Transport for NSW

Ms. Carolyn McNally
Secretary
Department of Planning and Environment
22-33 Bridge Street
Sydney NSW 2000

Attention: Andrew Beattie

Dear Ms. McNally Carolyn

Moorebank Intermodal Terminal Staged State Significant Development
Response to Submissions State Significant Development No. 5056

Thank you for your letter inviting Transport for NSW (TfNSW) to comment and provide advice on the Response to Submissions for the proposed Moorebank Intermodal Terminal Project. The attached comments also reflect input from Roads & Maritime Services as well as Sydney Trains.

A detailed response with recommended conditions of consent has been prepared and provided at **Attachment 1**.

TfNSW remains committed to facilitating a coordinated approach to the approval and development of the Intermodal Precinct at Moorebank and would like to be consulted during the preparation of any future development applications in the precinct. In this regard, a detailed review of the Traffic and Transport Impact Statement has been undertaken with comments provided in **Attachment 2**. These comments have been provided to assist the proponent in preparing any future development applications.

The TfNSW contact remains Mr. Simon Hunter, A/General Manager Land Use & Integrated Transport (8202 2577).

Yours sincerely

10/7/15

Anissa Levy
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Attachment 1 - Consolidated Recommendations

Traffic modelling

Roads & Maritime are currently developing a detailed mesoscopic traffic model of the Moorebank Liverpool area. It has been agreed with MIC that they would use this model as the basis for determining detailed traffic and transport impacts during the preparation of the Stage 2 SSD application.

On 4 June 2015 MIC announced that an agreement had been reached with the adjoining Sydney Intermodal Terminal Alliance (SIMTA) proponent for an integrated precinct of 241 hectares which SIMTA will operate.

MIC outlines in the Response to Submissions that SIMTA will be the proponents for future development applications for the combined Integrated Intermodal Precinct.

MIC also notes in the RtS, that it has been liaising with TfNSW/RMS throughout the duration of this project and will continue to do so. MIC is further developing its own model to assess the impact of Project traffic on the wider network. A wide ranging mesoscopic model is planned, with microsimulation of key elements such as the M5 Motorway over the Georges River. New AM and PM models will be based on a new round of 24 hour traffic data collection. MIC will discuss this future modelling with TfNSW and RMS to determine how information can be shared and if there is an opportunity to integrate and coordinate the modelling task. MIC does not agree with the recommendation to undertake an additional local and area wide model, other than the modelling work already agreed and discussed with TfNSW.

Recommendation

The response provided by MIC is largely accepted by TfNSW. TfNSW requests the following conditions:

- Detail the modelling assumptions for the combined facility will apply to future development applications. This would include back loading percentage, pallets per vehicle type, conversion of TEU to truck movements, percentage of peak hour vehicle movements, public transport use, and degree of car sharing by staff.

- Examine in greater detail the local and area wide traffic impacts on the operation of the road network through the use of micro or mesoscopic traffic models. As a minimum, the analysis should examine the information and scenarios listed within the Moorebank Intermodal Terminal Traffic, Transport and Accessibility Impact Assessment Report by Parsons Brinkerhoff dated September 2014.

- The proponent is to discuss any proposed mitigation measures to support the development of the intermodal facility with TfNSW and Roads & Maritime.

- Liaise with Roads & Maritime to ensure that any future detailed traffic assessment is based on the Roads & Maritime mesoscopic model unless otherwise agreed.

Workplace Travel Plan

TfNSW has requested that a workplace travel plan be developed by the proponent for future construction and operational stages of the development.

MIC has agreed to this position.

Recommendation

TfNSW requests the following conditions:

- An over-arching workplace travel plan be developed as part of the Stage 2 development application to the satisfaction of TfNSW. This plan is to be complemented by further detailed plans at future construction and operational stages.

Bus Services

TfNSW has previously requested that the proponent be conditioned to:

- *Identify and provide a bus turnaround facility on Moorebank Avenue with swept path dimensions sufficient to cater for a 14.5 metre long non rear-steer bus.*

- *Site should be designed to ensure there are direct pedestrian access paths between the proposed warehousing sites and bus stops on Moorebank Avenue.*

- *Provide appropriate pedestrian facilities on Moorebank Avenue (in consultation with Roads and Maritime and noting the need for approval from Roads and Maritime) to ensure the safe crossing of Moorebank Ave to access corresponding bus stops.*

The proponent in the RtS has stipulated that a bus turnaround facility will be considered in detail during the Stage 2 SSD application process, once the detailed design of the Project is known. A mesoscopic model would be used to assess the impacts. MIC would be prepared to receive conditions of approval based on this recommendation.

Recommendation

TfNSW broadly accepts the proponent's response. TfNSW requests the following conditions:

- Demonstrate that walking distances from within the site to nearby train or bus services are minimised and should be no further than 400m.

- During the preparation of the stage 2 development application, the following bus related infrastructure requirements should be investigated in consultation with TfNSW and Roads & Maritime:

- Provision of a paved bus turnaround facility on Moorebank Avenue that will allow buses to U-turn safely, which should accommodate swept path dimensions of a 14.5m long non rear-steer bus;
- If the facility is on SIMTA or MIC land provide standing landowner permission for regular route buses to turn around within the facility so constructed as a condition of development consent;
- The detailed design of the bus turnaround facility should 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 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;
- Investigate the design of any such facilities to cater for expected increase in traffic flows along Moorebank Avenue;
- Investigate the requirement for potential bus layover on either side of Moorebank Ave;
- Provision of bus stops and shelters on Moorebank Avenue to align with pedestrian access paths into the terminals. Pedestrian access paths should provide for the most direct access to these bus stops;
- Provision of appropriate pedestrian crossing facilities on Moorebank Ave in consultation with Road and Maritime near bus stops.

Rail Access

In the RtS, the proponent notes that a small portion of land owned by Sydney Trains will be impacted as result of the access requirements into the project site, via the Southern rail access option. MIC will investigate the most appropriate method of land acquisition or access to easements with the appropriate landholders to authorise the construction and operation of the rail link on private land.

Recommendation

TfNSW requests the following conditions:

- The cost/responsibility for any infrastructure or services located within the Main Southern Line which need to be relocated to facilitate connection to the Southern Sydney Freight Line will need to be borne by the proponent and approved by Sydney Trains.

- Any works to be undertaken will need to be during a scheduled track possession (i.e. shut-down) and be supervised by representatives of Sydney Trains in addition to any proponent supervision.

- To assist the proponent Sydney Trains can advise that **Annexure 1** provides a guide to the terms likely to be in the rail access agreement.

Property Requirements

In order to maintain the South Western Motorway, Interlink require maintenance access to the proposed GPT pit in the sliver of land adjacent to Moorebank Avenue (dedicated as public road but not used for road purposes).

MIC has noted that they will honour the existing access arrangement in place with Interlink and TfNSW.

Recommendation

TfNSW requests the following condition:

- Maintain the existing access arrangements in place with Interlink.

Construction Management Strategy

The proponent should establish an overall strategic framework for construction traffic management. Within the overall strategy a Construction Traffic Management Plan should be developed for each stage of the work. For example early works forms one plan, stage 1 a second plan et cetera. This will allow evaluation of each stage against the aims of the over-arching strategy.

Key issues that it is suggested are covered in the development of an overall Construction Management Strategy includes the following issues:

- Preventing queues from affecting adjacent intersections along Moorebank Avenue and the operation of the M5 Motorway / Moorebank Avenue interchange in the AM and PM peak periods.
- Detail construction vehicle routes, number of trucks, hours of operation, access arrangements, parking and traffic control measures.
- Modifying access locations in response to the upgrade of Moorebank Avenue.
- Minimising heavy vehicle movements through residential roads.
- Reducing volumes of construction vehicles travelling during peak periods.
- Maintaining access to neighbouring properties.
- Provision of alternate suitable pedestrian, cycle and public transport facilities.

- Detail and mitigate any impacts to the travel time of public bus services within the region.

- Developing a communication plan to provide relevant information to the appropriate authorities, bus operators and local community.

- Implementation of Traffic Control Plans and Variable Message Signs.

- Obtaining Road Occupancy Licences.

- Developing an emergency response plan for the upgrade of Moorebank Avenue.

- Submission of the early works CTMP to the Council and Roads and Maritime for approval prior to the issue of any Construction Certificate.

Recommendation

TfNSW requests the following conditions:

- The proponent develops an over-arching Construction Management Plan and a detailed Construction Traffic Management Plan for the early works to be approved by TfNSW and Roads & Maritime.

- Any subsequent development applications will need to be accompanied by a detailed Construction Traffic Management Plan.

Noise and Vibration

TfNSW previously suggested that the proponent be conditioned to:

- *Provide site access only to modern rolling stock that incorporate low noise locomotives, steering bogies (to control curve squeal) and permanently coupled wagons (to control noise from bunching).*

- *Adopt curve noise countermeasures including a review of the proposed site layout and rail access to the mainline to increase the radii of curved track, and effective lubrication techniques where curved track < 500m radius is unavoidable.*

- *Provide a report into the use of hybrid trains for port shuttle operations and also to hybrid engines for onsite mobile equipment. TfNSW would be prepared to assist in the review of the report.*

The proponent has responded as follows:

- *It is anticipated that a contractual arrangement between rail operators and the IMT operator would include a condition for all locomotives to have approval to operate under EPA Railway Systems Activities Licenses.*

- *As detailed in section 12.4 of Chapter 12 – Noise and vibration impact assessment of the EIS that a range of noise mitigation measures are proposed which aim to limit locomotive noise emission and the design of track systems to control noise emissions. Further mitigations would be considered during detailed design and the assessment undertaken for the Stage 2 SSD application, assuming approval of the Stage 1 SSD application.*

Recommendation

- Transport cluster supports the EIS recommended use of steering, permanently-coupled "multi-pack" wagons for the port shuttle service.

- Transport cluster recommends that noise impacts from additional mainline freight train movements between the Precinct and the Port will need to be assessed – either as part of the Moorebank IMT precinct or as part of future proposed upgrades to the freight rail line.

Air Quality

TfNSW previously provided some suggestions for managing and improving air quality.

The proponent has suggested in the RtS that they are happy to receive conditions of approval that require detail investigation of management measures relating to locomotives, vehicle idling, trucks and vehicles would be included in the mitigations proposed as part of the Stage 2 SSD application.

Recommendation

TfNSW agrees with the response provided by MIC. TfNSW requests the following conditions:

- The proponent prepares management measures for improving air quality including those related to locomotives, vehicle idling, trucks and vehicles as part of any future Stage 2 SSD application.

Attachent 2 – Review of the Moorebank Intermodal Terminal Revised Traffic and Transport Assessment Report

Introduction

The following issues and comments reflect TfNSW and Roads and Maritime review of the Response to Submissions documentation and are provided to assist the proponent in any future approved Stage 2 Development Application.

Driveway Monitoring and Conditioned Shift Changeover Times

Transport Cluster December 2014 Recommendation

It is suggested that the proponent is conditioned to:

- *Develop a site driveway monitoring program that will monitor all vehicular movements into and out of each of the proponent's site driveways. The program will note the type of vehicle travelling in or out of the site of for each hour of the day for every day of the year. These traffic generation numbers will be presented for comparison against the traffic generation rates advised in the EIS or against the traffic generation rates that may be generated by future more refined traffic model models outputs and agreed to by either TfNSW or Roads and Maritime. The proponent should also develop a suite of compensatory infrastructure and/or monetary payments in case the advised level of site vehicular movements is exceeded. When the proponent has developed their driveway monitoring regime the acceptance of the proposed program by the Department of Planning and Environment should be subject to a letter of endorsement from TfNSW or Roads and Maritime.*

- *Program shift changeover times in accordance with those times proposed in the EIS.*

May 2015 Proponent Comment (summary)

- Confirms shift changeover is expected to be 6.00 am, 2.00 pm and 10.00 pm.

- Acknowledges the request to implement a driveway monitoring regime and this will be considered as part of future assessment for the Stage 2 SSD application.

June 2015 Transport Cluster Consideration

- The proponent is requested to be conditioned to confirm that shift changeover times will be as advised (6:00am, 2:00pm and 10:00pm) and to develop a driveway monitoring program as part of the first Stage 2 SSD application.

- TfNSW advises that a driveway monitoring program could include the following:

- *The proponent is to generate and provide a report each six months that advises:*
  - *The number of actual and standard twenty foot equivalent shipping containers despatched and received during the period;*
  - *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;*
  - *A record of every vehicle entry by class, date and time;*
  - *The number of light vehicles turning left into the MIC driveway and the number of light vehicles turning left from the right from the MIC driveway for a representative day; and*
  - *The despatch location or origin address.*
  - *The report is to be in a format agreed with TfNSW and Roads and Maritime.*

M5 Motorway Traffic Weaving Assessment

Discussion

The Traffic Report in Section 11 examined the traffic weaving on the M5 Motorway between Hume Highway interchanges and Moorebank Avenue interchange. Future scenarios were assessed for 2030 with and without Moorebank IMT and used the Highway Capacity Manual (HCM) 2010. The methodology is appropriate subject to there being no queuing from the M5 Motorway / Moorebank Avenue and M5 Motorway / Hume Highway interchange ramps extending onto the diverge area of the motorway .

Roads and Maritime Services has reviewed the SIDRA results for both of these interchanges and the 95% queues on both ramps extend back past the diverge areas for a number of 2030 scenarios (ie Base, Base+MIMT development, Base+MIMT development with upgrade, Cumulative, Cumulative with upgrade).

As a result of queuing on these ramps extending back to the diverge areas, actual results for the weaving would be "worse" than the results presented within the Traffic Report. Therefore, the use of HCM 2010 methodology is "not" suitable for identifying the weave results.

Recommendation

Roads and Maritime recommends further assessment regarding the weaving on M5 Motorway be undertaken based on the following options:

- Model the two interchanges with the M5 Motorway using a microsimulation package with the base model appropriately calibrated and validated. This will then require the 2030 Base and Base plus development scenarios to be modelled. Weave results would be obtained via the microsimulation modelling.

- Alternatively, apply the HCM 2010 methodology to assess weaving on the M5 Motorway for any (Base plus development with upgrade) scenario(s), only if the proponent identifies appropriate improvements to both of Moorebank Avenue and Hume Highway interchanges that reduce the ramp queues to not extend onto the diverge areas of the motorway.

Queuing on the M5 Motorway at Moorebank Avenue Interchange and Hume Highway Interchange

Discussion

Intersection improvements proposed at the Moorebank Avenue and Hume Highway interchanges are feasible, however, under the various 2030 scenarios (Base + development with improvement and Cumulative with improvement scenarios), the extent of queuing from these off-load ramps extend back and will impact through movements on the M5 Motorway.

Recommendation

The proponent should re-examine / re-analyse these two interchanges for the various 2030 scenarios (ie Base + development with improvement and Cumulative with improvement) and identify feasible improvements which will ensure that queuing from these off-load ramps will not extend past the diverge areas of the motorway.

Proposed Intersection upgrades

Discussion

The Traffic Report (Section 9 - Intersection Analysis) identifies various intersections improvement upgrades to mitigate the impacts of the proposal. Various issues are raised in regard to road safety impact and feasibility of the proposals which are detailed below:

Recommendation

TfNSW requests that the proponent prepare functional layout plans of the proposed intersection upgrades to confirm feasibility of the proposals and identify property acquisition requirements. The plans should show the proposed intersection configuration overlayed on an aerial map with property boundaries and swept path analysis of the design vehicles. Specific issues and recommendations are detailed below for each intersection upgrade proposal, which should be incorporated into the amended plans.

Hume Highway / Orange Grove Road

Issue

An additional 60m long approach and 60m long departure lane along the Hume Highway (south-western approach) is proposed. The additional lane is proposed in the median area.

Additional approach and departure lanes of such short lengths are not supported because of likely low traffic use. Generally, to ensure adequate utilisation, those lanes should be approximately 200m long on approach and departure Furthermore, such configurations are typically provided in the kerbside lane and "not" the median lane as merging from the short lane becomes a safety issue. It is also noted that the as a result of the lane configuration proposed approach and departure lanes may not align.

Recommendation

The current proposal is not supported. Further investigation should be undertaken to resolve the issues detailed above.

Hume Highway / Elizabeth Drive -

Issue
Additional 70m long right turn bay for the movement from Elizabeth Drive (eastern approach) is proposed.

The proposed introduction of a dual right turn is likely to cause crashes with vehicle turning from the western approach of Elizabeth Drive due to turning paths overlapping or insufficient clearance between the opposing right turn movements. In addition, the proposal would possibly require property acquisition along Elizabeth Drive (north-eastern corner) in order to make it potentially feasible.

Recommendation

The current proposal is not supported. Further investigation should be undertaken to resolve the issues detailed above.

Hume Highway / Memorial Avenue -

Issue
Additional 60m long right turn bay for the movement from Hume Highway (southern approach) is proposed.

The proposed introduction of a dual right turn is likely to cause crashes with vehicle turning from the Hume Highway (northern approach) due to turning paths overlapping or insufficient clearance between opposing right turning movements. In addition the proposal would possibly require property acquisition along Hume Highway (south-western corner) in order to make it potentially feasible.

Recommendation
The current proposal is not supported. Further investigation should be undertaken to resolve the issues detailed above.

Hume Highway / Hoxton Park Road

Issue

Additional 75m long right turn bay for the movement from Hume Highway (northern approach) is proposed. The proposed introduction of a dual right turn may cause crashes with vehicle turning from the southern approach of Hume Highway due to turning paths overlapping or insufficient clearance between opposing right turn movements.

In addition the proposal would possibly require property acquisition along Hume Highway (north-western corner) in order to make it potentially feasible. It should be noted that Roads and Maritime's property plans (PIMS) has identified affection on the necessary property required to facilitate this proposal, this property is yet to be acquired.

Recommendation

Further investigation should be undertaken to resolve the issues detailed above.

Newbridge Road / Moorebank Avenue

Issue

It is proposed to lengthen the kerbside left turn storage lane from 75m up to 150m for the movement from Newbridge Road (eastern approach).The extension of this lane might require property acquisition of private land.

Recommendation

As part of the assessment of the SIMTA development project, Roads and Maritime has previously developed an alternative feasible intersection upgrade which could be considered as an alternative option for both this intersection and the Moorebank Avenue / Heathcote Road intersection. The functional layout plan of the proposal prepared by Roads and Maritime is provided in Annexure 2.

Moorebank Avenue / Heathcote Road

Issue

It is proposed to remove the existing bus lane on Heathcote Road (eastern approach) and change it to a general traffic lane (which allows left and right turn movements).The removal of the bus lane would not be supported by TfNSW as it will affect the operation of existing and future bus services.

Recommendation

An alternative option which maintains the bus priority lane on Heathcote Road should be developed for this intersection. This could include the Roads and Maritime functional layout plan provided in Annexure 2 and the full time banning of the right turn movement from Moorebank Avenue into Heathcote Road. However, the right turn ban would require the proponent to submit a Traffic Management Plan which is subject to Council approval through the Local Traffic Committee.

Moorebank Avenue / Church Road

Issue

It is proposed to ban the right turn movement out of Church Road. This proposal will require the proponent to submit a Traffic Management Plan which is subject to Council approval through the Local Traffic Committee.

Recommendation

Council should be consulted regarding the proposal.

Newbridge Road / Governor Macquarie Drive

Issue

It is proposed to amend Governor Macquarie Drive (north leg - southbound approach) from L / L / T / R to L / L / TR / R plus lengthen the storage of the right turn and through-right lanes up to 200m in length. Removal of diamond phase and implementation of split approach phasing. The abovementioned changes results in the removal of the diamond phase which would not be supported by Roads and Maritime.

Recommendation

An alternative option which maintains the diamond phase should be developed for this intersection.

Moorebank Avenue/M5 Motorway Interchange

Issue

It is proposed to add an additional 100m long left turn signalised slip lane from Moorebank Avenue (southern approach) onto westbound M5 Motorway on-load ramp.

Recommendation

No objection is raised regarding this proposal subject to further design, signal timing and feasibility assessment being submitted to Roads and Maritime for further review.

Hume Highway/M5 Motorway Interchange

Issue

It is proposed to lengthen one of the right turn lanes from the westbound M5 off-load ramp from 100m up to 230m.

Recommendation

No in-principal objection is raised regarding this proposal subject to further designs, signal timing and feasibility assessment being submitted to Roads and Maritime for further review.

Cambridge Avenue/Railway Parade/Canterbury Road/Glenfield Road roundabout

Issue

It is proposed to change lane designations on the Canterbury Road (southern approach) from LT/TR to LTR/R.The recommended changes will need to ensure that the roundabout can adequately accommodate turning paths of 19m semi-trailers turning from Canterbury Road into Cambridge Avenue from both the kerbside and the median lane(s).

Recommendation

No objection is raised regarding this proposal subject to further designs, feasibility assessment being submitted to Roads and Maritime for further review. The proposed changes to the roundabout will also require directional signposting on all approaches indicating the modified arrangement.

Moorebank Avenue/Anzac Road/New MIMT Access.

Issue

Major changes proposed.

Recommendation

No objection is raised regarding this proposal subject to further designs (including impacts upon the Bapaume Road intersection), signal phasing and feasibility assessment being submitted to Roads and Maritime for further review.

Timing and responsibility of intersection upgrades

Discussion

Table 9.36 and 9.37 of the Traffic Report provides a list of intersection upgrades and their timing requirements to return these intersections back to base year level performance parameters without project traffic. The delivery / provision of these nominated upgrades are based on the operation of various TEU throughput triggers. However, there are concerns that more trucks will be generated by each TEU than what the work to date estimates.

Recommendation

Subject to the satisfactory resolution of the scope and details of the intersection upgrades, this will require Table 9.36 and 9.37 of the Traffic Report to be updated to provide the following:

- Reflect the agreed scope / timing of intersection upgrades (based on truck movements rather than TEU), and
- Provide clear details on the agreed responsible party for the delivery / provision of these works.

This updated table should be used in the formulation of a Voluntary Planning Agreement (VPA).

Traffic Generation Assessment

Discussion

The following issues are raised regarding the traffic generation assessment detailed in the Traffic Report:

Two shift operation

Issue

Traffic analysis has been undertaken assuming that the proposed intermodal terminal is expected to operate 24/7 with three shifts and full capacity in 2030. This assumption is valid, only when the following occurs during the operation of intermodal terminal:

- The origin/destination of trips arriving/departing from the proposed intermodal terminal occurs at locations which operate 24/7 and 365 days per annum.
- All three shifts need to be operated with full capacity without downtime for maintenance activities.

However, typical intermodal terminals operate two shifts with full capacity and the third shift is allocated for maintenance activities with minimum number of staff.

Recommendation

The proponent should confirm that the third shift will be a working shift with an equivalent number of workers to the morning and afternoon shift.

Intermodal Terminal Peak Hour

Issue

Traffic analysis has been undertaken for morning and afternoon commuter peak periods. No traffic analysis has been undertaken for intermodal Terminal peak hour which is expected to be 2.00PM-3.00PM on weekdays. This needs to include the following:

- 1/3 of the total daily light vehicles (associated with Operations / Maintenance) leaving the site
- 9.3% of daily heavy vehicles arrive/leave the site

Recommendation

The proponent undertakes a sensitivity analysis with consideration for the above (i.e. two shift operation and intermodal terminal peak hour) in order to assess the impacts on the surrounding road.

Outstanding matters for resolution by the Stage 2 SSD application

Discussion

The mesoscopic model that the proponent will develop in support their Stage 2 SSD should address the following issues as a minimum:

1. Queing on the M5 Motorway at Moorebank Avenue Interchange and Hume Highway Interchange;
2. Proposed intersection upgrades
3. Timing and responsibility of intersection upgrades

These matters are required to address the impacts and it is expected that the will be delivered with a contribution from the proponent.

Indicative issues for inclusion in draft VPA

Following the resolution of issues during the Stage 2 SSD exhibition and response period, a planning agreement may be agreed, Roads and Maritime and TfNSW can advise they expect this agreement to address the following issues:

a) Intersection upgrades required to mitigate the traffic impacts of development for all key project phases of the Moorebank IMT development.
b) Intersection upgrades required to mitigate the traffic impacts of development for the agreed cumulative scenario of the Moorebank IMT / SIMTA development.
c) Upgrade of Moorebank Avenue between M5 Interchange and the Anzac Road intersection to a four lane divided roadway.
d) A financial offer to mitigate the broader regional impacts to the surrounding motorway network.

Annexure 1 – Guide to Rail Access Agreement

- *The proponent shall comply with any Land Owner's Consent requirements/conditions issued by RailCorp (being the owner of all rail land).*

- *The proponent shall comply with any requirements stipulated by the Australian Rail Track Corporation (ARTC) in order to connect to the Southern Sydney Freight Line (SSFL). Prior to the commencement of works required to be undertaken to facilitate the connection to the SSFL the Proponent shall provide Sydney Trains written confirmation from ARTC that it has agreed to the works and the connection to the SSFL.*

- *Prior to the commencement of works on any RailCorp land, the Proponent to enter into the required legal, operational/protocol and licence Agreements with Sydney Trains and RailCorp, on terms to the satisfaction of Sydney Trains and RailCorp, for the purpose of ensuring the protection of rail infrastructure facilities and the rail corridor/land or in connection with the carrying out of any works within the rail corridor/land and to ensure rail safety. The Proponent is to bear all Sydney Trains' and RailCorp's costs of entry into any Agreement required by this conditions. Works shall not commence until the Proponent have provide the consent authority with a copy of the Agreements signed by all the nominated parties.*

- *For any works within 25 metres of the rail corridor, or on RailCorp land or easement, the Proponent shall prepare and provide to Sydney Trains for approval/certification the following items:*

    1. *Final Geotechnical and Structural report/drawings. The Geotechnical Report must be based on actual borehole testing conducting on the site closest to the rail corridor.*
    2. *Final Construction methodology with construction details*
    3. *Final cross sectional drawings showing ground surface, rail tracks, sub soil profile, proposed basement excavation and structural design of sub ground support adjacent to the Rail Corridor. All measurements are to be verified by a Registered Surveyor.*
    4. *Detailed Survey Plan showing the relationship of the proposed developed with respect to RailCorp's land and infrastructure.*

- *Any conditions issued as part of the Sydney Trains approval/certification of any of the above documents will also form part of the consent conditions that the Proponent is required to comply with. Works shall not commence on RailCorp land or within 25m of the rail corridor until written confirmation has been received from Sydney Trains confirming that this condition has been complied with.*

- *All excavation/ground penetration works within 25m of the rail corridor areto be supervised by a geotechnical engineer experienced with such excavation projects.*

- *No rock anchors/bolts are to be installed into RailCorp's property. Prior to the commencement of works, at any time during the demolition, excavation and construction period deemed necessary by Sydney Trains or is representative, and prior to the operation of the SIMTA freight line, a joint inspection of the rail tunnels is to be carried out by representatives from Sydney Trains and the Proponent. These dilapidation surveys will establish the extent of any existing damage and enable any deterioration during works to be observed. The submission of a detailed dilapidation report will be required unless otherwise notified by Sydney Trains. Works shall not commence on RailCorp land or easement, or within 25m of the rail corridor until written confirmation has been received from Sydney Trains confirming that this condition has been complied with.*

- *For any works within 25 metres of the rail corridor, or on RailCorp land or easement, the following items are to be submitted to Sydney Trains for review and endorsement prior to the issuing of a Construction Certificate:*

    - *Machinery to be used during demolition, excavation and construction*

    Works shall not commence on RailCorp land or easement, or within 25m of the rail corridor until written confirmation has been received from Sydney Trains confirming that this condition has been complied with.

- *Prior to the commencement of works within 25 metres of the rail corridor, or on RailCorp land or easement, the Proponent shall peg-out the common property boundary with RailCorp's land. This work is to be undertaken by a registered surveyor.*

- *During all stages of the development extreme care shall be taken to prevent any form of pollution entering the railway corridor. Any form of pollution that arises as a consequence of the development activities shall remain the full responsibility of the Proponent.*

- *Drainage from the development must be adequately disposed of/managed and not allowed to be discharged into the corridor.*

- *Prior to the commencement of works within 25 metres of the rail corridor, or on RailCorp land or easement, a Risk Assessment/Management Plan and detailed Safe Work Method Statements (SWMS) for the proposed works are to be submitted to Sydney Trains for review and endorsement.*

- *Prior to the commencement of works within 25 metres of the rail corridor, or on RailCorp land or easement, the proponent must hold current public liability insurance cover for a sum to be determined by Sydney Trains. This insurance shall not contain any exclusion in relation to works on or near the rail corridor. The Proponent is to contact RailCorp's Rail Corridor Management Group to obtain the level of insurance required for this particular proposal. Prior to issuing the Construction Certificate the Principle Certifying Authority must witness written proof of this insurance in conjunction with RailCorp's written advice to the Proponent on the level of insurance required.*

- *Prior to the commencement of works within 25 metres of the rail corridor, or on RailCorp land or easement, the Proponent is to contact Sydney Trains Rail Corridor Management Group to determine the need for the lodgement of a Bond or Bank Guarantee for the duration of the entire works. The Bond/Bank Guarantee shall be for the sum determined by Sydney Trains. Prior to the issuing of the Construction Certificate the Principal Certifying Authority must witness written advice from Sydney Trains confirming the lodgement of this Bond/Bank Guarantee.*

- *The design, installation and use of lights, signs and reflective materials, whether permanent or temporary, which are (or from which reflected light might be) visible from the rail corridor must limit glare and reflectivity to the satisfaction of Sydney Trains. The Principle Certifying Authority is not to issue the Construction Certificate until written confirmation has been received from RailCorp confirming that this condition has been satisfied.*

- *Prior to the commencement of works appropriate fencing shall be in place along the rail corridor to prevent unauthorised access to the rail corridor. Details of the type of fencing and the method of erection are to be to satisfaction of Sydney Trains prior to the fencing work being undertaken. Sydney Trains may provide supervision, at the Proponent's cost, for the erection of the new fencing.*

- *Prior to the commencement of works within 25 metres of the rail corridor, or on RailCorp land or easement, the Proponent is to submit to Sydney Trains the demolition, excavation and construction methodology and staging for review and endorsement. The Principle Certifying Authority is not to issue the Construction Certificate until written confirmation has been received from RailCorp confirming that this condition has been satisfied. No metal ladders, tapes and plant/machinery, or conductive material are to be used within 6 horizontal metres of any live electrical equipment. This applies to the train pantographs and 1500V catenary, contact and pull-off wires of the adjacent tracks, and to any high voltage aerial supplies within or adjacent to the rail corridor.*

- *Prior to the commencement of works within 25 metres of the rail corridor, or on RailCorp land or easement, the Proponent is to submit to RailCorp a plan showing all craneage and other aerial operations (eg concrete pumps) for the development and must comply with all RailCorp requirements. The Principle Certifying Authority is not to issue the Construction Certificate until written confirmation has been received from the RailCorp confirmingthat this condition has been satisfied.*

- *No work is permitted within the rail corridor, or its easements, at any time unless prior approval or an Agreement has been entered into with Sydney Trains.*

- *Prior to the commencement of operation of the SIMTA freight line the Proponent shall provide Sydney Trains as-built drawings and survey locating the development with respect to any rail boundary, Sydney Trains easement and rail land. This work is to be undertaken by a registered surveyor. The as-built survey is to confirm that there has been no encroachment into any RailCorp land or easement area.*

ANNEXURE 2

Functional Layout Plan - Newbridge Road / Moorebank Avenue – Alternate Intersection Improvement Option – Roads and Maritime Services.