



DOC19/840386

27 September 2019

Mr Glenn Snow
Director – Transport Assessments
Department of Planning, Industry and Environment
GPO Box 39
Sydney NSW 2001

Dear Mr Snow

**Cabramatta Loop Project (SSI 10339)
Advice on the Environmental Impact Statement**

I am writing to you in reply to your invitation to the Environment Protection Authority (EPA) to provide advice on the Environmental Impact Statement (EIS), including recommendations for Conditions of Approval for the above proposal.

The EPA understands the project involves the construction and operation of a passing loop on the Southern Sydney Freight Line (SSFL) to enable freight trains up to 1,300 metres long and travelling in either direction, to pass each other. Components of the project include:

- A 1.65 km long section of new rail track Between Cabramatta and Warwick Farm Stations, adjacent to the existing track, with connections to the existing track at the northern and southern ends to form a loop;
- Realignment of about 550 metres of existing track sideways to make room for the new track;
- Construction of 2 new bridges adjacent to the existing rail bridges over Sussex Street and Cabramatta Creek;
- Reconfiguration of Bloomfield Street for a distance of about 680 metres between Sussex and Bridge Streets; and
- Ancillary upgrades of signalling and power; works to existing retaining and noise walls; drainage works and protecting/relocating utilities plus minor signalling along the rail corridor.

The EPA has reviewed the EIS provided by the Department of Planning, Industry and Environment (DPIE) and has provided advice in relation to noise and vibration, and contaminated lands, contained in **Attachment 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

A handwritten signature in blue ink, appearing to read 'Claire Miles'.

27.09.2019

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ATTACHMENT A

1. Noise

The following report was reviewed in the EPA's noise and vibration assessment:

- Technical Report 2 – *Noise and Vibration Impact Assessment*, dated 8 August 2019, prepared by GHD on behalf of Australian Rail Track Corporation (ARTC).

The EIS predicts significant construction noise impacts, particularly outside of the recommended standard hours. This includes 6 stages of construction over the period of two years, including road works, track works, barrier construction and testing. Out of hours work is required over the entire two-year period. The report indicates that there will be thousands of exceedances of the Noise Management Levels (NML's) over the day, evening and night time periods. These exceedances will routinely be 5 dB over the NML, with hundreds of exceedances over 20 dB predicted over the two-year period.

If approved, detailed information will need to be provided to the community, so they can understand what construction activities will take place; where it will take place; when it will take place and for how long. Where construction activities are proposed outside of the recommended standard hours, the community should – as far as practicable – be engaged to identify feasible and reasonable mitigation, including periods of respite.

It is considered that the community will hear, and likely be affected by noise and vibration at different times during the construction of the project, and from changes in the operation of the rail line in the area once the project is operational. As such the EPA advises that:

- The acoustic environment is likely to change and will be audible, particularly as construction of the project progresses. This may include construction noise and vibration during the evening and at night.
- It will be important to keep the community informed about construction activities as the project progresses, and to seek input to identify the community's preference to mitigation, including work scheduling, and consideration of respite periods.

Additional and specific requirements for the noise and vibration impact assessment are detailed as follows:

Modelling and "Annoyance" Method

- The modelling of the rail line has been undertaken "in accordance with the guidance provided in the *ARTC Noise Prediction and Mitigation Guidelines* (ARTC, 2018)". This Guideline, or the assumptions under which calculations have been undertaken is not included in the assessment. **The ARTC Noise Prediction and Mitigation Guideline should be published alongside the assessment or the key calculation assumptions stated.**
- The report cites the 2018 WHO *Environmental Noise Guidelines for Europe* and a 2018 systematic review by Basner and McGuire on sleep disturbance from road and rail in order to assess noise impacts in terms of annoyance. The interpretation of how awakenings relate to annoyance is not appropriate as it deviates from the information provided in Appendix 5 of the *Rail Infrastructure Noise Guideline* (RING). As the SEARs requires that the assessment be undertaken in accordance with the RING, the EPA requests that **an assessment must be undertaken to determine the predicted rail noise levels against the appropriate RING noise trigger levels to evaluate the long-term noise impacts of the project.**

Validation Procedure

- Section 5.2 of the report contains information regarding the validation of the noise model used to determine the noise impact of the proposed rail loop. However, the Operational Rail Vibration Assessment does not contain a model validation method. As the rail line is currently in operation, the usual obstacles to validate vibration levels would not be apparent in this instance. **The EPA request that a rail vibration validation take place that is of similar detail to that undertaken for noise validation.**
- Measured and predicted day/night noise levels at Locations L01 and L02 in Table 5-6 differ by significant margins and no explanation has been provided. **Where differences greater than 2 dB between the modelled and measured day/night noise levels are reported, these must be justified. If they are not able to be justified, and are modified accordingly, the modifications are to carry through to the predicted noise levels.** It is noted that carrying through these modified noise levels is likely to have a significant impact on the number of residences that qualify for additional mitigation.

Construction Method and Mitigation Options

- Table 4.7 and Table 4.8 of the report contain the “highest exceedance” of the NMLs. **The EPA requests clarification on what the figures in the table represent.** The current wording indicates that these are the exceedance over the NML (i.e. NML + the number in the table), however the explanatory notes below the tables do not reflect this. Further, the exceedances of the NMLs in the appendices are significantly above those within the table and would alter the explanatory notes considerably. **The EPA requests that the highest noise levels within each NCA be included in the tables and summarised in the explanatory notes. An indication of the number of receivers that are “highly noise affected” should also be included.**
- Table 6.1 of the report lists standard mitigation measures for construction. When considering standard mitigation for construction compounds, the report details limited uses of the compounds and shielding “where practicable”. It is unclear whether this shielding has been incorporated into the assessment of construction noise to the NCA’s. **The EPA requests further information on whether this compound mitigation has been considered in the assessment.**
- The EPA advises that **reliance on vegetation for shielding effects** from Compound 2 and 3 to NCA01 is not an appropriate mitigation method and **should not be considered when assessing the requirement for barriers.**
- Due to the significant out of hours (OOH) impacts expected at all NCAs, insufficient detail has been provided to determine the duration, regularity and scope of the exceedances during OOH works at the most affected receiver locations. As alternative accommodation is being considered for a large number of dwellings, **the EPA requires a detailed assessment to consider noise impacts, including consideration of all feasible and reasonable mitigation. This should consider options for alternative accommodation where there are residual noise impacts.**
- The assessment of worst-case construction noise impacts in the “Discussion of construction noise impacts” section provides information relating to the worst-case construction moving down the rail corridor. The report states that as the worst-case scenario moves away from a receiver, those dwellings will receive noise levels that are “less than worst case”. However, no indication is given as to the extent and duration of the impact as the worst-case construction scenario approaches and then travels past each NCA. **The EPA requires additional information of the extent of non worst-case construction noise at receivers considered to be above the “noise affected” level for the project.**

Operational Noise Assessment Method and Mitigation

- The noise modelling used to predict operational noise has been validated by using measurements of existing operations at the site. However, there are minor discrepancies between the predicted and measured noise levels. Analysis of the results presented within the appendices (particularly Appendix J and K) indicate that receivers may qualify for additional mitigation when this is taken into account. **The EPA requests clarification regarding any allowances made for potential discrepancies between the measured noise levels and the predicted noise model. Receivers that may qualify for additional mitigation after these discrepancies are taken into account should be included within the report.**

- The EPA advises that when reviewing multi-level receivers, such as the receiver identified as 106 Broomfield Street (R2289), in which the second floor has been identified for additional mitigation, but the third floor of the same building has not. **The EPA advises that mitigation should be applied in an equitable fashion for multistorey receivers, especially when the additional mitigation requirement is very close to the predicted noise level.**
- With reference to the above, we advise that the receiver identified as R2289 is 108-110 Broomfield Street, Cabramatta, not 106 Broomfield. **The EPA requests that the dwellings are correctly identified and that the receiver codes nominated within the appendices match the addresses on the appropriate NSW databases.**

The EPA advises that there are items contained within the technical review above that may have significant impact on the outcomes of the project. The EPA reiterates that many receivers will be significantly affected during the construction period and as such should be adequately consulted before and during the construction process.

2. Contamination

The following report was reviewed in the EPA's noise and vibration assessment:

- *Cabramatta Loop Project – Environmental Impact Statement*, prepared by GHD for Australian Rail Track Corporation, dated 15 August 2019 (the EIS).
- *Technical Report 6 – Soils and Contamination Impact Assessment*, prepared by GHD for Australian Rail Track Corporation, dated 8 August 2019 (the SCIA).

The site has not been previously notified to the NSW EPA in relation to section 60 of the *Contaminated Land Management Act 1997* (the Act) and is not regulated under the Act.

Assessment against SEARs (Contaminated land matters)

1. *The Proponent must verify the risk of acid sulfate soils (Class 1, 2, 3 or 4 on the Acid Sulfate Soil Risk Map) within, and in the area likely to be impacted by, the project.*

The SCIA and section 12.2.2.2 of the EIS evaluated the likelihood of acid sulfate soils (ASS) in the project. No sampling was conducted to verify the presence of ASS in the areas likely to be impacted by the project. The consultant's review of the NSW Government Sharing and Enabling Environmental Data (SEED) website and both the Fairfield City Council and Liverpool City Council LEP ASS maps indicated there are no known occurrences of ASS within the project site. Proposed signalling works located near Liverpool Station (Figure 7.2 in the EIS) are in an area classified as Class 5, however ASS are not typically found within Class 5 areas. While the desktop review considers the likelihood of encountering ASS to be very low, the EPA recommends that the proponent include measures to manage ASS in an Unexpected Finds Protocol to be required as a condition of approval.

2. *The Proponent must assess the impact of the project on acid sulfate soils (including impacts of acidic runoff offsite) in accordance with the current guidelines.*

The SCIA and section 12.2.2.2 of the EIS evaluated the impact of the project on ASS, based on desktop study only. While the consultant's desktop review considers the likelihood of encountering ASS to be very low, the EPA recommends that the proponent include measures to manage ASS and these measures be included in an Unexpected Finds Protocol to be required as a condition of approval.

3. *The Proponent must assess whether the land is likely to be contaminated and identify if remediation of the land is required. Where assessment and/or remediation is required, the Proponent must document how the assessment and/or remediation would be undertaken in accordance with current guidelines.*

The EIS report recognised that sampling was not undertaken in accordance with the *Sampling Design Guidelines* (NSW EPA, 1995), which is one of the guidelines approved by the EPA under s105 of the *Contaminated Lands Management Act 1997* (CLM Act). Furthermore, section 12.3.2 of the EIS stated that the findings of the limited contamination assessment can only be used to determine the “*presence of gross contamination within the project site*”. The EPA believes that the contamination at the project site has not been adequately assessed given the limited intrusive sampling undertaken to assess contamination at the project site.

The limited contamination assessment found no evidence of staining or odour that may indicate the presence of contamination in any of the test pits or boreholes, even though Section 12.2.3.2 of the EIS listed the potential sources of contamination in the vicinity of the project. Given the presence of these potential sources of contamination, the EPA recommends that the proponent include measures to manage unexpected contamination at the project site and these measures be included in an Unexpected Finds Protocol to be required as a condition of approval.

4. *The Proponent must assess the impacts on soil and land resources (including erosion risk or hazard). Particular attention must be given to soil erosion and sediment transport consistent with the practices and principles in the current guidelines.*

Section 12.4 of the EIS provided summary of operation impacts. The EIS complied with this SEAR item.

Recommended draft conditions of consent relating to contamination:

1. The proponent to prepare an unexpected finds protocol. The protocol should include detailed procedure for identifying and dealing with unexpected contamination, acid sulfate soils and other unexpected finds. The proponent should ensure that the procedure includes details of who will be responsible for implementing the unexpected finds procedure and the roles and responsibilities of all parties involved.
2. The proponent must conduct field testing if unexpected acid sulfate soils are found.
3. If unexpected contamination was found, the proponent must conduct more detailed investigation. The following guidance, as relevant, should be considered when assessing contamination at the site:
 - *NSW EPA Sampling Design Guidelines*
www.epa.nsw.gov.au/resources/clm/95059samppgdline.pdf
 - *Guidelines for the NSW Site Auditor Scheme* (3rd edition) 2017
<https://www.epa.nsw.gov.au/publications/contaminatedland/17p0269-guidelines-for-the-nsw-site-auditor-scheme-third-edition>
 - *Guidelines for Consultants Reporting on Contaminated Sites*, 2011
www.epa.nsw.gov.au/resources/clm/20110650consultantsglines.pdf
 - *The National Environment Protection (assessment of contamination) Measures 2013* as amended.
4. If unexpected contamination is found, the applicant must prepare a remediation action plan.
5. If remediation is required, the proponent is required to engage an EPA accredited site auditor to prepare a section B site audit statement that confirms that the land can be made suitable for the proposed use. When a site auditor is engaged, the auditor will review the adequacy of the investigations, unexpected finds protocol, any remedial works or management plan required. The proponent must adhere to the management measures accepted by the Auditor.
6. The processes outlined in *State Environmental Planning Policy 55 - Remediation of Land (SEPP55)* be followed in order to assess the suitability of the land and any remediation required in relation to the proposed use.

7. The proponent must ensure the proposed development does not result in a change of risk in relation to any pre-existing contamination on the site so as to result in significant contamination [note that this would render the proponent the 'person responsible' for the contamination under section 6(2) of *Contaminated Land Management Act 1997*].
8. The EPA is required to be notified under section 60 of the *Contaminated Land Management Act 1997* for any contamination identified which meets the triggers in the *Guidelines for the Duty to Report Contamination*
(www.epa.nsw.gov.au/resources/clm/150164-report-land-contamination-guidelines.pdf)
9. The EPA recommends use of "*certified consultants*". Please note that the EPA's Contaminated Land Consultant Certification Policy (<http://www.epa.nsw.gov.au/-/media/epa/corporate-site/resources/clm/18520-contaminated-land-consultant-certification-policy.pdf?la=en>) supports the development and implementation of nationally consistent certification schemes in Australia, and encourages the use of certified consultants by the community and industry. Note that the EPA requires all reports submitted to the EPA to comply with the requirements of the *Contaminated Land Management Act 1997* to be prepared, or reviewed and approved, by a certified consultant.