

# SIMTA Intermodal Terminal Project – Stage 1

Response to Submission –  
Peer Review

Project Number: 8201511201-03/Report 001 Ver 1



Prepared for  
Liverpool City Council

November 2015

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## Document Information

Prepared for: Liverpool City Council  
Project Name: Response to Submissions  
– Peer Review  
File Reference: Report 001 Ver 1 SIMTA  
Stg 1 RtS Review Master  
(Final).docx  
Job Reference: 8201511201-03/Report  
001 Ver 0  
Date: 26 November 2015

Version Number: 1

Effective Date: November 2015

Date Approved: November 2015

## Document History

Version	Effective Date	Description of Revision	Prepared by:	Reviewed by:
0	13/11/2015	Draft	Daniel Thompson	Alex Larance
1	26/11/2015	Final Issue	Daniel Thompson	Alex Larance

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## Executive Summary

The Sydney Intermodal Terminal Alliance (SIMTA) plan to construct and operate an intermodal freight terminal (IMT) and associated infrastructure at Moorebank, NSW. SIMTA obtained Concept Approval (MP 10\_0193) under Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act) on 29 September, 2014. The Concept Approval does not permit construction and operation subject to Schedule 2, Condition 1.5 of the Approval, with further approvals required under Division 4.1 of the EP&A Act. Consequently, an Environmental Impact Statement (EIS) for the proposed IMT, which addresses the assessment requirements of the EP&A Act has been prepared and lodged with NSW Department Planning and Environment (DP&E) for assessment and determination.

The site is located within the Liverpool Local Government Area and was previously Commonwealth land operating as the Defence National Storage and Distribution Centre (DNSDC). The site is now owned by SIMTA with surrounding land primarily Commonwealth owned. The proposed rail spur passes through a number of different public and privately owned parcels. The site is adjacent to Moorebank Avenue to the west with the Georges River beyond, with the residential suburb of Wattle Grove to the east.

The EIS was placed on public exhibition from 28 May to 26 June 2015 (note an extension of the date for submissions was granted to 3 July 2015). Liverpool City Council (Council) and its community have raised significant concerns about the scale of impacts associated with the proposal and have raised their strongest objection to the development scheme. Cardno (NSW/ACT) Pty Ltd (Cardno) was engaged to prepare a submission on behalf of and in conjunction with Council to the public exhibition period.

The review found that environmental impacts are extensive and primarily concern Moorebank, surrounding suburbs and associated transit corridors. Key issues identified by Cardno's submission included:

- > **Many of the impacts previously identified in the Council review of the EIS and wider submission comments are yet to be adequately assessed and mitigated to an acceptable level.**
- > **Traffic congestion and associated impacts on amenity due to additional vehicles on the road network. These impacts are anticipated to be greater than predicated in the EIS due to the assumptions used**
- > **Noise and Air Quality impacts on human health during construction and operations, which are likely to be greater than identified in the EIS due to the traffic assumptions used**
- > **Impacts from the rail alignment on the function of the Southern Sydney Freight Line, biodiversity, visual amenity, heritage and existing development**
- > **Hazard and risk both within the site and beyond the site boundary associated with the transport and distribution network.**
- > **Rigorous commitments to ongoing air quality and noise/vibration impact monitoring programs for both the construction and operational phases of the project to ensure the environment and community are protected from potential impacts have not been made.**
- > **The EPA (with support and commitment from State and Federal Government agencies) is believed to be the most appropriate regulatory authority for the proposed development and associated activities should approval be granted as Council has concerns they are not equipped with the resources to oversee and regulate a facility of this size and operational capacity.**

Subsequently the proponent has prepared a Response to Submission (RtS) report which is intended to address the submitted comments in detail and identify any resulting changes to the project. This was released in October 2015 and the project has proceeded to the assessment phase with DPE. Council and its community remain concerned about the proposal. Cardno (NSW/ACT) Pty Ltd (Cardno) has again been engaged, this time to undertake a review of the RtS to assist the Planning Assessment Commission (PAC) reach a final determination.

Many of the impacts previously identified in Cardno's review of the project EIS are yet to be adequately assessed and managed by the proponent, with the potential, detail and commitment to mitigate these

impacts to an acceptable level questioned. Impacts as diverse as noise, traffic, flooding, biodiversity and heritage are not mitigated to a degree that would allow a determining authority to make a decision on such a significant development with confidence. Concerns have been raised by multiple state agencies relating to specific impacts and the proponent has largely resisted further mitigation measures to resolve these concerns. Future responsibility for infrastructure is uncertain given that the Commonwealth may not retain ownership of road and lands in the precinct.

Cumulative impacts remain insufficiently addressed despite similar comments from a range of agencies and the community. It remains essential that a precinct-wide master planning process be undertaken as previously recommended by the PAC in its assessment of the SIMTA Concept Plan.

Consequently, it is recommended that SIMTA Stage 1 should not proceed in its current state.

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# 1 Introduction

This section introduces the submission and provides a background to the proposal.

The Sydney Intermodal Terminal Alliance (SIMTA), comprising a consortium of Qube Holdings and Aurizon, plan to construct and operate of an intermodal freight terminal (IMT) and associated infrastructure at Moorebank, NSW. An Environmental Impact Statement (EIS) for the proposed IMT, which addresses the assessment requirements of Part 4, Division 4.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) was prepared and lodged with NSW Planning and Environment (DP&E) for assessment and determination.

The site located within the Liverpool Local Government Area was previously Commonwealth land operating as the Defence National Storage and Distribution Centre (DNSDC). The site is now owned by SIMTA with surrounding land primarily Commonwealth owned. The proposed rail spur passes through a number of different public and privately owned parcels. The site is adjacent to Moorebank Avenue to the west with the Georges River beyond, with the residential suburb of Wattle Grove to the east.

The EIS was placed on public exhibition from 28 May to 26 June 2015. Liverpool City Council (Council) and its community have raised significant concerns about the scale of impacts associated with the proposal and object strongly to the development scheme. Council provided a submission to the EIS during the public exhibition period identifying the key environmental issues and community concerns.

A Response to Submissions (RtS) document has subsequently been prepared by Hyder (September, 2015) to respond to the submissions raised during the EIS exhibition period. Cardno (NSW/ACT) Pty Ltd (Cardno) has been engaged by Council to review and respond to the revised scheme and comments within the RtS documents. This submission reviews the RtS document and responds to the clarifications and changes to the proposal. Rather than reiterating all the comments previously made in the Cardno (2015) submission to the SIMTA EIS we note that those comments remain unless explicitly stated otherwise, with this submission building on those comments.

## 1.1 Background

SIMTA obtained Concept Approval (MP 10\_0193) as a transitional project under Part 3A of the EP&A Act. The Concept Approval does not permit construction and operation subject to Schedule 2, Condition 1.5 of the Approval, with further approvals being required under Division 4.1 of the EP&A Act. The project is identified as State Significant Development (SSD) subject to *State Environmental Planning Policy (State and Regional Development) 2011* (State and Regional SEPP) with an EIS informed by Secretaries Environmental Assessment Requirements (SEARs).

The SIMTA IMT is proposed to accommodate a container freight volume of 250,000 Twenty-foot Equivalent Units (TEUs) per annum. The 250,000 TEU capacity is the maximum permitted freight road volume subject to the Concept Approval. The IMT comprises a rail spur linking the site to the Southern Sydney Freight Line (SSFL), with four sidings on site serviced by trucks via Moorebank Avenue. The SIMTA project is proposed to service Port Botany, with freight received by rail and truck prior to distribution (refer to **Figure 1-1** for the Greater Sydney Regional context).

The RtS states that the proposal has been amended to respond to submissions received by government agencies and to reduce environmental impacts. The amendment comprises the realignment of the rail link within the land identified as the 'Southern Boot Land', which comprises the Commonwealth owned land (Lot 4, DP 1197707) to the south of the SIMTA site.

The SIMTA site borders are defined by:

- > Vegetated Commonwealth land and the residential suburb of Wattle Grove to the east
- > The heavily vegetated Holsworthy Military Reserve, with the East Hills Line Railway beyond to the south

- > DNSDC to the north and north east with residential and industrial areas of Moorebank beyond
- > Moorebank Avenue to the west, with the School of Military Engineering (SME) beyond.

The SME site is currently being considered for a second IMT by the Commonwealth Moorebank Intermodal Company (MIC). The MIC proposal for a 1.05 million capacity TEU per annum IMT is currently being assessed (by DP&E) following the public exhibition of a response to submissions report. **Figure 1-1** shows the two sites in the context of other IMT's within the Greater Sydney Region, with **Figure 1-2** illustrating the proximity of the two sites. A media release dated 4 June 2015 confirmed that the Commonwealth Government approved the integrated development and operation of the two IMT precincts, with the MIC EIS identifying a combined approach, while noting that SIMTA would continue to pursue individual planning approvals. However, the SIMTA scheme identified within the EIS is presented as a standalone proposal serviced by both road and rail with no connection to the MIC site.

The physical proximity and potential common operation of both Moorebank IMT sites suggests that there may be a shared rail link to the SSFL and associated infrastructure. However, this approach differs to the current SIMTA proposal, which identifies a separate connection to the rail network.

It is acknowledged that the scope of this review is focused on SIMTA's proposal. However, given the proximity of the two IMT's, there is the potential for large scale and wide ranging cumulative environmental impacts. Consequently, such impacts and opportunities for further integration of the proposals are examined within this submission. The consideration of cumulative impacts would ensure the most efficient and coordinated use of the land, while gaining a clear understanding of the potential impacts of both projects on the Liverpool community and Council assets.

## 1.2 Review Objectives

This review has been undertaken to address the following questions:

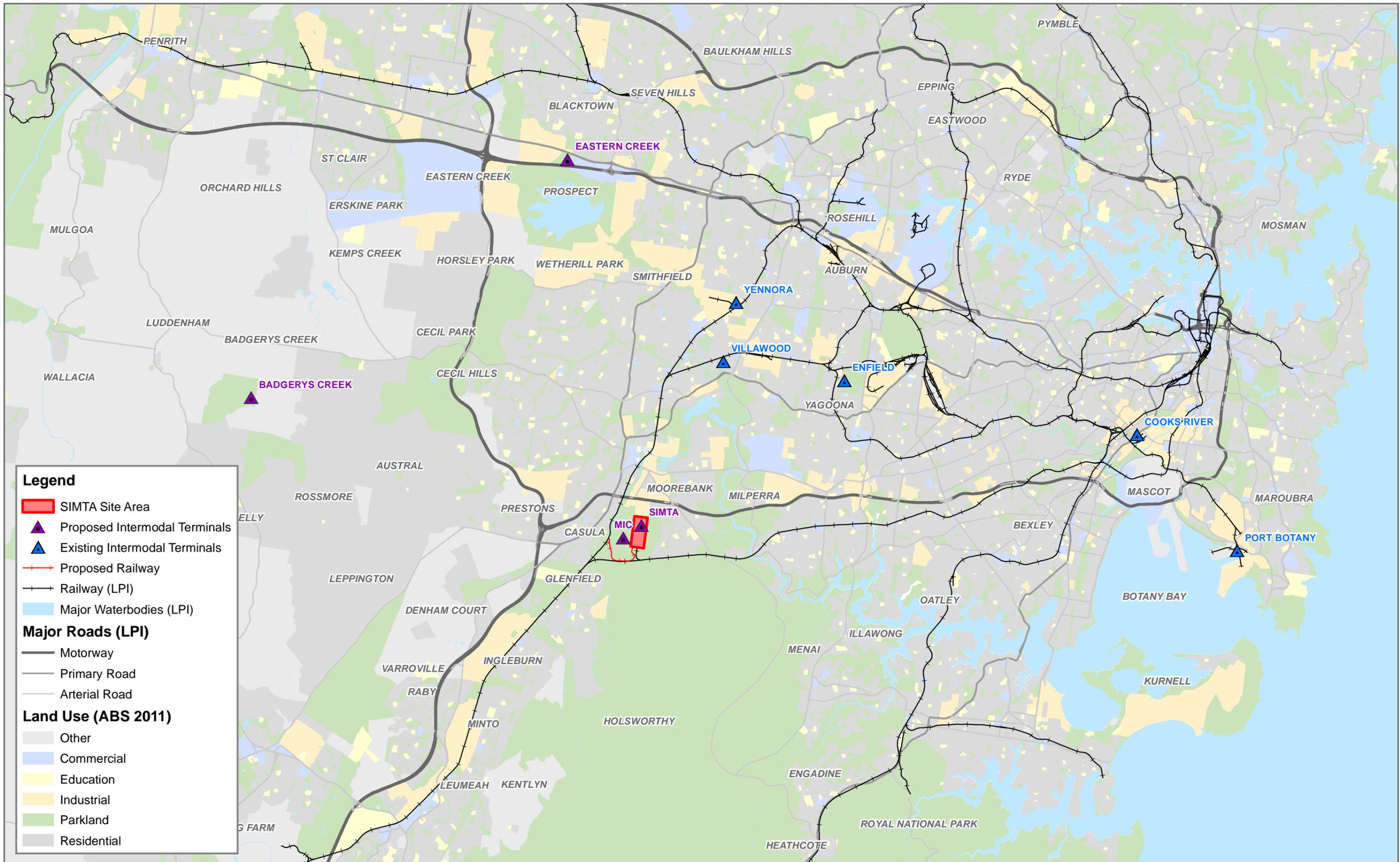
- > Does the RtS contain adequate supplementary investigations and details to address the proposal's deficiencies as identified by the submissions?
- > Does the EIS contain adequate investigations and details of the proposed development to inform a valid assessment of the proposal?
- > Does the proposal comply with the statutory planning requirements; the Concept Approval (MP10\_0193) Schedule 3 Future Assessment Requirements and Appendix 1 Statement of Commitments; and the NSW DP&E Secretaries Environmental Assessment Requirements (SEARs)?
- > Do the technical investigations comply with best practice guidelines? Are they based on appropriate assumptions and have they drawn valid conclusions?
- > What are the impacts on Liverpool's community and Council's assets? Are the proposed mitigation measures sufficient to address the impacts?
- > What are the cumulative impacts of two IMTs whether operating as one integrated entity or independently? Are they justified and do they represent the most efficient and orderly use of the land in accordance with the objectives of the Environmental Planning and Assessment Act 1979.
- > What are appropriate commitments and conditions of determination to mitigate and manage impacts, should the proposal receive approval?

## 1.3 Methodology

The tasks identified to meet the project objectives in **Section 1.2** are:

- > Re-establish the project team comprising the relevant specialists that undertook the peer review of the SIMTA Stage 1 EIS.
- > Identify the changes to the proposal identified within the RtS

- > Review the response to submissions from Council and other relevant submitters and the revised proposal as identified by the RtS in the context of the NSW DP&E SEARs and the Concept Approval (MP10\_0193) Schedule 3 Future Assessment Requirements and Appendix 1 Statement of Commitments
- > Identify the implications of the response to submissions and revisions to the proposal on the surrounds, with particular attention given to impacts on the community and Council assets and in consideration of the proposed MIC development on the adjacent site to the west
- > Identify opportunities and costs associated with the revised proposal as identified within the RtS and subsequently those mitigation and management measures required to address potential impacts
- > Identify commitments and prepare draft conditions of determination to assist the determining authority should the proposal be considered for approval.



**Legend**

- SIMTA Site Area
- ▲ Proposed Intermodal Terminals
- ▲ Existing Intermodal Terminals
- +— Proposed Railway
- +— Railway (LPI)
- Major Waterbodies (LPI)

**Major Roads (LPI)**

- Motorway
- Primary Road
- Arterial Road

**Land Use (ABS 2011)**

- Other
- Commercial
- Education
- Industrial
- Parkland
- Residential

# Location Plan : Greater Sydney Context

SIMTA STAGE 1 PROPOSAL PEER REVIEW

FIGURE 1-1  
1:160,000 Scale at A3

Kilometres

0 2 4 6 8



**Cardno**

Map Produced by Cardno NSW/ACT (WOL)  
 Date: 2015-06-24  
 Coordinate System: GDA 1994 MGA Zone 56  
 Project: 82015112  
 Map: 82015112-GS-002-LocationPlan.mxd 01



**Legend**

- SIMTA Stage 1 Boundary
- SIMTA Site Area
- SIMTA Rail Corridor
- MIC Site Area
- MIC Southern Rail Access Option
- Railway (LPI)
- Major Watercourses (LPI)

**Major Roads (LPI)**

- Motorway
- Primary Road
- Arterial Road

## 1.4 Project Team

Cardno has established the same project team that previously undertook the Stage 1 EIS review placed on public exhibition by NSW DP&E. The project team includes the following experts:

- >Traffic and Transport
- >Rail Infrastructure
- >Hazard and Risk
- >Stormwater and Flooding
- >Ecology
- >Heritage
- >Air
- >Noise
- >Environmental Risks
- >Economics
- >Social Planning
- >Infrastructure
- >Civil Engineering
- >Rail Infrastructure

## 1.5 Structure of the Report

This submission has been arranged as follows:

- > **Chapter 2 – identifies** the key issues associated with the proposal that are applicable across a range of environmental aspects, providing a basis for the subsequent aspect specific reviews undertaken in Chapters 3, 4 and 5.
- > **Chapter 3** – reviews the responses provided to the technical assessments. Where changes to the proposal have been made in the RtS, these changes have been reviewed, with a revised review of the potential impact of the scheme, whether they be positive, negative or no change, with information gaps, mitigation and management measures identified.
- > **Chapter 4** – summarises and concludes the review to establish the potential outcome for Council and the community, as well as providing recommendations for the next step in the assessment process.

## 1.6 Limitations

This assessment is based on secondary information (i.e. already readily available) gathered over a limited period, and is therefore subject to limitations. This information has not been individually verified and is therefore subject to the limitations of its original purpose.

*This report does not constitute an alternative environmental assessment of the proposal or propose a determination of the application. Rather, it is a peer review to determine if the application has addressed all statutory and legal requirements, and appropriately considered the merits and justifications for the project. This report is intended to guide further discussion with State agencies, Councils, relevant stakeholders, the community and the applicant.*

## 2 Reoccurring Themes

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This section identifies the key reoccurring themes associated with the proposal that traverse a number of environmental aspects.

A range of issues were identified during the review, with the key issues being:

- > Traffic and Transport
- > Noise
- > Air Quality
- > Hazard and Risk
- > Human Health impacts associated with the above.

A review of these issues, alongside those lesser, but still potentially significant issues has been detailed in **Section 3** of this document. During the assessment of these issues a number of reoccurring themes were identified as discussed below. These reoccurring themes either created significant impacts individually, or reoccurred throughout the review resulting in potentially cumulative impacts. These reoccurring themes have been identified below and require full consideration and review due to their far reaching impacts and potential to affect the legitimacy of the proposal.

### 2.1 Cumulative Effects

The proposal is located on the eastern side of Moorebank Avenue, with the Commonwealth owned SME immediately to the west across Moorebank Avenue. The SME site is proposed to be developed by MIC, with a concept application currently being assessed by DP&E to develop the land for an IMT with an annual throughput of 1.55 million TEUs per annum.

The MIC RtS (Parsons Brinkerhoff, 2015) identifies that agreement has been reached between MIC and SIMTA for an integrated precinct wide IMT, which is also acknowledged by the Commonwealth Government press release of 4 June 2015. However, the SIMTA RtS identifies the projects as two separate entities, with no interaction or pooling of resources and infrastructure. The inconsistency and lack of certainty does not provide confidence in the level of assessment both for the SIMTA site as a single entity, as well as cumulatively. Council previously requested that a master planned approach to the development of the IMT's be considered that looks to quantify resource use and infrastructure provision, along with environmental impacts, prior to examining strategies to minimise these impacts.

The RtS does not address the request to combine the two sites through a master planned approach, or acknowledge that the proposal should be developed and assessed to establish whether an IMT of this scale at Moorebank is reasonable. Consequently, the cumulative impacts of the SIMTA site are not clearly articulated and an assessment of whether the significant environmental impacts can be mitigated preferably on land under the proponents control. Based on the information contained within the EIS, it does not appear that this is currently the case.

The Council submission to the EIS requested that the relationship between SIMTA and MIC be acknowledged and a coordinated master planned approach be developed. The RtS does not acknowledge the agreement or identify that a master planned approach was recommended by submissions.

The RtS is reliant on the cumulative scenario identified within the EIS, which comprises SIMTA operating at 250,000 TEU's per annum and MIC operating as per the early works package, which comprises a zero TEU throughput. The Glenfield Recycling Facility is also considered, although quantitative assessment is not provided. A true cumulative assessment would consider the MIC site's operational impacts in conjunction with SIMTA operations, alongside development in the local and regional area.

The RtS does not provide additional cumulative assessment, stating that cumulative impacts were assessed in the EIS, which *"did not identify any additional impacts or exceedances of criteria and no additional mitigation measures, to those identified for the Proposal alone, were identified as being required"* (Hyder,

2015). The cumulative assessment contained within the EIS was confined to subjective commentary, rather than quantifiable analysis. The EIS stated that cumulative impacts were considered based on a total TEU catchment demand of 1 million TEUs. No further assessment was then provided for this operating scenario. This assumption of cumulative throughput is also considered deficient, as SIMTA and MIC have a potential combined throughput of up to 2.05 million TEUs based on a total staged SIMTA throughput of up to 500,000 TEU, with MIC proposing a throughput of 1.55 million TEUs per annum. Consequently, commercial reality would dictate that the IMTs maximise throughput to reach design capacity, rather than stand idle once the ultimate catchment demand identified by the EIS of 1 million TEUs is reached. The limited demand is counter to the predicted doubling of growth in container freight between 2030 and 2040 (*NSW Freight and Ports Strategy*, NSW Government, 2013), with Port Kembla a potential container port location due to the constraints on Port Botany and Newcastle, with the need for more IMT capacity in or just outside South West Sydney, such as Moorebank to transfer cargo from rail to road.

Comprehensive and realistic cumulative assessments that consider the impacts of both IMTs operating simultaneously, rather than limited to 250,000 TEUs at SIMTA and the early works package at MIC is required for noise, visual, traffic, air quality, GHG, socio economic and health. The simultaneous operation of the IMT's at full capacity is likely to have wide reaching environmental and social impacts beyond the worst case throughput identified in the EIS. A plan for the coordinated infrastructure works with staging triggered by cumulative freight growth and traffic impact is required for the consolidated SIMTA and MIC development.

## 2.2 Submissions Response

Section 89G(e) of the EP&A Act requires applicants to respond to submissions made to SSD development applications, with Section 89H of the EP&A Act identifying that Section 79C applies. Section 79C identifies the matters to be considered by a consent authority in the determination of applications. The matters to be considered include:

- “(d) any submissions made in accordance with this Act or the regulations,*
- (e) the public interest.”*

The requirement for the applicant to respond to submissions is reiterated by Clause 85A(2) of the EP&A Regulation, which states:

*“The Secretary may, by notice in writing, require the applicant to provide a written response to such issues raised in those submissions as the Secretary considers necessary.”*

The RtS document has been prepared to respond to agency and community submissions, with the document identifying the proposed changes to the proposal and responding to submission comments. The RtS notes at Section 6 that the proposal has been modified to respond to submissions by the government agencies and also to reduce overall environmental impacts. Realignment of the rail link from that identified within the EIS is noted as the amendment to the proposal.

Section 89H of the EP&A Act requires applicants to respond to ‘any submissions made’. The RtS specifically states that *“The proposal has been amended...to respond to submissions provided by the government agencies...”* (p xiii, Hyder, 2015). The approach taken by the RtS appears to exclude non-agency, public submissions from consideration and does not therefore fully address the requirements of Section 89H.

The limited consideration of submissions both from government agencies and the community is further reinforced by a review of Sections 4 and 5 of the RtS. These sections have been addressed in **Section 3** of this review and illustrates that the extent of the RtS response is very limited, with the submission comments previously made by Council responded to on a selective basis. Consequently, a large number of the comments have not been addressed and remain outstanding. Examples from the Council submission relate to the potential for double handling of freight due to the lack of warehousing in the Stage 1 proposal; and the need for a coordinated master planned approach to the SIMTA/MIC development. These issues have major

implications for traffic, noise, air quality and human health as discussed at **Sections 2.1 and 2.3**. However, it has not been addressed within the RtS.

## 2.3 Traffic

A number of the assumptions used to inform the environmental assessments are either not identified or not considered rigorous as previously identified by the Council submission. The proposal's traffic assessment is a key consideration with the potential to create impacts across a number of environmental aspects.

The Stage 1 proposal does not include warehousing, which is consistent with the Concept Plan. Consequently, unless containers are packed for a sole purpose they would need to be trucked to a secondary site that has warehousing to allow de-stuffing prior to being transferred to its destination. Empty containers would also need to be returned to the site. The lack of warehousing would result in the double handling of freight, with the additional trips diminishing the benefits of the increased use of rail transport to distribute freight from Port Botany.

The additional movements would impact on road congestion in proximity to the site, noise, air quality, visual amenity and subsequently human health. If warehousing facilities were provided on the SIMTA site, it is possible that these truck movements could be largely avoided. The secondary traffic movements from the SIMTA site should be incorporated into the TIA modelling and assessed to establish the level of impact associated with the proposal not providing warehousing on site.

The absence of a warehousing component as part of Stage 1 of SIMTA could also lead to the growth of warehousing facilities elsewhere in Moorebank and the Liverpool LGA such as the existing warehouses on Governor Macquarie Drive and Hoxton Park Road. This would result in the increasing dispersion of container traffic from SIMTA to surrounding warehouses and empty container storage areas which would invalidate the distribution assumptions of the SIMTA Stage 1 TIA. This in turn would increase the traffic impact and maintenance burden on local roads such as Nuwarra Road, Anzac Road and Governor Macquarie Drive. These roads also serve residential areas and additional freight traffic would have negative local effects on air quality and noise.

Similarly the RtS has not addressed the sensitivity of construction traffic volumes to the fill balance of the site. If contamination issues or structural deficiencies in the onsite fill prevent the re-use of fill for construction and environmental restoration. This could then result in a significant increase in the quantity of fill brought onto the site via road with a corresponding increase in road traffic.

The long term suitability of the Moorebank precinct for an intermodal terminal relies on the intersection of rail and road freight capacity. Parsons Brinckerhoff has conducted longer term modelling of the local road network for the MIC proposal. They identified capacity shortfalls and hyper-congested conditions at almost all intersections and roads in the precinct. Under such conditions the SIMTA Stage 1 IMT would not be able to operate and should not proceed. Given these findings, it is prudent to delay any SIMTA Stage 1 project determination until the RMS can complete the LMARI sub-regional road network modelling. This modelling will establish whether Moorebank is a suitable location for an intermodal terminal and the magnitude of the road upgrades required to facilitate it. The viability of any road upgrades in the region is questionable given that air quality and other environmental constraints place limits on the total volume of road traffic which could safely be accommodated.

Consequently, SIMTA's RtS has not resolved the major traffic issues raised in the previous Council submission.

## 2.4 Local Infrastructure Contributions

A major shortcoming of the Stage 1 SIMTA Project Application that was identified in the previous Council submission, and still remains, is the lack of commitment by the proponent towards local infrastructure contributions. Both the future assessment requirements of the Concept Plan approval and the SEARs required the consideration of the relevant Council's Developer Contributions Plan. It is clear that both of these requirements would necessitate either the payment of a monetary contribution pursuant to Section 94 or Section 94A, a works in kind arrangement or a combination of both under in accordance with a VPA.

However, the RtS document indicates that the proponent intends to avoid this requirement, stating “local infrastructure contributions are not applicable to the SIMTA Project”.

It is noted that under the current Section 94 Plan, the SIMTA site falls under the “Established Areas”, with only infill residential development attracting developer contributions. However, given the scale, nature and complexities associated with the project, it is Council’s expectation and preference that a VPA would be entered into between SIMTA and Council given the project’s impacts on local infrastructure.

A recent resolution by Council noted that the current Section 94 Plan for the “Established Areas” has left Council with a “limited ability to forward fund assets, and gaps in infrastructure provision. Council needs to invest in transport networks and community facilities which are being adequately funded by the existing scheme”. As a result, a motion was unanimously carried to seek Ministerial Approval for a Section 94A scheme for the “Established Areas” of the Liverpool LGA. Under the proposed 94A scheme, the following developer contributions would be applicable to any development within “established areas” (where the subject site lies):

- > Capital Investment Value \$0 - <\$100,000 – 0% levy
- > Capital Investment Value \$100,000 - <\$200,000 – 0.5% levy
- > Capital Investment Value >\$200,000 – 2% levy

***Therefore, under the proposed scheme under consideration by the Minister, the proposed development would be subject to a 2% levy of its \$142,500,000 Capital Investment Value, requiring a contribution amount of \$2,850,000.***

These funds would therefore be able to be applied throughout the Liverpool LGA and the surrounds of the SIMTA subject site. The funds would have benefits for the wider LGA to ensure the LGA wide impacts of the development on local road infrastructure can be appropriately managed in the lifecycle of the development.

Conversely, if the Minister only approves a 1% levy under a 94A scheme, the development would be subject to pay a contribution amount of \$1,425,000. In either case, this amount will help to support the future provision and maintenance of local infrastructure in the Liverpool LGA.

It is recommended that one of two options is chosen by the proponent prior to any determination to address this shortcoming. These include:

- > A VPA between SIMTA and Liverpool City Council is prepared to ensure a fair and equitable outcome regarding local infrastructure contributions is achieved. This may involve the payment of a monetary contribution using Council’s recent resolution as a basis, the provision of works in kind, or a combination of both. Liverpool City Council has identified that monetary contributions could cater for the long term maintenance or short term upgrades to the transport network, with road infrastructure management examples including the need to preclude heavy vehicle traffic on Nuwarra Road and Governor Macquarie Drive.
- > The PAC to impose a condition under Section 94A of the EP&A Act, in accordance with the provisions listed at Clause 94B (2) of the EP&A Act. This condition may result in a 2% levy being enforced in accordance with Council’s recent resolution for the proposed Section 94A Plan, or a 1% levy in accordance with the maximum levy allows in accordance with Clause 25K (1)(a)(iii) of the EP&A Act.

Overall, the intention of the proponent to not avoid having to pay a levy or contribute to local infrastructure is a series concern that requires immediate action. Left unchecked, it will set an undesirable precedent.

## 2.5 Commitments

The RtS Section 8 identifies revised mitigation measures in response to the submissions to the EIS. The commitments identified within the RtS include caveats that create uncertainty as to whether the measures will be implemented and the effectiveness of the measures should they be implemented.

Examples include the RtS commitment to prepare a GHG Management Plan prior to construction. However, the commitments 16A and 16B state that measures identified within the GHG and Climate Change

Assessment would be “*reviewed and considered where appropriate for incorporation*” into either the CEMP or OEMP. The identified measures are caveated by comments including ‘where possible’, or ‘where practicable’, which further add to the uncertainty.

Rail wheel squeal has been identified as a noise issue on the tight curve of the rail alignment. The additional assessment undertaken to inform the RtS was carried out in accordance with EPA requirements. However, the RtS report states, “It is noted that the occurrence of rail squeal is difficult to predict.” The difficulty predicting and mitigation the impacts of rail squeal result in the potential for substantial impacts on surrounding sensitive receivers. Given the high potential for impact a rigorous commitment should be made to achieving a specific upper noise limit that would not impact on sensitive receivers at night. Without this commitment there are likely to be noise and subsequent human health impacts.

The lack of commitment to genuinely mitigate impacts is demonstrated by the modification to the approved Concept Plan seeking to remove all requirements for road infrastructure upgrades and an agreement with the service operator to modify the 901 bus route to better serve the proposal.

Removing the road infrastructure and public transport commitments from SIMTA Stage 1 could compromise the local transport network and public transport provision associated with both the SIMTA and MIC proposals. The proposed modification would effectively remove responsibility for infrastructure provision from the proponent.

## 3 Environmental Impact Assessment

This section reviews the RtS in the context of previously submitted comments to establish whether those comments have been adequately addressed.

### 3.1 Traffic and Transport

The proposed SIMTA RtS provides a response to the submissions made to the EIS in relation to the proposal's impacts on Traffic and Transport. This review considers information in the RtS Section 4.6 and *Appendix F-Traffic and Accessibility Supplementary Response Material* prepared by Hyder Consulting.

#### 3.1.1 Summary

The Table below summarises the outcome of the changes to the proposal identified by the RtS.

**Table 3-1 Adequacy of Response Summary**

Concept Approval Commitments	Secretaries Environmental Assessment Requirements	Liverpool City Council Assessment
The following commitments are not adequately addressed:	The following SEARS are not adequately addressed:	The following assessment recommendations are not adequately addressed:
<p><i>Mitigation measures to avoid any unacceptable impacts on regular bus services and school bus services operating on roads within the vicinity of the site and pedestrian and cyclist access.</i></p> <p><i>The Proponent commits to negotiating with the relevant agencies/authorities as required to facilitate the staged delivery of the public transport infrastructure in accordance with the Transport Accessibility Impact Assessment:</i></p> <ul style="list-style-type: none"> <li>• <i>Designing and constructing the central spine road and throughout the other site roads to accommodate buses, bus infrastructure and cyclist use for employees.</i></li> <li>• <i>Construction of a covered bus drop off/pick up facility within the site to encourage the use of buses for employees.</i></li> <li>• <i>Review and rationalisation of the locations of Route 901 bus stops in the vicinity of the site to match the proposed northern terminal entry location and enhance accessibility.</i></li> <li>• <i>Providing peak period and SIMTA shift work responsive express buses to/from the site and Liverpool Station via Moorebank Avenue and Newbridge Roads with frequency dependant on the development of the site.</i></li> <li>• <i>Providing peak period express buses to/from the site and Holsworthy rail station via Anzac Road, Wattle Grove Drive and Heathcote Road with frequency dependant on the development of the site.</i></li> <li>• <i>Consulting with relevant bus provider(s) regarding the potential to extend the</i></li> </ul>	<p>d) consider the constructability constraints of proposed upgrade(s) at key intersections, such as vehicle sweep paths, geometry and sight lines;</p> <p>e) ii. an assessment of construction traffic volumes (including spoil haulage/delivery of materials and equipment to the road corridor and ancillary facilities); and</p> <p>iii. potential impacts to the regional and local road network (including safety and level of service) and potential disruption to existing public transport services and access to properties and businesses.</p> <p>f) assess operational traffic and transport impacts to the local and regional road network, including:</p> <p>ii. traffic capacity of the road network and its ability to cater for predicted future growth and</p> <p>i) provide an updated Traffic Management and Accessibility Plan including:</p> <p>ii. public transport;</p> <p>iii. cyclist facilities; and</p>	<p>Background Traffic Growth and Intersection Performance</p> <ul style="list-style-type: none"> <li>• Trip Generation and Modelling Period</li> <li>• Absence of Warehousing</li> <li>• M5/Moorebank Avenue Intersection</li> <li>• M5 Weave Conflicts</li> <li>• Construction Phase Traffic Arrangements</li> <li>• Bulk Earthworks Traffic Estimates</li> <li>• Seeking Modification to Avoid VPA on 901 Bus Route</li> <li>• Public Transport or Shuttle Bus Services for Staff</li> <li>• Cyclist Facilities and Infrastructure</li> </ul>

Concept Approval Commitments	Secretaries Environmental Assessment Requirements	Liverpool City Council Assessment
<p><i>Route 901 bus through the site via the light vehicle road and increasing peak period bus.</i></p> <p><i>The Proponent shall encourage walking and cycling by the inclusion of appropriate facilities including under cover bike storage, showers and change facilities.</i></p>		

**3.1.2 Summary of Revisions/Clarifications**

The following key revisions have been made to the proposal in relation to Traffic and Transport:

- > Construction of the new rail alignment will require the temporary closure of Moorebank Avenue.

**3.1.3 Assessment**

The **Table 3-2** below contains the comments, clarifications/responses and references taken from the RtS document, with a further review comment to the RtS provided in the last column. The Table includes responses to the Council submission, along with key relevant responses from other submissions addressed in the RtS.

**Table 3-2 RtS Response Review (Traffic and Transport)**

Comment	Clarification/Response	Reference	Review Comment
<b>Council Submission Responses</b>			
<p>We understand that Roads and Maritime Services (RMS) propose to undertake strategic network modelling of the roads surrounding the SIMTA and MIC sites. This will provide an independent assessment of traffic impacts near the site and assess the need for major upgrades to road infrastructure at a subregional level. The SIMTA Traffic Assessment does not consider the broader network beyond the key intersections and roads which were identified in the SEARs. The SIMTA Stage 1 project cannot be adequately assessed until the results of the independent RMS traffic modelling are released and considered.</p>	<p>Roads and Maritime Services is currently undertaking a study titled Liverpool Moorebank Arterial Road Investigations (LMARI) mesoscopic model. The LMARI investigation area includes a much larger network, consisting of key corridors including the Hume Highway, M5 Motorway, M7 Motorway, Camden Valley Way, Newbridge Road, Heathcote Road, Moorebank Avenue and Hoxton Park Road. It is understood that the future years modelling outcome from the LMARI would not be available until mid-2016 at this point in time. The traffic modelling prepared for the Proposal is considered suitable to address the impact of the Proposal, without the need for incorporation of the LMARI mesoscopic model.</p>	N/A	<p>It is considered that the future modelling which has occurred strongly suggests the future road network around Moorebank will be severely capacity constrained as a result of background traffic growth.</p> <p>The longer term modelling undertaken for the MIC project (Parsons Brinckerhoff, 2015) has predicted long queues, very poor levels of service at key intersections, and poor performance on the M5 due to weave effects.</p> <p>The RMS strategic modelling is highly relevant to assessing the appropriateness of this site and precinct for an intermodal terminal. Consequently, it is requested that determination of Stage 1 of SIMTA be delayed until the RMS LMARI modelling is available.</p>
<p>The TIA only models traffic growth out to 2016. At this point the SIMTA modelling indicates that background traffic has already grown to cause poor intersection performance on Moorebank Avenue at Heathcote Road and Newbridge Road. As the poor intersection performance cannot be attributed to this proposal, the TIA suggests that the upgrade should be funded by RMS. No indication is provided that the works will be carried out in time to facilitate the operation the SIMTA project. Furthermore, the TIA does not acknowledge that the SIMTA traffic will provide a significant contribution to intersection heavy vehicle movements and expedite the timeframe to reach reduced LOS.</p>	<p>The Traffic and Transport Impact Assessment, included as Appendix L and summarised in Section 7 of the EIS, concluded that operational traffic impacts from the Proposal on the Moorebank Avenue / Newbridge Road and Moorebank Avenue / Heathcote Road intersections would be minor. Additional assessment has been undertaken to demonstrate the impact with and without the Stage 1 Proposal, should these intersections not be upgraded by Roads and Maritime. These results are presented in Appendix F of this RtS. The assessment has demonstrated that the Proposal would not impact the level of service to these intersections.</p> <p>As per the Concept Plan Approval, SIMTA commits to negotiating with the relevant agencies/ authorities regarding the funding apportionment of potential upgrade works.</p>	<p>Section 7 and Appendix L of the EIS.</p> <p>Section 4.4 and Appendix F of this RtS.</p> <p>Concept Plan Approval – Statement of Commitments</p>	<p>Noted, however concerns remain that medium and long term traffic forecasts for the precinct suggest it is unsuited to an intermodal terminal.</p> <p>Any determination of SIMTA Stage 1 should ensure that the proponent is legally required to mitigate the full extent of their impacts. This can only occur with consideration of the cumulative impact of the MIC proposal, the full SIMTA proposal and background traffic growth on the regional and local road network.</p> <p>A staged development plan for the precinct could then be developed with mitigation measures and upgrades triggered by empirical measurement of impacts and traffic</p>

Comment	Clarification/Response	Reference	Review Comment
<p><i>Traffic modelling conducted by Parsons Brinckerhoff for the updated MIC concept plan EIS (Parsons Brinckerhoff, 2015) states that background traffic growth to 2030 will result in almost all modelled intersections performing at LOS F with regards to queueing. This result suggests that numerous intersection and road capacity upgrades will be required to prevent the precinct road network becoming dysfunctional. The strategic value of the Moorebank precinct for a road-rail intermodal may be short lived due to the associated congestion and comprehensive, potentially unfeasible infrastructure upgrades associated.</i></p>			levels.
<p><i>It is understood that Section 2.3 shows an annual negative growth of 0.9% (2010-2014) on Moorebank Avenue south of Anzac Road. The TIA also indicates that the average annual growth for the last 12 years in the area is approximately 1.2%. The traffic results shown in Section 3.2, (Tables 3-2 and 3-3) indicate that based on commissioned traffic surveys between November and December 2014 the traffic volumes increase at the same location. The TIA does not clarify if the local negative growth or the precinct average positive growth rate was applied to the background traffic at the intersections assessed.</i></p>	<p>The Traffic and Accessibility Impact Assessment presented Section 7 and Appendix L of the EIS used an average positive traffic growth rate, which was applied to the intersection performance analysis. The assumptions are detailed in Sections 4.1 and 4.2 of Appendix C of the Traffic and Accessibility Impact Assessment, included as Appendix L of the EIS.</p>	Section 7 and Appendix L of the EIS	Noted.
<p><i>The traffic impact assessment (TIA) does not provide detailed simulation inputs and outputs associated with modelling the intersections. In a typical TIA, this information would be provided in a detailed appendix. For instance, signalised intersections performance is dependent on the phasing and timing assumptions. The detailed inputs and outputs would allow these simulations to be confirmed and tested independently so that predictions of</i></p>	<p>Appendix C of the Traffic and Accessibility Impact Assessment, included as Appendix L of the EIS and summarised in Section 7 of the EIS, includes information on the Paramics modelling that was used for the assessment. Detailed simulation inputs and outputs are consistent with the Roads and Maritime Services Traffic Modelling Guidelines. The phasing and timing data for signalised intersections are sourced from RMS and used in the modelling where required.</p> <p>As noted in Chapter 7 and Appendix L of the EIS, the model used for the Concept Plan Assessment was updated to reflect the 2014 traffic counts. The modelling results and data included within the updated Transport and</p>	Sections 7.2 and 7.3 and Appendix L of the EIS Concept Plan Approval	<p>Noted. However there is clear reason for concern given that the long term traffic modelling conducted by Parsons Brinckerhoff for the precinct on MIC's behalf, suggests that in the period to 2030 these intersections will become severely congested.</p> <p>The 2016 modelling horizon adopted by the SIMTA Stage 1 TIA assumes</p>

Comment	Clarification/Response	Reference	Review Comment
<p>future performance can be verified.</p> <p>The existing cycle time and phasing at signalised intersections does not appear to be taken into consideration in the modelling of future intersection performance. The TIA does not indicate if existing cycle time and phasing would be retained or modified. Future conditions on existing signalised intersections (Operational / Construction) are not clear. Signalised intersection details for future conditions are not shown (phasing and timing). It is not clear if cycle time has been optimised or altered.</p>	<p>Accessibility Impact Assessment, along with the information presented in the Transport and Accessibility Impact Assessment (Available: <a href="https://majorprojects.affinitylive.com/public/e7e7b46eb83">https://majorprojects.affinitylive.com/public/e7e7b46eb83</a>) should be adequate for any assessment requirements. Additionally, clarification on modelled data and results may be provided on a needs basis upon request to SIMTA.</p>		<p>that future years will be dealt with in subsequent SIMTA project applications or by modelling conducted for the concept plan. This is not considered adequate. A determination on SIMTA Stage 1 should not be made until the RMS LMARI modelling is completed.</p>
<p>The assumption that average intersection performance metrics are an adequate description of intersection performance cannot be verified. Detailed outputs including delays, queue lengths and degree of saturation are typically provided to assess whether the intersections are performing appropriately. Intersection timing and queue lengths must be considered so that they do not generate interactions between intersections. At present, SIMTA provides only average delay and Level of Service (LoS) ratings for the intersections. This could disguise acute problems related to particular traffic movements on the local network approach lanes for example.</p>	<p>Appendix B of the Traffic and Accessibility Impact Assessment, included as Appendix L of the EIS and summarised in Section 7 of the EIS, includes detailed outputs of the assessment, in accordance with the Roads and Maritime Services Traffic Modelling Guidelines. Intersection modelling and analysis indicated that the Proposal would not exceed the current capacity at the eight modelled intersections assessed in accordance with the SEARs. In addition, traffic modelling undertaken for the Concept Plan Approval also identified network capacity issues on State Roads, demonstrating that there are already issues within the local network.</p>	<p>Appendix L of the EIS Concept Plan Approval</p>	<p>Noted. Although as originally stated, queue lengths are not provided in Appendix B for most scenarios. Consequently, queues may form which interfere with other intersections. Queueing issues are a key problem identified by the longer term traffic modelling undertaken by Parsons Brinckerhoff on behalf of the MIC project.</p>
<p>The assumption that the public transport mode share requirement of 20% can be reached without provision of enhanced public transport or private shuttlebus services is not considered correct.</p> <p>This assumption is made in the context of the existing mode share being estimated at 2%.</p> <p>The proposed IMT would be a major employer in the Moorebank Area. The 901 Bus is currently the only public transport</p>	<p>The Traffic and Accessibility Impact Assessment included as Appendix L of the EIS and summarised in Section 7 of the EIS, assumed that all employee trips (i.e. 100% of trips) would be by private vehicles, constituting 80 vehicle movements per day.</p> <p>In accordance with the Concept Plan Approval, SIMTA has committed to negotiating with the relevant agencies/authorities as required to facilitate the staged delivery of the public transport infrastructure including:</p> <ul style="list-style-type: none"> <li>Review and rationalisation of the locations of Route 901 bus stops in the vicinity of the site to match the proposed northern terminal entry location and enhance accessibility.</li> <li>Consulting with relevant bus provider(s) regarding the potential</li> </ul>	<p>Section 5.2.2 TIA, Appendix L of the EIS Section 7.3.2 of the EIS Concept Plan Approval</p>	<p>The concept plan's traffic modelling assumed a public transport mode share of 20%. This is unlikely to be achieved without the introduction of public transport improvements as set out in the Statement of Commitments, Conditions of approval and Commonwealth EPBC Act approval conditions.</p> <p>It is Cardno's view that SIMTA should be held to the conditions, terms and commitments of the</p>

Comment	Clarification/Response	Reference	Review Comment
<p><i>link within walking distance of the site. However, the 901 bus is not frequent enough to attract 20% of staff away from their cars as required by the conditions of the concept approval and assumed by the estimates of SIMTA employee traffic generation. The BTS Journey to Work Explorer contains mode share data for people who work within the Travel zone which contains both the SIMTA and MIC sites. Private vehicles have a combined total of 90% of trips. Public Transport has a combined total of 2% of trips. This is radically different from the 20% public transport mode share which is required by the conditions on the SIMTA concept approval.</i></p> <p><i>To address the current deficiency, the proponent should provide a frequent private shuttle bus service operating between Holsworthy Station, Liverpool Station and the SIMTA site in line with the terms of the Commonwealth EPBC Act approval proposed mitigation measures and the Statement of Commitments attached to the SIMTA Concept approval.</i></p>	<p>to extend the Route 901 bus through the site via the light vehicle road and increasing peak period bus service frequencies to better match the needs of existing and future employees of the locality with frequency dependent on the development of the site.</p> <ul style="list-style-type: none"> <li>Consulting with relevant bus providers regarding changes to existing bus stop location and the identification of new bus stop locations if required.</li> </ul>		<p>Concept Approval. Infrastructure and services to support use of public transport by project employees should be a condition of consent for Stage 1.</p> <p>TfNSW also expresses these concerns in their submission to the project.</p>
<p><i>Proposed upgrades have been restricted to those proposed by RMS itself. No consideration of constructability or safety of these upgrades has been undertaken.</i></p>	<p>All works undertaken on Roads and Maritime owned infrastructure would be undertaken in accordance with the required Works Authorisation Deed(s) and Road Occupancy Licences (ROLs), or other agreement reached with Roads and Maritime services.</p> <p>Further assessment has been undertaken of the performance of Heathcote Road /Moorebank Avenue and Newbridge Road / Moorebank Avenue intersections performance without the upgrades identified by Roads and Maritime and it has been demonstrated that the Proposal would not lead to a loss of intersection performance.</p>	<p>Section 4.4 of this RtS.</p>	<p>Noted. Although only limited information has been provided to explain the change in the results from the previous modelling. Full disclosure of the changes in the assumptions and modelling practices should be provided. If these are not identified, they cannot be confirmed as reasonable.</p>
<p><i>The forecast performance of all intersections in 2016 with and without Stage 1 of SIMTA is given in Tables 5-3 and 5-4. SIMTA Stage 1 is forecast to have no impact on the performance of the intersections at Moorebank Avenue at Newbridge Road and Moorebank Avenue at Heathcote Road. The numbers are</i></p>	<p>Appendix B of the Traffic and Accessibility Impact Assessment, included as Appendix L of the EIS and summarised in Section 7 of the EIS, includes detailed outputs of the assessment, in accordance with the Roads and Maritime Services Traffic Modelling Guidelines. Intersection modelling and analysis indicated that the Proposal would not exceed the current capacity at the eight modelled intersections assessed in accordance with the SEARs. In addition, traffic modelling undertaken for the Concept Plan Approval also identified network capacity issues on</p>	<p>Appendix L of the EIS Concept Plan Approval</p>	<p>Noted. Although only limited information has been provided to explain the change in the results from the previous modelling.</p>

Comment	Clarification/Response	Reference	Review Comment
<p><i>identical. This appears to be unlikely given that the proposed upgrades do not radically alter the intersections. The other intersections experience minimal change or even an increased LOS in one case despite no other upgrades being proposed. This is an unusual result.</i></p> <p><i>The results provided are the average for each intersection. The average could potentially disguise a reassignment of delay from the major traffic approach to minor traffic approach through prioritising and signal phasing adjustment. This would result in increased queue lengths on the minor traffic directions without any change in overall queue. These queues could interfere with the operation of other intersections which have not been considered as part of this analysis.</i></p>	<p>State Roads, demonstrating that there are already issues within the local network.</p>		
<p><i>Figure 5-3 of the SIMTA Traffic and Accessibility Impact Assessment shows the forecast Daily Truck Arrival Profile which shows the peak truck arrivals will occur around 14:00. The PM period modelling doesn't begin until 16:00. This means that the times of greatest traffic generation have not been assessed in the existing PM modelling. This is important because the PM peak is broader than the AM peak, often beginning around 15:00. The employee trip generation PM peak is also expected to be between 14:00 and 18:00 as shown in TIA Figure 5-4.</i></p>	<p>The Traffic and Accessibility Impact Assessment presented in Section 7 and Appendix L of the EIS considered the highest traffic volumes impact during the PM peak period, which was between 15:00 and 18:00. The highest PM peak in Traffic and Accessibility Impact Assessment provided a worst case traffic impact. The average traffic volumes during the time period between 14:00 and 16:00 are about 13% lower than time period adopted in the Traffic and Accessibility Impact Assessment.</p>	<p>Section 7.3.2 and Appendix L of the EIS. Concept Plan Approval</p>	<p>Noted.</p>
<p><i>The assumption that 70% of vehicles visiting the site will be semi-trailers and the remainder will be B-doubles has not been justified with reference to the composition of the Sydney truck fleet or any other empirical measurement. A higher proportion of smaller vehicles will generate more traffic and potentially greater noise, congestion and air pollution than suggested by the EIS.</i></p>	<p>The split of semi-trailers and B-doubles adopted for the Proposal is consistent with the split presented in the Concept Plan Assessment, which has been accepted by TfNSW and Roads and Maritime in the Concept Plan Approval.</p> <p>The split of vehicles adopted for the Traffic and Accessibility Impact Assessment was agreed with TfNSW and Roads and Maritime and approved in the Concept Plan Approval. There is no justification to test 80%, 90% and 100% freight to be moved by semitrailers.</p>	<p>Section 7.3.2 and Appendix L of the EIS. Concept Plan Approval</p>	<p>Noted, however consequently the proponent is not addressing the risk that the proportion of vehicle classes could be different in practice. This could result in higher traffic generation for the same container throughput. This will in turn lead to a greater impact on nearby intersections and potentially a greater impact on noise and air</p>

Comment	Clarification/Response	Reference	Review Comment
<p><i>The TIA assumes that 70% of trucks visiting the site will be semi-trailers and the remainder will be B Doubles. This assumption appears to have been derived from the projected proportions of 20ft and 40ft containers rather than the composition of the Sydney and NSW freight truck fleets which will frequent the IMT. This assumption is crucial because it directly affects the total number of truck movements the proposal will generate and therefore intersection performance, vehicle emissions, noise and other considerations. Additional traffic modelling should be conducted for a range of vehicle type proportions such as a scenarios where 80%, 90% and 100% of freight is moved via semi-trailers. This will allow the full range of potential impacts from traffic to be assessed.</i></p>			<p>quality.</p>
<p><i>The number of lanes on Moorebank Avenue between the Joint Logistics Unit intersection and Anzac Road varies from one to two lanes. It also has an on-road cycling lane south of Anzac Road. The TIA does not indicate if additional upgrades of Moorebank Avenue adjacent to the SIMTA precinct have been considered. TIA Figure 5-2 shows the access and egress concept design layout for heavy vehicles. However the TIA does not indicate if the proposed two lane exit from the SIMTA precinct will continue along Moorebank Avenue northbound or tie-in with the multilane approach to the Anzac Road intersection. Heavy vehicles merging could cause increased negative impacts on the Moorebank Avenue corridor, resulting in additional rear end collisions, delays and extended intersection queues. The TIA does not indicate if the current lane configuration is suitable for the traffic generated by the project or if the additional</i></p>	<p>Section 5.4 of the Traffic and Accessibility Impact Assessment (Appendix L of the EIS) assessed the traffic capacity of Moorebank Avenue in its current configuration. Currently, Moorebank Avenue is configured in two lanes (one lane in each direction) and carries approximately 16,400 to 16,900 vehicles per day.</p> <p>The Proposal would increase traffic on Moorebank Avenue (south of Anzac Road) by approximately 750 vehicles per day (approximately 4.5% increase compared to existing volumes). The analysis indicated that Proposal would not exceed the current capacity of the Moorebank Avenue. Therefore, the current lane configuration of Moorebank Avenue is suitable for carrying traffic generated by the Proposal. Figure 5-2 in the Traffic and Accessibility Impact Assessment (Appendix L of the EIS) shows the lane configurations on Moorebank Avenue at the site entrances and exits.</p>	<p>Section 7.3.2 and Appendix L of the EIS. Concept Plan Approval</p>	<p>Noted. However this response does not address the other potential functions of road lanes such as, parking or space for cyclists.</p> <p>There is also the potential for trucks to wait beside Moorebank Avenue on the grassed verge unless formal waiting and layover facilities are provided within the SIMTA facility.</p>

Comment	Clarification/Response	Reference	Review Comment
<p>traffic will impact the capacity of Moorebank Avenue.</p>	<p>The weaving issues on the M5 Motorway between the Hume Highway and Moorebank Avenue were reported in Transport and Accessibility Impact Assessment, prepared for the Concept Plan Approval.</p> <p>The Proposal would increase traffic volumes on the M5 Motorway between the Hume Highway and Moorebank Avenue by less than 1 percent of current traffic volumes.</p> <p>As the predicted traffic increase from the Proposal is anticipated to be low, the Proposal would not adversely impact the potential weaving on the M5 Motorway.</p>	<p>Appendix L of the EIS. Section 3.3.6 of Traffic &amp; Accessibility Impact Assessment for the SIMTA Concept Plan Approval.</p>	<p>The AADT on the M5 is 110,000 vehicles per day. Even 1% of this figure is a large amount of traffic in absolute terms. Semi-trailers and trucks are often modelled in terms of their PCE (Passenger Car Equivalent) units. Large trucks are often modelled as equivalent to 3.5 passenger cars. SIMTA's truck traffic may be approximately 1% of vehicle numbers, but closer to 3% of total traffic in terms of PCE.</p> <p>The weave problem, as with many traffic phenomena, may not respond linearly. What might appear to be a small change in traffic could create a non-proportional set of consequences. Modelling could help to establish the magnitude of any impacts the proposal might have.</p> <p>Secondly, the trucks travelling to and from the SIMTA site will be very large and have slower acceleration and braking rates. Modelling of the weave is required to establish that the proposal's traffic will not cause a hazard on the M5.</p>
<p>The EIS notes that a modification has been sought for the approved concept plan that would remove the requirement for an agreement to modify the 901 bus route to better serve the proposal. This appears to have come about because developer levies cannot be used to support bus services. This is problematic in the context of the MIC proposal. Both SIMTA and MIC have stated previously that they intend to combine their proposals. To date however, each proponent continues to advance the approvals process for each project separately. If in future the projects are</p>	<p>As outlined in Section 7 of the EIS, the Proposal would not trigger the need for bus route modifications or additional infrastructure associated with public bus services. The purpose of the modification sought is to alter the legal mechanism for investigating changes to the 901 bus service, in consultation with Transport for NSW and DP&amp;E as a Voluntary Planning Approval is not the appropriate mechanism to secure changes to the bus route (10_0193 MOD1). The modification does not remove SIMTA's commitment to negotiate with the relevant agencies/ authorities regarding the staged delivery of public transport infrastructure to support the SIMTA Project.</p> <p>It is noted local infrastructure contributions under Council's Contribution Plan are not applicable to the SIMTA site.</p> <p>It is also noted Moorebank Avenue is owned and maintained by the</p>	<p>Section 7 of the EIS. Concept Plan Approval 10_0193 MOD1</p>	<p>If a VPA is not an appropriate mechanism for enforcing the conditions and mitigation measures prescribed by the concept plan approval, then a binding alternative should be suggested and implemented.</p> <p>The modification cannot be supported without the introduction of another mechanism to ensure that the project meets the requirements of the concept plan approval.</p> <p>The section of Moorebank Avenue</p>

Comment	Clarification/Response	Reference	Review Comment
<p><i>combined, it is not clear how conflicting requirements and conditions of approval for the standalone projects might be implemented for the final project.</i></p> <p><i>Removing the public transport commitments from SIMTA Stage 1 could compromise public transport provision for the final IMT at the Moorebank Site. It must also be noted that the proposed modifications to the statement of commitments extend far beyond the removal of a bus route VPA and include the removal of all commitments to road infrastructure provision under a VPA. This is an extraordinary modification which would effectively remove responsibility for infrastructure provision from the proponent.</i></p>	<p>Commonwealth.</p>		<p>south of Anzac Road is owned and maintained by the Commonwealth at present. The future transfer of land from the Commonwealth to either the State or Council is plausible given the proposed changes in land use.</p> <p>The remaining section of Moorebank Avenue between Anzac Road and the M5 is a local road maintained by Council.</p>
<p><i>The proposal does not discuss the provision of facilities to encourage staff to cycle to work such as bicycle parking and showers. This is consequential as encouraging the use of active transport by IMT staff can help to minimise traffic impacts on surrounding residential areas. The TIA does not address existing cycling facilities regarding their relocation or maintenance during operation and construction of the proposal. This is referred to within the Statement of Commitments and Commonwealth EPBC Act attached to the SIMTA Concept approval.</i></p>	<p>Existing cycling facilities are considered in the Preliminary Construction Traffic Management Plan (PCTMP) and Preliminary Operational Traffic Management Plan (POTMP) (contained within Appendix L of the EIS).</p>	<p>Appendix L of the EIS.</p>	<p>As the comment refers to the “provision” of facilities to encourage cycling, discussion of only existing cycling facilities is not a useful response.</p> <p>The POTMP comments that the existing roads are sufficiently safe to support cycling from Holsworthy Station. This does not address connectivity with existing cycling infrastructure or align with Council’s own bike plans.</p> <p>The PCTMP does not mention cycling or cycling facilities at all.</p> <p>This matter has not been adequately addressed despite the RtS.</p> <p>The concept plan modelling assumed a 20% public transport and non-car mode share. If the relevant project applications do not include measures to achieve this mode shift then they cannot be said to be substantially compliant with the concept plan.</p>

Comment	Clarification/Response	Reference	Review Comment
<p><i>No Warehousing is proposed as part of the Stage 1 SIMTA proposal. Whilst it is acknowledged that this is consistent with the Concept Plan, this will result in the double handling of freight as containers must first be trucked to a secondary warehouse to be unloaded. These extra trips diminish the benefits of the IMT for local congestion, noise, air quality and visual impact. If warehousing facilities were provided on the SIMTA site, it is possible that these truck movements could be largely avoided.</i></p> <p><i>The secondary traffic movements from the SIMTA site should be incorporated into the TIA modelling and assessed to establish the level of impact associated with the proposal not providing warehousing on site.</i></p> <p><i>The absence of a warehousing component as part of Stage 1 of SIMTA could also lead to the growth of warehousing facilities elsewhere in Moorebank, effectively generating an enhanced level of traffic. This could cause the distribution of container traffic from SIMTA to change significantly.</i></p>	<p>This is not required as warehousing is not relevant to this stage. The Traffic and Accessibility Assessment, included as Appendix L of the EIS, has provided a suitable assessment.</p> <p>The Traffic and Accessibility Impact Assessment has considered vehicle movements associated with construction and operation of the Proposal. Section 1.3 of the EIS outlines a key objective of the Proposal to transfer freight container movements from road to rail, thereby alleviating freight related road congest between Port Botany and Moorebank, particularly along the M5 Motorway. As noted in Section 2.2 of the EIS, the Proposal would service the south-west freight catchment hence operation of the Proposal represents a change in transport mode between Port Botany and Moorebank for freight entering the catchment. Warehousing is not proposed as part of the Proposal.</p>	<p>Appendix L of the EIS</p>	<p>Noted. However, concern remains that the project may not achieve a better regional air quality and traffic reduction outcome unless warehousing is included.</p> <p>Warehousing remains relevant to SIMTA operations under Stage 1 and should be considered.</p>
<p><b>Other Submission Responses</b></p>			
<p><b>TfNSW</b></p> <p><i>Section 5.10 of the Hyder Traffic Impact Assessment report provides information and assessment of cumulative impacts of the two proposals during operation in 2016. Moorebank Intermodal Terminal's 2015 Early Works Phase was considered for this assessment which is not consistent with the development profile for the precinct. Therefore, the report provides incorrect cumulative analysis for 2016.</i></p>	<p>The Traffic and Accessibility Impact Assessment adopted the 2016 scenario for operation of the Proposal as this represents the timeframe at which it is envisaged that the Proposal would be operating at a TEU throughput of 250,000 per annum. The Proposal represents an interim development scenario as, once it has been demonstrated that the IMT can operate at a throughput of 250,000 TEU per annum, the intent would be to submit a development application to increase the TEU throughput of the terminal.</p> <p>As discussed in Section 19 of the EIS, the development scenario for commencement of Early Works associated with the MIC proposal and operation of the Proposal was modelled for the cumulative scenario as this is when operation of the Proposal as it is considered feasible that Early Works for the MIC Proposal could occur in 2016, based on the information presented in the Response to Submission Report (PB, 2015).</p>	<p>Section 19 and Appendix L of the EIS.</p> <p>MIC Response to Submissions (May 2015).</p>	<p>SIMTA's response assumes that Stage 1 of SIMTA will not be operating in concert with MIC Stage 1. This could prove to be incorrect if delays occur between the operation of SIMTA Stage 1 and the construction of SIMTA Stage 2. Consequently, TfNSW's comment that cumulative impacts should be reassessed is fully supported.</p>

Comment	Clarification/Response	Reference	Review Comment
	<p>Operation of the SIMTA Project and the MIC Proposal under a 'full build' scenario was assessed and approved under the Concept Pal Approval (MP10_0193).</p>		
<p><i>The proponent should amend their cumulative traffic analysis (during operation) for the year 2016 to include the Moorebank Intermodal Terminal's Project Phase A — 2016. The amended analysis should then be presented to TfNSW and Roads and Maritime for endorsement.</i></p>	<p>As noted above, the cumulative scenario adopted within the Traffic and Accessibility Impact Assessment is considered appropriate as Early Works for the MIC Proposal may occur in 2016, when the Proposal would be operational. Operation of the MIC Proposal (Phase A) is not predicted to commence until 2019 (PB, 2015).</p>	<p>Section 19 and Appendix L of the EIS MIC Response to Submissions (May 2015)</p>	<p>As above.</p>
<p><i>It is important to understand the relationship between containers received and vehicles generated from this site and their origin to monitor compliance with Planning Assessment Commission (PAC) conditions and to inform the transport assessment of future stages of development. A condition to report six monthly on vehicle movements through the truck gate is proposed. It is also noted the PAC determination indicates the need to monitor vehicle numbers along Cambridge Avenue. The following conditions are requested: The proponent is to generate and provide a report each six months (in a format agreed with TfNSW and Roads and Maritime) that advises:</i></p> <ul style="list-style-type: none"> <li>• <i>The number of actual and standard twenty foot equivalent shipping containers despatched and received during the period;</i></li> <li>• <i>The number of days in the period that the truck gate was open for despatching trucks 24 hours a day, 7 days a week. Detail any exceptions and advise actual hours of operation</i></li> <li>• <i>A record of every vehicle entry by class, date and time;</i></li> <li>• <i>The number of light vehicles turning right into the SIMTA driveway and the number of light</i></li> </ul>	<p>Accepted with small modification to wording.</p> <p>The proponent should generate and provide a report in an agreed format to TfNSW and Roads and Maritime Services, twice annually to include a two week survey period on vehicle movements through the truck gate and light vehicle egress point, from the commencement of operation of the Proposal that advises:</p> <ul style="list-style-type: none"> <li>• The number of actual and standard TEU despatched and received during the survey period</li> <li>• The number of days in the period that the truck gate was open for despatching trucks 24 hours a day, 7 days a week. Detail any exceptions and advise actual hours of operation during survey period</li> <li>• A record of every vehicle entry by class, date and time within the period</li> <li>• The number of light vehicles turning right into the SIMTA driveway and the number of light vehicles turning left from the SIMTA driveway for a representative day during the survey period only</li> <li>• The despatch location or origin address of heavy vehicles where available.</li> </ul>		<p>TfNSW's comment is intended to establish records of vehicles accessing the site as a means to confirm that the project is complying with its conditions of consent. These records are likely to be kept by SIMTA for business purposes and this condition would add minimal regulatory burden.</p> <p>A 2 week survey would not provide the same security for regulators as any non-compliant operations could simply be delayed until the survey period was completed.</p> <p>Consequently, TfNSW's original wording is supported, and SIMTA's alternative is rejected.</p>

Comment	Clarification/Response	Reference	Review Comment
<p>vehicles turning left from the SIMTA driveway for a representative day</p> <ul style="list-style-type: none"> <li>The despatch location or origin address</li> </ul>			
<p>The 901 bus service operates between Liverpool CBD and Holsworthy Station travelling in proximity to the SIMTA site. The revised SIMTA statement of conditions of May 2015 does not reflect the outcome that TfNSW is the entity responsible for regular route bus services under the Passenger Transport Act 1990, has for effective bus regular route servicing of the Moorebank Intermodal terminal. The proponent is requested to adopt the following in relation to bus services in their statement of commitments:</p> <ul style="list-style-type: none"> <li>Design and build a paved bus turnaround facility on Moorebank Avenue at the southern end of the MIT and SIMTA sites near Chatham Ave that will allow buses to U-turn safely. This is to have swept path dimensions to cater for a 14.5m long non rear-steer bus</li> <li>If the facility is on SIMTA land provide standing landowner permission for regular route buses to turn around within the facility so constructed as a condition of development consent</li> <li>The detailed design of the bus turnaround facility shall be audited by an independent TfNSW accredited road safety auditor in accordance with the relevant Austroads guidelines. The Road Safety Audit report should be submitted to TfNSW</li> </ul>	<p>The proposed mitigation measures are not appropriate for the Proposal, as the Proposal would not generate sufficient public transport patronage to justify changes to bus services.</p> <p>The Traffic and Accessibility Impact Assessment, included as Appendix L and summarised in Section 7 of the EIS considered the demand for public transport to the SIMTA Project, as a result of the Proposal. The assessment determined that, assuming the public transport share achieved by the Proposal reaches twenty percent, this would result in only eight additional public transport trips in one hour, during peak periods, which is not considered high enough to require upgrades to the public transport supply.</p> <p>The design of the Proposal does not preclude the development of a bus turnaround facility in future stages of development, when employee numbers will be higher and public transport patronage will warrant an increase to the bus services to the Proposal site. It is stated in Section 7.3 and Appendix L of the EIS that construction of the Proposal would not adversely impact the operation of the 901 bus route.</p> <p>It is noted that the traffic modelling assumptions adopted in the Traffic and Accessibility Impact Assessment, assumed that 100 % of employees would access the site using a private vehicle.</p>	<p>Section 7.3 and Appendix L of the EIS.</p>	<p>TfNSW clearly seeks to ensure that SIMTA provides appropriate public transport infrastructure. Given that SIMTA is currently seeking to remove the VPA requirements to provide infrastructure, this may be the only remaining mechanism for ensuring that the proposal can achieve the 20% public transport mode share envisaged in the concept plan. Consequently, TfNSW's proposed commitments are fully supported.</p>

Comment	Clarification/Response	Reference	Review Comment
<p><i>and Roads and Maritime for review and comment. The proponent shall recommend corrective actions for the identified safety issues and amend the design in consultation with TfNSW and Roads and Maritime to reduce the safety risks</i></p> <ul style="list-style-type: none"> <li>• <i>Install bus stops and shelters on Moorebank Avenue to align with a pedestrian access path directly into the SIMTA terminal. The bus stops should be appropriately designed in accordance with the relevant Austroads guidelines. A pedestrian access path network within the SIMTA terminal site should provide for direct access to these bus stops</i></li> <li>• <i>Provide appropriate pedestrian crossing facilities (from the western side of Moorebank Ave) in consultation with Road and Maritime Services to ensure the safe crossing of Moorebank Avenue to access corresponding bus stops. The bus shelter should closely align with the shelter on the SIMTA side of Moorebank Avenue. The facilities should be designed in accordance with the relevant Austroads guidelines</i></li> <li>• <i>In anticipation that traffic volumes on Moorebank Avenue will continue to increase in the future a concept plan should be developed that demonstrates how the bus turnaround facility can be upgraded at a later stage to allow buses to u-turn safely possibly with signal control. This concept plan should include bus layover</i></li> </ul>			

Comment	Clarification/Response	Reference	Review Comment
<p><i>for two 14.5 metre buses on both sides of Moorebank Avenue</i></p> <p><i>The SIMTA concept plan conditions provide that at a future point in time, following the commencement of intermodal operation, a future development application to increase the TEU throughput to 500,000 TEU can be lodged. TfNSW and Roads and Maritime advise that traffic modelling, monitoring and the works proposed under the draft Statement of Commitments are not considered adequate to achieve the objective of not exceeding the capacity of the transport network. TfNSW and Roads and Maritime will be better placed to consider and advise the exact package of mitigation works that will be required when the current Roads and Maritime mesoscopic model is finalised and the SIMTA proponent can demonstrate the efficient operations proposed in the EIS can be achieved.</i></p> <p><i>The applicant is requested to work with Roads and Maritime to demonstrate impacts of the 500,000 TEU on the road network.</i></p>	<p>Noted.</p> <p>SIMTA is committed to working with TfNSW and Roads and Maritime Services to facilitate the staged delivery of road infrastructure upgrades as required to mitigate impacts associated with container freight road volume associated with operation of the SIMTA Project for future development applications (as required by the Concept Plan Approval).</p>	<p>Concept Plan Approval.</p>	<p>It was previously requested that SIMTA Stage 1 not be determined until RMS's subregional scale road network modelling is complete. This will allow informed strategic decisions around the appropriateness of intermodals in the Moorebank precinct.</p> <p>RMS is clearly concerned that the proposal will exceed the capacity of the road network based on the information provided by the applicant.</p> <p>Modelling prepared by Parsons Brinckerhoff to support the MIC proposal, clearly shows that by 2030 the regional and local road network will be heavily congested.</p> <p>Rather than determine this application based on incomplete strategic understanding, the determination should be delayed. This strategic understanding is crucial to the setting of an appropriate precinct-wide cap on container traffic to limit impacts on the road network and to the development of an infrastructure response.</p>

### 3.1.4 Additional Matters

- > Cardno has previously raised concerns that turning paths for large vehicles at the M5 and Moorebank Avenue intersection have not been provided. These turning paths may be relevant to intersection performance if vehicles cannot complete a turn without encroaching on adjacent lanes. It is not identified whether sufficient space is provided for two semi-trailers to make a right turn simultaneously in adjacent lanes. This issue has not been discussed by the RtS and additional information has not been provided.
- > The M5 and Moorebank Avenue intersection does not appear to consider through traffic. Cardno has previously requested that this be clarified, but no relevant information has been provided in the RtS.
- > SIMTA argues that it cannot control the vehicles that enter its site and consequently cannot impose best practice mitigation measures on the vehicle fleet. This is not consistent with international examples such as the Port of Rotterdam and the Port Authority of New York and New Jersey, as previously identified by Cardno. No further information has been provided in the RtS to justify why Australia's regulatory environment uniquely prevents SIMTA from imposing minimum environmental standards and programs on vehicles entering its site.
- > Queue lengths have not been provided for the M5 and Moorebank Avenue intersection. This is significant given that the 83% of operational traffic will access the SIMTA site via the right hand turn lanes from the Eastbound M5. It is not clear if there is sufficient lane storage at the intersection given the large size and number of the vehicles anticipated.
- > The Construction phase intersection arrangements to access the Rail East compound and Georges River compound have not been finalised. The Stage 1 EIS modelled this intersection as priority controlled and found it would operate at level of service D. The accident risk and queueing implications of this have not been addressed by the RtS.
- > Traffic generation in the construction phase is very sensitive to the fill balance of the site. Although the project has been designed to achieve a net fill balance, there are unresolved issues of contamination, unexploded ordinance and suitability for use as engineering fill. If an unexpectedly large quantity of fill must be removed from or emplaced on site, there will be a commensurate increase in the volume of construction traffic. This risk does not seem to have been considered in the relevant traffic management plans and impact assessments.
- > The Stage 1 EIS and RtS does not address the possibility of vehicle stopovers and temporary storage. If provision for this is not made on site, could it result in trucks stopping on the verge at Moorebank Avenue?
- > The Need for Reclassification of Moorebank Avenue - The section of Moorebank Avenue to the south of Anzac Road is a road owned by Federal Government. With the sale of the abutting land to private sector clarification is required as to the dedication of Federal Road as public roads with appropriate classification being either a State or Local Road to be determined via negotiation with RMS and Liverpool Council. Determining the classification of Moorebank Avenue will assist in identifying the agency responsible for the road and also the setting of appropriate road layout and design standard adoption during its upgrade.
- > The current proposal for single lane either direction is not acceptable considering the volume of heavy vehicles from the cumulative development and demand for off-road parking. Also local access conditions and access management needs to be identified in detail.

### 3.1.5 Recommendations

The recommendations below are identified to address the identified impacts associated with traffic and transport to allow a comprehensive assessment of the proposal:

- > Determination of SIMTA Stage 1 should be delayed until the project can be assessed against the RMS LMARI sub regional scale road network modelling results. This is essential to demonstrate that the precinct is strategically appropriate for an intermodal terminal.

- > An entry in the statement of commitments should require that the applicant construct the public transport infrastructure identified by RMS as part of Stage 1.
- > The Traffic monitoring and reporting regime suggested by RMS should be required as a condition for Stage 1.
- > The proponent should be required to address the risk that the proportion of heavy vehicle classes is different to that modelled in the TIA.
- > Provision of cycling facilities and integration with the Council Bike Plan has not been adequately addressed and should be made a condition of any positive determination.
- > Council recommends that the whole of Moorebank Avenue be reclassified as a State Road. This is appropriate given its function and the expected additional heavy vehicle traffic generated by both intermodal terminal proposals,
- > If the road network is predicted to fail due to hyper-congestion as per the MIC modelling, then SIMTA Stage 1 will not be sustainable. Intermodal terminal development and traffic generation should be limited to a level of impact that can be offset by road upgrades and mitigation measures implemented by the proponent.
- > A staged infrastructure plan linked to empirical traffic impacts should be developed to provide all parties with certainty regarding the future performance and required upgrades of the road network. This infrastructure plan should be developed in consultation with the MIC, SIMTA, RMS/TfNSW and Council.
- > Council has been advised that the RMS is carrying out traffic modelling to identify and apportion the cost of external transport infrastructure required to accommodate the cumulative traffic impact of the SIMTA and MIC development developments. This process should be completed and the apportion contribution imposed on the Stage 1 development, in addition to other subsequent staged developments.
- > Council advises that it has begun monitoring traffic conditions on Moorebank Avenue, Nuwarra Road, Anzac Road and Governor Macquarie Drive. This data will be used in future to measure the impact of SIMTA Stage 1. If necessary, this data will be used to justify mitigation measures as part of future stages of the development.

## 3.2 Air Quality

The proposed SIMTA RtS provides a response to the submissions made to the EIS in relation to the proposal's impacts on Air Quality. This review considers information in the RtS Section 4.6, *Appendix M - Air Quality Impact Assessment* (AQIA) prepared by Environ Australia Pty Ltd (Environ 2015) and *Response to Submissions – Air Quality Addendum* prepared by Ramboll Environ Australia (Ramboll 2015).

### 3.2.1 Summary

The Table below summarises the outcome of the changes to the proposal identified by the RtS.

**Table 3-3 Adequacy of Response Summary**

Concept Approval Commitments	Secretaries Environmental Assessment Requirements	Liverpool City Council Assessment
<p>The following commitments are not adequately addressed:</p> <ul style="list-style-type: none"> <li>&gt; The Proponent will undertake an air quality monitoring programme during the initial phases of both construction and operation of the SIMTA site in accordance with the <i>Air Quality Impact Assessment</i> and including: <ul style="list-style-type: none"> <li>– Nuisance Dust</li> <li>– Air Emissions – PM<sub>10</sub> and Nitrogen Dioxide</li> </ul> </li> </ul> <p>The following Commitments are not addressed::</p> <ul style="list-style-type: none"> <li>&gt; The Proponent shall consider the need to develop a vehicle efficiency and emissions reduction program for the facility to encourage good maintenance and efficient vehicle selection, taking into account the results of the air quality monitoring programme.</li> </ul>	<p>The following SEARS are not adequately addressed:</p> <p>e) A comprehensive air quality management plan that includes at least the following information:</p> <ol style="list-style-type: none"> <li>i. Explicit linkage of proposed emission controls to the site specific best practice determination assessment and assessed emissions;</li> <li>ii. Explicit linkage of assumed engine standards and operational management systems;</li> <li>iv. Proposed key performance indicator(s) for emission controls;</li> <li>v. Proposed means of air quality monitoring including location (on and off-site), frequency and duration;</li> <li>vi. Poor air quality response mechanisms;</li> <li>vii. Responsibilities for demonstrating and reporting achievement of key performance indicator(s);</li> <li>viii. Record keeping and complaints response register; and</li> <li>ix. Compliance reporting.</li> </ol>	<p>The following assessment recommendations are not adequately addressed:</p> <ul style="list-style-type: none"> <li>• Concerns about inadequate traffic study assumptions and modelling inputs which will affect AQIA assumptions and results</li> <li>• Detail of any air quality modelling campaigns are limited</li> </ul>

### 3.2.2 Summary of Revisions/Clarifications

The following key revisions have been made to the proposal in relation to Air Quality:

- > Changes in Construction Phase
- > Changes in estimated emissions arising from dust generating activities, including vegetation removal, material handling for earthworks, wind erosion from expose areas and vehicles travelling on unsealed surfaces.

- > Ramboll (2015) found that the activity data inputs either do not change or are slightly reduced (based on minor reductions to the length of the Rail link and therefore impact areas) as a result of the amended rail link alignment. They also conclude that there is no expected change to the emission estimates presented in the AQIA (Environ 2015).
- > Changes in Operational Phase
- > The Air Quality Impact Assessment (Environ 2015) has also estimated emissions for diesel locomotives
- > Air quality impacts have been assessed to improve under the new rail link alignment. The new alignment has a shorter distance and will result in the emission of less NOx, Particulate Matter, and reduced fuel consumption.

### **3.2.3      Assessment**

The Table below contains the comments, clarifications/responses and references taken from the RtS document, with a further review comment to the RtS provided in the last column. The Table includes responses to the Council submission, along with key relevant responses from other submissions addressed in the RtS.

**Table 3-4 RtS Response Review (Air Quality)**

Comment	Clarification/Response	Reference	Review Comment
<b>Council Submission Responses</b>			
<i>The worst case assumptions in the Traffic Assessment fall short of identifying a rigorous worst case scenario. Therefore the assumptions for traffic volumes and movements which feed into the modelling undertaken as part of the AQIA will need further review and updating to ensure that significant impacts are not created.</i>	The assumptions adopted within the Traffic and Accessibility Impact Assessment, included in Appendix L and summarised in Section 7 of the EIS, were the same assumptions adopted for the Concept Plan Approval. For light vehicles, the EIS assumed all employees would use private motor vehicles to access the site during operation; which represents a worst case scenario.	Section 7 and Appendix L of the EIS	There still some concerns that additional construction activities may be required (i.e. cut/fill volumes are not confirmed) which will change traffic assumptions and therefore introduce sensitivities into reliant studies such as Air Quality.
<i>There is no off-site air quality monitoring proposed in the AQIA or within the Air Quality Management Plan. Due to the large scale clearing and bulk earthworks required during construction it is recommended that offsite monitoring of particulate matter be undertaken to ensure that potential dust impacts are identified and managed if required. The location of such monitoring should consider prevailing wind direction and sensitive receivers to ensure that potential impacts to the surrounding community are minimized.</i>	The Air Quality Impact Assessment, included in Appendix M and summarised in Section 8 of the EIS, for the Proposal predicted low risk of impact from both construction and operations and therefore revised monitoring recommendations were made for daily visual checks (construction dust, smoky vehicles, excessive idling). SIMTA is committed to undertaking air quality monitoring during the construction and operation of the Proposal, in accordance with the Concept Plan Approval.	Section 8 and Appendix M of the EIS. Section 8 of the RtS report  Concept Plan Approval	It is noted that mitigation measure 2C has been included to monitor key pollutants during construction and operations. We also acknowledge the commitment from SIMTA to undertake a campaign of air quality on a monthly basis during the initial stages of construction and operations. Council suggests that an air quality monitoring program shall be carried out for the duration of construction works and operational activities by a suitably qualified and experienced air quality consultant. The results of any monitoring must be recorded and maintained in a legible form and made available to the Consent Authority and Appropriate Regulatory Authority. Within three months of commencement of construction, an air quality report shall be prepared and submitted to the Consent Authority and Appropriate Regulatory Authority for review. The report shall include but not be limited to the following information:
<i>The AQIA contradicts the Statement of Commitments noting that no monitoring will be undertaken, whereas the Statement of Commitments clearly states that an air monitoring campaign will be undertaken during the initial phases of both construction and operation of the SIMTA site for:</i> <input type="checkbox"/> Nuisance Dust <input type="checkbox"/> Air Emissions – PM10 and Nitrogen dioxide.	For clarity, Mitigation Measure 2C has been included, and commits to air quality monitoring during the initial stages of construction and operation. The key pollutants were listed as nuisance dust (construction) and particulate matter and NO <sub>x</sub> (during operations). In accordance with the updated mitigation measures, SIMTA will commit to campaign air quality monthly monitoring during the initial stages construction and operations. Further details for monitoring, including equipment, frequency, duration and monitoring locations will be documented in the CEMP and OEMP.		a) Air quality measurements taken at the nearest sensitive locations; and  b) Verification that air quality measurements at the nearest potentially affected receivers comply with all relevant assessment criteria; and  c) All complaints received from local residents in relation to the development; and

Comment	Clarification/Response	Reference	Review Comment
			<p>d) Where air quality measurements required under point (a) above indicate that the relevant assessment criteria are exceeded, recommendations shall be provided in relation to how air quality emissions can be satisfactorily reduced to comply with the assessment criteria; and</p> <p>e) Following written approval from the Appropriate Regulatory Authority, any recommendations provided under point d) above shall be implemented fully. Further audits will be required every twelve (12) months from the commencement date of operation or such longer period as may be agreed to by the Appropriate Regulatory Authority.</p> <p>We also note that similar monitoring should be undertaken during any subsequent stages of development at the site to ensure that any predicted emissions are validated by real world monitoring data.</p>
<p><i>The Air Quality Management Plan for any future development stages will need to ensure best practice Emission controls are implemented where deemed feasible. All Air Quality Management Plans should also include:</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Detailed response plans should be prepared to provide an outline of response in the event of poor air quality conditions.</i></li> <li><input type="checkbox"/> <i>Further detail on site responsibilities for reporting achievements or failings against key performance indicator(s) is required to address this requirement.</i></li> <li><input type="checkbox"/> <i>Further detail on the compliance reporting requirements is required, including examples of any document templates, checklists etc. that will be used.</i></li> </ul>	<p>The Air Quality Management Plan (AQMP), included as Appendix M of the EIS, developed for the Proposal is a live document and will be continuously reviewed and updated on a regular basis. In particular, the AQMP (and Best Practice Review (BPR)) will need to be updated for future development applications of the SIMTA Project, incorporating advances in best practices including improving technologies and emissions performance.</p> <p>Response plans would be developed for Stage 1 site operations (for example to respond to excessive queuing, smoky vehicles). However, SIMTA are unable to develop response plans in the event of poor air quality conditions that are caused by events external to SIMTA operations. It is noted that poor air quality conditions in the Liverpool area, as defined by peak concentrations or exceedances of the</p>	<p>Appendix M of the EIS.</p> <p>Concept Plan Approval.</p>	<p>It is noted that SIMTA will continuously review the AQMP and BPR recommendations to ensure that best practice emission controls are implemented for all future development stages.</p> <p>The ongoing air quality monitoring campaigns (during construction and operational stages), which have now been committed to in Mitigation Measure 2C, will provide SIMTA with additional data and evidence to inform AQMP and response plan refinement and implementation.</p> <p>The data obtained from ongoing air quality monitoring will also assist SIMTA to target any problem areas with response plans or inform authorities of issues external to the SIMTA site.</p> <p>It is noted that a commitment from the Concept Approval noted above in Table 4-6 was made to utilize air quality data resulting from the air quality monitoring program to inform effective development of a vehicle efficiency and emissions reductions programme. This feedback loop for any data obtained should be outlined in the AQMP to ensure that maximum value can be derived from any air quality monitoring data obtained.</p>

Comment	Clarification/Response	Reference	Review Comment
	<p>relevant air quality goals, are most often associated with regional air quality issues (such as bushfires, ozone formation) or other local air quality issues, such as those associated with domestic wood heaters during winter.</p>		
<p><i>Event based scenarios of what to do in event of truck emission observations, dust escape or other potential air pollution event should form part of the CEMP and OEMP.</i></p>	<p>Management measures, including event based management scenarios are outlined in the AQMP, included as Appendix M to the EIS, for example:</p> <ul style="list-style-type: none"> <li>• During construction, event based management scenarios include ceasing activities such as soil stripping during high winds or increasing watering if dust is seen leaving the work site.</li> <li>• During operations, event based management scenarios include rejecting trucks with smoky exhausts or standing down equipment for maintenance.</li> </ul>	<p>Appendix M of the EIS.</p>	<p>It is noted that SIMTA has included some event based management scenarios in the AQMP. SIMTA should also commit to developing and incorporating procedures within the CEMP and OEMP to address any issues of non-compliance relating to expected air quality performance standards.</p> <p>These procedures should include pre-start checks of construction equipment to ensure maintenance logs are evident, engine and exhaust systems are in sound working condition as a preventative measure. Also SIMTA should clearly define and communicate acceptable limits to all personnel through initial inductions and regular ongoing communications.</p> <p>The procedures should also consider and outline appropriate repercussions for non-compliance such as 'stop work orders' or other disciplinary measures for offenders deemed responsible for emission offences.</p> <p>Air Quality aspects should also be considered in an environmental audit program which should be developed and implemented within twelve (12) months of commencement of operations. The operator shall carry out a comprehensive Environmental Audit of the premises and submit a report of the audit to the Appropriate Regulatory Authority for approval.</p>
<p><i>As an existing locomotive fleet will be deployed as part of SIMTA Stage 1, the upgrades to incorporate auxiliary power and electrical shore power connections should be considered as part of future maintenance programs.</i></p>	<p>This would be considered as necessary as part of future stages of development approval and in consultation with utility providers.</p>	<p>N/A</p>	<p>It is noted that SIMTA will investigate upgrade options to locomotives to incorporate auxiliary power and shore power connections as part of future ongoing maintenance and procurement programs.</p> <p>This commitment will need to ensure that options for the replacement or retrofitting of appropriate electrical technology will be explored during all future stages of development.</p>
<p><i>Rather than the proponent considering the need for a vehicle efficiency and emissions reduction program, this should be a continuous improvement requirement to operate SIMTA.</i></p>	<p>SIMTA is committed to continuous improvement, for example diesel powered container handling equipment would be replaced in future stages with electric</p>	<p>Sections 10.1 and 22 and Appendix M of the EIS.</p>	<p>It is noted that SIMTA will commit to the implementation of continuous improvement programs to ensure opportunities for emissions reduction technology to be</p>

Comment	Clarification/Response	Reference	Review Comment
<p><i>Ongoing review and consideration of 'long duration' idle reduction methods, strategies and technologies should be considered throughout the life of the SIMTA IMT. The outcomes of any identified international demonstration projects may provide important performance benchmarking for SIMTA operations to ensure that best practice and continuous improvement philosophies are adopted.</i></p>	<p>gantry cranes. The Best Practice Measures proposed for the Proposal in the BPR (Appendix M of the EIS) will be progressively implemented throughout the additional stages of the SIMTA Project, resulting in continual emissions improvement.</p> <p>As noted above, the BPR is a live document that will be reviewed and updated during subsequent development applications. Advances in technology and emissions performance will be incorporated into future updates to the BPR.</p>	<p>Section 8 of the RtS.</p>	<p>implemented during all stages of development. The best practice measures outlined in the BPR will also need to include written procurement policies within the OEMP that require the commitment to use the most efficient technologies available across all areas of future construction and operations.</p>

## Other Submission Responses

### Environmental Protection Authority

*Asbestos fibres can pose a serious health risk to humans if inhaled. The EPA notes that Glenfield Waste Services is licenced to receive asbestos waste. The Protection of the Environment Operations (Waste) Regulation 2014 requires operators of landfills licenced to receive asbestos to bury it in accordance with the regulation. However, operators are not required to record the locations of buried asbestos waste in landfills, therefore there is a reasonable possibility that if earthworks are required within previously landfilled cells, asbestos fibres could be encountered and liberated. The EPA cannot support any proposal that has the potential to disturb landfilled waste because the proponent has not detailed specific mitigation strategies to prevent the release of asbestos fibres of which there is a reasonable possibility that such fibres are contained within previously landfilled waste. The proponent has committed to producing an Asbestos Management Plan within the Contamination Management Plan which will be included in the Construction Environmental Management Plan which have either not been presented or not been finalised at the time of exhibition of the EIS.*

As stated in Section 22 of the EIS, and reproduced in Section 8 of this RtS, a Health and Safety Plan will be developed prior to commencement of construction and will include details of site contamination, risks and management measures. The plan will detail measures to minimise exposure pathways, including identification of appropriate personal protective equipment (PPE) to be worn during works associated with known or potentially contaminated material.

Further geotechnical investigations will be undertaken within the Glenfield Waste Facility during the development of detailed design to confirm the extent of landfill cells and to inform the design with the aim to avoid impacting on the cells. Should impacts on landfill cells be unavoidable, a specific works plan will be developed to address potential environmental and/or health and safety issues that may arise. As stated in Section 22, an Asbestos Management Plan will be developed for management of works in areas potentially impacted by asbestos within the Glenfield Waste Facility.

Sections 13 and 22 and Appendix R of the EIS.

Section 8 of the RtS.

Additional environmental investigations should be undertaken in addition to the geotechnical investigations within the Glenfield Waste Facility during detailed design to ensure that asbestos levels within areas to be disturbed are fully understood.

The outcomes of these investigations will be able to better inform the Health and Safety Plan and the Asbestos Management Plan.

The proposed Air Quality Monitoring program should also include targeted continuous asbestos monitoring of air borne contaminants to ensure sensitive receivers, including adjoining work sites containing personnel at risk, are considered in the program.

Mitigation response plans should include stop work orders, additional air monitoring requirements and further mitigation measures in the event that monitoring results identify unacceptable levels of air-borne contamination.

It is also noted that the Asbestos Management Plan and Air Quality Management Plan will reference any monitoring requirements. These management plan documents should be included in the CEMPs developed and approved prior to construction work commencing.

Comment	Clarification/Response	Reference	Review Comment
<p>The EPA has reviewed the Air Quality Impact Assessment (AQIA) prepared for the SIMTA Stage 1 project approval. The AQIA, has been conducted in general accordance with the Approved Methods for the Modelling and Assessment of Air Pollutants in NSW. The assessment includes a best practice review, and an Air Quality Management Plan as required by the SEARs. The EPA considers that the outcomes of the assessment are plausible.</p> <p>The EPA recommends that the following conditions be included as part of the development consent:</p>	Accepted.	N/A	Accept EPA's review comments that the AQIA has been conducted in general accordance with the Approved Methods for the Modelling and Assessment of Air Pollutants in NSW.
<p>1) The development of a Construction Air Quality Management Plan.</p>	Accepted. Section 22 of the EIS provides a compilation of mitigation measures which are to be implemented for the Proposal. These have been reproduced and updated in response to submission in Section 8 of this RtS. A Construction Air Quality Management Plan (CAQMP) is identified in both Mitigation Measures No. 0A and 3A. It is SIMTA's intention that a CAQMP would be implemented during construction of the Proposal in accordance with the mitigation measures identified in the EIS.	Section 22 of the EIS.  Section 8 of the RtS.	It is noted that a Construction Air Quality Management Plan (CAQMP) will be prepared.  The CAQMP should also include detailed of the air quality monitoring program and should be developed in consultation with Council and the EPA.
<p>2) Requirements for:</p> <p>a) All container handling equipment to meet as minimum US EPA Tier 3 I Euro Stage III or better emission standards;</p> <p>b) All container handling equipment, purchased after 2017, must meet US EPA Tier 4 or EU Stage IV emission standards;</p> <p>c) All locomotives operating on site to meet NSW best practice air emissions appropriate to the activity being undertaken.</p>	<p>These requirements are not considered reasonable or feasible for the Proposal and cannot be accepted as conditions of approval.</p> <p>In Mitigation Measure 4.1A, included in Section 22 of the EIS and reproduced in Section 8 of the RtS, SIMTA has committed to purchasing EPA Tier 3 I Euro Stage III compliance equipment for Stage 1 and agrees with condition 2(a). However, for future stages SIMTA plans to operate electric gantry cranes in the long term, in which case the proposed condition 2(b) is not supported.</p> <p>It is SIMTA's intention to comply with all, new minimum performance standards for newly manufactured non-road diesel plant</p>	<p>Sections 5.1, 10.1 and 22 and Appendix M of the EIS.</p> <p>Section 8 of the RtS.</p>	Noted.

Comment	Clarification/Response	Reference	Review Comment
	<p>and equipment.</p> <p>The Best Practices Reviews concluded that operation of the Proposal would be largely compliant with the relevant noise and air impact assessment criteria; it was therefore determined in the Best Practice(s) Review that restrictions on the rolling stock type accessing the site is not warranted for the Proposal. The imposition of the proposed conditions that restrict access to the terminal of certain types of locomotive and rolling stock are not reasonable or feasible for the Proposal.</p>		
<p>3) <i>The development (or further development) of the Operational Air Quality Management Plan, including linking the plan with:</i></p> <p><i>a) Procurement procedures or policies to facilitate the adoption of the best practice emission standards identified;</i></p> <p><i>b) Maintenance procedures, policies or plans to enable improved emission performances during overhaul/upgrades of locomotives;</i></p> <p><i>c) A clear defined strategy for implementation of electric container handling crane system, including a defined timeline and target for implementation; and</i></p> <p><i>d) Management measures contained in the EIS (i.e. anti-idling policy).</i></p>	<p>Accepted. Mitigation measures 0B, 2B and 4.1A proposed in Section 22 of the EIS and included in Section 8 of this RtS commit to these measures and will be implemented by SIMTA.</p>	<p>Section 22 of the EIS.</p> <p>Section 8 of the RtS.</p>	<p>Noted.</p> <p>The Operational Air Quality Management Plan or CEMP will ensure that the Operator keeps a legible record of all complaints received in an up-to date Complaints Register. This Complaints Register must record, but not necessarily be limited to:</p> <p>(a) the date and time, where relevant, of the complaint;</p> <p>(b) the means by which the complaint was made (telephone, mail or email);</p> <p>(c) any personal details of the complainant that were provided, or if no details were provided, a note to that effect;</p> <p>(d) the nature of the complaint;</p> <p>(e) any action(s) taken by the Operator in relation to the complaint, including any follow-up contact with the complainant; and</p> <p>(f) if no action was taken by the Operator in relation to the complaint, the reason(s) why no action was taken.</p> <p>(g) allocate an individual “complaint number” to each complaint received.</p> <p>The Complaints Register must be made available for inspection on request of the Consent Authority and Appropriate Regulatory Authority.</p>

### 3.2.4 Additional Matters

- > Cardno has previously raised concerns about the data inputs and assumptions used in the traffic impact assessments which appear to still be current as highlighted above in Section 3.1. As this study of traffic impacts is a key input into the AQIA the concerns still remain.
- > Further detail on the committed air quality monitoring program needs to be confirmed.

### 3.2.5 Recommendations

The recommendations below are identified to address the identified impacts associated with Air Quality to allow a comprehensive assessment of the proposal:

- > Prior to the issue of an Occupation Certificate (Interim or Final), written certification from a suitably qualified person(s) shall be submitted to the Principal Certifying Authority and Consent Authority stating that all works/methods/procedures/control measures/recommendations approved by the Consent Authority in the following reports (including but not limited to) have been completed:
  - Environmental Impact Statement; including
  - All other Environmental Assessment reports supporting the application.
- > An air quality monitoring program shall be carried out for the duration of construction works and operational activities by a suitably qualified and experienced air quality consultant. The results of any monitoring must be recorded and maintained in a legible form and made available to the Consent Authority and Appropriate Regulatory Authority. Within three months of commencement of construction, an air quality report shall be prepared and submitted to the Consent Authority and Appropriate Regulatory Authority for review. The report shall include but not be limited to the following information:
  - a) Air quality measurements taken at the nearest sensitive locations; and
  - b) Verification that air quality measurements at the nearest potentially affected receivers comply with all relevant assessment criteria; and
  - c) All complaints received from local residents in relation to the development; and
  - d) Where air quality measurements required under point (a) above indicate that the relevant assessment criteria are exceeded, recommendations shall be provided in relation to how air quality emissions can be satisfactorily reduced to comply with the assessment criteria; and
  - e) Following written approval from the Appropriate Regulatory Authority, any recommendations provided under point d) above shall be implemented fully. Further audits will be required every twelve (12) months from the commencement date of operation or such longer period as may be agreed to by the Appropriate Regulatory Authority.
- > Air-borne asbestos monitoring should also be considered in the air quality monitoring program during works in vicinity of waste cells of the Glenfield Waste Facility.
- > An Air Quality monitoring program should be undertaken during any subsequent stages of development at the site to ensure that any predicted emissions are validated by real world monitoring data.
- > To satisfy a commitment from the Concept Approval the data outputs of the Air Quality monitoring programs shall be used to inform the development of an effective vehicle efficiency and emissions reductions programme. This feedback loop for any data obtained should be outlined in the AQMP to ensure that maximum value can be derived from any air quality monitoring data obtained.
- > Within twelve (12) months of commencement of operations, the operator shall carry out a comprehensive Environmental Audit of the premises and submit a report of the audit to the Appropriate Regulatory Authority for approval (refer to **Table 4-7** for further details).

- > SIMTA will need to remain committed to ensuring that options for the replacement or retrofitting of appropriate electrical technology will be explored during all future stages of development. SIMTA management and procurement policies and future lease arrangements should be developed and implemented in consideration of the objectives of the BPR to ensure emission reduction opportunities are fully considered during design, planning and purchasing processes for operations and future tenancies.
- > The Construction Air Quality Management Plan (CAQMP) should also include detailed of the air quality monitoring program and should be developed in consultation with Council and the EPA.
- > A complaints' register shall be maintained by the Operator (refer to Table 4-7 for further details). The Complaints Register must be made available for inspection on request of the Consent Authority and Appropriate Regulatory Authority.
- > A 24 hour telephone complaints line shall be operated by the facility for the purpose of receiving complaints from members of the public in relation to activities conducted at the premises or by the vehicles, trains or mobile plant, unless otherwise specified.
- > The proponent is to establish a Community Liaison Committee which is to meet once every three months. The Community Liaison Committee is to include representatives from the Consent Authority and NSW EPA. Discussion at the meetings is to include implementation of development consent and licensing conditions, opportunity for community members to raise issues/concerns, review of complaints register, and other matters of concerns raised by representatives in relation to environmental impact.

### 3.3 Noise and Vibration

The proposed SIMTA RtS provides a response to the submissions made to the EIS in relation to the proposal's impacts on Noise and Vibration. This review considers information in the RtS Section 4.6 prepared by Hyder Consulting and *Appendix H – Noise and Vibration Addendum* (Wilkinson Murray, 2015) prepared by Wilkinson Murray.

#### 3.3.1 Summary

The Table below summarises the outcome of the changes to the proposal identified by the RtS.

**Table 3-5 Adequacy of Response Summary**

Concept Approval Commitments	Secretaries Environmental Assessment Requirements	Liverpool City Council Assessment
<p>The following commitments are not adequately addressed:</p>	<p>The following SEARS are not adequately addressed:</p>	<p>The following assessment recommendations are not adequately addressed:</p>
<p><i>The Proponent will carry out detailed assessments for the subsequent application stages and when the SIMTA proposal is operational, <u>including monitoring of background noise levels at nearby receivers. The monitoring data should be used to validate noise models used in these assessments.</u> The subsequent assessments should address the environmental assessment requirements, as determined by the approval authority, as a minimum. (emphasis added)</i></p> <p><i>Prior to undertaking demolition and construction on site, a Construction Noise and Vibration Management Plan should be prepared based on details of the proposed construction methodology, activities and equipment This should identify potential noise and vibration impacts and reasonable and feasible noise mitigation measures (such as those identified in this report) that may be implemented to minimise any potential impacts, including engineering and management controls.</i></p>	<p>a) assess construction noise and vibration impacts associated with construction of the intermodal facility including rail link, including impacts from construction traffic and ancillary facilities. The assessment shall identify sensitive receivers and assess construction noise/vibration generated by representative construction scenarios focusing on high noise generating works. Where work hours outside of standard construction hours are proposed, clear justification and detailed assessment of these work hours must be provided, including alternatives considered, mitigation measures proposed and details of construction practices, work methods, compound design, etc;</p> <p>b) assess operational noise and vibration impacts and identify feasible and reasonable measures proposed to be implemented to minimise operational noise impacts of the intermodal facility and rail link, including the preparation of an Operational Noise Management and Monitoring Plan;</p> <p>c) be prepared in accordance with: NSW Industrial Noise Policy (EPA 2000), Interim</p>	<ul style="list-style-type: none"> <li>• Input data, including sound power levels of plant, rail noise etc. and climatic conditions, should be clearly documented for clarity in the acoustic assessment so that input data, assumptions and noise mitigation treatments can be properly verified. Additional tables and references in the report are required to allow comprehensive assessment.</li> <li>• Existing rail noise impacts at NCA3 should be determined to confirm the assumption that the proposal will have little effect on these receivers as they are already subject to high levels of rail noise.</li> <li>• Cumulative noise impacts require reassessment for all receivers once consolidated input data is available. This should include impacts including the peak output on both sites and associated site generated road traffic.</li> <li>• The assessment should indicate if the documented noise impact is inclusive of temperature inversions, alternatively, provide two separate tables, i.e. one under neutral conditions and the second under temperature inversion conditions to clearly identify potential noise impacts under worst case conditions.</li> </ul>

Concept Approval Commitments	Secretaries Environmental Assessment Requirements	Liverpool City Council Assessment
	Construction Noise Guideline (DECC 2009), Assessing Vibration: a technical guide (DEC 2006), the Rail Infrastructure Noise Guideline (EPA 2013), Development Near Rail Corridors and Busy Roads Interim Guideline (DoP 2008), and the NSW Road Noise Policy 2011; d) All site-dedicated locomotives must meet EPA Noise Limits for Locomotives contained within the NSW operational rail licences for operation of new or substantially modified locomotives operating on the NSW network; and	

### 3.3.2 Summary of Revisions/Clarifications

The following key revisions have been made to the proposal in relation to Noise and Vibration:

- > New alignment of the rail link with updated noise modelling.
- > Updated commitment to produce a Rail Noise Management Plan.

### 3.3.3 Assessment

**Table 3-6** below contains the comments, clarifications/responses and references taken from the RtS document, with a further review comment to the RtS provided in the last column. The Table includes responses to the Council submission, along with key relevant responses from other submissions addressed in the RtS.

**Table 3-6 RtS Response Review (Noise and Vibration)**

Comment	Clarification/Response	Reference	Review Comment
<b>Council Submission Responses</b>			
<p><i>A section on the existing noise environment has been omitted from the report and therefore previous comments regarding whether the weather affected data had been removed in accordance with INP requirements could not be reviewed. In addition it appears that no further noise monitoring was carried out at the SME site as recommended in Cardno's previous review.</i></p> <p><i>The entire basis of the assessment (criteria) is determined from the noise monitoring data obtained from site. This should be included in the report, along with additional monitoring data for the SME site, or at least some commentary to explain why this is not required.</i></p>	<p>Noise survey data was presented, consistent with the Industrial Noise Policy, in the Noise and Vibration Impact Assessment for the SIMTA Concept Plan Assessment, which was accepted by the EPA and subsequently approved. This data is available with the Concept Plan Assessment, which is available on the Department of Planning and Environment's website. Background noise levels adopted for the SIMTA Project are presented within Appendix N and Section 9.2 of the EIS.</p>	<p>Section 9.2 and Appendix N of the EIS. Concept Plan Approval</p>	<p>Noted</p>
<p><i>It is understood that the current Commonwealth land proposed for the MIC site is currently utilised as educational facilities by the SME. This land is understood to also have residential accommodation. The stage 1 assessment has still not identified these receivers and does not appear to have undertaken baseline noise measurements at or in the vicinity of the site along Moorebank Avenue. As a result, these receivers have not been assessed.</i></p> <p><i>Whilst the assessment notes that the Commonwealth land occupied by the SME is zoned 'SP2 Infrastructure (defence)', the SME site is in use and may also be in use when the SIMTA site is being constructed/ operational. The site is required to be assessed for</i></p>	<p>The SME relocated from the MIC site in 2014; hence further consideration of impacts on the MIC site as an educational facility or residential area was not warranted as the MIC site would not be used for these purposes during construction or operation of the Proposal. See: <a href="http://www.defence.gov.au/id/moorebank/ProjectScope.asp">http://www.defence.gov.au/id/moorebank/ProjectScope.asp</a></p>	<p>N/A</p>	<p>Noted</p>

Comment	Clarification/Response	Reference	Review Comment
<p><i>construction and operational noise and vibration impacts to noise sensitive receivers. This was previously identified in the 2013 review but has not been subsequently addressed.</i></p>			
<p><i>The assessment of the relevant noise criteria does not appear to have taken account of any existing industrial noise in the area as per the INP requirements which may result in a lower amenity and therefore adopted assessment criteria being appropriate.</i></p> <p><i>This will affect whether the noise levels as a result of operations from the site are exceeding the INP criteria.</i></p>	<p>Background noise monitoring was undertaken to establish the noise management levels applicable to the SIMTA Project. The noise monitoring would have captured noise impacts from the Bankstown airport and trucks operating within the noise catchment areas that may be impacted by the Proposal. The INP established limits on the total noise level from all industrial noise sources affecting a receiver (which would include the operation of any existing industrial noise source) and the Proposal was assessed to be compliant with the INP criteria. Road noise from the Proposal was assessed in accordance with the Road Noise Policy and was found to contribute less than 2 dB to the total road noise, which is considered a minor impact and barely perceptible by the average person.</p>	<p>Section 9.3 and Appendix N of the EIS.</p>	<p>Noted</p>
<p><i>Two different criteria appear to have been adopted for assessment of road traffic noise. The first indicates that traffic from the project should not increase existing traffic noise levels by more than 2 dB(A), the second states the RNP noise criteria for 'residential land uses' from 'Existing Roads'. It's not clear why the second criteria has been stated in the report, as the first is the correct criteria to apply based on existing traffic noise levels which may be currently significantly below the Existing Roads criteria.</i></p> <p><i>The criteria should be based on the existing road traffic noise levels + 2dB(A), rather than maximum RNP existing roads criteria. Wilkinson Murray to confirm what the existing road traffic noise levels are and provide a comparison with and without the project so that actual impacts</i></p>	<p>Section 9.3.3 of the EIS, and Appendix N, provide an assessment of the potential impacts of the Proposal from road noise emissions. The EIS concludes that increases in road noise, from operational trucks, is considerably less than 2 dBA and therefore complies with the Road Noise Policy. No mitigation of traffic noise is therefore considered necessary for the Proposal.</p>	<p>Sections 9.3 and Appendix N of the EIS.</p>	<p>Noted</p>

Comment	Clarification/Response	Reference	Review Comment
<p>can be determined.</p>			
<p><i>There are a number of plant items that have been listed in Table 6-1 (operational noise sources). It is unclear whether the sound power levels take into account transient noise events such as shunting of train locomotives on site for example? It is understood that the data has been sourced from the Client however are the source sound power levels based on a Standard or are these derived from existing plant in an equivalent (or representative) facility?</i></p> <p><i>The LAeq noise level descriptor has been used to represent the average noise emission level of the plant items over a 15 minute period. In addition, based on previous experience there has been discrepancy between the quoted theoretical sound power data for plant and equipment and the same plant and equipment tested on-site. There is a risk that theoretical sound power levels may result in potentially lower modelled noise impacts so it is considered more appropriate to use actual measured source noise levels where feasible to minimise this risk. Wilkinson Murray to state the source of this noise data.</i></p>	<p>Transient noise events, such as horns, tonal reversing alarms and containers impacting, have the potential to cause sleep disturbance, should they occur at night. It was determined that the most likely source of transient noise is containers impacting each other (i.e. banging), which has an SWL expressed in L<sub>Amax</sub> of 118 dBA. This event was modelled to assess the potential for sleep disturbance at the receivers. The predicted L<sub>Amax</sub> levels at all receivers are less than, and therefore comply with, the sleep disturbance screening levels.</p> <p>Furthermore, the noise HRA has investigated the impact of noise from operation of the Proposal and rail noise on sleep disturbance and cognitive development in children using the World Health Organisation (WHO) community noise guidelines. The assessment was based on the 'worst case' scenario, and without noise mitigation measures being implemented. The assessment found that noise from the operation of the Proposal meets the WHO criteria. There were found to be some small exceedances of the sleep disturbance criteria from the rail noise; however, with the implementation of the best practice measures outlined in Section 10 of the EIS, these exceedances would be mitigated.</p>	<p>Section 9.3 and Appendix N of the EIS.</p>	<p>Noted</p>
<p><i>Other relevant noise sources such as truck reverse beepers have not been included in the assessment. Whilst it appears that efforts have been made to reduce the area where reversing would be required, this is likely to occur at times and can be a significant source of annoyance. Other sources not assessed are noise associated with staff movements, mobile plant (forklifts etc.),</i></p>	<p>This data is provided within Appendix N and summarised in Section N of the EIS, as follows:</p> <ul style="list-style-type: none"> <li>• Climatic conditions are presented in Section 3.1.1</li> <li>• Rail noise input data in presented in Section 3.1.2</li> <li>• Operational source levels are presented in Section 3.2.1</li> <li>• Construction source levels are presented in Section 3.6.3.</li> </ul>	<p>Section 9 and Appendix N of the EIS.</p>	<p>Noted.</p>

Comment	Clarification/Response	Reference	Review Comment
<p><i>diesel generators, chillers etc.</i></p> <p><i>When assessing the cumulative effects of noise impact from site operations, the missing sources may contribute to an unpredicted exceedance. Sources such as reverse beepers which are tonal or intermittent should also have the relevant penalties applied in accordance with the INP / AS1055.</i></p>			
<p><i>Sources assessed for Sleep disturbance have not been assessed elsewhere against the INP Intrusiveness or amenity criteria. This assessment does not address cumulative impacts of all of these sources. These sources should be included in the operational assessment or justification why they have been left out. The sleep disturbance assessment also should state whether noise penalties for impact noise sources have been added to the assumed sound power level and what the reference source of this noise level is.</i></p> <p><i>This is a major noise source and impacts could be higher than predicted if penalties have not been included.</i></p>	<p>The EPA's submission provides clarification that L<sub>Amax</sub> noise levels should be assessed in accordance with the NSW INP Application Notes. This assessment has been conducted and is documented in the SIMTA Stage 1 Rail Noise Addendum (Appendix H to the RtS) of the RtS.</p> <p>Mitigation measure 3C, included in the compiled mitigation measures in Section 22 of the EIS and updated in Section 8 of the RtS, commits to development of a Rail Noise Management Plan that will outline measures for the monitoring and management of rail noise.</p>	<p>Section 22 of the EIS. Sections 8 and Appendix H of the RtS.</p>	<p>Concern remains that noise levels in surrounding residential areas will be exposed to noise above or close to the relevant noise management criteria.</p> <p>The noise mitigation measures for rail transport are vaguely defined and obviously subject to further negotiation with public authorities. Given the concerns raised by OEH and the EPA that friction modifiers could create water pollution problems, there is the possibility that the noise mitigation measures will be so restricted that they may not be sufficiently effective.</p> <p>It is highly recommended that the noise monitoring program is carried out by a suitably qualified and experienced acoustic consultant and made available to the Consent Authority and Appropriate Regulatory Authority. Within three months of the commencement of construction and operational activities, an acoustic report shall be prepared and submitted to the Consent Authority and Appropriate Regulatory Authority for review. The report shall include but not be limited to the following information:</p> <ol style="list-style-type: none"> <li>a) Noise measurements taken at the nearest noise sensitive locations;</li> <li>b) Verification that noise levels at the nearest potentially affected receivers comply with all relevant assessment criteria;</li> <li>c) All complaints received from local residents in relation to the</li> </ol>

Comment	Clarification/Response	Reference	Review Comment
			<p>development; d) Where noise measurements required under point a) above indicate that the relevant assessment criteria are exceeded, recommendations shall be provided in relation to how noise emissions can be satisfactorily reduced to comply with the assessment criteria; and</p> <p>Following written approval from the Appropriate Regulatory Authority, any recommendations provided under point d) above shall be implemented fully. Further audits will be required every twelve (12) months from the commencement date of operation or such longer period as may be agreed to by the Appropriate Regulatory Authority.</p>
<p><i>It is unclear if the Railcorp noise data used for the rail noise assessment is of rail cars loading and unloading on site, diesel locomotives idling or takes into account shunting of rail cars and other transient events such as containers etc. being dropped onto hardstand areas. The assessment also does not identify at what location within the proposed rail balloon loop the assessment was taken. Source sound power levels (and conditions, i.e. rail cars shunting etc.) have not been documented other than a single reference in the sleep disturbance section of the report (Refer Section 6.2). In this section, an LAmax sound power level of 118dB(A) is referenced for these activities.</i></p> <p><i>For assessment of LAeq noise levels from rail activities, the assessment should clearly state the sound power levels used so that the assessment inputs and outcomes can be verified.</i></p>	<p>The TfNSW (previously RailCorp) rail noise data was used for the rail noise assessment only. In accordance with the Rail Infrastructure Noise Guideline (RING), the rail noise assessment investigates potential impacts due to trains operating beyond the SIMTA site boundary. Noise emissions from trains within the SIMTA site boundary are included in the operational noise assessment and assessed in accordance with the INP. The rail noise assessment includes noise from both locomotives and wagons.</p> <p>The Nordic prediction algorithm, which is accepted by NSW EPA, was used for the rail noise assessment for the movement of trains between the SSFL and the SIMTA site. The Nordic algorithm is based on reference noise levels rather than sound power levels. The reference noise levels used in the assessment were sourced from the TfNSW databases.</p>	<p>Appendix N of the EIS.</p>	<p>Noted, however as stated by SIMTA elsewhere in the RtS report “It is noted that the occurrence of rail squeal is difficult to predict.”. Concerns remain that rail squeal in particular has not been adequately modelled and that impacts may be greater than anticipated in the RtS and EIS.</p>

Comment	Clarification/Response	Reference	Review Comment
<p><i>Predicted noise levels could be too low as some sources may not have been incorporated.</i></p>			
<p><i>The predicted rail noise levels exceed the criteria at receiver NCA3. There are assertions that these receivers will be impacted by high levels of rail noise anyway, but existing levels from the SSFL are not provided for a comparison. Actual existing rail noise levels are required to validate this assumption. Impacts on the adjacent SME have also not been considered. The level of exceedance and associated loss of amenity at NCA3 could be considerable without a quantitative assessment of the predictions against existing rail noise given the predicted exceedance of criteria. Particularly given that the predicted exceedance due to curve squeal at this location is 11 dB(A).</i></p>	<p>Publicly available data on existing rail noise levels at the most sensitive receivers in NCA3 is unavailable. Due to the number of rail movements along SSFL and Main Southern Lines being significantly higher than those proposed for the Proposal, an engineering judgement was made that the existing rail noise levels in this area would be higher than the levels predicted from the Proposal. This will be confirmed through measurements prior to Stage 1 Operations and included in the Rail Noise Management Plan (RNMP). For clarity, mitigation measure 3C has been updated to include a commitment for rail noise monitoring to be undertaken prior to commencement of operations as part of development of the RNMP.</p>	<p>Section 9 of the RtS</p>	<p>The conclusion of a noise assessment should not be solely dependent on an “engineering judgement”.</p> <p>The updated analysis shows an exceedance at receiver NCA3 which is predicted to be slightly more severe than previously reported.</p> <p>The proponent should empirically demonstrate that this exceedance is immaterial or should provide sufficient mitigation measures.</p> <p>Neither has occurred in this case.</p> <p>Given that the proponent seeks to delay empirical assessment of the existing conditions at receiver NCA3 until the RNMP is developed, any conditions of approval should ensure adequate mitigation measures are imposed to mitigate the impacts of the proposal.</p>
<p><i>The construction noise assessment does not include modelling inputs and assumptions and does not indicate where the sources have been located on the site, or source to receiver distance assumptions. More information is required to confirm the stated results of “noise emissions would be expected to comply with the ICNG NMLs during all works periods at all receivers” Potential under-prediction of construction noise impacts may have occurred depending on where the assessed sources have been located.</i></p>	<p>The construction areas are shown in Figure 1-2 in the Noise and Vibration Impact Assessment, Appendix N of the EIS. For the purposes of modelling, the construction noise sources identified in Appendix N and Section 9.3 of the EIS, are spread over the site, representing the most likely scenario. For the construction of the rail link, a number of logical sections where modelled to capture the worst case noise levels at receivers close to the Rail link. These sections included the SSFL connection, Georges River crossing, Georges River to Moorebank Avenue, and Moorebank Avenue to the SIMTA site.</p>	<p>Section 9.3 Appendix N of the EIS.</p>	<p>It would be useful for these sections to be mapped for transparency and to permit reproduction of the assessment’s results.</p>
<p><i>It is unclear if the cumulative assessment has been reviewed and documented under temperature inversion conditions, as the report has identified that temperature inversions will occur at the</i></p>	<p>The scenario used for the cumulative assessment involves operations from the Proposal and Early Works of the MIC Proposal. The MIC Proposal indicates that early works construction activities will occur during daytime only. Accordingly, the cumulative assessment in the Noise and</p>	<p>Section 19 and Appendix N of the EIS</p>	<p>Western Sydney experiences frequent strong temperature inversions in the winter months. These inversions can form after sunrise and persist for hours under specific conditions. Localised inversions are known to more readily</p>

Comment	Clarification/Response	Reference	Review Comment
<p>site.</p> <p><i>Temperature inversion can add to noise impact levels. If the cumulative assessment has not taken this into account, the predicted noise levels documented in the report may be lower than expected.</i></p>	<p>Vibration Impact Assessment (Appendix N) for the Proposal is for the daytime period only, when temperature inversions are not likely to occur.</p>		<p>form over river valleys, like the Georges River which is close to the SIMTA site. Consequently it appears that inversion conditions could occur during construction phase working hours.</p> <p>If the EIS is to assess and mitigate a worst case scenario impact, it should consider inversion conditions during working hours.</p>
<p><i>The construction noise assessment does not include modelling inputs and assumptions and does not indicate where the sources have been located on the site, or source to receiver distance assumptions.</i></p> <p><i>More information is required to confirm the stated results of “noise emissions would be expected to comply with the ICNG NMLs during all works periods at all receivers”</i></p> <p><i>Sources and key modelling input assumptions have been omitted from the assessment. Therefore a rigorous review of the assessment is not possible with under-prediction of exceedances potentially occurring and subsequent provision of inadequate mitigation measures</i></p>	<p>The construction areas are shown in Figure 1-2 in the Noise and Vibration Impact Assessment, Appendix N of the EIS. For the purposes of modelling, the construction noise sources identified in Appendix N and Section 9.3 of the EIS, are spread over the site, representing the most likely scenario. For the construction of the rail link, a number of logical sections where modelled to capture the worst case noise levels at receivers close to the Rail link. These sections included the SSFL connection, Georges River crossing, Georges River to Moorebank Avenue, and Moorebank Avenue to the SIMTA site.</p>	<p>Section 9.3 Appendix N of the EIS.</p>	<p>It would be useful for these sections to be mapped for transparency and to permit reproduction of the assessment’s results.</p>
<p><i>Input data, including sound power levels of plant, rail noise etc. and climatic conditions, should be clearly documented for clarity in the acoustic assessment so that input data, assumptions and noise mitigation treatments can be properly verified. Additional tables and references in the report are required to allow comprehensive assessment.</i></p>	<p>This data is provided within Appendix N and summarised in Section N of the EIS, as follows:</p> <ul style="list-style-type: none"> <li>• Climatic conditions are presented in Section 3.1.1</li> <li>• Rail noise input data in presented in Section 3.1.2</li> <li>• Operational source levels are presented in Section 3.2.1</li> <li>• Construction source levels are presented in Section 3.6.3.</li> </ul>	<p>Section 9 and Appendix N of the EIS</p>	<p>Noted.</p>
<p><i>It is noted that lubrication on the tracks has been identified as a mitigation</i></p>	<p>Rail grinding and the application of friction modifiers are standard practice for mitigating rail squeal and are</p>	<p>Hanson et al. <i>Curve Squeal:</i></p>	<p>Noted. However this assumes that the geometry of the rail link is fixed. Given that this proposal is</p>

Comment	Clarification/Response	Reference	Review Comment
<p><i>measure for wheel squeal. Similar applications of this has been used by Sydney Trains, but it is unclear whether this has been effectively introduced. Further, the impact of wheel squeal may be further reduced by profile grinding of the rails to help keep the flange away from the rail to minimise stick slip effects. Real world examples should be cited with monitoring data provided to determine the effectiveness of the proposed mitigation measures.</i></p>	<p>employed by TfNSW across the NSW rail network. In a paper presented by TfNSW at INTER.NOISE 2014, lubrication/friction modification and grinding were identified as the most effective countermeasures that could be applied to rail track for mitigating curve squeal.</p> <p>Mitigation measures for the Proposal have been updated to include a commitment to rail grinding in accordance with TfNSW's specifications, in Section 8 of the RtS. This approach has been proposed for the Proposal and has been accepted by NSW EPA.</p>	<p><i>Causes, Treatments and Results.</i> INTER.NOISE 2014; Melbourne, Australia. Section 8 of the RtS.</p>	<p>still at a pre-determination stage, there is still the option to vary the rail link design to increase curve radii and reduce noise impacts.</p>
<p><i>Cumulative noise impacts require reassessment for all receivers once consolidated input data is available. This should include impacts including the peak output on both sites and associated site generated road traffic.</i></p>	<p>The Concept Plan Assessment contained an assessment of cumulative impacts associated with operation of the SIMTA Project and the MIC Proposal at a combined TEU throughput of 1 million TEU and associated warehousing, shared between the two sites.</p> <p>Assessment for the cumulative impacts of the Proposal and the MIC Proposal considered the Early Works of the MIC Proposal and annual road freight throughput of 250,000 TEU at the Stage 1 site, including traffic impacts for this scenario.</p>	<p>Section 19 and Appendix N of the EIS.</p>	<p>Given that the MIC and SIMTA proposals continue to evolve and may merge, there is a need to update the Cumulative Impacts assessment with each stage of the project. The studies undertaken for the SIMTA concept approval may no longer adequately model the impact of either proposal.</p>
<p><i>Construction noise risk was not assessed against the WHO guideline to the same level of quantitative rigor as the operational noise risk. There was also no assessment of the impact of the noise from the Stage 1 proposal on regional noise impacts. A quantitative assessment of the associated health risk could not be undertaken.</i></p>	<p>The Noise and Vibration Impact Assessment, included as Appendix N and summarised in Section 9 of the EIS, addressed the SEARs and all aspects were conducted in general accordance with relevant NSW Government guidelines and policies. It is not standard practice to assess noise impacts on a regional scale.</p>	<p>Section 9 and Appendix N of the EIS</p>	<p>Construction noise impacts on human health should be assessed to the same rigour as operational noise impacts.</p> <p>Given the large size of this project, a regional scale human health assessment considering noise is likely appropriate even if it not standard practice.</p>
<b>Other Agency Comments</b>			
<p><b>TfNSW</b></p> <p><i>The EIS predicts that the rail link between the proposed terminal and the SSFL will be a major source of potential noise impact, including locomotive noise and</i></p>	<p>The Noise and Vibration Impact Assessment, included as Appendix N and summarised in Section 9 of the EIS, identifies the Rail link as a potential source of noise impacts, primarily in the case where rail squeal occurs. It is noted that the occurrence of rail squeal is difficult to</p>	<p>Sections 9.3, 9.4 and 22 and Appendices F and N of the EIS. Sections 6.3 and 8 and Appendix</p>	<p>It appears that the modified rail link as proposed in the RtS report may have a smaller curve radius than the original rail link alignment. Consequently Cardno has concerns that the new alignment may impose even greater noise impacts.</p>

Comment	Clarification/Response	Reference	Review Comment
<p><i>idling, curve squeal, brake squeal, bunching and stretching. There is no evidence to support the "no curve gain" predicted noise from the rail link being achievable. TfNSW consideration suggests curve squeal may be louder than predicted in the EIS.</i></p> <p><i>It is requested that the rail link is designed to avoid curve radii of less than 500 metres where possible in order to minimise squeal noise impacts. It is requested that rail lubrication is used to mitigate squeal noise from tight radius curves. It is requested that the use of top-of-rail friction modification should also be investigated.</i></p>	<p>predict, and therefore, scenarios have been presented both with and without rail squeal. The modelling predictions which include rail squeal indicate the potential for exceedances of criteria and the requirement for mitigation, such as the application of friction modifiers to the Rail link.</p> <p>The Noise and Vibration Impact Assessment and Best Practices Review, included as Appendix N of the EIS, recommend that friction modification be considered for curved sections of the Rail link for squeal mitigation. This recommendation has been adopted within Mitigation Measure 3B, included in Appendix 22 of the EIS and reproduced in Section 8 of this RtS, which commits to the installation of friction modifiers on sections of the Rail link where rail curve squeal is likely to occur. The use of the term 'friction modifiers' was intended to encompass a number of squeal mitigation strategies which are based upon the application of a grease, or similar substance, to particular areas of the rail track. Such strategies include 'gauge face lubrication' and 'top-of-rail friction modification' and these would be selected during detailed design and the development of the Rail Noise Management Plan, as required under Mitigation Measure 3C (refer to Section 22 of the EIS and updated in Section 8 of this RtS).</p> <p>Design of the Rail link has sought to maximise the radius of curves to the greatest extent practicable; however, a number of constraints are present that restrict the size of the radii of the Rail link curves including the need to minimise impacts within the Glenfield Waste Facility, the Georges River riparian zone, and avoidance of the need for the Rail link to connect directly to the SSFL flyover and constraints within the SSFL corridor at the northern point of connection. The Rail link design has been progressed in consultation with ARTC and design considerations are outlined in the Rail Access Report, included as Appendix F of the EIS and updated in Appendix B of this RtS.</p>	<p>B of this RtS.</p>	<p>The SIMTA response to the TfNSW comment admits that wheel squeal is difficult to predict. This suggests that the updated noise impact assessment of the rail link may not turn out to be correct. This project should not receive a positive determination until this uncertainty can be reduced or, adequate mitigation measures which will scale to address the impacts which emerge.</p>
<p><i>It is noted that the proposal includes a port shuttle service which will run approximately 10 freight train movements per day on the SSFL between the</i></p>	<p>The Rail Access Report (Appendix F of the EIS) discusses consultation undertaken with ARTC to date relating to the development of the Rail link design and availability of train paths to accommodate the Proposal. Noise impacts</p>	<p>Sections 8 and 9 and Appendices F, N and M of the EIS.</p>	<p>TfNSW is clearly not confident that the proposal will be able to mitigate noise adequately without the use of special rail wagons. SIMTA rejects this mitigation measure as unnecessary despite</p>

Comment	Clarification/Response	Reference	Review Comment
<p><i>terminal and Port Botany, with potential for noise impacts from increased train passbys on the SSFL. For the port shuttle the recommended approach of using locomotives that comply with ARTC's Environment Protection Licence 3142 is not sufficient to mitigate impacts on the main line.</i></p> <p><i>It is requested the proponent prepares management measures including those related to locomotives, locomotive noise, vehicle idling, trucks and vehicles as part of any future Stage 2 SSD application. The EIS recommended use of steering, permanently coupled "multi-pack" wagons for the port shuttle service is supported.</i></p>	<p>associated with the movement of freight on the SSFL were assessed and approved under Approval No. 05_0089, which accounts for freight movements generated by an IMT in the south-western Sydney area. As noted in Appendices F and N of the EIS, the preliminary independent empirical analysis concluded that there was currently likely to be up to 10 train paths available each way on the freight network between Port Botany and Moorebank; hence upgrades to the SSFL would not be required to accommodate the Proposal. As rail movement on the SSFL is subject to existing development approval and on-going operational management by ARTC, the movement of rail traffic, once on the SSFL, is outside of the scope of the Proposal.</p> <p>Any future increase in freight movement that may require augmentation works on the SSFL is expected to be subject to separate development approval and would be assessed in accordance with the RING. Noise management measures would be developed to address noise impacts associated with future development stages as part of the impact assessment process undertaken for future stages. This will include a review of noise and air quality impacts against the management measures identified in the Best Practice Reviews to determine the appropriateness of those measures for the development approval stage.</p> <p>The Best Practices Review concluded that operation of the Proposal would be largely compliant with the relevant noise and air impact assessment criteria; it was therefore determined in the Best Practice(s) Review that restrictions on the rolling stock type accessing the site is not warranted for the Proposal. The imposition of the proposed conditions that restrict access to the terminal of certain types of locomotive and rolling stock are not reasonable or feasible for the Proposal.</p>	<p><a href="http://www.micl.com.au">www.micl.com.au</a> Accessed: 24 August 2015</p>	<p>predicted exceedances at a sensitive receiver. Cardno recommends that the permanently coupled wagons recommended by TfNSW be required as a condition of consent for Stage 1. Failure to impose this condition at Stage 1 may make it difficult to impose on a later stage.</p>
<p><b>EPA</b></p> <p><i>All feasible and reasonable mitigation measures should be implemented for the rail link.</i></p>	<p>Section 22 of the EIS provides a compilation of mitigation measures which has been prepared to ensure that all feasible and reasonable measures would be implemented to minimise noise impacts associated with the construction</p>	<p>Section 22 of the EIS. Section 8 of this RtS.</p>	<p>Both the EPA &amp; TfNSW have proposed mitigation measures which would reduce the noise impacts of the rail link or other activities on site. SIMTA has consistently rejected these additional mitigation measures. Cardno</p>

Comment	Clarification/Response	Reference	Review Comment
	<p>and operation of the Rail link.</p> <p>The mitigation measures presented in Section 22 of the EIS have been revised in response to the submissions received and are included in Section 8 of this RtS.</p>		<p>supports the EPA &amp; TfNSW mitigation measures to reduce the noise impacts of the proposal.</p>
<p><i>More mitigation measures should be committed to by the proponent, or be required by conditions of approval, if DP&amp;E decide to approve the project. The EPA recommends that for those locations where it is not possible to meet the required noise level criteria, mitigation measures such as noise walls, or architectural treatments should be implemented.</i></p>	<p>The Noise and Vibration Impact Assessment, included as Appendix N and summarised in Section 9 of the EIS, indicates that, subject to mitigating rail squeal, rail noise levels comply with relevant criteria at all receiver locations in Moorebank, Wattle Grove and Glenfield. At some locations in Casula, <math>L_{Aeq, period}</math> rail noise levels are predicted to exceed the night time criteria of 40 dBA by up to 4 dBA. These receivers are located in close proximity to the Southern Sydney Freight Line (SSFL) and it is most likely that the existing night time <math>L_{Aeq, period}</math> rail noise levels are significantly higher than 40 dBA. It should be noted that the applicable <math>L_{Aeq, period}</math> rail noise criteria for receivers near the SSFL, as defined in the Rail Infrastructure Noise Guideline (RING), is 60 dBA during the night time. RING does not provide specific guidance on establishing <math>L_{Aeq, period}</math> noise criteria for private non-network rail lines at receivers with significant existing levels of rail noise from a network line; however in the case of network lines, if the existing levels of rail noise exceed the relevant criteria, the new development should not cause a noticeable increase in <math>L_{Aeq, period}</math> rail noise levels. RING considers an increase in <math>L_{Aeq, period}</math> of 2 dB or more to be noticeable.</p> <p>Modelling has been undertaken to assess the noise impacts of the realigned Rail link and is summarised in Section 7.1.3 and included in Appendix H of this RtS.</p> <p>Accordingly, it is recommended that if the <math>L_{Aeq, period}</math> noise levels from the SIMTA Rail link exceed the amenity criteria at nearby receivers and cause total rail noise levels to increase by 2 dB or more, reasonable and feasible mitigation should be implemented. Mitigation measure 3C has been updated and commits to preparation of a Rail Noise Management Plan and has been updated to include a commitment to undertake background rail noise monitoring prior to commencement of operations to</p>	<p>Sections 9.3 and 22 and Appendix N of the EIS.</p> <p>Sections 7 and 8, and Appendix H to this RtS.</p>	<p>The EPA has recommended substantial mitigation measures to reduce the noise impacts of the proposal to an acceptable level.</p> <p>SIMTA's response is to argue that the noise impacts are not significant and that firm mitigation measures are not required because a Rail Noise Management Plan will be created prior to operations commencing.</p> <p>Cardno is of the view that the rail noise management plan will only be as effective as the conditions of consent and mitigation measures imposed on Stage 1.</p> <p>Any determination should ensure that the intent and result of the EPA's recommended mitigation measures is retained.</p>

Comment	Clarification/Response	Reference	Review Comment
	<p>establish LAeq, period rail noise levels in accordance with the RING. Mitigation measures will be developed and implemented where exceedances are predicted.</p>		
<p><b>NSW Health</b></p> <p><i>Train pass-by events are potentially sleep-disturbing. The guideline maximum allowed (LAmax) in the Rail Infrastructure Noise Guideline is high and we would expect awakenings to occur at a lower level. The findings of Screening Health Impact Assessment support this. We therefore would advocate as a condition of consent all feasible mitigation of the preferred southern rail link including lubrication and maintenance of rail and noise barriers to minimise affected receivers in the Casula and Glenfield areas. An Operational Noise and Vibration Management Plan may be an appropriate mechanism to monitor and achieve best health protective noise outcomes.</i></p>	<p>The Health Risk Assessment presented in Section 10.1 and Appendix O of the EIS reviewed the impact of noise from the operations of the IMT and rail noise on sleep disturbance and cognitive development in children using the WHO community noise guidelines. The review found that there were small exceedances of sleep disturbance criteria resulting from the rail noise, under a 'worst case' scenario where no mitigation measures were applied.</p> <p>Mitigation measure 3B commits SIMTA to the installation of friction modifiers on the Rail link and the effectiveness of their application confirmed with short-term noise monitoring. Additionally, Mitigation Measure 3C, included in Section 22 of the EIS and updated in Section 8 of this RtS, commits to the preparation of a Rail Noise Management Plan (RNMP) (or equivalent) that would prescribe monitoring, maintenance and mitigation requirements in the event that rail noise criteria are exceeded. The RNMP would form a component of the Operational Environmental Management Plan for the proposal.</p> <p>The Health Risk Assessment presented in Appendix O of the EIS concludes that through the implementation of these measures, along with those identified in the Best Practice Review, mean that the health risk to the community as a result of the proposal would be low. An addendum health risk assessment has been prepared to consider the health impacts of the amended Rail link, and concluded that the health risk to the community remains the same as that presented in the EIS. Additional mitigation measures, such as noise walls, are not considered reasonable or feasible for the Proposal.</p>	<p>Section 22 and Appendix O of the EIS.</p> <p>Sections 7 and 8 and Appendix N of this RtS</p>	<p>Cardno endorses NSW Health's recommendation that all feasible mitigation measures should be implemented on the rail link.</p>

### 3.3.4 Additional Matters

- > Cardno previously raised specific concerns that some specific noise impacts as predicted by the EIS Noise Impact Assessment do not appear to correlate with standard distance loss and calculation checks. SIMTA has not provided any explanation or alternative calculations to justify the discrepancies. The concerns previously identified were as follows:
  - *“A reach stacker has a sound power level of 106 dB(A) there are 6 of them (114 dB(A)), but only assumed to run 50% of the time (111 dB(A)). Reduce by 50% to account for half located on the eastern side and half on the western side. This indicates an LAeq sound power level for the eastern stackers alone of 108 dB(A). The distance to NCA3 is 220m indicating a resultant noise level assuming no screening of 53 dB(A). Table 3.2 indicates a predicted level of 33 dB(A) at NCA3, and the contour maps show a similar value. This is therefore assuming no other contributions from the site are influencing the noise level at NCA3 and 20 dB(A) of screening is being achieved by topography. This seems unlikely.”*
  - *“There is no explanation or base information to allow review of the source of the Sleep Disturbance screening level. In addition standard spherical spreading calculations indicate that for a distance of 220m (from the site to NCA3), there should be a distance loss of approximately 55 dB(A). This indicates a predicted level at the receiver of 63 dB(A). The predicted level in the report is 49 dB(A). We therefore assume that significant shielding between the proposed container stacking and the receivers has been allowed for and no clear line of sight exists between the source and receiver. If predictions have not been calculated correctly the predicted impacts could be significantly higher than stated..”*
- > Only vibration from rollers was assessed as part of the Stage 1 EIS. Cardno noted that the rail link bridge would likely be constructed using piling techniques which could generate vibration in the vicinity of the existing T2/East Hills Line railway bridge. No assessment of this risk or other potential vibration impacts has been provided.
- > Prior to the issue of an Occupation Certificate (Interim or Final), written certification from a suitably qualified person(s) shall be submitted to the Principal Certifying Authority and Consent Authority stating that all works/methods/procedures/control measures/recommendations approved by the Consent Authority in the following reports (including but not limited to) have been completed:
  - Environmental Impact Statement; including the Noise and Vibration Impact Assessment and all other Environmental Assessment reports supporting the application.
- > It is noted that the cumulative impact scenarios are still uncertain given the ongoing co-evolution of the SIMTA and MIC proposals. Cardno raised concerns previously that the cumulative impact noise modelling conducted for the concept plan approval and SIMTA Stage 1, may no longer represent the current cumulative impact scenario. SIMTA’s cumulative impact scenario considered SIMTA operating in conjunction with the MIC construction phase. This was previously justified by SIMTA claiming that the MIC would not commence operations until 2019 and that only future SIMTA stages would operate in concert with the MIC operations phase. Cardno (and government agencies) questioned this justification given that a delay of SIMTA Stage 2 operations and construction to beyond 2019 could occur. Although SIMTA’s previous arguments have been restated in response to agency comments, no new information has been provided in response to these questions.
- > Cardno expressed concerns that SIMTA’s cumulative assessment examined only amenity criteria rather than the most stringent of either amenity or intrusiveness and that not all input information and assumptions have been provided. This raises concerns that the Noise Impact Assessment may not be strictly in accordance with the INP methodology or the ICNG. No comment on this has been provided by the RtS report.
- > No further information has been provided by the applicant in relation to mitigation measures which will ensure that all locomotives comply with the EPA noise limits.

### 3.3.5 **Recommendations**

The recommendations below are identified to address the identified impacts associated with noise and vibration to allow a comprehensive assessment of the proposal:

- > An independent review of the noise assessment should be conducted to address the concerns expressed by multiple agencies.
- > It is highly recommended that the noise monitoring program is carried out during construction and operational phases by a suitably qualified and experienced acoustic consultant and made available to the Consent Authority and Appropriate Regulatory Authority. Within three months of the commencement of construction and operational activities, an acoustic report shall be prepared and submitted to the Consent Authority and Appropriate Regulatory Authority for review. The report shall include but not be limited to the following information:
  - a) Noise measurements taken at the nearest noise sensitive locations;
  - b) Verification that noise levels at the nearest potentially affected receivers comply with all relevant assessment criteria;
  - c) All complaints received from local residents in relation to the development;
  - d) Where noise measurements required under point a) above indicate that the relevant assessment criteria are exceeded, recommendations shall be provided in relation to how noise emissions can be satisfactorily reduced to comply with the assessment criteria; and

Following written approval from the Appropriate Regulatory Authority, any recommendations provided under point d) above shall be implemented fully. Further audits will be required every twelve (12) months from the commencement date of operation or such longer period as may be agreed to by the Appropriate Regulatory Authority.

- > Prior to the issue of an Occupation Certificate (Interim or Final), written certification from a suitably qualified person(s) shall be submitted to the Principal Certifying Authority and Consent Authority stating that all works/methods/procedures/control measures/recommendations approved by the Consent Authority in the following reports (including but not limited to) have been completed:
  - Environmental Impact Statement; including
  - All other Environmental Assessment reports supporting the application.
- > The project should not be determined without conditions of consent that mandate the implementation of mitigation measures that mitigate all noise criteria exceedances generated by the project.
- > All friction modification devices and products to be used, should be assessed for impacts on water quality.
- > The vibration assessment should address the potential impacts of piling, particularly in the vicinity of the existing railway bridge.
- > Construction noise impacts under temperature inversion conditions should be modelled. As noted previously, inversions can form and persist during daylight hours under specific conditions.
- > Alternative rail link alignments with broader curves should be considered to avoid noise emissions during operation.
- > The Human Health Impact assessment should consider noise at a regional scale.
- > Specific mitigation measures as recommended by TfNSW, the EPA and NSW Health should be mandated as conditions of consent.
- > Council has concerns in relation to the ongoing regulation of the proposed facility. Council is not equipped with the resources and manpower to oversee a facility of this size and operational capacity. This will lead to inadequate regulation of the site with major implications for the environment and community. The Federal and State Government must take a lead role in the regulation of the development if approval is granted. This will ensure that the community and environment are best protected from the impacts that are likely to result from the proposed development. The EPA is therefore believed to be the most appropriate regulatory authority for the proposed development and associated activities.

### 3.4 Hazard and Risk

The proposed SIMTA RtS provides a response to the submissions made to the EIS in relation to the proposal's impacts on Hazard and Risk. This review considers information in the RtS Section 4.6 and EIS prepared by Hyder Consulting.

#### 3.4.1 Summary

The Table below summarises the outcome of the changes to the proposal identified by the RtS.

**Table 3-7 Adequacy of Response Summary**

Concept Approval Commitments	Secretaries Environmental Assessment Requirements	Liverpool City Council Assessment
<p>The following commitments are not adequately addressed:</p>	<p>The following SEARS are not adequately addressed:</p>	<p>The following assessment recommendations are not adequately addressed:</p>
<p><b><u>Dangerous Goods:</u></b></p> <p>&gt; The Proponent commits to undertaking a preliminary hazard assessment (PHA) either during the preparation of the subsequent detailed planning applications (where tenants and purposes have been defined) or by tenants during the operational phase of development, as required by State Environmental Planning Policy No. 33 Hazardous and Offensive Development (SEPP No. 33).</p> <p>Refer to; <i>Revised Statement of Commitments in Environmental Assessment – Transitional Part 3A Concept Application</i> (Urbis 2014)</p>	<p><b>13. Hazards and Risks</b> – including but not limited to:</p> <p>A preliminary risk screening completed in accordance with <i>State Environmental Planning Policy No. 33 – Hazardous and Offensive Development and Applying SEPP 33</i> (DoP 2011), with a clear indication of class, quantity and location of all dangerous goods and hazardous materials associated with the proposal. Should preliminary screening indicate that the proposal is 'potentially hazardous,' a Preliminary Hazard Analysis (PHA) must be prepared in accordance with <i>Hazardous Industry Planning Advisory Paper No. 6 – Guidelines for Hazard Analysis</i> (DoP 2011) and <i>Multi-Level Risk Assessment</i> (DoP 2011).</p> <p>The PHA should:</p> <ol style="list-style-type: none"> <li>Estimate the risks from the facility;</li> <li>Be set in the context of the existing risk profiles for the intermodal facility and demonstrate that the proposal does not increase the overall risk of the area to unacceptable levels; and</li> <li>Demonstrate that the proposal complies with the criteria set out in the <i>Hazardous Industry Planning Advisory Paper No. 4 – Risk Criteria for Land Use Safety Planning</i>.</li> </ol>	<ul style="list-style-type: none"> <li>It is recommended that the transit and handling of dangerous goods and/or potentially hazardous materials be considered and assessed to ensure that the appropriate level of risk is assigned and appropriate mitigation measures are outlined, with these contributing to the procedures for freight acceptance to minimise risks along transit corridors.</li> </ul> <p>These procedures require development in consultation with third party authorities involved in the goods supply chain (i.e. customs and road/rail transport companies) to ensure that risks and hazards associated with unknown or uncontrolled dangerous or hazardous materials are managed appropriately.</p>

### **3.4.2 Summary of Revisions/Clarifications**

The following key revisions have been made to the proposal in relation to Hazard and Risk:

- > The main changes to the proposal relate to an amended Rail link alignment and the corresponding overbridge location across Moorebank Avenue. The main purpose of the amended Rail link was to avoid the previous Rail link entering the East Hills Rail Corridor (EHRC) as a result of comments on the design from RailCorp.

The implications for these design changes in relation to introducing additional hazards and risks are deemed to be negligible, however more general comments on the level of assessment still remain which are outlined further below.

### **3.4.3 Assessment**

The Table below contains the comments, clarifications/responses and references taken from the RtS document, with a further review comment to the RtS provided in the last column. The Table includes responses to the Council submission, along with key relevant responses from other submissions addressed in the RtS.

**Table 3-8 RtS Response Review (Hazard and Risk)**

Comment	Clarification/Response	Reference	Review Comment
<b>Council Submission Responses</b>			
<p><i>It is recommended that the transit and handling of dangerous goods and/or potentially hazardous materials be considered and assessed to ensure that the appropriate level of risk is assigned and appropriate mitigation measures are outlined, with these contributing to the procedures for freight acceptance to minimise risks along transit corridors. These procedures require development in consultation with third party authorities involved in the goods supply chain (i.e. customs and road/rail transport companies) to ensure that risks and hazards associated with unknown or uncontrolled dangerous or hazardous materials are managed appropriately.</i></p>	<p>A preliminary hazard assessment is not required for the Proposal as the facility would not receive or store dangerous goods (classes 5.1, 5.2, 6.1 and/or 8) in quantities greater than the screening thresholds identified in SEPP 33 requirements. Refer to Section 18.3 of the EIS.</p> <p>The transport of any dangerous goods to be accepted by the Proposal by road and rail would comply with the <i>Dangerous Goods (Road and Rail Transport) Act 2008</i> and the <i>Dangerous Goods (Road and Rail Transport) Regulation 2014</i>. Refer to mitigation measure 12E in Section 22.</p>	<p>Section 18 and Section 22 of the EIS</p>	<p>It is noted that a Preliminary Hazard Assessment (PHA) may not be required according to intended receiving and storage uses and associated SEPP 33 screening thresholds; however a commitment was made in the Concept Approval which states:</p> <ul style="list-style-type: none"> <li>• <i>“The Proponent commits to undertaking a Preliminary Hazard Analysis either during the preparation of the subsequent detailed planning applications (where tenants and purposes have been defined) or by tenants during the operational phase of development, as required by State Environmental Planning Policy No.33 Hazardous and Offensive Development (SEPP No.33)</i></li> <li>• <i>Once the level of risk has been identified the aim will be to reduce the risk to 'as low as reasonably possible' (ALARP) through the application of specific operational management procedures that would form part of a framework for managing risks, captured within the facility's Hazard and Risk Management Plan and Emergency Response Plan.”</i></li> </ul> <p>This commitment is important to Council and the community as there is still a concern that dangerous goods may be potentially transported to/from the site through highly populated areas and stored on site, either inadvertently or on purpose by unscrupulous persons (i.e. as part of a vandalism or terrorist act).</p> <p>Proactive operational procedures to ensure compliance with <i>Dangerous Goods (Road and Rail Transport) Act 2008</i> and the <i>Dangerous Goods (Road and Rail Transport) Regulation 2014</i> should also be implemented and supported by ongoing proactive and preventative security strategies and measures.</p> <p>Due to the strategic significance, operational scale and profile of the proposed intermodal, SIMTA should commit to undertaking further consultation to seek advice from</p>

Comment	Clarification/Response	Reference	Review Comment
			<p>the Office of Transport Security (OTS), an Australian Government Department, as OTS contributes to the wellbeing of all Australians by helping to develop transport systems that are more secure against the threat of terrorism and unlawful acts.</p> <p>The existing proposed security measures outlined in Section 4.5.5 of the EIS should be reviewed in consultation with OTS to ensure they sufficiently cover potential threats across the area of proposed operations.</p> <p>Further information on potential Transport Security Threats and Surface Transport Security are outlined here: <a href="https://infrastructure.gov.au/transport/security/">https://infrastructure.gov.au/transport/security/</a></p> <p>Any recommendations from future PHAs and this additional consultation and review should be referred to the NSW Department of Planning and Environment for consideration to ensure any additional achievable, sustainable and proportional preventive security measures, that are commensurate with the nature and level of risk and threat levels, are implemented by SIMTA into the <i>Operational Hazard and Risk Management Plan and Risk Register</i> and <i>Emergency Response Plan</i> for the site prior to operations commencing.</p>
<p>A PHA is not required based on the preliminary risk screening. However, given the potential for receipt of hazardous goods it is highly recommended that the following risk management measures are in place prior to construction and/or operations commencing:</p> <ul style="list-style-type: none"> <li>· Fire safety study</li> <li>· Emergency plan (including all construction areas, site operations including rail and road transport corridors)</li> <li>· Hazard and operability study (HAZOP)</li> <li>· Updated hazard analysis should be undertaken throughout the design phases of the project</li> <li>· Construction safety study</li> <li>· Safety management plan.</li> </ul>	<p>Mitigation measures 0A, 0B, 7B, 7D, 12A to 12I, 14A and 14B in Section 22 of the EIS would be implemented to manage hazards and risks associated with dangerous goods during the construction and operational stages.</p> <p>Mitigation measure 12C commits SIMTA to undertaking a HAZOP, which would be undertaken to identify and evaluate problems that may represent risks to personnel or equipment. In accordance with mitigation measure 12G, the OEMP for the Proposal would include an Operational Hazard and Risk Management Plan, which would be periodically reviewed and updated.</p> <p>As committed in mitigation measure 0A, the CEMP for construction of the Proposal would include a Health and Safety Plan.</p>	<p>Section 22 of the EIS</p>	<p>It is noted that mitigation measures 0A, 0B, 7B, 7D, 12A make a commitment to the development of a <i>Health and Safety Plan</i>, risk assessment and <i>Emergency Response Plan</i> which should also be referenced in the CEMP and OEMP.</p> <p>We note that 12A also notes that the HSP will address the requirements of the <i>Work Health and Safety Act 2011</i> and be developed in consultation with a range of stakeholders (NSW Police, NSW Fire Brigade, NSW Rural Fire Service and Ambulance Service of NSW).</p> <p>It is noted that 12C does make reference to the identification and management of hazards through a formal HAZOP process to be undertaken during design progression.</p> <p>It is also noted that mitigation measure 12G commits to the preparation of an <i>Operational Hazard and Risk Management Plan and Risk Register</i>, which will be incorporated into the OEMP, which would also be periodically reviewed and updated with any subsequent risk assessment outcomes.</p>

Comment	Clarification/Response	Reference	Review Comment
<p><i>It is highly recommended that residual risks are recorded in a project risk register to keep an account of all construction and operational phase risks and their mitigation measures for all Stages of the Proposal. The 'hierarchy of controls' for risks during design, construction and operations should be applied to 'Eliminate' risks as a top priority as outlined in this NSW WorkCover guideline</i></p>	<p>Noted and agreed. The Operational Hazard and Risk Management Plan would include a risk register. Mitigation measures provided within the EIS have been updated within Section 8 of this RtS to include this requirement.</p>	<p>Section 8 of the RtS.</p>	<p>It is noted that the Proponent will include a risk register in the Operational Hazard and Risk Management Plan.</p>
<p><i>Risks of including the MIC and SIMTA Projects as an integrated facility should be reviewed and better understood. If a single operator was to take control of the site the inter-dependency of the construction and operational risks need to be reviewed on an ongoing basis as the detailed designs for subsequent stages are developed.</i></p>	<p>MIC and SIMTA have entered into an agreement for the SIMTA Project and the MIC Proposal to be developed as the Moorebank intermodal freight precinct (<a href="http://www.micl.com.au">www.micl.com.au</a>). However, for the purposes of assessment of the development applications for the Proposal and the Concept approval for the MIC Proposal, the two applications are separate developments and must be considered as such. Section 18 of the EIS includes a Preliminary Risk Screening which has been prepared in accordance with State Environmental Planning Policy No. 33- Hazard and risk (SEPP 33) to assess and mitigate hazard and risks associated with the construction and operation of the Proposal. In addition to this, Section 19.3.6 of the EIS provides an assessment of the potential cumulative hazard and risk impacts resulting from undertaking of the Early Works for the MIC Proposal and operation of the Stage 1 Proposal. This cumulative assessment builds upon the overall cumulative assessment previously provided in the Concept Plan Approval for the SIMTA Project.</p> <p>The assessment undertaken (with the EIS and the Concept Plan Approval) is considered suitable to address the potential cumulative impacts of the SIMTA Project, including the Proposal in consideration of the MIC Proposal. It is envisaged that future approvals would</p>	<p>Section 1, Section 18 and Section 19 of the EIS.</p> <p><a href="http://www.micl.com.au">www.micl.com.au</a> Accessed: 24 August 2015</p>	<p>It is noted that the Proponent has committed to providing additional hazard and risk assessments as part of future approval applications.</p> <p>All future risk assessments will need to consider cumulative impacts of hazards from any adjoining operations, activities and proposals.</p>

Comment	Clarification/Response	Reference	Review Comment
	provide additional hazard and risk assessments as relevant.		
<i>A project wide risk register shall be maintained to record and capture all risks, hazards and required mitigation measures identified by all studies completed to date. This will need to be a 'live' document that is updated as more design details are developed and as the full picture of the overall development comes to light. The latest version of the risk register should accompany any subsequent development applications for future stages.</i>	Noted and agreed. The Operational Hazard and Risk Management Plan would include a risk register. Mitigation measures provided within the EIS have been updated within Section 8 of this RtS to include this requirement.	Section 8 of this RtS.	It is noted that the Proponent has amended Section 8 of the RtS to include reference to the Risk Register. In particular mitigation measure 12G has been amended to commit to the preparation of an <i>Operational Hazard and Risk Management Plan and Risk Register</i> , which will be incorporated into the OEMP.
<i>Detailed Hazard and Operability Studies (HAZOPs) shall be undertaken by a suitably experienced and multi-disciplinary team during the detailed design phases of the terminal infrastructure to ensure that logistical processes, hazardous material storage areas are reviewed against appropriate design standards and to evaluate problems that may present risks to personnel, equipment and the community.</i>	As noted in Section 18.4.2 and in mitigation measure 12C in Section 22, hazards associated with the Proposal operation would be identified through a HAZOP, which would be undertaken as part of the detailed design.	Section 18 and Section 22 of the EIS.	It is noted that mitigation measure 12C does make reference to the identification and management of hazards through a HAZOP to be undertaken during design progression and will take into consideration all relevant standards and guidelines.
<i>Safety in Design (SID) reviews should be undertaken by suitably experienced and qualified design team members during the detailed design phases of the terminal infrastructure to ensure that constructability, operability hazards and lifecycle risks are reviewed against appropriate design standards and to evaluate problems that may present risks to personnel, equipment and the community.</i>	The <i>Work Health and Safety Act 2011</i> prescribes the requirements for consideration of Safety in Design. All works associated with the Proposal will be undertaken in accordance with the <i>Work Health and Safety Act 2011</i> , as required by law. Mitigation measure 12A commits to preparation of a Health and Safety Plan in accordance with the legislative requirements.	Section 22 of the EIS.	It is noted that the Proponent will ensure SID reviews will be undertaken in accordance with <i>Work Health and Safety Act 2011</i> . It is also acknowledged that a <i>Health and Safety Plan</i> will be prepared in accordance with legislative requirements.  This plan will need to be referenced in all future CEMPs and OEMPs.

## Other Submission Responses

### Environmental Protection Authority

<i>Asbestos fibres can pose a serious health risk to humans if inhaled. The EPA notes that Glenfield Waste Services is licenced to receive asbestos waste. The Protection of the Environment Operations (Waste) Regulation 2014 requires operators of landfills licenced to receive asbestos to bury it in accordance with the regulation. However, operators are not required to record the locations of buried asbestos waste in landfills, therefore there is a reasonable</i>	As stated in Section 22 of the EIS, and reproduced in Section 8 of this RtS, a Health and Safety Plan will be developed prior to commencement of construction and will include details of site contamination, risks and management measures. The plan will detail measures to minimise exposure pathways, including identification of appropriate personal protective equipment (PPE) to be worn during works associated with known or	Sections 13 and 22 and Appendix R of the EIS.  Section 8 of the RtS.	Additional environmental investigations should be undertaken in addition to the geotechnical investigations within the Glenfield Waste Facility during detailed design to ensure that asbestos levels within areas to be disturbed are fully understood due to the potential hazard this poses to site personnel and the community.  The outcomes of these combined investigations will be able to better inform the detailed design, Health and Safety Plan and the Asbestos Management Plan.
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Comment	Clarification/Response	Reference	Review Comment
<p><i>possibility that if earthworks are required within previously landfilled cells, asbestos fibres could be encountered and liberated. The EPA cannot support any proposal that has the potential to disturb landfilled waste because the proponent has not detailed specific mitigation strategies to prevent the release of asbestos fibres of which there is a reasonable possibility that such fibres are contained within previously landfilled waste. The proponent has committed to producing an Asbestos Management Plan within the Contamination Management Plan which will be included in the Construction Environmental Management Plan which have either not been presented or not been finalised at the time of exhibition of the EIS.</i></p>	<p>potentially contaminated material.</p> <p>Further geotechnical investigations will be undertaken within the Glenfield Waste Facility during the development of detailed design to confirm the extent of landfill cells and to inform the design with the aim to avoid impacting on the cells. Should impacts on landfill cells be unavoidable, a specific works plan will be developed to address potential environmental and/or health and safety issues that may arise. As stated in Section 22, an Asbestos Management Plan will be developed for management of works in areas potentially impacted by asbestos within the Glenfield Waste Facility.</p>		

### 3.4.4 **Additional Matters**

- > Additional environmental investigations should be undertaken in addition to the geotechnical investigations within the Glenfield Waste Facility during detailed design to ensure that asbestos levels within areas to be disturbed are fully understood due to the potential hazard this poses to site personnel and the community. The outcomes of these combined investigations will be able to better inform the detailed design, Health and Safety Plan and the Asbestos Management Plan.

### 3.4.5 **Recommendations**

The recommendations below are identified to address the identified impacts associated with Hazard and Risk to allow a comprehensive assessment of the proposal:

- > All future risk assessments will need to consider cumulative impacts of hazards from any adjoining operations, activities and proposals. The outcomes of any risk assessments will need to be captured in the overall risk register for the site.
- > Due to the strategic significance and high profile of the proposed intermodal, SIMTA should commit to undertaking further consultation to seek advice from Office of Transport Security (OTS), as OTS contributes to the wellbeing of all Australians by helping to develop transport systems that are more secure against the threat of terrorism and unlawful acts.

The existing proposed security measures outlined in Section 4.5.5 of the EIS should be reviewed in consultation with Office of Transport Security (OTS) to ensure they sufficiently cover potential threats across the area of proposed operations.

Further information on potential Transport Security Threats and Surface Transport Security are outlined here: <https://infrastructure.gov.au/transport/security/>

Any recommendations from this additional consultation and review should be referred to the NSW Department of Planning and Environment for consideration to ensure any additional achievable, sustainable and proportional preventive security measures, that are commensurate with the nature and level of threat levels, are implemented by SIMTA prior to operations commencing.

- > Any subsequent approval applications will need to consider the detailed operational requirements of any proposed tenants to ensure that hazards from dangerous goods handling and storage are appropriately assessed. This should include assessment through a Preliminary Hazard Analysis, as per the Concept Approval commitment, which shall be prepared in accordance with State Environmental Planning Policy No. 33- Hazard and risk (SEPP 33) to assess and mitigate hazard and risks associated with the construction and operation of the Proposal.
- > Any recommendations from future PHAs and Final Hazard Analysis (FHA) and additional consultation and review should be referred to the NSW Department of Planning and Environment for consideration to ensure any additional achievable, sustainable and proportional preventive security measures, that are commensurate with the nature and level of risk and threat levels, are implemented by SIMTA into the *Operational Hazard and Risk Management Plan and Risk Register* and *Emergency Response Plan* for the site prior to operations commencing.
- > Council also has concerns in relation to the ongoing regulation of the proposed facility. Council is not equipped with the resources and manpower to oversee a facility of this size and operational capacity. This will lead to inadequate regulation of the site with major implications for the environment and community. The Federal and State Government must take a lead role in the regulation of the development if approval is granted. This will ensure that the community and environment are best protected from the impacts that are likely to result from the proposed development. The EPA is therefore believed to be the most appropriate regulatory authority for the proposed development and associated activities.

### 3.5 Hydrology

The proposed SIMTA RtS provides a response to the submissions made to the EIS in relation to the proposal's impacts on Hydrology. This review considers information in the RtS Section 4.6 and *Appendix E – Stormwater and Flooding Supplementary Response Material* and *Stormwater and Flooding Addendum* prepared by Hyder Consulting.

#### 3.5.1 Summary

The Table below summarises the outcome of the changes to the proposal identified by the RtS.

**Table 3-9 Adequacy of Response Summary**

Concept Approval Commitments	Secretaries Environmental Assessment Requirements	Liverpool City Council Assessment
The following commitments are not adequately addressed:	The following SEARS are not adequately addressed:	The following assessment recommendations are not adequately addressed:
None.	<p>a) assess impacts on surface and groundwater flows, quality and quantity, with particular reference to any likely impacts on Georges River and Anzac Creek;</p> <p>b) assess flooding impacts and characteristics, to and from the project (including rail link), with an assessment of the potential changes to flooding behaviour (levels, velocities and direction) and impacts on bed and bank stability, through flood modelling, including:</p> <p>ii. description, justification and assessment of design objectives (including bridge, culvert and embankment design);</p> <p>iii. an assessment of afflux and flood duration (inundation period) on property; and</p> <p>iv. consideration of the effects of climate change, including changes to rainfall frequency and/or intensity, including an assessment of the capacity of stormwater drainage structures.</p> <p>c) Include a detailed and consolidated site water balance;</p> <p>g) undertake an assessment of surface water quality during construction (including reference to water quality objectives for the relevant catchment where objectives have been determined), including an identification of works that may impact water quality, and a summary of proposed mitigation measures in accordance with <i>Managing Urban Stormwater – Soils &amp; Construction Volume 1 2004</i> (Landcom) and <i>Volume 2 (DECC 2008)</i>;</p>	<ul style="list-style-type: none"> <li>• The SEARs require an assessment of the impacts to flood velocities and durations as a result of the proposal. This should be provided.</li> <li>• Bank stability should be addressed in detail in the EIS and appendix. The proposed natural regrowth of vegetation will be too slow to mitigate erosion in the medium term and risks the establishment of weeds and fast growing species that will not represent the current ecology. The use of fill should be subject to extensive testing, must not contaminate the watercourse and must be suitable for supporting native vegetation through adequate nutrient and organic content.</li> <li>• Site water balance should be assessed in greater detail with assessment of changes in flow to individual catchments and storages including groundwater.</li> <li>• Flood maps should be added / amended to illustrate the following:</li> <li>• Post construction Anzac Creek flood conditions, as is provided for the existing scenario (i.e. depths, extents and elevations).</li> <li>• Show areas of “was dry now wet” in the flood impact maps provided.</li> <li>• Duration of flood affectation.</li> <li>• The proposed railway embankment will be a flood obstacle for flood events greater than 100 year ARI flood of the Georges River. These should be assessed and quantified for transparency and to ensure they are adequately mitigated.</li> <li>• The impact of the proposal on the freeboard of the existing bridge should be assessed.</li> <li>• A more detailed design of the proposed railway bridge including the location and orientation of bridge piers and the height of the bridge deck, should be provided before determination. The impacts of the bridge on flooding and navigation of the river should</li> </ul>

Concept Approval Commitments	Secretaries Environmental Assessment Requirements	Liverpool City Council Assessment
		<p>be assessed and considered. The proposed bridge piers should align with those of the existing bridge.</p> <ul style="list-style-type: none"> <li>• Increases in flood affectation on Moorebank Avenue, the SME site and any other area which will experience increased flood affectation as a result of SIMTA Stage 1, should be fully mapped and assessed.</li> <li>• Assess existing trafficability of Moorebank Avenue, to determine whether the predicted increase will reduce trafficability of the road.</li> <li>• Assess duration of flooding of Moorebank Avenue (particularly flooding which is not trafficable as defined by FDM 2005), for both existing and developed scenarios.</li> <li>• Extend the PMF impact map provided to ensure the full extent of flood impacts are illustrated (e.g. to the south).</li> <li>• It is understood that DRAINS hydrology was input into the hydraulic model (TUFLOW) for discharge from the SIMTA area, while RAFTS hydrology was input into the hydraulic model for the remaining catchments. It is suggested that this modelling configuration be reviewed in detail (with more detail / outputs provided in the EIS for reference) to ensure that all catchments have been appropriately accounted for.</li> </ul>

### 3.5.2 Summary of Revisions/Clarifications

The following key revisions have been made to the proposal in relation to Hydrology:

- > None. Provision of additional information only.

### 3.5.3 Assessment

**Table 3-10** below contains the comments, clarifications/responses and references taken from the RtS document, with a further review comment to the RtS provided in the last column. The table includes responses to the Council submission, along with key relevant responses from other submissions addressed in the RtS.

**Table 3-10 RtS Response Review (Hydrology)**

Comment	Clarification/Response	Reference	Review Comment
<b>Council Submission Responses</b>			
<p><i>Flood maps should be added / amended to illustrate the following:</i></p> <ul style="list-style-type: none"> <li>- <i>Post construction Anzac Creek flood conditions, as is provided for the existing scenario (i.e. depths, extents and elevations).</i></li> <li>- <i>Show areas of “was dry now wet” in the flood impact maps provided.</i></li> <li>- <i>Duration of flood affectation.</i></li> </ul>	<p>Additional mapping is included in Appendix E of the RtS. A map showing changes to flooding at Anzac Creek is included in Section 11.3 of the EIS and the Stormwater and Flooding Impact Assessment, included as Appendix P to the EIS. Mapping showing existing, post construction and changes in flood levels as a result of the SIMTA Project were included in the Concept Plan Assessment, and are available here: <a href="https://majorprojects.affinitylive.com/public/6c440e71625c63fab29b96b2aa7bfaf4/Appendix%20C%20Flooding%20Maps%20and%20Data_HI%20RES.pdf">https://majorprojects.affinitylive.com/public/6c440e71625c63fab29b96b2aa7bfaf4/Appendix%20C %20Flooding%20Maps%20and%20Data_HI%20RES.pdf</a></p>	<p>Appendix E of the RtS. Section 11.3 and Appendix P of the EIS</p>	<p>Appendix E (as published on the NSW Planning and Environment Major Projects Register) appears to contain some duplicate drawings and omit others.</p> <ul style="list-style-type: none"> <li>• “100 Year ARI Flood Level and Depth Anzac Creek to South SIMTA Site Post Development Conditions” drawing no. SKCS1033 is included twice, apparently in error.</li> <li>• “PMF Flood Level and Depth Anzac Creek to South SIMTA Site Post Development Conditions” is not included.</li> <li>• “Change in Probable Maximum Flood Level Anzac Creek to South SIMTA Site Post Development Conditions” drawing no. SKCS1032 is included twice, apparently in error.</li> <li>• “Probable Maximum Flood Flow Velocity Anzac Creek to South SIMTA Site Existing Conditions” is not included.</li> </ul> <p>The map provided in Section 11.3 of the EIS (Figure 11-7) shows increased extents for the 100 year ARI impacts only. A map showing the full extent of PMF impacts is required.</p>

Comment	Clarification/Response	Reference	Review Comment
<p><i>The post construction PMF modelling demonstrates increased flood affectation of Moorebank Avenue and the SME site where the MIC facility is proposed. Increases are quoted as up to 150mm on Moorebank Avenue. This is considered a significant increase on a public road, and is inconsistent with the reported conclusion that the proposal results in “negligible flood impacts within the Anzac Creek catchment area”. It is also not clear how far south the PMF impacts extend. It should be confirmed whether impacts extend to affect the existing rail line to the south. It is recommended that the following be undertaken:</i></p> <ul style="list-style-type: none"> <li><i>– Assess existing trafficability of Moorebank Avenue, to determine whether the predicted increase will reduce trafficability of the road.</i></li> <li><i>– Assess duration of flooding of Moorebank Avenue (particularly flooding which is not trafficable as defined by FDM 2005), for both existing and developed scenarios.</i></li> <li><i>– Extend the PMF impact map provided to ensure the full extent of flood impacts are illustrated (e.g. to the south).</i></li> </ul>	<p>A drawing showing probable maximum flood (PMF) ‘flood depths versus time’ for existing and developed conditions over Moorebank Avenue (at the Anzac Creek culvert) is provided in Attachment E to the RtS. Since the velocities are very slow, trafficability is primarily dependent on depth. The depth plot indicates that at a (‘safe’ vehicle) water depth of 0.2m, the road inundation time for developed conditions would increase from approximately 192 minutes (under existing conditions) to 197 minutes for the developed scenario of 25% blockage of existing railway culvert and 50% blockage of the proposed culvert over Anzac Creek.</p> <p>With potential flood level increases at this Moorebank Avenue location of less than 10 mm in all events up to and including the 100 year, and road inundation time increases of only some 5 minutes in a 10,000 to 100,000 year event (NSW Government, Floodplain Development Manual: the management of flood liable land, April 2005, Appendix A), Hyder reaffirms its assessment that the flood impacts within the Anzac Creek catchment would be negligible, as a result of the Proposal.</p> <p>It is unnecessary to extend the Anzac Creek flood analysis and mapping south to confirm whether PMF impacts extend to affect the East Hills Rail Corridor (EHRC) to the south. The EHRC is essentially located on the upper ridgeline of the Anzac Creek catchment which grades northward from minimum ground levels of approximately RL17.5mAHD, and will be protected by the proposed Rail link, located parallel to the EHRC on its northern (downstream) side as indicated on Dwg EISC1112 (Appendix E to the RtS). While it remains uncertain as to Anzac Creek management for the MIC Proposal, should flood protection of the proposed Rail link become necessary in this upper catchment area of Anzac Creek, then localised filling would be considered for the northern side of the proposed Rail link, in addition to that which is indicated on the southern side for local runoff management.</p>	<p>Appendix E of the RtS.</p> <p>Appendix P of the EIS</p>	<p>Negligible is defined as being <i>so small or unimportant as to be not worth considering; insignificant</i>. A flood increase of 120mm on a public road is not negligible, it is significant.</p> <p>Based on the assessment of flood duration and trafficability provided, it is agreed that the (significant) impacts on flood depths may not necessarily be considered detrimental to road users, based on typical trafficability criteria in a 100 year ARI storm. However, this (significant) increase in flood depths may reduce the ability of larger vehicles (e.g. emergency services) to access the road during a flood, which may have otherwise been trafficable for such larger vehicles. Further flood impact assessment should be undertaken to identify at what flood event the road will not be accessible for traffic and concurrence should be obtained from the State Emergency Services (SES).</p> <p>It is also possible that the proposal results flood level increases in smaller storms. In this case, there will be a storm for which the current road is trafficable, but would no longer be trafficable as a result of the proposal due to flood level increases. It is recommended that the largest storm for which the current road is trafficable be determined, and impacts to flood depths quantified for this storm.</p> <p>On the basis of the information provided, it is considered that the 120</p>

Comment	Clarification/Response	Reference	Review Comment
			<p>mm increase in flood levels may be detrimental to road users. These impacts should be considered by the determining authority.</p> <p>The velocity x depth vs time plot provided in Appendix E of the Rts (at Anzac Creek culvert) seems to indicate that VxD is improved in the proposed scenario. This is contrary to other results provided. Furthermore the y-axis is shown to indicate flood depth (it is assumed that this is in fact representing VxD).</p> <p>As previously requested, a map showing the full extent of PMF impacts is required.</p>
<p><i>The EIS notes that the Anzac Creek flood model was 'adjusted' to provide results. More detailed is required as to how the model was adjusted, and how results compare to those derived by Council.</i></p>	<p>The drawings included appendices to the Stormwater and Flooding Environmental Impact Assessment, included as Appendix P of the EIS, show the modelled sub-catchment area adjustments, which are also described in Appendix P and Section 11 of the EIS. Flooding impacts were assessed and approved as part of the Concept Plan Approval. These models were adopted for assessment of the Proposal. As referenced in the Stormwater and Flooding Environmental Assessment, further details of the model, including a comparison to Council results, are provided in the, 'SIMTA Sydney Intermodal Terminal Alliance: Flood Study and Stormwater Management Part 3A Concept Plan Application (12/08/2011)' (Concept Plan report) prepared by Hyder and available on the Department of Planning and Environment's website. As stated, 'the Concept Plan report should be read in conjunction with this current report' (i.e. Appendix P to the Concept Plan EIS: <a href="http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&amp;job_id=4400">http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&amp;job_id=4400</a>). Section 6.2.2 of Appendix P to the Concept Plan assessment notes that 'The 100 year (TUFLOW) results were compared with that of Council's and flood level variations found to generally vary by less than 0.025 metres.'</p>	<p>Section 11 and Appendix P of the EIS.</p> <p>Appendix P to the Concept Plan assessment</p>	<p>Maps provided in the Concept Plan report to illustrate the "adjusted existing condition TUFLOW model flow regime figures" are illegible.</p> <p>The report notes that a DRAINS model was developed for the site, that a RAFTS model subsequently amended to account for this, and that levels generally vary less than 0.025m. What is unclear is whether any other changes were made, and what specific variations in levels were observed at specific locations. A section in the EIS documents clearly summarising changes made to the existing model (and legible maps) would ensure transparency of the changes made and implications.</p>
<p><i>The EIS notes that a number of blockage</i></p>	<p>The 'Anzac Creek Floodplain Risk Management Study and</p>	<p>Appendix E to the</p>	<p>Based on this information, the</p>

Comment	Clarification/Response	Reference	Review Comment
<p><i>scenarios were incorporated within the Anzac Creek flood model, and that 25% was adopted for the EIS assessment. Clarity is required as to why this value was deemed appropriate from the range of scenarios available.</i></p> <p><i>Furthermore, it's not clear as to why 50% blockage was applied to the developed scenario, as opposed to 25% applied to the existing scenario.</i></p>	<p>Plan' (30 May 2008) prepared by BMT WBM for Liverpool City Council provides insight into the issue of blockage of waterway structures (particularly Section 8.3.3), noting that:</p> <ul style="list-style-type: none"> <li>• The range of waterway structure blockages considered across the catchment has included 25%, 50% and 100%.</li> <li>• A 100% blockage scenario would be an extreme condition assumption.</li> <li>• Quick responsive catchments with high velocities contribute to blockages.</li> </ul> <p>With respect to the areas south of the Stage 1 site, culvert blockages have been based on considerations which include waterway and floodplain characteristics, catchment development land use, the project design and operation, and potential flood impacts. In the EIS assessment to the south of the Stage 1 site, the proposed culvert over Anzac Creek (6, 2.1m x 1.8m culverts, with 2 additional cells for fauna passage) is to be located in-between two existing culverts.</p> <p>The existing upstream culvert (0.6m x 0.45m) under Moorebank Avenue served a well maintained golf course (generally flat graded), and has a local water storage and line of trees adjacent to the culvert entry. A 0% blockage of this upstream culvert is considered appropriate, noting that while high blockage is possible, the EIS focus is on whether the proposed downstream rail culvert would introduce adverse flood impacts and this blockage assumption allows for largely unattenuated flows continuing to the downstream culvert(s). The existing downstream culvert (3, 1.45m diameter) under the existing rail spur, within the Boot Land is located approximately 300m downstream of Moorebank Avenue. The connecting open channel is vegetated with grasses (no trees). The overbank areas are flat grading, swampy, and well treed. A 25% blockage of this (downstream) culvert is considered appropriate for the purpose of assessing whether the proposed 'in-between' culvert over Anzac Creek would introduce adverse flood impacts. Introducing, a 100% blockage scenario to the existing rail spur culvert would be an extreme condition assumption, particularly because of the floodplain grading and</p>	<p>RtS Anzac Creek Floodplain Risk Management Study and Plan' (BMT WBM, 2008) May</p>	<p>blockage assumptions adopted seem reasonable. Discussion to this effect within the EIS would be of benefit.</p>

Comment	Clarification/Response	Reference	Review Comment
	<p>resultant low velocities. Under existing conditions, a 50% blockage may be more realistic than a 25% blockage. However, for developed conditions potential for blockage of the existing rail spur culvert would be reduced by the proposed Rail link embankment and culvert over Anzac Creek potentially capturing blockage material (as indicated in Appendix E to the RtS).</p> <p>With respect to the 50% blockage applied to the proposed Anzac Creek culvert, this is considered to be an upper limit blockage scenario, to demonstrate potential upper limit flood impacts (upstream) and maximum upstream flood levels. Appendix E of the RtS indicates that this blockage scenario would result in 0.12m impact in the PMF at Moorebank Avenue (rather than the rounded 0.15m increase referred to in the EIS). Notwithstanding the above, a sensitivity assessment with 0% blockage on the proposed Anzac Creek culvert with 100% blockage on the existing rail culvert is included in Appendix E to the RtS, affirming that under such an extreme (and unlikely) blockage scenario, the PMF impact at Moorebank Avenue to be 0.09m (with a very minor 0.02m absolute water level increase, compared to 25% blockage of the existing rail culvert and 50% blockage of the proposed rail culvert).</p>		
<p><i>It is understood that DRAINS hydrology was input into the hydraulic model (TUFLOW) for discharge from the SIMTA area, while RAFTS hydrology was input into the hydraulic model for the remaining catchments. It is suggested that this modelling configuration be reviewed in detail (with more detail / outputs provided in the EIS for reference) to ensure that all catchments have been appropriately accounted for.</i></p>	<p>The Stormwater and Flooding Environmental Impact Assessment, included as Appendix P and summarized in Section 11 of the EIS, modelled the existing and proposed hydrology of the Proposal. The DRAINS, RAFTS and TUFLOW modelling has been consistent and comprehensive and detailed inputs and outputs have been provided within Appendix P of the EIS. The DRAINS, RAFTS and TUFLOW models can be made available on formal request (requiring a signed confidentiality agreement, between the reviewer(s) and Council for the RAFTS and TUFLOW models, where released by SIMTA).</p>	<p>Section 11 and Appendix P of the EIS</p>	<p>Ideally, sufficient information would be provided in the EIS to allow adequate assessment and confirmation of the modelling adjustments, without need to apply for, download and interrogate the modelling files (which is not possible for the majority of readers).</p>
<p><i>The following comments relate to the Georges River:</i></p>			
<p><i>The proposed rail link bridge piers do not align with the existing bridge piers on the East Hills Line railway bridge. This will impede navigation of</i></p>	<p>It was chosen to represent a 6 span bridge for assessment within the EIS as it represents a higher environmental impact than the 5 span bridge. A decision on the number of spans of</p>	<p>Section 11 and Appendix P of the</p>	<p>A concept bridge design should be provided prior to determination which meets the requirements imposed on</p>

Comment	Clarification/Response	Reference	Review Comment
<p><i>the river by boats and other watercraft which typically use the Georges River for recreational purposes. This should be rectified before determination and may require updated modelling.</i></p>	<p>the bridge would be made during detailed design; however, it would not exceed 6 spans.</p>	<p>EIS.</p>	<p>the concept plan by the Commonwealth and State governments.</p>
<p><i>A more detailed design of the proposed railway bridge including the location and orientation of bridge piers and the height of the bridge deck, should be provided before determination. The impacts of the bridge on flooding and navigation of the river should be assessed and considered. The proposed bridge piers should align with those of the existing bridge.</i></p>	<p>Design of the Georges River bridge would be considered further during detailed design. As noted above, a 6 span bridge was adopted as it represented a 'worst case' scenario, for assessment within the EIS.</p>	<p>Section 11 and Appendix P of the EIS.</p>	<p>A concept bridge design should be provided prior to determination which meets the requirements imposed on the concept plan by the Commonwealth and State governments.</p>
<p><i>Modelling results and maps for the 100 year ARI and PMF events within the Georges River have not been provided in a form consistent with those provided for Anzac Creek. At a minimum, maps should be generated to present flood extents and elevations for the 100 year ARI and PMF events.</i></p>	<p>The Georges River HEC-RAS model input details and results provide all necessary flood information including – flows, flood extents, velocities, water surface levels at all modelled river station locations, and water surface profiles for the length of the Georges River model.</p> <p>With respect to flood extents, Appendix C to Appendix P of the EIS, provides the 100 year waterway extents at each River Station location. Under existing conditions, typical flow widths are approximately 150m. The proposed conditions model indicates that the flow widths would typically vary from 0.0m to 0.1m, with a maximum flow width increase of 0.4m (from 225.2m to 225.6m) located approximately 200m upstream of Cambridge Avenue (at River Station 36).</p> <p>(Note: Appendix E to the RtS includes a correction to the HEC-RAS 'Profile Output – Standard Table 1' for 100 year Existing Conditions provided in Appendix C of Appendix P of the EIS. {The tables presented in Section 11 of the EIS })</p> <p>There is no requirement nor necessity to present Georges River (HEC-RAS) model results in the same 'map' format as Anzac Creek (TUFLOW) model results.</p>	<p>Section 11 and Appendix P of the EIS. Appendix E of the RtS.</p>	<p>Cardno asked that the proponent provide flood affectation mapping for the Georges River floodplain in a form consistent with the Anzac Creek flood modelling.</p> <p>This was rejected by the proponent as unnecessary given that the HEC-RAS model cross sections had been provided.</p> <p>Flood mapping for large areas is important, particularly for highlighting changes in a manner which is interpretable by non-engineers. These will include experts in other fields assessing this proposal, land owners along the Georges river who have concerns about their properties and the general public who use and enjoy the riverside parklands of the LGA.</p> <p>HEC-RAS cross sections do not communicate impacts to land clearly. Flood mapping is still considered critical to the better understanding of this project.</p> <p>Cardno restates its concerns that the flooding constraints on the Georges</p>

Comment	Clarification/Response	Reference	Review Comment
<p><i>HEC-RAS modelling was undertaken, and compared to previous MIKE-11 hydraulic modelling for the catchment, with results showing good parity. However, it is suggested that agreement between results should be checked for a range of storm events rather than just the 100 year ARI (e.g. PMF).</i></p>	<p>A comparison of Council’s PMF (MIKE-11) flood model levels to levels predicted in the modelling undertaken within the Stormwater and Flooding Environmental Assessment is provided in Appendix P of the EIS.</p>	<p>Section 11 and Appendix P of the EIS.</p>	<p>River floodplain have not been presented in a manner consistent with the Anzac Creek floodplain modelling. At a minimum, the proponent should provide 100 year ARI and PMF flood extent and elevation mapping for the Georges River floodplain.</p> <p>A comparison of MIKE-11 and HEC-RAS PMF levels could not be located in Appendix P. Table 5 of the document compares 100 year ARI levels only.</p> <p>The “HEC-RAS TABLE CORRECTION” provided in the RtS is noted, which provides comparison of PMF levels. This indicates HEC-RAS PMF levels of up to 0.5 m higher than those obtained in MIKE-11. This is significantly greater than the differences observed in the 100 year ARI. Some justification / explanation for the discrepancy should be provided. It is noted that levels are generally higher, and therefore conservative for the purposes of this assessment.</p>
<p><i>Results for the Georges River bridge options indicate identical results for options 2 and 3 (6 spans and 5 spans, respectively). Clarity is required as to how these options produce identical results, and why 6 spans was chosen given 5 spans produced the same result.</i></p>	<p>It is noted that the results for the 5 span and 6 span Georges River bridge design are not identical. The HECRAS model results, included in Appendix C to Appendix P and summarised in Section 11 of the EIS, for the 6 span and 5 span options indicates changes in energy grade and slope, channel velocities, flow areas top width and Froude number.</p> <p>The water surface levels are provided to the nearest 0.01m, since these do not vary between the models, it indicates that waterway area change resulting from the additional pier set results in water surface changes of no greater than +/-0.005m.</p> <p>It was chosen to represent a 6 span bridge for assessment within the EIS as it represents a higher environmental impact</p>	<p>Section 11 and Appendix P of the EIS.</p>	<p>Noted.</p>

Comment	Clarification/Response	Reference	Review Comment
	<p>than the 5 span bridge. A decision on the number of spans of the bridge would be made during detailed design; however, it would not exceed 6 spans.</p>		
<p><i>A more detailed design of the proposed railway bridge including the location and orientation of bridge piers and the height of the bridge deck, should be provided before determination. The impacts of the bridge on flooding and navigation of the river should be assessed and considered. The proposed bridge piers should align with those of the existing bridge.</i></p>	<p>Design of the Georges River bridge would be considered further during detailed design. As noted above, a 6 span bridge was adopted as it represented a 'worst case' scenario, for assessment within the EIS.</p>	<p>Appendix P of the EIS.</p>	<p>A concept bridge design should be provided prior to determination. The concept design must meet the requirements imposed on the concept plan approval by the Commonwealth and State governments.</p>
<p><i>Bridge / culvert structures required along the Georges River floodplain (for events &gt;100 year ARI) have not been modelled. The proposed railway embankment will be an obstruction to flow for such events, and result in impacts to flooding. These impacts need to be quantified and presented for transparency. Flood mitigation required (in the form of bridges / culverts) needs to be designed and modelled at this stage to ensure that impacts can be managed in a way which is feasible. Postponing such design until future stages of this assessment is considered to be a risk to the project, and flooding outcomes. It is not clear as to why this assessment has been overlooked, while other bridge structures have been modelled, optimised, and flood impacts quantified and presented.</i></p>	<p>The Stormwater and Flooding Environmental Impact Assessment, included as Appendix P and summarized in Section 11 of the EIS, includes assessment of potential flood impacts for the proposed structure through the Glenfield Waste Facility, up to a 100 year ARI event. Since the structure is proposed to be located above the 100 year floodplain, there is no flood impact up to the 100 year event.</p> <p>The current Liverpool City Council flood model does not appear to adequately represent overbank flow regimes in the vicinity of the Glenfield Waste Facility for events greater than the 100 year event. This may be because the excavation within the Glenfield Waste Facility is not representative of a sustainable site condition, with potential filling of the excavation being a condition of the development approval for the Glenfield Waste Facility.</p> <p>Overall levels at the Glenfield Waste Facility currently extend (in unexcavated areas) to above 21.0mAHD, with the PMF flood level in this vicinity approximately 13.8mAHD (see Appendix C to Appendix P of the EIS). Should (re)filling of the Glenfield Waste Facility excavation be above 13.8m AHD then the proposed Rail link would have negligible flood impact. However, since the Glenfield Waste Facility site levels are currently set at a minimum of approximately 12.0mAHD (to prevent 100 year flows entering the excavation) potential flood impacts as a result of the proposed Rail link could be mitigated (if necessary) by providing some waterway structure(s).</p> <p>These issues are proposed to be assessed in future design stages (with and/or without waterway structures), and are not</p>	<p>Section 11 and Appendix P of the EIS.</p>	<p>The comment does not relate to 100 year ARI impacts. The comment questions why events &gt;100 year ARI have not been modelled.</p> <p>If it has been identified that the flood model does not adequately represent overbank flows for events &gt;100 year ARI, then this should be rectified within the model, given the direct relevance of this dynamic to the proposal. Modelling should be undertaken to ensure flood impacts associated with a larger flood event, including the PMF are identified and mitigated.</p> <p>If anticipated fill conditions are unknown for the facility, then this should be clarified. Flood modelling to assess the impacts of the railway embankment should be undertaken to guide mitigation measures to eliminate the adverse impacts of flooding. These mitigation measures such as bridges and culverts should be included as a commitment as part of stage 1.</p> <p>It is reasserted that postponing the design of potential waterway</p>

Comment	Clarification/Response	Reference	Review Comment
	<p>considered to present a significant risk to the Proposal as impacts can be managed through design.</p> <p>A comparison of Council's PMF (MIKE-11) flood model levels to levels predicted in the modelling undertaken within the Stormwater and Flooding Environmental Assessment is provided in Appendix P of the EIS.</p>		<p>structures along this interface until future stages of the assessment is considered to be a risk to the project, and flooding outcomes. This should be investigated at the concept stage, to allow review of results and understanding of implications to flooding impacts and infrastructure, as has been undertaken for other aspects of the project.</p> <p>If this requires amendments to the modelling approach, and clarification of current (and potentially future) fill levels, then this should be undertaken at this current concept stage. There is no apparent benefit to postponing this necessary assessment until future design stages; rather it is a significant risk.</p>
<p><i>The SEARs require an assessment of the impacts to flood velocities and durations as a result of the proposal. This has not been addressed in the EIS report.</i></p>	<p>Information included in Appendix E of the RtS provides channel velocities at each River Station location assessed for the EIS. Under existing conditions typical 100 year velocities are approximately 3.0m/s. The proposed conditions model indicates that the velocities would increase by no greater than 0.03m/s. With respect to durations, the 'Upper Georges River Flood Study' prepared by Department of Land &amp; Water Conservation in conjunction with Liverpool city Council (December 2000) advises that 36 hour design storms produce the highest peak flows at Liverpool, and that the resulting 100 year river flows begin to rise 8 hours into the storm, peak at 1877m<sup>3</sup>/s a further 14 hours later, and after another 16 hours subside to 152m<sup>3</sup>/s.</p>	<p>Appendix E of the RtS.</p> <p><i>Upper Georges River Flood Study, DLWC &amp; Council, 2000</i></p>	<p>Cardno notes that the SEARs require an assessment of the proposal's impacts on flood velocities and duration.</p> <p>The response to submissions addresses flood durations by quoting a joint NSW Government and Liverpool City Council flood study from the year 2000.</p> <p>This does not address the SEARs requirement for an assessment of the proposal's impact on flooding duration in the Georges River floodplain.</p> <p>The proponent should fully address the SEARs requirement for an assessment of flooding duration in the</p>

Comment	Clarification/Response	Reference	Review Comment
Georges River flood plain.			
<i>The following comments relate to water quantity and quality:</i>			
<p><i>A management plan for testing and maintaining the system in acceptable condition should be provided. The impacts of vegetation on the OSD volumes also need to be considered to ensure risks associated with ineffective basin volumes are considered.</i></p>	<p>Management actions for maintaining the OSD and WSUD structures would be included as part of the Operational Environmental Management Plan for the site and are committed to in Mitigation Measures 5H, in Section 22 of the EIS and reproduced in Section 8 of the RtS. In developing this plan, consideration would be given to maintaining volumes within the OSD system.</p>	<p>Section 22 of the EIS.  Section 8 of the RtS.</p>	<p>Noted.</p>
<p><i>It is not clear how the integrated OSD / rain garden operates hydraulically, i.e.</i>  <i>- Has the infiltration rate of the bioretention filter media been accounted for in assessing the OSD volume available?</i>  <i>- What are the outlet structure configurations, e.g. low-flow outlet(s), high-flow weir(s)?</i>  <i>- What is the intended extended detention depth of the rain garden component, and how is this regulated?</i></p>	<p>The Stormwater and Flooding Environmental Impact Assessment, included as Appendix P and summarized in Section 11 of the EIS, modelled the performance of stormwater management for the Proposal, included OSD. The DRAINS assessment of OSD volume and discharge assumes that the OSD (with invert 13.50mAHD) is full of water up to 14.5 mAHD at the onset of the design storms, i.e. discharge is limited to the formal OSD outlet control structure. OSD outlet configuration details are provided in Attachment G to Appendix P of the EIS.</p> <p>The minimum extended detention depth for water quality performance is 0.3m, regulated by the OSD outlet structure, filter medium and associated subsoil drainage.</p>	<p>Section 11 and Appendix P of the EIS.</p>	<p>Noted.</p>
<p><i>For the OSD waterway, a number of structures and obstructions are indicated in HEC-RAS sections presented. It is not clear what these structures and obstructions are representing. Flow area is shown on both sides of the obstructions. It's not clear how this is occurring (e.g. surcharge). The HEC-RAS sections also don't seem to show a wall on the western channel bank, therefore it's not clear how much (if any) freeboard is achieved. It is noted that Council requires a minimum 300 mm freeboard to the 100 year ARI level in OSD structures.</i></p> <p><i>..The report notes that a spillway is required on the northern extent of the proposed OSD, however no details are provided. It is suggested that configuration details be provided for review.</i></p>	<p>The Stormwater and Flooding Environmental Impact Assessment, included as Appendix P and summarized in Section 11 of the EIS, modelled the performance of stormwater management for the Proposal, included OSD. The OSD waterway (HEC-RAS) modelling (with information provided in Section 5.1.2 and Appendix E of Appendix P of the EIS) is related to the future 'All Stages' on SIMTA so as to inform on the 'Cumulative impacts' issues. The 'All Stages' OSD 100 year water level varies from approximately 15.4mAHD to 15.7mAHD. [The 'Stage 1' OSD provided in Section 5.1.1 and Appendix D of Appendix P of the EIS. This 'Stage 1' OSD, being of shorter length and lower flows (compared to the modelled 'All Stages' OSD) is adequately represented by the DRAINS model basin representation. The 'Stage 1' OSD 100 year water level is 15.3mAHD.]</p> <p>With respect to the 'All Stages' OSD waterway (HECRAS)</p>	<p>Appendix P of the EIS  Appendix E of the RtS.</p>	<p>It remains unclear what the obstructions are representing, and why there is flow modelled on both sides of the obstruction. If the obstruction is impermeable, a levee should be incorporated to contain flow within the OSD waterway, to ensure flood elevations are not underestimated, and freeboard not overestimated.</p> <p>Furthermore, the HEC-RAS sections presented for the OSD do not match the typical OSD section provided on plan EIS1041. The concern is that the HEC-RAS sections may overestimate the available capacity and freeboard</p>

Comment	Clarification/Response	Reference	Review Comment
	<p>modelling, the obstructions are representing potential convey obstructions in the high level (eastern) landscaping areas of the OSD.</p> <p>The currently assessed OSD configuration includes a minimum freeboard of 300mm to the 100 year water level.</p>		<p>achieved, due to this and the modelling of seemingly ‘permeable’ obstructions.</p>
<p><i>For the Eastern and Southern waterways, a number of HEC-RAS sections show little (or no) freeboard within the channels, with flows overtopping in places. Consider widening channels to ensure adequate conveyance and freeboard.</i></p>	<p>The Stormwater and Flooding Environmental Impact Assessment, included as Appendix P and summarised in Section 11 of the EIS, modelled the proposed stormwater management system for the Proposal and demonstrated that there is adequate freeboard in the Eastern and Southern waterways.</p> <p>Details of freeboard in these waterways are shown in HEC-RAS model and Dwg EISC1041, included in Appendix P of the EIS and Appendix E of the RtS.</p> <p>It is noted that the HEC-RAS model ‘River Station 3.84’ represents the downstream water level boundary condition (beyond the northern site works.)</p>	<p>Section 11 and Appendix P of the EIS.</p> <p>Appendix E of the RtS</p>	<p>It is reasserted that for the Eastern and Southern waterways, a number of HEC-RAS sections show little (or no) freeboard within the channels, with flows overtopping in places. Consider widening the channels represented to ensure adequate conveyance and freeboard.</p> <p>Dwg EIS1041 shows an indicative water surface only, level(s) not provided, details of freeboard not shown.</p> <p>The OSD section provided on dwg EIS1041 does not match the HEC-RAS sections presented in Appendix P of the EIS.</p>
<p><i>It is noted for the Southern waterway that the grade is too flat to drain effectively, and that soak away / subsoil drainage may be required. It is suggested that bioretention be considered in this area, should that assist with a subsequent reduction in bioretention required in the OSD waterway.</i></p>	<p>The proposed Southern Waterway is within the broader Anzac Creek PMF floodplain, with PMF results provided in Appendix E to Appendix P of the EIS.</p>	<p>Section 11 and Appendix P of the EIS.</p>	<p>Noted. It would be useful to provide HEC-RAS layouts for reference to clarify modelled locations (i.e. similar to Figure 8).</p>
<p><i>Rainwater tanks have not been proposed as a water quality measure. It is suggested that this be further assessed, to quantify potential benefits to water quality and reductions in bioretention required (or more explanation provided as to why they are no longer proposed). Other benefits to site water balance are discussed below.</i></p>	<p>Consideration of inclusion of rain water tanks would be undertaken as part of detailed design of the Proposal, in accordance with the Concept Plan Approval.</p>	<p>Section 11 and Appendix P of the EIS.</p>	<p>Noted.</p>
<p><i>The following comments relate to site water balance:</i></p>			
<p><i>The site water balance is discussed too briefly and cannot be said to meet the relevant SEARs</i></p>	<p>The Stormwater and Flooding Environmental Impact Assessment, included as Appendix P and summarised in</p>	<p>Section 11.3.2 and Appendix P of the</p>	<p>Noted.</p>

Comment	Clarification/Response	Reference	Review Comment
<i>which require “a detailed and consolidated site water balance”.</i>	Section 11 of the EIS, includes the site water balance for the Proposal. While the site water balance may appear brief, it provides a comprehensive assessment of the inflows and outflows of water for the Proposal. The Stage 1 site is large, but relatively homogenous, and hence it is able to be represented using a relatively simple water balance model.	EIS.	However, the section is not representative of a “detailed assessment” required by the SEARs.
<i>The concept design included provision for rainwater tanks as part of the WSUD strategy. The EIS notes that the demand for water is relatively small for Stage 1, and stormwater harvesting has not been proposed on this basis. However, the relatively small demand (approx. 410kL/year) means that achieving a high reliability of supply is likely. Incorporation of rainwater tanks would have the following benefits:</i> <ul style="list-style-type: none"> <li>- Reduce runoff volumes</li> <li>- Improve water quality / reduce need for bioretention</li> <li>- Reduce operational costs in offsetting potable water requirements</li> <li>- Provide an outcome consistent with WSUD principles</li> </ul>	Consideration of inclusion of rain water tanks would be undertaken as part of detailed design of the Proposal, in accordance with the Concept Plan Approval.	Section 11 and Appendix P of the EIS.	The SEARs require a detailed water balance assessment. This implies that this assessment should be undertaken at the current design phase, rather than postponed to later stages.  A detailed review of stormwater harvesting opportunities should be progressed, as part of the detailed water balance assessment required by the SEARs, to provide indication of potential reductions in runoff volumes and expected reliability of supply.
<i>The following additional comments are made in relation to other matters:</i>			
<i>Bank stability has not been adequately addressed. The SIMTA analysis of bank stability only includes the construction phase. It suggests that clean fill will be used to augment and form banks without discussing what sources and types of fill are appropriate for use. Fill sourced from elsewhere on site may not have sufficient nutrient and organic content to support vegetation. Therefore, fill used to build or stabilize channel banks should be subject to extensive testing and evaluation to ensure that it is suitable. It is stated that re-vegetation will not be conducted and that this will be left to natural regrowth. Finally, there are no proposed erosion control measures which will operate over the medium term until vegetation has established. The EIS treatment of bank stability is wholly inadequate.</i>	As stated in Mitigation Measures 8B, of Section 22 of the EIS and Section 8 of the RtS, revegetation of the banks of the Georges River would be undertaken in accordance with the Riparian Vegetation Management Plan, included in Appendix S of the EIS, which identifies that revegetation or application of jute mesh or an alternative, may be required for bank stabilisation while vegetation establishes. As stated in the Riparian Vegetation Management Plan, revegetation of this area would predominantly be with shrubs, small tree and groundcover species. Weed management measures identified in the Riparian Vegetation Management Plan would also be implemented.	Section 22 and Appendix S of the EIS.  Section 8 of the RtS.	This does not address the stated concerns regarding the use of fill to form banks.  Fill sourced from elsewhere on site may not have sufficient nutrient and organic content to support vegetation. Therefore, fill used to build or stabilize channel banks should be subject to extensive testing and evaluation to ensure that it is suitable.
<i>Cumulative impacts of both the MIC proposal and future Stages of SIMTA on flooding, water quality</i>	The Stormwater and Flooding Environmental Impact Assessment, included as Appendix P and summarized in	Sections 11.3 and 19 and Appendix P	It is acknowledged that the MIC and SIMTA proposals have been subject

Comment	Clarification/Response	Reference	Review Comment
<p><i>and water balance for the precinct have not been discussed.</i></p>	<p>Section 11 of the EIS, and demonstrated that the stormwater management systems proposed for the Proposal would mitigate changes to stormwater quantity and quality as a result of the Proposal. Both the Proposal and the MIC Proposal have proposed mitigation measures to minimise off-site changes to hydrology. Future development applications for the SIMTA Project will include an assessment of potential cumulative impacts on hydrology, based on the information available at the time of the application.</p>	<p>of the EIS. <a href="http://www.micl.com.au">www.micl.com.au</a> Accessed: 24 August 2015</p>	<p>to independent assessments and mitigation measures. This does not address cumulative impacts.  It remains unclear what the cumulative impacts of the proposals may be. Council requires SIMTA in coordination with the MIC to undertake a cumulative flood impact assessment for flooding, stormwater quantity and water quality to determine if the cumulative impacts are acceptable. Any adverse impacts resulting from both development must be mitigated,</p>
<p><b>Other Agency Comments</b></p>			
<p><i>OEH – “No justification is provided in relation to the pollutants generated from the railway corridor in the MUSIC modelling. In particular, no consideration appears to have been given to gross and hydrocarbon pollutants from the railway operations - this is of particularly importance given the proposed use of lubricants to reduce rail noise. OEH recommends these matters be addressed by the proponent.”</i></p>	<p>MUSIC does not have the capability to model the generation or treatment of hydrocarbons and is unable to adequately represent potential gross pollutant generation by operation of the Rail link.  It is acknowledged that friction modifiers would be applied to reduce rail noise. There are a range of friction modifiers on the market and the most appropriate substance / system would be identified during detailed design, taking into consideration potential environmental impacts associated with the product.</p>	<p>N/A</p>	<p>The comment from OEH is considered valid, and has not been adequately addressed by the proponent.  The EIS should address a worst case scenario and identify appropriate mitigation measures including how these pollutants will be managed prior to entering into the waterways.</p>

### 3.5.4 Additional Matters

- > The new rail link alignment is not modelled or mapped in terms of flooding and stormwater impacts. The proponent argues that the impact of the proposed new alignment is minimal and will not substantially change the previous results. It is Cardno's view that the new rail link may result in changes to flood behaviour as the alignment has changed within the Anzac Creek flood plain and may provide less flood plain storage upstream of the proposed culvert. Updated modelling and mapping should be provided to demonstrate that the new rail link alignment does not significantly change the impact of the proposal.
- > Cardno's previous submission made comments with regard to the sensitivity of the open waterway drainage system to climate change scenarios. Cardno expressed concern that a number of the open waterway sections did not appear to have sufficient freeboard that insufficient discussion of this had been provided. No further information has been provided.
- > SIMTA's modelling of the Georges River flood response to the proposed railway bridge indicated an afflux of up to 30mm upstream. Cardno requested that SIMTA provide information regarding the impact of this on the freeboard of the existing bridge. No new information or discussion has been provided.

### 3.5.5 Recommendations

The recommendations below are identified to address the identified impacts associated with flooding and stormwater to allow a comprehensive assessment of the proposal:

- > The complete and correct flood mapping for Anzac Creek should be provided. All Anzac Creek flood mapping should be updated to include the new rail link alignment. All modelling of the Anzac Creek flood plain should be updated to consider any effects of the new rail link alignment.
- > Further information should be provided regarding the change in frequency of flooding and interruptions to trafficability of Moorebank Avenue as a result of the proposal. This is necessary to understand if these flood impacts are truly "negligible" as claimed.
- > The Concept Plan maps indicating the TUFLOW model regime should be provided in a legible form.
- > A concept rail link bridge design which meets the relevant requirements, should be provided prior to determination.
- > Georges River flood plain affectation should be mapped. Specifically, at minimum the proponent should provide 100 year ARI + PMF flood extent and elevation mapping for the Georges River flood plain.
- > The design of waterway structures on the Georges River in the vicinity of the Glenfield Water Facility should be investigated and assessed prior to determination under 100 year ARI and PMF flood conditions. Impacts on the freeboard of the existing rail bridge should be assessed.
- > An assessment of the project's impacts on flooding duration in the Georges River should be provided as is required by the SEARs.
- > Further information should be provided regarding the obstructions represented within the OSD waterways. Appropriate measures should be indicated to address the potential for blockages and overflows with consideration given to future climate scenarios.
- > A more detailed site water balance should be provided to meet the SEARs requirement.
- > Any fill proposed for use in forming watercourse banks should be subject to extensive testing to confirm that it is fit for purpose.
- > The concerns raised by the OEH relating to pollutants released from the railway alignment, including from friction modification products should be addressed. Cardno endorses the concerns raised by OEH.

### 3.6 Biodiversity

The proposed SIMTA RtS provides a response to the submissions made to the EIS in relation to the proposal's impacts on Biodiversity. This review considers information in the RtS Section 4.6 and Appendix J prepared by Hyder Consulting.

#### 3.6.1 Summary

The Table below summarises the outcome of the changes to the proposal identified by the RtS.

**Table 3-11 Adequacy of Response Summary**

Concept Approval Commitments	Secretaries Environmental Assessment Requirements	Liverpool City Council Assessment
The following commitments are not adequately addressed:	The following SEARS are not adequately addressed:	The following assessment recommendations are not adequately addressed:
<ul style="list-style-type: none"> <li>&gt; Guidelines for Vegetation Management Plans on Waterfront Land (OEH, 2010)</li> <li>&gt; d.iii. Offsets shall be identified, and demonstrate that they can be secured.</li> <li>&gt; The offset package will be secured before any clearing of endangered ecological communities or threatened species is carried out.</li> <li>&gt; The proposed rail link (located within the rail corridor) is exempt from the requirement for an a WM Act controlled activity approval from NOW as a transitional Part 3A project; however the detailed design of the rail link will seek to conform to the objects of the WM Act and its associated guidelines.</li> <li>&gt; Riparian corridors will be appropriately revegetated to restore and/or maintain ecological, functional and habitat values and impede surface flows and drop sediment before it reaches the waterways.</li> </ul>	<ul style="list-style-type: none"> <li>• A flora and Fauna assessment. The assessment shall:               <ul style="list-style-type: none"> <li>c) Include a Vegetation Management Plan that has been prepared in consultation with the NSW Office of Water;</li> <li>f) Include a comprehensive offset strategy, in accordance with the <i>NSW Biodiversity Offsets Policy for Major Projects</i> including the <i>Framework for Biodiversity Assessment</i> (OEH 2014), consistent with the 'avoid, minimise or offset' principle.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Fish passages as described in the EIS will not meet the relevant NSW guidelines.</li> <li>• The VMP lacks specific detail of the recommendations proposed. In addition to not being written in accordance with the Guidelines for Vegetation Management Plans on Waterfront Land (OEH, 2010). A contractor could not prepare a cost estimate for the proposed works unless there are works details and quantities provided in the Plan.</li> <li>• The VMP has no detailed plans or diagrams, with figures showing the VMP site boundaries only, which do not include details, such as existing riparian vegetation types, condition, proposed areas of disturbance and proposed rehabilitation measures.</li> </ul>

#### 3.6.2 Summary of Revisions/Clarifications

The following key revisions have been made to the proposal in relation to Biodiversity:

- > The rail corridor alignment has been revised resulting in a reduced area of *Grevillea parviflora subsp. parviflora* being impacted by the proposed works from 641 stems to 20 stems and a decrease in fragmentation of this species community (refer to ).
- > The level of vegetation to be cleared has reduced from 1.25 ha to 1.23 ha resulting in a 0.02 ha reduction in the required removal of Hard-leaved Scribbly Gum – Parramatta Red Gum healthy woodland of the Cumberland Plain, Sydney Basin.

- > A greater area of fauna habitat will also be protected as a result of the revised rail alignment with only one hollow bearing tree requiring removal, a reduction from three.
- > As a result of the biodiversity impact changes the Southern Boot Land offset site has changed in layout to allow for greater vegetation and habitat connectivity
- > A number of additional mitigation measures have been included for biodiversity including a flora and fauna management plan, water quality and macroinvertebrate monitoring and stabilisation of bushfire fuel loads in the rail corridor.

### **3.6.3      Assessment**

#### **3.6.3.1      *RtS Specific Response***

The Table below contains the comments, clarifications/responses and references taken from the RtS document, with a further review comment to the RtS provided in the last column. The Table includes responses to the Council submission, along with key relevant responses from other submissions addressed in the RtS.

**Table 3-12 RtS Response Review (Biodiversity)**

Comment	Clarification/Response	Reference	Review Comment
<b>Council Submission Responses</b>			
<i>The Biodiversity Assessment report lacks recognition of the need for connectivity between the Boot Land and the neighbouring habitat corridors. The project does not consider the ecological environment through which the rail link passes and the need for retaining these habitats within the Sydney Basin.</i>	The Biodiversity Assessment Report (BAR) was prepared in accordance with the Framework for Biodiversity Assessment (FBA) (OEH, 2014). Within the FBA, connectivity is prescribed a value, based on several factors, including linkage width and condition. As stated in Section 3.4 of the BAR, included as Appendix S of the EIS, and updated in Appendix J of this RtS, a connectivity value score of 9 was assigned to the Proposal. Section 4.8.3 of the BAR discusses habitat connectivity on the ecological study area and identifies that the habitat within the study area is currently isolated from adjacent areas due to the presence of significant barriers to fauna movement, including chain-mesh fencing, Moorebank Avenue and the East Hills Railway Corridor (EHRC). Section 14.2.9 of the EIS contains further discussion on the habitat connectivity of the Proposal and recognizes the larger expanses of habitat surrounding the ecological study area and within the Holsworthy Military Area, which may be utilised by mobile fauna species as well as the SIMTA site.	Appendix S of the EIS Appendix J of this RtS	The level of separation has been reduced from that associated with the previous alignment; however the proposed rail alignment will still result in the isolation of pockets of <i>Persoonia nutans</i> .
<i>Fish passages as described in the EIS will not meet the relevant NSW guidelines.</i>	As noted in Section 6.3.2 of the EIS, the Georges River bridge and Anzac Creek crossings were designed in consultation with Department of Primary Industries (Fisheries) (DPI (Fisheries)) and provide for fish passage. Mitigation measures 5B and 5C commit to consideration of fish passage requirements during detailed design and construction, included in Section 22 of the EIS and Section 8 of this RtS.	Sections 6.3.2 and Section 22 of the EIS. Section 8 of this RtS.	Section 8 of the RtS does not discuss fish passages in accordance with the relevant NSW guidelines.
<i>The Biodiversity Offset Strategy does not detail how the credits generated have been calculated or the assumptions on which the quantities are</i>	The Biodiversity Offset Strategy (BOS) was prepared in accordance with the FBA and the Commonwealth Biodiversity Offsets	Appendix J of this RtS.	Further discussion on how credits are derived is now provided in Appendix J. However, it is noted

Comment	Clarification/Response	Reference	Review Comment
<i>based. Due to this lack of information the number of credits generated cannot be assessed. To allow adequate assessment of the offsetting proposal presented, a detailed BOS should be provided including details on the assumptions and methods used to derive the resulting credits.</i>	Policy. As stated in section 5.3 of the BOS, the credits have been calculated using the Biobanking Credit Calculator. The methodology used and vegetation and habitat descriptions of the offset sites are presented in the BAR. This is stated in the BAR, BOS and the EIS. It is noted that the calculations have been revised in response to comments received from Office of Environment and Heritage (OEH), and the updated BAR and BOS are included with this RtS (Appendix J).		that adequate credits for <i>Persoonia nutans</i> could not be identified for use in this project.
<i>The Offset Strategy proposes to use Commonwealth Land to offset the proposed development. There is no discussion provided indicating that agreement has been reached with the Commonwealth. Furthermore, the Offset Strategy does not discuss whether the use of the Commonwealth Land will result in discounting of the credits associated with the land as no detail on how the credit are calculated is provided.</i>	The Commonwealth Government and SIMTA have reached an agreement for SIMTA to develop the MIC Proposal in conjunction with the SIMTA Project, and includes substantial biodiversity offsets as part of the Moorebank intermodal freight precinct ( <a href="http://www.micl.com.au">www.micl.com.au</a> ). As noted above and stated in the BAR, BOS and the EIS, the method used to calculate the credits follows the FBA and using the Biobanking Credit Calculator.	Appendix S of the EIS. Appendix J of this RtS. <a href="http://www.micl.com.au">www.micl.com.au</a> Accessed: 24 August 2015	The MIC site including the proposed offset lands will now be leased to SIMTA. The report still does not address the relationship with the MIC site and if credits utilised in this project will limit credits needed for the MIC project.
<i>The VMP lacks specific detail of the recommendations proposed. In addition to not being written in accordance with the Guidelines for Vegetation Management Plans on Waterfront Land (OEH, 2010). A contractor could not prepare a cost estimate for the proposed works unless there are works details and quantities provided in the Plan.</i>	The Riparian Vegetation Management Plan, included as Appendix S of the EIS and updated in Appendix J of this RtS, was prepared in accordance with the SEARs and the Guidelines for Vegetation Management Plans on Waterfront Land (NSW Office of Water (NOW), 2012). As stated in the Riparian Vegetation Management Plan, the plan would be reviewed and updated prior to construction of the Proposal to consider any changes in design and include further detail as detailed design permits. Cost estimates would be undertaken by the Construction Contractor once detailed design has been confirmed and the BOS finalised. The Riparian Vegetation Management Plan has been updated in response to comments received and is included as Appendix J of this RtS.	Appendix S of the EIS Appendix J to this RtS	A Riparian Vegetation Management Plan (RVMP) has been provided in Appendix J of the RtS. Whilst this document provides far greater details of the required riparian works in order to be consistent with the Guidelines for Vegetation Management Plans on Waterfront Land (OEH, 2010), the level of detail remains inadequate, with plans identifying the proposed revegetation works and plantings needs to be provided to allow full assessment.
<i>The VMP has no detailed plans or diagrams, with figures showing the VMP site boundaries only,</i>	Plans within the Riparian Vegetation Management Plan have been prepared to	Section 8 and Appendix J to this	The RVMP in Appendix J includes site boundaries but does not include any information on existing

Comment	Clarification/Response	Reference	Review Comment
<p><i>which do not include details, such as existing riparian vegetation types, condition, proposed areas of disturbance and proposed rehabilitation measures.</i></p> <p>...</p> <p><i>Justification needs to be made as to why the riparian setback for Anzac Creek [ &amp; Georges River] has not been met. The exact setback that has been determined for the proposal needs to be shown in a cross section of the creek showing top of bank, and CRZ distances and VB distances for both banks of the creek. Soil stability and revegetation of [the western bank of the Georges River] needs to be considered to ensure no sediment is discharged into Georges River.</i></p>	<p>meet NSW's Office of Water's requirements, which are: <i>a scaled plan which shows the proposed crossing options, existing riparian vegetation, the riparian corridor width and the riparian corridors that will be affected by the crossings.</i> These figures have been updated to show the width of the riparian corridors. The riparian setback for Anzac Creek, as specified by NOW, is 30 metres, while for Georges River the riparian setback is likely to be a minimum of 50 metres. These widths are now shown on the plans within the updated Riparian Vegetation Management Plan, included as Appendix J of this RtS.</p> <p>Erosion potential and the need for measures to stabilize banks is discussed in Section 4.5 of the Riparian Vegetation Management Plan. Measures to mitigate this risk are included within Section 22 of the EIS and updated in Section 8 of this RtS.</p>	<p>RtS. Section 22 of the EIS</p>	<p>vegetation types, condition, or detailed mitigation measures.</p> <p>Section 4.5 of the RVMP does not discuss erosion potential.</p>
<p><i>The Biodiversity Assessment and relating EIS chapter considers the development as avoidable without detailed discussion in accordance with the Part 3A guidelines. Whilst this development is being assessed under Part 4 of the EP&amp;A Act is should still be consistent with the commitments of the concept approval. The proposal is using the last resort approach of offsetting. Whilst there is some discussion of avoiding areas of high ecology significance, the project specifically runs a railway line through the middle of an area containing two protected plant species. The potential for avoidance of these areas is not discussed, nor is there discussion regarding avoidance of hollow bearing trees</i></p>	<p>As required by the SEARs, the BAR was prepared in accordance with the FBA; hence the Part 3A guidelines are not applicable to the assessment. As required under the FBA, a discussion of measures undertaken to avoid and mitigate impacts is included in Section 6 of the BAR.</p> <p>The Rail link has been amended in response to comments received during the submissions period and the BAR and the BOS have been updated to reflect this change. Alteration of the Rail link will reduce impacts on threatened flora species. These impacts are discussed further in Section 7.1.6 of this report and the amended BAR, included as Appendix J of this RtS.</p>	<p>Appendix J to this RtS</p>	<p>The rail alignment has changed resulting in a reduction in the impacts to threatened species and hollow bearing trees. Impacts to habitat will still occur as a result of this proposal including the removal of one hollow bearing tree.</p>
<p><i>The Assessment should define how the proposed impacts on riparian and aquatic habitats have been considered in accordance with the Fisheries Management Act 1994 and Water Management Act 2000 and how mitigation measures have been employed in accordance with the guidelines associated with these Acts.</i></p>	<p>The <i>Fisheries Management Act 1994</i> provisions relevant to the Proposal are discussed in Section 2.4 and Section 6.3.3 of Appendix S of the EIS and updated in Appendix J of this RtS. The <i>Water Management Act 2000</i> provisions relevant to the Proposal are discussed in the Riparian</p>	<p>Section 2 and Appendix S of the EIS Appendix J of this RtS.</p>	<p>These Acts are now discussed. However, suitable discussion associated with fish passage relevant to these Acts is not provided.</p>

Comment	Clarification/Response	Reference	Review Comment
<p><i>The BOS should include a commitment to try and address this deficit with like for like species to ensure the project will not contribute to the community and species being placed at risk of extinction.</i></p>	<p>Vegetation Management Plan outlined in Appendix S of the EIS and updated in Appendix J of this RtS.</p> <p>The BOS has been prepared in accordance with the FBA, which sets out the offset rules for biodiversity values. It is specified in section 5.3.4 of the BOS that variation of the offset rules does not apply to threatened entities listed under the EPBC Act; as such, the <i>Persoonia nutans</i> and Hard-leaved Scribbly Gum - Parramatta Red Gum heathy woodland of the Cumberland Plain, Sydney Basin will be offset using like for like credits or supplementary measures, if credits cannot be obtained.</p> <p>OEH have advised that Eastern Bentwing-bat should be considered as an ecosystem credit species, not a species credit species, and therefore there will be no longer be a credit deficit for this species. This has been updated in the BAR and BOS, included as Appendix J to this RtS.</p>	<p>Appendix J of this RtS</p>	<p>Additional information has been provided. Credits to offset the removal of <i>Persoonia nutans</i> have still not been identified.</p>
<p><i>Greater detail should be provided on the proposed mitigation measures such as weed control and propagation and transplanting of the threatened flora species so that the proposed methodologies can be assessed prior to determination</i></p>	<p>The Riparian Vegetation Management Plan provides detail on weed management measures that would be implemented within the riparian areas. Weed management in other areas would be undertaken in accordance with the requirements of the <i>Noxious Weeds Act 1993</i>. The Threatened Flora Species Management Plan outlines the management actions proposed for <i>Grevillea parviflora</i> subsp. <i>parviflora</i> and <i>Persoonia nutans</i>, including transplanting and seed collection. Seed collection would also be undertaken as part of the Riparian Vegetation Management Plan. Specific methodologies would be developed by an ecologist and further detailed in the Flora and Fauna Management Plan that is required under mitigation measure 8A contained within Section 22 of the EIS and updated in Section 8 of this RtS.</p>	<p>Section 22 and Appendix S of the EIS Section 8 and Appendix J of this RtS</p>	<p>A Threatened Flora Species Management Plan has now been included which details these aspects. This plan requires additional information on the land to be protected through the offsetting and should be updated once a suitable <i>Persoonia nutans</i> offset area is identified.</p>
<p><i>Mitigation measures provided in the Threatened Species Management Plan and Vegetation</i></p>	<p>Table 9 of the Riparian Vegetation Management Plan clearly identifies the</p>	<p>Section 22 and Appendix S of the</p>	<p>The revised RVMP and Threatened Species Management Plan now include this information. The</p>

Comment	Clarification/Response	Reference	Review Comment
<p><i>Management Plan need to be reviewed due to not only a lack of detail, but an apparent lack of understanding of the justification for those mitigation measures. The proposed mitigation measures should be well founded and rely on best practice standards.</i></p>	<p>intended outcome of the mitigation measures proposed. Mitigation measures outlined in the Threatened Species Management Plan have been developed in accordance with the recovery plan for the species and are linked to performance objectives. Both the Threatened Species Management Plan and the Riparian Vegetation Management Plan are live documents that will be reviewed and updated as the detailed design and construction program are developed. The level of detail provided in the plans is appropriate for this stage of the Proposal. The documents have been updated to reflect the changes to the Rail link and are included in Appendix J of this RtS.</p>	<p>EIS Appendix J of this RtS.</p>	<p>RVMP still lacks sufficient detail in regards to the proposed rehabilitation works.</p>
<p><i>The design of the rail alignment should be modified to ensure a greater preservation of habitat</i></p>	<p>The Rail link has been amended in response to comments received during public exhibition of the EIS for the Proposal. An assessment of impacts associated with the revised Rail link is provided in Section 7 of this RtS and the updated BAR, BOS, Threatened Species Management Plan and Riparian Vegetation Management Plan have been updated to reflect the change. The updated reports are included as Appendix J of this RtS. The amended Rail link alignment reduced impacts on threatened species and their habitat.</p>	<p>Section 7 and Appendix J to this RtS</p>	<p>This has been undertaken through the realignment of the rail corridor. Impacts to habitat will still occur including the removal of a hollow bearing tree.</p>
<p><i>A comprehensive photographic record of the site should be prepared (or be recommended to be part of the proposed Vegetation Management Plan works) to assist with the reporting and monitoring requirements of the Vegetation Management Plan. A cost estimate needs to be prepared for the Vegetation Management Plan.</i></p>	<p>Site photographs are included in the BAR. Additionally, a set of photographic monitoring points is a standard requirement of the Biobanking Management Actions Template, which must be included when applying for a Biobanking Statement. This would be undertaken during the preparation of the Biodiversity Offset Management Plan, as referenced in section 5.3.5 of the BOS.</p> <p>As stated in the Riparian Vegetation Management Plan, the plan would be reviewed and updated prior to construction of the Proposal to consider any changes in design and include further detail as detailed</p>	<p>Appendix J to this RtS</p>	<p>Listed to be undertaken at a later stage. Clear commitments should be provided within the RVMP to state when and how costing will be undertaken.</p>

Comment	Clarification/Response	Reference	Review Comment
	design permits. Cost estimates would be undertaken by the construction contractor once detailed design has been confirmed and the BOS has been finalised.		
<i>A specific assessment addressing the commitment to thoroughly assess any development within the Anzac Creek CSWL community, including potential impacts on groundwater quality and quantity should be undertaken.</i>	Impacts to Parramatta Red Gum woodland on moist alluvium of the Cumberland Plain, Sydney Basin Bioregion and impacts to groundwater have been considered in Section 6.2.1 of the BAR.	Appendix J to this RtS	Now included in Appendix J.
<i>The Biodiversity Offsetting documents should identify what the risk to the project and alternative approach would be if an offset package is not secured.</i>	Section 4.2 of the BOS, updated and included within Appendix J of this RtS describes the mechanisms available for securing offsets under the FBA. Section 5.1 of the BOS identifies several offset measures that may be used to meet the credit requirements.	Appendix J of this RtS.	Now included in Appendix J. An inability to secure credits for <i>Persoonia nutans</i> is not yet discussed.
<i>The section of the rail link situated along the western bank of the Georges River (from the northern loop track to the Georges River Bridge crossing) is situated within the specified riparian setback zone requiring assessment of soil and water management, soil stabilization and re-vegetation works post construction of the rail link.</i>	Impacts associated with soil and water management are discussed in Section 11.2 of the EIS and preliminary erosion and sediment control plans have been provided within Appendix P of the EIS.	Section 11 and Appendix P of the EIS	Now included in Appendix P. More detailed plans should be provided detailing these works.
<b>Other Submission Responses</b>			
<i>OEH – A number of comments relating to the specifics of the BAR calculation</i>	The BAR has been revised in accordance with the specifications provided by OEH.	Appendix J of the RtS	OEH specifications appear to have now been followed.
<i>DPI – Various comments relating to the lacking of the VMP and the need for improved mitigation measures.</i>	Amendments have been made to the VMP now identified as and RVMP. Minimal changes to riparian mitigation measures have been made.	Section 8 and Appendix J of this RtS.	As discussed above and below the RVMP is lacking in information required to determine the level of impacts and associated protection which will occur within the riparian areas.

#### **3.6.4**      **Additional Matters**

- > The Concept Plan Approval required off setting to be addressed. Offsetting sites are now based on commitments due to the leasing agreements between MIC and SIMTA. The Biodiversity Offset Strategy states that credit deficits occur for *Persoonia nutans*. The ability to secure adequate offset credits has not been demonstrated and is required.
- > The VMP has been upgraded into a Riparian Vegetation Management Plan which supersedes the VMP, with a greater level of information in accordance with the comments from DPI and NSW Office of Water. However, the document is still missing plans detailing proposed revegetation works and the existing condition of riparian vegetation as requested in the Guidelines for Vegetation Management Plans on Waterfront Land (OEH, 2010).

#### **3.6.5**      **Recommendations**

The realignment of the rail corridor has resulted in reduced ecological impacts. However, there are still a number of concerns associated with the level of detail and associated impacts, which are required to allow the proposal to be adequately assessed:

- > The offsets necessary for the removal of *Persoonia nutans* are not demonstrated to be achievable. Greater commitments and mitigation measures are required to ensure the project does not proceed until adequate protection of this species is ensured.
- > The riparian vegetation management plan has been updated to include greater information. However, details of the current riparian vegetation condition and a design detailing the distribution of proposed revegetation works in line with the relevant guidelines for the development of a vegetation management plan is required.
- > Additional detail has not been provided in regards to the protection or rehabilitation of fish passage. Clear commitments and design details identifying how this will be achieved needs to be provided to ensure the protection of this habitat through not only construction but also operational phases of the project.

### 3.7 Non Indigenous Heritage

The proposed SIMTA RtS provides a response to the submissions made to the EIS in relation to the proposal's impacts on Non-indigenous Heritage. This review considers information in the RtS Section 4.6 and Appendix L prepared by Artefact.

#### 3.7.1 Summary

The Table below summarises the outcome of the changes to the proposal identified by the RtS.

**Table 3-13 Adequacy of Response Summary**

Concept Approval Commitments	Secretaries Environmental Assessment Requirements	Liverpool City Council Assessment
<p>The following commitments are not adequately addressed:</p>	<p>The following SEARS are not adequately addressed:</p>	<p>The following assessment recommendations are not adequately addressed:</p>
<ul style="list-style-type: none"> <li>• The Proponent commits to undertaking the recommendations within the Non-Indigenous Heritage Report including:</li> <li>• Preparing a Statement of Heritage Impact (SOHI) for each stage, including the legal status of the site and advice on required actions depending on whether the site is listed or unlisted at the time that approval is sought;</li> <li>• Development of an overall mitigation strategy for the DNSDC site, which may be based on Table 3 of the Non-Indigenous Heritage report.</li> <li>• Undertaking further archaeological assessment and investigation or monitoring, where required in areas designated as having archaeological potential that would be impacted by the proposal. The SoHIs for each stage should address the archaeological potential within the development area for each stage; and</li> <li>• If any archaeological deposit or item of heritage significance is located within the study area and is at risk of being impacted, the NSW Heritage Council should be notified and a heritage consultant/archaeologist should be engaged to assess the item to determine its heritage significance.</li> </ul>	<p>iii. outline the proposed mitigation and management measures (including measures to avoid significant impacts and an evaluation of the effectiveness of the measures). Mitigation measures should include (but not be limited to) photographic archival recording and adaptive reuse of buildings or building elements on site); Note: Where historical excavation is proposed, the heritage consultant undertaking the assessment must meet the NSW Heritage Council's Excavation Director criteria.</p>	<ul style="list-style-type: none"> <li>• Despite the high level of significance being recognized in the Artefact Impact Assessment, no attempts have been made to adaptively reuse these structures based on structural and compliance issues. No consideration has been given to integrating these buildings into the proposed works with removal proposed. Consideration should be given to the integration of these buildings into the proposal to allow the heritage significance to remain to a limited degree.</li> <li>• The proposed rail link passes immediately to the west of the Glenfield Farm State Heritage Register listed item. The Impact Assessment identifies visual and noise impacts, however these are then discounted based on existing impacts occurring in the corridor. This approach does not consider the cumulative impact of these works and should be revised. Furthermore, movements on the spur line are likely to be slower than on the SSFL or East Hills Lines with locomotives potentially stopped on the spur line while other locomotives are moving into and out of the site, creating a far greater visual impact than the current fleeting views offered by freight carriages on the SSFL.</li> </ul> <p style="text-align: right;">Refer to <b>Section 3.7.3.</b></p>

#### 3.7.2 Summary of Revisions/Clarifications

The following key revisions have been made to the proposal in relation to Non-indigenous Heritage:

- > The amended rail alignment has been identified by the RtS as not resulting in any further impacts to non-indigenous heritage above that identified in the EIS.
- > No further mitigation measures to those presented in the EIS have been provided.

### **3.7.3      Assessment**

#### **3.7.3.1      *RtS Specific Response***

The Table below contains the comments, clarifications/responses and references taken from the RtS document, with a further review comment to the RtS provided in the last column. The Table includes responses to the Council submission, along with key relevant responses from other submissions addressed in the RtS.

**Table 3-14 RtS Response Review (Non Indigenous Heritage)**

Comment	Clarification/Response	Reference	Review Comment
<b>Council Submission Responses</b>			
<p>Despite this high level of significance being recognized in the Artefact Impact Assessment, no attempts have been made to adaptively reuse these structures based on structural and compliance issues. No consideration has been given to integrating these buildings into the proposed works with removal proposed. Consideration should be given to the integration of these buildings into the proposal to allow the heritage significance to remain to a limited degree.</p>	<p>The Concept Plan assessment considered possible mitigation of impacts on WWII structures and suggested measures included conservation in situ of some, or all, of the WWII structures, adaptive reuse of some or all of the WWII structures, or demolition of the structures with prior comprehensive archival recording. Adaptive reuse of these structures was considered as part of the Heritage (Non-Indigenous) Assessment, summarised in Section 16 and included as Appendix U of the EIS. As stated within Appendix U, architects have assessed the WWII buildings as follows:</p> <p><i>“The building's height of 4.4m (with the exception of Building 6 which has a height of 4.5m) and structural column spacing of 5.1m does not make the building suitable for modern warehouse operations such as receiving and despatch operations, material handling equipment operations and sortation systems. An accepted industry standard minimum of 5m clear height to roller shutter doors is required for a flush dock to enable a heavy vehicle to utilise the dock area. A wider column spacing would be required to accommodate modern racking systems, sortation systems and material handling equipment, such as a forklift. The building layout and site configuration is constrained and would not be suitable for manoeuvring of heavy vehicles associated with modern warehouse applications. The structures are susceptible to termite attack and the columns are at a higher risk of damage from machinery.”</i></p> <p>It is concluded that reusing the existing</p>	<p>Section 16 and Appendix U of the EIS</p>	<p>The assessment provided is limited to the industrial use of the site. It does not discuss consideration of the site for adaptive reuse as office and staff facilities and amenities. Greater investigation should be undertaken to try to modify the design to maintain these historic structures through a thorough adaptive reuse strategy.</p>

Comment	Clarification/Response	Reference	Review Comment
<p>The proposed rail link passes immediately to the west of the Glenfield Farm State Heritage Register listed item. The Impact Assessment identifies visual and noise impacts, however these are then discounted based on existing impacts occurring in the corridor. This approach does not consider the cumulative impact of these works and should be revised. Furthermore, movements on the spur line are likely to be slower than on the SSFL or East Hills Lines with locomotives potentially stopped on the spur line while other locomotives are moving into and out of the site, creating a far greater visual impact than the current fleeting views offered by freight carriages on the SSFL.</p>	<p>structures would be impractical from the perspective of adhering to modern engineering and safety standards, and also in regard to meeting the requirements of the new development.</p> <p>The Heritage (Non-Indigenous) Assessment, summarised in Section 16 and included as Appendix U of the EIS found that significant vistas from the house and barn of Glenfield Farm over the proposed Rail link have already been considerably compromised by existing development and operations. The Heritage (Non-Indigenous) Assessment, summarised in Section 16 and included as Appendix U of the EIS, takes into consideration the cumulative impact of the Proposal. The assessment concluded that while there is likely to be a minor increase in visual impacts as a result of construction and use of the Rail link the existing vegetation within the Glenfield Farm curtilage will continue to act as a screen limiting views towards the site (Figures 52-54 of Appendix U). The EIS and Non-Indigenous Heritage Impact Assessment (Artefact 2012) include photos from Glenfield Farm towards the SSFL. Vegetation screens the majority of the view towards the site from the house (both ground floor and second storey). There is less vegetation screening the view from the barn, but the increase in the extent of visual impacts is still assessed to be minor. It is also noted that at present, the most publically accessible views of the item are from Leacocks Lane, to the northwest of the house. The public will continue to be able to view and appreciate the significance of the site from this location.</p>	<p>Appendix U of the EIS</p>	<p>The statement that there is only a minor increase in noise and visual impacts needs to be presented in the context of the current levels of noise and visual impact. If noise and visual impacts are currently unacceptable then minor increases have the potential for substantial impacts on sensitive receivers.</p>
<p>An overall heritage strategy (incorporating photographic archival recording, conservation, adaptive reuse and interpretation) is required to ensure the conservation of the site heritage</p>	<p>The compilation of mitigation measures provided in Section 22 of the EIS, and updated in Section 8 of this RtS, includes mitigation measure 10A which proposes a</p>	<p>Section 22 of the EIS. Concept Plan Approval</p>	<p>The conditions of determination for the project should ensure that this commitment is adequately addressed.</p>

Comment	Clarification/Response	Reference	Review Comment
<p>significance. The current piecemeal assessment results in poor heritage outcomes.</p>	<p>full photographic record of the SIMTA site in its entirety to be undertaken prior to construction of the Proposal. Furthermore, mitigation measure 10B proposes the preparation of a heritage interpretation strategy to include interpretative mediums (plaques, displays and/or online resources) for the Stage 1 site. These mitigation measures are considered suitable to record and interpret the heritage significance of the SIMTA site for the future. Further approvals would also provide further heritage assessment as per the Concept Plan Approval.</p>	<p>Section 8 of this RtS.</p>	
<p>Photographic Archival Recording should be prepared to cover the entire site prior to the commencement of any works.</p>	<p>The compilation of mitigation measures provided in Section 22 of the EIS and updated in Section 8 of this RtS, includes a mitigation measure 10A which proposes a full photographic record of the SIMTA site to be undertaken prior to construction of the Proposal.</p>	<p>Section 22 of the EIS. Section 8 of this RtS.</p>	<p>The conditions of determination for the project should ensure that this commitment is adequately addressed.</p>

### 3.7.4 Additional Matters

It is noted that a number of comments made by Council in response to the EIS were not mentioned or addressed in the RtS. These comments were in regards to adequacy of the EIS in response to the Concept Approval Requirements, which required the legal status of the site and advice on required actions depending on whether the site is listed or unlisted at the time that approval is sought. There is no discussion in the Impact Assessment Report with regards for the legal status of the site nor the need to obtain permits or consult with relevant authorities.

The Approval required further archaeological assessment and investigation or monitoring in areas designated as having archaeological potential that would be impacted by the proposal. The SoHIs for each stage are required to address the archaeological potential within the development area for each stage. The RtS identifies the need for monitoring but provides no commitment or methodology to undertaken this monitoring. Furthermore, the mitigation measures provided in the Impact Assessment Report are potential mitigation measures only, with no defined commitments made to undertake these mitigation measures. Adaptive reuse of the buildings is not considered in the potential mitigation measures.

### 3.7.5 Recommendations

The RtS failed to response to comments raised by Council in relation to non-indigenous heritage. The following issues are still outstanding and need to be addressed to ensure non-indigenous heritage is adequately managed as part of the proposed development:

- > Defined commitments should be made to undertaken mitigation measures to protect non-indigenous heritage items through the adaptive reuse of the remaining historic buildings.
- > Greater detail needs to be provided in regards to consultation with relevant heritage authorities, relevant legislation and the need to obtain permits.
- > Commitments should be made to ensure a heritage interpretation strategy is undertaken for the site, along with monitoring of heritage items in accordance with the relevant guidelines.

## 3.8 Indigenous Heritage

The proposed SIMTA RtS provides a response to the submissions made to the EIS in relation to the proposal's impacts on Indigenous Heritage. This review considers information in the RtS Section 4.6 and Appendix K prepared by Archaeological and Heritage Management Solutions.

### 3.8.1 Summary

The Table below summarises the outcome of the changes to the proposal identified by the RtS.

**Table 3-15 Adequacy of Response Summary**

Concept Approval Commitments	Secretaries Environmental Assessment Requirements	Liverpool City Council Assessment
The following commitments are not adequately addressed:	The following SEARS are not adequately addressed:	The following assessment recommendations are not adequately addressed:
Refer to <b>Section 3.8.3</b>	Refer to <b>Section 3.8.3</b>	<ul style="list-style-type: none"> <li>• Investigation of Area 1 should be undertaken to determine the extent of significance of this area and if this significance will be directly impacted by the proposal.</li> <li>• Redesign of the proposed</li> </ul>

Concept Approval Commitments	Secretaries Environmental Assessment Requirements	Liverpool City Council Assessment
		<p>alignment should be considered to ensure impacts to site MA14 are minimised, if not avoided. If further design improvements cannot be achieved these should be discussed with explanation provided.</p>
		<p>Refer to <b>Section 3.8.3</b></p>

**3.8.2 Summary of Revisions/Clarifications**

The following key revisions have been made to the proposal in relation to Indigenous Heritage:

- > The amended rail alignment did not result in an alteration to the alignment over the Georges River and does not therefore vary the impacts identified within the EIS.
- > PAD 3 was delisted following the exhibition of the EIS due to lack of cultural materials as previously identified in Appendix T of the EIS.
- > No further mitigation measures to those presented in the EIS have been provided.

**3.8.3 Assessment**

**3.8.3.1 *RtS Specific Response***

The Table below contains the comments, clarifications/responses and references taken from the RtS document, with a further review comment to the RtS provided in the last column. The Table includes responses to the Council submission, along with key relevant responses from other submissions addressed in the RtS.

**Table 3-16 RtS Response Review (Indigenous Heritage)**

Comment	Clarification/Response	Reference	Review Comment
<b>Council Submission Responses</b>			
<p><i>The proposed rail alignment runs along the edge of the Glenfield Waste Facility, parallel to the remnant riparian vegetation zone of the Georges River. The project does not discuss the level of impact associated with this neighbouring riparian zone, which has not been assessed for archaeological significance in either the Concept EA or the Stage 1 EIS. The Concept EA does note that the area, referred to as Area 1, was identified by Aboriginal participants as an area of cultural interest and as such is listed as an Area of Cultural Value. The SEARs specifically require that impacts to Aboriginal heritage sites identified within or near the project should be assessed. This has not occurred and the SEARs have not been met.</i></p> <p>...</p> <p><i>Mitigation measures should define Areas within 50 metres of the eastern and western banks of the Georges River. These areas should not be impacted without further assessment.</i></p>	<p>This issue is addressed in Section 8.3 of the <i>Aboriginal Heritage Impact Assessment</i>, included as Appendix T and summarised in Section 15 of the EIS. Specifically, it identifies that the site identified as Area 1 is outside of the current development footprint and study area boundary. While there may be an argument for indirect visual impacts, this was not raised as a concern by the Registered Aboriginal Parties (RAPs) during discussion of the Proposal. Further, the area in question is already part of a large sand extraction (and now landfill) operation, so currently has considerably negative visual impact.</p> <p>It is also highlighted that extensive test excavations were undertaken by Navin Officer Heritage Consultants (2014) as part of the MIC Proposal. These included manual and mechanical excavations along the floodplain landforms west of Georges River, and immediately north of Area 1. These excavations identified a number of discrete cultural deposits across the landform, but considered them all of low significance, and recommended no further archaeological mitigation.</p> <p>Therefore while Area 1 has not been investigated in detail as part of the SIMTA Project (being outside of the development), it is considered unlikely to provide significantly different results to those found &lt;800m to the north by Navin Officer Heritage Consultants (2014), and therefore site specific recommendations are considered unnecessary. At this stage avoidance of the site through appropriate temporary fencing along the</p>	<p>Appendix T and Section 22 of the EIS. Section 8 of this RtS.</p>	<p>Due to the nature of the riparian corridor immediately east of the rail alignment as it passes the Glenfield Waste Facility, conditions of determination should require clear definition of the area of work and strict limitations for works occurring within the Georges River riparian corridor. This should include clear go and no go areas defined within the project CEMP and associated management plans.</p>

Comment	Clarification/Response	Reference	Review Comment
	<p>study area boundary is sufficient protection for Area 1. Should the boundary change, or development encroach within the boundary of Area 1, additional assessment would indeed be required. A commitment to this is included in mitigation measure 9C within Section 22 of the EIS and updated in Section 8 of this RtS.</p>		
<p><i>Investigations of Area 1 should be undertaken to determine the extent of significance of this area and if this significance will be directly impacted by the proposal.</i></p>	<p>Area 1 is outside of the Stage 1 Proposal study area and footprint of the Proposal. Therefore there would be no direct impact to the site through the construction of the Proposal, which is entirely within the existing Glenfield Waste Facility. Any archaeological investigation would have been unnecessarily invasive and destructive to the archaeological resource (if present). Further, an assessment of the rail corridor immediately west of Area 1 was undertaken by AHMS and the RAPs as part of the Concept Plan Approval, and identified no areas of archaeological or cultural concern. While Area 1 may have once extended into the Proposal site, the Glenfield Waste facility, if present during operations may have possibly impacted upon any cultural deposits. Area 1 is therefore well constrained by the environmental (i.e. Georges River) and activities of Glenfield Waste Facility.</p>	<p>Appendix T of the EIS</p>	<p>The RtS is based on an assumption that the Glenfield Waste Facility activities have resulted in the complete removal of any potential items of heritage significance west of Area 1. This assumption is not supported by any archaeological testing and should be evaluated prior to any impacts in this area.</p>
<p><i>Further investigations should be undertaken at PAD1 to determine the southern extent of the site and to determine the level of impact that will occur at the site as a result of the proposed neighbouring rail alignment.</i></p>	<p>PAD 1 is located outside of the approved Rail Corridor identified within the Concept Plan Approval. Further, PAD 1 is located outside of the Proposal site. The Rail link would not impact on PAD 1. PAD 2 is located within the Rail Corridor to the south of PAD 1. A key part of the Aboriginal Heritage Impact Assessment, Appendix T of the EIS, involved undertaking sub-surface investigations to determine the nature and extent of any possible Aboriginal heritage resources, assess the potential impacts on areas of archaeological sensitivity and update</p>	<p>Sections 15, 22 and Appendix T of the EIS. Section 8 of this RtS.</p>	<p>Further testing of the site MA14 still required prior to construction to ensure the salvage of artefacts is suitably undertaken.</p>

Comment	Clarification/Response	Reference	Review Comment
	<p>previous reporting. As a result of these investigation PAD 2 was reconsidered and limited to an area encompassing the elevated areas immediately above the Georges River.</p> <p>This area was relabelled as MA14 to reflect its new identification as an artefact scatter and deposits rather than a PAD (refer to Section 15 of the EIS). As identified in Section 22 of the EIS, and updated in Section 8 of this RtS, this area (MA14) would be subject to open area salvage excavations to be undertaken prior to construction of the Proposal.</p> <p>Therefore, the EIS adequately assesses, and mitigates potential impacts of the Proposal relating to Indigenous heritage.</p>		
<p><i>Comprehensive consultation with OEH on heritage matters is required prior to assessment and determination.</i></p>	<p>OEH was consulted on a number of occasions throughout the preparation of the EIS, refer to Section 6 of the EIS. Consultation with OEH would continue during and prior to commencement of construction of the Proposal.</p>	<p>Section 6 of the EIS.</p>	<p>The need for further consultation with OEH is reflected in the submissions received from OEH in response to the EIS.</p>
<p><i>The EIS should commit to ensuring that contractors are trained to understand the relevant heritage considerations, legislation and recommendations to ensure that impacts are minimised and responded to during construction and operation.</i></p>	<p>As identified in the Preliminary Construction Environmental Management Plan (PCEMP), included as Appendix I of the EIS, all personnel, including subcontractors would attend a site induction that would include an environmental component, which would identify the environmental constraints, including heritage considerations.</p> <p>Mitigation Measure 9C, included in Section 22 of the EIS and updated in Section 8 of this RtS, also requires all relevant personnel and contractors involved in the construction of the Proposal will be advised of the relevant heritage considerations, legislative requirements and recommendations in the draft Aboriginal Heritage Impact Assessment (AHMS, 2015).</p>	<p>Section 22 and Appendix I of the EIS.</p>	<p>The need for contractors to undertake relevant inductions should be included within the project determination to ensure appropriate training is provided.</p>
<p><i>Redesign of the proposed alignment should be considered to ensure impacts to site MA14 are</i></p>	<p>MA14 is located within the footprint of the proposed Georges River bridge. This is</p>	<p>Section 22 and Appendix T of</p>	<p>It is noted that site MA14 has the potential to be of State Significance and will still be impacted by the proposed</p>

Comment	Clarification/Response	Reference	Review Comment
<p><i>minimised, if not avoided. If further design improvements cannot be achieved it should be discussed and explain why.</i></p>	<p>considered the most suitable location for the bridge from a design perspective and minimising environmental impacts (i.e. flooding, visual, noise and air). While MA14 has the potential to be a site of State significance, it has currently only been assigned a local value, and therefore the rationale for conservation is far less. In addition, works undertaken as part of the adjacent Moorebank Intermodal Terminal has found that the sand deposits characteristic of MA14 are present across much of the ridgeline over-looking Georges River. Therefore, while the Aboriginal Heritage Impact Assessment, included as Appendix T of the EIS, identified the site based, in part, on its rarity, there is some evidence suggesting it is far more widespread in this area. For these reasons, detailed archaeological salvage – conservation ex situ – is considered a valid and preferred approach. It is also highlighted that the Rail link only impacts part of MA14, and as such some conservation in situ of the deposits is likely to remain following the development. Therefore, the EIS adequately assesses, and mitigates potential impacts of the Proposal relating to Indigenous heritage.</p>	<p>the EIS.</p>	<p>alignment. The design of the proposed bridge at this location should ensure the protection of this site. Commitments should also be made to ensure its protection.</p>
<p><i>An unexpected find protocol in accordance with the Due Diligence guidelines should be included in the Impact Assessment and EIS with a commitment to include the protocol in the CEMP.</i></p>	<p>Section 22 of the EIS includes a commitment, within mitigation Measure 9C, included in Section 22 of the EIS and updated in Section 8 of this RtS, for Aboriginal heritage management to be included within the CEMP for the Proposal. In particular this CEMP would include management of unexpected finds in accordance with the due diligence code and Section 86 of the <i>National Parks and Wildlife Act 1974</i>.</p>	<p>Section 22 and Appendix T of the EIS. Section 8 of this RtS.</p>	<p>An unexpected finds protocol should be included as a condition of the determination.</p>
<p><i>Details should be provided prior to determination as to why Transect 1 was not considered in this proposal as per the recommendations in the Concept Approval.</i></p>	<p>The AHMS (2012) preliminary assessment as part of the Concept Approval recommended that isolated Aboriginal objects identified in transect 1 (south of the</p>	<p>Appendix T of the EIS. Section 8 and Appendix K of the RtS.</p>	<p>If the collection of artefacts from this site is to be included within the CEMP then the relevant mitigation measures should be updated to include details.</p>

Comment	Clarification/Response	Reference	Review Comment
	<p>SIMTA site) be collected prior to development. The absence in the Aboriginal Heritage Impact Assessment, included as Appendix T and summarised in Section 15 of the EIS, is the result of three main reasons: 1) all of the Aboriginal objects are outside the Proposal, and therefore would be un-impacted by the Proposal; 2) cursory examination of their locations as part of the 2015 field program failed to identify them, and given their locations on exposed and erodible areas are considered lost; and 3) a shift in focus to the more significant deposits adjacent Georges River. It is considered, however, that management of these Aboriginal objects would be incorporated into the CEMP being developed for the Proposal, and would include their collection should they have the potential of any disturbance during construction.</p> <p>An assessment of impacts on Aboriginal heritage as a result of the revised Rail link is provided in Section 7.1.7 and Appendix K of this RtS.</p>		

#### Other Submission Responses

<p><i>OEH recommends that a final decision regarding the long term management of Aboriginal objects be made as soon as possible. If objects are to be reburied on site, the location will need to be registered on the AHIMS and any subsequent impact or harm may require an AHIP. If objects are to be reburied on site, OEH considers that long term protection of the location should be determined and secured</i></p>	<p>Section 8.6.6 of the Aboriginal Heritage Impact Assessment, included as Appendix T and summarised in Section 15 of the EIS, identifies the long term curation options of any Aboriginal objects recovered through the testing, and future salvage programs. These are outlined in order of preference based on discussions with the Registered Aboriginal Parties (RAPs). Specifically, it indicates that the preference would be for lodgement in the Australian Museum to avoid legacy issues, and due to the potential State significance of the main Aboriginal site identified (MA14). Based on recent assemblages lodged by AHMS, even the current (small) collection from the test excavation would meet the thresholds suitable for lodgment with the museum.</p>	<p>Sections 15.4 and 22 and Appendix T of the EIS.</p>	<p>The RtS does not answer the OEH comment. OEH require this process to be predetermined i.e. to have advice provided by the Australian Museum or the locations for reburial prearranged prior to development.</p>
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Comment	Clarification/Response	Reference	Review Comment
<p>OEH notes at dot point 4 of section 15.4 (Mitigation Measures) of the EIS: <i>‘The Proposal is likely to impact one Aboriginal site, MA14 (artefact scatter and deposit) on the eastern bank of Georges River. If impacted mitigation measures including in Section 9.6 of the draft Aboriginal Heritage Impact Assessment (AHMS, 2015) should be implemented. These include open area salvage excavation up to 100m2 in the vicinity of test pit #3’. Apart from the reference error to section 9.6 (rather than the correct section 8.6) of the draft Aboriginal Heritage Impact Assessment (AHIA), OEH recommends that statement be amended to specify that the mitigation measures be implemented prior to any impacts occurring to site MA14 through development activities. This accords with dot point 6 of Section 8.7 (Recommendations) of the AHIA: ‘The Stage 1 Proposal is likely to impact on Aboriginal site, MA14 (artefact scatter and deposit) on the eastern bank of Georges River. Due to the significance of this site, additional mitigation measures prior to development is recommended and outlined in Section 9.6 [sic] of this report...’</i></p>	<p>Should the museum reject the assemblage for curation, it would be re-buried on site. The location would need to be determined but several parts of MA14 are currently outside of the rail alignment impact footprint and would be suitable. Any re-burial location would be listed on OEH’s AHIMS database to provide protection under the <i>National Parks and Wildlife Act 1974</i>.</p> <p>Agreed. All archaeological mitigation works for MA14 should occur prior to construction within the vicinity of the artefact scatter. AHMS recommend that construction in other parts of the study area that are more than 100 m from MA14 could be initiated prior to the archaeological mitigation if required. In such a scenario, MA14 and a suitable buffer (&gt;100m) should be fenced off and marked as exclusion zones to avoid accidental impact.</p> <p>Mitigation Measure 9A, included in Section 22 of the EIS and reproduced in Section of this RtS, commits to implementation of the mitigation measures included in Section 9 of the draft Aboriginal Heritage Impact Assessment during the preconstruction phase.</p>	<p>Sections 15.4 and 22 and Appendix T of the EIS. Section 8 of this RtS.</p>	<p>As discussed above specific detail are needed to be included in the mitigation measures to ensure protection of these sites.</p>

### 3.8.4 Additional Matters

The RtS does not include additional information to address indigenous heritage. Consequently, comments from the previous Council submission in relation to the Concept Plan Approval conditions and Statement of Commitments remain. These comments relate to the need for the collection of artefacts from this site is to be included within the CEMP with the relevant mitigation measure updated to include details.

Conditions of determination should clearly define the area of work with strict limitations for works occurring within the Georges River riparian corridor. This should include the clear identification of go and no go areas within the project CEMP and associated management plans.

Further testing of the site MA14 was identified as being required prior to construction to ensure the salvage of artefacts is suitably undertaken. Additional testing has not been addressed

### 3.8.5 Recommendations

The RtS reflects the approach taken in the EIS and does not provide specific details on a number of key points including:

- > Specific identified sites to be included within the CEMP, with the associated actions identified to guide the measures required at each site to ensure its protection.
- > The detailed methodology for the curation or reburial of identified artefacts.
- > Design criteria that will be utilised for the bridge over MA14 to ensure this site is protected.

## 3.9 Property and Infrastructure

The proposed SIMTA RtS provides a response to the submissions made to the EIS in relation to the proposal's impacts on Property and Infrastructure. These impacts were split between local infrastructure contributions and land acquisition. This review considers information in the RtS Sections 4.6 and 8 prepared by Hyder Consulting.

### 3.9.1 Summary

The Table below summarises the outcome of the changes to the proposal identified by the RtS.

**Table 3-17 Adequacy of Response Summary**

Concept Approval Commitments	Secretaries Environmental Assessment Requirements	Liverpool City Council Assessment
The following commitments are not adequately addressed:	The following SEARS are not adequately addressed:	The following assessment recommendations are not adequately addressed:
<p><b>Section 94 Contributions</b></p> <p>a) An assessment of the impacts of the project on local infrastructure, having regard to any relevant Council's Developer Contributions Plan (or equivalent document requiring developer contributions)</p> <p>Refer to <b>Section 3.9.3</b> and <b>Section 3.9.4</b> for further comment.</p>	<p><b>Rail</b></p> <p>b) Identifying the forecast annual train movements including an estimated range of daily train movements, and the capacity of existing an proposed rail network to handle predicted increases in traffic, based on appropriate empirical evidence and modelling.</p> <p><b>Infrastructure Upgrades/Contributions</b></p> <p>c) Consideration of any relevant Council's Developer Contributions Plan (or equivalent document requiring developer contributions).</p> <p>Refer to <b>Section 3.9.3</b> and <b>Section 3.9.4</b> for further comment.</p>	<ul style="list-style-type: none"> <li>• Rail Geometry (section 4.15.2.2)</li> <li>• Rail Yard, Train Operation and Maintenance (section 4.15.2.3)</li> <li>• Impacts of the rail link to the Glenfield Waste Facility (section 4.15.2.10)</li> <li>• Lack of detail regarding infrastructure contributions</li> </ul>

Concept Approval Commitments	Secretaries Environmental Assessment Requirements	Liverpool City Council Assessment
		(section 4.5.2.12)
		Refer to <b>Section 3.9.3</b> and <b>Section 3.9.4</b> for further comment.

**3.9.2 Summary of Revisions/Clarifications**

The following key revisions have been made to the proposal in relation to property and infrastructure:

- > Realignment of the rail corridor within the Southern Boot Land, Moorebank Avenue and the MIC Site. the benefits of this realignment have been identified as:
  - Overall reduction in environmental impacts of the proposal
  - Relocation outside of the East Hills Rail Corridor will not impact existing infrastructure or future expansion opportunities in this corridor

**3.9.3 Assessment**

**3.9.3.1 *RtS Specific Response***

The Table below contains the comments, clarifications/responses and references taken from the RtS document, with a further review comment to the RtS provided in the last column. The Table includes responses to the Council submission, along with key relevant responses from other submissions addressed in the RtS.

**Table 3-18 RtS Response Review (Property and Infrastructure)**

Comment	Clarification/Response	Reference	Review Comment
<b>Council Submission Responses</b>			
<b>Local Infrastructure Contributions</b>			
<p><i>There is lack of information regarding local infrastructure contributions. The EIS was required to provide an assessment of infrastructure impacts and consideration of any relevant Council Contributions Plan.</i></p> <p><i>The infrastructure assessment did not address impacts to local infrastructure, including roads and drainage infrastructure and community and recreation facilities.</i></p> <p><i>Additional traffic and transport assessments should be undertaken to fully quantify the impact of the development on infrastructure. It is unclear how the SIMTA proposal will manage impacts on Moorebank Avenue, whether through a pavement upgrade following construction or through the payment of contributions to Council.</i></p> <p><i>It is recommended the applicant enter into relevant discussions with Liverpool Council regarding a works-in-kind or monetary contribution towards local infrastructure works.</i></p>	<p>Local infrastructure contributions under Council's Contribution Plan are not applicable to the SIMTA Project. In regards to impacts on Moorebank Avenue, it is noted this road is owned and maintained by the Commonwealth.</p> <p>The Traffic and Accessibility Impact Assessment, summarised in Section 7 and included as Appendix L of the EIS, quantified the impacts on road infrastructure as a result of the Proposal. As discussed above, the analysis found only a minor impact to Moorebank Avenue, Anzac Road, Cambridge Avenue and M5 Motorway attributable to the Proposal and modelling of the intersections identified that the Proposal would not exceed current capacity on the M5 Motorway / Moorebank Avenue, M5 Motorway/ Hume Highway, M5 Motorway/Heathcote Road and Cambridge Avenue. The analysis confirmed that capacity improvements are required at the Moorebank Avenue/Newbridge Road signalised intersection due to an existing operational network capacity problem, without consideration of the Proposal, with the Proposal having an insignificant impact on the performance of these intersections.</p> <p>SIMTA and MIC will discuss and agree a coordinated approach to maintenance of Moorebank Avenue, which is owned by the Commonwealth.</p> <p>SIMTA and MIC will continue to consult with Liverpool City Council as development of the SIMTA Project progresses.</p> <p>Further traffic impact assessments will be undertaken for future stages of development of the SIMTA Project, in accordance with the requirements of the Concept Plan Approval.</p>	<p>Section 7 and Appendix L of the EIS.</p> <p>Concept Plan Approval.</p>	<p>The lack of information or firm commitment from the applicant regarding local infrastructure contributions remains.</p> <p>While it is noted that Moorebank Avenue is under Commonwealth Ownership, demonstrated commitments regarding local infrastructure contributions and consultation with Council has not occurred. It appears that SIMTA does not intend to make any works in kind or monetary contribution to Council to offset the impact of the development on local infrastructure and associated ongoing maintenance.</p> <p>Further assessment of local infrastructure contributions and suggested measures to be completed prior to any determination, are presented below.</p>
<p><i>Inadequate information has been provided regarding the construction of the rail link and the volume of imported fill</i></p>	<p>Section 4.5 of the EIS provides a conservative estimate of the fill volumes required for the site. Mitigation Measure 6C, included in Section 22 of the EIS and updated in</p>	<p>Section 4 and Section 22 of the</p>	<p>Based on the plans submitted with the EIS and RtS documents, the construction footprint of the rail corridor appears to have a width of greater</p>

Comment	Clarification/Response	Reference	Review Comment
<p><i>needed for the rail embankment. Construction of the rail link is likely to disturb an area greater than proposed cleared corridor, which will require additional information regarding re-vegetation, soil and water management and soil stabilisation to be provided.</i></p>	<p>Section 8 of this RtS, commits to progression of the Bulk Earthworks Strategy by the construction contractor.</p> <p>The EIS has assessed the impacts of the rail link within a 20 m wide corridor. Construction and operational footprint would be within this 20 m corridor. Updated estimates for fill and cut volumes have been included in Section 7 of this RtS to reflect the amended Rail link.</p>	<p>EIS. Sections 7 and 8 of this RtS.</p>	<p>than 20m in some areas, including along the edge of the Glenfield Waste Facility and the Georges River corridor.</p>
<p><b>Land Acquisition</b></p> <p><i>Provide evidence of consultation with land owners regarding purchase and/or ongoing lease of impacted lands.</i></p> <p><i>Provide updated property acquisition costs.</i></p>	<p>Section 6.3.5 and Section 20.4 of the EIS provide details of consultation undertaken with landowners.</p> <p>Details on land purchase and/or lease transaction agreements are confidential.</p>	<p>Section 6 and Section 20 of the EIS</p>	<p>The confidential nature of purchase and lease transactions is noted. This point was made in relation to the overall viability of the project, with the costs of acquiring land to facilitate the construction and operation of the project likely to increase the overall cost.</p>
<p><i>Provide evidence of consultation with Roads and Maritime and the Glenfield Waste Facility operator regarding rail link alignment impact upon the future use of the Glenfield Waste Facility site for public purposes.</i></p>	<p>Public access to the Glenfield Waste Facility site would be maintained and Glenfield Waste Services have given approval for the Proposal. Consultation with RMS on this matter is not considered necessary.</p> <p>Section 6.3.3 and 6.3.5 of the EIS document consultation with RMS and Glenfield Waste Services respectively. Section 2 of this RtS provides details of consultation that has occurred during public exhibition of the EIS.</p>	<p>Section 6 of the EIS. Section 2 if this RtS.</p>	<p>The future use of the Glenfield Waste Facility as a public open space (as identified by the site's zoning) would clearly benefit from unimpeded access to Georges River. The provision of the proposed rail corridor will create a permanent visual and physical barrier preventing public access to the waterfront.</p> <p>The drawings provided as part of the EIS and RtS document indicate no provision for future public access to the foreshore once the site is to be converted for public purposes. This is considered a prudent approach and a strong case exists for a potential redesign of the rail link in this area to ensure the utility of the public open space is future proofed.</p> <p>In this regard, consultation with the RMS associated with its proposed future use of the area is vital, as they will be the developer of the public open space. This matter requires further consideration and/or modification of the rail link.</p>
<p><i>Additional cumulative impact assessment should be undertaken to determine whether any major utility service</i></p>	<p>Assessment of impacts associated with utilities service upgrades and relocation are documented in Section 20.4.3 of the EIS. This Section concludes that required upgrades</p>	<p>Section 20 of the EIS</p>	<p>Noted. However, there is a high likelihood that both the</p>

Comment	Clarification/Response	Reference	Review Comment
<i>upgrades will need to occur in the fully developed MIC and SIMTA scenarios.</i>	<p>can be accommodated to service the Proposal.</p> <p>MIC has undertaken a similar assessment within the MIC EIS. The SIMTA Project and MIC Proposal are considered to be separate for the purposes of utility upgrades and approvals.</p>		SIMTA and MIC proposals would benefit from a coordinated approach to infrastructure provision to both sites.
<i>The proponent should identify measures to mitigate impacts on recreational uses from the construction of the Georges River rail bridge.</i>	<p>Section 20.4.3 of the EIS acknowledges temporary restrictions to vessels using this part of the Georges River during river based construction activities associated with the Georges River bridge. These impacts are considered temporary and for a relatively short duration.</p> <p>The Community Information and Awareness Strategy (Mitigation Measure 17A in Section 22 of the EIS and reproduced in Section 8 of this RtS) will maintain communication with the community and all relevant stakeholders throughout the construction of the Proposal.</p> <p>It is noted that the riparian corridor on either side of the Georges River is not publically accessible. Therefore there is no foreshore recreational activities on this section of the riparian corridor.</p>	<p>Section 20 and Section 22 of the EIS.</p> <p>Section 8 of this RtS.</p>	<p>Noted. Consultation with local sporting and recreational groups should occur as part of the Community Information and Awareness strategy to ensure they are kept aware of any closures and impacts associated with construction.</p> <p>As identified above, the Glenfield Waste Facility is mapped as being a future public open space area, which is likely to benefit from access to the water front.</p>
<p><b>Rail</b></p> <p><i>The northern connection to the SSFL introduces a special turnout into a 1263 m radius curve. The practice of placing turnouts in curves is problematic, building in an ongoing need for requiring ongoing maintenance.</i></p>	<p>In accordance with ARTC requirements, a special turnout is required for the northern connection of the Rail link as it is located on a curve. As discussed in the Rail Access Report, included as Appendix F of the EIS, it was agreed with ARTC to keep the northern connection on the curve due to constraints within the SSFL corridor and the Georges River. As noted in the Rail Access Report (Appendix F of the EIS) and Section 6.3.3 of the EIS, design of the northern connection was refined in consultation with ARTC. Maintenance of the track and formation of the Rail link would be undertaken by SIMTA and access to the Rail link for maintenance purposes has been provided.</p>	<p>Section 6.3.3 and Appendix F of the EIS.</p>	<p>The corridor configurations and signaling/ operational constraints are acknowledged. However, the northern entry turnout placement on the transition curve for the SSFL should be avoided.</p> <p>If the current design places the turnout in the curve transition, investigation should be undertaken into placement either on the tangent track alignment near the under bridge, or use of a widened under bridge with turnout on bridge (either a ballast top or direct fixation fastened turnout configuration).</p>
<i>The 165 m radius curve and 1 in 7 turnout on the southern connection to the SSFL loop appears to be less than the ARTC normal minimum for yards/sidings connected to interstate lines.</i>	<p>As noted in the Rail Access Report (Appendix F of the EIS), design of the southern connection was refined in consultation with ARTC. The connection point with the SSFL for the southern connection was identified to limit operational impacts on the SSFL during construction and</p>	<p>Section 6.3.3 of the EIS Appendix F of the EIS.</p>	<p>No further comment</p>

Comment	Clarification/Response	Reference	Review Comment
<p><i>The design is aiming for an operational speed of 35 kph on this connection but appears to be insufficient to achieve this when compared with ARTC standards. The ARTC standards, in this instance, should take precedence for this section of the rail link as it will be their infrastructure that connects to SIMTA rail yard. It is noted in the EIS that consultation with ARTC has occurred throughout the design of the rail link, however this is not clear in the provided documentation.</i></p>	<p>operation of the Proposal. The southern connection uses a standard right hand R190:7 tangential turnout capable of accommodating trains speeds of 35 km /h. It is noted that ARTC standards generally require a 200 m radius; however a 165 m radius curve is required in this location to minimise impacts within the Glenfield Waste Facility and to avoid the need for the Rail link to connect directly to the SSFL flyover. These constraints have been discussed with ARTC and details of consultation with ARTC throughout the design development are included in Section 4.2 of the Rail Access Report (Appendix F of the EIS) and Section 6.3.3 of the EIS.</p>		
<p><i>The design of the SSFL loop seems to be primarily focused on the northern entry and for 650 m trains. This is in contrast to the ARTC comment that they desire future flexibility for 1800 m trains to access the site. Currently, an interstate train would extend partially onto the loop, with the crossovers needing to be further into the yard. Alternatively a parallel track to the loop could be provided to ensure standing trains would not remain on the loop. If interstate trains are to terminate at the site when coming from the south the southern entry to the yard provides a low speed constraint and will become a maintenance issue. Wheel squeal may also become a noise issue on such a tight curve.</i></p>	<p>It is intended that all locomotives using the Rail link would be marshalled and stabled in yards on either the SIMTA or MIC site. Priority would be given to incoming trains to prevent parking on the SSFL. Maintenance access will be arranged with relevant land owners. It is noted that the Proposal is seeking approval for operation of 650 m locomotives on the Rail link. Design of the Rail link has been undertaken in consultation with ARTC (Appendix F of the EIS) and does not preclude its use by trains of up to 1800 m length. Operation of 1800 m length trains on the Rail link would be subject to separate development approval. Consultation with ARTC will be on going throughout the progression of detailed design. The potential for wheel squeal has been assessed in the Noise and Vibration Impact Assessment (Appendix N of the EIS), and is described in Section 9.3.3 of the EIS. Mitigation measures have been identified in Section 22 of the EIS.</p>	<p>Sections 9.3.3 and 22, Appendices F and N of the EIS</p>	<p>An operational concept document and indicative train operations plan should be prepared at this stage to clearly identify the operations for the 650m length trains and foreshadow how the 1800m long trains would be expected to operate on the site. Flexibility in track layout to accommodate future 1800mlong trains ought to be identified now to ensure constraints are avoided when the time comes to add these services.</p> <p>Effectiveness of rail squeal mitigation needs to be quantified, as this has the potential for impacts on the amenity of sensitive receivers in the surrounding area. Should the project proceed, monitoring of squeal is required.</p> <p>Maintenance access provision should be included in the detail design to ensure ease of access for corrective maintenance activities on the 160m radius curve on the southern connection. All turnouts should have staging areas nearby in the maintenance access roads for preparation of replacement turnouts.</p>
<p><i>The clear distance from SSFL loop (southern entry) to first crossover is approximately 400 m, which is insufficient</i></p>	<p>As noted above, priority would be given to incoming trains to avoid parking on the SSFL. As stated in Section 2.2 of the Rail Access Report (Appendix F of the EIS) the</p>	<p>Appendix F of the EIS.</p>	<p>An operational concept document and indicative train operations plan should be prepared prior to any determination to clearly identify the</p>

Comment	Clarification/Response	Reference	Review Comment
<p><i>to hold either a 650 m or 1800 m train clear of the SSFL loop. Similarly the distance to the second crossover from the SSFL loop is approximately 1095 m which is insufficient to hold an 1800 m train clear of the SSFL loop.</i></p>	<p>Proposal is seeking approval to operate 650 m trains on the Rail link and operation of 1800 m trains would be subject to a separate development approval. Consultation with ARTC will continue through the progression of detailed design for the Proposal and would also be undertaken for subsequent development applications relating to rail access from the ARTC rail network.</p>		<p>operations for 650m length trains and foreshadow how the 1800m long trains would be expected to operate on the site. Flexibility in track layout to accommodate future 1800m long trains ought to be identified now to ensure constraints are avoided when the time comes to add these services.</p>
<p><i>Crossing beneath Moorebank Avenue south of the northern abutment on the Up Side of the East Hills corridor provides an unnecessary constraint to both the IMT and the East Hills corridors. The rail line access is being limited to a single line and does not easily accommodate an additional track for increased throughput to the terminal. In addition, should container trains approaching from the south of Sydney become double stacked in the future, this alignment with limited vertical clearance will add another unnecessary constraint that would need to be removed. The future quadruplication options for the East Hills line may be limited by this alignment, to the down side of the corridor. This may cause complications for track alignment, cross overs and a future Moorebank station location when the quad is developed.</i></p>	<p>As noted above, the Rail link alignment has been amended and no longer encroaches on the East Hills Rail Corridor. A description of the proposed amendment and an assessment of the impacts of the amendment are included in this RtS. Double stacking of containers on freight trains within the ARTC metropolitan network is not considered feasible due to existing height restrictions within the existing rail network.</p>	<p>Section 6 and 7 of this RtS.</p>	<p>Amended rail link alignment avoids impact to future Sydney Trains services in the East Hills line. However, the limitation for double stacked containers remains. Should ARTC customers push for double stacking as a spin off from the Inland Rail Corridor, flexibility to more easily accommodate this approach should be built in to the alignment design.</p>
<p><i>The proposed rail alignment has limitations and is not anticipated to meet the objectives of other stakeholders such as the ARTC and MIC. The geometry of the line will not provide sufficient space for a 650m train between the southern SSFL loop and the first cross over. Further, 1800m trains would not fit between the Northern SSFL loop and the second cross over. This configuration will result in trains standing within the loop</i></p>	<p>As noted above, the design of the Rail link has been developed in consultation with ARTC. As stated in Section 1.5 of the EIS, SIMTA and MIC have reached an agreement for development of the SIMTA and MIC sites as a whole of precinct approach, utilising the Rail link as described in this RtS. Design of the Rail link has been undertaken in consultation with MIC to meet the objectives of that site as well as the SIMTA Project. As noted above, the Rail link has been designed to not preclude its use by 1800 m trains, however the Proposal is seeking approval for use of the Rail link by 650m trains. Priority will be given</p>	<p>Sections 5.1, 6.3.3 and Appendix F of the EIS.</p>	<p>An operational concept document and indicative train operations plan should be prepared prior to determination to clearly identify the operations for 650m length trains.</p>

Comment	Clarification/Response	Reference	Review Comment
<i>and potentially causing operational problems for other traffic on the SSFL.</i>	to incoming trains to prevent parking of trains on the SSFL as a result of the Proposal. As stated in Section 2.2 of the Rail Access Report (Appendix F of the EIS) the Proposal is seeking approval to operate 650 m trains on the Rail link and operation of 1800 m trains would be subject to a separate development approval.		
<i>The application has relied on assumptions from the Concept Plan (2013) regarding the IMT trip generation. It was assumed that there will be five trips to Port Botany and five trips from Port Botany spread evenly throughout the day. However, in reality this spread will be contingent on a number of external factors which have not been considered. Additional empirical evidence regarding the capacity of the SSFL is required to confirm the operational environment of the IMT, with negotiation and support from ARTC.</i>	As noted in Sections 4.5.4 and 6.3.3 of the EIS and the Rail Access Report included within Appendix F of the EIS, ongoing consultation with ARTC has highlighted train path availability for the Proposal. SIMTA will continue to consult with ARTC with regards to train paths on the ARTC network.	Section 4.5 and Appendix F of the EIS.	An operational concept document and indicative train operations plan should be prepared prior to determination to clearly identify the operations for 650m length trains.
<i>There is no consideration given to the difficulty of tying into existing rail lines from a geotechnical, drainage and constructability perspective.</i>	The Rail Access Report included within Appendix F of the EIS, addresses the design of the Rail link. As was noted in the EIS, the Rail link was amended to move the connection point for the northern connection northwards, in order to avoid a requirement to extend the Glenfield Passing Loop. The tie-in for the southern connection was amended to minimise works to existing RailCorp and ARTC assets. Additionally, the Appendix F of the EIS notes: <i>The design of the Rail Link support through the GWS including detailed earthworks stability modelling and structural design will require further targeted geotechnical investigation. The results of this investigation will allow the designers to undertake detailed geotechnical modelling of existing and proposed conditions to define the most efficient engineering solution.</i>  Mitigation measure 6A commits to further geotechnical investigations during detailed design.	Sections 12 and 22 and Appendix P of the EIS.	Acknowledged. An appropriate contingency in the business case costs should be included to account for this uncertainty. The outcomes of these investigations should be tracked and conditions added to the EIS determination.
<i>The proposed rail link's special turnout into a radius curve for the northern</i>	A special turnout is required at the northern connection in accordance with ARTC requirements, as the connection is	Appendix F of the EIS.	The corridor configurations and signaling/operational constraints are acknowledged.

Comment	Clarification/Response	Reference	Review Comment
<p><i>connection of the rail line to the SSFL would cause ongoing maintenance issues. Appropriate justification and mitigation measures need to be identified.</i></p>	<p>located on a curve of the SSFL. The connection point with the SSFL for the northern connection was identified to limit operational impacts on the SSFL during construction and operation of the Proposal.</p> <p>As noted in Section 3.3 of the Rail Access Report (Appendix F of the EIS), design of the Rail link includes provision of an access track along the Rail link to provide SIMTA Rail link operators with access to maintain the track and formation and to provide ARTC access to maintain signalling, which will be under the direct operation of ARTC.</p>		<p>However, the northern entry turnout placement on the transition curve for the SSFL should be avoided.</p> <p>If the current design places the turnout in the curve transition, investigation should be undertaken into placement either on the tangent track alignment near the under bridge, or use of a widened under bridge with turnout on bridge (either a ballast top or direct fixation fastened turnout configuration).</p>
<p><i>The following rail link loop design issues need additional justification or re-design:</i></p> <ul style="list-style-type: none"> <li><i>The clear distance from the southern SSFL loop to the first cross over is insufficient to hold a 650m long train.</i></li> <li><i>The clear distance from the northern SSFL loop to the second cross over is insufficient to hold a 1800m train.</i></li> </ul> <p><i>The crossovers will need to be further into the yard or the introduction of a parallel line will be needed to address this existing shortcoming</i></p>	<p>Priority would be given to incoming trains to prevent parking of trains on the SSFL and all trains would be marshalled and stabled within the yards on the SIMTA site.</p> <p>The Rail link has been designed to not preclude its use by 1800 m trains. As stated in Section 2.2 of the Rail Access Report (Appendix F of the EIS) the Proposal is seeking approval to operate 650 m trains on the Rail link and operation of 1800 m trains would be subject to a separate development approval. Consultation with ARTC will continue throughout detailed design for the Proposal and subsequent development approval applications for use of the Rail link.</p>	<p>Appendix F of the EIS.</p>	<p>An operational concept document and indicative train operations plan should be prepared prior to any determination to clearly identify the operations for 650m length trains and foreshadow how the 1800m long trains would be expected to operate on the site. Flexibility in track layout to accommodate future 1800m long trains ought to be identified now to ensure constraints are avoided when the time comes to add these services.</p>
<p><i>The rail link alignment is not considered to be future proof due to the following:</i></p> <ul style="list-style-type: none"> <li><i>The alignment of the rail link underneath the Moorebank Avenue Bridge will have future limitations as any double stacked freight trains will not be able to access the site.</i></li> <li><i>The rail link alignment underneath Moorebank Avenue also restricts the link to only a single line, which further restricts future expansion opportunities for the development.</i></li> </ul> <p><i>The proximity of the rail alignment to the EHPL will result in the future quadruplication of the EHPL to occur to the south. This may cause</i></p>	<p>The rail link alignment is not considered to be future proof due to the following:</p> <ul style="list-style-type: none"> <li>The alignment of the rail link underneath the Moorebank Avenue Bridge will have future limitations as any double stacked freight trains will not be able to access the site.</li> <li>The rail link alignment underneath Moorebank Avenue also restricts the link to only a single line, which further restricts future expansion opportunities for the development.</li> </ul> <p>The proximity of the rail alignment to the EHPL will result in the future quadruplication of the EHPL to occur to the south. This may cause complications for track alignment and a future Moorebank Station.</p>	<p>Sections 6 and 7 of this RtS.</p>	<p>Limitation remains on double stacking and line amplification in the future.</p>

Comment	Clarification/Response	Reference	Review Comment
<p><i>complications for track alignment and a future Moorebank Station.</i></p>			
<p><i>Also, a number non-compliances with ARTC standards have been identified. It is unclear whether ARTC has been consulted about these non-compliances.</i></p>	<p>Section 4.1 of the Rail Access Report (Appendix F of the EIS) outlines the consultation undertaken with ARTC to date and design modifications undertaken to meet ARTC requirements.</p>	<p>Appendix F of the EIS.</p>	
<p><i>There may be a need to limit noise associated with train horns. A similar issue at the Leppington Stabling Yard has resulted in a ground based warning system to be commissioned to negate the need for use of horns when drivers are starting the trains moving and brake tests. A similar system may be required at this facility when trains are ready to leave the site or when locomotives are being repositioned from one end of the train to the other. (Section 4.15.2.3 Rail Yard, Train Operation and Maintenance)</i></p>	<p>No response made in Response to Submissions</p>		<p>Comment stands</p>
<p><i>The assumption that train paths will be evenly distributed across the day may not be valid. Particularly for interstate trains that are time dependent on reaching their destination ahead of the next business day or just in time for the business day. This could lead to a bunching of train paths, for example trains arriving from Melbourne overnight to Sydney in order to be unloaded for same day distribution of containers. (Section 4.15.2.3 Rail Yard, Train Operation and Maintenance)</i></p>	<p>No response made in Response to Submissions</p>		<p>Comment stands</p>
<p><i>Infrastructure maintenance activity would need to be done between trains paths, some of this may be weekend and evenings/nights, after trains leaving the terminal and before trains</i></p>	<p>No response made in Response to Submissions</p>		<p>Comment stands</p>

Comment	Clarification/Response	Reference	Review Comment
<i>arrive at the terminal. (Section 4.15.2.3 Rail Yard, Train Operation and Maintenance)</i>			
<i>It is not known whether running maintenance and refuelling of trains/locomotives will be done at the terminal. (Section 4.15.2.3 Rail Yard, Train Operation and Maintenance)</i>	No response made in Response to Submissions		Comment stands

### 3.9.4 Additional Matters

A number of outstanding issues that the proposal has failed to address as part of the updated RtS remain. These are detailed in the following sub sections.

#### 3.9.4.1 Local Infrastructure Contributions

The RtS and associated documentation has failed to provide adequate information regarding local infrastructure contributions. Specifically, SEAR 8 (c) required that the application consider any relevant Council’s Developer Contributions Plan, with the future assessment requirements of the Concept Plan approval stating that the developer make a commitment to the payment of any monetary contribution or undertake works in kind towards the provision or improvement of public amenities and services.

Given the nature, scale and complexity of the SIMTA development, the understanding from Council is that a VPA would be the appropriate means to address this SEAR.

However, page 174 of the RtS notes that “*local infrastructure contributions are not applicable to the SIMTA Project*”, without providing any indication of how this conclusion was reached, including demonstrated consultation with Council. Notably, this response follows the applicant’s statement in the originally submitted EIS that they would develop a strategy regarding local contributions in consultation with Council (refer to excerpt below).

SEAR’s Requirements	Where Addressed in this EIS
c) Consideration of any relevant Council’s Developer Contributions Plan (or equivalent document requiring developer contributions); and	This would be developed as necessary through discussions with Liverpool City Council.

Under the *Liverpool Contributions Plan 2009 (March 2011)*, the development would not be subject to a Section 94 levy as it applies only to residential development within “*established areas*”. Specifically, this plan was made under Section 94 of the EP&A Act and levies contributions based on residential subdivision, on the assumption that an increase in population increases the demand on Council services and infrastructure. The plan also levies contributions for non-residential development in Middleton Grange and Hoxton Park and levies contributions for new industrial development in the Prestons Industrial Area. As a result, there are no applicable levies to the proposed SIMTA development, due to it not being captured by the Contributions Plan.

Consequently, Council would expect and require any development of this magnitude to enter into a VPA to ensure appropriate monetary contributions or works in kind arrangements are agreed to. As noted in other sections of this document, particularly traffic, the proposal will place additional stress on Council services and infrastructure both during the construction and operational phases of the project. Since the lodgement of the EIS, Council can confirm that there has been no discussion regarding a VPA with the applicant, contrary to what was noted in the document. As a result, if this matter is not appropriately resolved, the project is likely to place additional stress on the local infrastructure of the Liverpool LGA, without appropriate compensation being paid by the applicant.

At an ordinary meeting of Council on 30 September 2015, Council resolved to seek Ministerial approval pursuant to Clause 94E (1)(d) of the EP&A Act to introduce a Section 94A scheme across the “*established areas*” of Liverpool. Under the proposed 94A scheme, the following developer contributions would be applicable to any development within “*established areas*” (where the subject site lies):

- > Capital Investment Value \$0 - <\$100,000 – 0% levy
- > Capital Investment Value \$100,000 - <\$200,000 – 0.5% levy
- > Capital Investment Value >\$200,000 – 2% levy

The report tabled at the Council meeting (refer to **Appendix A**), provided background to the proposed Section 94A scheme, citing research undertaken by economic and planning firm SGS. The report noted that the current Section 94 scheme for “*established areas*” in the Liverpool LGA has:

*“left Council with a limited ability to forward fund assets, gaps in infrastructure provision. Council needs to invest in transport networks and community facilities which are not being adequately funded by the existing scheme. For example, a hotel or motel development outside the city centre does not currently attract any developer contributions.”*

The same scenario applies to the SIMTA development. It does not attract any developer contributions.

SGS identified that a Section 94A scheme applying to the established areas of Liverpool would raise an estimated \$6.2-\$7.6 million over the next 20 years in addition to the funds expected from the operation of the existing Section 94 scheme. This increase in funds to facilitate increased infrastructure provision and maintenance would be partly justified as a value capture scheme.

Overall, the proposed Section 94A scheme was identified as having the following benefits:

- > The Section 94A scheme would capture all forms of developments, including developments such as the SIMTA and MIC projects, currently not captured by the current Section 94 scheme.
- > SGS noted that the 2% levy is unlikely to impact upon development viability
- > No nexus is applicable under a Section 94A scheme, allowing funds to be used throughout the LGA on infrastructure upgrades and maintenance

At the Ordinary Meeting of Council, this proposed Section 94A scheme was unanimously recommended by the Councillors of Council.

***Therefore, under the proposed scheme under consideration by the Minister, the proposed development would be subject to a 2% levy of its \$142,500,000 Capital Investment Value, requiring a contribution amount of \$2,850,000.***

These funds would therefore be able to be applied throughout the Liverpool LGA and the surrounds of the SIMTA subject site. The funds would have benefits for the wider LGA to ensure the LGA wide impacts of the development on local road infrastructure can be appropriately managed in the lifecycle of the development.

Conversely, if the Minister only approves a 1% levy under a 94A scheme, the development would be subject to pay a contribution amount of \$1,425,000. In either case, this amount will help to support the future provision and maintenance of local infrastructure in the Liverpool LGA.

Currently, the intention of the applicant is to not pay any monetary contribution to Council for local infrastructure contributions. This is a serious concern that requires thorough investigation by the applicant, in consultation with Council, to ensure a fair and equitable works in kind or monetary contribution is agreed to prior to any determination of the application.

In this regard, without an appropriate mechanism in place, it is considered that a VPA between Council and SIMTA is the most appropriate means to ensure impacts to local infrastructure are managed. This would ensure the applicant appropriately addresses SEAR number 8, and the requirements of the Concept Plan approval that required the applicant to make:

*“a commitment to pay developer contributions to the relevant consent authority or undertake works-in-kind towards the provision or improvement of public amenities and services”.*

Council has identified a number of local roads within the vicinity of the SIMTA site that have the potential to require additional long term maintenance associated with increased truck movements, with a VPA having the ability to directly contribute to this maintenance. These roads include:

- > Nuwarra Road
- > Governor Macquarie Drive

While no formal identification of the long term maintenance costs associated with these roads has been identified, a monetary contribution developed as part of the VPA could secure direct funding for a maintenance program associated with the increased traffic. These contributions could be staggered over a period of years, or via a lump sum. It is also noted that specific road upgrades to these two roads could occur to prohibit semi-trailer movements. These costs would preclude the long term movement of heavy vehicles on these roads and will reduce long term maintenance. In either case, a VPA between the proponent and Council would allow an appropriate monetary contribution to be identified to pay for long term

maintenance or short term upgrades to minimise heavy vehicle movements along both Nuwarra Road and Governor Macquarie Drive.

Overall, Cardno holds the opinion that the applicant has inadequately addressed these requirements as part of the Project Application SEARs and the future assessment requirements under the Concept Plan approval. Cardno suggests two possible means for local infrastructure contributions to be adequately addressed for the SIMTA Project:

- > Demonstrated evidence that satisfactory arrangements are in place for a VPA between SIMTA and Council relating to local infrastructure
- > PAC to impose a condition under Section 94A, in accordance with the provisions listed at Clause 94B (2) of the EP&A Act.

It is noted that in numerous other project applications for large scale projects throughout NSW, conditions of determination have required the applicant to pay relevant developer contributions. In this instance, it is requested that the PAC require that satisfactory arrangements are in place relating to the provision and maintenance of local infrastructure prior to any determination of the application.

The PAC's attention is also drawn to Clause 94B (2) of the EP&A Act, which states:

*(2) However, in the case of a consent authority other than a council:*

*(a) the consent authority may impose a condition under section 94 or 94A even though it is not authorised (or of a kind allowed) by, or is not determined in accordance with, a contributions plan, but*

*(b) the consent authority must, before imposing the condition, have regard to any contributions plan that applies to the whole or any part of the area in which development is to be carried out.*

With regard to this Clause, the PAC is able to impose a condition of determination that requires the applicant to pay a developer contribution. In accordance with the recent resolution of Liverpool City Council, the PAC may consider imposing a Section 94A levy of 2%. Additionally, they may consider imposing a Section 94A levy of 1%, in accordance with Clause 25K (1)(a)(iii) of the EP&A Regulation.

#### **3.9.4.2 Appointment of the NSW EPA as the Appropriate Regulatory Authority (ARA)**

The SIMTA development has been identified as having the potential to impact upon the built and physical environment, with a number of environmental management measures suggested to mitigate these impacts on surrounding property, infrastructure and the environment.

Council has indicated that they are not equipped to regulate a facility the size of SIMTA. As a result, future impacts to property, infrastructure and the environment may not be sufficiently regulated due to Council's level of resources.

Consequently, it is suggested that the NSW EPA is appointed as the Appropriate Regulatory Authority for the entire facility and all associated activities. The RtS document has not been updated in relation to the environmental regulation of the site. The facility is intended to be regulated as a non-scheduled activity under the *Protection of the Environment Operations Act 1997* (POEO Act).

According to Section 6 of the POEO Act, a local authority is the appropriate regulatory authority for non-scheduled activities within its area except for a matter for which a public authority (other than the local authority) is declared under subsection (3) to be the appropriate regulatory authority. Stage 1 of the SIMTA proposal represents a large scale operation with an overall capital investment of over \$140 million. Liverpool Council is not sufficiently resources to regulate a facility of this size which is proposed to operate 24 hours per day, 7 days per week. In this regard, the NSW EPA should be declared, under Section 6 (3) of the POEO Act to be the appropriate regulatory authority for all non-scheduled activities associated with the overall SIMTA facility, including the Stage 1 project.

### **3.9.4.3 Rail Operational Concept Document and Indicative Train Operations Plan**

The review of the proposed rail link and its proposed operation noted a number of issues. It was recommended that the preparation of a Rail Operational Concept Document and Indicative Train Operations Plan be prepared prior to any determination. A number of potential issues associated with the operation of both 650m length trains and the future use of 1800m length trains would be able to be formalised in an operational plan. This operational plan should be prepared in consultation with ARTC to ensure it is prepared to a sufficient standard.

This is considered a critical task that needs to be prepared to allow a thorough assessment to occur as the applicant has made a number of comments regarding the operation of the rail link that are not formalised.

The preparation of these operational documents would allow the applicant to fully address SEAR No 6 (b).

### **3.9.5 Recommendations**

The recommendations below are identified to address the identified impacts associated with property and infrastructure to allow a comprehensive assessment of the proposal:

#### **Local Infrastructure Contributions**

- > Inadequate information and commitments regarding local infrastructure contributions (whether a monetary contribution, works in kind or VPA arrangement) has been provided. It is recommended that one of the two following options are chosen by the Proponent:
  - A VPA between SIMTA and Liverpool City Council is prepared to ensure a fair and equitable outcome regarding local infrastructure contributions is achieved. This may involve the payment of a monetary contribution using Council's recent resolution as a basis, the provision of works in kind, or a combination of both.
    - If this option is selected, the Proponent is to provide evidence to that satisfactory arrangements are in place between SIMTA and Liverpool City Council prior to any determination.
  - PAC to impose a condition under Section 94A of the EP&A Act, in accordance with the provisions listed at Clause 94B (2) of the EP&A Act. This condition may result in a 2% levy being enforced in accordance with Council's recent resolution to gain Ministerial approval for the proposed Section 94A Plan, or a 1% levy in accordance with the maximum levy allowed in accordance with Clause 25K (1)(a)(iii) of the EP&A Act.
    - If this option is selected, the Proponent is to provide written confirmation that they are willing to accept any condition from the PAC.
- > Provide demonstrated consultation with Liverpool City Council regarding local infrastructure contributions.

#### **Future Use of Glenfield Waste Facility and Public Open Space**

- > The future of the Glenfield Waste Facility as public open space will provide future recreation opportunities for local residents. Access to the Georges River foreshore from this space is considered to be a vital component of the utility of this open space. The current rail alignment will create a permanent visual and physical barrier preventing any opportunity for the public to access the foreshore. In this regard, the following is recommended:
  - Demonstrated consultation with the RMS regarding their future plans for the area to ensure the design of the rail alignment responds to these future plans
  - Consideration of including provision for pedestrian access underneath the rail alignment to ensure the future access to the Georges River foreshore is achievable.

## Rail

- > An operational concept document and indicative train operations plan should be prepared prior to any determination to clearly identify the operations for 650m length trains and foreshadow how the 1800m long trains would be expected to operate on the site. Flexibility in track layout to accommodate future 1800m long trains ought to be identified now to ensure constraints are avoided when the time comes to add these services.
- > The northern entry turnout placement on the transition curve for the SSFL should be avoided. If the current design places the turnout in the curve transition, investigation should be undertaken into placement either on the tangent track alignment near the under bridge, or use of a widened under bridge with turnout on bridge (either a ballast top of direct fixation fastened turnout configuration).
- > The limitation for double stacked containers on the proposed rail link remains. Should ARTC customers push for double stacking as a spin off from the Inland Rail Corridor, flexibility to more easily accommodate this approach should be built in to the alignment design.
- > Effectiveness of tail squeal mitigation needs to be quantified, as this has the potential for impacts on the amenity of sensitive receivers in the surrounding areas. As a result, a commitment to monitoring of squeal is recommended.

### 3.10 Ecologically Sustainable Development

The proposed SIMTA RtS provides a response to the submissions made to the EIS in relation to the proposal's impacts on Ecologically Sustainable Development (ESD). This review considers information in the RtS Sections 4.6 and 8 prepared by Hyder Consulting.

#### 3.10.1 Summary

The Table below summarises the outcome of the changes to the proposal identified by the RtS.

**Table 3-19 Adequacy of Response Summary**

Concept Approval Commitments	Secretaries Environmental Assessment Requirements	Liverpool City Council Assessment
The following commitments are not adequately addressed:	The following SEARS are not adequately addressed:	The following assessment recommendations are not adequately addressed:
<p>Where applicable the Proponent will implement the Ecological Sustainable Development initiatives across the construction, operation and decommissioning stages of the SIMTA proposal including:</p> <ul style="list-style-type: none"> <li>&gt; Site management policies and strategies;</li> <li>&gt; Materials selection and energy and water demand management; and</li> <li>&gt; On-site renewable energy generation.</li> </ul> <p>The following principles will be achieved during the design development and construction phase of the proposal:</p> <ul style="list-style-type: none"> <li>&gt; Precautionary principles;</li> <li>&gt; Inter-generational equality;</li> <li>&gt; Conservation of biological and ecological integrity; and</li> <li>&gt; Improved valuation, pricing and incentive mechanisms.</li> </ul>	<p>The EIS shall detail how the development will incorporate ESD principles in the design, construction and ongoing operation phases of the development.</p>	<ul style="list-style-type: none"> <li>• Defining a key set of sustainability criteria with the commitment of ensuring that these criteria are utilised through the project life cycle</li> <li>• Undertake an ISCA Assessment and commit to obtaining ISCA 'Leading' rating for design, construction and operation</li> <li>• Adopting an attitude towards sustainability that is maintained throughout the project by defining key management objectives in line with The National Strategy for Ecological Sustainable Development</li> <li>• Identify a tracking, auditing, assessment and project review process that is continually undertaken through the project lifecycle</li> <li>• Adoption of the initiatives identified in the best practice review.</li> </ul>

#### 3.10.2 Summary of Revisions/Clarifications

The following key revisions have been made to the proposal in relation to ESD:

- > Reduction in the length of the rail alignment by 200m with the identified ESD benefits comprising:
  - o Reduced vegetation removal
  - o Reduced construction materials
  - o Reduced fuel consumption.

### **3.10.3      Assessment**

#### **3.10.3.1      *RtS Specific Response***

The Table below contains the comments, clarifications/responses and references taken from the RtS document, with a further review comment to the RtS provided in the last column. The Table includes responses to the Council submission, along with key relevant responses from other submissions addressed in the RtS.

**Table 3-20 RtS Response Review (Ecologically Sustainable Development)**

Comment	Clarification/Response	Reference	Review Comment
<b>Council Submission Responses</b>			
<p><i>ESD commitments outlined in the EIS are extremely limited with only a cursory review provided. The scale or/and intensity of the use as proposed would not be able to be offset through management and mitigation measures. It is recommended DP&amp;E approval conditions should be based around:</i></p> <ul style="list-style-type: none"> <li>• <i>Defining a key set of sustainability criteria with the commitment of ensuring that these criteria are utilised through the project</i></li> <li>• <i>life cycle</i></li> <li>• <i>Undertake an ISCA Assessment and commit to obtaining ISCA 'Leading' rating for design, construction and operation</i></li> <li>• <i>Adopting an attitude towards sustainability that is maintained throughout the project by defining key management objectives in line with The National Strategy for Ecological Sustainable Development</i></li> <li>• <i>Identify a tracking, auditing, assessment and project review process that is continually undertaken through the project lifecycle</i></li> <li>• <i>Adoption of the initiatives identified in the best practice review (Section 4.18.2 of the submission)</i></li> </ul>	<p>Section 20.7 of the EIS outlines the Proposal's consistency with the principles of ecologically sustainable development in accordance with the legislative requirements of Schedule 2 of the Environmental Planning and Assessment Regulation 2000.</p> <p>The SIMTA Project and Stage 1 Proposal has been designed with consideration of, and has found to be consistent with the sustainability criteria and principles of:</p> <ul style="list-style-type: none"> <li>• Precautionary principles</li> <li>• Inter-generational equality</li> <li>• Conservation of biological and ecological integrity</li> <li>• Improved valuation, pricing and incentive mechanisms.</li> </ul> <p>The Proposal would implement a number of key environmental controls and initiatives as stated in the Statement of Commitments provided in the Concept Plan Approval. As per the mitigation measures for the Proposal the design development and construction phase of the Proposal will achieve these principles.</p> <p>The measures included in the Concept Plan Approval and Section 22 of the EIS / Section 8 of this RtS are considered suitable to ensure that ESD principles are integrated into the Proposal. It is noted that the IS rating scheme is a purely voluntary performance rating scheme. As per the Concept Plan Approval and the mitigation measures for the Proposal, ESD initiatives will be implemented across the</p>	<p>Sections 20.7 and 22 and Appendix X of the EIS.</p> <p>Concept Plan Approval Section 8 of this RtS.</p>	<p>The changes and comments within the RtS do not add to, or respond to the ESD comments raised in the previous Council submission.</p> <p>Section 20.7 of the EIS references three groups of ESD initiatives, which once implemented are identified as addressing the four principles of ESD. The three initiative groups comprise:</p> <ul style="list-style-type: none"> <li>&gt; Site management policies and strategies</li> <li>&gt; Materials selection and energy and water demand management</li> <li>&gt; On-site renewable energy generation.</li> </ul> <p>As identified in the previous Council submission the EIS makes no further reference to these initiatives, therefore it is unclear how they would be implemented, monitored and reported. It is unclear how the ESD requirements of the EP&amp;A Regulation or the four ESD principles are addressed. Furthermore, justification is not provided in support of the statement that the Project is “<i>designed with consideration of, and has found to be consistent with the sustainability criteria and principles of</i>” (Hyder, 2015) ESD. It is unclear how the project has been ‘found’ to be consistent as there is not quantification of what ‘found’ equates to, with no supporting assessment or justification.</p> <p>The EIS and RtS documents reference compliance with the Statement of Commitments and Concept Approval as a means to achieve the principles of ESD. The RtS identifies that these commitments are contained with Section 8 of the RtS. These commitments do not directly relate to ESD initiatives, with no reference to ESD in the CEMP or OEMP.</p> <p>Commitment 16A identifies that a GHG Management Plan would be prepared prior to construction for inclusion in CEMP, with Commitment 16B guiding the development of the OEMP. Commitments 16A and 16B state that measures identified within the GHG and Climate Change Assessment would be ‘reviewed and considered where</p>

Comment	Clarification/Response	Reference	Review Comment
	<p>construction, operation and decommission stages of the SIMTA Project.</p>		<p>appropriate for incorporation” into either the CEMP or OEMP.</p> <p>These actions that are identified as commitments resulting from the environmental assessment are caveated by ambiguity, with the level of commitment questioned.</p> <p>The GHG Management Plan identified in Commitment 16A and the measures for incorporation into the OEMP in Commitment 16B include items that would assist with addressing the principles of ESD. However, the level of commitment is ambiguous with each commitment caveated by comments including where possible, or where practicable.</p> <p>It is acknowledged that the IS rating scheme is a voluntary scheme. However, as clear commitments are not provided and the SEARs requirement for best practice it is recommended that the project be assessed against the IS rating scheme for infrastructure (Infrastructure Sustainability Council of Australia [ISCA]), with the intent of achieving a ‘Leading’ rating. A commitment to the ISCA Leading rating would require the project to satisfy identified ESD objectives, helping to quantify the proposal’s performance during design, construction and operation. It is recommended that a commitment should be made to achieve a Leading rating as a quantifiable means of ranking performance.</p>

### 3.10.4 Additional Matters

The RtS response to the ESD comments contained within the Council submission are limited and targeted to the recommendations section of the submission only. Due to the extent of changes to the proposal, which are limited to the realignment of the rail corridor many of the previously submitted comments remain. The changes to the rail alignment do not specifically reference ESD. However, a number of items that contribute to the principles of ESD are discussed.

Section 7 of the RtS notes in relation to Climate Change that the “*amended Rail link would shorten the alignment by approximately 200m*”, resulting in reduced GHG emissions due to reduced vegetation clearance, reduced materials and associated embodied energy and reduced construction machinery usage.

The reduction in rail alignment length would result in minimal ESD benefits, with the primary benefit associated with conservation of biological and ecological integrity, through the reduction of vegetation removal. However, it is noted that extensive removal of EEC’s would still occur under the revised proposal as discussed at **Section 3.6** of this report. The proposal would still result in the clearing of threatened fauna, flora and marine species as well as TECs, with the biodiversity assessment and Vegetation Management Plan (VMP) contained within the EIS lacking sufficient detail to give confidence that biological and ecological integrity will be retained (refer to **Section 3.6**). An alternative outcome would be to consolidate the SIMTA and MIC rail alignments with the SIMTA rail access excluded, removing the need for the associated impacts on biodiversity. The RtS does not address the duplication of a rail link from the SSFL, with both the SIMTA and MIC sites proposing a direct connection. The lack of discussion regarding the impacts of two rail links serving what has been identified by an agreement between the Commonwealth Government and SIMTA is a key flaw in the RtS.

The rail duplication is counter to a number of the ESD principles, demonstrating a lack of respect for environmental values. The duplication suggests that an adequate value and price has not been placed on the environment, with the rail link requiring extensive construction material, as well as emission releases during construction in the form of embodied energy and construction vehicle and plant emissions, as well as during operations due to the longer rail spur and associated increased travel distances.

The EIS and RtS do not fully address alternative uses for the site, with a do nothing option the only alternative considered, based on the rationale that the site is zoned for the use, with no further investigation required. This limited approach to a review of alternatives, which is a key requirement within Schedule of the EP&A Regulation for EIS documents does not address inter-generational equity. Alternative uses of the site could deliver higher order development resulting in greater employment and economic activity on site, while retaining heritage character would provide greater levels of inter-generational equity. Uses could include a mix of commercial and light industrial uses, with the rail corridor retained as is due to the associated ecological values.

The Precautionary Principle is identified as being addressed through the use of conservative worst case assessment scenarios where there is uncertainty. Use of a worst case assessment scenario is recognised as standard practice to counter uncertainty. However, the establishment of the worst case baseline requires a review of each assessment. The worst case assumptions in the Traffic Assessment at Section 7 of the EIS have not been amended by the RtS and fall short of identifying a rigorous worst case scenario, with the Traffic Assessment considering maximum truck movements into and out of the site, noting that freight would not be broken up on site. This statement is likely to be counter to operational practice, with many of the containers transported to site unlikely to contain single destination freight. Consequently, containers will need to be transferred from the site to warehousing off site to be broken up and then transferred, to its end destination. Alternatively, containers would need to be moved from one site to the next to allow staged unloading of freight.

Furthermore, a similar number of movements would be required when delivering containers back to the SIMTA site for transfer to Port. The assumptions contained within the Traffic Assessment in terms of total vehicle movements are inaccurate and fall well short of providing a worst case scenario to address the uncertainty. The predicted traffic movements have been used as baseline data within the associated assessments of congestion, noise, air quality, human health and visual amenity. Consequently, these flow on assessments are potentially inaccurate, based on a reduced number of vehicle movements, falling short of providing a worst case scenario to address the uncertainty and thus not satisfying the requirements of the Precautionary Principle.

To fully address the Precautionary Principle an overarching project risk matrix should be developed identifying and ranking risks and the interactions between these risks across the project. The mid to high level risks would then be addressed more thoroughly with a specific risk management strategy to identify the uncertainty and the proposed approach. The matrix would provide more confidence to the determining authority that a precautionary approach has been adopted. This recommendation has not been progressed within the RtS and is not identified as a future commitment.

### **3.10.5      Recommendations**

The ESD commitments are extremely limited with only a cursory review provided. The scale and intensity of the use as proposed would not be able to be offset through management and mitigation measures. Consequently, a substantial review of the proposed scheme is required. Furthermore, should DP&E elect to proceed with the proposal conditions of determination should be based around:

- > Defining a key set of sustainability criteria with the commitment of ensuring that these criteria are utilised through the project life cycle
- > Undertake an ISCA Assessment and commit to obtaining ISCA 'Leading' rating for design, construction and operation
- > Adopting an attitude towards sustainability that is maintained throughout the project by defining key management objectives in line with *The National Strategy for Ecological Sustainable Development*
- > Identify a tracking, auditing, assessment and project review process that is continually undertaken through the project lifecycle

### 3.11 Cumulative Impact

The proposed SIMTA RtS provides a response to the submissions made to the EIS in relation to the proposal's Cumulative Impacts. This review considers information in the RtS Section 4.6 prepared by Hyder Consulting.

#### 3.11.1 Summary

The Table below summarises the outcome of the changes to the proposal identified by the RtS.

**Table 3-21 Adequacy of Response Summary**

Concept Approval Commitments	Secretaries Environmental Assessment Requirements	Liverpool City Council Assessment
N/A	<p>SEARs are address or The following SEARs are not adequately addressed:</p> <p>The Environmental Impact Statement (EIS) must meet the minimum form and content requirements in clauses 6 and 7 of Schedule 2 the Environmental Planning and Assessment Regulation 2000 including but not limited to:</p> <ul style="list-style-type: none"> <li>the development's relationship to and interaction with adjoining development, including the proposed intermodal on the School of Military Engineering site and consideration of cumulative impacts of the two intermodals;</li> </ul>	<p>The following assessment comments are not addressed:</p> <ul style="list-style-type: none"> <li>It is unclear whether the SIMTA and MIC IMTs will be integrated or standalone projects. Should one integrated project be proposed, a master planned development is required to provide certainty to the community and Council regarding the type and location of likely environmental impacts.</li> <li>An assessment is required to identify those sites and associated uses with the potential to contribute to cumulative impacts. A risk assessment should then identify items of low, medium and high risk of cumulative impact in the both the local and regional context.</li> </ul>

#### 3.11.2 Summary of Revisions/Clarifications

The following key revisions have been made to the proposal in relation to Cumulative Impacts:

- > None, no new information provided.

#### 3.11.3 Assessment

The Table below contains the comments, clarifications/responses and references taken from the RtS document, with a further review comment to the RtS provided in the last column. The Table includes responses to the Council submission, along with key relevant responses from other submissions addressed in the RtS.

**Table 3-22 RtS Response Review (Cumulative Impact)**

Comment	Clarification/Response	Reference	Review Comment
<b>Council Submission Responses</b>			
<i>The cumulative assessment contained within the EIS provides limited, generally unquantifiable assessment based primarily on secondary information. It does not follow best practice cumulative assessment which requires best practice in the individual assessment of environmental aspects and a risk analysis considering potential impacts associated with surrounding existing and proposed uses.</i>	The cumulative impact assessment documented in Section 19 of the EIS addresses the SEARs and is therefore considered adequate. The assessment has taken into consideration proposed developments within the vicinity of the Proposal for which information is publicly available. Impacts associated with individual environmental aspects, including traffic, noise, air quality etc. have been assessed.	Section 19 of the EIS.	It is considered that SIMTA's response to this comment provides no new information. Consequently, the Cumulative Impacts assessment is still considered inadequate.
<i>It is unclear whether the SIMTA and MIC IMTs will be integrated or standalone projects. Should one integrated project be proposed, a master planned development is required to provide certainty to the community and Council regarding the type and location of likely environmental impacts. A comprehensive cumulative assessment is then required that considers impacts attributable to the site and those associated with the interactions between site and surrounding land uses both locally and regionally.</i>	<p>A masterplan is not considered necessary as these proposals are separate (refer to Section 1.5 of the EIS).</p> <p>A comprehensive cumulative assessment for the operation of both the SIMTA Project and the MIC Proposal has been provided in the Concept Plan Approval. A cumulative impact assessment specific to this Proposal has been provided in Section 19 of the EIS. The assessment identified cumulative impacts related to the Proposal and the MIC Proposal.</p> <p>No further cumulative impact assessment is considered necessary at this stage.</p>	Section 1 and Section 19 of the EIS.	<p>Considering the announced partnership between SIMTA and MIC to develop intermodal terminals jointly, the argument that the proposals are separate cannot be sustained.</p> <p>The lack of a precinct master plan which will consolidate and confirm the functional and spatial relationship between the two projects prevents a full and complete assessment of cumulative impacts.</p>
<i>An assessment is required to identify those sites and associated uses with the potential to contribute to cumulative impacts. A risk assessment should then identify items of low, medium and high risk of cumulative impact in the both the local and regional context. Items of medium and high risk would require further assessment and subject to the findings, mitigation to address potential impacts should be identified and committed to.</i>	<p>An Environmental Risk Assessment has been provided within Section 21 of the EIS. In addition to this, a cumulative assessment has been undertaken within Section 19 of the EIS.</p> <p>No further cumulative impact assessment is considered necessary or suitable at this stage.</p>	Section 19 and Section 21 of the EIS.	The SEARs relating to the risk assessment make specific reference to the risk associated with cumulative impacts. Without addressing the risks associated with the cumulative impacts of both projects, the proposal has not responded to the SEARs.

#### **3.11.4      Recommendations**

The recommendations below are identified to address the identified impacts associated with cumulative impacts to allow a comprehensive assessment of the proposal:

- > A precinct master plan addressing both the SIMTA and MIC projects should be developed and provided prior to the determination of the SIMTA Stage 1 project application.
- > The project risk assessment should include assessment of risks arising from the cumulative impacts of both intermodal terminals as required by the project SEARs.
- > Cumulative impacts should be assessed in greater detail at the level of specific environmental aspects and locations within each project.

## 4 Conclusions & Recommendations

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This section provides a summary of findings and overall conclusion to the study, along with associated recommendations.

This review of the RtS Report and its supporting information for the Stage 1 SIMTA Intermodal Terminal Project has identified that a number of outstanding matters are yet to be adequately addressed by the proponent. The review was informed by the objectives listed at **Section 1.2** of this document which asked a range of questions regarding the adequacy of the environmental assessments and commitments by the proponent based on compliance with the Concept Plan Approval (MP10\_0193) and SEARs, consideration of best practice and the overall impact on the wider Liverpool community.

The review found that many of the impacts previously identified in Cardno’s review of the project EIS are yet to be adequately assessed and managed by the proponent, with the potential, detail and commitment to mitigate these impacts to an acceptable level questioned. Impacts as diverse as noise, traffic, flooding, biodiversity and heritage are not mitigated to a degree that would allow a determining authority to make a decision on such a significant development with confidence. Concerns have been raised by multiple state agencies relating to specific impacts and the proponent has largely resisted further mitigation measures to resolve these concerns.

Cumulative impacts remain insufficiently addressed despite similar comments from a range of agencies and the community. It remains essential that a precinct-wide master planning process be undertaken as previously recommended by the PAC in its assessment of the SIMTA Concept Plan. The master planning would be informed by the latest agreement between SIMTA and MIC as to the extent of cooperation and integration of the two proposed IMT’s, while also considering Liverpool City Council’s strategic intent for the site and surrounds. Inputs would also be required from other stakeholders including the Department of Planning and Environment, Transport for NSW and Roads and Maritime Services.

### 4.1.1 **Reoccurring Themes**

The assessment identified a number of reoccurring themes that were not adequately addressed in the project EIS that continue to be a major shortcoming of the application. The following themes require the immediate attention of the proponent prior to any determination by the PAC:

#### 4.1.1.1 ***Cumulative Effects***

The cumulative effects of the SIMTA proposal and the MIC proposal has not been adequately assessed or addressed. The RtS does not address the request to combine the two sites through a master planned approach, or acknowledge that the proposal should be developed and assessed to establish whether an IMT of this scale at Moorebank is reasonable. Consequently, the cumulative impacts of the SIMTA site are not clearly articulated and an assessment of whether the significant environmental impacts can be mitigated preferably on land under the proponents control.

#### 4.1.1.2 ***Adequacy of the Submissions Response***

The RtS document has been prepared to respond to agency and community submissions, with the document identifying the proposed changes to the proposal and responding to submission comments. Section 89H of the EP&A Act requires applicants to respond to ‘any submissions made’. The RtS specifically states that “*The proposal has been amended...to respond to submissions provided by the government agencies...*” (p xiii, Hyder, 2015). The approach taken by the RtS appears to exclude non-agency, public submissions from consideration and does not therefore fully address the requirements of Section 89H. Examples from the previous Council submission relate to the potential for double handling of freight due to the lack of warehousing in the Stage 1 proposal; and the need for a coordinated master planned approach to the SIMTA/MIC development.

#### **4.1.1.3 Traffic**

A number of the assumptions used to inform the environmental assessments are either not identified or not considered rigorous as previously identified by the Council submission. The proposal's traffic assessment is a key consideration with the potential to create impacts across a number of environmental aspects. The major traffic related shortcomings included the lack of warehousing from the Stage 1 project (contrary to the Concept Plan), which could lead to the growth of warehousing facilities elsewhere in Moorebank, effectively generating an enhanced level of traffic.

Additionally, the long term suitability of the Moorebank precinct for an intermodal terminal relies on the intersection of rail and road freight capacity. Parsons Brinckerhoff has conducted longer term modelling of the local road network for the MIC proposal. They identified capacity shortfalls and severe congestion at almost all intersections and roads in the precinct. Given these findings, it is prudent to delay any SIMTA Stage 1 project determination until the RMS can complete the LMARI sub-regional road network modelling. This modelling will establish whether Moorebank is a suitable location for an intermodal terminal and the magnitude of the road upgrades required to facilitate it.

#### **4.1.1.4 Commitment to Ongoing Monitoring Programs during Construction and Operations**

A commitment to undertaking effective air quality and noise/vibration monitoring programs through both the construction and operational phases of the proposed project is required to ensure

Any air quality and noise/vibration monitoring program is to be carried out by a suitably qualified and experienced consultant and made available to the Consent Authority and Appropriate Regulatory Authority. Within three months of the commencement of construction and operational activities, appropriate assessment and validation reports shall be prepared and submitted to the Consent Authority and Appropriate Regulatory Authority for review. The report shall include but not be limited to the following information:

- a) Air Quality and Noise/Vibration measurements taken at the nearest noise sensitive locations;
- b) Verification that Air Quality and Noise/Vibration levels at the nearest potentially affected receivers comply with all relevant assessment criteria;
- c) All complaints received from local residents in relation to the development;
- d) Where Air Quality and Noise/Vibration measurements required under point a) above indicate that the relevant assessment criteria are exceeded, recommendations shall be provided in relation to how noise emissions can be satisfactorily reduced to comply with the assessment criteria; and

Following written approval from the Appropriate Regulatory Authority, any recommendations provided under point d) above shall be implemented fully. Further audits will be required every twelve (12) months from the commencement date of operation or such longer period as may be agreed to by the Appropriate Regulatory Authority.

#### **4.1.1.5 Local Infrastructure Contributions**

A major shortcoming of the Stage 1 SIMTA Project Application that was identified in the previous Council submission, and still remains, is the lack of commitment by the proponent towards local infrastructure contributions. Both the future assessment requirements of the Concept Plan approval and the SEARs required the consideration of the relevant Council's Developer Contributions Plan. It is clear that both of these requirements would necessitate either the payment of a monetary contribution pursuant to Section 94 or Section 94A, a works in kind arrangement or a combination of both under in accordance with a VPA. However, the RtS document indicates that the proponent intends to avoid this requirement, stating "local infrastructure contributions are not applicable to the SIMTA Project".

It is recommended that a VPA between SIMTA and Liverpool City Council is prepared to ensure a fair and equitable outcome regarding local infrastructure contributions is achieved. Alternatively, the PAC is able to impose a condition under Section 94A of the EP&A Act, in accordance with the provisions listed at Clause 94B (2) of the EP&A Act.

#### **4.1.1.6 Lack of Firm Commitments**

The RtS Section 8 identifies revised mitigation measures in response to the submissions to the EIS. The commitments identified within the RtS include caveats that create uncertainty as to whether the measures will be implemented and the effectiveness of the measures should they be implemented. Examples of the lack of firm commitments include the management of greenhouse gas emissions and rail squeal monitoring.

#### **4.1.1.7 Ongoing Regulation Requirements**

Council has concerns in relation to the ongoing regulation of the proposed facility. Council is not equipped with the resources and manpower to oversee a facility of this size and operational capacity. This will lead to inadequate regulation of the site with major implications for the environment and community. The Federal and State Government must take a lead role in the regulation of the development if approval is granted. This will ensure that the community and environment are best protected from the impacts that are likely to result from the proposed development. The EPA is therefore believed to be the most appropriate regulatory authority for the proposed development and associated activities should approval be granted.

## **4.2 Recommendations**

Cardno's review has identified a number of recommendations that include additional assessment requirements, identification of management plans and operational procedures and firmer commitments relating to compensation schemes and long term environmental monitoring.

Prior to the issue of an Occupation Certificate (Interim or Final), written certification from a suitably qualified person(s) shall be submitted to the Principal Certifying Authority and Consent Authority stating that all works/methods/procedures/control measures/recommendations approved by the Consent Authority in the following reports (including but not limited to) have been completed:

- > Environmental Impact Statement
- > All other Environmental Assessment reports supporting the application.

The preparation of a precinct wide master plan for the Moorebank Area (inclusive of the SIMTA site and the MIC) site, as previously recommended by the PAC, is an overarching recommendation that is necessary, justified and in the public interest. Specifically, the master planning and subsequent environmental assessment would help resolve a number of the gaps and shortcomings that remain following the submission of the RtS. The outcome of the master planning process would provide additional certainty for the community and would address the currently unmitigated residual impacts.

Due to Council's concerns in relation to resourcing the regulation of the development, then the EPA (with support of other Stage and Federal Government agencies) is believed to be the most appropriate regulatory authority for the proposed development and associated activities, should approval be granted.

Overall, in its current state, the Project Application does not adequately address a number of key environmental matters which, if left unchecked, have the potential to cause significant impacts to the built and physical environment of the locality and wider region. Consequently, it is recommended that the SIMTA Stage 1 Project Application not proceed in its current state.