made suitable for the proposed use.

8. If remediation is required, the proponent must submit a **Validation Report** for the development prior to commencement of use. The **Validation Report** must:
   (a) be prepared, or reviewed and approved, by consultants certified under either the Environment Institute of Australia and New Zealand's Certified Environmental Practitioner (Site Contamination) scheme (CEnvP(SC)) or the Soil Science Australia Certified Professional Soil Scientist Contaminated Site Assessment and Management (CPSS CSAM) scheme.
   (b) be prepared in accordance with the relevant guidelines made or approved by the EPA under section 105 of the *Contaminated Land Management Act 1997*.
   (c) include, but not be limited to:
      i. comment on the extent and nature of the remediation undertaken;
      ii. if material is to remain in-situ and capped, describe the location, nature and extent of any remaining contamination on site as well as any ongoing management requirements;
      iii. classification and appropriate removal/disposal of the stockpiled materials observed in the Project Site;
      iv. clearance survey of unexploded ordnance (UXO), Explosive Ordnance (EO), and removal of Explosive Ordnance Waste (EOW) observed in the Project site;
      v. sampling and analysis plan and sampling methodology undertaken as part of the remediation;
      vi. if treated material is to remain on the subject site, results of sampling of treated material, compared with the treatment criteria in the RAP;
      vii. results of any validation sampling, compared to relevant guidelines/criteria; and
      viii. comment on the suitability of the area for the intended land use; and
   (d) be submitted to the Planning Secretary for review one month after the completion of remediation works

9. The proponent must obtain from a NSW EPA accredited Site Auditor a **Section A1 Site Audit Statement** or a **Section A2 Site Audit Statement** accompanied by an **Environmental Management Plan** prepared by a certified consultant, and submit it to the Planning Secretary and relevant Council for information no later than one month before commencement of use of the area.

10. Prior to commencement of operation, the proponent must obtain confirmation from the Environmental Management Representative in writing that the requirements of condition **9** have been met. The development must not be used for the purpose approved under the terms of this approval until a Site Audit Statement certifies the land is suitable for that purpose and any conditions on the Site Audit Statement have been complied with.