urbanco

ST MARYS freight hub

SSD-7308 | Post Exhibition Assessment

Extended Hours Work Statement

September 2019

Prepared for

pacificnational

Client:	Pacific National
Document Type:	SSD-7308 | RTS Technical Assessment
Document Title:	St Marys Freight Hub | Extended Hours Works Statement
Version:	Final
Issue Date:	25 September 2019

Prepared By:	Guy Evans | Director

If this document is not signed it is a draft.

urbanco

CONTENTS

urbanco

APPENDICIES

FIGURES

1 INTRODUCTION

Construction of the St Marys Freight Hub requires low impact works outside standard construction hours due to traffic, safety, quality and traffic management reasons. The Extended Hours Works (EWH) can be managed so there is low potential to exceed relevant noise management levels outlined in the EPA Interim Construction Noise Guidelines (2009).

An Extended Hours Protocol is to be developed for the construction phase to determine the type of Extended hours works, approvals, environmental management, consultation, monitoring and complaints handling procedures.

The standard hours are defined as:

- 7:00am to 6:00pm Mondays to Fridays
- 8:00am to 12:00pm Saturdays

Extended hours works is construction activity outside the standard hours.

The main construction work for the St Marys Freight Hub is the construction of the large handstand pavement area. Construction of the hardstand pavement is the main work activity to be undertaken during extended hours period and there are no highly noise intensive works.

All extended hours works are therefore low impact and low risk. These works can be readily managed so there is no significant impact on nearby residential receivers.

2 SITE & CONTEXT

2.1 Land Details & Site Description

The area subject to development is 9.9ha (approx.) and is contained with three (3) allotments (subject land) identified as:

Lot 2 DP876781 – 2 Forrester Road, St Marys

Lot 3 DP876781 – 69-81 Lee Holm Road, St Marys

Lot 196 DP31912 – 196 Christie Street, St Marys

Pacific National also owns an additional allotment to the west of the subject land identified as Lot 2031 DP815293 Links Road, St Marys, which formers the broader Pacific National landholding.

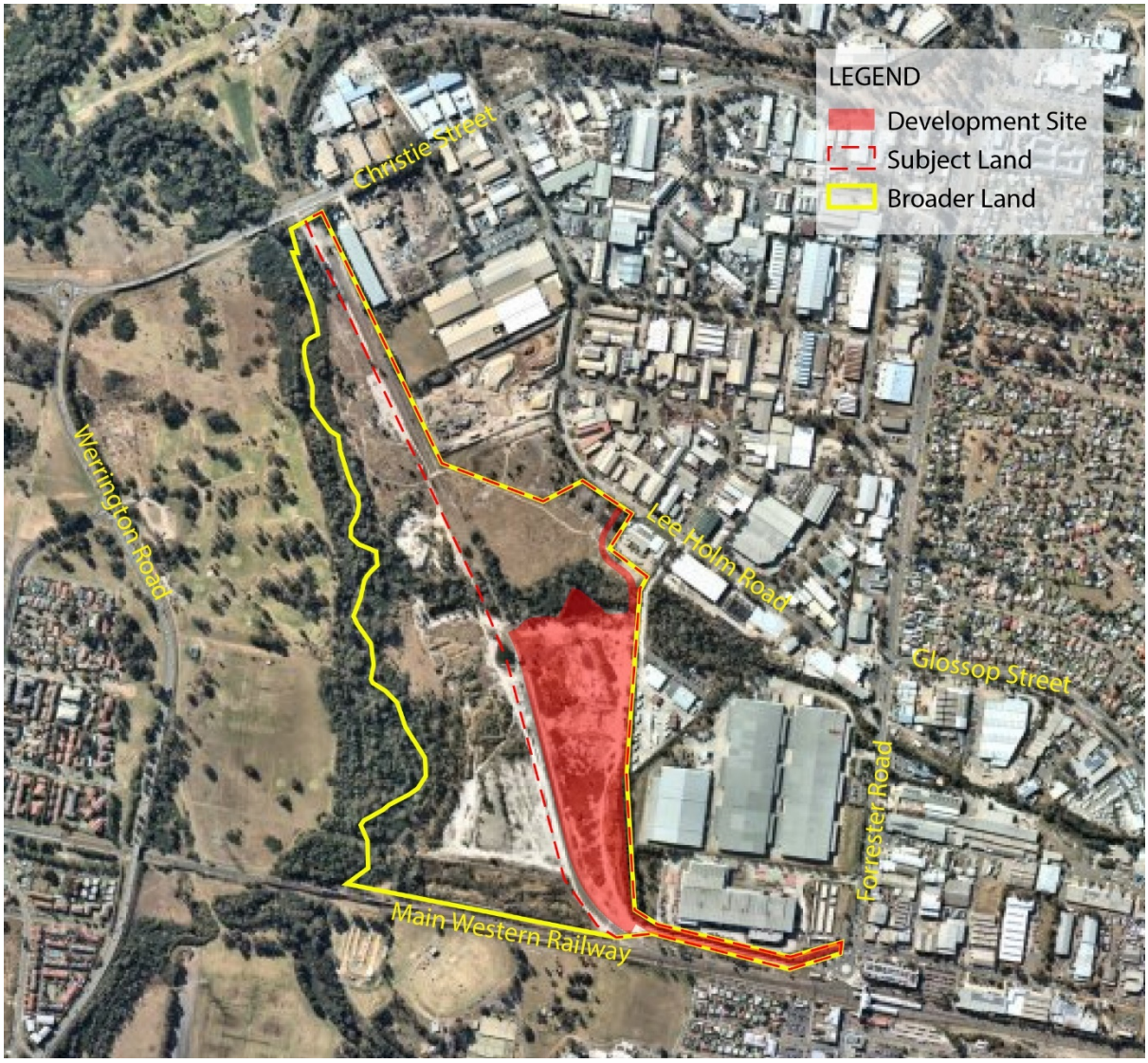


Figure 1 – Development Site & Subject Land (Source: Nearmap)

The development site contains an active rail spur and is generally flat, cleared, highly disturbed and has been subject to extensive filling as part of the importation of material excavated from the Northside Sewerage Tunnel Project.

2.2 Site Context

The land subject to the St Marys Intermodal State Significant Development proposal is located within a large existing industrial area. There are numerous general industrial activities to the north and east that operate 24 hours a day and double shifts (morning and afternoon shifts) throughout the week.

The Main Western Railway Line is to the south, and South Creek and open parklands is to the west. There are residential dwellings and parklands to the south of the Railway Line.

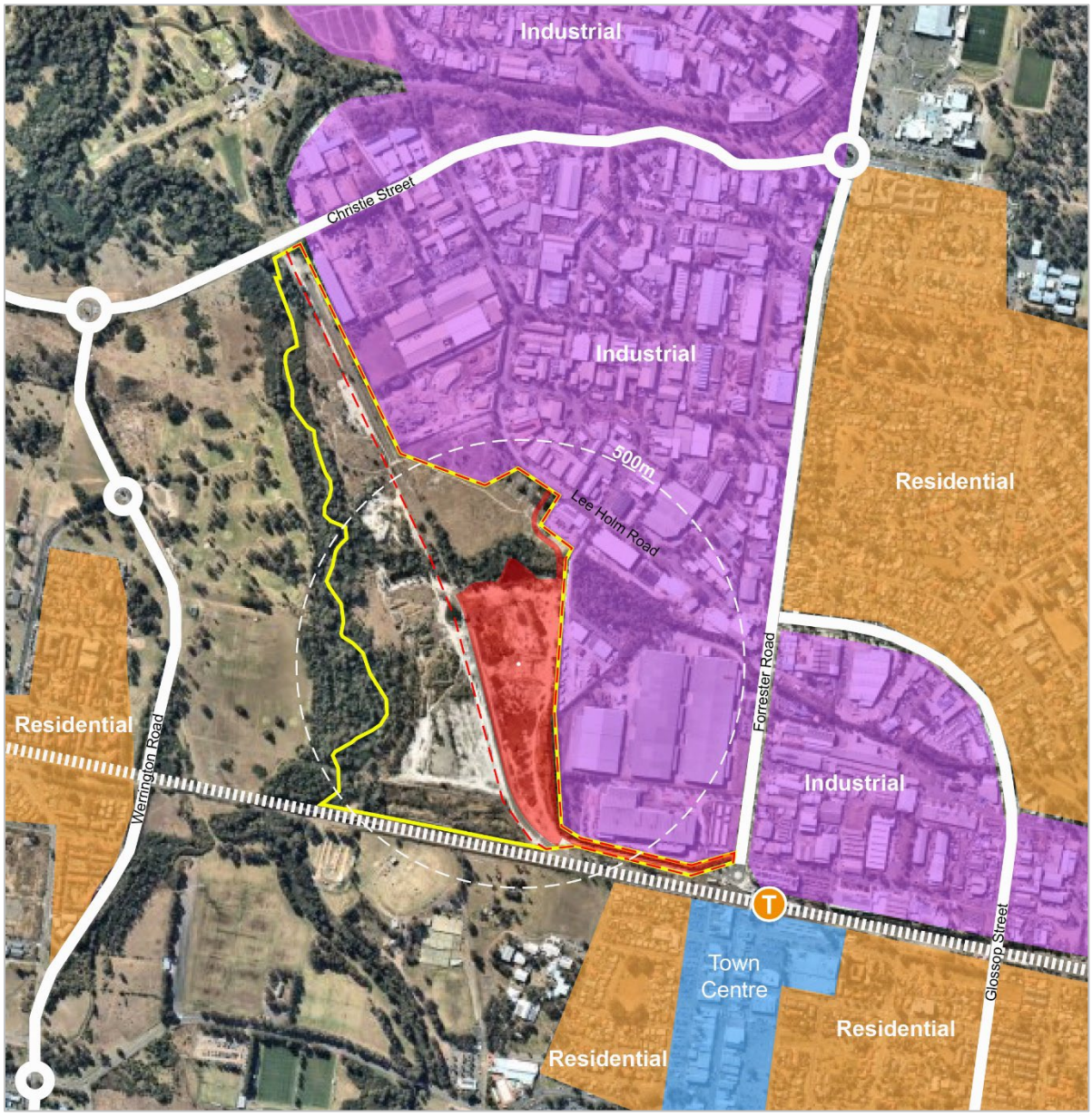


Figure 2 – Local Context (Source: Nearmap)

The development site has frontage to Forrester Road, Lee Holm Road and Christie Street. All these frontages interface with existing industrial areas and connect to the regional road network, including Classified Regional and State Roads of Forrester Road, Glossop Street, Greater Western Highway, Mamre Road and Werrington Road.

3 PROPOSED DEVELOPMENT

3.1 St Marys Freight Hub

St Marys Freight Hub is an intermodal freight terminal that receives full containers from Port Botany by rail. The containers are unloaded from the train, stacked onsite for up to 48 hours, and loaded on trucks and transported to various locations in Western Sydney, which are typically less than 20km from the Freight Hub. Trucks return with empty containers to the Freight Hub to be transported back to Port Botany by rail. St Marys Freight Hub results in greater efficiency in transporting containers from Port Botany to Western Sydney that has widespread traffic and environmental benefits. A copy of the Concept Plan is in Figure 3 and also in Appendix 1.

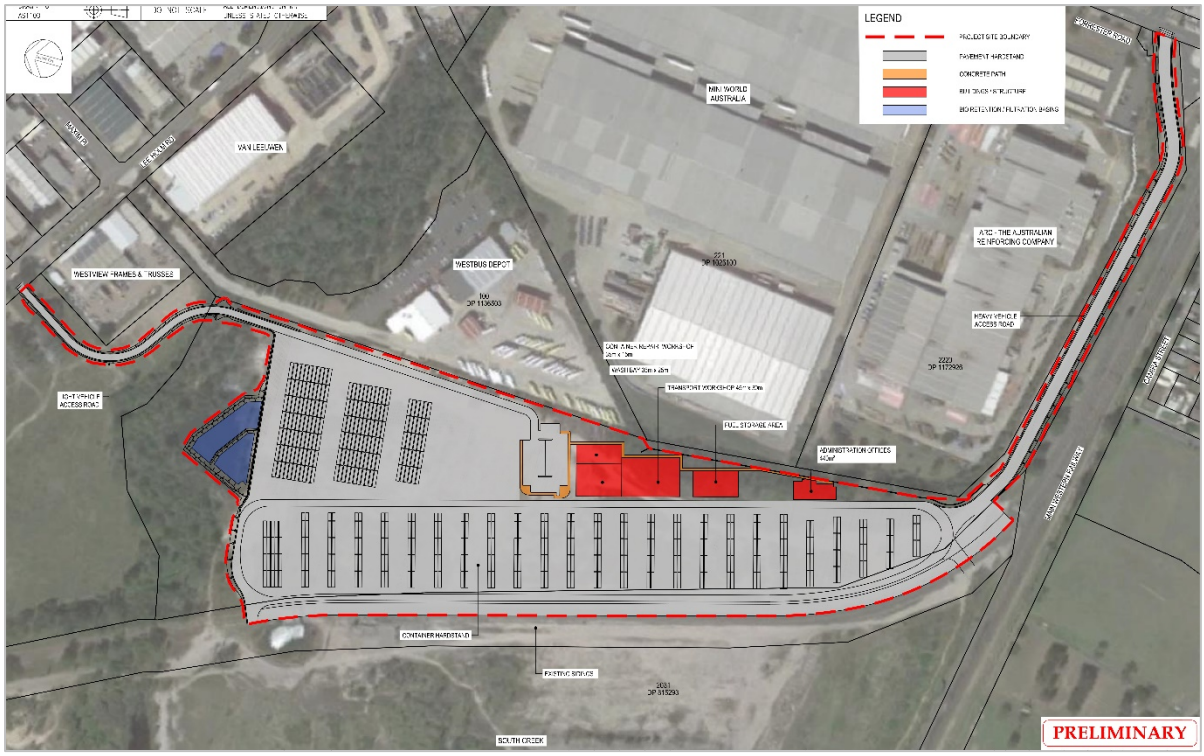


Figure 3 – Concept Layout (Source: BG&E)

Construction of the St Marys Freight Hub includes the following works:

- Construction of hardstand pavement areas for container storage and laydown, rail and vehicle loading and unloading areas.
- Construction of internal access roads providing separate ingress and egress for light and heavy vehicles as follows:

  - to/from Forrester Road for heavy vehicles
  - to/from Lee Holm Road for light vehicles

- Construction of a wash bay area, building sites for offices, workshops, fuel storage area, and parking for staff and visitors.
- Construction of a water quality and stormwater management facilities.

4 EWH CONSTRUCTION METHODOLOGY

4.1 EWH Construction Overview

The main construction work for the St Marys Freight Hub is the construction of the large handstand pavement area. Construction of the hardstand pavement is the main work activity to be undertaken during the extended hours period and there are no highly noise intensive works. All works during extended hours is therefore low impact and low risk. These works can be readily managed so there is no significant impact on nearby residential receivers.

Construction of the hardstand pavement does not require importation of fill due to the historic filling already completed within the development site, which reduces construction traffic and duration of works. There is also no removal of material offsite.

Construction materials that need to be delivered to the site include:

- quarry materials / road base
- bituminous product
- drainage products
- building materials
- stabilisation agents

These products will be sourced from nearby suppliers where possible. There are time constraints for placement of construction materials for the pavement. In addition, the demand for construction materials during standard works hours is at its highest which can impact the availability of materials.

The majority of extended hours deliveries will be for materials to construct the hardstand pavement.

4.2 EWH Construction Works

Construction works are defined as either Type 1 or Type 2 works. Type 1 works is typical construction work that is undertaken during standard construction hours. Type 2 construction works includes lower impact works that can be undertaken outside the standard construction works within certain areas of the development site

Type 1 works	Type 2 works (Extended Hours Period)
All type 2 works and the following works: • Earthworks • Building works • Installation of services • Works listed under Type 2 works	Construction of hardstand pavements including: • Delivery of plant equipment • Supply and delivery of pavement materials • Transport of pavement materials to site and tipping out • Pushing pavement materials out with graders and loaders • Application of water through water carts spraying water on the surface • Compacting the surface using smooth-drum rollers – both static and vibrating • Grading the surface to level

4.3 EWH Construction Hours

Standard construction works hours are defined as:

- 7:00am to 6:00pm Mondays to Fridays
- 8:00am to 12:00pm Saturdays

Extended hours construction works for the Freight Hub is during night time on weekdays and Saturday morning and afternoon. There is no construction work on Saturday after 6pm, Sundays or public holidays. The extended hours works are shown in Figure 4.

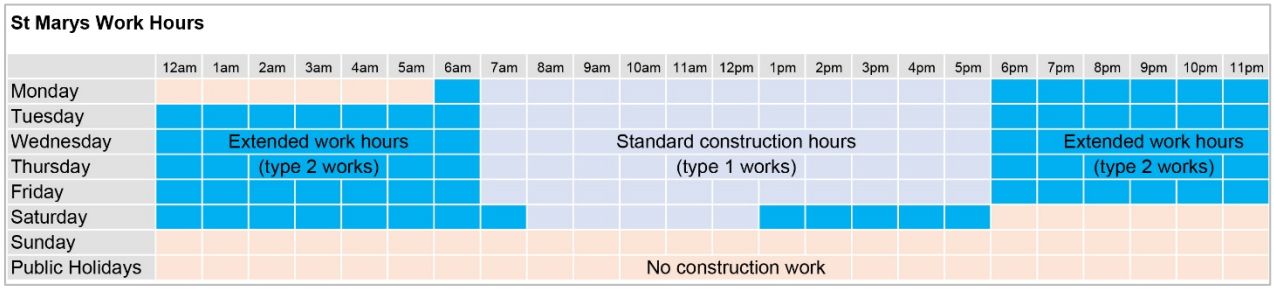


Figure 4 – Extended Hours Works Schedule

4.4 EWH Construction Duration

The duration of the extended hours works is projected to be last between 3 to 4 months subject to weather conditions.

Construction during the extended hours period will reduce the overall construction timeframe by 3 to 4 months.

4.5 EWH Construction Equipment

Typical plant to be used during extended hours work periods are not high noise emitting equipment and generally have the same power levels.

Typical plant to be used for undertaking the pavement construction will generally consist of truck deliveries, graders, rollers, wheel loaders and water carts, and includes:

- 30t Excavator – Komatsu PC300
- Semi Tippers – Freightmaster TriAxle
- Grader (GPS Controlled) – Caterpillar 140M
- 18t Padfoot Roller – Bomag BW138 AD; Dynapac CA2500D, Dynapac CA134
- Watercart -Hino 2628 15,000L; Caterpillar TA 27 (27,000L)
- Wheel Loader – Komatsu WA 320, WA420

In addition, equipment will be fitted with low-noise reversing squawkers instead of the traditional reversing beepers on equipment.

A noise assessment has been completed by Aecom considering the above equipment and nearest residential receivers south of the Main Western Railway Line (see Appendix 2). The noise assessment has modelled the required separation distance at night time where compliance with noise standards is achieved. Generally, extended hours construction works needs to be 350 metres from the nearest residential receiver.

Delivery of the large plant is also to occur during the extended hours work period during low traffic night time hours. This ensures transport of equipment is undertaken in the safest conditions with minimum disruption

4.6 EWH Construction Access

All construction vehicle access is via Lee Holm Road. There are existing gates and constructed crossovers to the site from Lee Holm Road.

Figure 5 – Lee Holm Road Access (Source: Google Maps)

4.7 EWH Transport Routes & Traffic

Construction traffic is to only utilise Classified Roads and approved heavy vehicle roads to travel to the site access at Lee Holm Road. There will be no use of local residential streets. Planning heavy vehicle transport routes is to consider the number of sensitive receivers to ensure routes have the lowest potential impacts.

Construction traffic generation for has been projected to be between 100 and 140 vehicles per day (p73 'St Marys Freight Hub Traffic and Transport Assessment – Post Exhibition Version' by Bitzios Consulting). It is projected construction traffic will be up to 8 to 12 trucks per peak hour, which is likely to reduce during the night time hours construction period. The St Marys Freight Hub Traffic and Transport Assessment by Bitzios Consulting confirms that at peak hour, construction traffic "will have a negligible impact on the key intersections in the study area".

4.8 EWH Protocol Outline

Prior to commencing works during the extended hours period, an Extended Work Hours Protocol is to be prepared and approved by the Department of Planning, Industry & Environment. The EWH Protocol is to address the following:

- Approval Framework
- Accountabilities
- Education & Training
- Community Consultation & Notifications
- Roles and Responsibilities
- Traffic Management
- Construction Noise Strategy
- Complaints Handling & Resolution

5 EVALUATION

The proposed extended hours works are low impact and low risk as there are no highly noise intensive works proposed.

The site is located within a large existing industrial area with activities that operate 24 hours per day. There site is buffered to residential areas by the industrial area to the north and east, and South Creek and parklands to the west.

The Main Western Railway Line is to the south. Residential dwellings and parklands are to the south of the Railway Line. These dwellings are the closest sensitive receivers to the development site.

The key consideration in assessing extended hours works is noise impacts on surrounding sensitive receivers. Under this proposal for extended work hours, there will be no exceedances on surrounding residential areas.

The EPA Interim Construction Noise Guideline (2009), implementation of the Guidelines states:

The steps for managing noise impacts from construction are:

1. *identify sensitive land uses that may be affected*
2. *identify hours for the proposed construction works*
3. *identify noise impacts at sensitive land uses*
4. *select and apply the best work practices to minimise noise impacts*

An acoustic assessment has been undertaken by Aecom to ensure compliance with noise management levels from the nearest receivers in Kalang Street on the southern side of the railway (see Appendix 2). The acoustic assessment calculates the minimum separation distance for a plant item operating individually and minimum separation distance for all plant items operating together. The minimum separation distance is 290 metres and 350 metres respectively.

The sensitive land uses have been identified around Kalang Avenue to the south. Noise assessment works during the extended hours work period has defined an area within the development site where noise management levels for residential receivers satisfy the Interim Construction Noise Guideline standards of rating background level (RBL) + 5dB. Accordingly, confining extended hours works (Type 2 works) to the areas where no exceedances are predicted ensure these are no construction noise impacts on residential receivers. The post exhibition version of the St Marys Freight Hub Noise and Vibration Impact Assessment by Aecom has assessed noise impacts outside standards works hours. Table 21 in the Aecom noise assessment confirms that works in the area 350m from the nearest residential receiver will have no exceedances (see Figure 6).

Activities	Exceedance above NML, dB			
	1-10 dB(A) Clearly audible	11-20 dB(A) Moderately intrusive	> 20 dB(A) Highly intrusive	Highly affected >75 dB(A)
Extended work hours construction work	0	0	0	0

Figure 6 – Table 21 from St Marys Freight Hub Noise and Vibration Impact Assessment by Aecom

Works in the defined 'extended work hours' works area will have no noise impacts on nearby residential receivers.

Evaluation to the steps for managing construction noise in the EPA guidelines are outlined below:

EPA ICNG Steps for Managing Construction Noise	Evaluation
1. *identify sensitive land uses that may be affected*	Sensitive land uses have been identified around Kalang Avenue to the south (around 150m from site)
2. *identify hours for the proposed construction works*	Extended work hours are outlined in Section 4.3.
3. *identify noise impacts at sensitive land uses*	Noise assessment by Aecom has identified an area where exceedances to noise impact standards will not occur (refer Appendix 2)
4. *select and apply the best work practices to minimise noise impacts*	Containing construction activity to the area defined in the Aecom noise assessment requires not further practices to manage noise. Notwithstanding, additional mitigation measures will be implemented to ensure no exceedances to noise standards will occur.

The management approach to noise assessment and impacts is consistent with the steps in the Interim Construction Noise Guideline requirements. Importantly, defining an extended work hours activity area ensures there are no noise affected (RBL + 5 dB) residential receivers during evening and night time hours.

The separation required to meet noise standards will also ensure there are no impacts from either vibration or light spill.

The duration of the extended hours works period is 3 to 4 months and works outside standard works hours will reduce the construction period by around 3 to 4 months. Reducing duration of construction will lessen the duration of any residual impacts from the construction process on nearby receivers.

Site access is from Lee Holm Road within a large industrial area and there will be no disruption to local traffic or non-vehicular transport routes. Extended hours deliveries will utilise Classified Roads and approved heavy vehicle routes only. There will be a reduction of traffic on the local network during the AM/PM peak periods which results in improved safety with less heavy vehicles during peak traffic times. There will also be wider network benefits as transport will occur at night which disperses traffic volumes on the greater network.

With proper site and construction management there should not be any impacts on sensitive receivers to the development site.

6 MITIGATION MEASURES

Specific mitigation and management measures during extended work hours are to be implemented to minimise any amenity impacts or inconvenience on local residences and the local community.

Site & Construction Management

1. Manage site access for construction traffic and employees from Lee Holm Road
2. Prepare a Construction Environmental Management Plan that includes a section on extended work hours work practices and procedures including:
    - Environmental management activities and controls
    - Extended Work Hours Protocol
    - Driver/operator education and training
    - Risk assessment and management
3. Prepare an Extended Work Hours Protocol for approval that addresses the following:
    - Approval Framework
    - Accountabilities
    - Education & Training
    - Community Consultation & Notifications
    - Roles and Responsibilities
    - Traffic Management
    - Construction Noise Strategy
    - Complaints Handling & Resolution
4. Define type of works allowed during extended work hours period
5. No earthworks or rock breaking permitted during extended work hours period
6. Manage type of construction activities occurring during extended hours period

Noise

7. Implement extended work hours construction work zones and exclusion zones in accordance with Aecom noise assessment (see Appendix 2)
8. Use of low impact plant equipment
9. Plant is to be fitted with low-noise reversing squawkers
10. Controlled site access from Lee Holm Road
11. Plan transport routes to minimise number of sensitive receivers

Transport & Traffic

12. Controlled site access from Lee Holm Road only
13. Transport routes are to utilise Classified Roads and approved heavy vehicle routes
14. No use of local residential streets is allowed

7 EWH JUSTIFICATION

Extended work hours construction works as proposed will not result in any noise affected residential receivers and will allow construction activity in an existing industrial area where operating hours for other industrial activities continue on a 24/7 basis.

Construction work associated will be undertaken in accordance with the assessment and management methodologies outlined in the EPA Interim Construction Noise Guideline, where no work practice management requirements are needed as there are no noise affected sensitive receivers. However, mitigation measures are to be implemented to ensure no adverse impacts result from the extended work hours activities.

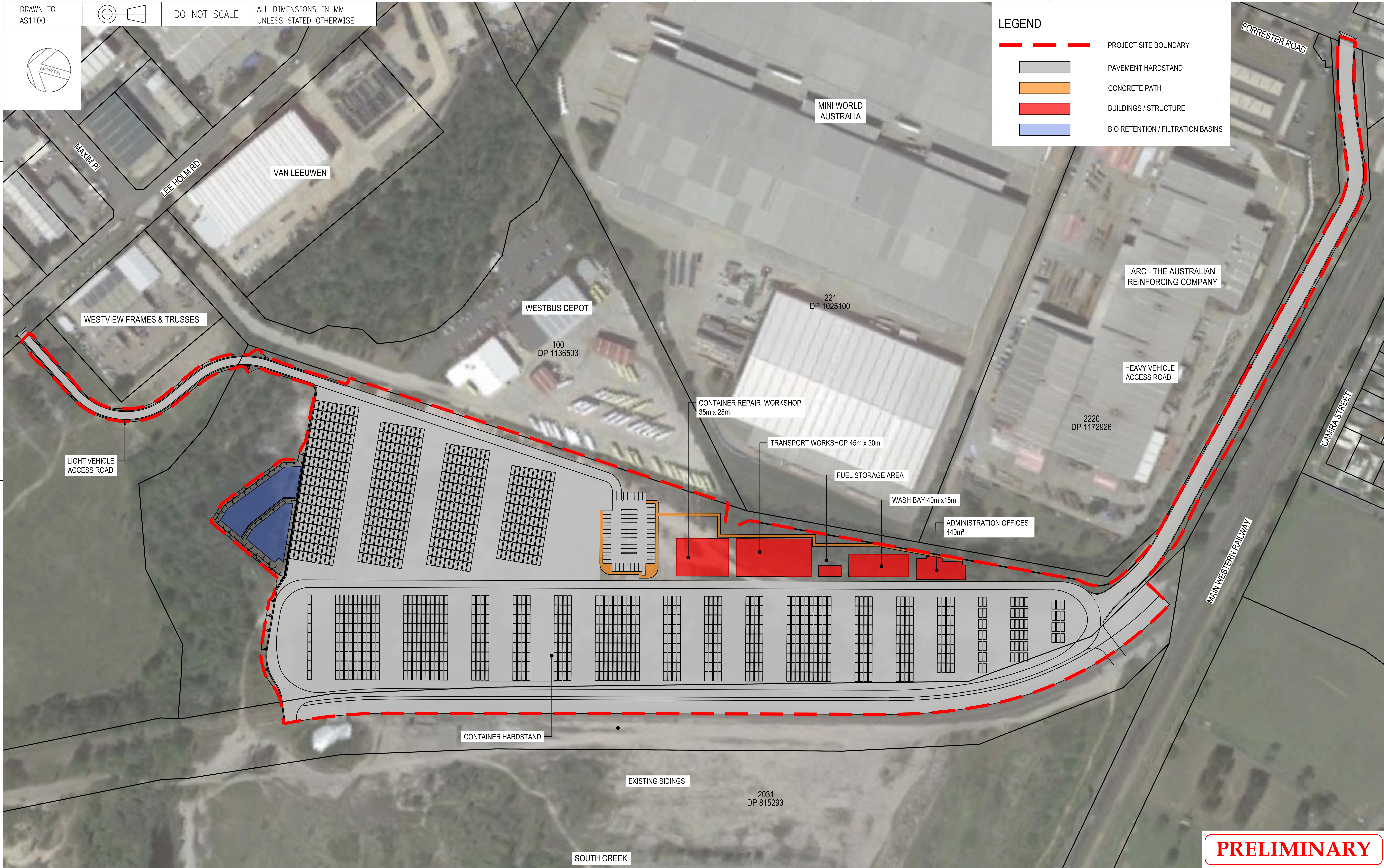
Extended hours works are considered justified as:

1. There are no noise affected sensitive receivers.
2. Works are low impact and low risk (i.e compliant with the Noise Management Levels).
3. Traffic is dispersed and managed more effectively to avoid peak hour traffic periods.
4. Promotes the safety of road users, construction personnel and the public in general.
5. Less disruptions to local traffic and the local road network in the adjacent industrial areas and nearby residential and town centre precincts.
6. Shorter construction duration that results in reduced period for any residual impacts.
7. Containing construction activity to the area defined in the Aecom noise assessment requires not further practices to manage noise

Given the benefits and the minimal impacts on the surrounding locality from construction works the extended work hours, approval for extended work hours is justified and should be supported.

APPENDIX 1

DRAWN TO AS1100 | DO NOT SCALE | ALL DIMENSIONS IN MM UNLESS STATED OTHERWISE



NORTH
LEGEND
PROJECT SITE BOUNDARY
PAVEMENT HARDSTAND
CONCRETE PATH
BUILDINGS / STRUCTURE
BIO RETENTION / FILTRATION BASINS
FORRESTER ROAD
MINI WORLD AUSTRALIA
MAXIM PL
LEE HOLM RD
VAN LEEUWEN
WESTBUS DEPOT
100
DP 1136503
221
DP 1025100
ARC - THE AUSTRALIAN REINFORCING COMPANY
WESTVIEW FRAMES & TRUSSES
HEAVY VEHICLE ACCESS ROAD
2220
DP 1172926
CAMIRA STREET
CONTAINER REPAIR WORKSHOP 35m x 25m
TRANSPORT WORKSHOP 45m x 30m
FUEL STORAGE AREA
WASH BAY 40m x15m
ADMINISTRATION OFFICES 440m²
LIGHT VEHICLE ACCESS ROAD
MAIN WESTERN RAILWAY
CONTAINER HARDSTAND
EXISTING SIDINGS
2031
DP 815293
SOUTH CREEK

PRELIMINARY

Used on / Next higher assembly:

Filename: B18028-SKC-1000.dwg

Alternate DMS number:

Rev	Date	Revision Description	Designed	Checked	Ind. Rev.	Approved	Accepted
B	05.09.19	ISSUED FOR REVIEW	S.O'B	MWE			
A	09.05.19	ISSUED FOR REVIEW	AK	SW			

Designing Company: Sydney Office– L2, 8 Windmill St, Sydney NSW 2000 P / +61 2 9770 3300 E / info@bgeeng.com bgeeng.com–

BG&E DOC No: B18028

Designed S.O'Brien

Checked S.West

Ind.Rev. Company | Ind.Rev. Name

Ind.Review Signature

Approved By | Accepted By

Signed: | Signed:

Approval Date | Acceptance Date

SK-C-1000

Sheet No. 1 of 1

Scale: NTS

SHEET SIZE A1

ST MARYS FREIGHT HUB

OVERALL LAYOUT PLAN

APPENDIX 2

Meters 0 70 140

Construction Work Areas - Night-time

Subject Site