

Moorebank Precinct West Stage 2 Proposal Response to Submissions

Appendix E: Air Quality Impact Assessment



SIMTA

SYDNEY INTERMODAL TERMINAL ALLIANCE

Part 4, Division 4.1, State Significant
Development

AIR QUALITY IMPACT ASSESSMENT

MPW Stage 2 Response to Submissions – Addendum Impact Assessment

16 MARCH 2017

Incorporating



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1 INTRODUCTION

SIMTA are seeking approval for the construction and operation of the Moorebank Precinct West (MPW) Stage 2 Proposal (the Proposal), which will be the second stage of development under the MPW Concept Approval (SSD 5066).

An Environmental Impact Statement (EIS) was prepared for the Proposal seeking approval under Part 4, Division 4.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). In particular, the EIS was prepared to address, and be consistent with, the following:

- The Secretary's Environmental Assessment Requirements (SEARs) (SSD 16-7709) for the Proposal, which were issued on 14 July 2016
- The relevant requirements of the MPW Concept Approval (SSD 5066) granted by the Planning Assessment Commission (PAC) on 3 June 2016
- The relevant requirements of the approval under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) (No. 2011/6086).

The EIS was publicly exhibited, in accordance with clause 83 of the *Environmental Planning and Assessment Regulations 2000* (EP&A Regulations), between 26 October 2016 and 25 November 2016. During this exhibition period submissions were invited from all stakeholders including members of the community and government stakeholders. In response to the submissions received, and also to respond to design progression, amendments have been made to the Proposal (the Amended Proposal), as detailed below.

1.1 Report purpose

The purpose of this report is to provide further environmental assessment for the Amended Proposal and serve as an addendum to the Air Quality Impact Assessment (AQIA) (Ramboll Environ, 2016) provided within the EIS. A summary of the works included in the Amended Proposal is provided below.

1.1.1 Amended Proposal

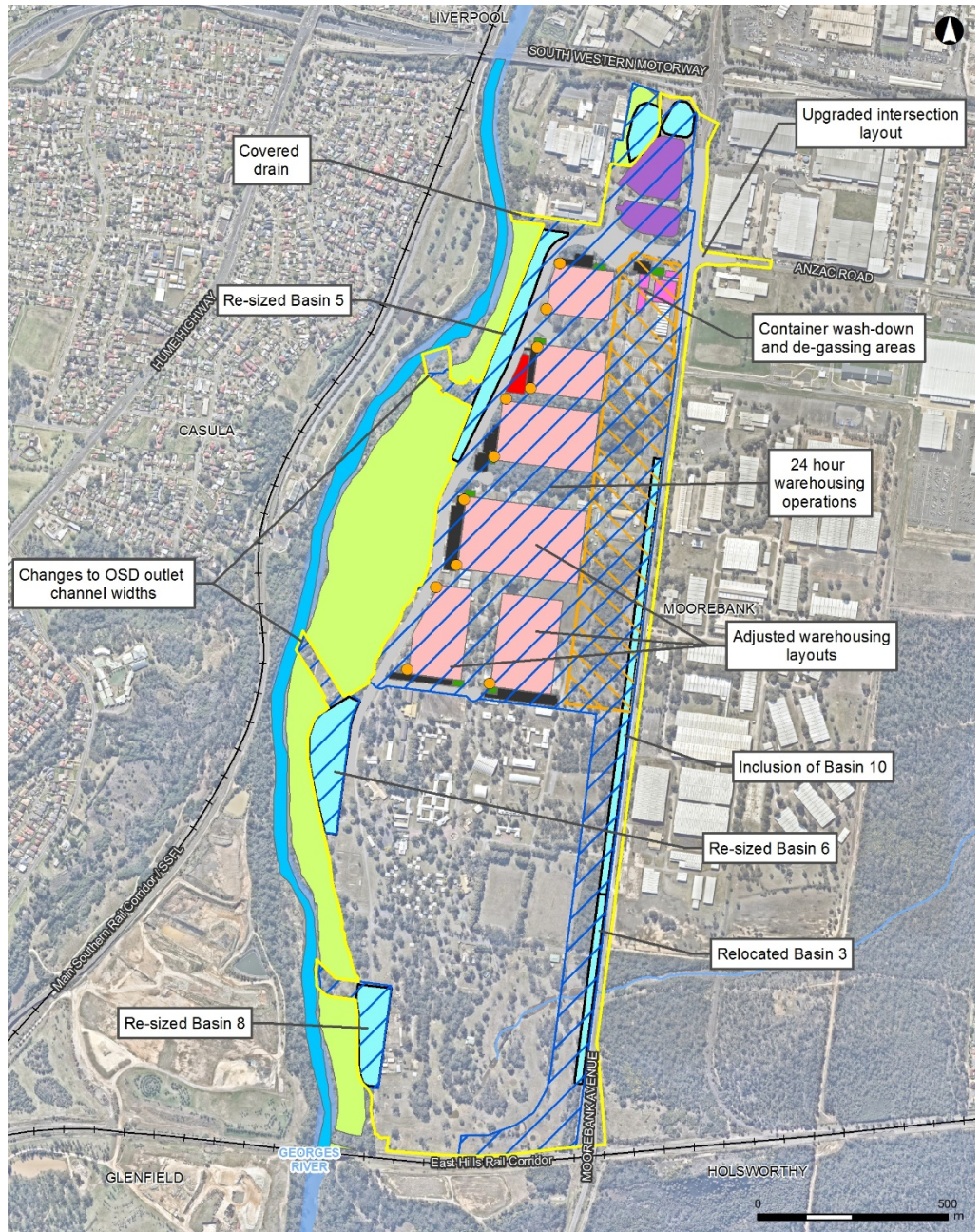
The MPW Stage 2 Proposal (the Proposal) involves the construction and operation of an intermodal terminal (IMT) facility to support a container freight throughput volume of 500,000 twenty-foot equivalent units (TEUs) per annum. The Proposal also includes the construction and operation of approximately 215,000 m² GFA, freight village (800 m²) and associated infrastructure.

The Amended Proposal alters the Proposal based on submissions received during exhibition of the EIS, consultation with key stakeholders and design development. A summary of the amendments to the Proposal is as follows:

- Alignment of the operational hours for warehouses to the IMT facility and Port freight operations to enable freight movements outside of peak traffic times.
- Alterations to the drainage design, including:
 - Inclusion of the OSD (Basin 10) and relocation of another OSD (Basin 3) along the eastern boundary of the operational area, adjacent to the western verge of Moorebank Avenue
 - Re-sizing of OSD basins along the western boundary of the operational area
 - Reduction to the widths of selected OSD outlet channels
 - Provision of an additional covered drain within the Endeavour Energy easement

- Establishment of a container wash-down facility with de-gassing area within the IMT facility
- Illuminated backlit signage within the warehousing area
- Inclusion of an upgraded layout for the Moorebank Avenue/Anzac Road intersection
- Adjustments to warehouse layouts.

The amendments to the Proposal are shown in Figure 1.



LEGEND

- | | | |
|-----------------------------|-----------------------------------|---------------|
| Amended construction area | Ancillary components and services | OSD |
| Amended operational area | Conservation area | Truck parking |
| Multipurpose Terminal | Freight Village | Office |
| Illuminated backlit signage | Georges River | Road |
| | Carpark | Warehousing |

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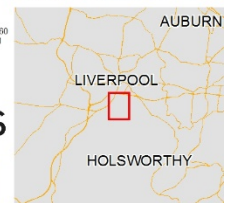


Figure 1: Amendments to the Proposal

2 IMPACT ASSESSMENT

2.1 MPW Stage 2 Proposal Assessment

The AQIA prepared for the EIS assessed local air quality impacts using a Level 2 assessment approach, in general accordance with the NSW Environment Protection Authority (EPA) *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales*.

The key emissions to air during the construction phase of the Proposal were identified as fugitive dust or particulate matter (PM), generated during demolition, site clearing and earthworks.

During operations, the key emissions were identified as those associated with the combustion of diesel fuel.

Emissions and modelling scenarios were presented for the construction and operation of the Proposal, as follows:

- Scenario 1: Construction of the Proposal.
- Scenario 2: Operation of the Proposal with the IMT facility operating at 500,000 TEU and 215,000 m² of warehousing.
- Scenario 1a: Cumulative construction of the Proposal with concurrent construction activities for MPE Stage 1.
- Scenario 2a: Cumulative operation of the Proposal plus MPE Stage 1, incorporating a combined 750,000 TEU (500,000 TEU for the IMT facility and 250,000 TEU for the MPE IMEX).

Dispersion modelling results demonstrated that the construction phase emissions comply with all relevant impact assessment criteria. The predicted increase in annual average PM₁₀, PM_{2.5}, TSP and dust deposition were considered minor, when compared against existing background conditions. Cumulative predictions demonstrated that the construction for the Proposal would result in no additional days over the criteria.

For the operational phase the maximum increase in PM₁₀ and PM_{2.5} was considered minor when compared to existing background conditions. When background was added, there were no additional exceedances of the short term impact assessment criteria. Annual average background concentrations of PM_{2.5} were already above the assessment criteria, therefore cumulative predictions were also above the assessment criteria at all receptors. It was noted, however, that the Proposal results in a relatively minor increase in annual average PM_{2.5} (<0.4 µg/m³ at all sensitive receptors). The predicted NO₂, CO, SO₂ and VOC concentrations were all well below the relevant impact assessment criteria.

In summary, consistent with previous air quality assessments for the MPW Concept Approval, the potential air quality impacts were found to be low risk and the proposed mitigation measures sufficient to ensure off-site impacts from the Proposal are effectively managed.

2.2 Amended Proposal Assessment

2.2.1 Methodology

The Amended Proposal includes some amendments that differ from what was assessed in the AQIA prepared for the EIS. Further discussion on the changes for the Amended Proposal are presented in the subsequent sections.

Hours of warehousing operations

The change in the hours of warehousing operations from 18 hours to 24 hours a day will not result in an increase in emissions for sources associated with warehousing (heating/cooling, internal transfer vehicles and forklifts).

For warehouse heating and cooling, there would be no increase in the estimated energy demand and emission estimates do not change. For internal transfer vehicles, emissions are estimated based on activity data that are independent of the hours of operation (i.e. travel distance and number of vehicle per day), therefore emissions estimates do not change for this source. The change to 24 hour operations would not increase the actual operational hours for forklifts as the total freight processed is diluted over a longer operational period thus the forklift utilisation is reduced in account of the longer operational hours. As such, the emissions modelled in the AQIA prepared for the EIS remain valid

Container wash-down facilities and de-gassing areas

The Amended Proposal will include container de-gassing and fumigation facilities. The proposed de-gassing system will include fan forced ventilation for container residual gas extraction and collection. Where additional fumigation is required, a recapture system will be used to collect and treat residual gas emissions.

The proposed de-gassing and recapture system for fumigation will use carbon filtration to control emissions of methyl bromide and other potential pollutants. The treated air from de-gassing and fumigation would be unlikely to compromise air quality goals and no further quantitative assessment is presented.

Upgraded layout for Moorebank Avenue/Anzac Road

The upgraded layout for Moorebank Avenue would result in some minor changes to the works along Moorebank Avenue and increase in the duration of the construction program for Works Period D (Moorebank Avenue intersection works and internal road network) for these works.

These changes would not result in any material change to the emission estimates used in the AQIA prepared for the EIS, because the proposed equipment activity data and amount of material handled would not change.

Other Amendments to the Proposal

The remaining amendments to the Proposal, including:

- Drainage works
- Illuminated backlit signage
- Adjustments to warehouse layouts

would not result in any changes to the emissions estimates presented in the air quality assessment undertaken for the EIS, therefore no further assessment is required.

2.2.2 Results

The Amended Proposal would result in no change to emissions and no change to the predicted ground level concentrations assessed in the AQIA prepared for the EIS

2.2.3 Mitigation measures

No additional mitigation measures are required for the construction or operation of the Amended Proposal with regards to air quality.

2.3 Conclusion

This assessment concludes that the Amended Proposal would result no change to what was already identified and assessed as part of the existing air quality assessment. Therefore, the outcomes and recommendations of the assessment undertaken for the air quality assessment are still relevant and appropriate for the assessment of the Amended Proposal.