Chapter 5
Response to community submissions

5. Response to community submissions

Chapter 5 of this Supplementary Response to Submissions report (this report) details the key issues and sub-issues raised in the community submissions received during the exhibition period of the Response to Submissions report. Moorebank Intermodal Company's (MIC) response to each of the issues raised is provided throughout this chapter.

5.1 Strategic context and need for the Project

A range of issues were raised in relation to the strategic context and need for the Project. These area detailed below:

5.1.1 Container destinations and freight demands

A submission raised concerns about the double and triple handling of freight and that no real demand for an intermodal facility of this size (1.55 million TEU per annum) has been demonstrated. Concerned that the project is not in the public's best interest.

Submission number(s)

119077

MIC response

Section 2.5 in Chapter 2 – *Assessment of the issues raised by the NSW Planning Assessment Commission* of the Response to Submissions report, provides a discussion of the public benefit of the Project.

MIC recognises that there will be some impacts to local residents which will be minimised through the implementation of environmental mitigation measures. Section 2.5 within Chapter 2 – *Assessment of the issues raised by the NSW Planning Assessment Commission* of the Response to Submissions report summarises the public benefits of the Moorebank Intermodal Terminal including:

- its contribution to productivity, reduced business costs, reduced road congestion and environmental outcomes – these benefits have been estimated at around $9 billion;
- the unique characteristics of the terminal site, which provide a once-in-a-generation opportunity for a transformative freight project; and
- the project's consistency with Commonwealth, and State planning and infrastructure strategies and policies.

The residual impact of the environmental impacts addressed in the EIS and Response to Submissions report will be relatively minor and within established criteria and regulatory requirements. In addition, a package of local benefits will be progressed in consultation with relevant stakeholders. On balance, therefore, the project is considered to be in the public interest.

Section 3.1 of Chapter 3 – *Strategic context and need for the Project* of the EIS described Sydney's need for addition Intermodal Terminal capacity in the IMEX and interstate markets which is being driven by:

- the growth in container movements in NSW;
- easing of the Port Botany bottleneck from heavy vehicles;
- growth in containerised interstate freight;
- limited capacity within the existing and already planned IMT network;
- increasing freight demand in Sydney and interstate;
- road congestion; and
- environmental and social impacts of road freight.

Section 2.3 of Chapter 2 – *Assessment of the issues raised by the NSW Planning Assessment Commission* of the Response to Submissions report further expands on the demand for intermodal capacity of the Moorebank Precinct from a perspective of achieving NSW rail share targets and overall demand for intermodal capacity based on the predicted growth through Port Botany. The discussion focuses on both IMEX and interstate demand and concludes that by investing in additional intermodal capacity in locations that are attractive to the freight market (such as Moorebank), there is a shortfall between future capacity of existing terminals and the capacity needs to handle predicted growth though Port Botany.

The full IMEX capacity of 1.05 million TEU will be needed if the rail mode share from Port Botany is permitted to grow in line with demand (or if the NSW Government were to pursue a higher than 28% rail mode share target) beyond 2020 to enable Port Botany to continue to grow. A cap on IMEX throughput (for less than 1.05 million TEU) would:

- limit the ability of importers and exporters to choose the most efficient freight transport mode for their needs;
- reduce the efficiency of planned investment in intermodal capacity at Moorebank, requiring further investment before it is economically efficient, and potentially discouraging investment in intermodal capacity;
- be inconsistent with NSW and Commonwealth Government objectives to increase freight transfers by rail to reduce reliance on the road network, enabling continued growth in Port Botany throughput and encourage productivity growth; and
- only be warranted if the environmental impacts beyond the cap could not be managed, which other parts of this report, and the EIS, demonstrate is not the case.

The Moorebank precinct also needs to provide 500,000 TEU of interstate capacity (i.e. in addition to the 1.05 million TEU of IMEX capacity). The Commonwealth Government has been investing heavily in the freight rail network to increase its reliability and transit times. A network of large, modern intermodal facilities, including at Moorebank is required to complement this investment and encourage more interstate freight to travel by rail. An improved interstate rail freight network would compete on cost and reliability with road, thereby encouraging more interstate freight to travel by rail.

In response to the concern regarding double and triple handling of freight – transporting freight by rail to an intermodal does involve extra handling, however from an economic perspective, the Deloitte demand analysis (2013) determined that rail transport via Moorebank is cost competitive compared to road transport and also compared with rail and via other IMEX terminals in Sydney. Therefore despite the extra handling requirements, transporting freight via Moorebank offers the freight transport sector savings in operating costs.

5.1.2 Economic viability of the project

A submission raised general concerns about the economic viability of the proposal due to the limits placed on the SIMTA intermodal terminal development by the NSW Planning Assessment Commission on the number of TEU allowed. Also raised concerns that the Moorebank Intermodal Terminal site is surrounded by water, which means it will be costly to service the intermodal in this area.

They note that Liverpool City Council has estimated these upgrades are likely to cost in excess of $750 million.

Submission number (s)

119052

MIC response

The economic viability of the project is demonstrated by the strong private sector interest in funding, developing and operating the terminal despite the limits placed by the Planning Assessment Commission (PAC) on IMEX intermodal throughput on the SIMTA land at Moorebank. SIMTA entered into an agreement to develop and operate the terminal across a combined precinct (comprising both the MIC and SIMTA sites) after these limits were placed on the SIMTA land by the PAC. SIMTA's commitments under the agreement include providing or delivering around $1.5 billion over 10 years to deliver the IMEX and interstate terminals and warehousing in the combined precinct.

The main impact of the throughput cap is to reduce the economic benefits of the terminal. For example, the throughput cap would reduce the capital investment that the terminal will attract in south-west Sydney and the scope of the precinct development (e.g. the terminals and warehousing may not be developed to their full potential scale). This in turn would reduce the number of jobs created at the terminal and in related industries, and reduce the overall economic benefits which, for a full capacity terminal (i.e. 1.55 million IMEX and interstate TEU p.a.) would total over $9 billion over a 30 year period. It would also likely bring forward economically inefficient investment in intermodal terminal capacity elsewhere and/or bring forward the need for additional investment in road infrastructure to and from Port Botany which would otherwise be deferred as a result of the terminal.

MIC notes the capacity restrictions placed on the SIMTA Project relate to the potential impacts of the intermodal terminal, most notability the impacts on the road network. Section 2.3 in Chapter 2 – *Assessment of the issues raised by the NSW Planning Assessment Commission* of the Response to Submissions report presents an analysis of the Moorebank precinct demand for both IMEX and Interstate intermodal capacity with a specific focus on the conclusions made by the PAC in their assessment report for the SIMTA concept approval. The analysis draws upon and expands on the demand assessment presented in Chapter 3 – *Strategic context and need for the project* in the EIS and aligns these with the NSW Government objectives to double the proportion of container freight moved by rail through NSW Ports by 2020. The discussion focuses on demand for both IMEX intermodal capacity given the current and planned intermodal terminals in the greater Sydney region and interstate freight.

The Response to Submissions report demonstrates that with suitable modification of key intersections and other supplementary measures outlined in Table 7.20 (of Chapter 7 – *Proposed amendments to the development)*, the road network can be progressively improved to ensure that, allowing for background growth, the road network can be maintained at a level of services commensurate with its 2030 conditions (where there is no project), up to a level of 1.55 million TEU. Additionally the report clearly justified the development at Moorebank in a total intermodal capability of 1.55 million TEU (comprising 1.05 million TEU in IMEX and 500,000 TEU in interstate freight capacity) to meet market demand for containerised goods in western Sydney and to achieve the NSW governments rail share target.

The Moorebank Intermodal Terminal site is easily accessible by both road and train, with easy access to the SSFL to the west of the site and the M5 Motorway to the north of the site. The fact that the terminal site is bound by Georges River has little impact on the accessibility of the site.

MIC is unable to comment on the $750 million figure presented by Liverpool City Council as we have not seen the background data which informs this figure. MIC has committed to upgrading local intersections surrounding the terminal, however this issue is unrelated to the fact that the terminal is surrounded by water.

5.1.3 Project benefits

A submission raised that the costings for the upgrading of road infrastructure to address the observable limitations of the Moorebank Intermodal Terminal site and the measured shortcomings of existing traffic flows will see the project be one of limited returns for all concerned.

Submission number(s)

119063

MIC response

As discussed in Section 3.2 of Chapter 3 – *Strategic context and need for the Project* of the EIS, the project is expected to generate a number of economic, social and environmental benefits for the community and economy. This includes close to $9 million in economic benefits over a 30 year operational period of the Project, including $120 million a year for the south-west Sydney economy through improved productivity, reduced operating cost, reduced costs associated with road damage, congestion and accidents and better environmental outcomes.

The Response to Submissions report demonstrates that with suitable modification of key intersections and other supplementary measures outlined in Table 7.20 (of Chapter 7 – *Proposed amendments to the development*), the road network can be progressively improved to ensure that, allowing for background growth, the road network can be maintained at a level of services commensurate with its 2030 'base level' conditions (i.e. the traffic that would exist in 2030 if there was no project),

The funding (costs) for the infrastructure upgrades of the identified key intersections have been captured in the Projects business case and economic evaluation. MIC will enter into a voluntary planning agreement with Transport for NSW and Roads and Maritime Services and will contribute to the funding of the infrastructure upgrades. The project remains economically viable given these commitments to infrastructure contributions.

5.2 Planning and statutory requirements

5.2.1 Concerns regarding the transparency and adequacy of impact assessments

A number of submissions raised concerns with regards to the transparency and adequacy of impact assessments. Issues included:

- concerns that the project has been examined from and financial perspective and does not consider it from a 'human perspective';
- questions if the noise impacts (on Casula residents) as a result of realigning Powerhouse Road (in Casula) been considered?
- states that local residents have a right to expect honesty in the EIS;
- the original data on which the computer modelling was based on should be re-evaluated by a truly independent company;
- concerns regarding the content of the EIS and requests that new guidelines be issued so the EIS can address new technology, past testing results and World Health Organisation best practice;
- exhaustive environmental, social, engineering and economic studies must be conducted;
- concerned at the 'find results to match the desired outcome' method of the whole process; and
- a possible issue around transparency and due process in the awarding of tenders for the Moorebank precinct.

Submission number(s)

118989, 119042, 119107, 119239, 119237, 118651, 118933 and 118981.

MIC response

The Moorebank Intermodal Terminal Project viability has been considered from a demand, logistical (infrastructure requirements), environmental, social (community) and economic perspective. It is true that a number of the chapters in the EIS and Response to Submissions report focused on the demand and the economic viability of the Project. This discussion in the Response to Submissions report was in response to a number of community and agency submissions from the EIS.

Chapters 11 to 24 of the EIS focused on impact assessments and in particular the impacts to the community and on the environment as a result of the Project. The technical assessments for noise, air quality, traffic and transport, water quality, biodiversity, contaminated land, visual impact and heritage (aboriginal and European) were all considered as part of the Health Impact Assessment (Volume 9 of the EIS). The Health Impact Assessment (HIA) considered a range of impacts including stress levels on the community, low level noise impacts, impacts to infants, children and the elderly. These aspects were discussed in Table 6.1 in the HIA along with a summary of measures proposed to minimise/mitigate these impacts.

In addition a social impact assessment was completed for the project (Chapter 24 – *Social and economic impacts of the EIS*). The social impact assessment considered issues such as impact to the community structure, impacts on the quality of living, impacts to public open spaces, and other social impacts such as increased traffic congestion and safety.

Under the revised Project site layout, the realignment of Powerhouse Road is not required as the southern rail access has been confirmed as the preferred rail access option.

The EIS was prepared by experienced professionals in accordance with all relevant environmental and planning legislation and other relevant procedures and guidelines required by government agencies, including the Secretary for NSW Department of Planning and Environment's Environmental Assessment Requirements (SEARs) and the Department of the Environment's (DoE) EIS Guidelines.

Independent technical peer reviews were also undertaken for selected technical studies to endorse the assessment process and findings of the technical assessments. Four technical peer reviews were completed for local air quality, human health, noise and vibration and traffic and transport. Letters from peer reviewers endorsing the technical papers are provided in Appendix G of the EIS (Volume 2).

The above represented best practice in regards to preparing large and complex EIS's. The information presented in the EIS was balanced and transparent.

Future Stage 2 SSD applications will be subject to the assessment guidelines developed by the relevant authorities at the time of application. Any changes in legislation, updates to guidelines and/or technology will be considered at that time.

As described above, the project is seeking concept approval as a staged State significant development (SSD) consent under the NSW *Environmental Planning and Assessment Act 1979* (including a Stage 1 SSD approval for Early Works). The level of assessment conducted for the concept EIS stage is considered appropriate given the staged approval approach. The project will be developed in future stages, and each stage will be subject to a Stage 2 SSD EIS. The Stage 2 SSD EIS will be conducted once the detailed engineering design of the project has been developed and the environmental and social impacts can be address in further detail.

This staged approach is consistent with government policy and regulation and therefore is an appropriate pathway for developing the project.

As announced on the 4 June 2015, the Commonwealth Government approved the Moorebank Intermodal Company (MIC) entering into an agreement with the Sydney Intermodal Terminal Alliance (SIMTA) to develop and operate the Moorebank Intermodal Terminal. This approval followed a due diligence review of the proposed agreement by the Commonwealth Government. The media release is available on MIC's website.

This announcement followed a 13-month period of negotiations between MIC and SIMTA that was conducted in accordance with a process deed and overseen by an independent probity adviser. MIC and SIMTA reached in-principle agreement in late 2014, which was announced by the Minister for Finance and the Minister for Infrastructure and Regional Development on 5 December 2014. The Ministers' media release is available on MIC's website.

SIMTA was selected to enter direct negotiations with MIC in May 2014, following a competitive process initiated in December 2013. Media releases announcing these two milestones are available on MIC's website. Two other potential proponents were kept on standby during the negotiation period. The competitive process involved an invitation for Expressions of Interest (EOI), which was issued to organisations involved in the freight logistics industry. The request for EOIs was also made available on MIC's website.

The agreement between MIC and SIMTA requires SIMTA to develop and operate the Moorebank Intermodal Terminal for a period of 99 years. All design, construction and operations are to be undertaken by SIMTA. MIC will fund the rail access from the Southern Sydney Freight Line to the terminals and site remediation and ground improvements on Commonwealth owned land, and SIMTA will fund all other works. For the works funded by MIC, MIC will approve the scope and procurement strategy and tender documents to ensure value for money, but it is SIMTA's responsibility to procure appropriate contractors to undertake the works. All other works will be procured by SIMTA under their own internal procurement policies. With respect to operations it is SIMTA's responsibility to procure appropriate contracts.

Further detail on the agreement between MIC and SIMTA will be released publicly after the initial planning approvals for the terminal are obtained. This is expected to be in late 2015. Information on the procurement process and outcome is also available in MIC's Annual Reports.

5.2.2 Concerns regarding the approval process

There was one submission that was concerned that the Project has been approved.

Submission number(s)

118040

MIC response

The project has not been approved.

The EIS and its associated Response to Submissions report for the Moorebank Intermodal Terminal is a document required in order for the State and Commonwealth environmental and planning regulators to approve the project. The EIS addressed both the Commonwealth's EIS Guidelines as well as the Secretary for NSW Department of Planning and Environment's Environmental Assessment Requirements for the Project.

The planning and assessment process for the Project is summarised below presented in Figure 1.1 of this Report. MIC is currently seeking approval for the proposal concept (i.e. the broad parameters of the project to operate at a maximum capacity of 1.55 million TEU).

Should this application for the Moorebank Intermodal Terminal be approved; only early works can commence. Construction of the terminal and associated infrastructure will be subject to future Stage 2 SSD Applications under the NSW *Environmental Planning and Assessment Act 1979*.

The environmental and planning approval process under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* and the NSW *Environmental Planning and Assessment Act 1979* is being undertaken in parallel. A Final EIS is currently being prepared to satisfy the Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999* whilst this report addresses the final requirements of the Concept Approval for the Moorebank Intermodal Facility under the NSW *Environmental Planning and Assessment Act 1979*.

5.3 Community consultation

5.3.1 Adequacy of community consultation

A number of submissions raised issues relating to the community consultation process for the Project. This included:

- Concern over the community consultation presentations that was given for the EIS, the figures appeared inconsistent.
- Concern that there wasn't enough time for the community to have their questions answered appropriately.
- None of the concerns raised at the community consultation sessions have been answered.
- Concerned that the residents of Casula and Wattle Grove are not being listened to.
- Believes that community consultation is a tick box exercise.

Submission(s)

118405, 118769, 118173, 118171 and 118201.

MIC response

The figures and data presented at the community sessions, along with all other material, were thoroughly reviewed by MIC and its advisers to ensure consistency with the EIS. MIC is not aware of any inconsistencies and no specific examples have been provided in the submission.

The discussion and question time for each of the three community sessions during the EIS exhibition period (in late 2014) were slightly different in response to the different questions raised. Members of the community who attended the three sessions were also encouraged to formally present their questions as part of their submission on the Project. MIC has provided a formal response to the questions raised in submissions as part of the Response to Submissions report and the Supplementary Response to Submissions report. A feedback report was prepared to summarise the information presented and questions asked during the community consultation sessions. This feedback report is located on the MIC Website: http://www.micl.com.au/have-your-say/past-consultation.aspx.

MIC's community consultation on the EIS has exceeded the requirements set out in NSW Department of Planning and Environment's *Guidelines for Major Project Community Consultation* (NSW DP&E 2007). These guidelines outline the community and stakeholder consultation expected from major projects prior to, during and after the assessment of an EIS. As outlined in Chapter 5 – *Stakeholder and community consultation* of the EIS, Chapter 3 – *Consultation* and Chapter 2 – *Consultation* of this report, a comprehensive community consultation program was implemented for the Project prior to and during the exhibition of the EIS.

This report and the Response to Submissions report has aimed to address the concerns raised during the exhibition period of the EIS and Response to Submissions report. MIC continues to engage with the community and questions or feedback can be provided via email through the MIC website (http://www.micl.com.au/contact-us.aspx), or by telephone to the Project information line (1300 382 239).

5.4 Project alternatives

5.4.1 Alternative sites for an intermodal terminal

Community submissions suggested a number of alternative sites for an IMT, including Badgerys Creek, Eastern Creek, Newcastle, Chullora and Enfield.

Alternative site at Badgerys Creek

Submitters provided a number of arguments for the Badgerys Creek site including:

- They believe that the Government should consider the views of the local community and locate the intermodal terminal to Badgerys Creek.
- An Intermodal terminal should be placed in a commercial area such as Badgerys Creek or Eastern Creek.
- An intermodal terminal at Badgerys Creek should be logistically better and more cost effective.
- To reduce supply chain costs the intermodal terminal should be moved to Badgerys Creek with access to the M7 Motorway and the proposed M9 Motorway.
- Badgerys Creek allows for proper planning including the surrounding road network to take place.
- Badgerys Creek is ideal location for an intermodal terminal to handle both interstate and import-export freight due to:
    - > trains not need to be broken;
    - > can handle greater capacity;
    - > strategically located where a new rail line is planned for the airport and near the M7 Motorway and accessible to the M5 Motorway;
    - > near the Western Sydney Employment Area (WSEA);
    - > truck access can be configured rather than upgrading existing roads; and
    - > it being owned by the Australian Government and suitable for land uses which are consistent with the airport.
- Consider relocating the intermodal terminal to Badgerys Creek.
- Decision to construct an intermodal site at Moorebank was made prior to the Badgerys Creek airport announcement.

Other locations

Several submitters also raised issues about other alternative site including:

- Eastern Creek and Newcastle which have much lower housing density and therefore less people impacted.
- Alternative sites exist that will not have the impact on the local communities that the Moorebank site will have.

- Eastern Creek is preferred as 45% of containers go to western Sydney than south-west Sydney and a new rail line will need to be built in any case.
- Should build Eastern Creek first then Badgerys Creek.
- Chullora's site has now increased so the need to build an intermodal terminal at Moorebank is not as urgent.
- Neither Chullora nor Enfield will have a significant impact on local residents because both operate in commercial areas, unlike MIC which is planning its operations in the middle of family homes where there is no existing commercial premises.
- Enfield intermodal has not yet commenced operations so why is Moorebank being considered?

No business case of alternatives

There has been no published formal business case analysis of alternatives.

Submission number(s)

117918,117934, 117860, 117896, 117874, 118969, 118963, 118989, 119107, 117836, 117922, 118661, 118405, 118711, 119249, 119255, 119253, 118969, 118981, 118405, 118969, 119052 119239, 117926, 117906, 118360, 118040, 118282, 118171, 117998, 117982, 118969 and 118985, 118769, 118651, 118969, 118937, 119237, 118917, 118651 and 119603.

MIC response

MIC acknowledges that a number of the community submissions raised concerns about the proposed location for the Terminal site. The need for an intermodal terminal in south-west Sydney was described in detail in Chapter 3 – *Strategic context and need for the Project* of the EIS and reiterated in the Response to Submissions report specifically in Chapter 2 – *Assessment of the issues raised by the NSW Planning Assessment Commission and* Chapter 6 – *Response to Community Submissions.*

The Moorebank site was selected due to its strategic positioning, with good access to existing major freight and rail corridors (Southern Sydney Freight Line, M5 Motorway and near to the M7 Motorway and Hume Highway), and is centrally located relative to major freight markets in the west and south-west of Sydney. The size of the site was also a significant factor in site selection, with the requirement to accommodate interstate trains which can be up to 1,800 m long and the need for the site to be large enough to handle the number of containers expected (a total throughput capacity of 1.55 million TEU a year including up to 1.05 million TEU a year of IMEX).

The MIC notes that Badgerys Creek has been suggested by many community members as a suitable alternative site for the intermodal terminal, with many arguments provided for locating an intermodal terminal at this location. However, this site would be located too far west of current Sydney freight markets to be commercially viable as an intermodal facility and the location does not currently have adequate road or rail supporting infrastructure. While some submissions suggest that infrastructure provided for the airport could be utilised for an intermodal terminal, MIC is not aware of any plans to extend freight lines to this location as part of infrastructure upgrades for the proposed airport.

While is it acknowledged that the proposed Badgerys Creek site is located close to the M7 Motorway, the proposed M9 Motorway and the Western Sydney Employment Area, the land earmarked for development of the new Western Sydney Airport site is unlikely to have spare land available for the development of an intermodal terminal so additional land would need to be identified and purchased. Additionally a new freight line would need to be funded, designed, approved and constructed before Badgerys Creek could be considered as an economic and logistically better solution. There is currently no rail network that services Badgerys Creek. Development of the Western Sydney Airport is

investigating a passenger rail network through an existing corridor. It is not viable for freight to share the passenger rail network, which would ultimately undermine the efficiency and reliability of a freight service via Badgerys Creek.

Even if land were available for development at Badgerys Creek, the planning and environmental approval process to assess the land suitability from an environment, planning, social and traffic perspective can take years. Given the demand for intermodal facilities in western Sydney exists now, the Moorebank Intermodal Terminal site is considered the most appropriate site to service the current demand.

Land at Badgerys Creek has been earmarked for development of a second Sydney airport since the 1980's. In 1999 the Commonwealth Government commenced its planning and approval process for development of the site for an airport, however for a number of social and political reasons the project was not progressed at that time. The recent announcements to develop the site for an airport, built on the assessments completed in the late 1990's. The decision to develop the airport was therefore made long before the decision to develop the Moorebank site for an intermodal terminal.

The Australian Government is currently undertaking a planning study for the Badgerys Creek Western Sydney Airport site; however, MIC is not aware of any existing Commonwealth land in the vicinity of Badgerys Creek that is currently suitable for an intermodal facility.

Predicted demand in containerised goods suggests that a number of intermodal facilities will be required and that Eastern Creek and Badgerys Creek may provide suitable long-term future intermodal sites. However, given that the demand for a western Sydney intermodal exists now, the Moorebank Intermodal Terminal site is considered the most appropriate site for an intermodal facility.

The suggestion of alternative locations for the intermodal terminal has been raised by a number of community submissions for the EIS and the Response to Submissions report. MIC acknowledges that a number of the suggested alternatives exist in rural or commercial areas, which are different to the residential location at Moorebank, however the alternative locations for reasons outlined below are not suitable to address the demand for containerised freight in Western Sydney – which exists now.

- A discussion regarding Badgerys Creek is provided above and is discussed extensively in the Response to Submissions report (e.g. Section 2.5.1 of Chapter 2 – *Assessment of the issues raised by the NSW Planning Assessment Commission,* Section 6.4.1 of Chapter 6 – *Response to community submissions).*

- In terms of an Eastern Creek facility, an intermodal terminal at this site has been proposed; however, it is yet to be confirmed, and no land has been set aside for an intermodal terminal. Even if an intermodal terminal was to be developed at this location, taking into account container destinations, this facility would largely service its local market around the west and north-west of Sydney (not 45% of containers destined for Moorebank). As such, there would still be a need for a facility in south-west Sydney.

- As discussed in Section 3.4 of Chapter 3 – *Strategic context and need for the Project* of the EIS, approximately 93% of import containers traded through Port Botany are destined for locations within the Sydney greater metropolitan area. On this basis, even if the capacity of Port of Newcastle was increased (which MIC is not aware of any plans to do so), this site would not be suitable as would be too far away from containers destinations.

- In relation to the Chullora intermodal terminal, the announcement to increase demand (to handle 600,000 TEU by 2015, and 800,000 TEU in the longer term) is acknowledged. MIC understands that the future plans for Chullora could have an impact on the timing and development of an interstate facility at Moorebank however, sensitivity testing undertaken as part of the forecasting reported by Deloitte (2013) predicted that even if Chullora remains operational with a capacity of approximately

350,000 TEU, there would still be demand for handling up to 107,000 TEU for the interstate market through the Project site in the short to medium term. While MIC recognises the intention to upgrade Chullora to handle 600,000 TEU, no commitment has been made regarding the timing for the upgrade. Chullora would also be subject to a rigorous planning and assessment process before upgrade works can commence. It is not clear whether any additional capacity at Chullora would service the interstate or IMEX markets (or both).

- As discussed in Chapter 2 – *Assessment of the issues raised by the NSW Planning Commission* of the Response to Submissions report, intermodal terminals serve a defined geographic catchment and there is clear demand for Moorebank from a catchment area that is different to that served by existing intermodal terminals. Sydney's estimated total future IMEX intermodal capacity at existing terminals is not sufficient to meet government rail freight targets or expected rail freight demand at Port Botany. This includes the potential future capacity provided by the Yennora, MIST (Minto) and Villawood terminals approved capacity at the Enfield intermodal terminal and the recently announced new IMEX capacity at Chullora.

  The demand for intermodal freight in western Sydney exists now. No other site has been identified that is practicably feasible in the timeframe required and able to deliver the same operational efficiency (including the efficiency benefit of competition between terminal users under the terminal open access arrangement).

A business case was prepared for the Project in 2012 by KPMG and considered by the then Australian Government in its decision to proceed with the development of an intermodal at Moorebank.

A summary of the business case was released publicly in 2012, and is available on the MIC website, http://www.micl.com.au/.

Chapter 6 – *Project development and alternatives* of the EIS provides a description of alternative sites considered for an Intermodal Terminal and why a site within west and south-west Sydney was targeted.

5.4.2 Suitability of an intermodal terminal at the Moorebank site

Numerous submitters raised issues regarding the suitability of the Moorebank site as an intermodal terminal including:

- it is too close to residential dwellings;
- it should not be placed near schools or cultural centres;
- the SIMTA site is located 400 metres from established neighbourhoods of families. Moorebank Intermodal Freight terminal, an extra 300 metres;
- freight hubs should be out in wide open spaces away from existing communities;
- there is no urgent requirement for an intermodal terminal due to the opening of the new Enfield Terminal so replanning should now take place for an alternate location such as an Industrial area at Badgerys Creek;
- Enfield has an unused Intermodal;
- there has been no investigation of the capacity of Enfield intermodal terminal and the possibility that future innovations will rob Moorebank of the line timeframe required to deliver TEU's to Moorebank;
- the NSW Government are planning a metro train network to Bankstown in the future and to have a container terminal 8 km away is poor planning;

- the only reason the intermodal terminal has been chosen at Moorebank is due to its proximity to the M5, M7 and the SSFL; and
- the Moorebank intermodal terminal site is unsuitable due to too many projects occurring in south-west Sydney.

Submission number(s)

117902, 117934, 117838, 117942, 118360, 118201, 118661, 118785, 118651, 118969, 119009, 118959, 118945, 119063, 119042, 118981, 119052, 119005, 119025, 118270, 117946, 118969, 119063, 118342, 118985, 119237, 118327, 118173, 118171, 118048, 118707, 118791, 118969, 119229, 118769 and 118933.

MIC response

MIC notes that many submissions argue the Project site is not suitable given its proximity to existing residential dwellings and local schools.

In determining the suitability for an intermodal terminal at the Moorebank site, MIC engaged a number of technical specialists to prepare and assess the social, environmental and economic impacts of the intermodal terminal in this location. The findings of the assessments were presented in the EIS (Chapters 11–26 of the EIS) and were re-assessed in Section 7.9.2 in Chapter 7 – *Proposed amendments to the development* in the Response to Submission report due to changes in the concept design. In both assessments a discussion of the unmitigated and mitigated environmental risks were provided.

Section 7.11 of Chapter 7 – *Proposed amendments to the development* addresses the cumulative impacts of the project in consideration of the SIMTA project. This assessment considers the proximity of the residents of Wattle Grove to the SIMTA site.

The EIS and Response to Submissions report assessed a range of impacts including traffic and transport, noise and vibration, human health, air quality, heritage and others, and determined that while impacts would occur, these impacts would be no more than moderate once mitigation measures are implemented. MIC has also committed to ongoing monitoring to investigate and implement new or additional measures as required.

In addition, responses provided throughout the Response to Submission report addresses many of the arguments raised by community members from the EIS public exhibition process in relation to the suitability of the site for the purposes of an intermodal terminal. In particular:

- Section 6.4.1 discusses the site selection process and the positioning and size requirements for the intermodal terminal;
- Section 6.7.6, Section 6.11.6 and Section 6.17.1 addresses proximity to and impact on sensitive receptors;
- Section 6.6.4 addresses traffic congestion;
- Section 6.8.2 and Section 6.10.2 addresses the impacts to Georges River;
- Section 6.11.2 addresses concerns relating to existing air quality;
- Section 6.1.5 addresses requirements for, and costs of, infrastructure upgrades;
- Section 6.15.1 addresses recreational impacts; and

- Section 6.1.4 addresses the economic viability of the Project given capacity restrictions imposed by the NSW Planning Assessment Commission on the SIMTA project.

- Section 7.11 of Chapter 7 – *Proposed amendments to the development* addresses the cumulative impacts of the project in consideration of the SIMTA project. This assessment considers the proximity of the residents of Wattle Grove to the SIMTA site.

MIC disagrees that freight hubs should be in wide open spaces, as land in undeveloped areas does not have the supporting infrastructure to make an intermodal terminal economically viable. Freight hubs should be positioned close to their freight catchment and existing transport networks such as road and rail facilities.

Chapter 2 – *Assessment of the issues raised by the NSW Planning Assessment Commission* of the Response to Submissions report provides an assessment of the demand for intermodal capacity in the Moorebank precinct (refer to Section 2.3). The discussion justifies that the development of the Moorebank precinct to a total intermodal capacity of 1.55 million TEU (comprising 10.5 million TEU IMEX capacity and 500,000 TEU in interstate capacity) is required to meet the market demand for containerised goods in Western Sydney (as a result of predicted growth in freight at Port Botany) and to achieve the NSW Government policy regarding increasing the freight rail share.

Enfield is located in the southern Sydney freight catchment, which is a different catchment to the Moorebank freight catchment (Deloitte (2013)). Available intermodal capacity in one area will not necessarily reduce the potential demand for terminal in another area. Therefore the opening of a new intermodal facility at Enfield will have minimal impact on the likely demand at Moorebank. This is demonstrated in Figure 2.2 in Chapter 2 – *Assessment of the issues raised by the NSW Planning Assessment Commission* of the Response to Submissions report.

The analysis of demand for intermodal freight presented in Section 2.3.2 of Chapter 2 – *Assessment of the issues raised by the NSW Planning Assessment Commission* of the Response to Submissions report considers the current and future (planned) capacities at Chullora, Enfield, Yennora and MIST (see Table 2.2). The analysis shows, that if all these terminals are operating at their approved capacity, under a low Port growth scenario (assuming 28% rail share target), the IMEX shortfall in 2020 would be around 415,875 TEU p.a. (641,988 TEU p.a. under a high growth strategy) which increases to 810,309 TEU p.a. in 2040 (1,690,000 TEU p.a. under a high growth strategy).

Therefore, while Enfield is currently under development, the demand for IMEX capacity at Moorebank has been modelled under the assumption that Enfield is operating at its approved capacity. There is still a large shortfall of intermodal capacity once Enfield becomes fully operational.

The planned metro train network to Bankstown is a separate project, and MIC is unable to comment on the planning issues associated with this project.

The Sydney rail network separates passenger train corridors and freight corridors and therefore any plans to upgrade the passenger network to Bankstown will have little impact on the freight network capacity of the region.

MIC acknowledges that a number of community members consider the land at Moorebank to be unsuitable for an intermodal terminal. However MIC and the Commonwealth Government believe the uniqueness of the land at Moorebank makes it the ideal location for an intermodal terminal.

As presented in Section 2.5 of Chapter 2 – *Assessment of the issues raised by the NSW Planning Assessment Commission* in the Response to Submissions report there are a number of public benefits in developing the land at Moorebank for an intermodal terminal. These benefits include:

- Increased productivity, reduced business cost and reduced road congestion, estimated at around $9 billion.
- A once in a generation opportunity for a transformative freight project.
- The project is consistent with Commonwealth and State planning and infrastructure strategies and policies.

While it is acknowledged that the project will have some local impacts, once the effect of the mitigation measures are considered, the impacts will be relatively minor and within established criteria and regulatory requirements. In addition, a package of local benefits will be progressed in consultation with relevant stakeholders.

Given the clear suitability of the site for an intermodal terminal and the lack of economically efficient alternatives, it would be inappropriate and mostly inefficient to use the site for an alternative purpose (i.e. residential or commercial) as these land uses would have greater impacts on the local environment and the community. For example, during peak hours:

- Residential development would generate around 7–8 times more traffic than an IMT (in equivalent passenger car unit terms);
- A business park would generate up to three times more traffic than an intermodal terminal.

In addition, the site is not suitable for residential development as the site is contaminated and the cost of remediating the site suitable for residential standards it likely to be much more than the value that the land can be sold for.

The Moorebank site has been selected due to its proximity to the local motorways (including the M5 and M7 Motorways) and the Southern Sydney Freight Line. The proximity of the site to this infrastructure means that new infrastructure is not required to be constructed in order to support the intermodal terminal. However there are other reasons why the Moorebank site was selected, as presented in Section 3.3 of Chapter 3 – *Strategic context and need for the project* in the EIS, the Project site has a unique set of characteristics suited for an intermodal terminal that are not necessarily needed for other types of land uses. In particular:

- The site is currently owned by the Commonwealth Government and is available for development with Defence relocating the School of Military Engineering facilities to Holsworthy.
- The site is large enough to accommodate a facility that can generate the economies of scale and efficiencies needed to encourage freight to make the switch from road to rail.
- No other known site in Sydney has the same characteristics to efficiently accommodate the type of activities being proposed within the timeframe required. The availability of the site for development represents a once-in-a-generation opportunity for a transformational freight infrastructure project.

Throughout the EIS and Response to Submissions report a justification for the suitability of the Moorebank site for development as an intermodal has been provided.

Chapter 27 – *Cumulative Impacts* of the EIS discussed the context of the Project with respect to other infrastructure projects planned in south-west Sydney. These projects included the SIMTA Intermodal Project as well as other key transport and urban developments such as the M5 West Widening Project, South West Rail Link, South West Growth Centre, Bringelly Road Upgrade and the Moorebank Waste facility project. The results of the assessment indicated that while construction impacts may have short term impacts on local air quality and waterway management, longer term impacts are unlikely. The benefits of the infrastructure upgrades will have longer term positive outcomes to the community and infrastructure users.

5.4.3 Need for a whole of precinct approach

Several submitters raised a concern for the need for a whole of precinct approach of both the MIC and SIMTA sites.

- A master plan of the MIC and SIMTA sites would have enabled the NSW Planning Assessment Commission to assess the impact of both proposals.
- Having separate MIC and SIMTA proposals has created confusion within the community.
- The SIMTA and MIC Proposals should have been considered as a single precinct application.
- Need to assess both MIC and SIMTA projects together to understand the true impacts.
- It appears as though the 'ball game' has been changed mid-way through.

Submission number(s)

118405, 118981, 119052, 118769, 118639, 118969 and 119107.

MIC response

MIC acknowledges the confusion generated in the community as a result of having two separate projects. MIC and SIMTA has reached an agreement to develop and operate a precinct wide intermodal facility and associated warehousing across the Moorebank and the SIMTA sites. As part of the agreement, the Commonwealth Government would retain ownership of the Moorebank Intermodal Terminal site, with SIMTA occupying the site under a long term lease. MIC would remain involved to ensure the Commonwealth Governments objectives for construction and operation of the site (including environmental compliance requirements) are satisfied.

Now that the Commonwealth Government has approved the agreement with SIMTA, the master planning for the Moorebank precinct can commence. However in the interim, MIC is seeking concept approval for the Moorebank Intermodal Terminal site and independently SIMTA is seeking approval of its Stage 1 SSD application (for 250,000 IMEX facility and a rail connection to the Southern Sydney Freight Line at the southern end of the SIMTA site).

Since the exhibition of the Moorebank Intermodal Terminal EIS, MIC and SIMTA have reached an agreement to develop and operate a precinct-wide intermodal facility and associated warehousing across the Moorebank and SIMTA sites (hereafter referred to as the Moorebank precinct). As part of that agreement, the Commonwealth Government retains ownership of the Moorebank Intermodal Terminal site, with SIMTA occupying the site under a long-term lease. MIC remains involved to ensure the Commonwealth Government's objectives for construction and operation of the site (including environmental compliance requirements) are satisfied.

Section 7.11 of Chapter 7 – *Proposed amendments to the development* of the Response to Submissions report, provided an updated cumulative impact assessment for the Project given the change to the master plan, following the decision to appoint SIMTA as the developer of the precinct. The results of the cumulative impacts assessments indicate that noise and traffic remain the key issues that require management and mitigation and a series of mitigation measures were presented, which will be explored further during future Stage 2 SSD applications.

Under the agreement between MIC and SIMTA, SIMTA is responsible for obtaining the planning approvals to build each stage of the combined precinct. SIMTA is currently seeking the first of these approvals – approval to build the first stage of the IMEX terminal and warehousing on SIMTA land in the precinct. At the same time, MIC is completing the process already underway to obtain a concept approval for the MIC land in the precinct. After the concept approval is granted, SIMTA will be responsible for all subsequent planning approvals in the precinct. The approach to seeking concept approval of the Moorebank site has not changed. However, due to the agreement with SIMTA, the site layout has changed (i.e. the position of the IMEX, interstate and warehousing on the site layout plan). The changes to the site layout has had a positive impact on some of the residual impacts of the Moorebank Intermodal Terminal as the warehousing is now able to act as a buffer to the residential areas of Casula to the west of the Georges River and the selection of the southern rail access reduces the noise impacts to the Casual Powerhouse and the local residents. All the amendments to the development have been assessed and the results were presented in the Response to Submissions report.

5.4.4 Capacity restrictions for SIMTA proposal

Two submissions raised concerns about the limits imposed on the SIMTA site and how that should impact the MIC site.

- The limit imposed by the PAC to cap the SIMTA site to 250,000 TEU plus an additional 250,000 subject to road network improvement should be applied to both the MIC and SIMTA projects combined.

- TEU should be limited to 250,000 in the Moorebank precinct.

Submission number(s)

118405 and 118981.

MIC response

MIC notes the capacity restrictions placed on the SIMTA Project (which relate to IMEX freight only), recognising that these restrictions relate to the potential impacts of the IMT, most notability the impacts on the road network. Section 2.3 in Chapter 2 – *Assessment of the issues raised by the NSW Planning Assessment Commission* of the Response to Submissions report presents an analysis of the Moorebank precinct demand for both IMEX and Interstate intermodal capacity with a specific focus on the conclusions made by the Planning Assessment Commission (PAC) in their assessment report for the SIMTA concept approval. The analysis draws upon and expands on the demand assessment presented in Chapter 3 – *Strategic context and need for the project* in the EIS and aligns these with the NSW Government objectives to double the proportion of container freight moved by rail through NSW Ports by 2020. The discussion focuses on demand for both IMEX intermodal capacity given the current and planned intermodal terminals in the greater Sydney region and interstate freight.

The PAC's decision on the SIMTA site has a number of implications for this Project, the most significant being the suggested cap on intermodal capacity that would restrict the precinct as a whole to a long-term capacity cap of 500,000 TEU per annum. The cap relates to the PAC's concerns about the ability of the road network to accommodate a greater throughput and a perception that such a cap would be sufficient to accommodate long term demand and therefore meet the Government objective of a doubling of rail freight mode share (currently 14% for freight entering Port Botany) by 2020. The Response to Submissions report demonstrates that with suitable modification of key intersections and other supplementary measures outlined in Table 7.20 (of Chapter 7 – *Proposed amendments to the development)*, the road network can be progressively improved to ensure that, allowing for background growth, the road network can be maintained at a level of services commensurate with its 2030 conditions (where there is no project), up to a level of 1.55 million TEU. Additionally the report clearly justified the development at Moorebank in a total intermodal capability of 1.55 million TEU (comprising 1.05 million TEU in IMEX and 500,000 TEU in interstate freight capacity) to meet market demand for containerised goods in western Sydney and to achieve the NSW governments rail share target.

To provide assurance to the consent authority and the local community with respect to MIC's position on maximum precinct capacity, MIC has suggested a number of conditions of consent, as presented in Section 2.2.6 of Chapter 2 – *Assessment of the issues raised by the NSW Planning Assessment Commission* of the Response to Submissions report.

Section 2.3 clearly outlines the demand for both IMEX and Interstate capacity in consideration of existing government strategies and policies and in particular how the project contributes to the NSW Government Policy of achieving a rail mode share target of 28% by 2020 and by greater than 40% in 2040. The argument for demand also examines the current catchment constraints and the planned upgrades of existing intermodal facilities such as Enfield and Chullora.

5.5 Project development phasing and construction

5.5.1 Concern regarding 24 hour intermodal terminal operation

A number of submissions raised concerns about the impacts of a 24/7 operation (including long term impacts) when not even Kingsford Smith Airport is 24/7.

Submission(s)

118779, 119063, 118937, 118981 and 119025.

MIC response

The Moorebank Intermodal Terminal is required to operate 24 hours a day, 7 days a week to meet the demands of the freight market. It is noted that heavy vehicles would only access the site for 16 hours a day, 5.5 days per week until the Project reaches Full Build, at which time trucks would also access the site 24 hours day, 7 days a week.

In recognition of the 24 hour operations, a range of mitigation measures are proposed to mitigate the impacts of 24 hour operations on the surrounding community, particularly the impacts at night. These mitigation measures include:

- Minimise light spill to surrounding areas including:
  - > designing lighting to minimise impacts;
  - > the use of shields on luminaire lighting to minimise brightness effects;
  - > selecting asymmetric light distribution-type floodlights as part of the proposed lighting design;

  - the use of low-reflection pavement surfaces to reduce brightness; and
  - minimising the quantity of light and energy consumption in parts of the intermodal terminal site.

- Minimise noise impacts including:
  - design/layout to minimise noise (e.g. procurement of mechanical plant with lowest available noise emissions, use of noise reduction barriers, restricting track turn radii);
  - ongoing community consultation/complaints management system; and
  - ongoing monitoring to continually evaluate Project noise emissions and, as required, implement additional noise mitigation.
- Measures to control potential wheel squeal including:
  - the turn radius of curved track sections would be greater than 500 m to reduce tight turns in the alignment;
  - track greasing systems would be investigated on curved sections of track to lubricate and reduce friction at the wheel–rail interface; and
  - the track maintenance system would include measures such as grinding to remove rail roughness, treatment of roughness on the wheels of locomotives and wagons, and adjustment of bogie-suspension tracking and brake system set up.

5.6 Traffic transport and access

Many submissions raised concerns relating to the traffic transport and access impacts of the Project. This included impacts on local roads and major arterials and the associated social, environmental and economic impacts. These are discussed below:

5.6.1 Traffic congestion

Many submissions made a general comment about existing traffic congestions and the impacts the Project will have on traffic congestions on local roads and major arterials.

Some submissions were concerned that the Moorebank Intermodal Terminal would not reduce traffic congestion, especially in the Moorebank area which is to be transformed into a highly populated residential area.

Submission(s)

117912, 117906, 118342, 117942, 118360, 118282, 118707, 118405, 118779, 118711, 119259, 119245, 118969, 119009, 119097, 118937, 118963, 119081, 119107, 117854, 118048, 118785, 118985, 119052, 117902, 117874, 118072, 117978, 118661, 199077, 119257, 119005 ,119029, 118959, 119239, 118953, 117922, 119984, 119042, 117918, 117838 and 117916.

MIC response

In response to the general concerns regarding additional congestion - the traffic impacts of the Project have been assessed as detailed in the EIS and revised in Appendix E – Traffic and Transport Impact Assessment of the Response to Submissions report . The traffic study was undertaking in consultation with and input from Transport for NSW and Roads and Maritime Services (RMS).

Traffic impacts on the wider network, including local roads have been assessed using intersection performance modelling software (Signalised and unsignalised Intersection Design and Research Aid (SIDRA)) for a number of intersections within and surrounding the Project site. RMS are currently developing a detailed mesoscopic traffic model for the Moorebank Liverpool area which will be used to undertake a detailed assessment during future Stage 2 SSD applications.

MIC acknowledges that the traffic modelling shows local road network updates would be required. Indicative timings have been identified for these upgrades and are detailed in Section 7.10.3 of the Response to Submissions report. The timing of these upgrades is based on current projections of background traffic and anticipated increases in container throughput.

MIC recognises the concerns made by the community in relation to traffic congestion, increased travel times and road safety issues. MIC is committed to contributing to the cost of intersection upgrades so that these intersections would operate at no worse than they would without the project. Table 7.26 in Section 7.10.3 of Chapter 7 – *Proposed amendments to the development* of the Response to Submissions report presents an analysis of traffic generated by the project compared to the congestion forecast and the planned mitigation measure to manage the impact.

In relation to incidents or breakdowns for trucks accessing the site; the indicative intermodal terminal layout provides a truck parking and holding area on site to accommodate up to 25 trucks, to serve as a layover facility for trucks that arrive early and need to wait for their allocated time slot. This would avoid the need for trucks to queue on Moorebank Avenue and hence reduce the safety concerns.

MIC has not claimed that the intermodal terminal will reduce traffic congestion, the Project will reduce truck travel over the Sydney road network which in turn will reduce the growth in traffic congestion.

MIC recognises there are existing traffic congestion issues along the M5 Motorway between the Hume Highway and Moorebank Avenue interchange and that this acts as a 'bottleneck' within the M5 Motorway network. This issue outside of the scope of this Project and needs to be addressed on a regional basis. MIC recognises that the Project would place additional pressure on existing intersections along Moorebank Avenue and as such an upgrade to Moorebank Avenue between the M5 Motorway and Anzac Road is included as part of the Project.

5.6.2 Traffic safety issues

The following comments were made on traffic safety:

- The use of local roads may increase risks to local residents of potentially fatal accidents.
- The intersection of Newbridge Road and Governor Macquarie Drive is already very dangerous.
- Trucks weaving into traffic at Moorebank Avenue onto the M5 Motorway and from the M5 Motorway and traffic from Hume Highway coming over the bridge to Moorebank.

Submission(s)

199077, 118953, 118973 and 119239.

MIC response

MIC recognises the concerns made by the community in relation to road safety issues. MIC is committed to contributing to the cost of intersection upgrades so that these intersections would operate at no worse than they would without the project. Table 7.26 in Section 7.10.3 of Chapter 7 – *Proposed amendments to the development* of the Response to Submissions report presents an analysis of traffic generated by the project compared to the congestion forecast and the planned mitigation measure to manage the impact. The intersection of Newbridge Road and Governor Macquarie Drive is currently operating at an

average level of service and is predicted to operate at a poor level of service in 2030 without the project. Intersection improvements at this location are proposed during construction activities which will improve the level of service in 2030.

It is recognised that Project traffic will add to the weaving traffic on the M5 Motorway. The potential contribution of project traffic to the weaving impact will be analysed in more detail at the next stage of detailed traffic modelling for the Stage 2 SSD application, which will include microsimulation modelling.

5.6.3 Impact on local roads

Some submitters raised concerns about the impact of the Project on local roads including:

- Concerned about bringing freight through the local road network.
- What will prevent large trucks travelling up Anzac Road though the Wattle Grove residential community?
- There are currently signs pointing to Anzac Road which prevent vehicles greater than 5 tonne however there are no signs to indicate that Wattle Grove Road is unsuitable for heavy vehicles.
- 'Rat runs' will be created through suburban streets.

Submission(s)

118327, 118405, 118981, 119225, 119241 and 119239.

MIC response

The Moorebank Intermodal Terminal will significantly reduce the number of trucks that would otherwise need to travel from Port Botany to destinations in west and south-west Sydney. This is because each container using the terminal will make part of its journey by rail, so it will travel a shorter distance by road. The volume of trucks accessing the local roads would therefore be reduced once the terminal is operational.

Additionally, MIC is also proposing to introduce a ban on heavy vehicles along the eastern section of Anzac Road and the southern section of Moorebank Avenue, this will limit the amount of trucks that can access local roads in the vicinity of the terminal.

MIC acknowledges the current load restrictions on Anzac Road, and is committed to maintain this restriction for the Project. There are currently no restrictions on Wattle Grove Road, nor are there plans to put restrictions in place. All heavy vehicle traffic accessing the terminal will be forced to turn left from the terminal onto Moorebank Avenue to access the M5 Motorway. Heavy vehicles will not need to access the southern portion of Moorebank Avenue, south of the Anzac Road intersection and hence heavy traffic will not access Wattle Grove Road.

To avoid local 'rat runs', vehicle restrictions will be in place, forcing traffic to turn left onto Moorebank Avenue to access the M5 Motorway. Heavy vehicles will be unable to access the southern portion of Moorebank Avenue. This will prevent 'rat runs' involving heavy vehicles. Light vehicles accessing the terminal may still take the 'rat runs'. A more detailed assessment of traffic impacts, including 'rat runs' will be undertaken as part of future Stage 2 SSD applications.

5.6.4 Traffic impacts on the M5 and M7 Motorway

Several submissions raised concerns about the impact of the Project on the traffic or the M5 and M7 Motorways. Issues raised included:

- concerns about the traffic impacts on the M5 and M7 Motorways as a result of the project, especially trucks and the safety at the motorway exits with trucks merging with much faster traffic;
- the proposal will move the traffic congestion from Port Botany to Moorebank, which is currently experiencing traffic congestion;
- for containers that are railed to Moorebank, the road system is unable to sustain any increase in traffic. Already, key traffic intersections are frequently gridlocked;
- the M5 Motorway cannot cope with the current traffic loads and additional traffic will make congestion worse;
- confusion regarding how the project will reduce the vehicle kilometres travelled by trucks on Sydney roads;
- concerns about the logistics of thousands of daily truck movements; and
- traffic is expected to increase 10 fold over the next 25 years and result in a 1 km delay on the M5 Motorway and add an extra 10,000 trucks and 5723 cars will lead to gridlock.

Submission(s)

117896, 118405, 119253, 118981, 117836, 119251, 118327, 117978, 118613, 119225, 118327, 11898, 118753 and 118327.

MIC response

As illustrated in Figure 6.6 and 6.7 of Technical Paper 1 – Traffic, Transport and Accessibility Impact Assessment (EIS Volume 3), it is anticipated that around 65% of the truck traffic from the Project would use the M5 Motorway to the west of Moorebank Avenue. MIC recognises that this part of the M5 Motorway is forecast to experience congestion resulting from the inadequate weave distance between Moorebank Avenue and the Hume *Highway without the* presence of Project traffic as presented in Table 6.7 of Technical Paper 1 – Traffic, Transport and Accessibility Impact Assessment (EIS Volume 3), more sophisticated mesoscopic modelling is currently being undertaken to explore this issue in greater detail and MIC is in talks with Roads and Maritime Services to identify solutions to this issue. Potential solutions range from the provision of additional motorway capacity to avoiding the M5 Motorway during peak periods and will be explored in the next round of traffic analysis.

One of the most substantial benefits of the Moorebank Intermodal Terminal is it will reduce the growth in the number of trucks that need to travel between Port Botany and other parts of Sydney:

- Currently, around 5,000 shipping containers a day travel to and from Port Botany by road.
- Without the Project, by 2040, around 14,000 containers a day will need to travel to and from the port by road (based on a conservative forecast of port growth).
- The Project will reduce this figure to about 11,000 containers a day.

The Moorebank Intermodal Terminal will therefore significantly reduce the number of trucks that would otherwise need to travel from the port to destinations in west and south-west Sydney. While each container using the intermodal terminal (or its contents) will need to travel to and from Moorebank by truck, the intermodal terminal will nonetheless reduce the total distance travelled by trucks on Sydney's road network. This is because each container using the terminal will make part of its journey by rail, so it will travel a shorter distance by road. Ultimately, the Moorebank Intermodal Terminal will reduce the total distance travelled by import-export freight trucks in Sydney by over 60,000 km each day.

Section 3.1 within Chapter 3 – *Strategic context and need for the Project* of the EIS describes that the interstate terminal will also reduce the number of containers that need to move between Sydney and other parts of Australia by road. This will:

- reduce highway congestion, which will reduce delays for cars and remaining commercial vehicles on the road network, and improve journey time reliability; and
- reduce the cost of road damage on the interstate highway network as a result of reduced road haulage lessening the impacts on road pavements.

The revised traffic impact assessment prepared for the project does indicate an increase in traffic congestion on the local road network. However to mitigate against this impact, MIC is committed to contributing to the cost of intersection upgrades so that these intersections would operate at no worse than they would without the project. Table 7.26 in Section 7.10.3 of Chapter 7 – *Proposed amendments to the development* of the Response to Submissions report presents an analysis of traffic generated by the project compared to the congestion forecast and the planned mitigation measure to manage the impact.

The impact of this traffic increase on the road network and the incremental impact of additional traffic from the terminal will be examined using new traffic models currently being developed by MIC and Roads and Maritime Services (RMS). These mesoscopic models use the AIMSUM suite of software and cover a significant proportion of western Sydney. The M5 Motorway between the Hume Highway and Moorebank Avenue will be analysed using a microsimulation model. These models will examine three time periods (AM, Interpeak and PM) for the existing and a number of future year scenarios. The results of this modelling will supersede the results obtained using SIDRA analysis undertaken for the concept approval stage.

The current *Traffic and Transport Impact Assessment* (Appendix E of the Response to Submissions report) determined that traffic generated from the Moorebank Intermodal Terminal would represent less than 3.3% of the total traffic already on the M5 Motorway and that the trucks from the IMEX development would have been on the highway road traffic anyway but associated with Port Botany.

5.6.5 Traffic impacts on Moorebank Avenue/M5 Motorway intersection

A few submitters raised concerns about traffic impacts on Moorebank Avenue and M5 Motorway and the impediment to the traffic flow.

Submission(s)

118959, 118981 and 118973.

MIC response

A number of mitigation measures are proposed to reduce the traffic impact and improve traffic flow around Moorebank Avenue and the M5 Motorway, these include:

- widening part of Moorebank Avenue to four lanes;

- modifying several local intersections over time to maintain their performance at the service level that would have been experienced without the terminal;
- implementing traffic access arrangements that prevent trucks entering or leaving from the south to minimise traffic impacts on local communities; and
- ensuring all trucks accessing the terminal connect to the arterial road network via the M5 Motorway.

Moorebank Avenue is proposed to be upgraded at the same time that construction occurs on the interstate terminal, which is expected to take place during late 2017 to 2019.

5.6.6 Adequacy of traffic assessment

The following issues were raised regarding the adequacy of the traffic impact assessment:

- Modelling:
  - > Confusion as to the total traffic generated from the two proposals, as the modelling for each is different.
  - > Concerning that 4 year old traffic count data is being used in the modelling.
  - > Does not include the predicted growth of the region.
  - > Traffic projections for 2030 comprise the base year (2010) plus intermodal traffic. Major road upgrades required to accommodate unconstrained traffic growth were not reported.
  - > Traffic modelling for the intermodal used the 'strategic model' to generate the future travel demand but that demand was not used in the 'micro-simulation model'. Consequently, the modelling accepted by the government was based on data which could not have been generated using the claimed source.
- Figures and general concerns
  - > Claims that the Moorebank Intermodal Terminal will reduce the number of Port Botany containers moved by truck are false. According to the NSW Bureau of Transport Statistics (February 2014), 6.9 million Port Botany containers will be moved by truck in 2046, compared with 1.9 million in 2013. BTS assumes intermodals operating at Moorebank and Eastern Creek.
  - > There is already significant transport and traffic congestion however it is claimed that an additional 8,160 heavy vehicles and 5,725 cars will not have any further impact.
  - > Predicted operation with road upgrades and without road upgrades which is not like with like.
  - > Traffic figures do not take into consideration the WestConnex proposal.
  - > Anzac Road has 6% heavy vehicle traffic however it wasn't included in the trip distributions figures for this road.
  - > Concerned that heavy vehicle traffic congestion has not been adequately addressed.
  - > MIC has predicted 297 train movements each week however this does not include interstate trains that may transit through the terminal.
  - > Unclear on the impact to the passenger rail line and travel time for people travelling to Sydney by rail.

Submission(s)

118753, 118405, 118405, 118981, 118917, 118981 and 119984.

MIC response

Roads and Maritime Services (RMS) supplied growth rates indicate a rise in background traffic of up to approximately 18% on the network around the Moorebank Intermodal Terminal site by 2031. They include major developments and proposed network improvements and hence account for growth of the region.

The impact of traffic from the terminal on the road network and the incremental impact of additional traffic from the precinct will be examined using new microsimulation traffic models currently being developed by MIC and RMS. The results of this modelling will supersede the results obtained using SIDRA analysis undertaken for the concept approval stage.

The current environmental approval process for the Moorebank Intermodal Terminal and the SIMTA Intermodal Terminal are being independently assessed and approved. Therefore two separate traffic impact assessments have been completed for the two projects and this has resulted to two different approaches to modelling the traffic conditions. The next stage of approval (as part of the Stage 2 SSD application) will consider a combined Moorebank freight precinct encompassing warehousing, an import/export (IMEX) facility based around containers via Port Botany and an interstate container facility, with a traffic impact assessment to be conducted for the combined precinct.

The next stage of modelling will be based around a new traffic surveys undertaken in 2014 and 2015.

The Moorebank Intermodal Terminal will significantly reduce the number of trucks that would otherwise need to travel to and from the port to destinations in west and south-west Sydney.

The Project will reduce the number of containers that need to travel by truck in 2040 by 11,000 containers per day, this is because the mode share has shifted from road to rail as a result of the terminal. However, container volume is still forecast to grow through Port Botany, estimated to grow from 5,000 containers to 14,000 containers in 2040. The intermodal terminal at Moorebank will not have the capacity to sustain this growth in containers, and therefore more intermodals will be required into the future. Even with the construction of Moorebank the number of trucks travelling to and from Port Botany will increase, as this traffic growth will be servicing other parts of Sydney (e.g. north or south east). However, it's important to note, that the growth of traffic through Port Botany, will be significantly reduced once the Moorebank Intermodal Terminal is operational.

The numbers quoted in the submission on traffic generation have been extracted from the EIS. The revised *Traffic and Transport Impacts Assessment* presented in Appendix E of the Response to Submissions report has revised these numbers down to 5,724 light vehicles and 5,522 heavy vehicles of total daily weekday trips during the Full Build Scenario in 2030. It's also important to note that this traffic will access the terminal over a 24 hour period with the majority of the traffic movements occurring outside the AM and PM peak periods.

The future year road networks and background traffic demand matrices are the RMS forecasts for the Sydney region. They include major highway improvements such as the proposed WestConnex.

The heavy vehicle traffic distributions presented in Technical Paper 1 – Traffic, Transport and Accessibility Impact Assessment (EIS Volume 3) represent traffic to and from the development. Existing truck traffic is included in the analysis as background traffic.

The forecast number of interstate trains is approximately 24 train movements or 12 trains per week (in and out) The total number of Port Shuttle (IMEX) trains is approximately 273 train movements or 137 trains per week (in and out). The total of the IMEX and interstate trains equates to 297 train movements per week.

The containers shipped by train between Moorebank and Port Botany are transported on the Southern Sydney Freight Line. This is a dedicated freight line with no interaction with passenger services, the impact on passenger rail is therefore nil.

5.6.7 Traffic impacts – general

The following comments on general traffic impacts were made:

- It is noted that 32 intersections would need to be upgraded for the Project to work as the area is already at capacity however only Moorebank Avenue to the M5 Motorway is proposed to be upgraded and not until 2029/30. This isn't efficient.
- The local traffic intersections are already at 'fail' level service status.
- East Liverpool serves as the main traffic corridor to the north, east and south for the entire Macarthur Region and the City of Liverpool which are the locations of Sydney's fast growing South West Urban Growth area. The Badgerys Creek airport traffic will have to flow through it.
- Impact on ABB Australia site:
    - > We would like to understand if there is likely to be any negative impact on ABB Australia ('ABB') in either getting access to or leaving our site – which is located at the end of Bapaume Road.
    - > How will the traffic flow/management change along Moorebank Avenue and Bapaume Road including timeframes and commencement date?

Submission(s)

118769, 119063, 119063 and 118803.

MIC response

The revised TIA presented in Appendix E – Traffic and Transport Impact Assessment of the Response to Submissions report, indicates that 14 intersections in the vicinity of the terminal require upgrading. Where an intersections performance is predicted to deteriorate below an unacceptable level of performance with the project, then the intersection will be upgraded. Table 7.20 of the Response to Submissions report, presents the proposed intersection upgrade and the timing for the upgrade works,

The modification of the Moorebank Avenue and M5 Motorway intersection is proposed in 2028, when the terminal is operating at a capacity of 1.3 million TEU.

Additional traffic modelling of the road network and the incremental impact of additional traffic from the precinct will be examined using new traffic models currently being developed by MIC and Roads and Maritime Services (RMS). The results of this modelling may result in a review of the intersection performance and proposed upgrades. The results of this additional traffic modelling will be presented during the detailed design for the project during the Stage 2 SSD application.

The future year road networks and background traffic demand matrices were provided by RMS and represent future forecasts for the Sydney region. They include major developments (such as Badgerys Creek and the South West Urban Growth area) and other proposed network improvements. The impact of traffic from the intermodal terminal on the road network and the incremental impact of additional traffic from the terminal will be examined using new traffic models currently being developed by MIC and RMS.

Access to and from the ABB site will be maintained.

All traffic entering and exiting the Project site will utilise the Moorebank Avenue and Anzac Road intersection, with traffic restrictions in place to force all exiting traffic to turn left onto Moorebank Avenue. The section of Moorebank Avenue from Anzac Road to the M5 Motorway interchange will be upgraded to four lane as described in the Response to Submission report detailed below:

- widening of Moorebank Avenue to a four-lane carriageway between the M5 Motorway and Anzac Road only;
- an upgrade of the Anzac Road intersection and relocation of and upgrade of Bapaume Road and its intersection with Moorebank Avenue (to be determined as part of the detailed design which will be subject to a detail planning application in 2016 for permission to build); and
- only one access point to the Moorebank Intermodal Terminal site.

The upgrading of Moorebank Avenue between Anzac Road and the East Hills Railway line, as proposed in the EIS exhibited late last year, is no longer required. Design for these upgrades will be undertaken as part of the detailed design of the Project.

Further traffic related technical information can be found in the Response to Submission report, Chapter 7 – *Proposed amendments to the development* (section 7.4.4 – Road Layout and Access) and the Traffic and Transport Impact Assessment technical paper. Both documents can be found here: http://www.micl.com.au/environment/response-to-submissions-report-exhibition/view-the-response-to-submissions-report.aspx.

5.7 Noise and vibration

5.7.1 Noise impacts – general

A couple of general concerns were raised about the noise impacts of the Project. Issues included:

- The future noise issue of the additional 10,000 trucks turning onto Moorebank Avenue from the Georges River Bridge has not been addressed.
- Concerns regarding the impact of having trucks turn onto this bridge to go onto the M5 Motorway.
- Concerned about road traffic noise and how the development will not increase existing road traffic noise by more than 2 dB(A).
- At Lakewood Crescent noise levels are predicted to exceed evening noise criteria by 9 dB(A) and the night time criterion by 5 dB(A). These are significant numbers.
- With houses at Lakewood Crescent, Casula within 50 m of the rail crossings, what mitigation measures have been offered? How would they be enforced?

Submission(s)

118989, 118959 and 119042.

MIC response

The Noise and Vibration impact assessment (Volume 3 – Technical Paper 2 of the EIS) and the updated Noise and Vibration Assessment was completed for the change to the concept design as part of the Response to Submissions report (Appendix F, Volume 4) considered all possible sources of noise emissions, including all constructions related activities, on-site operational requirements, operation of the rail access from the Southern Sydney Freight Line and truck/vehicle access to and from the terminal, including any associated increased traffic on the Georges River Bridge (M5 Motorway) accessing Moorebank Avenue.

Whilst the revised project resulted in a marginal changed in the predicted road traffic noise levels (less than +/- 1 dB(A)), the revised designs comply with the NSW Road Noise Policy (RNP) which is consistent with the outcomes of the road traffic noise assessment in the EIS. The results of the predicted noise levels at residential receptors as a result of heavy vehicles associated with the intermodal terminal are shown in the Table 5.1 below:

Table 5.1 Predicted Noise Levels at Residential Receptors

Project Phase	**Predicted Noise Levels at Residential Receptors (dB(A), $L_{Aeq, 15min}$)**			
	Casula NMR = 49 dB(A)	Wattle Grove NML = 45 dB(A)	Glenfield NML = 45 dB(A)	Liverpool NML = 49 dB(A)
Scenario 1 – 2016 (construction only)	30–44	38–43	32–37	36–38
Scenario 2a – 2019 (operation and construction)	30–40	32–38	30–34	37–39
Scenario 2b – 2023 (operation and construction)	30–42	32–39	30–42	36–38

Construction and operation noise from the Project would be regulated through the Project approvals (Stage 1 and Stage 2 SSD approvals) and in accordance to relevant acoustic legislation, policy and guidelines (including the NSW Industrial Noise Policy, the NSW Road Noise Policy and the Interim Construction Noise Guideline). The regulations have been developed to control noise levels in order to manage potential health impacts on the community.

5.7.2 Noise impacts on the community

Four submitters raised concerns about the noise impacts of the Project on the community, including:

- Local residents already suffer from noise pollution from heavy trucks and Bankstown airport.
- Believes that noise from Port Botany can be heard 3 km away which is worrying for local residents of Moorebank and Chifley.
- The sleep disturbance criteria do not apply to rail traffic noise. The proposition that noise reaching 48 dB(A) from an industrial source is likely to cause sleep disturbance, but rail noise below 80 dB(A) will not is unreasonable. Sleep disturbance criteria should be applied to all noise sources as the source of noise plays no role in the level of disturbance to sleep.
- This will affect a large number of residences in the area.

Submission(s)

117874, 118327, 118981 and 118826

MIC response

The noise and vibration assessment (Volume 3 – Technical Paper 2 of the EIS) for the Project was undertaken by firstly establishing the existing background noise levels and then assessing the impacts of the Project (impact of adding the Project noise to the existing background noise levels). Any existing noise from heavy trucks or Bankstown Airport would have been captured in the background noise assessment.

MIC is not able to comment on management and mitigation of noise emissions from the Port Botany site. The operations at Port Botany are different to the operations proposed at Moorebank as such, a direct comparison between the two projects is not possible.

Chapter 7 – *Revised environmental management measures* of this report presents reasonable and feasible noise mitigation measures to control noise emissions from the Project.

There are no specific objectives outlined in the Rail Infrastructure Noise Guideline (RING) for assessing sleep disturbance from a non-network rail line. For network rail line the RING proposes maximum noise design objectives of 80 dB(A) L_{Amax} for a new rail corridor and 85 dB(A) L_{Amax} for a redevelopment of a rail corridor. The SSFL has been designed to an 80 dB(A) L_{Amax} maximum noise criterion which is within the predicted maximum noise levels at the nearest receptors in Casula.

MIC acknowledges that sleep disturbance is a concern to the residents. The design and construction of the Project will include measures to reduce and control night-time noise levels and specifically control noise from short lived or high noise events which may otherwise have the potential to disturb sleep (refer to Section 12.4 of Chapter 12 – *Noise and vibration* of the EIS).

5.7.3 Noise impacts from intermodal terminal operations

Several submitters raised concerns about the noise impacts from the intermodal terminal operations, including:

- Concerns about the noise resulting of 24 hours of railway shunting, fork life beeping, wheel squeal and associated noise.
- Concerns about the noise associated with an increase of trains on the Southern Sydney Freight Line (SSFL).
- General concerns about noisy industry in close proximity to established residential neighbourhoods and river bank reservations.

Submission(s)

117942, 118072, 118613, 118405, 119009,118959, 118953, 118981, 119025, 119239, 119229, 118207, 119063, 119042, 118619, 118621, 118623, 118617 and 119029.

MIC response

Section 12.4.3 of Chapter 12 – *Noise and vibration* the EIS recommends a range of noise control measures to limit the potential for noise from wheel squeal, including designing the Project to avoid tight radius curves and implementing track greasing systems.

The EIS has presented reasonable and feasible noise mitigation measures to control noise emissions within the surrounding communities. Once the detailed design is developed, the appropriateness of the noise mitigation measures will be further considered and assessed during the future Stage 2 SSD application process. The actual noise and mitigation measured adopted for the Project will be designed based on what will be built, the level of noise being omitted during construction and operation and best practice mitigation.

Increase of trains on the Southern Sydney Freight Line (SSFL) is outside the scope of this Project. We understand that the additional trains associated with the Project are in accordance with the approval conditions of the SSFL.

It is acknowledged that a number of residents live close to the Project site and there is a concern regarding exceedance of noise assessment criteria.

To minimise noise emissions and comply with the Project approval and regulations, the Project would be designed and constructed with reasonable and feasible noise mitigation measures to control noise emissions within the surrounding communities. A number of noise mitigation measures were presented in the EIS and have been updated in Table 7.1 of this report. The appropriateness of the noise mitigation measures will be further assessed during the Stage 2 SSD applications, once the detailed design is developed and the mitigation measures can be adopted to reflect the final design.

5.7.4 Adequacy and feasibility of mitigations

Some submitters had concerns about the proposed management and mitigation measures which have been proposed for noise and vibration including:

- Concerned that there is no noise wall along the Georges River.
- Would like noise barriers along the SSFL from Glenfield to Casula as part of the initial works.
- A reduction requirement of up to 23 dB at Full Build is required. This would be an unachievable reduction and would result in large exceedances of project noise goals, even with all feasible and reasonable mitigation measures in place. Concerns about noise mitigation strategies (noise, light, emissions control of transmission of noise and light, noise attenuation, controlling noise at receiver. Proposed mitigation measures such as instructing crane drivers not to bang the containers is laughable.
- Confusion regarding how mitigation measures will keep impacts within legislative guidelines.
- What mitigating strategies have been offered for sleep disturbance impacts? How would they be enforced?
- Australian Rail Track Corporation (ARTC) constructed the SSFL at Casula with promises to the community that where noise is excessive it would install noise barriers and to limit the number of trains that were held to late night operations due the curfews installed by RailCorp and change them to daytime services so as not to disturb the sleep patterns of residents close to the rail lines. Levels of 103 dB(A) have been recorded by RailCorp during the night time which is more than 60 dB(A) above State Government recommended levels. The noise barriers were not installed because ARTC argued that the trains were being moved 5 m away from residents' homes and therefore the noise would be reduced.

Submission(s)

118661, 118405, 118969, 119042, 118981, 118989, 118207, 118826, 118779, 118959 and 119237.

MIC response

Noise walls or noise barriers would be installed within the main intermodal terminal site to impede the line of sight between noise sources and the nearest receptors.

Subject to further consideration of environmental, social and economic impacts, earth mounding could be considered as an alternative to, or in conjunction with, noise walls/barriers to attenuate the propagation of noise between the site and nearest affected receptors. Where earth mounding can fully impede the line of sight to dominant noise sources, it may be possible to reduce noise from ground level sources by 6 dB(A) L_{Aeq} or more. For the southern rail access, it is proposed that earth mounding be considered on the main intermodal terminal site, at the western extent of the IMEX and interstate rail lines.

The EIS is seeking approval of a concept design, (as a Stage 1 SSD application) and as such, the noise mitigation scenario is presented as a hypothetical mitigation. The mitigations as currently presented are reasonable and feasible noise mitigation measures to control noise emissions within the surrounding communities. Once the detailed design is developed, the appropriateness of the noise mitigation measures will be further developed during the Stage 2 SSD approval application. The actual noise and mitigation measured adopted for the project will be designed based on what will be built including the type of machinery and equipment used, and the level of noise being omitted during construction and operation.

Chapter 7 – *Revised environmental management measures* of this report presents the updated noise management and mitigation measures proposed for the project. To supplement these measures a construction environmental management plan (CEMP) or its equivalent will be produced for the project, there will be a requirement that the CEMP is regularly updated to incorporate any changes in legislative requirements.

Table 7.1 of this report outlines the proposed management and mitigation measures for the Project. These measures will be finalised during the detailed design phase when an updated Noise and vibration assessment will be undertaken to support any future Stage 2 SSD Applications. Specifically items 5A to 5AJ address noise and vibration management and mitigation including sleep disturbance.

It will be a requirement of the intermodal terminal operator to undertake the necessary noise monitoring from construction and operations. If an exceedance is detected, it is normal practice to report the exceedance to the relevant regulatory authority. The intermodal terminal operator will need to investigate the exceedance and if the exceedance is attributed to site practices, modify the operations to ensure compliance is maintained.

Mitigation and management measures of the SSFL is outside the scope of this Project.

5.7.5 Adequacy of noise assessment

Five submitters raised concerns over the adequacy of the noise impact assessment including;

- Concerns over modelling criteria in terms of adverse weather conditions.
- Concerned that the receptors set to ascertain the base index for ambient noise have been placed in noisy locations.
- Concerns about the inclusion of an error margin in noise impact assessment.
- Concerns regarding why only Buckland Road, Casula was the only noise monitoring location. Lakewood Crescent is an ideal location to measure noise levels.
- Concerns about the traffic noise increase for Lakewood Crescent?

- Would it in fact be more than 2 dB(A) – and thus breach the Projects own traffic noise policy.
- SSFL should provide noise receptor information to MICL for houses along Lakewood Crescent, St Andrews Boulevard and Buckland Road.
- The assessment has not taken into account any noise assessment outside of the immediate areas of the site.
- Believes that there is more information on environmental protection provided for construction rather than operation. Why is it that the construction restrictions are so much more stringent than the ongoing operational environmental impacts noise quality?

Submission(s)

118959, 118405, 118959, 119042 and 119237.

MIC response

The noise modelling completed for the EIS and Response to Submissions report was undertaken in consideration of regional wind gradients and temperature inversion effects which can focus sound and wave propagation paths and may increase received noise at the receptor locations. Conservatively, worst case noise levels are likely to occur early morning and night time during winter months. This data forms the basis for the model, and the modelled results are predicted based on these day-time and night-time assumptions.

Chapter 7 – *Revised environmental management measures* of this report presents the updated noise management and mitigation measures proposed for the project. To supplement these measures a construction environmental management plan (CEMP) or its equivalent will be produced for the project, there will be a requirement that the CEMP is regularly updated to incorporate any changes in legislative requirements.

The long term noise monitoring locations used for the noise impact assessment were selected after an initial site visit to identify areas within Casula, Wattle Grove and Glenfield that were considered representative of quiet noise environments. That is, a location where noise from the surrounding road and rail networks was not significantly influencing the measured background noise levels. By measuring noise levels at the quietest noise environments, the noise assessment criteria and the assessment of potential impacts are considered to be representative for the most sensitive communities.

In relation to the comment about an error margin, it is unclear what this comment is in relation to. While the noise modelling was conducted to represent conservative (or worst case) predictions. There is no error margin included in the model. The modelling results are likely to be overestimated, rather than underestimated.

Only one sensitive receiver (e.g. Buckland Road, Casula) is required to measure background noise levels and this location is considered representative of all sensitive receivers, hence multiple monitoring locations within each suburb are not necessary to define background noise levels. Lakewood Crescent would not be an ideal location as background noise levels are to be measured at locations representative of the more sensitive (quietest) noise environments, not higher noise environments adjacent to transport corridors.

Technical Paper 2 – Noise and vibration impact assessment of the EIS (EIS Volume 3) and Appendix F of the Response to Submissions report include assessment of several receptors, including a residence in Lakewood Crescent, Casula (Refer to Table 1 of the revised Noise and vibration assessment in the Response to Submissions). Some exceedances were noted during Phase 2b and during the full build.

MIC has had a number of discussions with the Australian Rail Track Corporation (ARTC) regarding noise monitoring along the Southern Sydney Freight Line (SSFL). ARTC has published some information in relation to their monitoring requirements however specific information relation to individual properties along the SSFL was not made available to MIC.

Chapter 12 – *Noise and vibration* and Technical Paper 2 – Noise and vibration impact assessment in Volume 3 in the EIS describes the noise assessment undertaken for the Project including an assessment of a number of scenarios including Early Works (2015), Phase A (2018), Phase B (2025), Phase C (2030) and Full Build (2030). The assessment considered existing background noise levels however has not undertaken an assessment of any new noise sources outside the Project boundary.

The EIS and the Response to Submissions report considered both operational and construction noise and vibration impacts equally. During the detailed design phase and for future Stage 2 SSD applications, a revised Noise Impact Assessment will be undertaken using final plans, including an assessment of actual machinery proposed to be used. At this stage more stringent operational management and mitigation measures will be finalised.

5.8 Biodiversity

5.8.1 Impacts on flora and fauna

A number of submitters had some general concern on the Projects impact on Biodiversity of the area, including:

- General concern on the projects impacts on the local flora and fauna, including Koala populations and other threatened species.
- Impacts on biodiversity and loss of habitat within the Georges River catchment.

Submission(s)

118327, 118282, 118661, 118785, 119005, 118921 and 119009.

MIC response

Chapter 13 – *Biodiversity* of the EIS provides a summary of the potential impacts on the existing biodiversity within and surrounding the Project, which is based on the findings of the *Ecological Impact Assessment* contained in Volume 4 of the EIS. The Project will result in vegetation clearing and habitation disturbance, the impacts of which are irreversible

In relation to the comment on Koala populations and other threatened species, due to the highly fragmented and urbanised land surrounding small remnant vegetation patches the habitat to sustain threatened fauna is described as poor to moderate. The riparian corridor along Georges River does contain well connected native vegetation which could sustain habitat for protected species. This riparian corridor will be protected (and enhanced) by the project. Fauna surveys detected the Grey-headed Flying Fox and two microbat species (large footed Myotis and Eastern-bent wing Bat). Twenty three additional species were identified (Chapter 13 – *Biodiversity* in Table 13.7 of the EIS) as likely to occur in the region, but were not identified during field surveys. Most of these species, if they do exist in the riparian corridor have large home ranges that would extend well beyond the Project site and/or are migratory and are therefore likely to use the riparian corridor on a sporadic or seasonal basis.

Impacts associated with vegetation clearing have been assessed in accordance with state and federal legislation. The Project will be subject to stringent mitigation measures at all stages of development that will include riparian vegetation management and revegetation, bridge design based on NSW Fisheries fish passage requirements for waterway crossings, and appropriately designed stormwater

management measures based on further ongoing water quality monitoring. Further extensive biodiversity offsetting in accordance with state and federal guidelines will ensure the Project adequately achieves appropriate biodiversity outcomes.

5.8.2 Impacts on Georges River

There were five submissions which had general concerns about the biodiversity of the Georges River.

Submission(s)

118282, 118661, 119009, 118937 and 119005.

MIC response

The biodiversity of the lower reaches of the Georges River has been modified as a result of habitat degradation and changes in abiotic condition such as water flow volumes, velocities, increased nutrients, chemical pollution and invasive species. The degraded condition of this section of the Georges River has led to the presence of disturbance tolerant species which are less sensitive to alternations in environmental conditions.

The Ecological Impact Assessment was prepared in accordance with NSW Office of Environment and Heritage (OEH) guidelines and the surveys were based on desktop analysis. This approach was endorsed by the NSW Department of Planning and Environment and is compliant with the Secretary for NSW Department of Planning and Environment's Environmental Assessment Requirements (SEARs) for the Project. Detailed surveys of aquatic habitat would be undertaken in preparation of the Stage 2 SSD application(s).

5.8.3 Adequacy of biodiversity assessment

One submission raised a concern that there was a failure to acknowledge and adequately respond to the issues raised in previous submissions concerning owl and wedge tail eagle habitats within the affected area.

Submission(s)

118917

MIC response

Ten threatened migratory species were predicted to occur within the locality of the Project but were not recorded during the field surveys, which included two species of owls and the Little Eagle (note: Wedge tail eagles are not known to occur in the region). However, the Project site would not be classed as an 'important habitat' for migratory species as defined under the Matters of National Significance because the terminal site is unlikely to contain:

- Habitat utilised by a migratory species occasionally or periodically within a region that supports an ecologically significant proportion of the population of the species.
- Habitat utilised by a migratory species which is at the limit of the species range.
- Habitat within an area where the species is declining.

As such, it is unlikely that the Project would significantly affect any migratory species and this group was not considered further in the study.

5.9 Hydrology, groundwater and water quality

5.9.1 Impact on Georges River

A number of submissions raised some general concerns regarding the impact of the Project on the Georges River, including:

- Environmental damage to the Georges River.
- The State and Federal Governments have spent a significant amount of money restoring the Georges River Catchment by removing polluting industries from its catchment. The intermodal terminal will now bring such industries to the foreshore of the Georges River.
- No hard stand should be built on the banks of the Georges River.
- Impacts on the water quality of the Georges River.
- Impacts of litter on the Georges River.
- Concerns about sewage treatment plant and overflow in catastrophic failure. There is no mention of detention times for this structure.

Submission(s)

117902, 117838, 117978, 119249, 119009, 118985, 199063, 118963, 119239, 118342, 118651, 118921 and 118959.

MIC response

As discussed in section 16.2 of Chapter 16 – *Hydrology, groundwater and water quality* of the EIS, impacts on the Georges River in terms of water quality have been identified as an important issue for the management of the Project. Further investigations would be undertaken as part of future Stage 2 SSD applications and this would include detailed modelling and subsequent management of water quality to ensure there is no impact to the Georges River and associated flora and fauna habitats.

In respect to the condition or health of the Georges River, annual monitoring reported in the Georges River Health Report Card 2013-14 states the overall river health is of 'fair' condition. The Moorebank Intermodal terminal will be subject to stringent mitigation measures at all stages of development that will include riparian vegetation management and revegetation, bridge design based on NSW Fisheries fish passage requirements for waterway crossings, and appropriately designed stormwater management measures based on further ongoing water quality monitoring.

MIC is committed to the restoration of the Georges River catchment adjacent to its site through the retention and creation of a conservation zone along the banks of the Georges River in the west of the site.

The Moorebank Intermodal Terminal will be constructed to the east of the Georges River and separated by a Conservation Area. No areas of hard stand will be built on the banks of the Georges River.

In accordance with NSW Department of Primary Industries guidelines for controlled activities, MIC will establish a 40 m wide riparian corridor (measured from top of bank of the Georges River).

Dedicated recycling storage areas and recycling bins would be located throughout the Moorebank Intermodal Terminal site to reduce the amount of rubbish being produced and subsequently entering Georges River A water quality monitoring program for the Georges River and Anzac Creek is currently undertaken for the Moorebank Intermodal Terminal, with key results published on the MIC website (http://www.micl.com.au/environment/monitoring-results/water-quality.aspx) every month. This program commenced in July 2013 and would be expected to continue throughout the construction and operation of the Moorebank Intermodal Terminal.

The installation of utilities will be undertaken during Phase A. The detailed design of such utilities, including the sewerage treatment will be assessed and described in the Stage 2 SSD application for that stage.

5.9.2 Flooding impact

Two submissions raised concerns of the impact of floods to the operation of Project, including:

- NSW and recent floods in Liverpool showed that the only secure intersection was the M5 Motorway and Moorebank Avenue.
- East Liverpool is a flood prone area bounded on three sides by the Georges River. Bridges are fundamental to traffic movement.

Submission(s)

118327 and 119063.

MIC response

Chapter 16 – *Hydrology, groundwater and water quality* of the EIS describes a moderate to high risk of flood to the site during a storm event. The potential effects of various flood events on construction and operational phases would be further investigated during detailed design and preparation of future Stage 2 SSD approval(s).

The design of the Georges River rail bridge would ensure structural stability under an appropriate upper limiting flood event, typically the 1 in 2000 year Annual Exceedance Probability (AEP) event or other event of similar magnitude.

5.10 Local and regional air quality

A number of submissions made general and specific comments relating to the air quality impacts of the Project. These are as follows:

5.10.1 Air quality impacts – general

General concern regarding to the impacts on air quality as a result of the Project. Issues include:

- believes that south-west Sydney/Liverpool already experiences poor air quality and is on the verge of unacceptable air quality;
- concerned about pollution as a result of the project, including creating more dust and diesel pollution from semi-trailers;
- concerned about air pollution, included that created over a wide radius;

- deposition of particles on site and in the near vicinity will affect the workers within the boundary of the facility, they will be exposed to close to three times the NEPM advisory level at a conservative estimate, if not more; and

- concerns about the release by the operation of the terminal of toxic, carcinogenic, poisonous emissions and the lack of site inbound traffic (road and rail), lack of appropriate scientific monitoring and analysis, and procedures by the proponents to manage exceedances.

Submission(s)

118360, 118282, 118661, 118985, 118981, 118959, 117912, 118173, 118171, 118201, 117982, 118707, 118405, 118779, 117843, 117864, 117902, 117838, 117916, 117866, 118270, 118342, 117978, 119257, 119239 and 118959.

MIC response

The Local Air Quality Impact Assessment (LAQIA) (Technical Paper 7 – Local air quality impact assessment, EIS Volume 6 and Appendix H, Volume 4 of the Response to Submissions report) includes the assessment of the following air pollutants: particulate matter (including total suspended particulate (TSP), particulate matter less than 10 microns (PM_{10}) and particulate matter less than 2.5 microns ($PM_{2.5}$), nitrogen dioxide (NO_2), carbon monoxide (CO), sulphur dioxide (SO_2), benzene, toluene, xylenes, 1, 3-butadine, formaldehyde, acetaldehyde and polycyclic aromatic hydrocarbons (PAHs). These air pollutants measure the air quality impacts associated with semi-trailers (trucks), diesel trains and construction related activities (including dust).

Emissions of these pollutants were quantified using the accepted published emission factors from a number of sources, including the NSW Environment Protection Authority (EPA), US EPA and the Australian National Pollution Inventory (NPI). A range of conservative assumptions were made, including the selection of worst case emission standard engine classes for locomotives, to provide an upper level estimation of emissions from the Project.

Emissions were quantified for various stages of the Project, including construction only, periods where construction and partial operation would occur as well as the Full build operational facility. Additionally, the cumulative emissions from operations on the Moorebank Intermodal Terminal and the SIMTA Intermodal Projects were also quantified and assessed. In total, 15 emissions scenarios were assessed to quantify impacts in the surrounding environment.

The results of the dispersion modelling highlight that adverse impacts to the surrounding environment are not predicted for any modelling scenario or pollutant. The air quality impact associated with the emissions generated by the construction and operational phases of the Moorebank Intermodal Terminal is therefore predicted to be low.

A number of community submissions have raised the issue of poor air quality in the south-west Sydney/ Liverpool area, which is why the baseline air quality characterisation study focused on data recorded by onsite monitoring equipment and the NSW Office of Environment and Heritage (OEH) Liverpool air quality monitoring station monitoring station, located at Rose Street, Liverpool. The following observations are made with respect to background air quality:

- On average, the 2013 calendar year contained higher PM_{10} and $PM_{2.5}$ concentrations across the OEH monitoring stations. 2013 was therefore selected as a conservative representation of baseline air quality.

- Comparison of same-day PM_{10} concentrations at the OEH Liverpool and onsite monitoring stations throughout 2013 showed strong agreement, despite the separation distance of 3 km between the two sites. The Liverpool station data was adopted as the most appropriate measure of baseline data.

- Annual average PM_{10} concentrations are below the EPA criterion (30 µg/m³), with infrequent exceedances of the 24-hour reporting standard primarily coinciding with regional events (in particular October 2013 bush fires).

- The influence of the October 2013 bushfires in Greater Sydney contributed to higher than normal $PM_{2.5}$ concentrations (both annual and 24-hour average) during 2013. Analysis of same-day concentrations recorded at Liverpool, Chullora and Earlwood (two closest OEH $PM_{2.5}$ stations) show strong agreement through summer, early autumn and spring. Concentrations at Liverpool are however higher between late autumn and winter. Analysis of concentrations by month and time of day highlights that concentrations are highest during May through August and between the hours of 7.00 pm and 2.00 am. This analysis is strongly indicative of impacts from residential wood-fire heaters.

- TSP, NO_2, SO_2 and CO concentrations during 2013 are below EPA air quality impact assessment criteria.

- Ongoing monitoring of $PM_{2.5}$, PM_{10} and NO_2 in 2014 have demonstrated an improvement in air quality since the 2013 baseline year. Online reporting of monitoring results is currently presented on the MIC website (http://www.micl.com.au/environment/monitoring-results.aspx).

In summary, background data is highly influenced by the 2013 bushfire anomaly baseline data. The data collected in 2014 shows an overall improvement in background air quality data for the area.

The incremental (Project-only) air pollutant concentrations and dust deposition rates associated with all modelled scenarios being predicted to be within NSW Environment Protection Authority (EPA) criteria and National Environment Protection Measures (NEPM) advisory reporting. The maximum cumulative 24 hour average PM_{10} and $PM_{2.5}$ concentrations only exceeded the applicable NSW EPA criteria and NEPM advisory reporting goals (exceedance only at one receptor) when taking into account existing background levels. Importantly, the air quality assessment found that there would be no additional exceedance events as a result of the Project. Therefore the risk to site workers during construction activities is expected to be low.

MIC has been monitoring air and noise quality at the site since 2012 and this monitoring would continue through the operational phases of the project. Online reporting of monitoring results is currently presented on the MIC website (http://www.micl.com.au/environment/monitoring-results.aspx) which will continue and ambient air quality monitoring data would be used to track the environmental performance of the Project. An Air Quality Management Plan (AQMP) would be developed for the Project, highlighting air quality management practices and procedures.

If an exceedance is detected, it is normal practice to report the exceedance to the relevant regulatory authority. The IMT operator (who will be responsible for the monitoring and reporting of air quality data) will need to investigate the exceedance and if the exceedance is attributed to site practices, modify the operations to ensure compliance is maintained.

5.10.2 Diesel fumes/emissions

A number of submissions raised issues about diesel fumes including:

- concerns about the impacts of diesel fumes on the local community; and
- current $PM_{2.5}$ levels are already close or above the advisory criteria and additional gas and liquid natural gas powered vehicles will exacerbate this.

Submission(s)

117930, 118327, 118661, 119249, 118933, 118791, 119009, 119077, 119063, 118953, 118937, 118981, 119052, 119005, 119025 and 119239.

MIC response

The general concern regarding diesel combustion emissions is valid and underpins the reason for the assessment of such emissions from the Project. Emissions from Project operations, including locomotive and truck movements, were quantified using the accepted published emission factors from a number of sources, including the NSW EPA, US EPA and the Australian National Pollution Inventory. A range of conservative assumptions were made, including the selection of worst case emission standard engine classes for locomotives, to provide an upper level estimation of emissions from the Project. The results of the air quality modelling, which were based on the emission calculations, indicate that the potential for adverse impact in the surrounding environment from air pollutants generated by the Project would be very low.

The Human Health Risk Assessment (HHRA) prepared for the EIS (Technical Paper 15, EIS Volume 9) and revised for the Response to Submission report (Appendix H, Volume 4) evaluated health impacts associated with exposure to particulates from construction related dust and combustion sources (including diesel trucks and locomotives), as well as other emissions to air, specifically polycyclic aromatic hydrocarbons from diesel engines and a range of air pollutants, including volatile organic compounds, derived from all combustion sources. As noted in Section 4.2.2 of the HHRA (EIS Volume 6), the World Health Organisation cancer unit risk value (mean value of 3.4 x 10-5 per $\mu g/m^3$) has been used to evaluate potential excess lifetime risks associated with incremental impacts from diesel particulate matter exposures. The HHRA notes that while there is no guidance on what level of risk is considered to be acceptable in the community, a level of 10–4 for increased risk (one chance in 10,000) has generally been adopted by health authorities as a point where risk is considered to be unacceptable (i.e. consistent with established practice and regulation). An increased risk level of between negligible (10–6 (one chance in a million)) and unacceptable (10–4) is therefore considered tolerable or even acceptable. Findings from the HHRA indicate the risks associated with the exposure to diesel particulate matter are negligible for some health indictors with the remainder within the range of tolerable risks (refer to Section 4.5.3 of the HHRA).

The revised HHRA undertaken for the Response to Submission report identified minor variation in the health risks however noted that the conclusions identified in the EIS remain unchanged. The on-site operations include the use of Liquefied Petroleum Gas (LPG) generated plant and equipment in place of diesel to minimise impacts on local air quality

5.10.3 Adequacy of air assessment

The following comments were made on the adequacy of the air impact assessment:

- Questions why the air quality study does not monitor on diesel particulate matter or formaldehyde?
- Questions why the Department of Planning and Environment accepted an air quality assessment which does not consider such impacts.
- Environmental modelling done to date is flawed, conflicted and breathtaking in its unreliability.
- Concerns about the release by the operation of the emissions and the lack of site inbound traffic (road and rail), lack of appropriate scientific monitoring and analysis, and procedures by the proponents to manage exceedances.
- Now that the SIMTA/MIC sites have been merged, please confirm that revised air quality modelling will include assessment of diesel particulate matter, formaldehyde as part of the new proposal.
- The issue of the geographic shape of the area and its likely effect on local air currents/localised atmospheric conditions, particularly in conjunction with the effects of diesel emission and local atmospheric contamination, have not been adequately addressed.

Submission(s)

117930, 119225, 118602, 118959 and 118917

MIC response

The Local Air Quality Impact Assessment conducted for the EIS and the Response to Submissions report did assess diesel particulate matter. Diesel particulate matter comprises $PM_{2.5}$, PM_{10} and polycyclic aromatic hydrocarbons. Formaldehyde was assessed as part of the modelling of air quality impacts, however formaldehyde is not part of the current background monitoring data collected for the site.

Emission calculations and atmospheric dispersion modelling has been conducted in accordance with the NSW Environment Protection Authority's (EPA) Approved Methods for the Modelling and Assessment of Air Pollutants in NSW. The emissions calculations modelling conducted has accounted for a high level of conservatism in key assumptions to provide an upper level prediction of potential air quality impacts in the surrounding environment. The air quality technical assessment has therefore been adequately assessed and not underestimated. In addition, Local Air Quality Impact Assessment (LAQIA) (Technical Paper 7 – Local air quality impact assessment, EIS Volume 6 and Appendix H, Volume 4 of the response to Submissions report) was prepared by technical experts who are specialists in their field and peer reviewed by an independent expert who agreed with the approach, methodology and findings of the LAQIA. Letters from the independent peer reviewers endorsing the technical papers are provided in Appendix G to the EIS. In addition, the EIS has been prepared in accordance with the Secretary for NSW Department of Planning and Environment's Environmental Assessment Requirements (SEARs) and the Department of the Environment's (DoE) EIS Guidelines and has also been reviewed by the NSW Office of Environment and Heritage and EPA.

An updated local air quality assessment will be prepared for each future development application for each phase. This assessment will be based in the final project design and take into consideration cumulative air impacts (of both the Moorebank and SIMTA terminals) to a local and regional level. Diesel combustion related pollutants (specifically $PM_{2.5}$, NOx, SO2, CO, VOCs, formaldehyde and PAHs) will be considered in this updated assessment. The updated assessments will also include revised mitigation and management measures.

As detailed in Appendix G – Local Air Quality Impact Assessment in the Response to Submissions report, in order to predict air quality impacts arising from quantified air pollution emissions, atmospheric dispersion modelling was conducted using the US Environment Protection Authority (EPA) – developed AERMOD dispersion model. Atmospheric dispersion modelling was undertaken in strict accordance with the NSW EPA Approved Methods for the Modelling and Assessment of Air Pollutants in NSW. Therefore the effects of diesel emissions have been adequately assessed.

5.10.4 Dust and odour during construction

Concerned about dust and odour, especially during construction, concerned that this Project is larger than any other development in the vicinity.

Submission(s)

118661, 118405, 118981 and 117860.

MIC response

Air pollution emissions and associated impacts from the construction phases have been addressed in the Local Air Quality Impact Assessment (LAQIA) in accordance with the NSW Environment Protection Authority (EPA) *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW*. Predicted impacts from the construction phase are below applicable NSW EPA assessment criteria at all surrounding receptor locations. Impacts from dust generation during the construction phase are therefore predicted to be low.

On the basis of onsite contaminated soil sampling results, potential odorous emissions from the construction phase are likely to minimal (i.e. given the soil characteristics, odour is not likely to be a significant issue) and would be localised/contained within the Project site. Soil management measures as described in section 15.5 of Chapter 15 – *Contamination and soils* (including covering of onsite stockpiles) would avoid and minimise any potential odour emissions.

In addition, LAQIA (Technical Paper 7 – Local air quality impact assessment, EIS Volume 6 and Appendix H, Volume 4 of the response to Submissions report) was prepared by technical experts who are specialists in their field and peer reviewed by an independent expert who agreed with the approach, methodology and findings of the LAQIA. The project has been assessed in accordance with the Secretary for NSW Department of Planning and Environment's Environmental Assessment Requirements (SEARs) and the Department of the Environment's (DoE) EIS guidelines and has also been reviewed by OEH and EPA.

5.10.5 Adequacy and feasibility of mitigation measures

Where will be the nearest pollution monitoring station be situated in relation to the Moorebank Intermodal Terminal?

Submission(s)

119225

MIC response

The existing onsite air quality monitoring station which records continuous measurements of NO_2, PM_{10} and $PM_{2.5}$ to ensure that the ambient air quality criteria are met will be continued during the construction and operation of the project. $PM_{2.5}$ and NO_2 are diesel combustion related pollutants.

The final location of this station may change dependant on the final site layout and regulatory requirements.

5.11 Aboriginal and European heritage

5.11.1 Impacts on heritage sites

Five submissions were concerned about removal of heritage features from the site, particularly those with military and indigenous significance.

Submission(s)

118405, 119009, 118981, 119005 and 119107.

MIC response

The Aboriginal and European heritage impacts as a result of the Project are identified and assessed in Chapter 20 – *Aboriginal heritage* and Chapter 21 – *European heritage* of the EIS. In summary, as identified in section 20.6 of Chapter 20 – *Aboriginal heritage*, the main construction footprint is located in areas considered to be of low Aboriginal heritage significance. While the majority of identified Aboriginal recordings within the Project footprint would be directly affected, the areas of highest sensitivity (adjacent to the Georges River) would be largely conserved. The Project would affect less than a quarter of the Tertiary terraces within the Project site that are identified to be archaeologically sensitive. Appropriate management and mitigation measures are proposed including avoidance (within the conservation zone), salvage of significant items, and consultation with registered Aboriginal parties.

In relation to European heritage impacts, most of the sensitive heritage items, particularly those of military significance would be relocated from the current SME site prior to construction of the Project, as part of the Moorebank Units Relocation (MUR) Project. Further details of the MUR Project are available at http://www.defence.gov.au/id/moorebank/.

While many of the intangible values (e.g. memorials, Chapel and Museum) would be transferred to the new SME site at Holsworthy, there would be residual values associated with the broader landscape setting, as well as more tangible elements of the landscape that would be affected as part of the Project. However, as identified in Table 29.6 of Chapter 29 – *Environmental Risk Analysis* of the EIS, the impacts on European heritage would be reduced to low to moderate provided mitigation measures such as archiving, additional investigations and relocation where appropriate, are implemented.

5.12 Visual and urban design

5.12.1 Visual impact of intermodal terminal

Two submitters raised several concerns about the visual impact of the Project including:

- Many residential properties in Casula Links estate due to its topography (elevation of 30-40 metres above the river) will have visual impacts stemming from the Project site. What mitigating strategies have been offered? How would they be enforced?
- The viewpoints selected for the Casual residential area (locations 5 and 6) are not representative as they are located low and closer to the river. Why weren't higher points used in the assessment?
- Why does the report not include a high rating?
- The intermodal terminal will be a concrete/blue gravel area with an eyesore of thousands of containers stacked everywhere.

Submission(s)

119042 and 118342.

MIC response

The visual impacts of have been assessed for the EIS and updated for the Response to Submissions Report, the findings of these assessments are provided in Chapter 22 – *Visual and urban design* of the EIS and Section 7.10.2 of Chapter 7 – *Proposed amendments to the development* of the Response to Submissions Report. Impacts were assessed at a number of different locations/receptors surrounding the proposed intermodal terminal site, including parks and community facilities to the west and surrounding residential suburbs and public road reserves. During construction moderate to high impacts were predicted for many viewpoints due to the impact of tall construction equipment such as cranes that would be visible above the tree line during construction of both the IMEX and interstate intermodal terminal facilities. These impacts would be temporary. The EIS notes that at Full Build, the most significant visual impact would be from properties directly adjacent to Leacock Park and Carroll Park and residential properties on the elevated areas to the west of the Georges River and residential properties backing onto the Southern Sydney Freight Line. These impacts range from negligible to moderate/high for different locations. The most prominent views of the Project will be at localised boundaries and public parks overlooking the site.

MIC has proposed a number of mitigation measures (presented in Table 7.1 of this report) that would be considered during detailed design phase and further information on these measures would be provided as part of future Stage 2 SSD application(s). These include:

- incorporation of urban design principles into Project design, including height controls that limit building heights to 21 m;
- visual mitigation measures such as landscaping, screening/buffering of less attractive activities/infrastructure;
- localised earth mounding and native canopy tree planting in internal landscaped areas to mitigate visual impacts from residential areas; and
- designing lighting to minimise light spill (as discussed in section 6.14.1 of the Response to Submissions report).

The visual impact rating table (Refer to Appendix A of Landscape Visual Impact – Appendix D of the Response to Submissions report) includes high ratings for distance from the site (100–300 m), quantum of view (A direct view of the development where the development occupies the greater proportion of the view cone) and duration (significant part of the day). Viewpoints located further and higher away from the Georges River are at a greater distance from the Project and comprise a smaller quantum of view than locations 5 & 6 and therefore are likely to have a lesser impact. Viewpoints 5 & 6 although at a lower height and closer to the River are considered to have a higher impact, due to their proximity to the site.

In terms of enforcement, the EIS commits to the monitoring of light spill during the operation of the Project to assess the impacts and modify, including introducing new measures (if required).

5.12.2 Light impacts

Five submitters raised concerns about the light impact from the Project, including:

- General light spilling impacts as a result of land topography.
- Light impacts from 24 hour operation.

- Visual impacts would also stem from the freight trains such as headlights and from rail signalling lights.

Submission(s)

118981, 119009, 118937, 119005 and 119042.

MIC response

Section 22.5 of Chapter 22 – *Visual and urban design* of the EIS identifies and assesses the light spill impacts considering the 24hr of operation at the site. For some residential locations that overlook the Project site, there would be a noticeable change in the brightness of the area on clear nights. In foggy conditions, the brightness may be less; however, there would be a local sky glow effect. Transitory lighting from train headlights on trains leaving the Project site at night would potentially affect some residential locations, however, since the selection of the southern rail access, the direct impacts to local residents is reduced.

As outlined in section 22.7.2 of Chapter 22 – *Visual and urban design* of the EIS and Table 7.1 of this report, light spill mitigation measures would be considered during the detailed design and would include measures such as:

- designing lighting to minimise impacts;
- the use of shields on luminaire lighting to minimise brightness effects;
- selecting asymmetric light distribution-type floodlights as part of the proposed lighting design;
- the use of low-reflection pavement surfaces to reduce brightness; and
- minimising the quantity of light and energy consumption in parts of the intermodal terminal site that are not active.

5.13 Land use and property

A number of community submissions raised concerns about changes to their property value and impacts on community recreational land as a result of the Project. Details of these submissions are provided below.

5.13.1 Property values

- Negative impact of the project on local house prices.
- What compensation will be offered?
- If this goes ahead the State government should remove house sale stamp duty for those people who wish to move away from the area.

Submission(s)

117916, 118707, 118661, 118779, 118969, 119005, 199025 and 118937.

MIC response

MIC acknowledges the concerns of the local community regarding depreciation to the value of homes. There are many factors that influence housing prices in an area. Given the complexity of these factors, it is not possible to predict whether the terminal would have any negative impacts to local house process or positive impacts – for example, due to housing demand created by the additional employment generated by the terminal.

Table 7.1 of this report has also presented a number of management and mitigation measures to be implemented during construction and operation of the Project to mitigate any adverse impacts on property prices. These measures will be assessed further during the detailed design phase and during future Stage 2 SSD applications.

MIC has committed to a public benefits package in recognition that people living closest to the terminal will experience the most impacts, but receive the same share of the terminals broader benefits as other parts of Sydney. People living near the terminal will receive:

- A share of the broader benefits of the terminal – e.g. jobs growth, reduced congestion growth and increased productivity; and
- All the benefits of MICs contribution to local programs and services – i.e. the public benefits package. The public benefits package was chosen by members of the community via a Citizens' Jury. The public benefits package will include a TAFE scholarships program (targeting local business opportunities) and a healthy lifestyles package (including exercise equipment for local parks and a preventative health training program).

The potential impact property values as a result of the project have not been determined. MIC has no influence on the removal of stamp duty as measure on compensation.

5.13.2 Impacts on public open space/community facilities

Several submitters were concerned about the impacts of the Project on several recreational areas, including:

- Riverfront land is valued in all other areas of Sydney, residents should be able to utilise this community asset for recreation purposes.
- Concerned about the detrimental effect on Casula Powerhouse Arts Centre including interruptions due to noise of 24 hour intermodal terminal operations.
- Concerned about building bridges and a railway over the old golf links.

Submission(s)

119097, 118360, 118405, 118981, 118963, 119052, 119005, 119042, 119229.and118707

MIC response

The final use of the Conservation Area proposed for this project has not been finalised however walking trails within this area, along the Georges River is being considered. Additionally, as described above, MIC is contributing to a healthy lifestyle package which includes providing exercise equipment in local parks and a preventative health training program.

Since the selection of the southern rail access option, the noise impacts to the Casula Powerhouse Arts Centre have reduced, as the proposed northern rail access option had greater associated noise impacts.

Noise monitoring at the Casula Powerhouse Arts Centre, completed during the EIS, took into account existing background noise levels, along with proposed trains that would access the terminal. The predicted unmitigated noise levels at the Casula Powerhouse Arts Centre (from trains using the terminal plus background noise) are below the relevant noise criteria as shown in the Table 5.2 below:

Table 5.2 Predicted unmitigated noise at the Casula Powerhouse Arts Centre

Project Phase	Criteria (decibels – dB(A))	Predicted Noise level (Neutral weather conditions) (dB(A))	Predicted Noise level (Adverse weather conditions)
Scenario 2a – 2019 (operation and construction)	50	40	42
Scenario 2b – 2023 (operation and construction)	50	41	43
Scenario 3 – Full Build (2030)	50	43	44

For the combined freight precinct (i.e. MIC and SIMTA sites combined) at full operations, the predicted noise levels have improved by 8 dB(A) compared to the results in the EIS for the MIC site alone. This is mainly due to the selection of the southern rail access option for the project.

MIC's EIS and Response to Submissions report did not consider any peak time for train movements and assumed 24 hour terminal operations. The timing and demand for train movements will be driven by the operators and hence are difficult to predict. Therefore, the assumption made in the EIS and Response to Submission report analysis was that train movements would be evenly spaced, with 24 interstate train movements and 273 IMEX train movements a week.

The RAE Golf Club has closed; therefore there would be no impacts during construction.

5.14 Social and economic impacts

Numerous submissions were received from the community including concerned about employment opportunities, impacts on the quality of living and supply chain costs. These submissions are discussed below.

5.14.1 Employment

Four submitters raised concerns about that the container trade is very automated and jobs created would be few. They believe that more intensive industries would be a greater help for employment and that a vacant area of land of this magnitude should be focused on proving employment opportunities for thousands of people in the surrounding suburbs.

Submission(s)

118327, 118769, 199077 and 119239

MIC response

The automation of several components of the Project has led to a reduction in the environmental impacts of the project (e.g. air and noise impacts). It is expected that the Project will generate approximately 1,400 jobs during construction and about 7,000 jobs once it is fully operational.

A number of land use alternatives were considered for the land at Moorebank, however it was concluded that it would be inappropriate and mostly inefficient to use the site for an alternative purpose (e.g. residential or commercial), as these land uses would have greater impacts on the local environment and community. For example, during peak hours:

- residential development would generate around 7–8 times more traffic than an IMT (in equivalent passenger car unit terms); and
- a business park would generate up to three times more traffic than an intermodal terminal.

5.14.2 Impacts on quality of living

Several submitters raised concerns about the impact of the project on lifestyle/safety and wellbeing of local residents and were concerned about the social and economic decline of the area.

Submission(s)

118282, 118707, 118715, 119009, 118959, 118945, 119077, 188963, 119081, 119005, 119107 and 119239.

MIC response

MIC acknowledges the concerns of the local community regarding the impacts on the quality of living. There are many factors that influence the quality of living in an area. Given the complexity of these factors, it is not possible to predict whether the terminal would have any negative impacts, or positive impacts.

Section 24.3.2 of Chapter 24 – *Social and economic impacts* assesses community structure including the potential changes to demographics and population as a result of the Project. No considerable changes to Liverpool's population are expected during construction or operation of the Project which may lead to the decline of the area. During construction the workers are expected to be sourced from within the Sydney metropolitan region, with some workers sourced from inside the Liverpool LGA. The operation of warehousing could see an additional 1,500 people being employed in the area; this would be equivalent to an increase of around 1% of the existing Liverpool LGA population (see Table 24.4 of Chapter 24 – *Social and economic impacts*).

The EIS and Table 7.1 of this report have presented management and mitigation measures to be implemented during construction and operation of the Project which would avoid and minimise the impacts to the quality of living. These measures will be assessed in future detail during the detail design and during future Stage 2 SSD approval applications.

5.14.3 Supply chain costs

Two submitters questioned how the project will reduce supply chain costs when the transferring freight by rail less than 25 km from Port Botany, while increasing the handling costs of the supply chain with containers having to be loaded and unloaded multiple times in a very short distance.

Submission(s)

118405 and 119052

MIC response

The Deloitte (2014) analysis considered the relative cost of road and rail transport to various destinations in Sydney using data from the Australian Customs and Border Protection Service on the origin and destination of containers. This analysis found that significant volumes of freight heading to and from west and south-west Sydney would be transported by rail via Moorebank because of the significant cost advantage that the Project will be able to offer. A large part of this cost advantage is derived from the economies achievable from the large volume of freight that the Moorebank precinct is proposed to handle.

5.15 Human health risks and impacts

5.15.1 Health impacts to the community

The following general concerns were raised relating to human health:

- Increased traffic movements, noise and air pollution and 24/7 train movements will be detrimental to the health and wellbeing of Moorebank residents.
- Concerned about the health of the community as a result of pollution from the Project.
- Above acceptable noise levels can have health impacts including: annoyance, sleep disturbance, performance issues (reduced concentration), cardiovascular health problems, hearing problems, mental health effects, and general health impacts (e.g. on the immune system).
- Money should not be a short term consideration, the health and welfare of the local population is far more important.
- Health and wellbeing of residents is more important than the employment benefits of the Project.
- Concerned that a decision about onsite equipment will be made by the tender winner and based on economics rather than community welfare when they are a significant contributor to PM_{10} and $PM_{2.5}$.
- The social, health and economic disbenefits not addressed.
- Concerned that the area already has poor health records due to the polluted nature of the area and that an ITM has no place in this area.
- Concerned about the health impacts of having an industrial site within a residential area with schools and preschools in the area.
- Concerned about the impacts of diesel fumes to their kids and causing choking and wheezing.

Submission(s)

117934, 118405, 118963,119029, 119107, 117849, 117926, 118270, 118785, 118933, 119245, 119097, 117836, 118981, 118945, 117854, 118651, 118327, 118405, 118661, 118969 and 119239.

MIC response

Chapter 25 – *Human health risks and impacts* of the EIS provides an overview of the findings of the potential health impacts associated with the Project. The health impacts were addressed in more detail in the Human Health Risk Assessment (HHRA) of the EIS, and Health Impact Assessment (HIA) of the EIS (in Volume 9). Both the HHRA and HIA was updated following the change in the concept layout for the Project and was included in Appendix H of the Response to Submissions report.

The HIA addresses health impacts associated with traffic and transport, noise and air pollution and concluded that the health impacts of the project are unchanged since the EIS and that the health impacts as a result of the project remain low.

In relation to determining whether health impacts in the community are acceptable, the HHRA and HIA have considered whether there are threshold values (below which there are no health impacts) that are protective of health and if the Project complies with these thresholds. In addition, where an annual or lifetime health risk is calculated, the HHRA provides a detailed discussion on the acceptability of health risks (presented in Section 4.4 of the HHRA). All these aspects have been considered in the HHRA where the acceptability of health impacts is evaluated.

The HIA presented in Technical Paper 16 (Volume 9 of the EIS) includes consideration of a range of impacts (related to many aspects of the Project) including increased traffic, noise and air pollution. These aspects are summarised in Table 6.1 in the HIA along with a summary of the measures proposed to minimise/mitigate these impacts.

Impacts on health associated with noise are discussed in detail in Section 5.3 of the *Health Impact Assessment* (HIA) (EIS Volume 9) and summarised in Section 25.5.2 of Chapter 25 – *Human health risks and impacts* of the EIS. The assessment of health impacts from noise relies on the noise guidelines established in NSW (NSW Industrial Noise Policy, the NSW Road Noise Policy, and the Interim Construction Noise Guideline). These noise guidelines are based on the protection of health from a range of different types of noises (from industry, roads, rail and construction) and these guidelines incorporate information/evidence of health effects in the community derived from the World Health Organisation (refer to Section 5.3.3 of the HIA (EIS Volume 9) for further discussion).

The assessment of health impacts presented in the Human Health Risk Assessment (HHRA) and the HIA have considered impacts at a range of representative sensitive receivers (refer to Figure 2.1 in the HHRA and Figure 3.1 in the HIA). These include the closest workplaces, residences, schools, childcare facilities and community facilities. The quantitative assessment of health risks presented in the HHRA has assumed that individuals are exposed to impacts from the Project at each of the sensitive receivers for a whole work day (for workplace locations) and for 24 hours a day, every day for all other sensitive receivers. This approach provides a conservative assessment for all users (i.e. school, day care, sporting grounds etc.) of these areas. Health impacts in areas located further from the site will be lower than assessed for the closest sensitive receivers.

The revised HIA undertaken for the Response to Submissions report (presented in Appendix H) noted the following additional management and mitigation measures:

- Automated container handling areas in the IMEX and interstate terminals to avoid the use of alarms or beepers on the rail mounted gantry cranes.
- Electrification of all plant and equipment at the IMEX and interstate terminals, or alternatively sourcing plant and equipment with noise emission levels equivalent to electrified plant.
- Permanently coupled wagons to limit impact noise events from wagon bunching on the freight trains.
- Minimise the need for reversing of vehicles operating within the main intermodal terminal site equipment to prevent nuisance caused by reversing alarms. This can be achieved through one-way traffic systems and the use of traffic lights which can also limit the use of vehicle horns.
- To further mitigate potential noise from vehicle horns, the practical application of radio contact between operators and limiting the use of vehicle horns to the daylight hours only would be investigated.

- Broadband reversing alarms are to be used instead of tonal reversing alarms, in particular between the hours of 6.00 pm to 7.00 am. This requirement would extend to the heavy vehicles (trucks) entering and leaving the site and where possible (particularly for night works). This should be included as a contractual requirement for all operators accessing the main intermodal terminal site.

The health and wellbeing of the community have been addressed in the Health Impact Assessment (HIA) undertaken for the EIS (Volume 9 of the EIS) and revised for the Response to Submissions report (Appendix H). Health and wellbeing was also assessed in Chapter 24 – *Social and economic impacts* of the EIS and Technical Paper 14 – Social Impact Assessment (Volume 9 of the EIS). The HIA and the Social Impact Assessment considers both the project benefits and the impacts (or disbenefits) to the local community. Where an unacceptable impact is identified, management and mitigation measures have been recommended to minimise the impact.

Health and wellbeing has been considered from a social and community infrastructure perspective, as well as from a community functioning, construction and operational amenity and regional employment opportunities. The HIA looks at the health and wellbeing outcomes from specific project issues such as noise, air quality, traffic, hazardous materials and visual/urban design. The HIA also looks at equity, existing health conditions and recommends mitigation measures to protect health and wellbeing of the local community.

As part of approving the Stage 1 SSD Concept Approval for the Moorebank Intermodal Terminal (and subsequent Stage 2 SSD applications), the consent authority (in this case the Commonwealth Department of the Environment (for the Concept EIS only) and NSW Department of Planning and the Environment) will provide a number of conditions of approval which will relate to the acceptable level of noise and air quality emissions permissible by the project. The project developer (SIMTA) will need to comply with these air quality criteria and select the onsite equipment and/or implement management and mitigation measures to comply with the criteria. The criteria will be set, based on community welfare and protection of human health in accordance with published criteria.

The existing health of the local community is discussed in Section 2.4 of the *Human Health Risk Assessment* (HHRA) and Section 3.5 of the *Health Impact Assessmen*t (HIA) (EIS Volume 9). From this data the population in the south-west Sydney area has a higher rate of health indicators. The existing health of the population in this area (based on the existing health data available from NSW Health) is included in the calculations undertaken in the HHRA when evaluating the risk of health impacts from particulate exposures. The calculations presented in the HHRA do not indicate that the Project would result in any significant impact on the existing health of the population. While the calculated risks do not show any significant impact on community health, the HIA includes a list of recommendations and mitigation measures which will be considered further at detailed design to minimise community exposures. As discussed in Section 5.11.7 of the HIA (EIS Volume 9), the implementation of best practice air quality management practices for the operation of the facility would also be investigated during Stage 2 SSD detailed design.

The impact of the Project on the local community including residential areas and schools has been assessed in detail, in accordance with Australian guidance, within the HHRA. Overall, on the basis the assessment, cumulative and incremental impacts from the construction and operation of the Project on the health of the community (including sensitive land uses) are generally considered to be low and impacts can be mitigated in accordance with established practice and regulation (refer to Section 5 of the HHRA).

5.15.2 Impacts on health system

Two submitters were concerned that the Project will put pressure on hospitals and concerned about a high cost of compensation claims against the Government for health impacts on the local community as a result of the Project.

Submission(s)

117926 and 117916.

MIC response

The impacts on the health of the local community have been addressed in detail in Chapter 25 – *Human health risks and impacts* and Technical Paper 15 – HHRA and Technical Paper 16 – HIA (Volume 9 of the EIS). More specifically, the HHRA has undertaken a quantitative assessment of the impacts of the Project on the health of the community due to changes in air quality. The quantification of health impacts has included the calculation of the increase in the number of cases for the relevant health effects evaluated (refer to Sections 4.4 and 4.5 of the HHRA). The change in the number of cases calculated was less than 0.2 per year which cannot be measured in any health data/statistics for the area. Therefore, it is not considered that the Project would have an increased patient load within the NSW health system or require compensation.

5.15.3 Air quality impacts on human health

Several submitters raised concerns about the air quality impacts on the human health as a result of the Project. The following issues were raised:

- Concerned about the health hazards of air quality impacts and the emission of diesel fumes associated with the project.
- Fine particulate matter from trucks is a major concern in regards to health.
- Concerned about high levels of $PM_{2.5}$ and PM_{10} on the health of residents and workers. The World Health Organisation likens PM impacts to asbestos impacts.
- Exposure to pollutants and particulate matter (PM) can contribute to, or exacerbate, respiratory and cardiovascular issues, including premature mortality and morbidity, in addition to increasing associated hospitalisations.
- Pollution and contamination from the Project is unacceptable. Next to the project the cancer risk will be 1000 in a million and it doesn't decrease until 1 mile away. Normal cancer risk is eight in a million. Will expose unnecessary risks from PM_{10} and $PM_{2.5}$.
- Long-term studies of workers exposed to mixtures of PAHs and other workplace chemicals have shown an increased risk of skin, lung, bladder and gastrointestinal cancers. These studies have also reported asthma-like symptoms, lung function abnormalities, chronic bronchitis and decreased immune function.

Submission(s)

117942, 118405, 119005, 118985. 118769, 118981, 117906, 118651, 118327, 118917 and 118959.

MIC response

The health effects of exposure to air pollutants relevant to the Project is addressed in the HHRA (EIS Volume 9) where impacts of exposure to diesel particulate matter, fine particulates and other air pollutants has been addressed using Australian guidance, current robust science and the site-specific aspects, including all the emission sources related to the Project. Ultrafine particulate exposure was also assessed in the HHRA. The relationships used in the HHRA (as outlined in Section 4.2 of the HHRA) are based on studies of changes in exposure to fine particulates (that include ultrafine particulates) in urban air (where the pollution is dominated by combustion sources that include fine and ultrafine emissions) and health effects in the population. As such, the quantitative assessment presented in the HHRA

addresses health effects associated with exposure to both fine and ultrafine emissions from combustion sources.

The existing health of the population in the Project area (based on the existing health data available from NSW Health) has been included in the calculations undertaken in the HHRA when evaluating the risk of health impacts from particulate exposures. The calculations presented in the HHRA show that the Project would not result in any significant impact on the existing health of the population.

The EIS demonstrates that the Moorebank Intermodal Terminal will have some impacts on the local community and environment, including diesel emissions which will be addressed through a raft of mitigation measures including locomotive standards to reduce emissions. The residual impact on the local community and environment – accounting for mitigation measures – will be small and manageable. The concentration of air borne pollutants in the areas will be well with the established air quality guidelines, including for particulate matter (PM_{10} and $PM_{2.5}$).

As noted in Section 4.2.2 of the HHRA (EIS Volume 6), the World Health Organisation cancer unit risk value (mean value of 3.4 x 10–5 per $\mu g/m^3$) has been used to evaluate potential excess lifetime risks associated with incremental impacts from diesel particulate matter exposures. The HHRA notes that while there is no guidance on what level of risk is considered to be acceptable in the community, a level of 10–4 for increased risk (one chance in 10,000) has generally been adopted by health authorities as a point where risk is considered to be unacceptable (i.e. consistent with established practice and regulation). An increased risk level of between negligible (10–6 (one chance in a million)) and unacceptable (10–4) is therefore considered tolerable or even acceptable. Findings from the HHRA indicate the risks associated with the exposure to diesel particulate matter are negligible for some health indictors with the remainder within the range of tolerable risks (refer to Section 4.5.3 of the HHRA).

The HHRA considered short-term/acute and long-term/chronic exposures and health risks to workers within the intermodal terminal. As concluded in section 5 of the HHRA (EIS Volume 9), the risks are considered to be low which is consistent with established practice and regulation. In addition, Chapter 29 – *Environmental risk* of the EIS, notes the key risks/hazards associated with the Project during construction and operation includes gas leaks, loss of containment of flammable/combustible liquids, vehicle accidents, flooding and inappropriate waste disposal. A number of design and management measures are proposed to minimise risk to levels consistent with established practice and regulation (refer to Section 14.7 of Chapter 14 – *Hazards and risks*).

5.16 Cumulative impacts

5.16.1 Adequacy of cumulative assessment

Five submitters were concerned that the cumulative impacts of the MIC and SIMTA proposals have not been adequately addressed.

Submission(s)

118405, 119077, 118981, 119239 and 119237.

MIC response

Section 7.10 of Chapter 7 – *Proposed amendments to the development* of the Response to Submissions report presents four cumulative scenarios to assess the impact of both the Moorebank and SIMTA projects proceeding. These four assessment scenarios were discussed and agreed with NSW Department of Planning and Environment prior to the commencement of the assessment. MIC considers that a thorough assessment of cumulative impacts has been conducted and further assessment for the concept approval stage is not required.

The assessment of cumulative impacts will be further addressed in future Stage 2 SSD applications.

5.16.2 Health impacts due to sleep disturbance

Two submitters were concerned about increased noise at night leading to sleep disturbance, especially near Casula.

Submission(s)

118769 and 118989.

MIC response

MIC acknowledges that the community is concerned about the impacts of sleep disturbance and the potential health impacts this may cause. As discussed in Section 12.5 of Chapter 12 – *Noise and vibration* of the EIS and revised for the Response to Submissions report (Appendix F), operations on the main intermodal terminal site were predicted to comply with sleep disturbance objectives at the nearest receptors in Casula, Wattle Grove and Glenfield. Furthermore, IMEX and interstate train movements on the rail access connection to the SSFL are predicted to comply with sleep disturbance objectives for rail freight operations in NSW.

The design and construction of the Project will include measures to reduce and control night-time noise levels and specifically control noise from short lived or high noise events which may otherwise have the potential to disturb sleep (refer to section 12.4 of Chapter 12 – *Noise and vibration).*

5.17 General

In addition to the issues discussed in the sections above, a number of community submissions raised concerns about impacts of the Project. These are summarised in Table 5.2 below.

Table 5.3 Summary of general issues raised and MIC response

Issue	MIC response	Submission number(s)
The recommendation of the southbound rail connection is not clear from the outset.	Since the exhibition of the EIS and the appointment of SIMTA as the developer and operator of the Moorebank Intermodal Terminal, the southern rail access option has been chosen as the preferred rail access option. It was not the intent of the EIS to compare and contrast the three presented rail access options, rather the intent was to present the impacts of all three options. The southern rail access option was selected by SIMTA as the preferred option as it aligned with the concept plans produced for the combined precinct masterplan and from a rail efficiency perceptive.	119042
A compensation package will be completely inadequate to address the impacts this proposal will have on the area.	The Moorebank Intermodal Citizens' Jury was asked to develop a package of measures to benefit people living near the future Moorebank Intermodal Terminal. The proposed local benefits package recognises that the terminal will benefit the wider community through billions of dollars in productivity gains and lower traffic growth in parts of Sydney. The public benefits package is not intended to address the impact of the terminal, which will be addressed through mitigation measures (e.g. local intersection upgrades, noise walls and locomotive standards to reduce noise and diesel emissions). Appropriately, the value of these mitigation	118981

Issue	MIC response	Submission number(s)
	measures will go far beyond the funding that MIC allocates to local public benefit measures. MIC decided to deliver a public benefit package in recognition that people living near the terminal will experience most of its impacts but receive the same share of the terminal's broader benefits as other parts of Sydney. Because of MIC's decision, people living near the terminal will receive: • a share of the broader benefits of the terminal – e.g. jobs growth, reduced congestion growth, increased productivity; and • all of the benefit of the MIC's contribution to local programs and services – i.e. the public benefits package. The public benefits package was chosen by members of the community via a Citizen's Jury. The public benefits package will include a TAFE scholarships program (targeting local business opportunities) and a healthy lifestyles package (including exercise equipment for local parks and a preventative health training program).	
General concerns regarding the pollution from the intermodal terminal.	General concerns regarding air quality pollution and noise impacts have been addressed in section 5.10 and section 5.7 of this report. The health and wellbeing of the community in terms of protection from pollution have been addressed in the Health Impact Assessment (HIA) undertaken for the EIS (EIS Volume 9). The HIA considered both the project benefits and the impacts to the local community. Where an unacceptable impact was identified, management and mitigation measures have been recommended to minimise the impact. The HIA considered a number of different populations in the community, including infants, children, site workers and the elderly.	119025 and 119029.
Along our (ABB) adjoining properties what buildings/infrastructure will be erected and what trading hours will it be operational.	The current access arrangements will be maintained for ABB throughout the construction and operations of the terminal. During detailed design if any access is to be modified this will be done in conjunction with ABB and be subject to planning approvals.	118803