

Preliminary Environmental Site Assessment SIMTA Site and Rail Corridor Lands



SIMTA

SYDNEY INTERMODAL TERMINAL ALLIANCE

Part 3A Concept Plan Application

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PRELIMINARY ENVIRONMENTAL SITE ASSESSMENT – SIMTA SITE AND ASSOCIATED RAIL CORRIDOR

Dear Steve

1.0 INTRODUCTION

The Sydney Intermodal Terminal Alliance (SIMTA) is a joint venture between Stockland Developments Pty Ltd (Stockland), Qube Logistics and QR National. The SIMTA Moorebank Intermodal Terminal Facility (SIMTA site) is proposed to be located on the land parcel currently occupied by the Defence National Storage and Distribution Centre (DNSDC) on Moorebank Avenue, Moorebank, south-west of Sydney (Figure 1). The SIMTA site will be connected to the Main Southern Railway by a rail corridor (alignment not finalised) which will pass through several parcels of land located south and south-west of the SIMTA site.

Golder Associates Pty Ltd (Golder) was engaged by Stockland via Arben Management Pty Ltd (Arben) on behalf of SIMTA to conduct a Preliminary Environmental Site Assessment (ESA) of the SIMTA site and the adjoining rail corridor. The objective of this Preliminary ESA is to address the Project's Director General's Requirement (DGRs) in regards to contamination, which included:

- The identification of the need for remediation having regard to the ecological and human health risks posed by past land uses, and where remediation is required, present remediation options.
- Consideration of natural soil constraints including potential for acid sulphate soils.
- Take into account the Acid Sulfate Soils Manual (ASSMAC), and the guidelines approved under Section 105 of Contaminated Land Management Act 1997 including Guidelines for Consultants Reporting on Contaminated Sites (NSW EPA 1997).

The SIMTA site is identified as Lot 1 DP1048263 and is approximately 82 hectares in area. The rail corridor covers approximately 65 hectares. The SIMTA site and rail corridor are shown in Figure 2.

In the period between 2000 and 2002 extensive environmental investigations were completed at the SIMTA site. These investigations were reviewed and enquiries made regarding possible site changes post environmental investigations. It was considered that further Phase 1 investigations were not warranted and a summary of the key findings of the previous environmental investigations has been presented. The proposed rail corridor includes several parcels of land with only preliminary environmental investigation completed. Consequently, the following report was prepared;

- Golder (2011) Phase 1 Environmental Site Assessment Rail Corridor Land for SIMTA Moorebank Intermodal Terminal Facility dated August 2011.



This summary has been prepared taking into consideration the Contaminated Land Management Act 1997 and the associated guidelines.

2.0 PREVIOUS INVESTIGATION ON THE SIMTA SITE

Initial environmental investigations on the SIMTA site were completed by Douglas Partners (DP) in 1980, then between 1993 and 1995, and were part of geotechnical investigations completed for development on specific parts of the SIMTA site. These included:

- Subsoil Investigation (Ref: SSI/5-6818, dated 17 September 1980);
- Buildings N13, N21, N22, N24 & Hardstand N20 and Associated Roads (Project 14923J, dated 7 October 1993);
- Corrosion of Steel Water Mains (Project 14923K, dated 20 October 1993);
- Report on Geophysical and Contamination Assessment Buildings N9A, N9B and N13; Project 14923M, dated 24 November 1993);
- Additional Geophysical and Contamination Assessment Buildings N9A and N9B (Project 14923N, dated 21 January 1994); and
- Site Contamination Investigation Shed 2 (Project 20792, dated 12 July 1995).

The abovementioned reports have not been sighted by Golder, however, were referenced by DP in 2009 in a summary of environmental conditions (see below). The next series of investigations were completed in the period between 2000 and 2002, and were primarily completed in preparation for sale of the SIMTA site. These included:

- Egis (2000) Preliminary Site Investigation at the Defence National Supply and Distribution Centre, Moorebank Defence Lands, dated September 2000;
- URS (2002a) Assessment of DNSDC Buildings – Supplement to Egis 2000 Stage 1 Preliminary Site Investigation of Areas A1 to A6, dated March 2002;
- HLA (2002a) Work Plan Soil and Groundwater Investigation Moorebank Defence Land, dated 17 September 2002;
- HLA (2002b) Soil and Groundwater Investigation, Precinct H (DNSDC), Moorebank Defence Lands, dated November 2002;
- Milsearch (2002) Ordnance Investigation and Hazard Analysis of the DNSDC Moorebank, dated October 2002;
- URS (2002b) Investigation Review Report, DNSDC, Moorebank Defence Lands, dated December 2002;
- Contamination Management (2002a) Summary Site Audit Report, DNSDC Site, Moorebank, dated December 2002; and
- Contamination Management (2002b) Site Audit Statement, Defence National Storage and Distribution Centre, Moorebank Avenue, Moorebank, dated December 2002.

As part of the sale and proposed development of the property, several summary reports have been prepared for the SIMTA Site. These include:

- Environmental and Earth Sciences (2002a) Memorandum: Review of Reports Pertinent to Environmental Investigations Conducted at DNSDC, Moorebank, NSW, dated 12 December 2002;
- Environmental and Earth Sciences (2002a) Memorandum: Review of Investigation Review Report DNSDC, Moorebank Defence Lands (URS) and Site Audit Statement WRR118 (Dr William Ryall), dated 16 December 2002;

- ARUP (2008) Stockland Moorebank Intermodal Terminal Geotechnical Desk Study Report, dated December 2008;
- Douglas Partners (2009) Summary Environmental Conditions, Proposed Intermodal Freight Terminal, DNSDC Site – Moorebank Avenue, Moorebank, dated December 2009; and
- Golder Associates (2010) Phase 1 Environmental Site Assessment, Stage 1A of Moorebank Intermodal Freight Terminal Development, dated August 2011.

Over the period of preparation of the above reports, the flow of information related to the environmental conditions on the sites has not been continuous. The reports completed in the period between 1993 and 1995 were identified by DP in 2009 following a search of the company's archive. As a result, the Egis 2000 report did not reference these reports, rather stated that no previous environmental investigation had been completed but acknowledged there was anecdotal evidence that remedial activities had been undertaken at the site in the early to mid 1990's. This observation carried through for the remaining reports completed in 2002. The reviews completed in 2002 and 2009, as part of the sale and development of the site, were also based on a subset of the previous reports. Particularly, the DP 2009 report references the 1993 to 1995 reports, however, does not provide details of the investigations. The Egis (2000) and HLA (2002b) reports were also excluded from the DP 2009 review.

The most pertinent information related to the proposed development of the SIMTA site is within the URS (2002b) Investigation Report Review and the Contamination Management (CM) (2002a) Summary Site Audit Report and Site Audit Statement (CM, 2002b). The URS (2002b) report was an interpretative report, presenting the findings of the intrusive soil and groundwater investigations completed by HLA (2002), and the ordnance investigation completed by Milsearch (2002). The CM (2002a) was a non-statutory contaminated site audit completed by Mr William R Ryall (NSW EPA Accredited Site Auditor No. 9809).

3.0 PREVIOUS INVESTIGATION KEY FINDINGS

The URS (2002b) report concluded, and agreed by CM (2002a), that eleven areas of environmental concern had been identified across the SIMTA site. Figures 3, 4a and 4b, prepared by URS (2002b), show the locations of the areas of environmental concern.

URS (2002b) recommended, and agreed by CM (2002a), that these areas of environmental concern should be addressed through the implementation of a Site Management Plan (SMP). Generally, URS (2002b) recommended that the SMP include the following matters, which was agreed by CM (2002a):

- A groundwater monitoring program to confirm and monitor groundwater quality over time;
- Investigation of the underground tank installations located in the south-western area of DNSDC;
- Integrity testing of the waste oil tank located in the north-east area of the site;
- Investigation and remediation of filled areas in the south-eastern part of the site, particularly materials that have the potential to contaminate groundwater. Hexachlorobenzene (HCB) and asbestos should be considered contaminants of potential concern during works in this area;
- Implementation of site management procedures to control the following:
 - Stormwater discharges for compliance with local and state legislative requirements and protection of the environment;
 - Collection, sorting and disposing of fragments of materials potentially containing asbestos including during intrusive earthworks;
 - Unauthorised access of personnel to the south-eastern corner of the site, where fragments of grenades have been identified, until such time that a hazard reduction operation has been completed in accordance with the recommendations of Milsearch (2002); and
 - Incorporate the findings and recommendations of the Ordnance Investigation report by Milsearch (2002) during future development of the site.

CM (2002a) formed the following conclusions:

- The HLA (2002b) and URS (2002b) investigations were undertaken in substantial compliance with the requirements of the Work Plan (HLA, 2002a) and the guidelines published by the NSW EPA (as current at the time);
- The investigation was of adequate scope and reliability; and
- Based on the results of the investigations the site was considered suitable for continuing commercial/ industrial use, including use as a storage and distribution centre.

CM (2002a) noted that in view of some of the elevated concentrations of chemicals of concern identified in groundwater and fill materials, additional investigation were required to be undertaken as part of the SMP. As a matter of priority, CM (2002a) concluded that the south-eastern areas of the site, where grenade fragments were identified, should be addressed.

DP (2009) noted that at the time of preparing the summary report, they were not aware whether the areas of environmental concern had been addressed or if an SMP had been developed for the site.

In relation to potential acid sulphate soils, ARUP (2008) noted the acid sulphate soil risk map of the area indicates that the site lies in an area where there is no known occurrence of acid sulphate soils materials.

In relation to the rail corridor the Golder report (2011) concluded that there is the potential for subsurface contamination to be present in the rail corridor lands, and five areas of environmental interest were identified. These included:

- The area immediately south of the proposed SIMTA site, where historic information has noted that partially remediated areas of unauthorised dumping may have occurred;
- The bushland area south of the proposed SIMTA site development, where historic information has noted that potential UXO associated with the former grenade ranges may exist. This area also has evidence of illegal dumping, with historic reports and the site inspection noting the presence of building rubble and other waste materials;
- Lot 1 DP825352 (owned by Railcorp) has been subjected to extensive filling with the area levelled approximately 2-2.5m higher than the surrounding areas;
- The south-western portion of the golf course, where historic information has noted the former training facility, the mock Viet Cong village, was demolished with potential tunnel materials buried in the area; and
- The Glenfield Quarry and Waste Disposal Facility, where extractive and waste disposal is being undertaken in accordance with a current Environmental Protection Licence.

On the basis of the Stage 1 Preliminary ESA, Golder (2011) recommended the following in regards to the rail corridor lands:

- A Phase 2 ESA be completed with an objective to assess the risk posed to the detailed design and construction of the rail corridor by the areas of environmental concern identified within the report. The Stage 2 intrusive investigation would include a program of soil and groundwater sampling completed in accordance with the guidelines made or approved by the EPA under s105 of the *Contaminated Land Management Act 1997*; and
- Develop and implement a contamination management plan as part of the project construction environmental management plan for managing contaminated materials and landfill gas either expected or unexpectedly encountered during the construction of the rail corridor.

4.0 POTENTIAL CONTAMINATION MANAGEMENT MEASURES

As noted above, a NSW EPA Accredited Site Auditor concluded in 2002 that the SIMTA site was suitable for ongoing commercial/industrial use, including the use as a storage and distribution centre, subject to the implementation of a SMP. The status of implementation of the SMP is not clear. Nonetheless the areas of environmental concern on the SIMTA site comprised underground tank installations, filled areas including asbestos containing materials and potential UXO associated with use of grenades. There is potential for soil and groundwater contamination to be present in these areas. There are well established remediation methods for each of these areas of environmental concern which may be considered, including the following:

- Underground tank installations: removal of tanks, removal of contaminated soil for land farming or off-site disposal to a licensed landfill, treatment of contaminated groundwater via insitu (e.g. air sparge with vapour extraction, enhanced bioremediation, chemical oxidation or natural attenuation) or exsitu methods (e.g. pump and treat).
- Filled areas, including asbestos: excavation and removal of filled material and associated impacted soil and either placement and capping on site (subject to regulatory approval) or off-site disposal at a licensed landfill. Contaminated groundwater could be treated via insitu (e.g. air sparge with vapour extraction, enhanced bioremediation, chemical oxidation or natural attenuation) or exsitu methods (e.g. pump and treat).
- UXO materials: geophysical surveys to identify locations of UXOs, selective removal of UXOs for disposal by the military, scraping of soil and screening to separate residual exploded ordnance metal fragments for disposal at an appropriate on-site burial pit (subject to regulatory approval) or at an off-site disposal to a licensed landfill.

An update of the Phase 1 ESA of the SIMTA Rail Corridor Land (Golder, 2013) includes an assessment of potential contamination management measures which may be adopted for the identified contamination risks within the railway corridor external to the SIMTA site during the construction project. It was concluded that there were well established remediation methods to address the identified contamination risks.

In summary, it is considered that the contamination risks identified may be managed via commercial available and well established remediation methods which can be tailored for site-specific circumstances and would not preclude the construction of the proposed railway or intermodal facility. The specific details of the remediation method adopted for the project will depend upon factors such as the contamination characteristics identified during the intrusive investigations, the detailed design of the construction works, cost and schedule.

5.0 CONCLUSION AND RECOMMENDATIONS

It is evident that extensive information is available on the environmental condition of the SIMTA site. In particular, a non-statutory environmental audit has been completed. It was the opinion of the then NSW EPA accredited environmental auditor (W R Ryall, No 9809), that the site was suitable for ongoing commercial/industrial use, subject to the implementation of a SMP. It is acknowledged, that this opinion was based on information gathered during 2000 and 2002, and site conditions may have changed in the subsequent period. Albeit, the site has continued to operate as the DNSDC in the period subsequent to the investigations, and a review of aerial photos completed in Golder (2010), noted that no material changes to the SIMTA site were evident.

It is also acknowledged that there is some uncertainty as to whether a SMP was implemented at the SIMTA site. The lack or partial implementation of an SMP on the SIMTA site will require further investigation, particularly, the low risk ordnance issues identified in the south-eastern portion of the SIMTA site. It is recommended, that as part of the development of the detailed design of the project, confirmation should be sought in regards to what, if any, actions were taken in regards to the Milsearch (2002) recommendations and the associated low risk ordnance issues. It is recommended further investigations be completed in the areas of environmental concern, as identified by URS (2002) and Golder (2011), that are likely to be impacted upon by the proposed development. These investigations should be based on the detailed design of the proposed development, with the objective to identify the extent of contamination, and what, if any, remediation activities are needed. The remediation of areas of the site (if any) would be best matched to the development of the site and considered as part of the future Project Application design. For example in areas

requiring filling to allow construction of the terminal facility may serve the dual purpose of isolating potential site contaminants (e.g. munitions waste). The additional investigation results would also facilitate the development of a Contamination Management Plan for the development of the SIMTA site and the associated rail corridor. The contamination management plan would include detailed procedures on:

- Handling, stockpiling and assessing potentially contaminated materials encountered during the development works;
- Landfill gas management during the excavation, handling, and stockpiling of waste materials, if excavation is required during the development, in the area of the Glenfield Quarry and Landfill;
- Assessment, classification and disposal of waste in accordance with relevant legislation; and
- A contingency plan for unexpected contaminated materials, such as materials that is odorous, stained or containing anthropogenic materials, that may be encountered during site works.

The review and investigation undertaken by Golder have not identified significant environmental issues which would preclude the currently proposed development of the SIMTA site and associated rail corridor.

Should a staged approach be adopted for the development of the site, a similar staged approach can be adopted for the additional investigations, and subsequent Contamination Management Plans. However, some areas of environmental concern may transverse proposed development stage boundaries, which may add complexity to the implement of the Contamination Management Plan. As such, there may be benefit from addressing all contamination matters at the site in a single stage of investigations.

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7.0 REPORT SIGNATURES

GOLDER ASSOCIATES PTY LTD



Greg Stratton
Principal Environmental Scientist

GVS/SM/gvs

Attachments:

Figure 1 – Regional Context Plan
Figure 2 – Local Context Plan

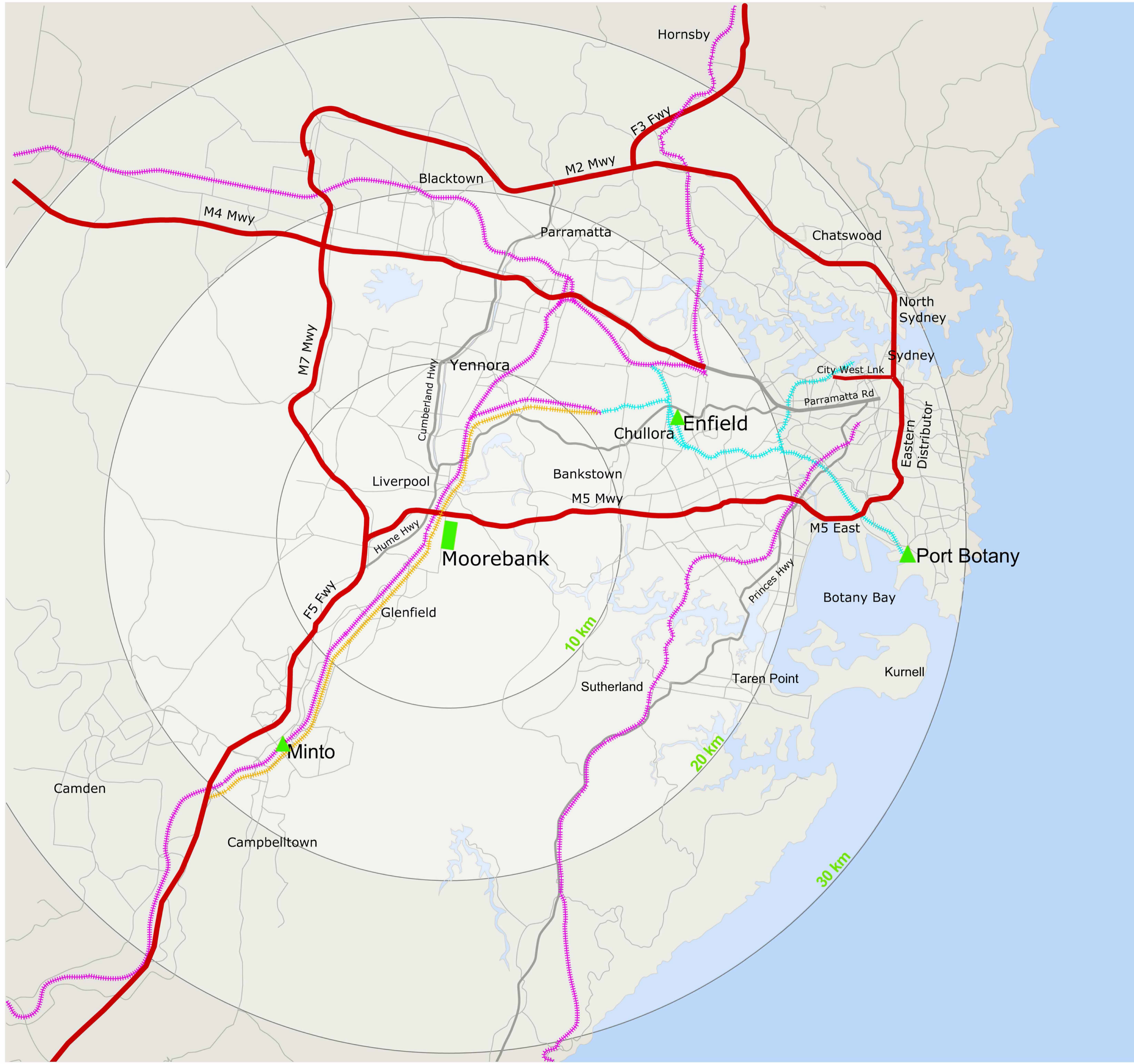


Seth Molinari
Principal Environmental Scientist

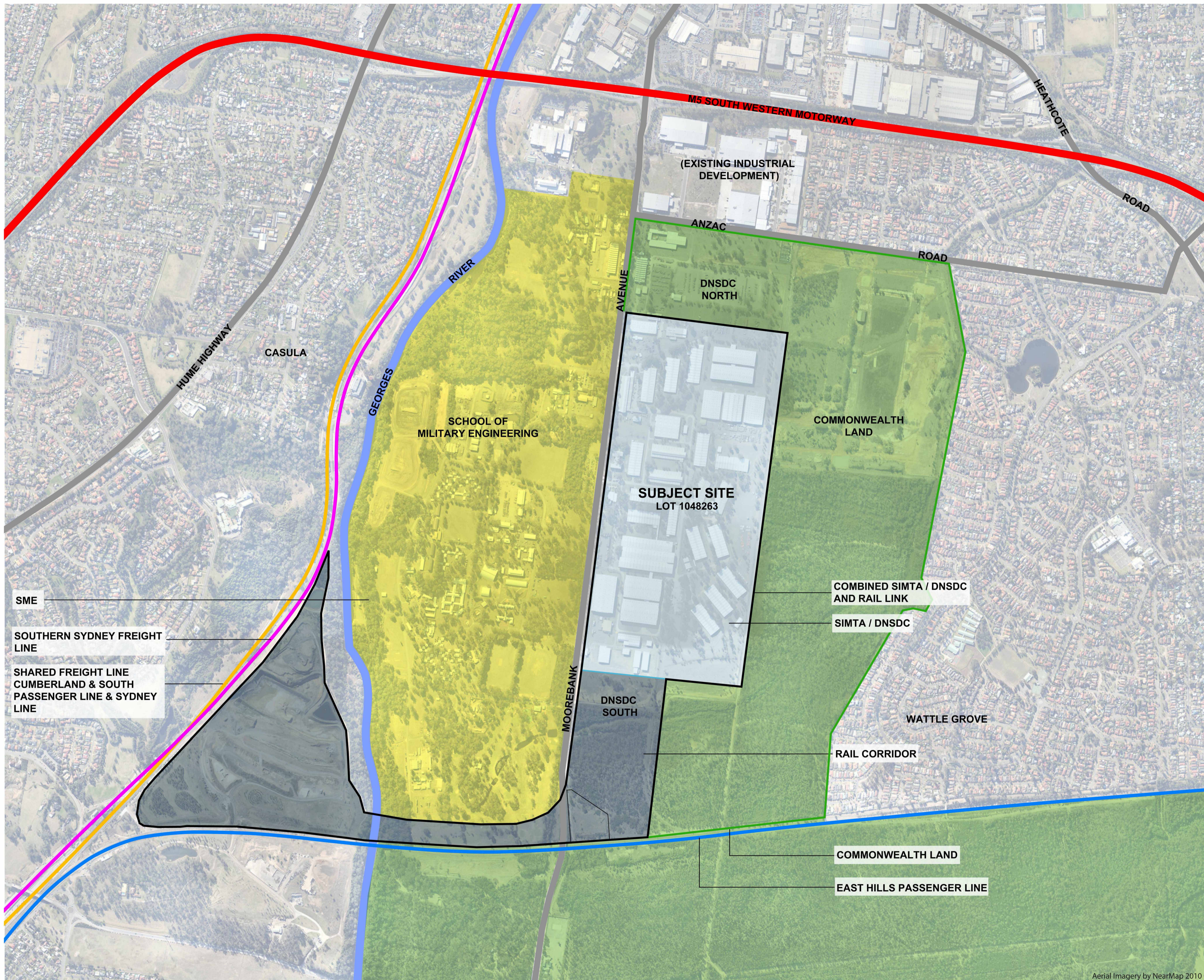
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- LEGEND**
- RAIL LINE - PLANNED SOUTHERN SYDNEY FREIGHT LINE ⚡
 - RAIL LINE - DEDICATED FREIGHT LINE ⚡
 - RAIL LINE - SHARED PASSENGER & FREIGHT ⚡
 - HIGHWAYS & MAJOR ROADS —
 - MOTORWAYS & FREEWAYS —
 - PROPOSED MOORBANK INTERMODAL TERMINAL ■
 - EXISTING INTERMODAL TERMINAL ▲



LEGEND

- RAIL LINE - SOUTHERN SYDNEY FREIGHT (UNDER CONSTRUCTION) —
- RAIL LINE - DEDICATED PASSENGER LINE —
- RAIL LINE - SHARED PASSENGER & FREIGHT —
- SME ■
- GEORGES RIVER ■
- MOTORWAYS —
- MAJOR ROADS & HIGHWAYS —
- SIMTA / DNSDC ■
- RAIL CORRIDOR ■
- COMBINED SIMTA / DNSDC & RAIL LINK ■
- COMMONWEALTH LAND ■

SME

SOUTHERN SYDNEY FREIGHT LINE

SHARED FREIGHT LINE CUMBERLAND & SOUTH PASSENGER LINE & SYDNEY LINE

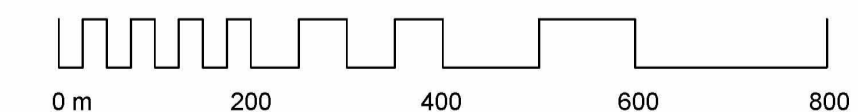
COMBINED SIMTA / DNSDC AND RAIL LINK

SIMTA / DNSDC

RAIL CORRIDOR

COMMONWEALTH LAND

EAST HILLS PASSENGER LINE



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