# NSW Ports

# Environmental Assessment
# Modification Application No.12
## Extension of Existing Rail Sidings and Administration Office Expansion

# Intermodal Logistics Centre at Enfield

# Cosgrove Road, Strathfield South

Client: NSW Ports
TFA Reference: 16279
TFA PROJECT GROUP SYDNEY
NOVEMBER 2016

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|---|---|---|---|
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# 1. INTRODUCTION

This Environmental Assessment (EA) has been prepared by TfA Project Group on behalf of NSW Ports (the Applicant) to support a modification application to the NSW Department of Planning and Environment (DPE). The Project Approval subject to this modification application is for the development of an Intermodal Logistics Centre (ILC) at Enfield approved by the then Minister for Planning under Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act) on 5 September 2007 (MP05_0147).

The approved project includes an intermodal terminal, empty containers storage facilities, warehousing, and light industrial / commercial areas.

This modification application seeks to modify the approval to undertake various works across the ILC including:

- an extension to the two (2) existing rail sidings; and
- an extension to an existing office building.

Pursuant to Schedule 6A of the EP&A Act, the approved project is a transitional Part 3A project and therefore Part 3A of the EP&A Act continues to apply in respect of the project. Section 75W (2) of the EP&A Act provides that a Proponent can request the Minister to modify the approval of a project. Accordingly, this application is made under section 75W (2) of the EP&A Act.

This EA, which is submitted in support of the application, provides details of the proposed development and addresses relevant matters associated with the proposal.

To assist in DPE's determination of the development application, this EA covers the following matters:

- **Section 2:** a site description including approval history and site characteristics;
- **Section 3:** a description of the proposed modification;
- **Section 4:** an assessment of the proposed modification against the relevant planning provisions; and,
- **Section 5:** an environmental assessment of the proposed modification.

## 2. THE SITE

### 2.1. Approved Project

A project application under Part 3A of the EP&A Act for the construction and operation of the Enfield ILC was submitted to the then Department of Planning in December 2005. The proposal involved the following key elements:

- demolition, relocation or removal of former railway buildings and structures;
- earthworks and drainage including the levelling of the site, formation of landscape mounds and detention basins and removal of unsuitable materials, as required;
- construction and operation of:
  - an intermodal terminal for the loading and unloading of containers between road and rail and the short-term storage of containers, with a capacity to handle 300,000 TEU per annum;
  - rail sidings, railway lines and associated works to connect to the existing freight line;
  - warehousing for the packing and unpacking of containers and the short-term storage of cargo;
  - empty container storage facilities, for the storage of empty containers to be later packed or transferred back to the port by rail;
  - light industrial/commercial area fronting Cosgrove Road complementary to operations at the site;
  - access works including the construction of a road bridge over the new marshalling yards for access to Wentworth Street and an upgrade of the entrance to the site from Cosgrove Road; and
  - internal roads, administration buildings, diesel and LPG storage and fuelling facilities, container wash down area, vehicle maintenance shed, and installation of site services (all utilities, stormwater and sewerage).

On 5 September 2007, the then Minister for Planning granted approval of the project under Section 75J of the EP&A Act (MP05_0147).

The Approval specifically provided planning consent for a railway through-line along the western boundary of the Enfield ILC (known as the main through rail line) and two rail sidings, each approximately 920m in length, adjacent to the intermodal terminal site. The Approval also provided planning consent for an administration building adjacent to the intermodal terminal entrance.

### 2.2. Modification History

Since MP05_0147 was approved, the approval has been modified on six occasions. Additionally, there are a further two Modification Applications (MOD 10 and MOD 11) currently in the assessment process, and others which have not progressed. These modifications are summarised in Table 1 below:

| Modification Number | Status (as at August 2016) | Description | Date of Approval |
|---|---|---|---|
| MOD 1 | Approved | Amendment of conditions relating to construction dust monitoring | 2 October 2008 |
| MOD 2 | Approved | Amendment of conditions to enable staged construction and operation and modified timing of submission of Site Audit Statements | 30 March 2009 |
| MOD 3 | Not lodged | - | - |

| | | | |
|---|---|---|---|
| MOD 4 | Approved | Amendment of conditions relating to noise walls, internal roads, stormwater detention, development areas and site layout. | 27 May 2010 |
| MOD 5 | Approved | Relocation and reuse of unsuitable material to Mount Enfield | 10 November 2011 |
| MOD 6 | Approved | Incorporation of former Toll Site into project site and subdivision of site into 22 allotments | 11 December 2012 |
| MOD 7 | Withdrawn | - | - |
| MOD 8 | Approved | Amendment of subdivision layout into 23 allotments to facilitate commercial leasing, development and operation of the site | 27 November 2013 |
| MOD 9 | SEARs issued | Intermodal agricultural commodities storage and handling facility | - |
| MOD 10 | Proponent reviewing submissions | Amendment to freight-related operational activities within the intermodal terminal | - |
| MOD 11 | Proponent reviewing submissions | Additional warehouse in Area G | - |

## 2.3. Site Description

The Enfield ILC is located at Cosgrove Road, Strathfield South, and is wholly located within the Strathfield local government area (LGA). The Enfield ILC currently includes:

- an intermodal terminal for the loading and unloading of containers between road and rail and the short term storage of containers, with a capacity to handle 300,000 TEU per annum;
- rail sidings, railway lines and associated works to connect to the existing freight line;
- empty container storage facilities, for the storage of empty containers to be later packed or transferred back to the port or regional areas by rail;
- a community and ecological area known as the Southern Precinct;
- other infrastructure including internal roads, administration buildings, stormwater detention basins etc.

Figure 1 below shows the location of the Enfield ILC; Figure 2 shows the approved site layout; and Figure 3 shows the current land title plan:


*Figure 1 - Site Location (source: Google Maps)*

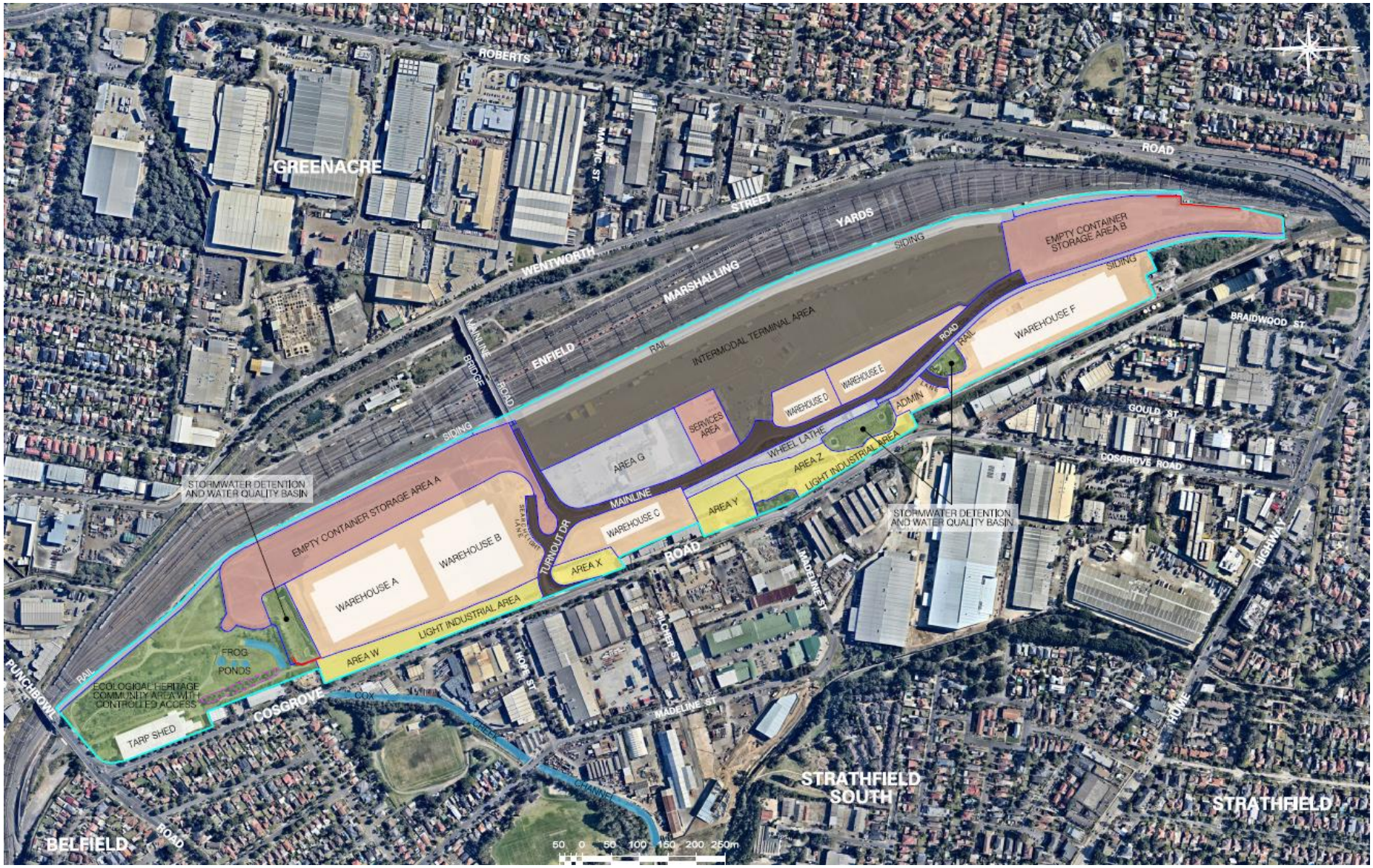


*Figure 2 - Approved Site Layout (source: NSW Ports)*

| SCHEDULE OF PROPOSED LOTS | | |
|---|---|---|
| LOT | DECRIPTION | AREA |
| 1 | NSW PORTS FREEHOLD LOT – LIGHT INDUSTRIAL/COMMERCIAL LOTS | 14,985m² |
| 2 | NSW PORTS FREEHOLD LOT – LIGHT INDUSTRIAL/COMMERCIAL LOTS | 4,800m² |
| 3 | NSW PORTS FREEHOLD LOT – LIGHT INDUSTRIAL/COMMERCIAL LOTS | 7,760m² |
| 4 | NSW PORTS FREEHOLD LOT – LIGHT INDUSTRIAL/COMMERCIAL LOTS | 14,079m² |
| 5 | LEASEHOLD TENANT LOT – INTERMODAL TERMINAL AREA | 8,481m² |
| 6 | LEASEHOLD TENANT LOT – WAREHOUSE DISTRIBUTION | 76,277m² |
| 7 | LEASEHOLD TENANT LOT – WAREHOUSE DISTRIBUTION | 16,364m² |
| 8 | LEASEHOLD TENANT LOT – WAREHOUSE DISTRIBUTION | 7,859m² |
| 9 | LEASEHOLD TENANT LOT – WAREHOUSE DISTRIBUTION | 12,606m² |
| 10 | LEASEHOLD TENANT LOT – WAREHOUSE DISTRIBUTION | 35,740m² |
| 11 | LEASEHOLD TENANT LOT – INTERMODAL TERMINAL AREA | 135,540m² |
| 12 | LEASEHOLD TENANT LOT – INTERMODAL TERMINAL AREA | 53,917m² |
| 13 | LEASEHOLD TENANT LOT – INTERMODAL TERMINAL AREA | 38,299m² |
| 14 | LEASEHOLD TENANT LOT – EXISTING WHEEL LATHE WORKSHOP | 7,478m² |
| 15 | LEASEHOLD TENANT LOT – RAIL | 6,650m² |
| 16 | LEASEHOLD TENANT LOT – RAIL | 3,060m² |
| 17 | LEASEHOLD TENANT LOT – RAIL | 6,905m² |
| 18 | LEASEHOLD TENANT LOT – ADMIN BUILDINGS | 3,732m² |
| 19 | LEASEHOLD TENANT LOT – SOUTHERN PRECINCT | 63,708m² |
| 20 | LEASEHOLD TENANT LOT – VACANT | 1600m² |
| 21 | LEASEHOLD TENANT LOT – INFRASTRUCTURE LOT | 15,060m² |
| 22 | LEASEHOLD TENANT LOT – INFRASTRUCTURE LOT | 29,860m² |
| 23 | LEASEHOLD TENANT LOT – INTERMODAL TERMINAL AREA (FORMER TOLL AREA) | 25,457m² |
| | | |
| | TOTAL AREA | 590,216m² |

PROPOSED EASEMENT NOTE

LOT 22 WILL BE BURDENED BY EASEMENTS FOR ACCESS, AUTHORITY SERVICE EASEMENTS, AND DRAINAGE.


*Figure 3 - Enfield ILC Plan of Subdivision (source: NSW Ports)*

## 2.4. Enfield ILC Project Status

The Enfield ILC project has approval to be constructed and operated in stages. Construction of the intermodal terminal area commenced in 2011 and was completed in December 2013. Rail operations at the intermodal terminal commenced in May 2016. The former Toll area of the Enfield ILC site (i.e. parts of Lots 5 and 23) is operating as a container storage depot and transport logistic centre.

The Enfield ILC will comprise several long-term tenants performing intermodal, warehousing and light industrial / commercial activities.

## 2.5. Project Status Relating to Proposed Modification

### 2.5.1. Rail Infrastructure

The Approval provided planning consent for a main through rail line along the western boundary of the Enfield ILC.

Consent was also given for two 920m (approximately) rail sidings adjacent to the intermodal terminal site (i.e. north of Mainline Road access bridge). These rail siding areas are shown on Figure 2 shaded grey and labelled “Rail Siding” and are also indicated on Figure 4-2a (Concept Design Layout) of the original Environmental Assessment for the Enfield ILC. Another rail siding already existed on the site (known as the DELEC or Workshops siding) and was approved to be relocated to the area known as the Wheel Lathe Lease Area with rail access to and from the north of the Enfield ILC.

This rail infrastructure outlined above has been constructed and relocated on site and is consistent with the original EA and the project approval as modified. As such the constructed rail infrastructure consists of the main through rail line, two 920m sidings, and the Wheel Lathe Lease Area siding.

### 2.5.2. Intermodal Terminal Office Accommodation

The Approval provided planning consent for three small administration buildings, with two located within the empty container storage areas and one located adjacent to the intermodal terminal loading and unloading area.

The intermodal terminal administration building was approved with a floor area of about 200m$^2$ across a single storey including office space and staff amenities. Its location was indicated on Figure 4-2a (Concept Design Layout) of the original Environmental Assessment, an extract of which is shown at Figure 4 below.

Office accommodation that has been constructed for the intermodal terminal includes a prefabricated office and an amenities building totalling about 200m$^2$ consistent with the approval (see Figure 5).

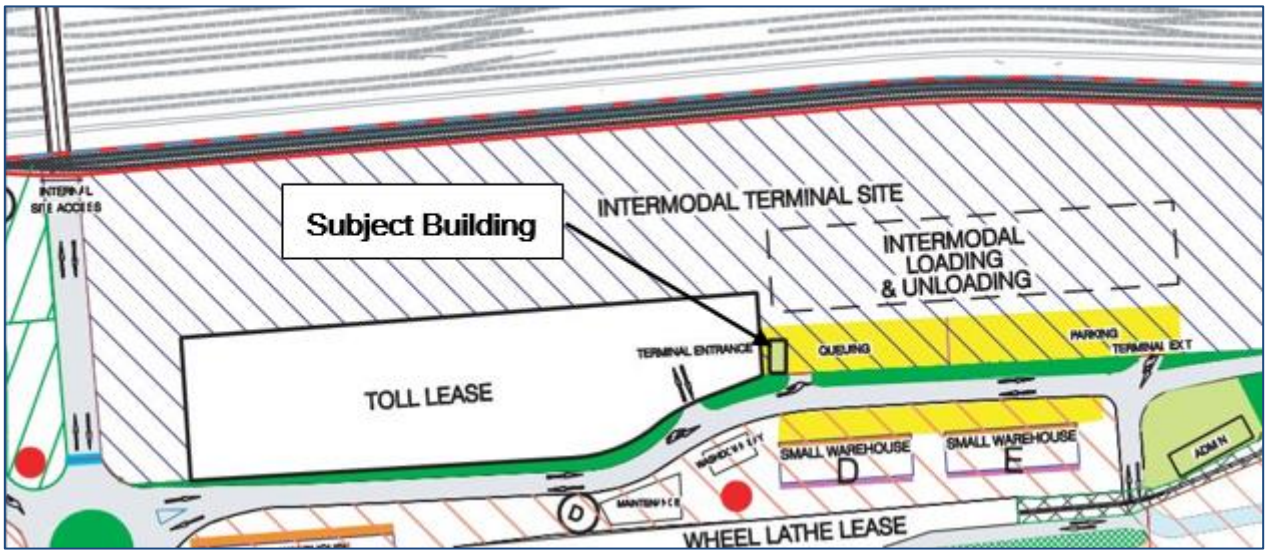


*Figure 4 - Extract of Figure 4-2a of Enfield ILC EA Showing Subject Intermodal Terminal Admin Building*

*Figure 5 - Existing Intermodal Terminal Administration Building (source: NSW Ports)*

# 3. PROPOSED MODIFICATION

## 3.1. Description of the Proposal

This application seeks to modify the approval to undertake various works across the ILC including:

- an extension to two (2) existing rail sidings to connect through to the main through rail line; and
- an extension to an existing office building.

The sections below provide further detail regarding the proposed modifications.

### 3.1.1. Extension to Rail Sidings

It is proposed to extend each of the two existing rail sidings (i.e. the rail sidings located to the east of the main through rail line) by approximately 600m in length in order to allow the existing rail sidings to connect through to the main through rail line at the southern end of the intermodal terminal (i.e. along the western side of Empty Container Storage Area A (Lot 12) (see Figure 6). The siding extension will provide 430m of additional "standing room" for each of the two existing rail sidings within the Enfield ILC site for rail wagons and allow freight trains to access the intermodal terminal rail sidings while another train is positioned on the main through rail line.

The rail siding extension and its connection to the main through rail line will allow the intermodal terminal to service longer trains, preload empty train wagons stored on the rail sidings and ensure both rail sidings could be accessed while a train was positioned on the main through rail line. These works are likely to result in a reduction in train shunting activities on site and improve the operational efficiency of the Enfield intermodal terminal.

The rail siding extension will be constructed using concrete or recycled timber sleepers, second hand rail (if available) and ballast to a depth of approximately 150mm.

Due to the landform in the area, bulk earthworks will be required to facilitate the proposed rail sidings extensions at an appropriate grade. There will be approximately 9,000$m^3$ of cut material associated with the works. The cut material will be managed on site in accordance with the existing Remediation Action Plan (see Section 4.2).

There is an existing vegetated batter on the east side of the main through rail line in the location of the proposed rail siding extension area. Following the bulk earthworks, a similar 2H:1V vegetated batter would be reinstated on the east side of the proposed rail sidings. The batter would have a maximum height of approximately 3m at the southern end of the proposed sidings and will gradually reduce in height until the rail sidings reach the same ground level as the empty container area at the northern end of the sidings. The height of the batter is similar to the existing batter with an average height of approximately 1.5m (see Figure 7).

Some minor stormwater relocation and fencing relocation works will also be required. This includes stormwater drainage which runs adjacent to the existing main through rail line in the location of the proposed sidings.

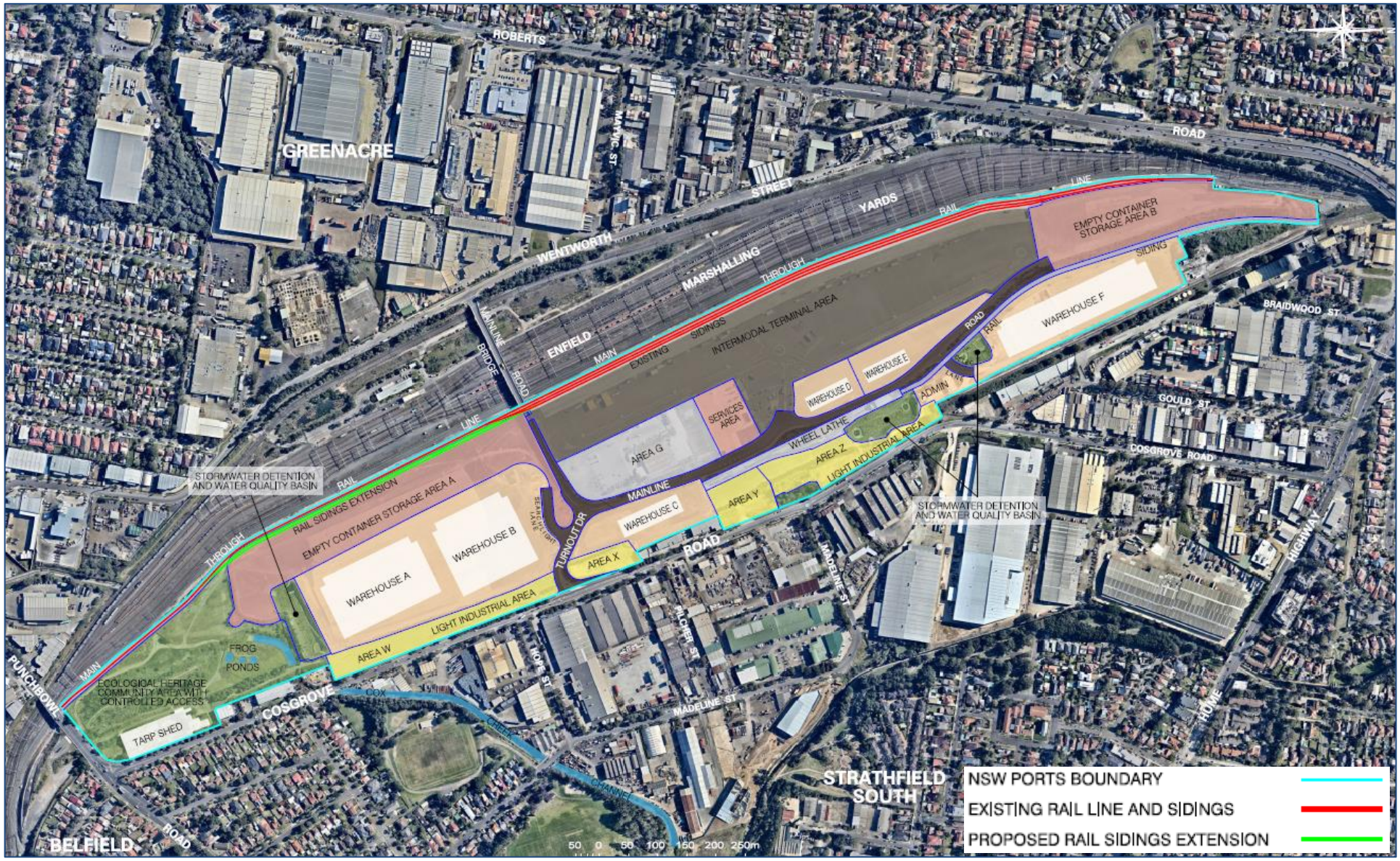


*Figure 6 - Indicative Rail Siding Layout (source: NSW Ports)*

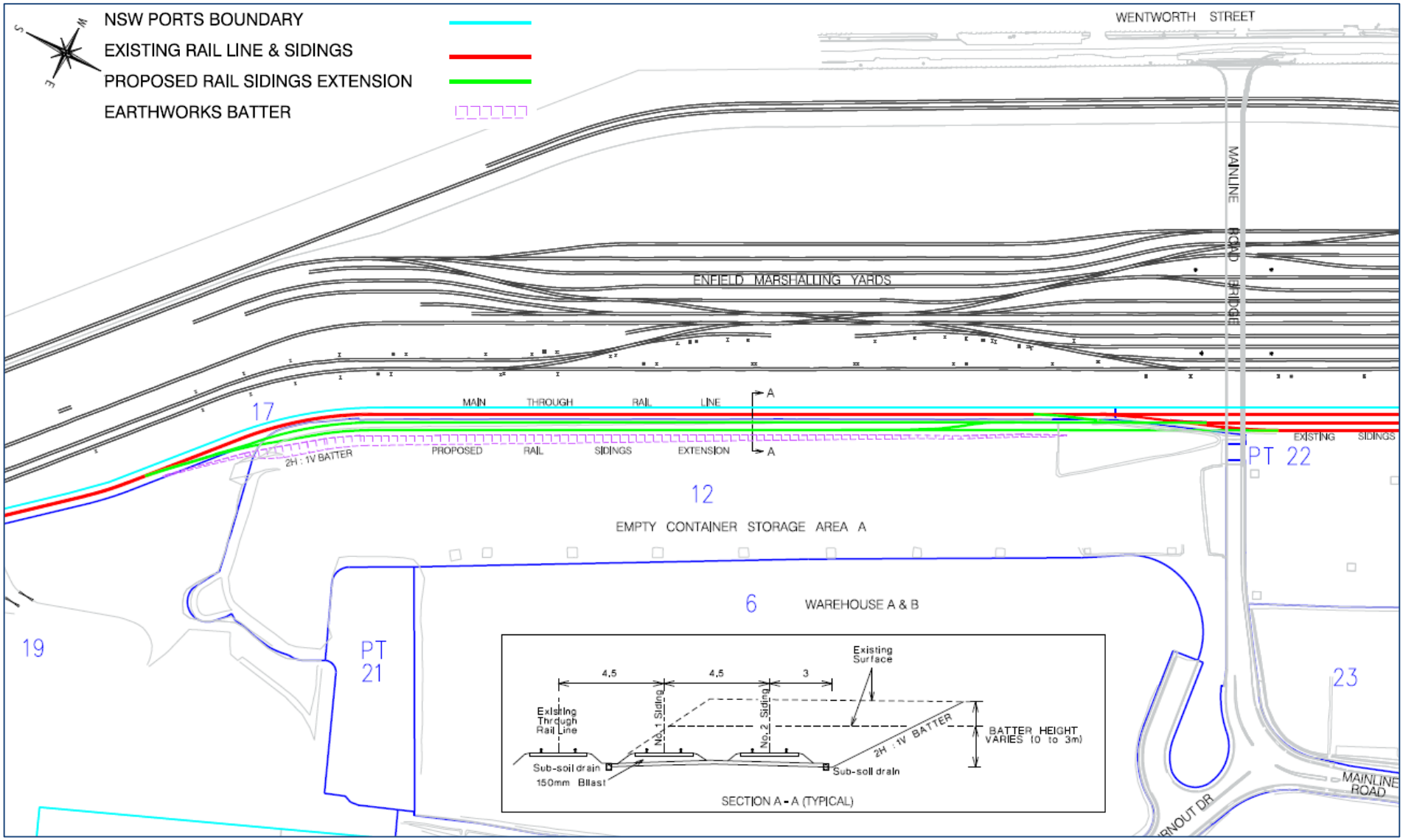


*Figure 7 - Proposed Rail Sidings Extension Works (source: NSW Ports)*

### 3.1.2. Office Building Extension

There is currently an administration office located adjacent to the main entry to the intermodal terminal area. The current office (comprising two prefabricated buildings) is approximately 200m$^2$ in size in accordance with the project approval which allowed for an administration office of around 200m$^2$ in size.

It is proposed to extend the office space available by erecting a second prefabricated office space on top of the existing with access via an external staircase and adding a third office space adjacent to the existing. This will result in a total office floor space of approximately 450m$^2$. The proposed modification to the building footprint and building envelop is minor in the context of the Enfield ILC site.

The additional prefabricated buildings will be of similar construction and colour to the existing. The proposed building extension will meet the requirements of the relevant provisions of the Building Code of Australia. Where practicable, the additional office space design will consider the use of natural ventilation, natural lighting and measures to minimise energy consumption associated with heating, cooling and lighting.

## 3.2. Justification

The Enfield ILC serves as a road and rail hub for the storage, distribution and collection of containerised cargoes and empty containers.

The extension to the existing rail sidings is required to improve operational efficiencies for trains accessing the site including loading / unloading operations within the intermodal terminal area. The intermodal terminal is serviced by freight trains that run between Port Botany and the Enfield ILC as well as trains from regional areas. These trains vary in length and the period which they “stand” within the intermodal terminal, based on loading and unloading activities.

The rail extension works will facilitate the intermodal terminal to service regional (including interstate) trains on the main through rail line while allowing port shuttle trains to continue to access the intermodal terminal via the two rail sidings. Regional trains often need to be held at the Enfield ILC until rail access windows become available. Due to the length of the regional trains and the current configuration of the main through rail line and rail sidings, it is not possible for port shuttles to access the intermodal terminal while a regional train is on the main through rail line without additional and inefficient train shunting activities being undertaken. The extension to the two existing rail sidings will allow port shuttles to access the intermodal terminal while a regional train is on the main through rail line. The sidings extensions will also provide a wagon storage area for pre-loaded and out of service rail wagons.

The office space subject to this modification application houses administrative staff associated with the intermodal terminal operations. Following the commencement of intermodal terminal operations at the Enfield ILC in mid-2016, a better understanding of the administrative needs of the intermodal terminal operator has been gained. Coupled with the ongoing improvements in logistical efficiencies and the need to provide suitable facilities to operational workers, it has meant that a centralised administrative office capable of meeting the needs of the intermodal terminal is pivotal in its efficient operation. The existing intermodal terminal operator requires additional office space to cater for their operations and current & future staffing levels.

## 4. STATUTORY CONTEXT

### 4.1. Environmental Planning & Assessment Act

The Project Approval subject to this modification application is for the development of an ILC at Enfield approved by the then Minister for Planning under Part 3A of the EP&A Act on 5 September 2007 (MP05_0147).

Pursuant to Schedule 6A of the EP&A Act, the approved project is a transitional Part 3A project and therefore Part 3A of the EP&A Act continues to apply in respect of the project. Section 75W (2) of the EP&A Act provides that a Proponent can request the Minister to modify the approval of a project. Accordingly, this application is made under section 75W (2) of the EP&A Act.

### 4.2. State Environmental Planning Policy No. 55 – Remediation of Land

*State Environmental Planning Policy No. 55 – Remediation of Land* (SEPP 55) aims to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment. Clause 7 of SEPP 55 states:

> *7 Contamination and remediation to be considered in determining development application*
>
> *(1) A consent authority must not consent to the carrying out of any development on land unless:*
>
> *(a) it has considered whether the land is contaminated, and*
>
> *(b) if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and*
>
> *(c) if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.*

Excavation works will be required to form the area to construct the proposed extension to the rail sidings. Based on past test results at the Enfield ILC and land use history, there is a possibility the existing soil at the location of the works will be contaminated. As such, the soil will be managed in accordance with the *Remediation Action Plan for Known Soil Contamination Intermodal Logistics Centre @ Enfield* prepared by Coffey Environments and dated 23 June 2009 (the RAP) and the *Enfield ILC Site Management Plan: Empty Container Storage Area A*.

Following the completion of the rail siding works, a Site Audit Statement will be prepared by a qualified NSW Site Auditor in accordance with Condition 2.43 to certify that the land is suitable for its intended use prior to the commencement of operations.

# 5. ENVIRONMENTAL ASSESSMENT

## 5.1. Traffic and Access

### 5.1.1. Construction

The construction of the proposed rail sidings and office space will require access to the site by workers in light vehicles, as well as access by heavy vehicles for bulk earthworks and for the delivery of materials and mobile cranes. It is predicted that there will be a maximum of 5 trucks and 10 light vehicles associated with the construction of the proposed works per day during peak construction periods (mainly during the rail siding extension establishment works). On average, there will be 1-2 trucks and 5 light vehicles per day over the anticipated four month construction period.

The original Environmental Assessment for the Enfield ILC predicted average construction vehicles accessing the entirety of the site to be around 29 heavy vehicles, and 150-170 light vehicles per day. The majority of the intermodal terminal site civil works (internal infrastructure, hardstand areas) have been completed and as such, any construction traffic impacts as a result of the proposed works are expected to be significantly less than the vehicles numbers assessed in the original Environmental Assessment.

The most significant construction works to still occur relate to the approved warehouses on site. Construction works for the approved warehouses on the Enfield ILC site have not as yet commenced. It is unlikely that all warehouses will be constructed at the same time. Details regarding potential cumulative impacts and project staging have been discussed in Section 5.6 below.

The office building construction works will take approximately two months, given the additions are largely prefabricated and services are already in place. It is estimated that there will be a small number of delivery / light vehicles required to undertake the works with a limited number of truck movements over a couple of days to deliver the prefabricated buildings.

All construction vehicles associated with the construction of the proposed works will be able to park within the Enfield ILC adjacent to the respective construction areas. The delivery of materials will occur within the subject site and will not be required to be loaded or unloaded on public roads.

Condition 6.3(b) of the Project Approval requires a Construction Traffic Management Protocol (CTMP) to be prepared. This plan has been prepared by NSW Ports and was approved by the Secretary of DPE on 20 March 2014 in accordance with the overarching respective Environmental Management Plan conditions. The construction related traffic associated with the proposed rail sidings and office will be managed in accordance with the approved CTMP.

### 5.1.2. Operation

The proposed additional sidings will not affect the approved maximum throughput of 300,000 TEU (twenty-foot equivalent units) per annum or the traffic movements previously assessed for the Enfield ILC. This is due to the existing traffic assessment considering a throughput of 300,000 TEUs and a condition of approval requiring that this be measured at the rail intermodal terminal interface. Further, the main purpose of the additional rail sidings is to allow for increased rail line efficiency through the staging of port shuttle trains concurrent with regional / interstate trains.

As it is not proposed to increase the approved maximum throughput, no additional off site operational traffic impacts are proposed above the current approved site operations as a result of the proposed development.

The traffic impact assessment[1] prepared as part of the EIS assumed the intermodal terminal area weekday staff levels to include up to 24 operational staff and 22 administration staff. Current staff numbers are approximately 30 and the proposed increase to office space will likely accommodate a further 10-15 employees. Given that staff numbers are within those assumed in the traffic impact assessment, the traffic impact is anticipated to be within that which was assessed and approved.

Employee parking for the proposed office extension will be within the existing staff parking area to the north east of the building. To ensure there are no potential parking impacts external to the Enfield ILC, car parking has been provided to ensure the provision of one parking space per employee during peak operations plus 10%. Car parking areas will be designed in accordance with the relevant Australian Standards (*AS1428:1-4 Design for Access and Mobility*, *AS2890.1 Car Parking Facilities*, and *AS 2890.2 Commercial Vehicle Facilities*).

Condition 6.5(b) of the Project Approval requires an Operational Traffic Management Plan (OTMP) be prepared. This plan has been prepared by NSW Ports and subsequently approved by the Secretary of DPE in accordance with the overarching respective Environmental Management Plan conditions. The operation of the proposed office space will be consistent with the approved OTMP.

## 5.2. Noise

A Noise Impact Assessment has been completed by SLR for the construction and operation of the proposed rail siding extensions and is included at Appendix A to this Environmental Assessment. The below summarises the findings of the Noise Impact Assessment.

### 5.2.1. Construction

Construction working hours would be between 7am to 6pm Monday to Friday and 8am to 1pm on Saturdays in accordance with Condition 2.15 of the Project Approval. Typical construction noise is likely to be generated by equipment such as delivery trucks, excavators, and a rail tamper.

The Interim Construction Noise Guideline (ICNG) recommends a construction noise management level (CNML) equivalent to the daytime RBL plus 10 dBA within standard hours (i.e. daytime) and RBL plus 5 dBA outside standard hours.

Construction noise levels have been predicted at all receiver locations in the vicinity of the proposed works. The worst-case noise predictions presented in Table 7 of the Noise Impact Assessment indicate that CNML exceedances of up to 4 dBA and 10 dBA are to be expected at locations A3 (Wentworth Street (south)) and A5 (Western end of Blanche Street) respectively during standard working hours.

The calculated noise levels will inevitably depend on the number of plant items operating at any one time and their precise location relative to the receiver of interest. In practice, the noise levels are likely to vary due to the fact that plant would move about the worksites and would not all be operating concurrently at all times. As such, noise levels are likely to be lower than the worst-case noise levels presented in Table 7 for most, and probably all, of the time during the works.

[1] Appendix B Traffic Impact Assessment Intermodal Logistics Centre, Enfield, SKM, July 2005

The predicted construction noise levels at receiver A3 are similar to those predicted for the original Environmental Impact Statement (EIS), and at receiver A5 typically 10 dBA lower than those predicted for the EIS. In addition, rail track construction has been undertaken as part of the development of the ILC and there were no complaints received at that time that were attributable to that activity.

Condition 6.3(a) of the Project Approval requires a Construction Noise Management Plan (CNMP) to be prepared. This plan has been prepared by NSW Ports and subsequently approved by the Secretary of DPE in accordance with the overarching respective Environmental Management Plan conditions. The construction of the proposed works will be managed in accordance with this approved Plan.

### 5.2.2. Operation

The hours of operation are 24 hours, 7 days per week for the Intermodal terminal, warehousing, empty container yards and associated road and rail infrastructure in accordance with the Project Approval. The proposed extensions to the rail sidings will be used to facilitate more efficient rail operations for the intermodal terminal. Shunting activities currently occur on the southern part of the main through rail line and would occur on the extended section of the rail sidings (i.e. further to the south of the intermodal terminal area).

Condition 2.17 of the Project Approval establishes design noise criteria for operations at the Enfield ILC.

Table 9 to Table 12 of the Noise Impact Assessment presents the predicted operational noise levels at each of the nominated assessment locations. The findings are summarised as follows:

- Daytime period:
    - Worst-case 24 hour operations during daytime 15-minute periods are predicted to comply with the LAeq(15minute) Condition 2.17 criteria for under both neutral and enhanced weather conditions.
    - Compliance of the Condition 2.17 daytime external amenity criteria was achieved under both neutral and enhanced weather conditions.
- Evening period:
    - Worst-case 24 hour operations during evening 15-minute periods are predicted to comply with the LAeq(15minute) Condition 2.17 criteria under both neutral and enhanced weather conditions.
    - Compliance of the Condition 2.17 evening amenity criteria was achieved under both neutral and enhanced weather conditions.
- Night-time period:
    - The proposed modification will not involve any change to night-time operations at the ILC. Therefore, night-time noise impacts will remain as previously assessed.

The incremental change in noise level has been examined with the cumulative noise impacts summarised as follows:

- There are minor average increases of up to 1 dB in the LAeq(15minute) intrusive noise levels and LAeq(period) amenity noise levels during the day and evening periods.
- The predicted LAeq(15minute) intrusive noise levels at the assessment locations are in the range of 1 dBA to 17 dBA and 1 dBA to 20 dBA below the Project Approval Condition 2.17 noise criteria during the day and evening periods respectively.

- Assessment location A3 (residences to the south west) and A6 (residences to the south east) experienced the greatest increase in LAeq(15minute) intrusive noise level by up to 4 dBA during daytime period under enhanced weather conditions. Assessment location A3 (residences to the south west) experienced the greatest increase in LAeq(15minute) intrusive noise level by up to 5 dBA during evening period under calm weather conditions.
- The predicted LAeq(period) amenity noise levels at the assessment locations are in the range of 1 dBA to 25 dBA and 8 dBA to 29 dBA below the Project Approval Condition 2.17 noise criteria during the day and evening periods respectively.
- Assessment location A3 (residences to the south west) experienced the greatest increase in LAeq(period) amenity noise level by up to 3 dBA during daytime period under enhanced weather conditions. Assessment location A3 (residences to the south west), A6 (residences to the south east) and A13 (Greenacre Bowling Club) experienced the greatest increase in LAeq(period) amenity noise level by up to 1 dBA during the evening period under enhanced weather conditions.

As per the existing Project Approval requirements, management measures will be put in place at the Enfield ILC site to control the noise emission, including:

- Preparation of a Noise Management Plan (in accordance with Project Approval condition 6.5);
- Compliance noise monitoring (in accordance with Project Approval condition 3.3) will be conducted at different annual throughput stages (i.e. 50,000, 150,000 and 250,000 TEU) and commencement of operation in Empty Container Storage Area A to assess the compliance with the condition of 2.17 of the existing consent, including LA1(1minute) noise events during the night-time period; and
- Implementation of any additional measures required by the Director-General to address any non-compliances with the noise limits in condition 2.17 identified during noise monitoring as required under condition 3.4.

## 5.3. Contamination

As described in Section 4.2 the rail sidings extension works will be undertaken is accordance with the Remediation Action Plan (the RAP) for the site and the *Enfield ILC Site Management Plan: Empty Container Storage Area A* (the SMP). The RAP includes the following options for dealing with excavated material from the ILC site:

a) on-site re-use as capping material subject to confirmation that it meets remediation acceptance criteria;
b) ex-situ containment on site beneath an appropriate capping layer;
c) on-site treatment, if required, of impacted soils using landfarming techniques;
d) off-site disposal of soil (contingency option).

The existing capping layer will be re-instated and the site validated in accordance with the SMP. A Site Audit Statement will be prepared by a qualified NSW Auditor in accordance with Condition 2.43 to certify that the land is suitable for its intended use prior to the commencement of operations.

## 5.4. Air Quality

### 5.4.1. Construction

Potential air quality impacts during the construction of the proposed works are generated through dust (particularly in regards to the bulk earthworks) and construction equipment emissions.

Construction air emissions may be generated by equipment such as excavators, graders, delivery trucks, mobile cranes, specialist rail construction plant (tamper) and hand tools. Air emissions will be minimal and unlikely to have an impact on regional air quality. Mitigation measures in respect to minimising emissions identified within the approved CEMP will be implemented in the construction of the proposed rail sidings and office extension.

The proposed rail siding works involve earthworks with a disturbed area of approximately 5,000m2. The disturbed area is relatively minor in comparison to the early stage works (remediation, site wide earthworks and infrastructure) which exposed large areas of the 590,216m2 site.

Notwithstanding the above, Condition 6.3(e) of the Project Approval requires a Construction Dust Management Protocol be prepared. This plan has been prepared by NSW Ports and subsequently approved by the Secretary of DPE in accordance with the overarching respective Environmental Management Plan conditions. Construction practices and mitigation measures will be consistent with this approved Plan.

#### 5.4.2. Operation

Sources of air emissions during operation include light employee vehicles as well as rail locomotive emissions.

Given light vehicle traffic volumes will not significantly increase as a result of the proposal, and are within the previously predicted limits, potential road vehicle air quality impacts as a result of operations are consistent with those of the original environmental assessment.

The Air Quality Impact Assessment (AQIA) which accompanied the original EA conservatively assumed 5 locomotives operating continuously on site at all times. As there are no proposed increases to this assumption as a result of the proposed modification, total air emissions are therefore expected to be consistent with what was previously assessed. Locomotive emissions accounted for less than 10% of total $NO_2$ emissions and less than 4% of total $PM_{10}$ emissions for the site in the AQIA. The AQIA conservatively predicted air quality impacts (including existing background levels) would be below relevant criteria at all sensitive receptors including four receptors near the southern end of the site (i.e. in the location of the proposed siding extension). Partial relocation of locomotive sources towards the southern end of the site is not expected to significantly impact on air quality at nearby receptors.

### 5.5. Stormwater and Water Quality

As identified in the original environmental assessment, the main water quality impacts during construction would be the export of sediments and other pollutants such as nutrients, to the local waterways due to the exposure of soils to erosion. The bulk earthworks associated with the rail sidings will temporarily expose the area to possible erosion given the differences in height following the cutting works.

Condition 6.2 of the Project Approval requires a Construction Environmental Management Plan (CEMP) be prepared and that it include details of measures to monitor and minimise soil erosion and the discharge of sediment during construction activities. This plan has been prepared by NSW Ports and subsequently approved by the Secretary of DPE.

Water quality management measures consistent with the CEMP will be implemented to minimise erosion and sediment loss. Construction practices will use industry best practice guidelines; in general, the *"Blue Book" - Managing Urban Stormwater: Soils and Construction* (Landcom, 2004).

The proposed development of the rail sidings includes the formation of a batter slope which will be vegetated as soon as practical to minimise erosion impacts of the works.

The Enfield ILC (including the location of the proposed rail sidings and the new office area) is currently serviced by an existing stormwater system. This stormwater system includes three stormwater basins that capture, retain, and filter stormwater before it is discharged from the site. Small areas of the site, including sections of the main through rail line discharge to existing stormwater culverts.

Stormwater from the rail sidings extension area will be discharged via the existing stormwater culverts similar to the existing main through rail line. The rail sidings will have a shallow swale and longitudinal subsoil drains to direct stormwater to the discharge pipework. Subsoil drains will be wrapped in geofabric to prevent sediment from entering the stormwater system. Some stormwater would also infiltrate into the ground via the rail ballast. A short length of stormwater pipework adjacent the existing culvert will be relocated a short distance to accommodate the rail sidings and will continue to operate as designed.

## 5.6. Cumulative Construction Impacts

The construction of the Enfield ILC has been undertaken in a staged approach (as per the table below), with some stages being undertaken either fully or partially in parallel.

| Phase | Activities |
|---|---|
| Stage 1 – Remediation/Landscaping Mound | • Removal of contaminated material/land-farming on-site;<br>• Removal of unsuitable material from site;<br>• Construction of all internal sealed haul roads;<br>• Construction of the stormwater detention basins;<br>• Construction of landscaping mounds including associated earthworks;<br>• Construction of off-site noise barrier; and<br>• Preparation of light industrial/commercial area along Cosgrove Road. |
| Stage 2 – Detailed earthworks and drainage | • Site grading including cut and fill works to level site;<br>• Construction of retaining walls/embankments;<br>• Site stabilisation works;<br>• Construction of stormwater trunk drainage system;<br>• Development of Community and Ecological Area (details to be determined); and<br>• Relocation of services. |
| Stage 3 – Road and rail infrastructure, intermodal and empty container storage areas | • Construction of off-site access points (Overbridge);<br>• Construction of reinforced earth wall for road embankment;<br>• Northern Bridge to empties area;<br>• Installation of services;<br>• Relocation of existing rail access to wheel lathe;<br>• Construction of new railway line and sidings; and<br>• Pave intermodal area, container storage areas and internal roads. |
| Stage 4 – Warehousing and final works | • Construct warehouses, administration and maintenance buildings;<br>• Pavement areas; and |

| | |
|---|---|
| | • Final landscaping. |
| Stage 5 – Commercial / Light Industrial buildings | • Construct buildings along Cosgrove Road for commercial / light industrial and ancillary retail / refreshment uses |

The majority of works associated with Stage 1, Stage 2, and Stage 3 have been completed and the proposed warehousing associated with the Stage 4 works are due to commence (i.e. the Enfield ILC is currently in the Stage 4 phase of works).

All impact assessment studies that were undertaken as part of the original assessment assumed that the construction of Stage 4 of the Enfield ILC (i.e. the construction of all six warehouses and all pavement areas not associated with Stage 3) was to occur concurrently.

Specifically, the scenario of all six warehouses being constructed at the same time was used (as a worst-case scenario) for the Traffic Impact Assessment, the Stormwater Quality and Soil and Water Management Assessment, the Noise Impact Assessment, and the Air Quality Assessment.

For the construction of the proposed office extension and rail sidings, it is anticipated that other construction works occurring at the Enfield ILC will be Stage 4 works and specifically the construction of one or two of the warehouses (of the six associated with the original approval, and one that is the subject of Modification 11). The original Traffic Impact Assessment presumed approximately 29 heavy vehicles, and 150-170 light vehicles per day during the construction period. This assessment also presumed all six warehouses would be constructed concurrently. As stated in Section 5.1.1, it is anticipated that there will be approximately seven heavy vehicles on site during the peak construction period per day and up to 10 light vehicles associated with the rail siding and office building. The administration building works are also likely to generate minimal traffic impacts to complete the works. As only two to three warehouses are likely to be under construction concurrently with the works proposed as part of this modification application, the cumulative construction traffic impacts of the proposed sidings and office space will remain within the traffic impact envelop of the original environmental assessment.

In addition, operational traffic is currently well below the approved operational limit, and as the construction works are relatively small in scale and intensity, there are unlikely to be cumulative traffic impacts as per current Enfield ILC operations.

## 6. CONCLUSION

This Environmental Assessment (EA) has been prepared by TfA Project Group on behalf of NSW Ports (the Applicant).

The EA has been prepared to support an application to the NSW Department of Planning and Environment (DPE) under Section 75W of the *Environmental Planning and Assessment Act 1979* (EP&A Act) for the proposed rail sidings extension works and extension to an existing IMT administration building at the Intermodal Logistics Centre (ILC) at Enfield.

The proposal has been assessed against the relevant legislative provisions. From this assessment, the following conclusions are able to be drawn:

- The rail sidings and office space are already existing suitable land uses for the Enfield ILC;
- The rail sidings and office space works will further facilitate the ILC achieving the strategic goal of transporting containers by rail to and from Port Botany and regional areas;
- The rail sidings will facilitate operational improvements and the servicing (loading / unloading) of freight trains;
- There are unlikely to be any significant environmental impacts as a result of the proposed modification.

On the basis of the above, it is considered sufficient planning grounds exist to warrant the proposal and the modification application is recommended for DPE approval.

# APPENDIX A – NOISE IMPACT ASSESSMENT