

SIMTA Intermodal Terminal Facility- Stage 1

Response to Submissions -Air Quality Addendum



SIMTA

SYDNEY INTERMODAL TERMINAL ALLIANCE

Part 4, Division 4.1, State Significant
Development

Westley Owers
Principal Environmental Planner
Hyder Consulting Pty Ltd
Level 5, 141 Walker Street
North Sydney, NSW 2060

SIMTA STAGE 1 - REVIEW OF AIR QUALITY EFFECTS FOR AMENDED RAIL LINK ALIGNMENT

Report purpose

This addendum report has been prepared to provide further information on, and environmental assessment of, a proposed amendment to the Rail link as part of the SIMTA Stage 1 Proposal (the Proposal). This report has been prepared to support a Response to Submissions to be prepared as part of the approval process of the Proposal for State Significant Development (SSD) under Part 4, Division 4.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

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Ramboll Environ Australia
Level 3, 100 Pacific Highway
North Sydney, NSW 2060
Australia

www.ramboll-environ.com

This report provides an addendum to the Air Quality Impact Assessment (AQIA) prepared by ENVIRON, dated May 2015, and included within the Environmental Impact Statement (dated May 2015) prepared for the Proposal.

Proposal amendment overview

The Rail link is to be realigned within Commonwealth Land (including MIC Site, Moorebank Avenue and the Southern Boot Land) to respond to submissions (received during the exhibition of the EIS (28 May 2015 and 26 June 2015)) and also to reduce the overall environmental impacts of the Proposal (refer to **Figure 1**).

This realignment would alter the Rail link alignment to the south of the Anzac Creek Crossing, at the intersection with Moorebank Avenue and also on the MIC site (to the immediate west of Moorebank Avenue). The rail alignment would retain the 20 metre width of the Rail Link Corridor within environmentally sensitive areas, as per the Concept Plan Approval (MP 10_0193) and the EIS.

There would be no alteration to the Rail link to north of this realignment including at the crossing of Anzac Creek, connection to, or within the Stage 1 site. There would also be no alteration to the Rail link to the west along the MIC site, the Georges River bridge crossing, within the Glenfield Waste Facility or at the southern and northern connections to the SSFL.

This alteration in the rail alignment would result in Moorebank Avenue being intersected by Rail link further north of that previously identified within the EIS.

An alteration would be undertaken to the existing Moorebank Avenue road embankment to create an overbridge to accommodate the realigned Rail link.

The Rail link realignment would not generally alter the construction methodology (with the exception of the Moorebank Avenue overbridge) or the operation of the IMT as previously provided, with no change to the rail traffic, road access, operational hours, workforce or overall operational procedures.

Air Quality Assessment

Change in construction phase emissions

The AQIA estimated emissions for dust generating activities, including vegetation removal during site preparation, material handling for earthworks / fill, wind erosion from exposed areas and vehicles travelling on unsealed surfaces. The emission estimates were based on assumptions for activity rates, for example, tonnes of material handled, hours of operation, areas of exposed ground.

The activity data inputs will either not change or be slightly reduced (based on minor reductions to the length of the Rail link and therefore impact areas) as a result of the amended rail link alignment.

Therefore there is no expected change to the emission estimates presented in the AQIA.

Change in operational phase emissions

The AQIA estimated emissions for diesel locomotives travelling along the Rail link, to and from site to the SSFL. Emissions for locomotives were calculated based on the amount of fuel consumed and fuel based emission factors equivalent to US EPA Pre-Tier 0 Line Haul locomotive emissions performance.

An NSW average fuel consumption rate of 4.03 litres per gross kilotonne-kilometre (L/kt-km) was assumed and the annual gross kilotonne-kilometre was estimated based on the total train weight (for full and empty trains), the number of trains per annum and a travel distance of 3 km (from site to SSFL). The assumed travel distance of 3 km is approximate. The distance from the southern SSFL connection to the site was estimated to be approximately 2.4 km while the distance from the northern SSFL connection to the site was estimated to be approximately 2.8km.

The alternative rail alignment does not increase the travel distance to the SSFL, in fact would reduce the distance by approximately 200 meters. The reduction is unlikely to have a measureable change in emissions or air quality effects on a short term basis, however it may be measureable on an annual basis, for example by reducing fuel consumption and consequently emissions. A nominal theoretical change in fuel consumption and emissions is presented in **Table 1**, based on a reduced travel distance of 230m.

Table 1: Nominal change in fuel consumption and emissions for the alternative rail link

Scenario	Fuel Consumption (kL/annum)	NOx emissions (kg/annum)	PM emissions (kg/annum)
EIS Rail link	80.3	5,737	104
Amended Rail link	74.2	5,297	92

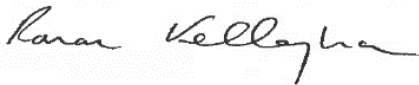
Change in source location

As shown in **Figure 1**, the amended Rail link provides a more direct route to the alignment proposed within the EIS. For the section of the Rail link that is re-aligned, there is a shift west, away from Wattle Grove and towards the MIC site. The re-alignment would move modelled source locations approximately 150m as the widest separate point to the EIS alignment. This marginal change would

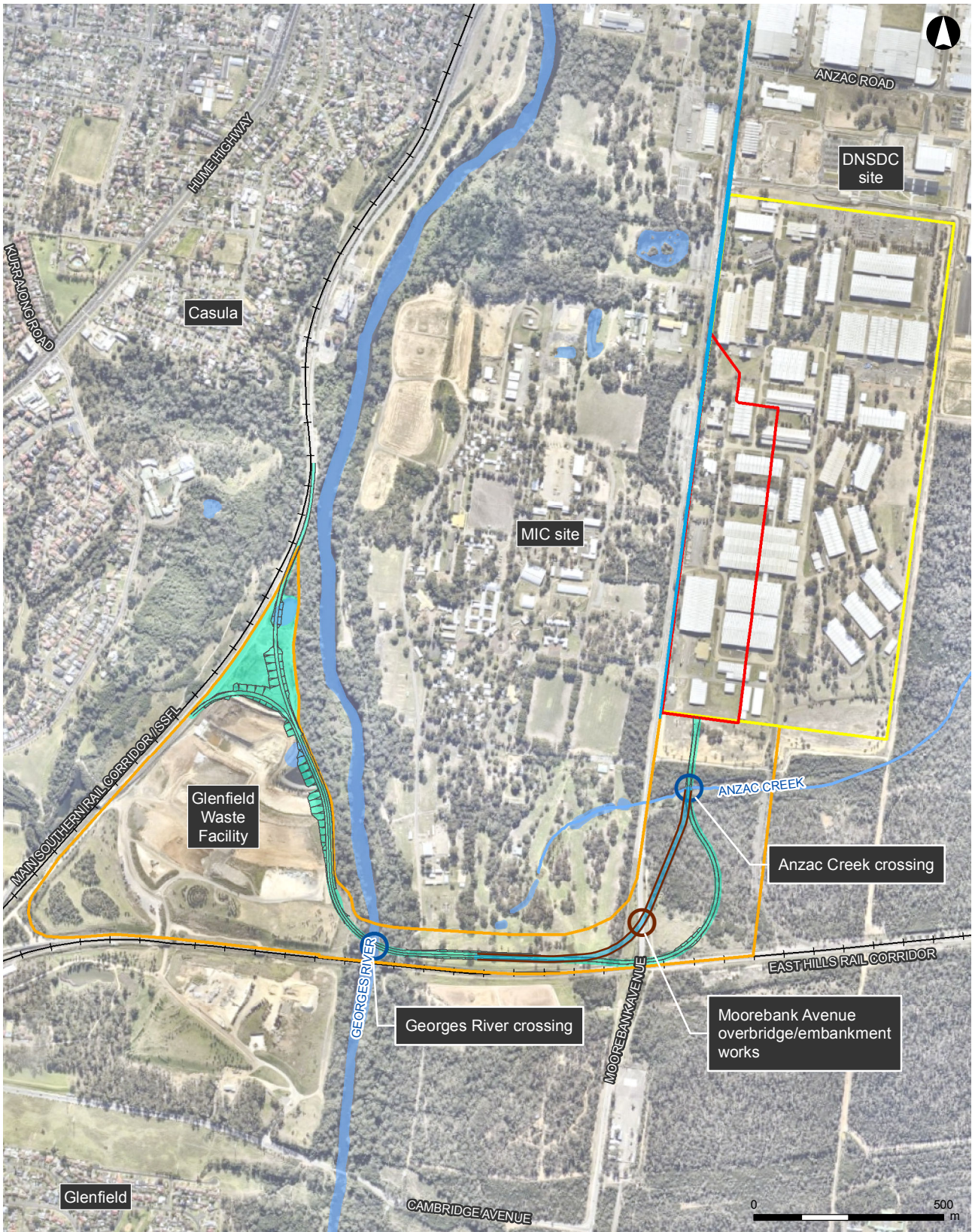
have little or no impact on the predicted ground level concentrations presented in the AQIA, considering separation distances of approximately 2km to the closest sensitive receivers to the west.

Conclusion

A nominal change in emissions and source locations as a result of an amended Rail link would not result in any significant change to the air quality predictions presented in the AQIA. The conclusion of the AQIA therefore remain, that is, there is very low risk of adverse air quality impacts from the construction and operation of SIMTA Stage 1. Recommendations made in the Best Practice Review and Air Quality Management Plan remain unchanged.



Ronan Kellaghan - Senior Manager – Air Quality



LEGEND

- Rail Corridor
- SIMTA site
- Operational area
- Alternative Rail link alignment
- Rail link
- Moorebank Avenue impact area
- Rail link (including 20m width and variable buffer)
- Alternative Rail link 20m buffer
- Creek/River crossing
- Road crossing
- Existing railway
- Watercourse

HYDER CONSULTING PTY LTD
 ABN 76 104 485 289
 Level 5, 141 Walker St
 North Sydney NSW 2060
 Australia
 P: +61 (0) 2 8907 9000
 F: +61 (0) 2 8907 9001

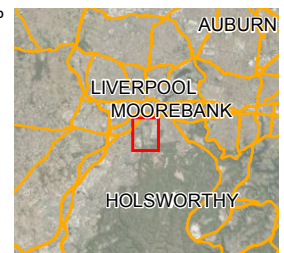


Figure 1: Alternative Rail link and overview of the Proposal