

ST MARYS FREIGHT HUB

RESPONSE TO SUBMISSIONS

PREPARED FOR:
PACIFIC NATIONAL

OCTOBER 2019

PREPARED IN PARTNERSHIP WITH:

urbanco



PLANNING FREIGHT FRIENDLY CITIES + REGIONS

ST MARYS FREIGHT HUB RESPONSE TO SUBMISSIONS

OCTOBER 2019

ISSUE 1H: LODGED WITH DPIE

Prepared for: **PACIFIC NATIONAL**

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Project Reference: 17-103 STM
Doc Reference: 191004 17-103 STM rp St Marys Freight Hub RTS_1H_LODGED.docx
Issue No: 1
Revision No.: H

Date:	Issue / Revision No:	Document Revisions:	Issued To:	Author:	Reviewer:
22 August 2019	Issue 1A – DRAFT		PN + Urbanco	KM	Leigh Cook
11 September 2019	Issue 1B – DRAFT	KM track changes	PN + Urbanco	KM	David Djulbic + Guy Evans
18 September 2019	Issue 1C – DRAFT	DD + GE track changes	PN	KM	David Djulbic
25 September 2019	Issue 1D – DRAFT	KM track changes	PN	KM	David Djulbic
26 September 2019	Issue 1E – DRAFT	KM Track changes	PN + Urbanco	KM + GR	David Djulbic + Guy Evans
	Issue 1F – DRAFT	GE track changes	SITE	GE	-
01 October 2019	Issue 1G – DRAFT	KM track changes	Urbanco	KM	-
4 October 2019	Issue H – FINAL		DPIE	SITE, Urbanco + PN	-

EXECUTIVE SUMMARY


SITE planning + design (SITE), Urbanco and the broader project team have been engaged by Pacific National Pty Ltd to obtain relevant approvals for State Significant Development Ref: SSD 7308 for the development of a 9.6ha portion of Lot 2 Forrester Road, Lots 3 Lee Holm Road and Lot 196 Christie Street, St Marys (the ‘subject site’) for the St Marys Freight Hub.

The purpose of the Response to Submissions report is to outline and respond to the issues raised in submissions and detail how the proposed development and operations have been modified to mitigate impacts, where relevant.

This Response to Submissions report should be read in conjunction with the Secretary’s Environmental Assessment Requirements (SEARs) dated 23 October 2018 and the Environmental Impact Statement (EIS), including consultant technical reports, prepared by SITE and Urbanco, dated May 2019 (Issue 4C).

STRATEGIC OBJECTIVES

The proposed St Marys Freight Hub seeks to:



“Develop a ‘best practice’ freight hub at St Marys in Western Sydney to facilitate freight mode-shift, reduce road congestion and support supply-chain efficiency and productivity.”

The St Marys Freight Hub will facilitate a new port shuttle service between Port Botany and Greater Western Sydney. The Freight Hub enables an increase in the volume of import freight moved via rail and relieves the regional and state road network of heavy vehicle traffic, including the local road network servicing Port Botany, which is heavily congested.

It is projected that around 8.7 million truck kilometres per year will be removed from the regional and state road networks between Port Botany and Western Sydney.

The proposed development is consistent with the State Government’s commitment and policy objectives relating to the Port Botany expansion and achieving an ultimate throughput of 7,500,000 TEU’s (shipping containers) annually.

The proposed St Marys Freight Hub and associated port shuttle service will result in a significant reduction in the road-based container transport between Port Botany and Western Sydney in favour of

rail, with local traffic impacts able to be managed within the existing road network, which consists of Classified Regional and State Roads and approved heavy vehicle routes. Amenity impacts along these designated high-order transport routes have been assessed, including noise, air quality and traffic impacts, and there are no significant impacts resulting from the proposal.

The findings of initial technical investigations and site responses are detailed in the EIS (dated May 2019, Issue 4C). In response to submissions on the Freight Hub proposal, there have been minor changes to the design and additional transport and environmental reporting post EIS exhibition, which are detailed in this report and technical reports appended.

In addition to the supply chain benefits that will be delivered by the project across greater western Sydney, the St Marys Freight Hub will deliver local economic benefits including local job creation, gross regional product and increased local expenditure.

The St Marys Freight Hub is expected to:

- **Support an operating capacity of 301,000 TEU annual throughput;**
- **Support local employment through the creation of 150 (168 with train drivers) new full time equivalent (FTE) jobs during operation and 60 FTE jobs during construction; and**
- **Remove 8.7 million truck kilometres per year from the regional and state road networks between Port Botany and Western Sydney.**

The proposal aligns with, and supports, the Local, State and Federal Government's strategic intent and objectives as outlined in the:

- National Ports Strategy;
- National Freight and Supply Chain Strategy;
- Draft National Ports Strategy;
- Greater Sydney Region Plan;
- Western Sydney District Plan;
- Future Transport Strategy 2056;
- 2013 NSW Freight and Ports Strategy;
- 2017 NSW Draft Freight and Ports Plan; and
- Penrith City Strategy.

EXHIBITED DEVELOPMENT

The exhibited EIS proposed the staged construction and operation of an intermodal (road and rail) terminal and container park with an ultimate operating capacity of 301,000 twenty-foot equivalent units (TEU) (1 x 20 foot shipping container = 1 TEU) annual throughput.

The St Marys Freight Hub is proposed to operate up to 24 hours per day, 7 days per week, with 80% of the heavy vehicle movements expected to occur between 6am and 6pm, 7 days a week.

In accordance with Section 4.36 of the *EP&A Act*, the proposed development was declared a State Significant Development under the provisions of Schedule 1, Clause 19(1b) of the State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP). This is on the basis that the proposed development has a capital investment value of more than \$30 million for the following purposes:

“(b) railway freight terminals, sidings and inter-modal facilities.”

The exhibited EIS documented the proposed development and works as follows:

- Construction of hardstand areas for container storage and laydown, rail and vehicle loading and unloading areas;
- Construction of new internal access roads providing separate ingress and egress for light and heavy vehicles as follows:
 - to/from Lee Holm Road for heavy vehicles; and
 - to/from Forrester Road for light vehicles;
- Construction of:
 - Wash bay area;
 - Office building pad site;
 - Fuel storage area;
 - Container workshop (repair bay) pad site;
 - Transport workshop pad site;
 - Staff and visitor light vehicle parking bays (parallel to the internal light vehicle access road connecting to Forrester Road); and
 - Heavy vehicle parking bays;
- Ancillary development includes:
 - Signage and landscaping;
 - Utility services to support the proposed development including drainage, potable water, water (for firefighting purposes), power, data, security and sewerage;
 - Minor realignment of a section of the Sydney Trains high voltage overhead power line at the southern end of the subject site;
 - Minor clearing of areas of vegetation regrowth, remediation (if required) and minor earthworks; and
 - Electrical transformer.

The EIS and supporting technical studies demonstrated that the that the proposed development would not result in any significant environmental impacts that could not be managed by appropriate management and mitigation measures. Before the initial EIS was lodged, the proposed concept layout design and operations were modified to acknowledge and respond to the environmental outcomes of site investigations and recommendations to minimise and mitigate impacts, particularly with respect to the following:

- Traffic and transport;
- Noise;
- Biodiversity;
- Contamination;
- Stormwater management and quality;
- Bushfire;
- Heritage;
- Visual impacts; and
- Flooding.

PUBLIC EXHIBITION

The EIS was publicly exhibited in accordance with Section 4.39 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and clause 83 of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation) between 31 May 2019 and 27 June 2019.

In total 16 submissions were received, including 10 government agency submissions, 1 local government submission, 1 special interest group submission and 4 corporate and individual submissions. The submissions are summarised as:

- 3 support the proposed development and provide comments;
- 3 object to the proposed development and provide comments; and
- 10 provided comments and/or sought further clarification/information.

The submissions and responses to the issues and matters raised are summarised below and detailed in the following report and submissions schedules appended. The St Marys Freight Hub project did not attract any objections or opposition from the public or local residential community.

Refer to Appendix 1 – Response to Submissions Matrix.

SUMMARY OF KEY ISSUES AND DESIGN RESPONSE

TRAFFIC AND TRANSPORT

Issues relating to transport routes, impacts and traffic generation were raised in submissions by:

- Penrith City Council;
- Department of Planning, Industry and Environment;
- Transport for NSW;
- Charter Hall; and
- Two (2) individuals.

Additional traffic modelling and analysis of three (3) additional options for heavy vehicle access and transport route options to the exhibited option (Option 1) has been undertaken in response to the submission issues. Reassessment of access and transport routes confirms that Option 4 is the optimum scenario for heavy vehicle movements and transport routes. Heavy vehicle access is now proposed from Forrester Road and is no longer proposed from Lee Holm Road. Light vehicle access and staff and visitor parking is accessed from Lee Holm Road and is separated from internal truck movement and manoeuvring areas. Further, the carpark is closer to the proposed office and staff amenity building areas.

The concept layout of the Freight Hub has been modified to reflect the change in access arrangements ensuring appropriate separation of truck and light vehicle movements within the site. The use of Lee Holm Road and Christie Street for heavy vehicle traffic was a key concern in various submissions, including Penrith City Council. Heavy vehicle access is now from Forrester Road under Option 4. There will be no heavy vehicles accessing Lee Holm Road or Christie Street.

Under Option 4 transport routes within the surrounding road network only utilise Classified State and Regional Roads and approved B-double routes, which achieve the shortest and the most appropriate path to connect to the motorway and highway network. There is no use of local residential streets. In regard to site access during construction, all access is from Lee Holm Road, which also full addresses objection issues raised in the submissions.

Option 4 results in the least operational, safety and amenity impacts on the local road network. Implementation of Option 4 results in the following design and operational changes:

- No heavy vehicle traffic on Lee Holm Road, Christie Street, and Forester Road (north of Glossop Street);
- Heavy vehicle access/egress to the subject site has been re-routed from Lee Holm Road to Forrester Road;
- Light Vehicle access/egress to the subject site has been re-routed from Forrester Road to Lee Holm Road;
- A narrower entry road from Lee Holm Road and vehicle crossing over Little Creek;
- A widened internal access road from the container handling area to the Forrester Road entrance suitable for two passing B-double vehicles;
- Reliable controlled site access management for heavy vehicles at the Forrester Road entry that will prioritise an incoming truck by temporarily holding an outgoing truck within the property boundary under CCTV and stop sign control, with motion sensors that will be trigger low frequency alarm / light at gate to control safe access/egress vehicular movements;
- The internal layout has been modified to reflect the changes in the access arrangements ensuring appropriate separation of truck and light vehicle movements within the site; and
- Staff and visitor parking have been relocated to provide direct access from Lee Holm Road and suitable pedestrian access to work and visitor areas separate from internal truck movements.

Traffic generation for the St Marys Freight Hub has been explained and qualified by the key limiting

factors that underpin traffic generation. In summary, truck trips are controlled by five train paths with each train having a capacity of 87 twenty-foot equivalent units (TEUs). A train is limited to 87 TEUs due to the maximum trailing weight allowance of 2000 tonnes (approx.) and train length of 600m in accordance with Sydney Trains & ARTC requirements. A maximum capacity of 87 TEUs per train equals 435 TEUs inbound by rail at 100% utilisation of asset per day.

With truck trip generation based on 2 TEUs per truck (semitrailer) and 435 TEUs arriving at St Marys by train, this equates to 218 semitrailer movements out of St Marys per day. Trucks return to St Marys with empty containers for return to Port Botany by train at the same rate (218 trucks returning). The above factors form a robust basis for calculating traffic generation for the proposed development.

In considering traffic generation for St Marys, it is important to note:

- Peak hour 15 in / 15 out per hour (conservatively high) incentivised to travel outside peak hours for better efficiency (reduced travel times);
- Projected import growth in operations are:
 - Year 1 = 75k TEUs
 - Year 2 = 100k TEUs
 - Year 3 onwards up to 110K to 150.5K TEUs
- Freight is import only and there is no export in the proposal;
- There is no packing or unpacking of containers onsite;
- All import freight remains within containers and containers are deployed by truck from onsite;
- St Marys Freight Hub is serviced by onsite truck fleet using quality equipment used for fleet (i.e. Euro 5 and 6 vehicles); and
- Majority of customers are within 20km (Erskine Park, Eastern Creek) with single truck completing a delivery in 1.25 hours.

Transport from the St Marys Freight Hub delivers the following key benefits:

- One truck from St Marys replaces 9-10 equivalent trucks traveling from Port Botany; and
- There is a reduction of 8.7 million Vehicle Kilometres Travelled (VKT) per annum on Sydney's regional road network.

NOISE AND VIBRATION

Issues relating to:

- Noise Modelling;
- Construction Noise disturbance outside standard construction hours;
- Night time Noise and Vibration disturbance; and
- Rail Noise;

were raised in submissions by:

- Penrith City Council;
- Environmental Protection Agency (NSW EPA);
- Department of Planning, Industry and Environment (DPIE);
- Transport for New South Wales; and

- One public submission.

In response to the issues raised AECOM have updated the Noise and Vibration Impact Assessment (NVA) to assess the performance of reach stacker soft landing technology has also been tested to assess the mitigation effects on night time sleep disturbance impacts during operation and rail noise has been considered. In addition, the operational change of relocating the heavy vehicle access to Forrester Road has also been modelled to assess potential impacts on the residences to the south of the site.

The uses of soft landing technology reduces the exceedances in sleep disturbance criteria to acceptable levels. In addition, the use of rubber dampeners on reach stackers will further mitigate noise levels for night time sleep disturbance. Once noise testing and monitoring has been undertaken during the first 12 months of operation, comprehensive assessment of the residential buildings and noise attenuation requirements can be properly assessed.

Noise attenuation facilities are also required to mitigate impacts on the properties to the south of the site.

SOIL AND WATER

Issues relating to water quality and stormwater management were raised in submissions by:

- Penrith City Council;
- Environmental Protection Agency;
- Department of Planning, Industry and Environment;
- Department of Planning, Industry and Environment – Lands, Water and Department of Industries;
- Blacktown and Districts Environmental Group Inc; and
- Charter Hall

In response to comments made in the submissions, BG&E undertook additional site investigations and stormwater modelling to inform the Post Exhibition revision of the Stormwater Management Report and the preparation of a Dam Dewatering Plan report for the purposes of addressing these concerns as outlined below:

- Provide an alternative water quality solution that results in the exceedance of PCC water quality compliance;
- Justify the onsite detention (OSD) position concluding that OSD is not required as the site's peak flow will pass prior to the overall peak flows of Little Creek;
- Attenuation of smaller events will be incorporated into the treatment train to assist in protecting the geomorphic values of the receiving waterways;
- A 1000m² sediment and bio-retention basin is proposed as a part of the treatment train to manage water quality between the pit and pipe network and Little Creek thereby negating the need to use a vegetated swale as a part of the treatment train;
- A drainage pipe is proposed to run along the eastern boundary outside the existing drainage easement to convey the pre-development overland flow paths from the upstream catchments

northward for discharge into Little Creek to protect development and adjacent properties to unreasonable increase in exposure to flood events and maintain pre and post flow paths for the Sydney Trains drainage easement;

- Prepare a Dam Dewatering plan to address dewatering concerns associated with re-use of the existing former sediment basin for water quality facilities.

FLOODING

Comments relating to localised flooding and impacts on adjoining properties were raised in submissions by:

- Penrith City Council;
- Department of Planning, Industry and Environment; and
- Charter Hall.

To respond to comments made in the submissions, BG&E undertook additional site investigations and flood modelling to inform the Post Exhibition revision of the Flood Impact Assessment report for the purposes of addressing these concerns as outlined below:

- Describe the updates made to Penrith City Council's flood model of Little Creek to make fit-for purpose for the assessment of the proposed development;
- Understand flood risks to the existing site and identify potential flood risks to the future development;
- Identify key development constraints in regard to flooding;
- Establish any flood mitigation measures required to minimise flood impacts to the development itself and the surrounding area; and
- Consider potential flood management and evacuation options for the site.

In considering the above matters it can be concluded from the updated assessment that the proposed development is not considered to expose any adjacent properties to unacceptable levels of risk or events that will unreasonably increase flood hazard or risk to other properties.

CONTAMINATION

Submissions lodged by NSW EPA and Penrith City Council sought further sampling and report updates as follows:

- Further sampling of Stockpile SP3 to address comments by the NSW EPA and to fully characterise the stockpile with a quantitative asbestos assessment; and
- A site walkover and further sampling of the railway corridor to address comments by Penrith City Council in the Notice of Exhibition.

Additional investigation and reporting confirmed that the site can be made suitable for the proposed development subject to:

- the successful remediation and validation of asbestos impacted soil at PAEC 1, located in the far northern portion of the site (in the location of the proposed light vehicle access road); and
- onsite management of specific site soils in relation to pesticide, metal and PAH impacts.

An updated Remediation Action Plan (RAP) and an Interim Environmental Management Plan (Interim EMP) outline the strategy (including delineation, excavation and validation) for onsite containment of soils requiring remediation within a dedicated containment cell. There are also ongoing control measures to aid in the management of the risks associated with the proposed containment cell and the site to protect human health and the environment.

No design or operational changes are required to respond to the findings of further contamination investigations. The development site has now been fully investigated for contamination to EPA standards and remediation and management of contamination during construction is documented in the updated RAP and Interim EMP.

CONSTRUCTION

Comments relating to perceived impacts from the proposed construction were raised in submissions by:

- Penrith City Council;
- Department of Planning, Industry and Environment; and
- Charter Hall.

To respond to comments made in submissions, Urbanco have prepared an Extended Work Hours Statement (EWHS) and all documentation that refers to the construction program have been updated. Whilst there are no design or operational changes that have resulted from the additional investigation and reporting, the EWHS provides clarity in the scheduling of construction works, the type of works proposed during the extended works period, an assessment of noise impacts in accordance with the Interim Construction Noise Guideline and site access for construction.

The post exhibition noise assessment has been updated to include assessment of night time noise impacts from extended hours construction activities. The assessment defines a works area within the development site where there is no noise impact from extended hours construction works on sensitive receivers due to imposing adequate separation distances (minimum 350m). Importantly, there is no impact on nearby residences from the proposed night time construction works due to the separation distance for construction activity during the extended works period.

AIR QUALITY

Comments relating emissions and modelling of plant equipment were raised in submissions by:

- Penrith City Council;
- NSW Environmental Protection Agency; and
- Charter Hall.

To respond to comments made in submissions, AECOM undertook additional investigations to inform the updated Air Quality Impact Assessment, however no design or operational changes have resulted from the additional investigation and reporting.

It has been confirmed that the modelling conditions considers the worst case scenario additional

modelling of the locomotive fleet has been undertaken. As documented in the updated Air Quality assessment, St Marys facility is committed to the Industry Code of Practice and non-road emissions complying with Euro III emissions (for non-locomotive sources) and Tier 0+ with Upgrade kits (following the next major Locomotive overhaul). The AQIA has been modelled based on the Locomotives and Non-road diesel vehicle expected to be used for the project. Minimum standards assumed include Tier 0+ for Locomotives and Euro III for non-road diesel vehicles. In addition, air quality impacts have been better illustrated with the addition of contour mapping.

BIODIVERSITY

Comments relating to biodiversity impacts were in submissions by:

- NSW DPIE – Environment, Energy and Science Group; and
- Blacktown and Districts Environmental Group Inc.

An updated Biodiversity Development Assessment Report (BDAR) and a Dam Dewatering Plan have been prepared to address comments made in submissions. The BDAR reassesses the modified development footprint and there has been a reduction in impact on some of the higher value vegetation types, which reduces the value of credits required for biodiversity offsets.

UPDATED PROJECT DESCRIPTION

The key built form elements of the proposed development remain unchanged from the exhibited EIS and include the following works:

- Construction of hardstand areas for container storage and laydown, rail and vehicle loading and unloading areas;
- Construction of new internal access roads providing separate ingress and egress for light and heavy vehicles as follows:
 - to/from Lee Holm Road for light vehicles; and
 - to/from Forrester Road for heavy vehicles;
- Construction of:
 - Wash bay;
 - Office building pad site;
 - Fuel storage area;
 - Container workshop (repair bay) building pad;
 - Transport workshop building pad;
 - Staff and visitor light vehicle parking bays (adjoining operational); and
 - Heavy vehicle parking bays;
- Ancillary development includes:
 - Signage and landscaping;
 - Utility services to support the proposed development including drainage, potable water, water (for firefighting purposes), power, data, security and sewerage;
 - Minor realignment of a section of the Sydney Trains high voltage overhead power line at the southern end of the subject site;

- Minor clearing of areas of vegetation regrowth, remediation (if required) and minor earthworks; and
- Electrical transformer.
- Construction in three stages

In addition to the built form elements outlined above, no changes are proposed to:

- Operational and construction job forecasts;
- Operating days and hours;
- Container volumes;
- Light and heavy vehicle trip volumes;
- The extended work hours during the construction phase.

Key changes to the design and operations are summarised as:

- Revised site layout and development footprint, including:
 - The development area of 9.6ha is essentially the same land area with modification of development footprint as a result of:
 - changing the access from Lee Holm Road from heavy vehicles to light vehicles; and
 - inclusion of additional land for a bio retention filtration basin at the northern end of the development site, abutting Little Creek;
 - Light vehicle access from Lee Holm Drive (previously from Forrester Road);
 - Heavy vehicle access from Forrester Road (previously from Lee Holm Road);
- Revised route for heavy vehicle movements (Option 4);
 - Provision for two (2) B Double vehicles to wait on site prior to exiting to Forrester Road, to allow oncoming traffic to enter the site;
 - Controlled heavy vehicle access at Forrester Road entrance;
 - Staff and visitor car parking relocated to co-locate with operational and administrative buildings;
 - Relocation of the fuel storage facility to abut operational buildings;
 - Relocation of the administrative office building, away from operational buildings and activity; and
 - Construction of an acoustic fence along the southern boundary of the access leg to Forrester Road.

Refer to Appendix 2 – Concept Layout and Staging Plans.

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16. CONSTRUCTION PROGRAM (UPDATED)

1. INTRODUCTION

SITE planning + design (SITE), Urbanco and the broader project team have been engaged by Pacific National Pty Ltd to obtain relevant approvals for State Significant Development Ref: SSD 7308 for the development of Lot 2 Forrester Road, Lots 3 Lee Holm Road and Lot 196 Christie Street, St Marys (the ‘subject site’) for the St Marys Freight Hub, an intermodal container terminal for the receipt of full (and the return of empty) shipping containers from Port Botany by rail and distribution to Greater Western Sydney by road.

1.1 PURPOSE OF THIS REPORT

This Response to Submissions (RTS) report is submitted on behalf of Pacific National in relation to the proposed St Marys Freight Hub SSD 7308 at Lot 2 Forrester Road, Lots 3 Lee Holm Road and Lot 196 Christie Street, St Marys.

The RTS should be read in conjunction with the Secretary’s Environmental Assessment Requirements (SEARs) dated 23 October 2018 and the Environmental Impact Statement (EIS), including consultant technical reports, prepared by SITE and Urbanco (dated May 2019, Issue 4C).

The EIS was publicly exhibited from 31 May 2019 to 27 June 2019.

In total 16 submissions were received, including ten (10) government agency submissions, one (1) local government submission, one (1) special interest group submission and four (4) corporate and individual submissions. The submissions are summarised as:

- 3 support the proposed development and provide comments;
- 3 object to the proposed development and provide comments; and
- 10 provided comments and/or sought further clarification/information.

The submissions and responses to the issues and matters raised are detailed in the following report.

The submissions raised the following issues:

- Transport routes & impacts
- Traffic generation
- Noise (night time sleep disturbance)
- Water Quality
- Flooding & stormwater management
- Contamination
- Extended work hours
- Air quality
- Biodiversity

Pursuant to clause 85A(2) of the EP&A Regulation, the Department of Planning Industry and Environment (the Department) the following report responds to the issues raised and details how the proposed development and operations have been modified to mitigate impacts, where relevant.

1.2 STRUCTURE OF THIS REPORT

The format of the RTS report includes the following sections:

- Executive Summary – provides a high-level overview of the proponent, the strategic project objectives, the proposed development, the outcomes of the public exhibition period and how the development and operations have been modified to responded to key issues raised in submissions.
- Section 1 Introduction – outlined the purpose and structure of the RTS report.
- Section 2 Overview of The Exhibited Project – provides an overview of the subject site and the exhibited project, including key issues raised during the preparation of the EIS and design responses proposed.
- Section 3 Analysis of Submissions – provides a high-level summary and graphical representation of submissions received and the issues raised.
- Section 4 Actions Taken During and After Exhibition – Engagement: details consultation with Penrith City Council and the community.
- Section 5 Actions Taken During and After Exhibition – Further Environmental Assessment: details the further investigations undertaken to respond to the issues raised, key findings, recommendations and design responses.
- Section 6 Summary of Proposed Project Modifications – outlines proposed project modifications in response to issues raised in submissions.
- Section 7 Updated Project Description – describes the proposed development, highlighting key elements and operations.
- Section 8 Response to Submissions – describes detailed response to submissions issues.
- Section 9 Post Exhibition Project Evaluation – provides summary of submissions issues, environmental assessments, design changes and evaluation of overall project.

2. OVERVIEW OF THE EXHIBITED PROJECT

The St Marys Freight Hub EIS (dated May 2019, Issue 4C) outlined Pacific National Pty Ltd's (the 'Applicant') intent to redevelop 9.6ha of land zoned 'IN1 General Industrial' under the Penrith Local Environment Plan 2010 (Penrith LEP 2010) at Christie Street, Lee Holm and Forrester Roads, St Marys (the 'subject site') for the development of the St Marys Freight Hub (the 'proposed development').

The site is located within the suburb of St Marys, which comprises a mix of commercial, industrial, residential, recreation and public purpose uses, including:

- Lee Holm Road, Forrester Road and the Dunheved Business (Industrial) Park to the east and north-east of the subject site;
- Christie Street, the Dunheved Business (Industrial) Park and the Dunheved Golf Course are located to the north.
- South Creek, the Colonial Golf and Footgolf Course, the Troy Adams Archery Field and areas of public recreation to the west;
- the T1 Great Western passenger and freight rail line, the St Marys Senior High School sports fields, the Kingsway public playing fields and a pocket of residential dwellings to the south; and
- the St Marys passenger train station and associated multi-level car parking station and the St Marys town centre, comprising commercial and retail services and facilities and car parking, to the south east.

Refer to **Figure 1 – Local Context Plan** and **Figure 2 – Aerial Site Plan**.

2.1 SITE DESCRIPTION

The land subject to the EIS comprises a 9.6ha portion (the 'development site') of the broader 22.028ha site (the 'subject site') owned by Pacific National Properties Operation Pty Ltd, Lendlease and Pacific National (NSW) Pty Ltd.

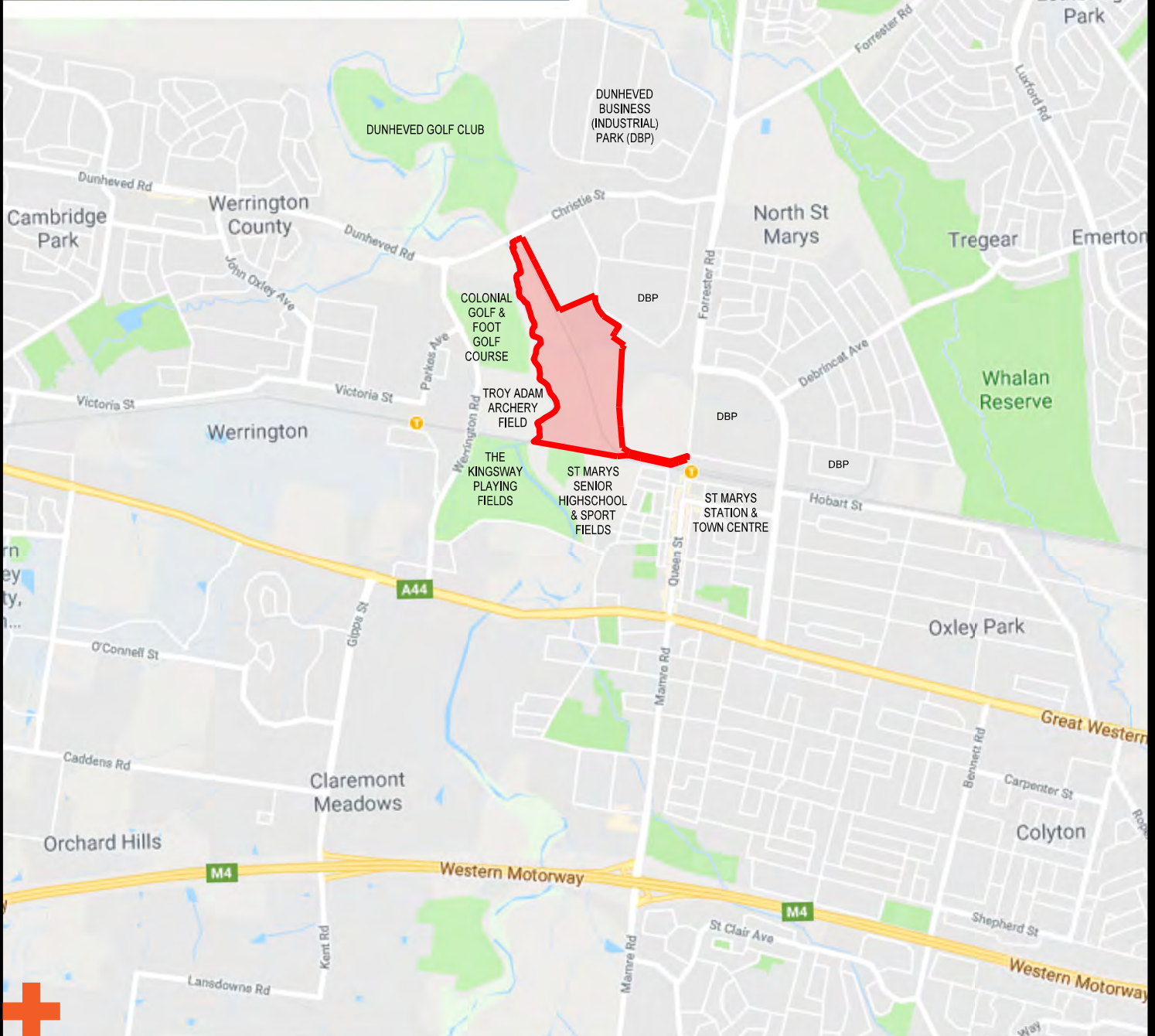
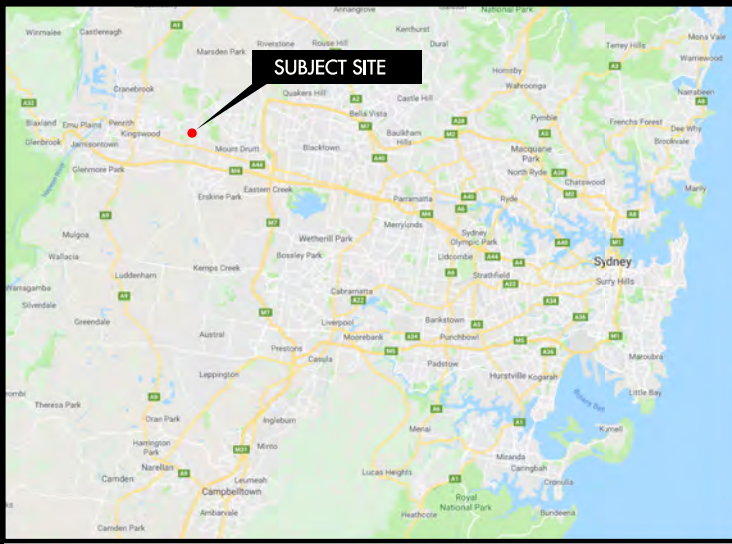
The lots subject to the proposed development are described as:

- Lot 2 Forrester Road on DP 876781;
- Lot 3 Lee Holm Road on DP 876781; and
- Lot 196 Christie Street on DP 31912 (comprising the rail siding).

There are no changes to the land details as submitted in the initial EIS.

FIGURE 1 LOCAL CONTEXT PLAN

Doc ref: 190313 17 103-5-001 Local Context Plan



WWW.SITEPD.COM.AU

ST MARYS FREIGHT HUB

CLIENT : Pacific National
 PLAN NO. : 17-103-5-001
 REVISION : A
 DATE : 13 March 2019
 DRAWN : BDL
 SCALE : 1:35,000@A4

LEGEND
 BROADER SITE

NOTE
 Base data sourced from Google Maps
 Areas and dimensions shown are subject to final survey calculations.
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LEIGHTON
 Land development DRAFTING & DESIGN

SITE

PLANNING + DESIGN

LOCAL CONTEXT PLAN



0 350 700 1050 1400m

FIGURE 2 AERIAL SITE PLAN

Doc ref: 190912 17 103-5-001 Aerial Site Plan



WWW.SITEPD.COM.AU

ST MARYS FREIGHT HUB

CLIENT : Pacific National
PLAN NO. : 17-103-5-001
REVISION : A
DATE : 13 March 2019
DRAWN : BDL
SCALE : 1:7,500@A4

NOTE
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LEIGHTON
Land development DRAFTING & VISUALS

LEGEND

BROADER SITE
 SUBJECT SITE
 LOT NUMBERS
 BOUNDARIES

SITE

PLANNING + DESIGN

AERIAL SITE PLAN



0 75 150 225 300m

2.2 OPERATIONAL OVERVIEW

The 9.6ha development site is proposed to be developed for the operation of the St Marys Freight Hub, an intermodal (road and rail) terminal and container park, with an operational capacity equivalent to 301,000 TEU (twenty-foot equivalent units shipping containers) annual throughput and associated container handling operations.

No operational activities outside of the development site or on adjoining land owned by Pacific National are proposed by this development.

The proposed St Marys Freight Hub will be supported by a dedicated port shuttle service from Port Botany, with the road transport leg commencing at the St Marys Freight Hub. **Refer to Figure 3 – Regional Context Plan and Figure 4 – Container Freight Flow Chart.**

The St Marys Freight Hub is proposed to operate up to 24 hours per day, 7 days per week, with 80% of the heavy vehicle movements expected to occur between 6am and 6pm, 7 days a week.

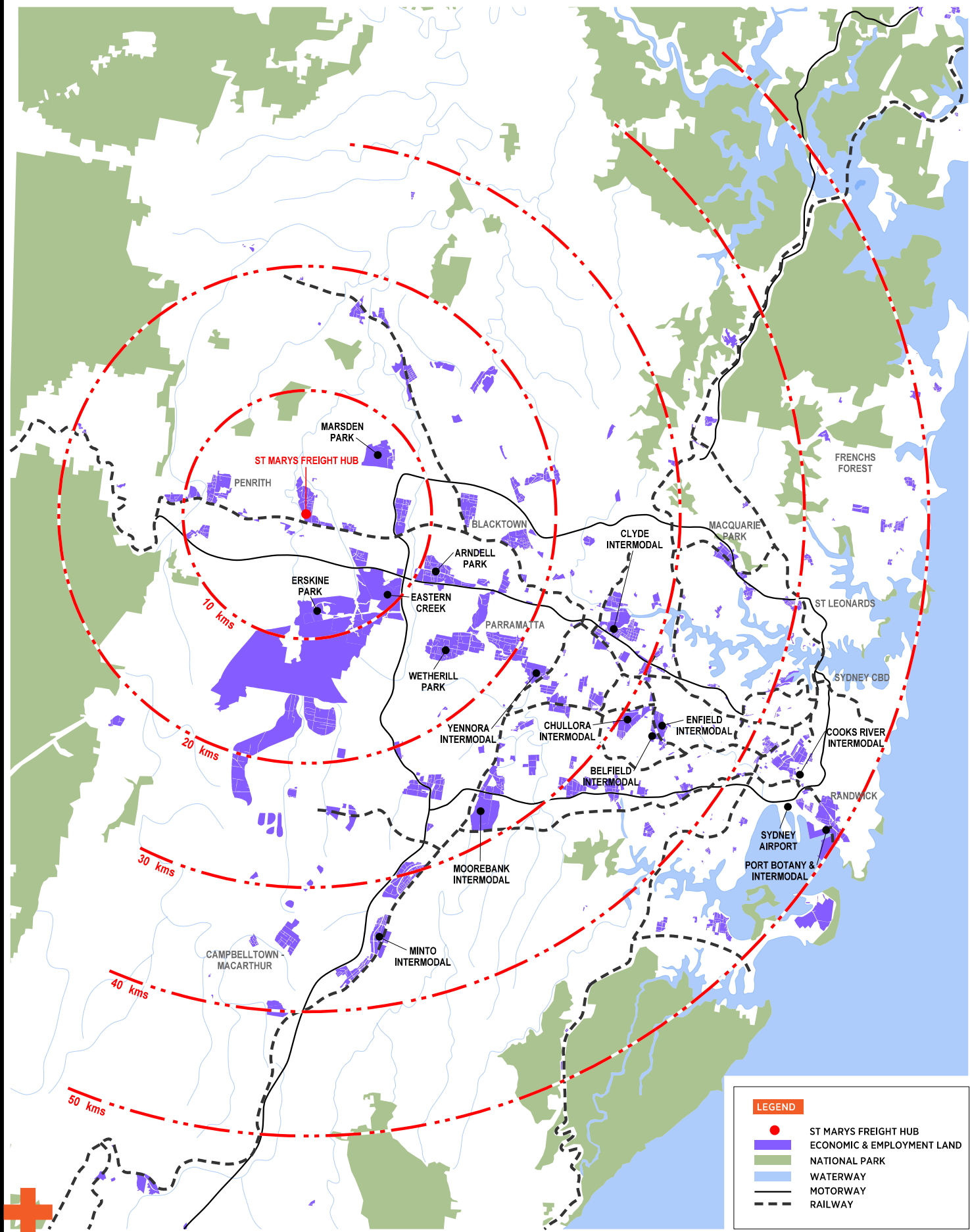
Operations at the St Marys Freight Hub will include receiving full import containers from Port Botany by rail and transporting full containers from St Marys to customers in Western Sydney by truck. Trucks return to St Marys with empty containers, which are then returned to Port Botany by rail. Transport routes between St Marys and the customers will utilise Classified State and Regional Roads and approved heavy vehicle routes designated for B Double vehicles. There is no use of local residential streets.

Freight forwarding from St Marys to the customer (such as those located at Marsden Park, Eastern Creek, Erskine Park and Wetherill Park, amongst others) will generate up to a maximum of 436 total truck movements per day (i.e. 218 truck movements in and 218 truck movements out), based on conservative estimates. The conservative volumes provided are likely to be higher than the actual average day site traffic generation as only transport by semi-trailers has been assumed, where B-Doubles will also be used and have a greater carrying capacity.

The proposed development will form an important part of a new port shuttle service to move containers to and from Port Botany. The port rail shuttle service and the Freight Hub will significantly increase the volume of freight being moved by rail, relieving the regional and state road network, including primary freight routes servicing Port Botany, of heavy vehicle and container freight traffic.

FIGURE 3 REGIONAL CONTEXT PLAN

Doc ref: 190313 17 103-5-001 Regional Context Plan



WWW.SITEPD.COM.AU

ST MARYS FREIGHT HUB

CLIENT : Pacific National

REVISION : A

DRAWN : BDL

PLAN NO. : 17-103-5-001

DATE : 13 March 2019

SCALE : 1:400,000@A4

NOTE

Base data sourced from LAND SUPPLY MONITOR - GREATER SYDNEY
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LEIGHTON
Land development DRAFTING & VISUALS

SITE

PLANNING + DESIGN

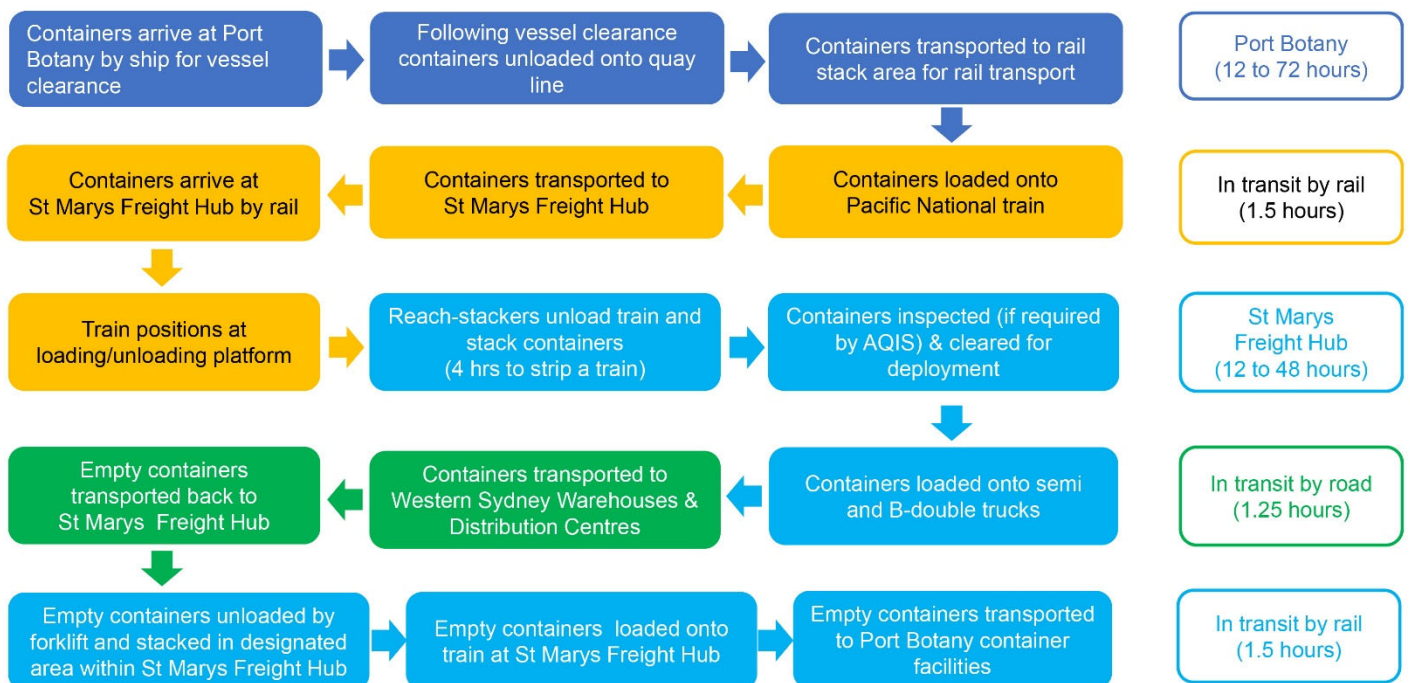
REGIONAL CONTEXT PLAN



0 4 8 12 16km

FIGURE 4 CONTAINER FREIGHT FLOW CHART

Port Botany to St Marys Freight Hub Container Freight Process Flow



2.3 KEY ELEMENTS

The exhibited development proposed the following works:

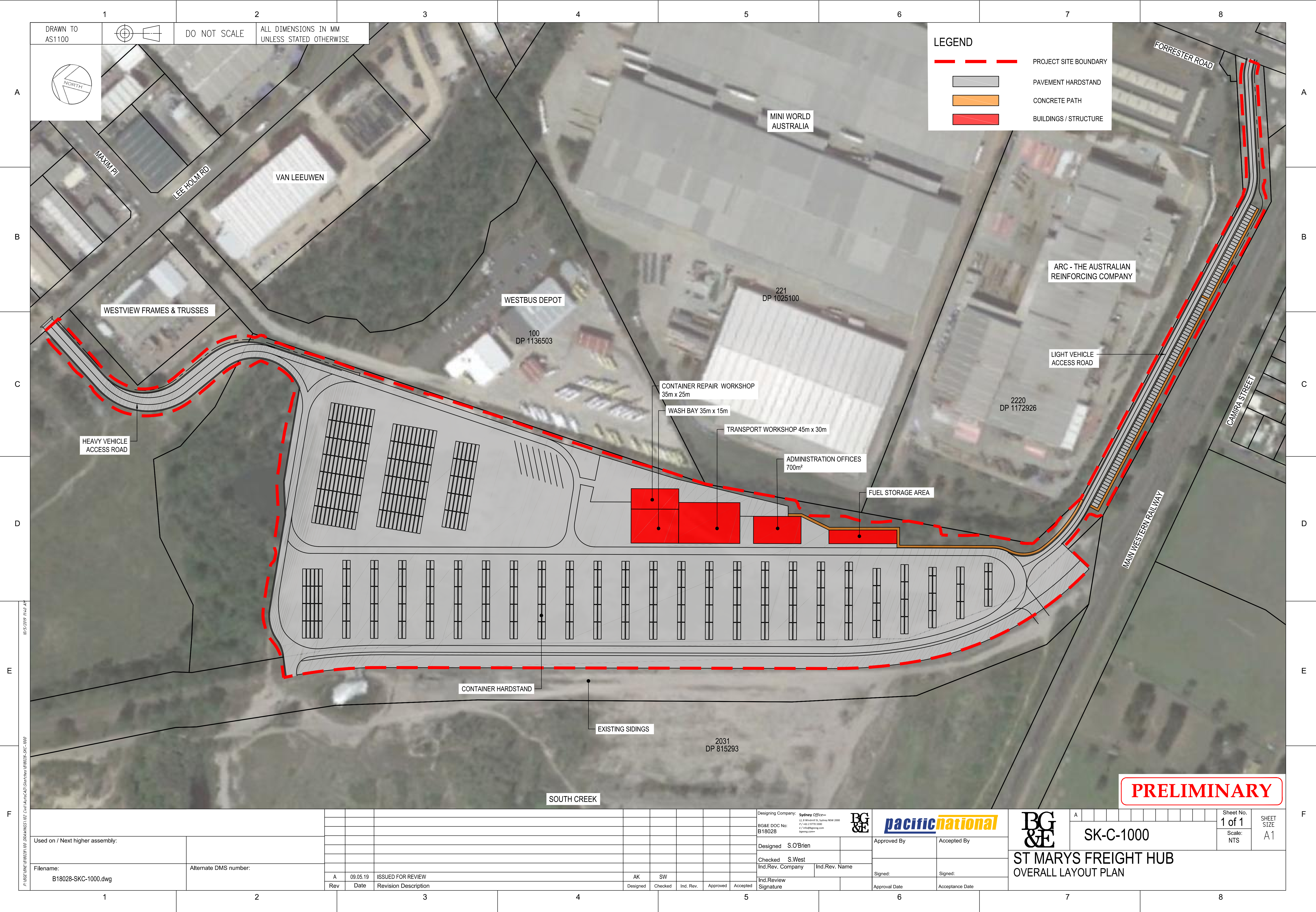
- Staged construction of hardstand areas for container storage and laydown, rail and vehicle loading and unloading areas;
- Construction of new internal access roads providing separate ingress and egress for light and heavy vehicles as follows:
 - to/from Lee Holm Road for heavy vehicles; and
 - to/from Forrester Road for light vehicles;
- Staged construction of:
 - Wash bay;
 - Office building pad site;
 - Fuel storage area;
 - Container workshop (repair bay) building pad;
 - Transport workshop building pad;
 - Staff and visitor light vehicle parking bays (parallel to the internal light vehicle access road connecting to Forrester Road); and
 - Heavy vehicle parking bays;
- Ancillary development includes:
 - Signage and landscaping;
 - Utility services to support the proposed development including drainage, potable water, water (for firefighting purposes), power, data, security and sewerage;
 - Minor realignment of a section of the Sydney Trains high voltage overhead power line at the southern end of the subject site;
 - Minor clearing of areas of vegetation regrowth, remediation (if required) and minor earthworks; and
 - Electrical transformer.

Refer **Figure 5 – Overall Development Plan - Exhibited**.

The development was proposed to be constructed in four (4) stages.

FIGURE 5 OVERALL DEVELOPMENT PLAN - EXHIBITED

Doc ref: 190509 BG&E Plan 3 - Site Layout_RevA



Used on / Next higher assembly:		Filename: B18028-SKC-1000.dwg		Alternate DMS number:		Designing Company: Sydney Office— 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		Sheet No. 1 of 1 Scale: NTS SHEET SIZE A1	
Rev	Date	Revision Description		Designed	Checked	Ind. Rev.	Approved	Accepted	ST MARYS FREIGHT HUB OVERALL LAYOUT PLAN		
A	09.05.19	ISSUED FOR REVIEW		AK	SW						

3. ANALYSIS OF SUBMISSIONS

3.1 STATISTICAL DATA

In total 16 submissions were received, including:

- 10 government agency submissions;
- 1 local government submission;
- 1 special interest submissions; and
- 4 corporate and individual submissions.

The position outlined in the submissions are summarised as:

- 3 support the proposed development and provide comments;
- 3 object to the proposed development and provide comments; and
- 10 provided comments and/or sought further clarification/information.

Refer to **Appendix 1 – Response to Submissions Matrix** and the figures below, which provide a graphical representation of statistical information about the submission received.

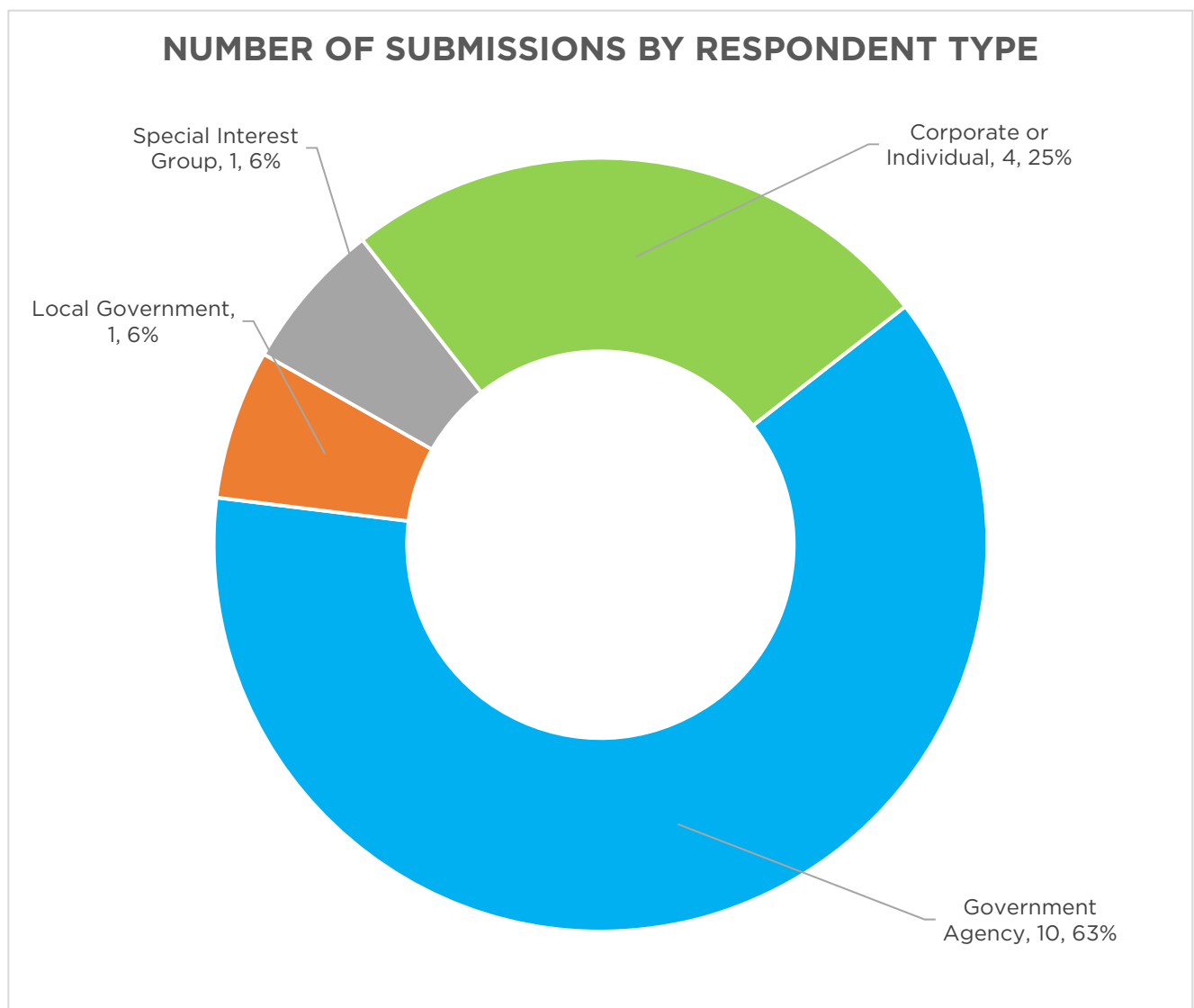


FIGURE 6 NUMBER OF SUBMISSIONS BY RESPONDENT TYPE

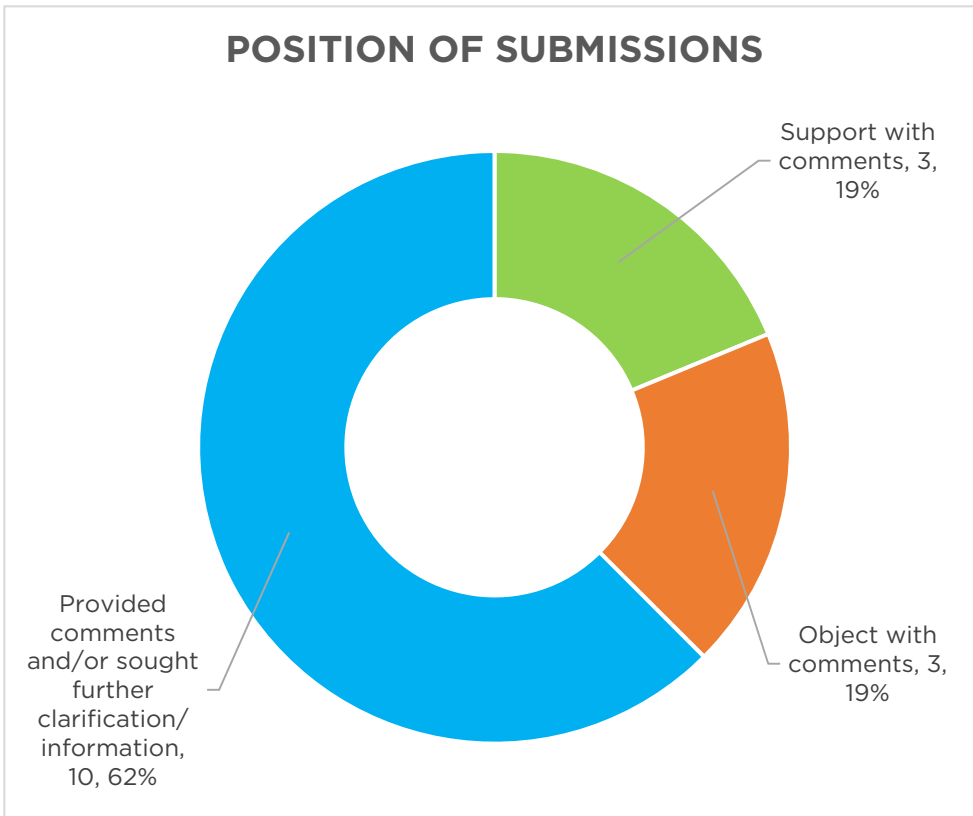


FIGURE 7 POSITION OF SUBMISSIONS

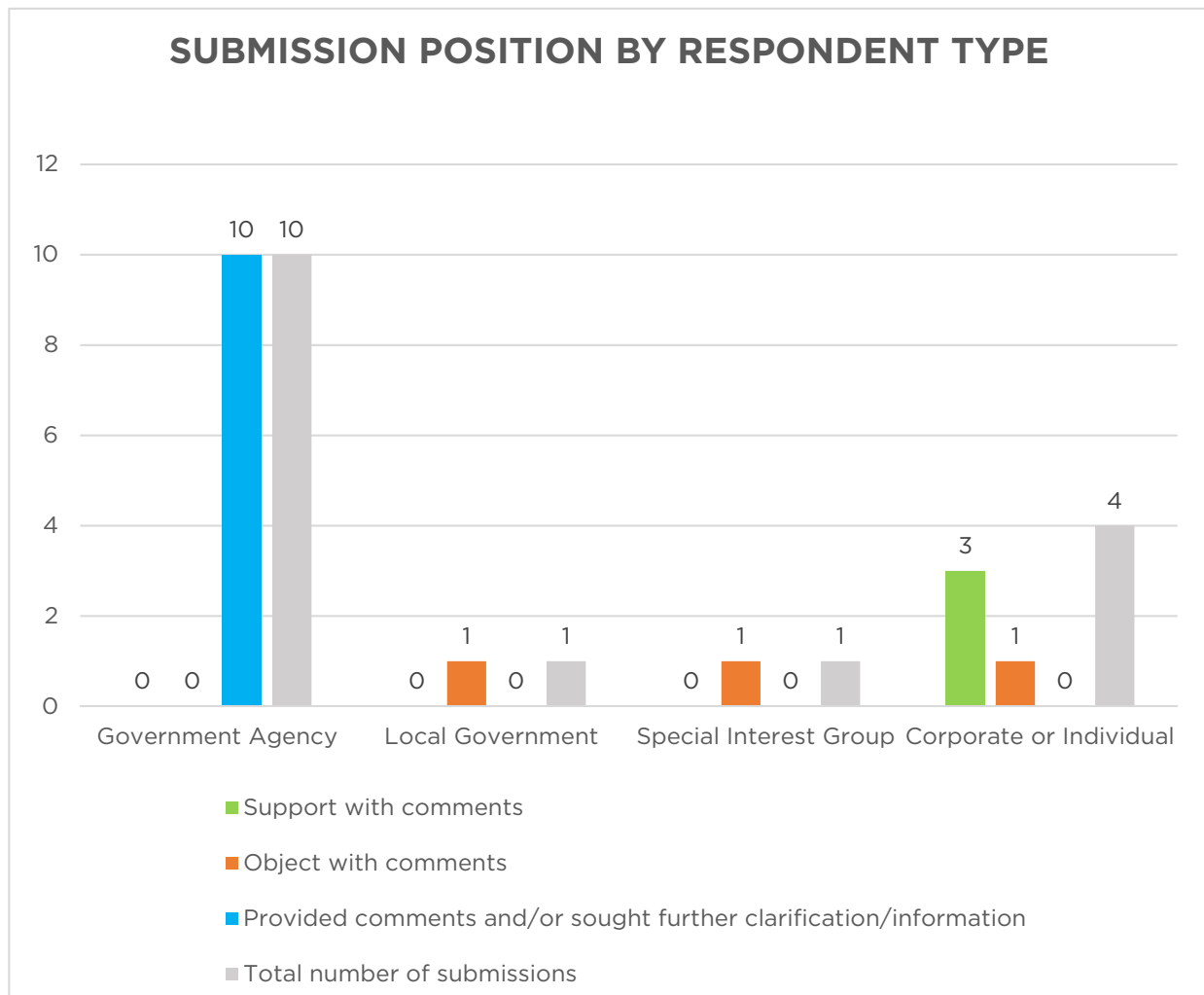


FIGURE 8 SUBMISSION POSITION BY RESPONDENT TYPE

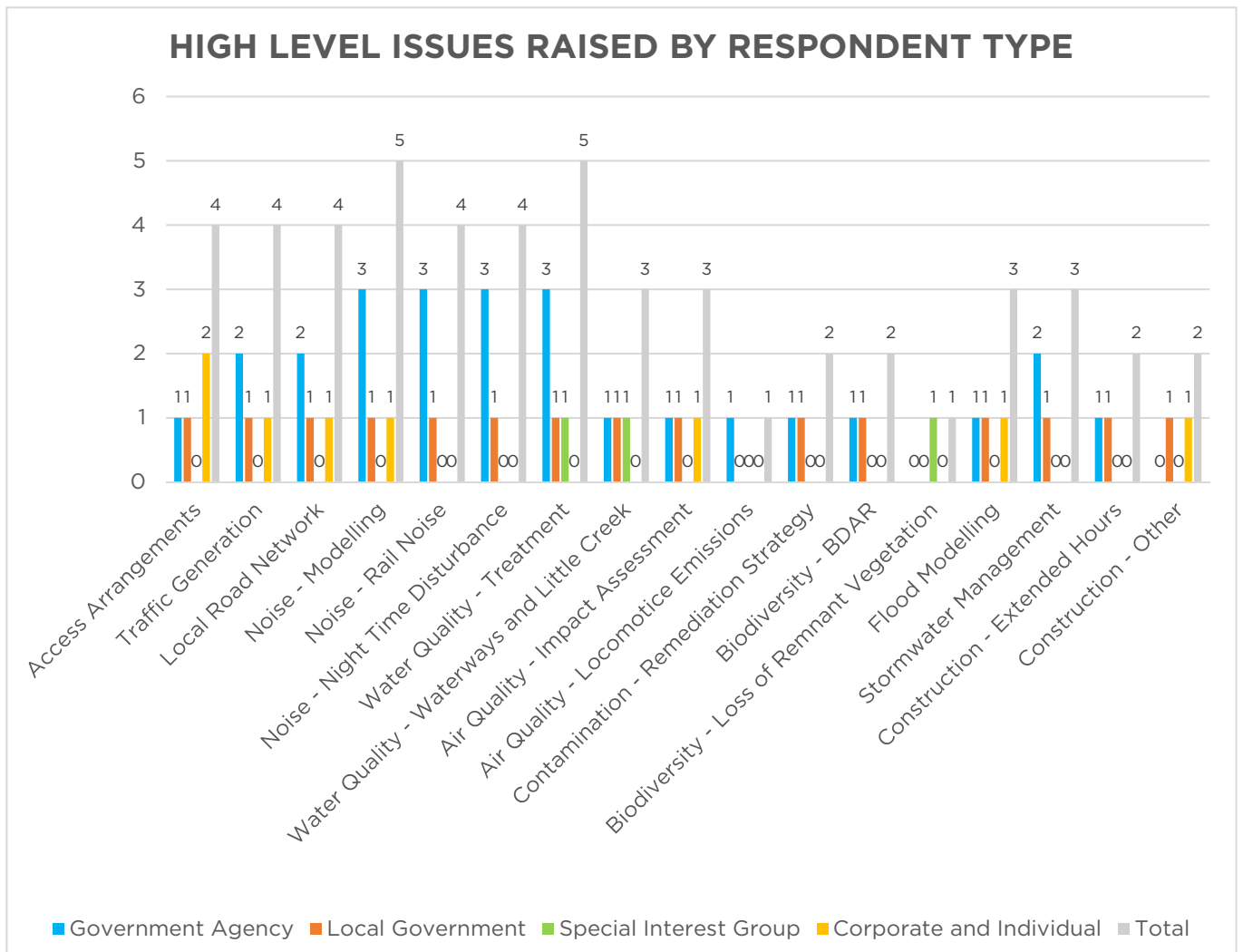


FIGURE 9 HIGH LEVEL ISSUES RAISED BY RESPONDENT TYPE

3.2 HIGH LEVEL CATEGORISATION OF ISSUES

Outlined below is a high-level categorisation of the issues raised in submissions, using the same heading groupings that were included in the EIS, where applicable, and **Appendix 1 – Response to Submissions Matrix** which outlines which submissions commented on these issues.

- **TRAFFIC AND TRANSPORT**
 - Transport routes and impacts
 - Traffic generation
- **NOISE AND VIBRATION**
 - Modelling
 - Rail noise
 - Night-time sleep disturbance
- **SOIL AND WATER**
 - Water quality treatment
 - Waterways and Little Creek
 - Stormwater management
- **FLOODING**
 - Flood modelling

- CONTAMINATION
 - Stockpile SP3
 - Railway corridor
 - Remediation strategy
- CONSTRUCTION
 - Extended work hours
 - Waste management
 - Construction program
- AIR QUALITY
 - Impact assessment
 - Locomotive and equipment emissions
- BIODIVERSITY
 - Net loss of ecological communities

TABLE 1 SUBMISSIONS SUMMARY MATRIX

SUBMITTER	VIEW	ONLINE FORM / LETTER / PETITION	ISSUES / COMMENTS																	
			TRANSPORT & TRAFFIC			ENVIRONMENTAL										ENGINEERING			CONSTRUCTION PHASE	
			TRANSPORT	TRAFFIC		NOISE			WATER QUALITY		AIR QUALITY		CONTAMINA TION	BIODIVERSITY		FLOODING MODELLING	STORMWATER MANAGEMENT	SERVICING	EXTENDED HOURS	OTHER
			ACCESS ARRANGEMENTS	GENERATION	LOCAL ROAD NETWORK	MODELLING	RAIL NOISE	NIGHT TIME NOISE DISTURBANCE	TREATMENT & SEDIMENT CONTROL	WATERWAYS LITTLE CREEK	IMPACT ASSESSMENT	LOCOMOTIVE EMISSIONS	REMEDIA TION STRATEGY	BDAR	LOSS OF REMNANT VEG					
LOCAL GOVERNMENT																				
PENRITH CITY COUNCIL	OBJ.	LETTER	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		*	*
GOVERNMENT AGENCY																				
NSW EPA	COM	LETTER				*	*	*	*		*	*	*				*			
NSW DPIE	COM	LETTER	*	*	*	*	*	*	*							*	*		*	
NSW DPIE – ENVIRONMENT, ENERGY AND SCIENCE GROUP	COM	LETTER												*						
NSW DPIE – LANDS WATER AND DEPARTMENT OF INDUSTRIES (DPI)	COM	LETTER							*	*										
NSW TRANSPORT, ROADS AND MARITIME SERVICES	COM	LETTER																		
TRANSPORT FOR NSW	COM	LETTER		*	*	*	*	*												
NSW RURAL FIRE SERVICES	COM	LETTER																		
AIR SERVICES AUSTRALIA	COM	LETTER																		
SYDNEY WATER	COM	LETTER																*		
ENDEAVOUR ENERGY	COM	LETTER																*		
SPECIAL INTEREST GROUP																				
BLACKTOWN & DISTRICTS ENVIRONMENTAL GROUP INC	OBJ.	ONLINE FORM							*	*					*					
CORPORATE AND INDIVIDUAL																				
CHARTER HALL	OBJ	LETTER				*					*					*				*
NSW PORTS	SUP.	LETTER																		
EMMANUEL STRATIOTIS	SUP.	ONLINE FORM	*																	
CON DIAKOS	SUP	ONLINE FORM	*	*	*															
TOTAL																				
LOCAL GOVERNMENT			1	1	1	1	1	1	1	1	1		1	1		1	1		1	1
GOVERNMENT AGENCY			1	2	2	3	3	3	4	1	1	1	1	1		1	2	2	1	
SPECIAL INTEREST GROUP						1				1					1					
CORPORATE AND INDIVIDUAL			2	1	1						1					1				1
TOTAL			4	4	4	5	4	4	5	3	3	1	2	1	1	3	3	2	2	2

4. ACTIONS TAKEN DURING AND AFTER EIS EXHIBITION - ENGAGEMENT

4.1 CONSULTATION STRATEGY

Pacific National is dedicated to active engagement for the St Marys Freight Hub and has formulated a Consultation Strategy with Primary Communication to establish a framework for engaging and consulting with government, business and community stakeholders, and to address the requirements outlined in the SEARs. The Consultation Strategy is a fluid document that is updated regularly to capture all consultation events during the lifecycle of the assessment process for St Marys. It is noted that an updated version of the communications strategy was submitted to the Department of Planning, Industry & Environment in late September 2019 to supplement the draft version exhibited with the EIS.

The Consultation Strategy outlines the engagement objectives and tools that have been established to ensure all stakeholders are informed and can provide input on the St Marys Freight Hub project. Refer **Appendix 3 – EIS Community Engagement Report and Ongoing Consultation Strategy**.

The engagement tools implemented for community engagement include:

- a community engagement website: stmarysfreighthub.com.au
- Users can obtain information about the project and register their email addresses to received regular email updates about the progress of the project.
- a toll free information line: **1800 137 929**
- email address for enquiries: enquiries@stmarysfreight.com.au
- **Public notices** in local newspapers
- **Community drop-in centres** in the St Marys town centre.
- Information letters sent by mail.
- The community engagement tools offer a range of methods to ensure all people in the community can access information on the St Marys Freight Hub project.

During public exhibition the following public notices and community information events were implemented by Pacific National:

- Public notices:
 - Nepean News – 7 June 2019
 - Western Weekender – 7 June 2019
 - Western Weekender – 14 June 2019
- Community information desks (St Marys Village):
 - Thursday 13 June 2019 – 3pm to 6pm
 - Friday 21 June 2019 – 10am to 2pm

Pacific National also hosted a Penrith Valley Chamber of Commerce event on 27 August 2019 at the Penrith RSL and provided a presentation to members of the Chamber. Approximately 100 Chamber members attended the function.

4.2 CONSULTATION AND ENGAGEMENT TO DATE

There has been various engagement and consultation steps commenced with government, business and the community.

4.2.1 ENGAGEMENT WITH PENRITH CITY COUNCIL

- Meeting with Penrith City Council on 27 August 2019.
- DPIE was present at meeting.
- Matters discussed at the meeting:
 - Revised St Marys Freight Hub design
 - Key design changes
 - Operations & function overview
 - Heavy vehicle access
 - Water quality & stormwater treatment
 - Traffic & Transport
 - Revised heavy vehicle access design
 - Traffic routes
 - Intersection analysis
 - Traffic Generation
 - Traffic generation methodology
 - Flood Management
 - DCP flood afflux standards
 - Evacuation shelter-in-place strategy
 - Water Quality
- Revised water quality treatment design
 - Other Submission Issues
 - Contamination
 - Noise impacts
 - Air quality

The meeting with Penrith City Council provided a good opportunity to discuss their submission issues, present design changes in response to the submissions issues and clarify some aspects of the proposed Freight Hub.

4.2.2 ENGAGEMENT WITH THE COMMUNITY

Primary Communication with Pacific National has actively been engaged with the community throughout public exhibition and post exhibition of the Freight Hub proposal. A summary of the community engagement snapshot is outlined below.

TABLE 2 COMMUNITY ENGAGEMENT SNAPSHOT

COMMUNITY ENGAGEMENT	
St Marys Freight Hub website - stmarysfreighthub.com.au	3,178 total visitors to the website 1,064 unique visitors to website



	18 registered users
1800 toll free information line	Less than 10 calls
enquiries@stmarysfreight.com.au	11 emails sent to the advertised email addresses about asking about traffic plans, employment opportunities, site maps and sub-contracting
Public notices have been placed in local newspapers on: <ul style="list-style-type: none"> Western Weekender – 16 November 2018 Western Weekender – 23 November 2018 Nepean News – 23 November 2018 Western Weekender – 30 November 2018 Nepean News – 7 June 2019 Western Weekender – 7 June 2019 Western Weekender – 14 June 2019 	
Community drop-in centres in the St Marys Village Shopping Centre for the local community were held on: <ul style="list-style-type: none"> Friday 23rd November: 11am - 3:00pm Thursday 29th November: 3:00pm - 7:00pm Saturday 1st December: 10am - 2:00pm Thursday 13 June 2019 – 3pm to 6pm Friday 21 June 2019 – 10am – 2pm 	23 attendees
Community stakeholder meetings	6 unique stakeholder meetings with interested community members
Information letters sent by mail	Over 90 stakeholder letters sent (including letters to government, council and business stakeholders)

Many of the above engagement tools continue to operate to maintain engagement with the community.

The EIS Community Engagement Report and Ongoing Consultation Strategy by Primary Communication provides a detailed account of the issues and responses pre-exhibition, during exhibition and following exhibition. A summary of the information sought and/or issues raised by the community include:

- Support of the project;
- Site plans;
- Location of the project;
- Hours of operation;
- Information on what is being built;
- Noise from operations and rail;
- Number of trucks on roads;
- Travel plans;
- Traffic and roads;
- Truck routes;
- Rail movement;
- Impacts on passenger services;
- Employment generation; and
- Employment opportunities.

The ongoing engagement with community stakeholders has been essential to enable Pacific National to continue listening to the community, address community issues and be informative for the broader community. There have been no objections from the local community opposing the project.



5. ACTIONS TAKEN DURING AND AFTER EIS EXHIBITION - FURTHER ENVIRONMENTAL ASSESSMENT

Further environmental assessments have been undertaken for the St Marys Freight Hub to address changes to the proposal and/or improve mitigation and management measures response to the proposal. A summary of the additional assessments is outlined in Table 3 below.

TABLE 3 SUMMARY OF FURTHER ENVIRONMENTAL ASSESSMENT

TECHNICAL ASSESSMENT	SUMMARY OF FURTHER ASSESSMENT	REASONS
Traffic and Transport Assessment Bitzios Consulting Appendix 4	<ul style="list-style-type: none"> Assess 3 additional heavy vehicle access & transport routes (Options 2, 3 and 4) Clarify traffic generation methodology 	<ul style="list-style-type: none"> Improved heavy vehicle access Reduced impacts Responding to submission issues
Noise and Vibration Impact Assessment AECOM Appendix 5	<ul style="list-style-type: none"> Assessment of revised heavy vehicle access from Forrester Road Performance assessment of soft landing technology & reassessment of night time sleep disturbance impacts 	<ul style="list-style-type: none"> Assess changed heavy vehicle access Adoption of improved mitigation measures Reduced impacts Responding to submission issues
Stormwater Management Plan BG&E Consulting Appendix 6	<ul style="list-style-type: none"> Redesign & reassessment of water quality treatment train. 	<ul style="list-style-type: none"> Responding to submission issues
Dam Dewatering Plan Eco Logical Australia Appendix 7	<ul style="list-style-type: none"> Additional assessment for reuse of former sediment basin for water quality purposes 	<ul style="list-style-type: none"> Improved response to mitigation measures
Flood Impact Assessment BG&E Consulting Appendix 8	<ul style="list-style-type: none"> Consideration of container buoyancy Clarification of evacuation procedures 	<ul style="list-style-type: none"> Responding to submission issues
Stockpile No.3 and Rail Corridor Investigation Douglas Partners Appendix 9	<ul style="list-style-type: none"> Additional contamination testing of Stockpile No.3 to EPA density standards More comprehensive assessment of rail corridor 	<ul style="list-style-type: none"> Responding to submission issues
Further Asbestos Investigation Douglas Partners Appendix 10	<ul style="list-style-type: none"> To delineate extent of asbestos and inform RAP methodology 	<ul style="list-style-type: none"> Responding to submission issues
Remediation Action Plan Douglas Partners Appendix 11	<ul style="list-style-type: none"> Refined methodology for remediating contaminants in response to findings in Further Asbestos Investigation 	<ul style="list-style-type: none"> Responding to submission issues
Draft Interim Environmental Management Plan Douglas Partners Appendix 12	<ul style="list-style-type: none"> To inform method & mitigation measures for asbestos during remediation & construction 	<ul style="list-style-type: none"> Improved response to mitigation measures
Biodiversity Development Assessment Report Eco Logical Australia Appendix 13	<ul style="list-style-type: none"> Revised BDAR to align with modified to development footprint 	<ul style="list-style-type: none"> Assess modifications to proposal Reduced impacts Responding to submission issues
Air Quality Impact Assessment AECOM Appendix 14	<ul style="list-style-type: none"> Benchmark modelling of locomotive fleet Clarification of worst cases scenario Updated assessment of non-road diesel plant & equipment 	<ul style="list-style-type: none"> Remodelling emissions to match confirmed locomotive and equipment specifications Responding to submission issues
Extended Work Hours Statement Urbanco Appendix 15	<ul style="list-style-type: none"> Additional detail on proposed extended hours works, scheduling, noise impacts, site access & approach 	<ul style="list-style-type: none"> Responding to submission issues



6. SUMMARY OF PROPOSED PROJECT MODIFICATIONS

6.1 CHANGES TO PROPOSED DEVELOPMENT, CONSTRUCTION AND/OR OPERATIONS

Key changes to the design and operations are summarised as:

- Revised site layout and development footprint, including:
 - The maintenance of the development area of 9.6ha resulting from:
 - Reduced development footprint as a result of changing the access from Lee Holm Road from heavy vehicles to light vehicles;
 - Increased development footprint as a result of the inclusion of additional land for a bio retention filtration basin at the northern end of the development site, abutting Little Creek;
 - Light vehicle access from Lee Holm Drive (previously from Forrester Road);
 - Heavy vehicle access from Forrester Road (previously from Lee Holm Road);
 - Provision for two (2) B Double vehicles to wait on site prior to exiting to Forrester Road, to allow oncoming traffic to enter the site under CCTV and stop sign control, with motion sensors that will be trigger low frequency alarm / light at gate to control safe access/egress vehicular movements;
 - Staff and visitor car parking relocated to co-locate with operational and administrative buildings;
 - Relocation of the fuel storage facility to abut operational buildings;
 - Relocation of the administrative office building, away from operational buildings and activity;
 - Construction of an acoustic fence along the southern boundary of the access leg to Forrester Road;
- Revised route for heavy vehicle movements (Option 4);
- Implementation of reach stacker soft landing technology to reduce noise associated with container stacking and loading/unloading;
- Revised stormwater management design to achieve water quality standards; and
- Preparation and implementation of a dewatering plan for the dam at the northern end of the development site.

6.2 CHANGES TO PLANS AND FIGURES

6.2.1 REVISED SITE LAYOUT AND DEVELOPMENT FOOTPRINT

Figures 10 and 11 below, illustrate the exhibited and updated site layout and development footprint, where the key changes are summarised in the table below. Refer to **Appendix 2**.

TABLE 4 SUMMARY OF SITE LAYOUT CHANGES

ELEMENT	EXHIBITED SITE LAYOUT	MODIFIED SITE LAYOUT
Area of development footprint	9.6ha	9.6ha
Light vehicle access	From Forrester Road	From Lee Holm Road
Heavy vehicle access	From Lee Holm Road	From Forrester Road
Internal access road from Forrester Road		Area and width increased to accommodate heavy vehicle widths, turning movements and waiting bays at site exit
Internal access road from Lee Holm Road		Area and width reduced, resulting in reduced impacts on vegetation and Little Creek and a smaller development area
Internal access roads		Reduced operational area dedicated to internal vehicle access roads
Staff and visitor car parking	Located within the access leg to/from Forrester Road, parallel to rail line	Co-located with operational and administrative buildings
Bio retention filtration basin		Included, resulting in an increased development area
Fuel storage		Relocated north to abut operational buildings
Administrative building		Relocated south, away from operational buildings
Truck parking	Dedicated truck parking bays	Allowance for dedicated truck parking bays
Pedestrian and cyclist access	Allowance for pedestrian and cyclist access from Forrester Road entry	Allowance for pedestrian and cyclist access from Lee Holm Road and Forrester Road entry

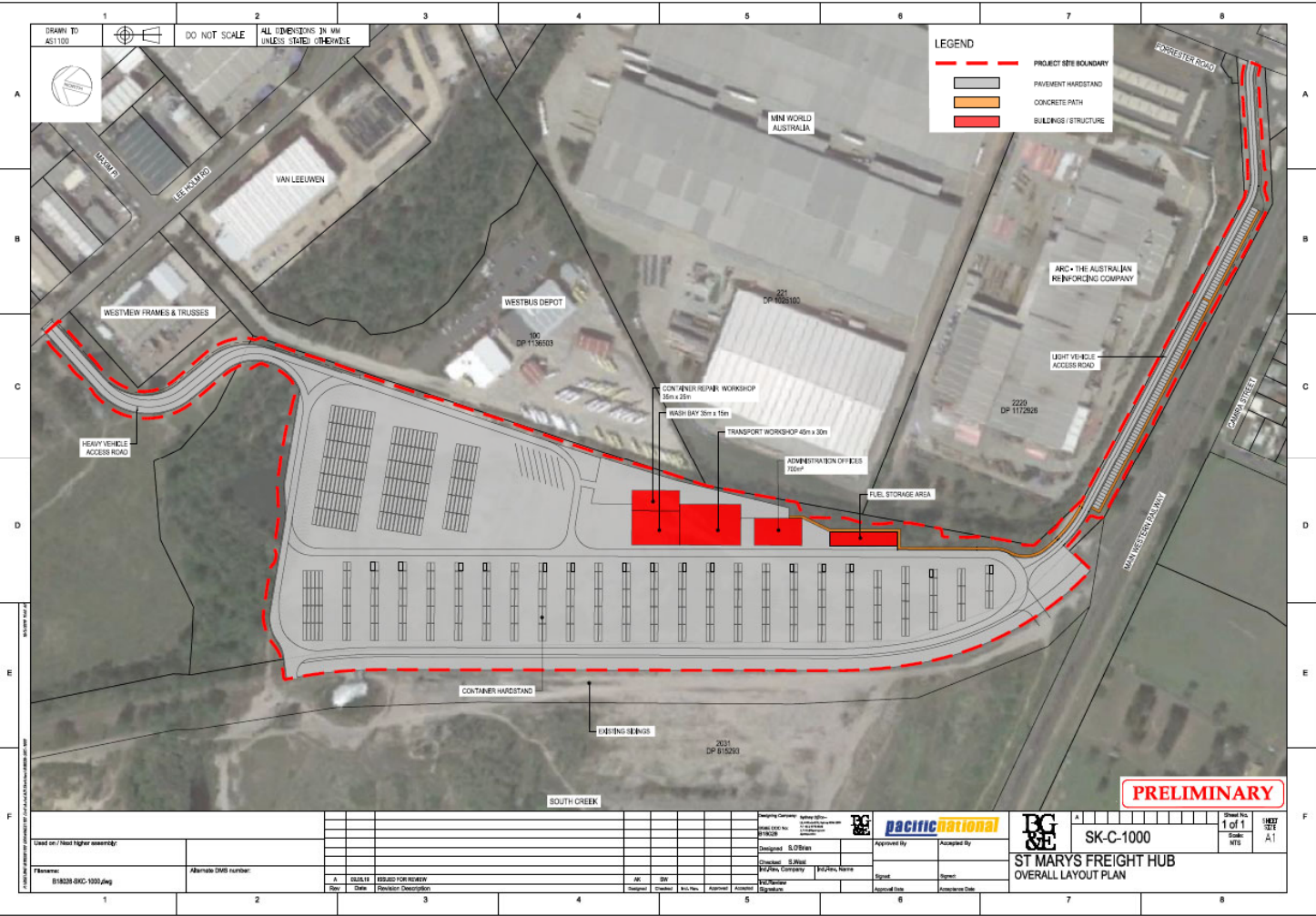


FIGURE 10 EXHIBITED – OVERALL LAYOUT PLAN

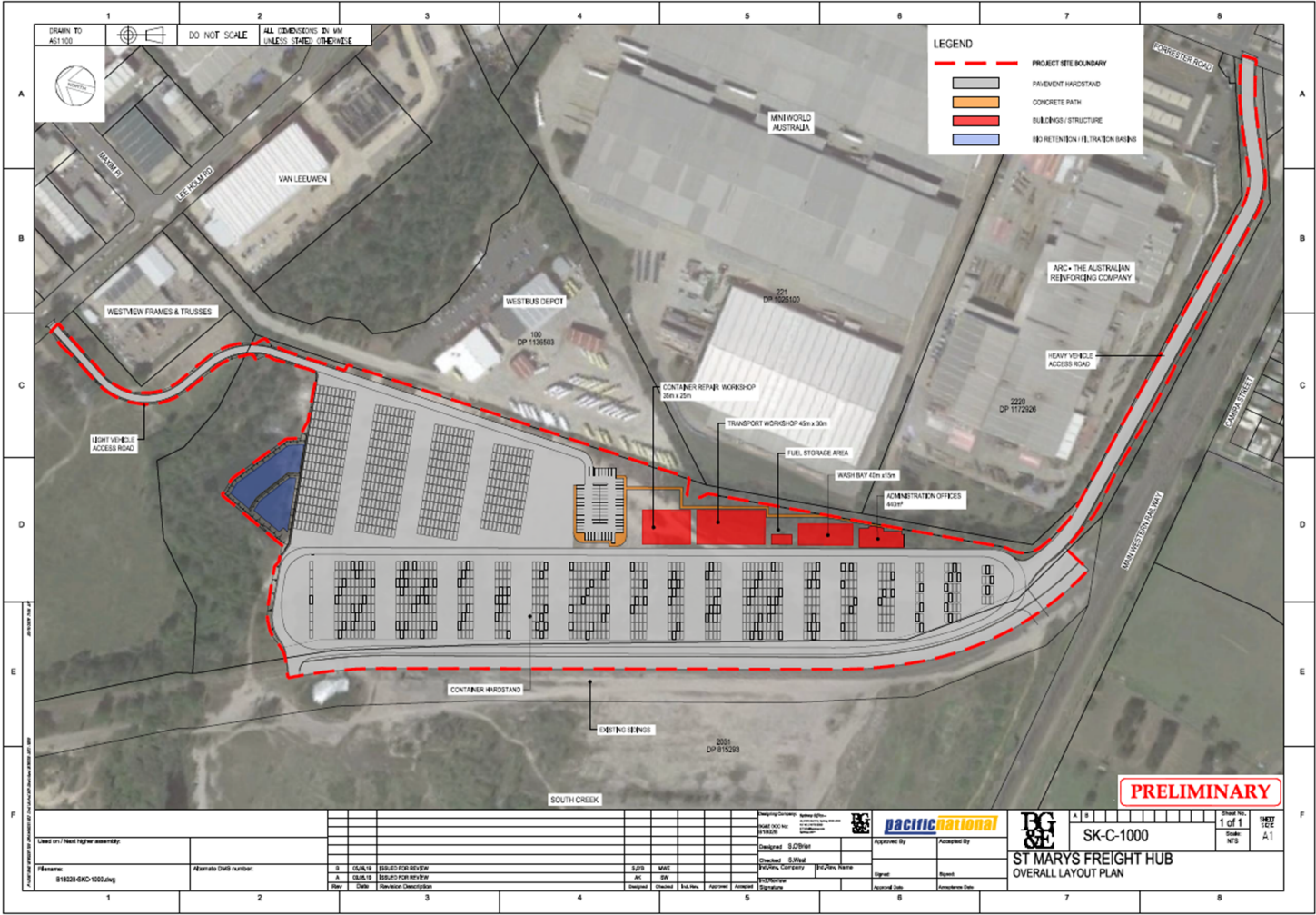


FIGURE 11 UPDATED – OVERALL LAYOUT PLAN

6.2.2 STAGING

Figures 12 - 15 below, illustrate the proposed staging at the time of exhibition and the updated staging plan. Refer to Appendix 2.

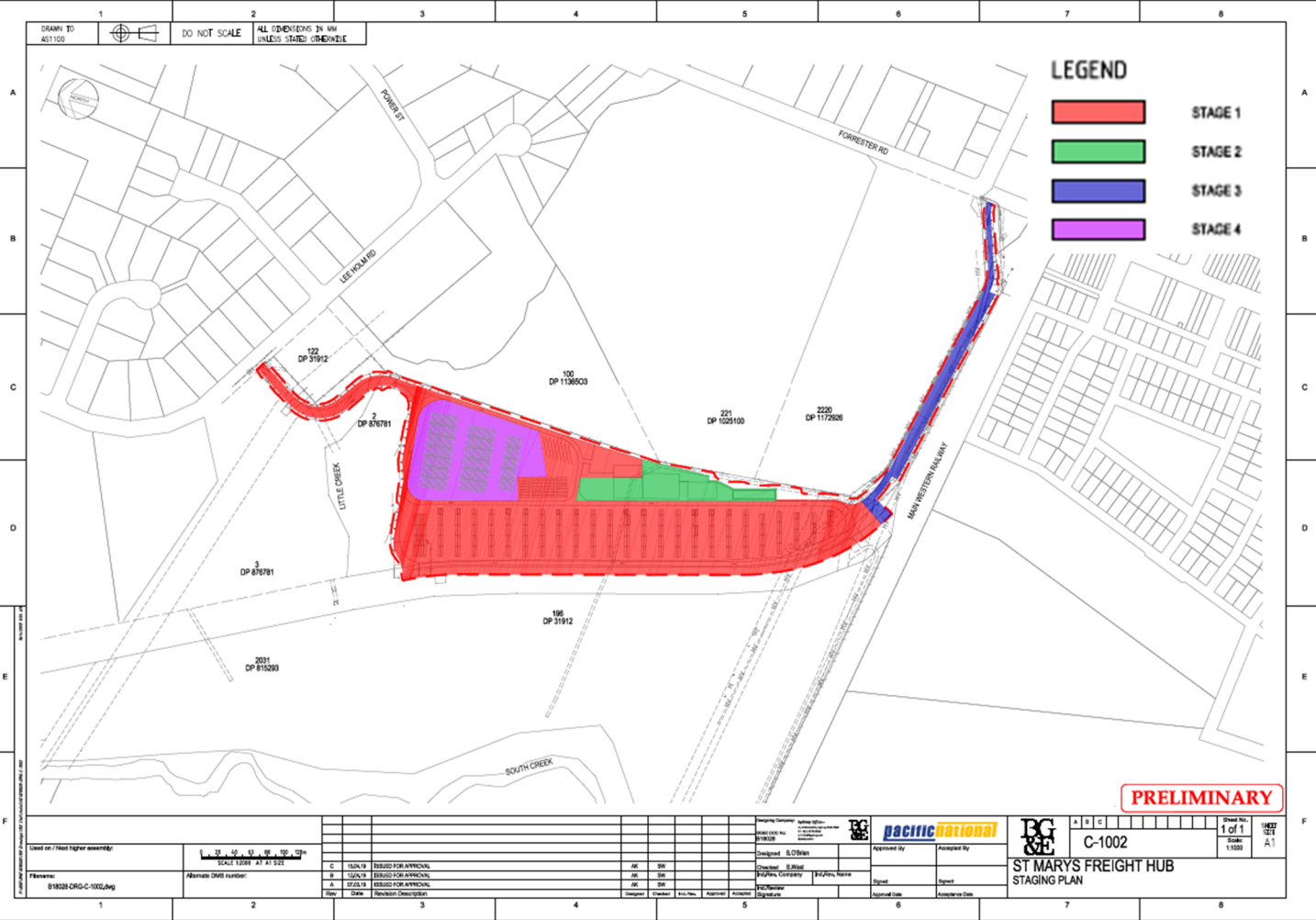


FIGURE 12 EXHIBITED – CONSTRUCTION STAGING PLAN

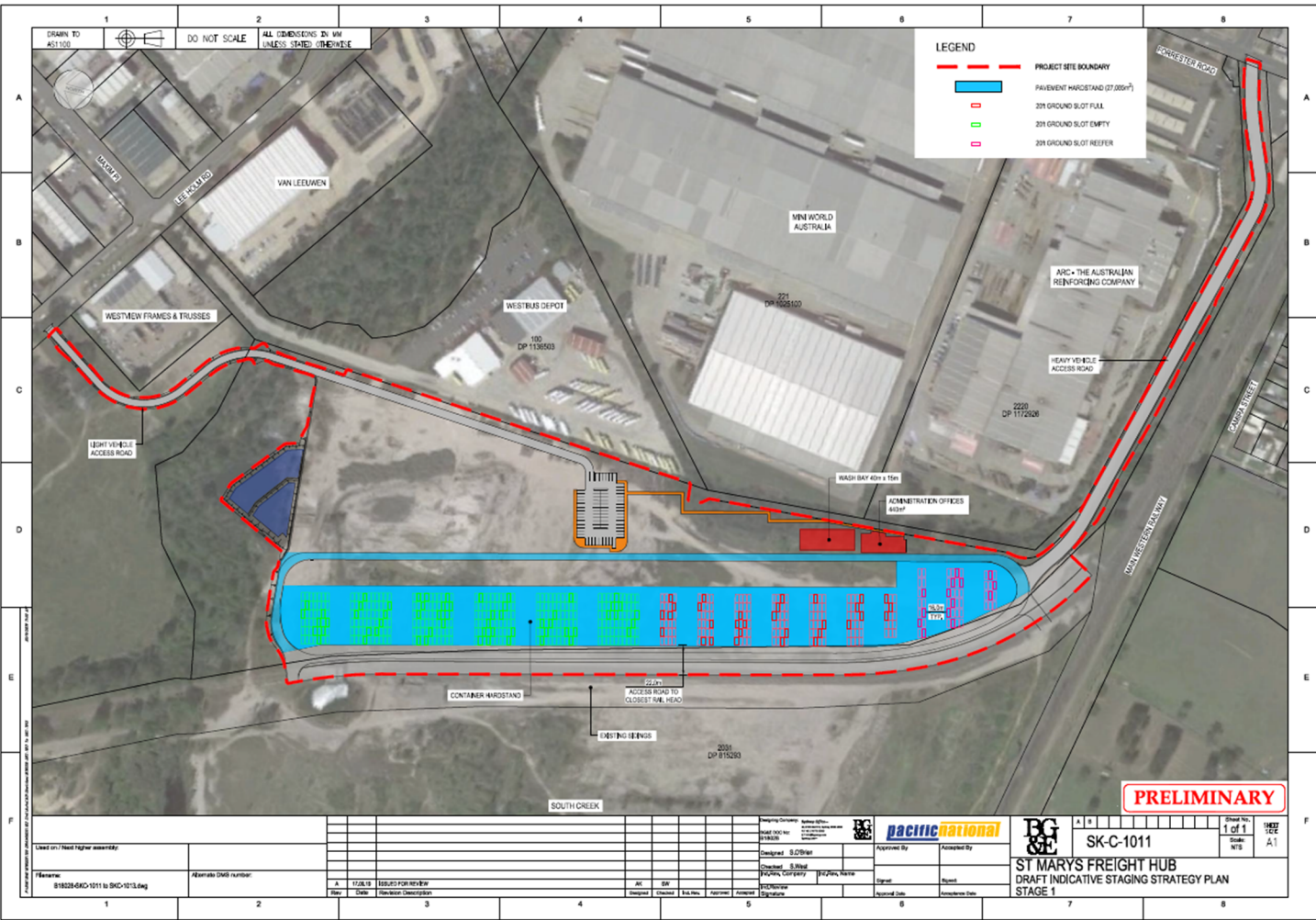


FIGURE 13 UPDATED – CONSTRUCTION STAGING PLAN - STAGE 1



PRELIMINARY



PRELIMINARY

6.2.3 NOISE AND VIBRATION

Figure 16 below, from the updated Noise and Vibration Impact Assessment, illustrates the recommendation to construct acoustic fence 2.4 metres in height along the southern boundary of the internal access leg to Forrester Road, as shown by the blue line. Refer to Appendix 5 – Noise and Vibration Impact Assessment.

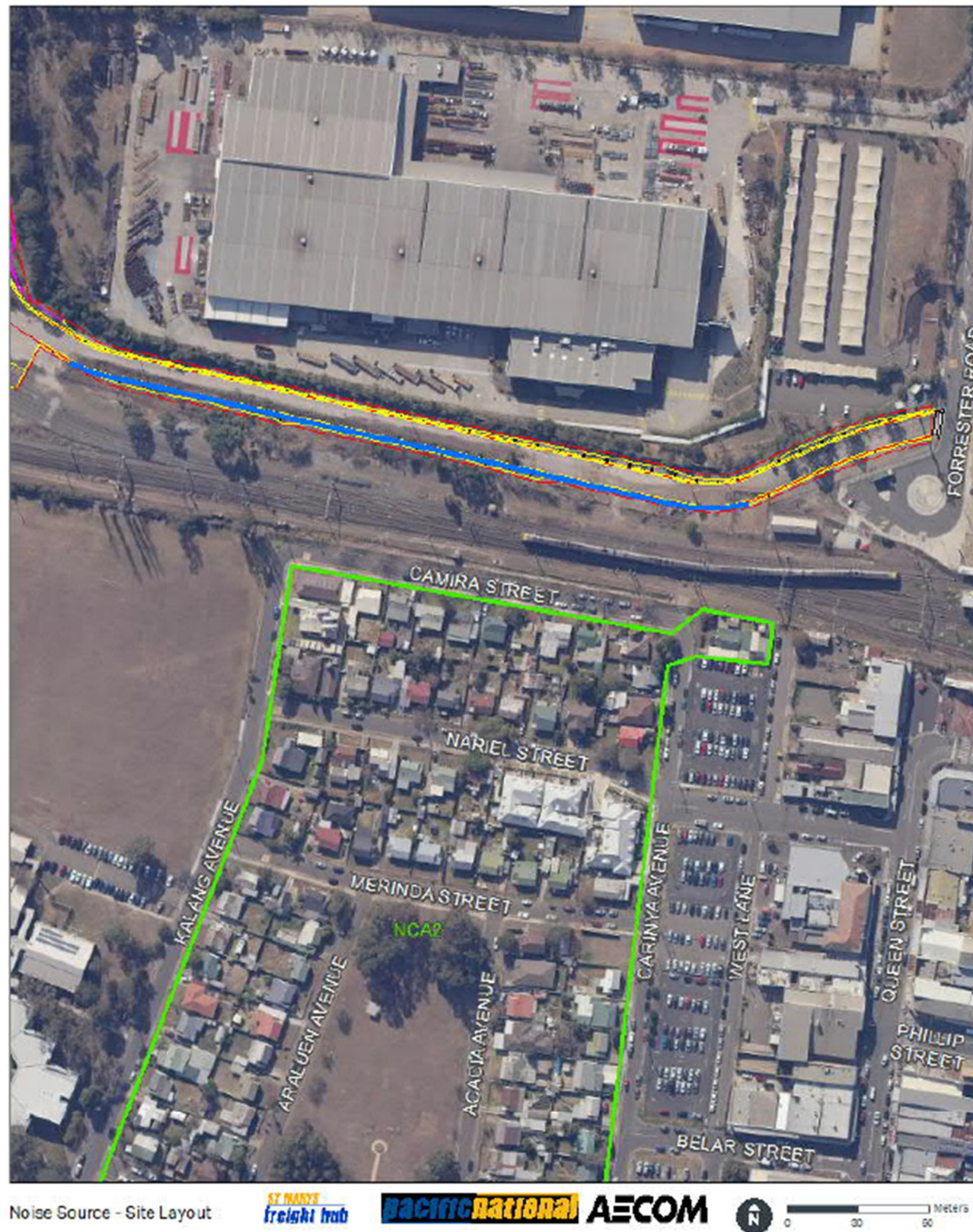


Figure 3 Noise Barrier (blue)

FIGURE 16 UPDATED – LOCATION OF PROPOSED ACOUSTIC FENCE

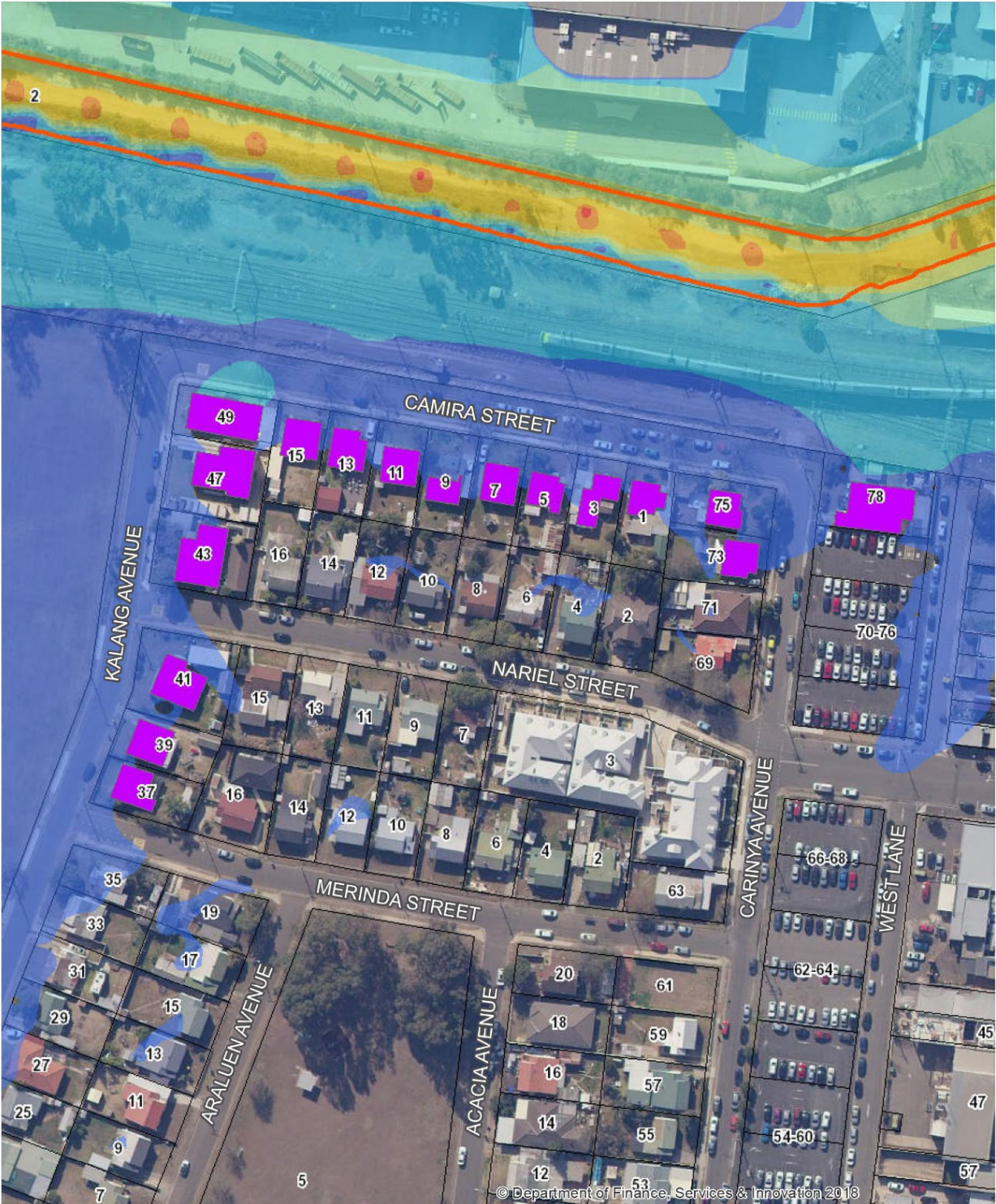
Figures 17 and 18 below, from the updated Noise and Vibration Impact Assessment, illustrates the properties recommended for at-property treatments. Refer to Appendix 5 – Noise and Vibration Impact Assessment.



Operational Noise Levels
Night-time - Temperature Inversion W Wind



FIGURE 17 EXHIBITED – AFFECTED PROPERTIES BY OPERATIONAL NOISE IMPACTS



Operational Noise Levels
Night-time - Temperature Inversion W Wind

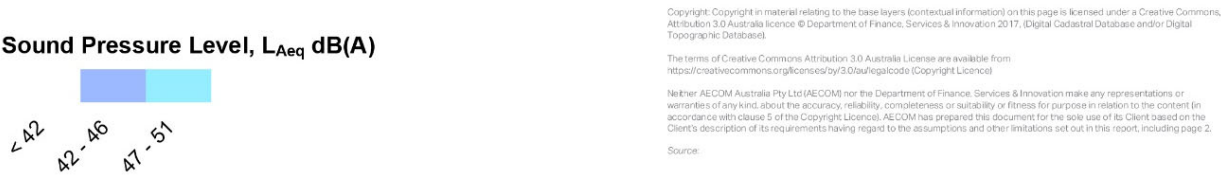


FIGURE 18 UPDATED – AFFECTED PROPERTIES BY OPERATIONAL NOISE IMPACT

6.2.4 SOIL AND WATER

Figures 19 and 20 below, illustrate the proposed changes to the stormwater layout of the proposed development. Refer to Appendix 6 – Stormwater Management Plan.

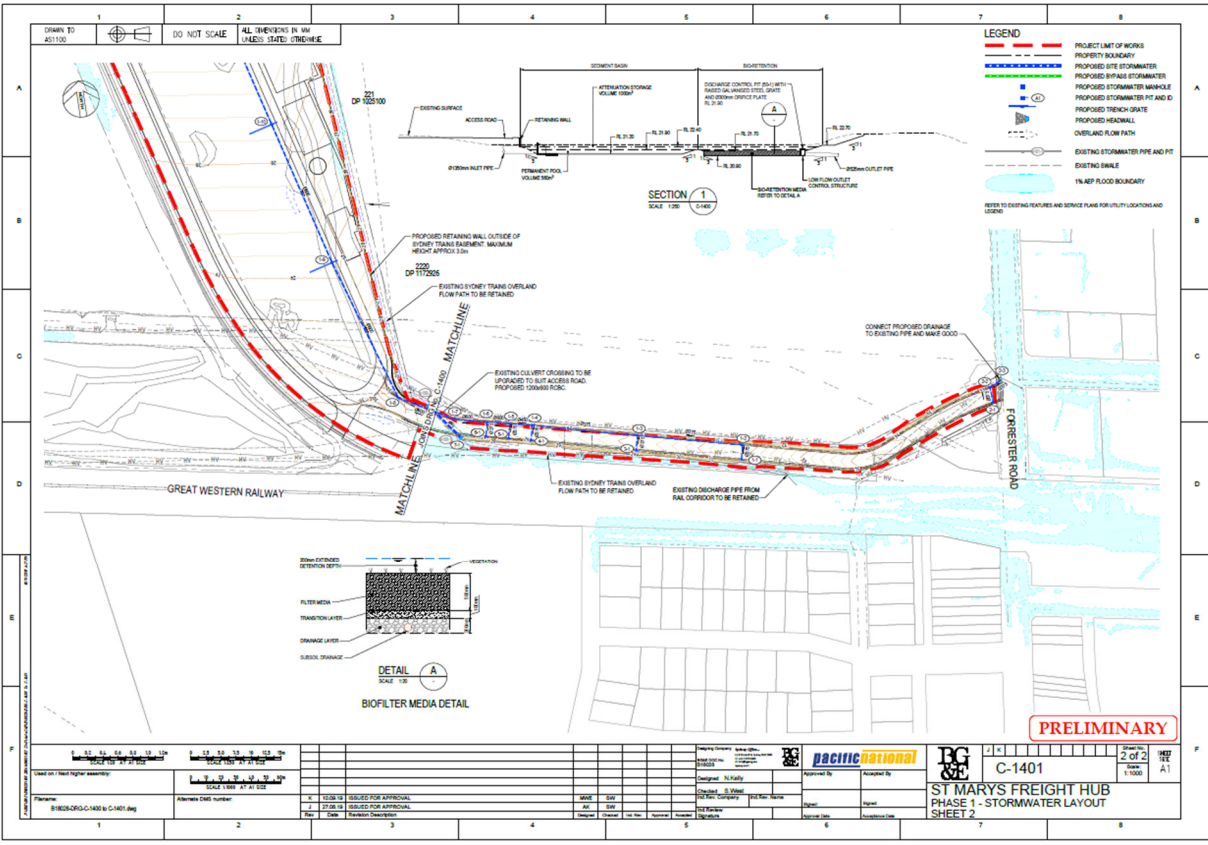
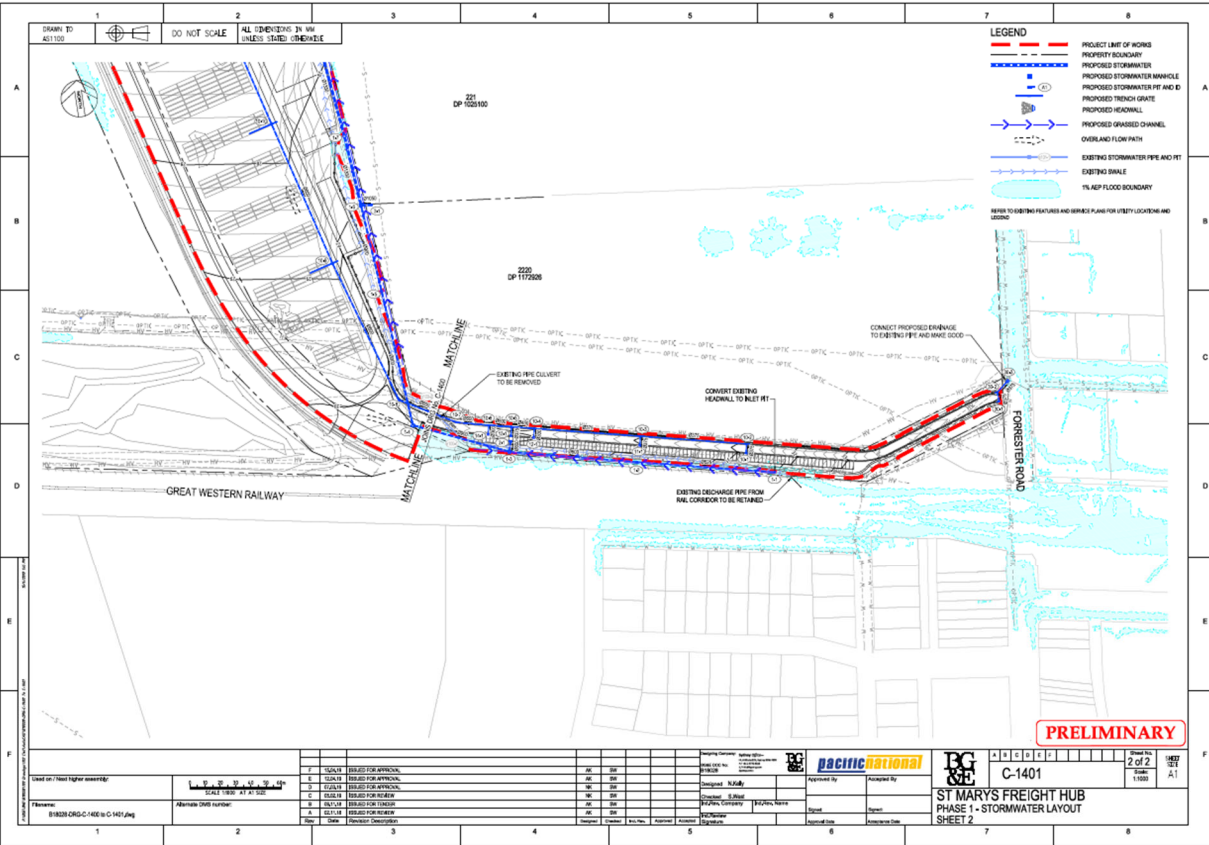
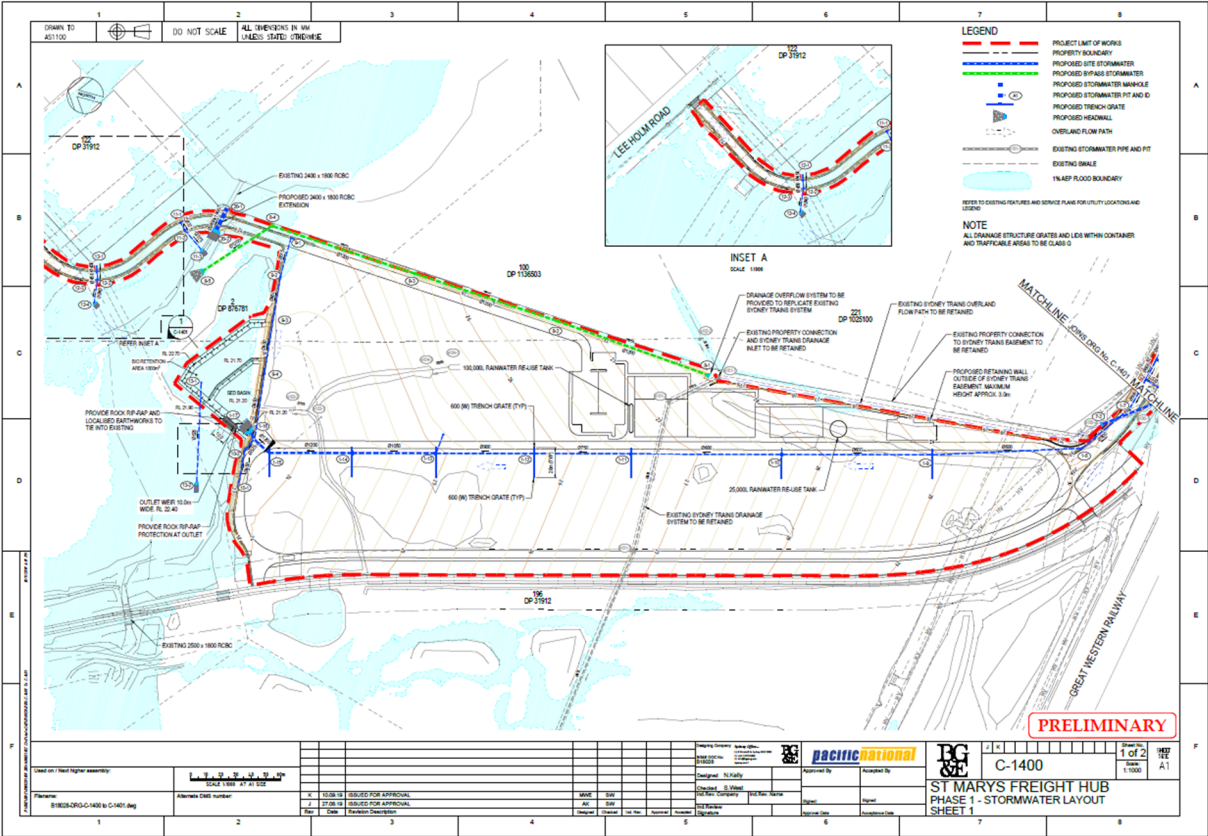
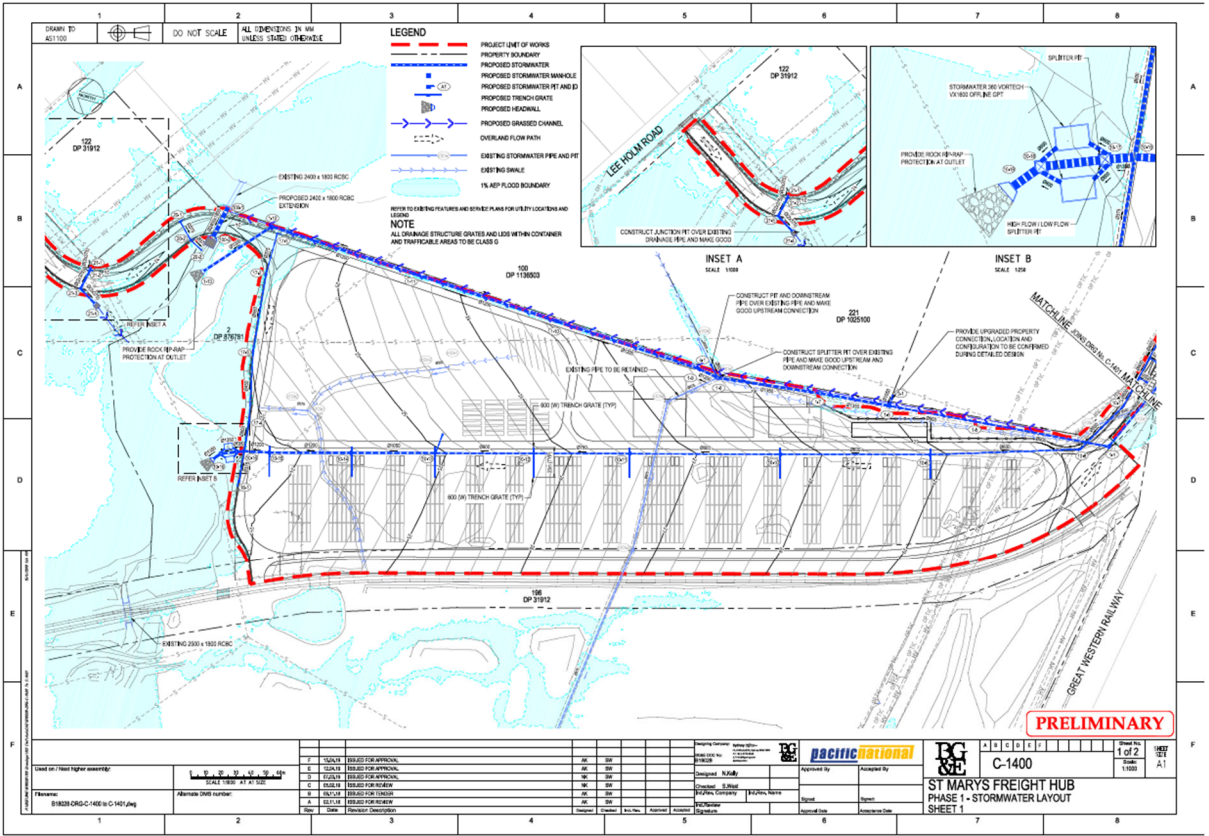


FIGURE 19 EXHIBITED – STORMWATER LAYOUT - PHASE 1

FIGURE 20 UPDATED – STORMWATER LAYOUT - PHASE 1

Figures 21 and 22 below, illustrate the exhibited and updated 1% Annual Exceedance Probability (AEP) hydrograph for a 2 hour storm event. Refer to Appendix 6 – Stormwater Management Plan.

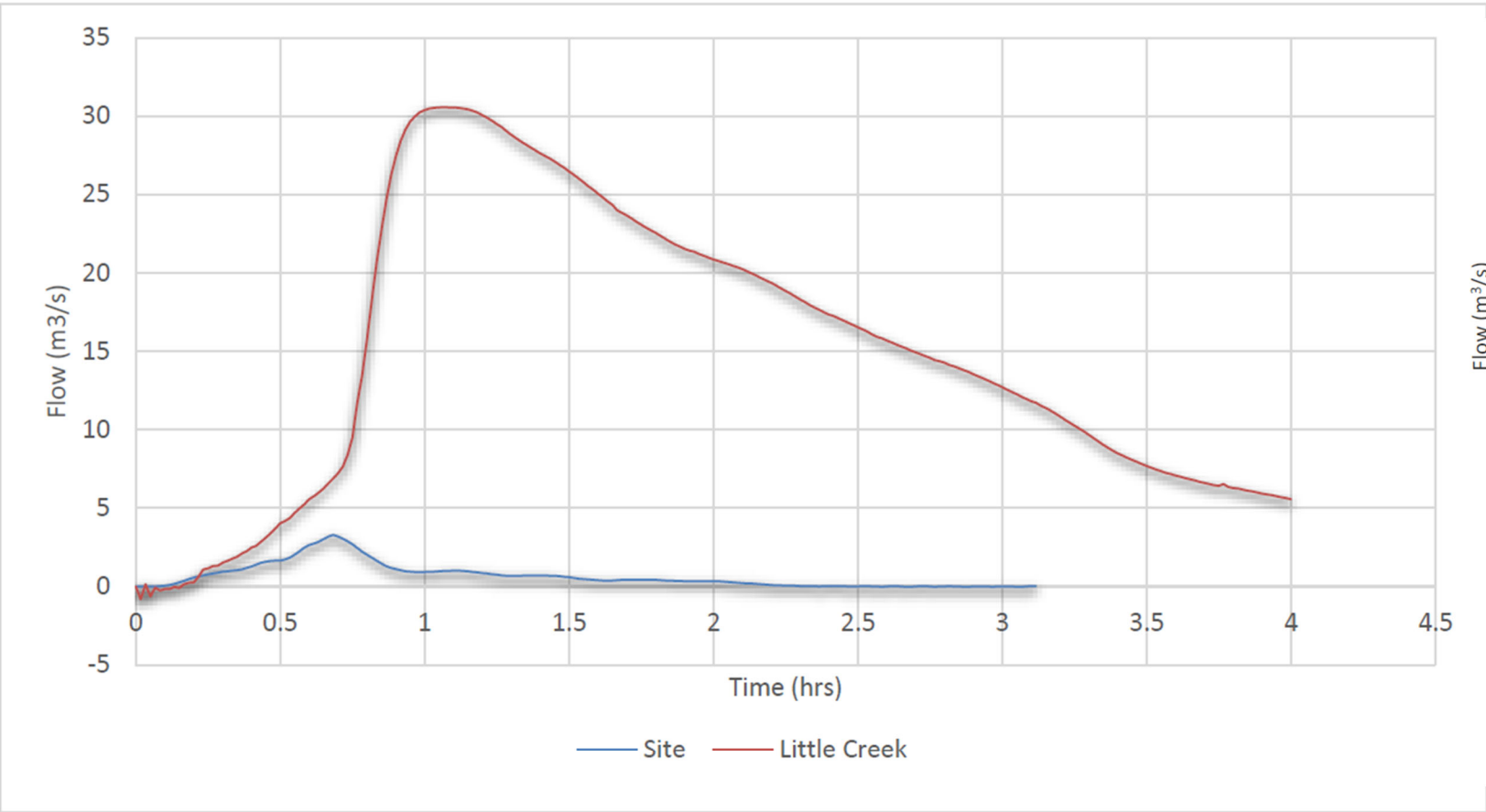


Figure 2 - 1% AEP 2 Hour Storm Hydrograph

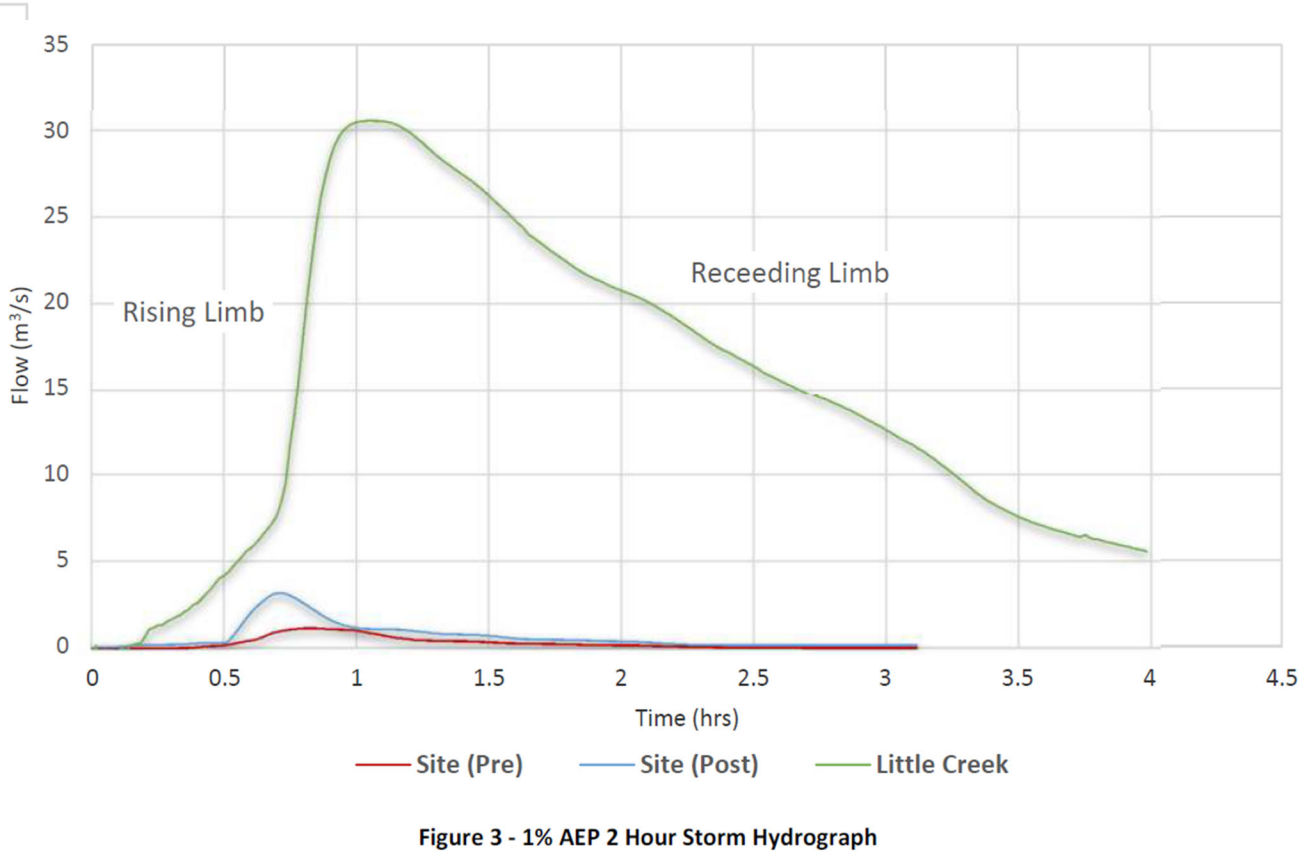


Figure 3 - 1% AEP 2 Hour Storm Hydrograph

FIGURE 21 EXHIBITED – 1% AEP 2 HOUR STORM HYDROGRAPH

FIGURE 22 UPDATED – 1% AEP 2 HOUR STORM HYDROGRAPH

6.2.5 FLOODING

Figures 23 and 24 below, illustrate the exhibited and updated PMF levels. Refer to Appendix 8 – Flood Impact Assessment.

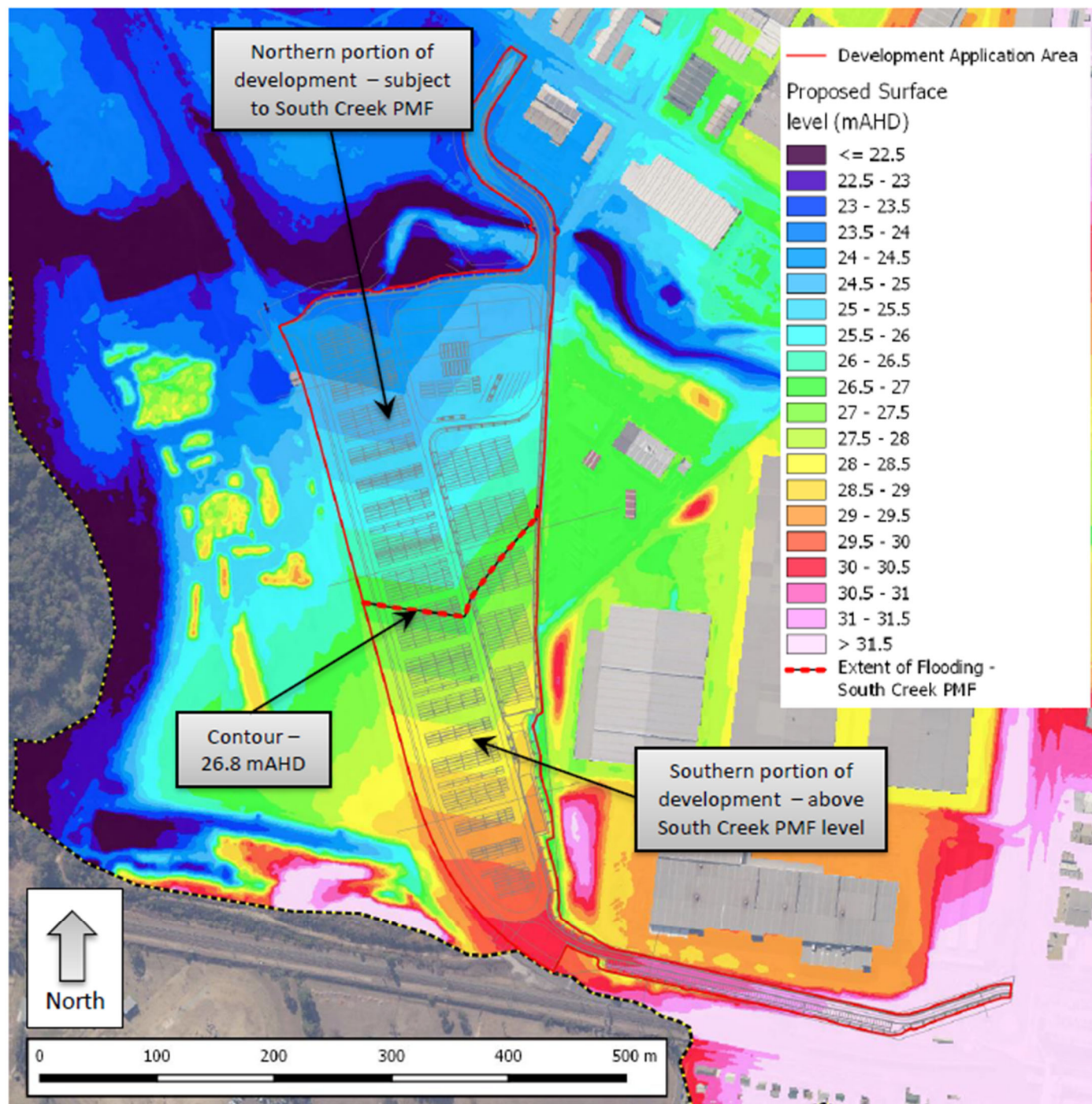


FIGURE 23 EXHIBITED – FLOODING IMPACT ASSESSMENT

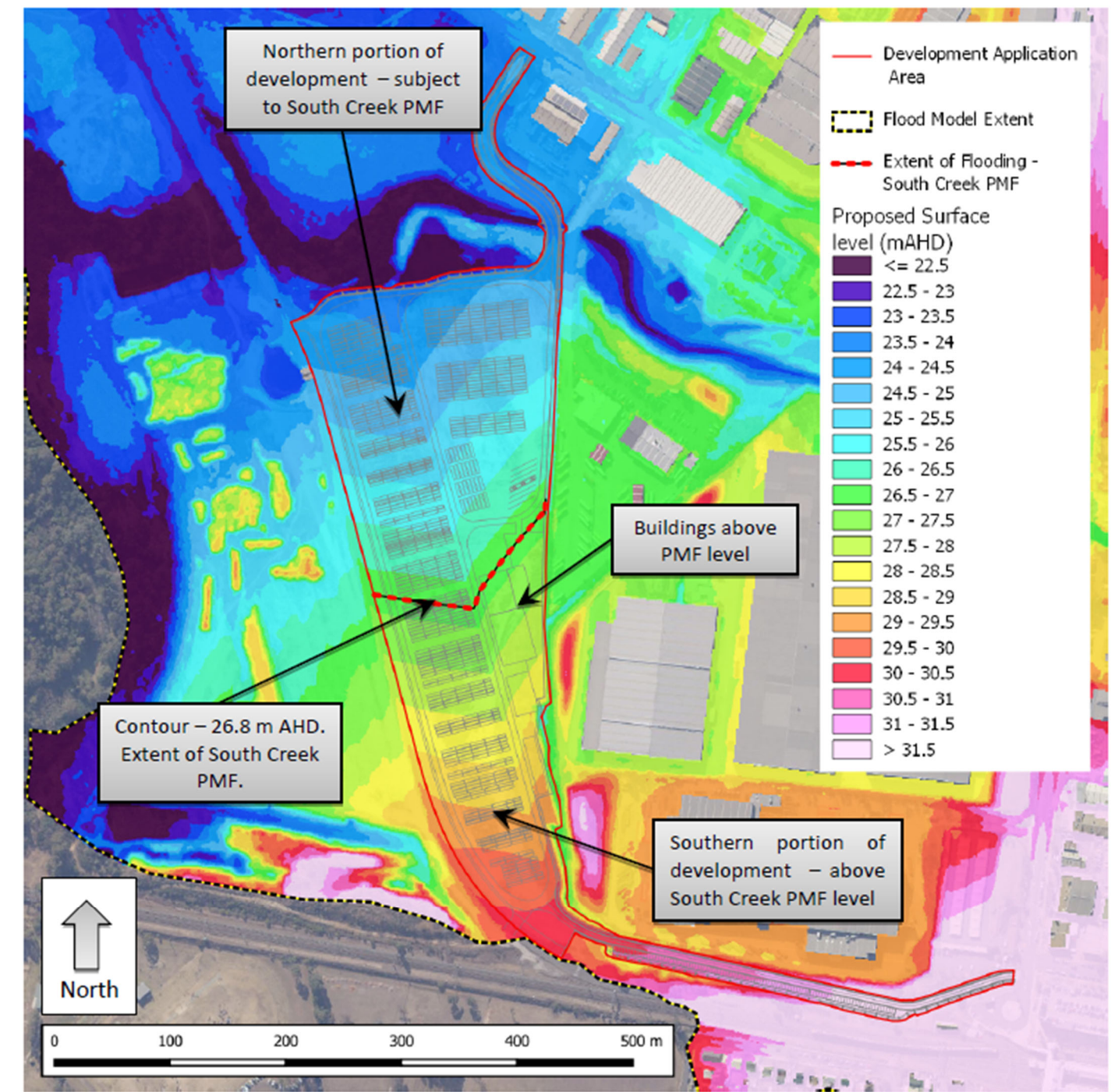


FIGURE 24 UPDATED – FLOODING IMPACT ASSESSMENT

6.2.6 CONTAMINATION

Figures 25 to 28 below, illustrate the exhibited and updated report figure highlighting the location of EIS and additional test pit locations, respectively. Refer to Appendices 9 – 12.



FIGURE 25 EXHIBITED – TEST PIT LOCATIONS

FIGURE 26 UPDATED – ADDITIONAL TEST PIT LOCATIONS – RAILWAY CORRIDOR



FIGURE 27 UPDATED - ADDITIONAL TEST PIT LOCATIONS - STOCKPILE 3



FIGURE 28 UPDATED - ADDITIONAL FAI TEST PIT LOCATIONS - TP205 AND TP208

6.2.7 BIODIVERSITY

Figures 29 and 30 below, illustrate the exhibited and updated report figures illustrating the impacts that require offsets. Refer to Appendix 13 – Biodiversity Development Assessment Report.

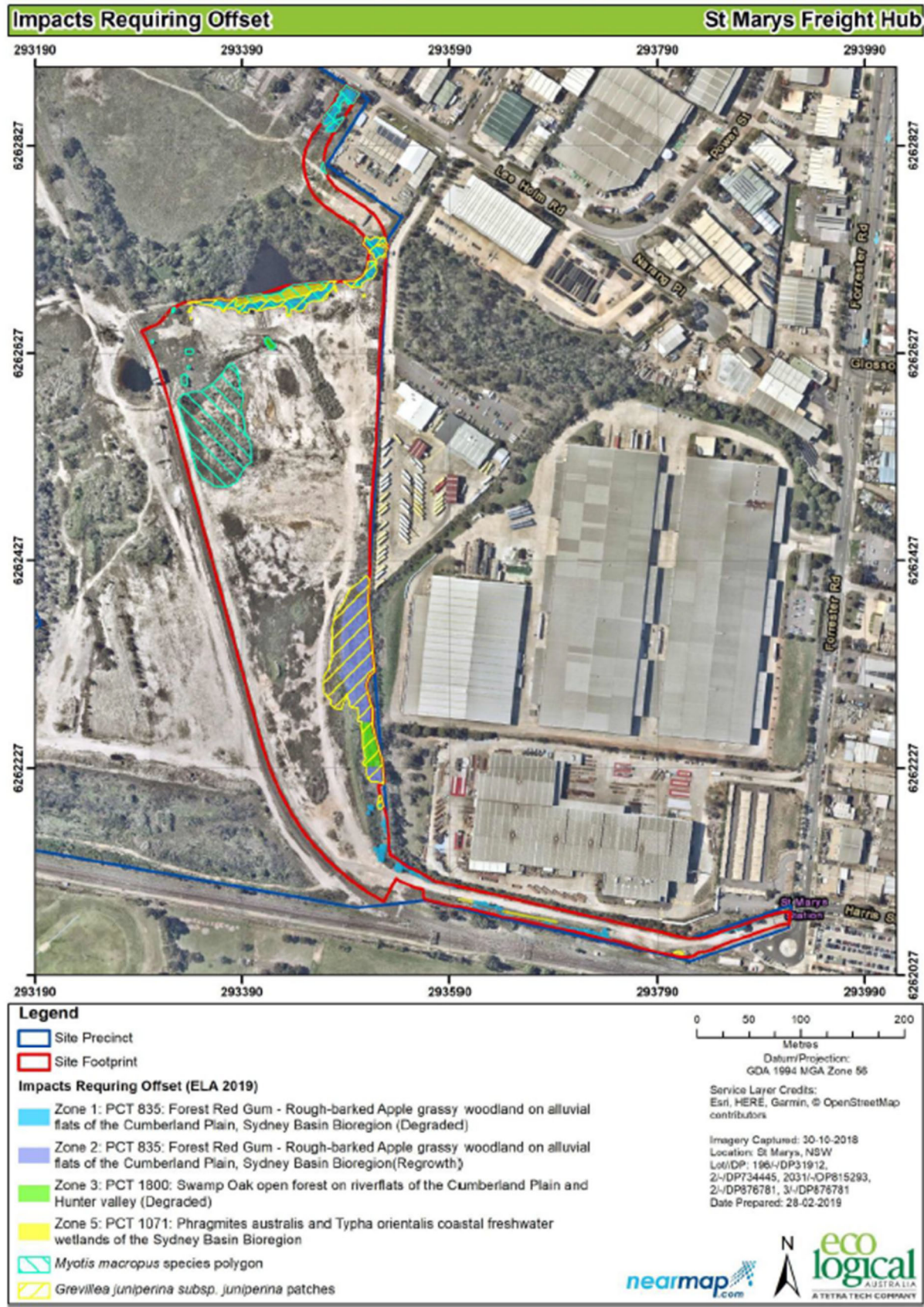


FIGURE 29 EXHIBITED – IMPACTS REQUIRING OFFSET

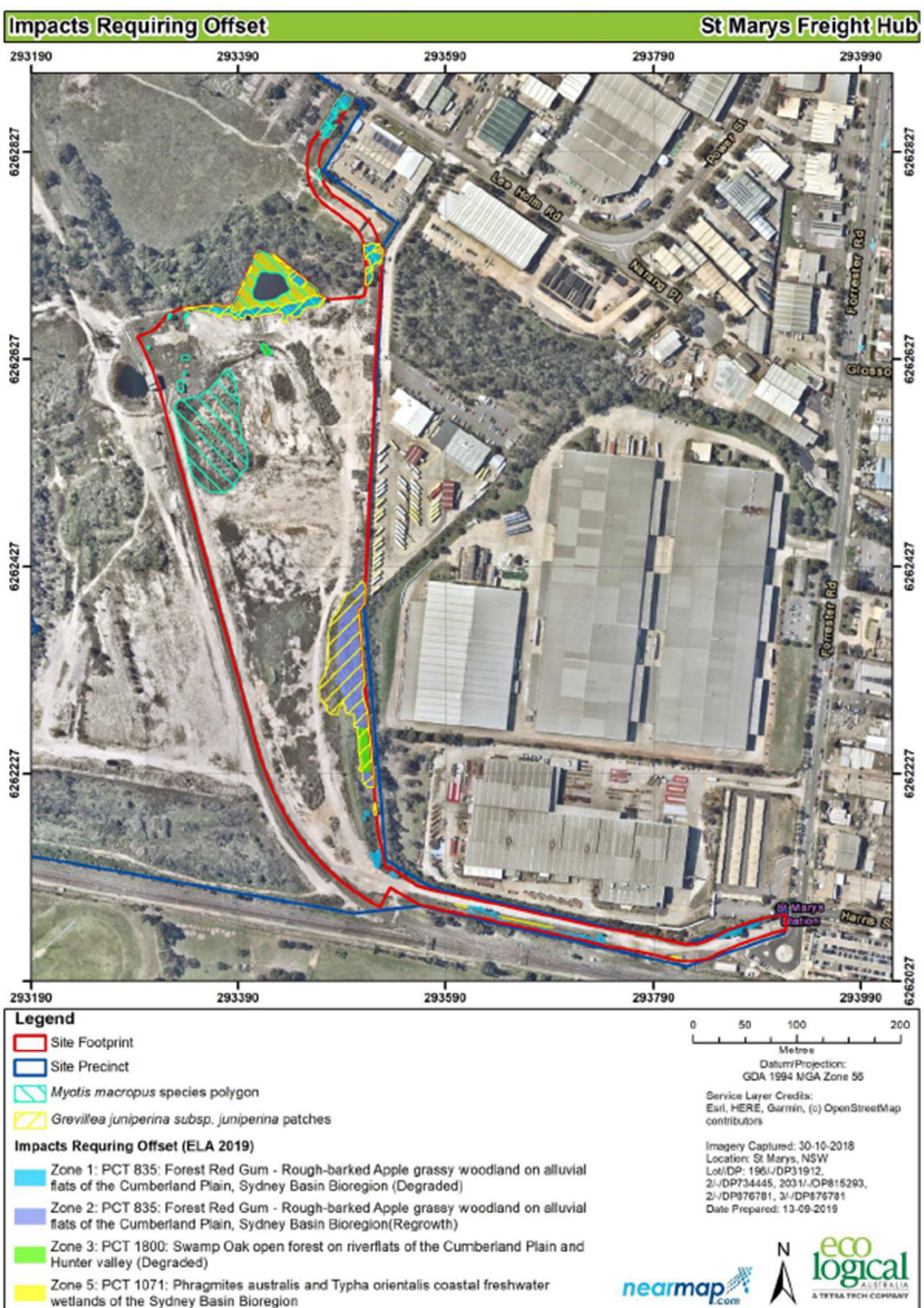


FIGURE 30 UPDATED – IMPACTS REQUIRING OFFSET



6.3 CHANGES TO IMPACTS

A summary of the changes to impacts resulting from design and operational changes to the proposed development are outlined in the table below.

TABLE 5 SUMMARY OF DEVELOPMENT IMPACT CHANGES

NO	ELEMENT	EXHIBITED EIS		UPDATED EIS	
TRAFFIC AND TRANSPORT					
1	Road classification and B-Double approved routes	Roads used by heavy vehicles are State, Regional and/or Local roads and approved B-Double routes		Heavy vehicles will not use local roads and/or roads not approved for B-Double use.	
2	Truck trips through key intersections (operational) with implementation of Option 4				
3	Intersection	Development truck trips/hr (max)	% of intersection peak hr volumes ¹	Development truck trips/hr (max)	% of intersection peak hr volumes ¹
4	Richmond Road / Dunheved Road	0	0%	No change from exhibited EIS	
5	Great Western Highway / Parker Street	0	0%		
6	Great Western Highway / Werrington Road / Reserve Road	0	0%		
7	Great Western Highway / Queen Street / Mamre Road	26	<1%		
8	Great Western Highway / Carlisle Avenue	2	<0.1%		
9	Mamre Road / M4 Western Motorway (south)	2	<0.1%		
10	Mamre Road / M4 Western Motorway (north)	26	<1%		
11	Great Western Highway / Glossop Street	30	<1%		
12	Glossop Street / Harris Street	Intersections not modelled		30	1.1%
13	Forrester Road / Harris Street			30	13.2%
14	Forrester Road / Glossop Street			30	1.6%
15	Forrester Road / Boronia Street / Christie Street			0 ²	0%
16	Christie Street / Dunheved Road / Werrington Road			0 ²	0%
17	¹ Worst case percentage across the morning and evening peak hours ² Commitment by operator that Christie Street, Werrington Road and Forrester Road (north of Glossop Street) will not be utilised for operational heavy vehicle movements				
18	Intersection Level of Service (LoS)	No change to LoS		No change from exhibited EIS	
19	Intersection Degree of Saturation (DoS)	Increased by a maximum of 5%		No change from exhibited EIS	
20	Intersection road safety assessment	Negligible change in crash likelihood and hence crash risk		No change from exhibited EIS	
21	Based on the assumed traffic volume distribution, peak traffic volumes (based on 2019 traffic volumes) will only increase by:				
22	Forrester Road for trucks heading north after the intersection of Glossop Street and Forrester Road			0% ²	
23	Glossop Street			1.3%	
24	Forrester Road south of Glossop Street			9% ³	
25	² Commitment by operator that Christie Street, Werrington Road and Forrester Road (north of Glossop Street) will not be utilised for operational heavy vehicle movements				



NO	ELEMENT	EXHIBITED EIS	UPDATED EIS																																		
	³ This portion of Forrester currently carries only 176 vehicles per hour per south bound in the AM peak and 281 per northbound in the PM peak, despite the typical capacity of a single lane urban road at 1,200 vehicles per hour. As a consequence, the low volumes of traffic make any relatively small increase in truck movements appear more significant.																																				
26	Truck kilometres per annum		430,000 fewer																																		
27	Intersection usage		Fewer intersections																																		
28	Route		Most direct permitted connection to M4																																		
29	Impact on residential dwellings		Fewer dwellings impacted																																		
30	Forrester Road heavy vehicle access		Crossover widened and access road redesigned to house two (2) B-Doubles trucks in first 30m of entry reducing the opportunity for congestion or conflict within Forrester Road.																																		
NOISE AND VIBRATION																																					
31	OPERATIONAL																																				
32	Site Operations (with proposed noise barrier fence)																																				
33	121 Forrester Road	0 L _{Aeq} dB(A) exceedance	No change from exhibited EIS ⁴																																		
34		0 – 2 L _{Amax} (Night) dB(A) exceedance	0 L _{Amax} (Night) dB(A) exceedance ⁴																																		
35	49 Kalang Avenue	0 – 4 L _{Aeq} dB(A) exceedance	0 – 3 L _{Aeq} dB(A) exceedance ⁴																																		
36		12 – 13 L _{Amax} (Night) dB(A) exceedance	1 – 2 L _{Amax} (Night) dB(A) exceedance ⁴																																		
37	42 – 44 Princess Street	0 L _{Aeq} dB(A) exceedance	No change from exhibited EIS ⁴																																		
38		0 – 3 L _{Amax} (Night) dB(A) exceedance	0 L _{Amax} (Night) dB(A) exceedance ⁴																																		
39	1 Lockyer Avenue	0 L _{Aeq} dB(A) exceedance	No change from exhibited EIS ⁴																																		
40		0 L _{Amax} (Night) dB(A) exceedance	No change from exhibited EIS ⁴																																		
41	⁴ modelled noise impact with proposed noise barrier wall and use of soft landing technology																																				
42	Traffic – increase in traffic noise level																																				
43	Forrester Road	Not modelled	< 1 peak hour L _{Aeq} dB 15hr																																		
45			1 minimum hour L _{Aeq} dB 1hr																																		
46	Glossop Street		< 1 peak hour L _{Aeq} dB 15hr																																		
47			1 minimum hour L _{Aeq} dB 1hr																																		
48	Great Western Highway		< 1 peak hour L _{Aeq} dB 15hr																																		
49			< 1 minimum hour L _{Aeq} dB 1hr																																		
50	Mamre Road		< 1 peak hour L _{Aeq} dB 15hr																																		
51			< 1 minimum hour L _{Aeq} dB 1hr																																		
52	Rail – 49 Kalang Avenue ⁵																																				
53	Operational	Not modelled	0 L _{Aeq} 8hr dB(A) exceedance																																		
54	Wheel squeal		7 – 8 L _{Amax} dB(A) exceedance																																		
55	Bunching		3 – 4 L _{Amax} dB(A) exceedance																																		
56	⁵ NCA 2 already experiences L _{Amax} noise levels in excess of 70 dB(A) during the night due to existing industrial noise and train pass-bys. The type of noise likely to be generated by operation of the Proposal will be of the same nature and generally a lower level. The predicted exceedances due to the Proposal are worst case, noise levels would generally be lower for most of the night.																																				
57	CONSTRUCTION																																				
58	Standard work hours	<table><tr><th rowspan="2">Activities</th><th colspan="4">Exceedance above NML, dB</th></tr><tr><th>1-10 dB(A) Clearly audible</th><th>11-20 dB(A) Moderately intrusive</th><th>> 20 dB(A) Highly intrusive</th><th>Highly affected >75 dB(A)</th></tr><tr><td>Site establishment and delivery of materials</td><td>78</td><td>30</td><td>13</td><td>0</td></tr><tr><td>Bulk earthworks</td><td>61</td><td>21</td><td>1</td><td>0</td></tr><tr><td>Trenches/utilities</td><td>40</td><td>23</td><td>0</td><td>0</td></tr><tr><td>Pavement/ hardstand construction</td><td>81</td><td>31</td><td>13</td><td>0</td></tr><tr><td>Building delivery and installation</td><td>6</td><td>0</td><td>0</td><td>0</td></tr></table>	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)	Site establishment and delivery of materials	78	30	13	0	Bulk earthworks	61	21	1	0	Trenches/utilities	40	23	0	0	Pavement/ hardstand construction	81	31	13	0	Building delivery and installation	6	0	0	0	No change from exhibited EIS
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)																																	
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Trenches/utilities	40	23	0	0																																	
Pavement/ hardstand construction	81	31	13	0																																	
Building delivery and installation	6	0	0	0																																	
59	Outside standard work hours	Not modelled	<table><tr><th colspan="5">Table 22 Residential properties exceeding the NMLs</th></tr><tr><th rowspan="2">Activities</th><th colspan="4">Exceedance above NML, dB</th></tr><tr><th>1-10 dB(A) Clearly audible</th><th>11-20 dB(A) Moderately intrusive</th><th>> 20 dB(A) Highly intrusive</th><th>Highly affected >75 dB(A)</th></tr><tr><td>Extended work hours construction works</td><td>0</td><td>0</td><td>0</td><td>0</td></tr></table>	Table 22 Residential properties exceeding the NMLs					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 works	0	0	0	0															
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	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 works	0	0	0	0																																	



NO	ELEMENT	EXHIBITED EIS	UPDATED EIS
60			
61	Sleep disturbance	Not modelled	No exceedance of the sleep disturbance screening criteria at any residential receivers.
62	Road vehicle traffic	Increase less than 2 dB	No change from exhibited EIS
SOIL AND WATER			
63	Water quality entering Little Creek		Pollutant reduction targets are exceeded as part of the updated treatment train design.
64	Post development stormwater flows to match pre development		Whilst the development area for the site does have an increased peak discharge due to an increase in impervious area, the peak flow immediately downstream of the site will not increase.
65	Erosive index potential of Little Creek		Stream Erosion Index of 3.5 times the pre developed duration of stream forming flows is achieved.
66	Dam Dewatering Plan		Dam Dewatering Plan completed.
FLOODING			
67	Impact of development on adjacent properties		Within allowed reflux requirements.
68	Impact of new Little Creek culvert		Acceptable outcomes are achieved.
69	Evacuation / shelter in place		Shelter in place safest option during PMF for South Creek and Little Creek
70	Container buoyancy during flooding		Assessment of containers during inundation show risk of containers blocking Little Creek is low to none.
CONTAMINATION			
71	Stockpile 3 and Railway Corridor		No further investigation or remediation works require.
72	Contaminated soils		No contaminated soils will be removed off-site. Onsite containment of soils requiring remediation will occur within a dedicated containment cell.
AIR QUALITY			
73	Construction activities	Provided appropriate mitigation measures are implemented, no significant air quality impacts are anticipated.	No change from exhibited EIS
74	Operational activities		
75	Freight rail	Not modelled.	Tier 0+ remodelled
BIODIVERSITY			
76	Area of native vegetation impacted by the proposed development	1.51ha	No change from exhibited EIS
77	Ecosystem credits required to offset impacts	16	15
78	Species credits required to offset impacts	18	19

7. UPDATED PROJECT DESCRIPTION

7.1 KEY ELEMENTS OF THE UPDATED PROJECT

The key built form elements of the proposed development remain unchanged from the exhibited EIS and include the following works:

- Staged construction of hardstand areas for container storage and laydown, rail and vehicle loading and unloading areas;
- Construction of new internal access roads providing separate ingress and egress for light and heavy vehicles as follows:
 - to/from Lee Holm Road for light vehicles; and
 - to/from Forrester Road for heavy vehicles;
- Staged construction of:
 - Wash bay;
 - Office building pad site;
 - Fuel storage area;
 - Container workshop (repair bay) building pad;
 - Transport workshop building pad;
 - Staff and visitor light vehicle parking bays (adjoining operational); and
 - Heavy vehicle parking bays;
- Ancillary development includes:
 - Signage and landscaping;
 - Utility services to support the proposed development including drainage, potable water, water (for firefighting purposes), power, data, security and sewerage;
 - Minor realignment of a section of the Sydney Trains high voltage overhead power line at the southern end of the subject site;
 - Minor clearing of areas of vegetation regrowth, remediation (if required) and minor earthworks; and
 - Electrical transformer.
- Construction is in three stages.

In addition to the built form elements outlined above, no changes are proposed to:

- Operational and construction job forecasts;
- Operating days and hours;
- Container volumes;
- Light and heavy vehicle trip volumes; or
- The extended work hours during the construction phase.

Key changes to the design and operations are summarised as:

- Revised site layout and development footprint, including:
 - The development area of 9.6ha is essentially the same land area with modification of development footprint as a result of:



- changing the access from Lee Holm Road from heavy vehicles to light vehicles; and
- inclusion of additional land for a bio retention filtration basin at the northern end of the development site, abutting Little Creek;
- Light vehicle access from Lee Holm Drive (previously from Forrester Road);
- Heavy vehicle access from Forrester Road (previously from Lee Holm Road);
- Provision for two (2) B Double vehicles to wait on site prior to exiting to Forrester Road, to allow oncoming traffic to enter the site;
- Staff and visitor car parking relocated to co-locate with operational and administrative buildings;
- Relocation of the fuel storage facility to abut operational buildings;
- Relocation of the administrative office building, away from operational buildings and activity;
- Construction of an acoustic fence along the southern boundary of the access leg to Forrester Road;
- Revised route for heavy vehicle movements (Option 4);
- Implementation of reach stacker soft landing technology to reduce noise associated with container stacking and loading/unloading;
- Clarification on the construction program and extended work hours details;
- Revised stormwater management design to achieve water quality standards; and
- Preparation and implementation of a dewatering plan for the dam at the northern end of the development site.

7.2 REVISED MANAGEMENT AND MITIGATION MEASURES

Table 6 below, provides a comparison of the draft management and mitigation measures to be implemented during the detailed design, construction and operation¹ phases of the development as per the exhibited EIS and the updated and revised measures following consideration of the issues raised in submissions, additional investigations and changes to the proposed development, construction and operations.

TABLE 6 COMPARISON OF DRAFT AND FINAL MANAGEMENT & MITIGATIONS MEASURES

MANAGEMENT AND MITIGATION MEASURES		APPLICATION
EXHIBITED EIS MEASURES	UPDATED MEASURES	
1. General Project Commitments		
All practical and reasonable measures to prevent and/or mitigate significant adverse impacts on the environment will be implemented.	No change.	Construction and Operation
All practical and reasonable measures to protect human health and safety for staff, visitors, contractors, construction workers and the general public will be implemented.	No change.	Construction and Operation
Staging of construction and operation is to be in accordance with Staging Strategy to be submitted to the Department of Planning and Environment which details how development will be staged, including general details of work activities associated with each stage and the general timing of when each stage will commence, and when respective stages will commence operation.	No change.	Pre-construction
2. General Management		



MANAGEMENT AND MITIGATION MEASURES		APPLICATION
EXHIBITED EIS MEASURES	UPDATED MEASURES	
Inductions of contractors and construction workers will include management and mitigation measures outlined in this Table where relevant.	No change.	Construction
Inductions of staff and visitors will include management and mitigation measures outlined in this Table where relevant.	No change.	Operation
Management during the construction cycle will monitor potential environmental impacts (i.e. noise, dust, Aboriginal and non-Aboriginal heritage, erosion and sediment control, etc.) to ensure impacts on the environment are minimised.	No change.	Construction
A Construction Environmental Management Plan will be prepared prior to commencement of construction activities and implemented throughout the construction cycle.	No change.	Construction
Core construction hours will be between 6am to 6pm Monday to Friday and 6am to 1pm on Saturdays with low impact works during extended hours for up to a 10-hour period during Monday to Friday.	Adopt standard hours and extended hours works scheduling, practices and mitigation measures in accordance with the Extended Work Hours Statement dated September 2019 by Urbanco.	Construction
An Operational Environmental Management Plan will be prepared and implemented for the St Marys Freight Hub that will include details on approvals, management requirement of the development and operating hours of 24 hours per day, 7 days per week.	No change.	Pre-operation and Operation
The operation of plant and equipment (i.e. forklifts, reach-stackers) will be maintained and operated in accordance with Australian Standards.	No change.	Operation
3. Air Quality		
<p>The following precautionary management and mitigation measures are to be implemented:</p> <ul style="list-style-type: none"> Minimise exposed surfaces, such as stockpiles and cleared areas, including partial covering of stockpiles where practicable Implement dust suppression measures, such as watering of exposed soil surfaces, dust mesh, water trucks and sprinklers to minimise dust generation Minimise dust generating activities and water stockpiles and exposed areas during adverse weather conditions such as high winds and dry periods Establish hard surfaced haul routes which are regularly damped down and cleaned; Perform regular visual inspections to identify areas that may require watering Establish defined site entry and exit points to minimise tracking of soil on surrounding road Ensure vehicles entering and leaving the site are covered to prevent escape of materials during transport 	No change.	Construction
Best practice management and mitigation measures are to be implemented to prevent and/or minimise airborne particulate.	No change.	Construction and Operation
4. Traffic and Transport		
<p>A Construction Traffic Management Plan is to be prepared by a suitably qualified and experienced person prior to commencing construction works and will include management requirements on the following:</p> <ul style="list-style-type: none"> number of trucks; vehicle routes, access and parking arrangements, hours of operation; indicative traffic control measures; Drivers' Code of Conduct; and detail procedures for notifying any nearby residents of any potential disruptions to routes (if required). 	No change.	Pre-construction
The Construction Traffic Management Plan is to be implemented	No change.	Construction



MANAGEMENT AND MITIGATION MEASURES		APPLICATION
EXHIBITED EIS MEASURES	UPDATED MEASURES	
throughout the construction cycle.		
	Site construction access will be from Lee Holm Road.	Construction
	Christie Street, Werrington Road and Forrester Road (north of Glossop Street) will not be utilised for operational heavy vehicle movements.	Operation
	Heavy vehicle access is to be from Forrester Road only.	Operation
5. Aboriginal Cultural Heritage		
<p>The following precautionary management and mitigation measures are to be implemented:</p> <ul style="list-style-type: none"> Inductions for construction contractors and works will highlight the heritage significance of the site prior to works commencing. Unexpected Finds Procedures are to be outline in inductions and the steps below are to be followed if any suspected or identified heritage items are identified during construction activities. <ol style="list-style-type: none"> All work should cease in that area and notify a Project Manager or Supervisor immediately of the find; A 'no-go' zone should be established around the find, using visibility fencing (where applicable); Inform all on-site personnel and staff of the find and the demarcated 'no-go' zone; Contact a qualified archaeologist/heritage consultant to inspect the find and provide recommendations. In the event that human remains are identified, complete steps 1-3. Replace Step 4 by immediately contacting the local police to investigate if the find relates to a criminal investigation. The police may take command of part or all of the site. Once clearance of the site has been given by either the qualified archaeologist/heritage consultant then works may proceed within the 'no-go' zone UNLESS specifically instructed by the professional that no further works can be completed. 	No change.	Construction
6. Non-Aboriginal Heritage		
Support retention of existing mature trees to the south of the site (within existing rail reserve) that shield the view of the proposed Freight Hub from the SHR listed St Marys Railway Station.	No change.	Pre-construction, Construction and Operation
New building and structures are to use neutral colour tones similar to existing surrounding industrial buildings.	No change.	Pre-construction, Construction and Operation
<p>The following precautionary management and mitigation measures are to be implemented:</p> <ul style="list-style-type: none"> Inductions for construction contractors and works will highlight the heritage significance of the site prior to works commencing. Unexpected Finds Procedures are to be outline in inductions and the steps below are to be followed if any suspected or identified heritage items are identified during construction activities. <ol style="list-style-type: none"> All work should cease in that area and notify a Project Manager or Supervisor immediately of the find; A 'no-go' zone should be established around the find, using visibility fencing (where applicable); Inform all on-site personnel and staff of the find and the demarcated 'no-go' zone; Contact a qualified archaeologist/heritage consultant to 	No change.	Pre-construction and Construction



MANAGEMENT AND MITIGATION MEASURES		APPLICATION
EXHIBITED EIS MEASURES	UPDATED MEASURES	
<p>inspect the find and provide recommendations.</p> <p>5. In the event that human remains are identified, complete steps 1-3. Replace Step 4 by immediately contacting the local police to investigate if the find relates to a criminal investigation. The police may take command of part or all of the site.</p> <p>6. Once clearance of the site has been given by either the qualified archaeologist/heritage consultant then works may proceed within the 'no-go' zone UNLESS specifically instructed by the professional that no further works can be completed.</p>		
7. Noise and Vibration		
<p>Offer acoustic attention measures to the identified moderately affected residential receivers (six (6) properties in Kalang Street, St Marys as identified in the 'St Marys Freight Hub Noise and Vibration Assessment' dated March 2019 by AECOM) to mitigate operational noise emissions for night time noise levels.</p> <p>Treatments to the identified residential receivers are to include measures such as air conditioning and/or upgraded facade elements to receivers.</p>	<p>Offer acoustic attention measures to the identified marginally affected residential receivers (seventeen (17) properties in Kalang Street, St Marys as identified in the 'St Marys Freight Hub Noise and Vibration Assessment' dated 3 Oct 2019 by AECOM) to mitigate operational noise emissions for daytime and night time noise levels.</p> <p>Treatments to the identified residential receivers are to include measures such as air conditioning and/or upgraded facade elements to receivers.</p>	Pre-operation
Empty container stacking areas will be separated from residential receivers as far as practical to allow proper function of the facility.	No change.	Operation
Soft landing technology for container handling, movement and stacking is to be adopted to minimise handling noise.	No change.	Operation
	Use of rubber dampeners is to be adopted for container handling	Operation
	Erection of a 2.4m acoustic fence along southern boundary to internal access road from Forrester Road.	Operation
The best available equipment will be used to minimise noise levels during operation.	No change.	Operation
<p>The Construction Environmental Management Plan is to be prepared and will include reasonable and feasible safeguards to manage and mitigate any noise emissions and include a framework to manage any complaints from construction noise.</p> <p>Adoption and implementation of noise mitigation measures in the Construction Environmental Management Plan.</p>	No change.	Pre-construction and Construction
	Limit construction activity during extended work hours to the area within the site not less than 350m from the nearest sensitive receiver in Kalang Avenue.	Construction
	Construction of an acoustic fence along the southern boundary of the heavy vehicle access leg to Forrester Road, as outlined in the AECOM Noise and Vibration Impact Assessment Report. Refer to Appendix 5 .	Pre-operation



MANAGEMENT AND MITIGATION MEASURES		APPLICATION
EXHIBITED EIS MEASURES	UPDATED MEASURES	
8. Air Quality		
	Locomotive fleet and non-road diesel vehicles to meet Industry Code of Practice standards.	Operation
9. Soil and Water		
A Stormwater Management Plan is to be prepared by a suitably qualified engineer prior to the commencement of construction that is generally in accordance with the report titled "St Marys Intermodal—Stormwater Management Report" dated 26 September 2019 by BG&E and is to include: <ul style="list-style-type: none"> relevant standards, requirements and specifications design plans including any water sensitive urban design measures describe the measures to be implemented to maintain the infrastructure 	No change.	Pre-construction
Stormwater management facilities are to be maintained to ensure ongoing treatment of stormwater flows and water quality.	No change.	Operation
If excavation is required at a depth below 3 metres, additional groundwater monitoring and assessment is to be undertaken at the specific location(s) where excavation is greater than 3 metres below the existing surface.	No change.	Pre-construction
	Construction of a bio-retention basin to maintain water quality to Penrith City Council Standards.	Construction
	Dewater existing sediment basin in accordance with the Dam Dewatering Plan.	Construction
10. Flooding		
A Flood Evacuation Plan is to be prepared prior to the commencement of operation and is to include: <ul style="list-style-type: none"> procedures for managing flood risk during construction assembly and evacuation points for all buildings evacuation routes and procedures in a flood event. 	No change.	Pre-operation
The Flood Evacuation Plan is to form part of inductions of new staff.	No change.	Operation
11. Contamination		
Implement the preferred remediation option/s for AEC 1.as presented in the RAP report	Implement the preferred remediation option for PAEC 1 as presented in the RAP report	Pre-construction / Construction
	Undertake the remediation and construction works in accordance with the Interim Environmental Management Plan.	Pre-construction / Construction
An Unexpected Finds Protocol is to be prepared by a suitability qualified expert prior to commencing construction. The Unexpected Finds Protocol is to form part of the inductions of contractors and construction workers and be included in the Construction Environmental Management Plan.	No change.	Pre-construction
Any contaminated material identified during construction (if any) will be managed and remediated to EPA and NSW Office of Environment & Heritage Guidelines.	No change.	Construction
12. Waste Management		
A Construction Waste Management Plan is to be prepared by the contractor prior to commencing construction works and will include waste management requirements on the following: <ul style="list-style-type: none"> roles and accountabilities review and amendment waste management objectives waste mitigation measures 	No change.	Pre-construction



MANAGEMENT AND MITIGATION MEASURES		APPLICATION
EXHIBITED EIS MEASURES	UPDATED MEASURES	
<ul style="list-style-type: none"> waste containment and storage disposal methods 		
<p>An Operational Waste Management Plan is to be prepared prior to commencing operation and will include waste management requirements on the following:</p> <ul style="list-style-type: none"> Generation of domestic waste from personnel. Inappropriate disposal of hazardous waste. Generation or spread of contaminated waste e.g. groundwater or chemicals. Mixing of unusable waste with reusable or recyclable material, leading to disposal of materials that could have been reused or recycled. Water and soil pollution/contamination due to inadequate waste handling or treatment. Weed infestation from the uncontrolled dispersion of seeds during operation. Reduced visual amenity, vermin and odour of the area. Generation of vegetation waste from maintenance of the facility. 	No change.	Pre-operation and Operation
<p>Operational waste generated on site as classified in NSW Office of Environmental and Heritage's Waste Classification Guidelines will be disposed of properly and the following targets are to be implemented:</p> <ul style="list-style-type: none"> Avoid the unnecessary production of waste during operation through planning with a focus on waste. Minimise / reduce the quantities of resources to be used by avoiding duplication and waste. Establish waste re-use / recycling targets. Dispose of waste materials in accordance with legislative requirements. 	No change.	Operation
<p>Implement a continuous improvement process as part of the Operational Environmental Management Plan to:</p> <ul style="list-style-type: none"> Identify areas of opportunity for improvement of environmental management and performance. Determine the cause or causes of non-conformances and deficiencies. Develop and implement a plan of corrective and preventative action to address any non-conformances and deficiencies. Verify the effectiveness of the corrective and preventative actions. Document any changes in procedures resulting from process improvement. Make comparisons with objectives and targets. Staff inductions and training program including: <ul style="list-style-type: none"> <i>Relevant legislation.</i> <i>Incident response, management and reporting.</i> <i>Requirements of the waste hierarchy.</i> <i>Waste/recycle storage requirements.</i> <i>Waste reporting requirements.</i> <i>Targeted training in the form of toolbox talks or specific training will also be provided to personnel with a key role in waste and energy management.</i> 	No change.	Pre-operation and Operation
13. Biodiversity		
Detailed design of the Freight Hub will aim to further reduce environmental impacts on native flora and fauna where possible.	No change.	Pre-construction
Areas of ecological significance identified for conservation will be marked and fenced to ensure protection and conservation during construction.	No change.	Pre-construction
Clearing of native vegetation is to be contained within the	No change.	Construction



MANAGEMENT AND MITIGATION MEASURES		APPLICATION
EXHIBITED EIS MEASURES	UPDATED MEASURES	
construction footprint.		
<p>The Construction Environmental Management Plan and Operational Environmental Management Plan is to include a section on managing native vegetation and include the following details:</p> <ul style="list-style-type: none"> ▪ impact avoidance and mitigation ▪ staff/contractor inductions ▪ clearing procedures and protection zones ▪ weed control ▪ pest management ▪ monitoring 	Added requirement for Dam Dewatering Plan.	Pre-construction and Pre-operation
Landscaping treatments are to use endemic tree, shrubs and grass species in the sensitive vegetation zones and planting/revegetation will adopt procedures that will not adversely impact on the exiting native vegetation.	No change.	Pre-construction and Construction
Manage, protect and conserve the areas of ecological significance which are to be preserved.	No change.	Operation
14. Bushfire		
<p>The following management and mitigation measures are to be implemented:</p> <ul style="list-style-type: none"> ▪ Ongoing maintenance of Asset Protection Zones ▪ Construction of proposed and future buildings are to meet relevant Bushfire Attack Level (BAL) construction standards. ▪ Provision of a water supply that complies with AS 2419.1 – 2005 Fire Hydrant Installations - System Design, Installation and Commissioning ▪ Gas and electricity services are to be installed to Planning for Bushfire Protection standards ▪ A Fire Emergency Response and Evacuation Plan is to be prepared prior to operation and form part of the induction for staff. 	No change.	Pre-construction, Construction, Pre-operation and Operation
15. Hazard and Risks		
<p>The Construction Environmental Management Plan is to include a section on minimising hazards and risks, including:</p> <ul style="list-style-type: none"> ▪ Procedures for safe removal of asbestos ▪ Provision for safe access and egress for emergency service personnel and workers ▪ An Incident Response Plan including a Spill Management Procedure 	No change.	Construction
Transport of goods is to be in accordance with the Australian Code for Transport of Dangerous Goods by Road and Rail (Dangerous Goods Code).	No change.	Operation
16. Landscape and Visual Assessment		
<p>During construction the following measures are to be implemented:</p> <ul style="list-style-type: none"> ▪ Dust is to be controlled in response to visual signs ▪ Areas of soil disturbed by the project would be rehabilitated progressively or immediately post-construction ▪ Night lighting (if used) is to be minimised and directed away from residential areas to the south of the site 	No change.	Construction
Where practical materials, colours and finishes of buildings and structures are to be non-reflective and in keeping with the materials and colouring of existing infrastructure or of a colour that will blend with the surrounds.	No change.	Operation
<p>A tree screen is to be planted in the location recommended in the “Visual Impact Assessment – St Marys Freight Hub” dated February 2019 by NGH Consulting. Plantings are to be:</p> <ul style="list-style-type: none"> ▪ One row deep and where practical planted on the inside of the boundary fence ▪ The plant species to be used in the screen are recommended to be native, and fast growing, with spreading habit and having a mature height of 10-11m 	No change.	Operation



MANAGEMENT AND MITIGATION MEASURES		APPLICATION
EXHIBITED EIS MEASURES	UPDATED MEASURES	
<ul style="list-style-type: none"> Species selection could be undertaken in consultation with a botanist or landscape architect Initial establishment of screening is to be within 2 months of completion of construction 		
Landscaping treatments are to use endemic tree, shrubs and grass species where practical.	No change.	Construction

8. RESPONSE TO SUBMISSIONS

Refer to **Appendix 1 – Response to Submissions Matrix** for a detailed response to each of the comments raised in submissions.

8.1 TRAFFIC AND TRANSPORT

Issues relating to transport routes, traffic generation and impacts were raised in submissions by:

- Penrith City Council;
- Department of Planning, Industry and Environment;
- Transport for NSW; and
- Three (3) public submissions.

Refer to **Appendix 1 – Response to Submissions Matrix**.

The outcomes of further traffic investigations, recommendations and the design response are summarised below and detailed in **Appendix 4 – St Marys Freight Hub Traffic and Transport Assessment**.

In response to concerns raised regarding the use of Lee Holm Road for heavy vehicle access and egress and the impact of traffic generated by the development on the surrounding local road network and land uses, Bitzios Consulting undertook a detailed truck route assessment to reassess the proposed access arrangements presented in the EIS (Option 1) and three (3) additional Options (Options 2-4) to ascertain the route with the least impact on the local road network and amenity, taking into account operational, safety and local impacts on the network and adjacent land uses.

The four options (Refer to **Figures 31 to 34** below) considered were:

- Option 1 – EIS exhibited option – trucks utilising Lee Holm Road primarily via Christie Street, Forrester Road and Glossop Street
- Option 2 – Trucks entering and exiting via Lee Holm Road primarily via Christie Street and Werrington Road
- Option 3 – Trucks entering and exiting the site at Forrester Road (using Harris Street westbound as entry route and Forrester Road – Glossop Street for the egress route)
- Option 4 – Trucks entering and exiting the site at Forrester Road with Glossop Street / Forrester Road as the nearest intersection accommodating inbound and outbound movements.

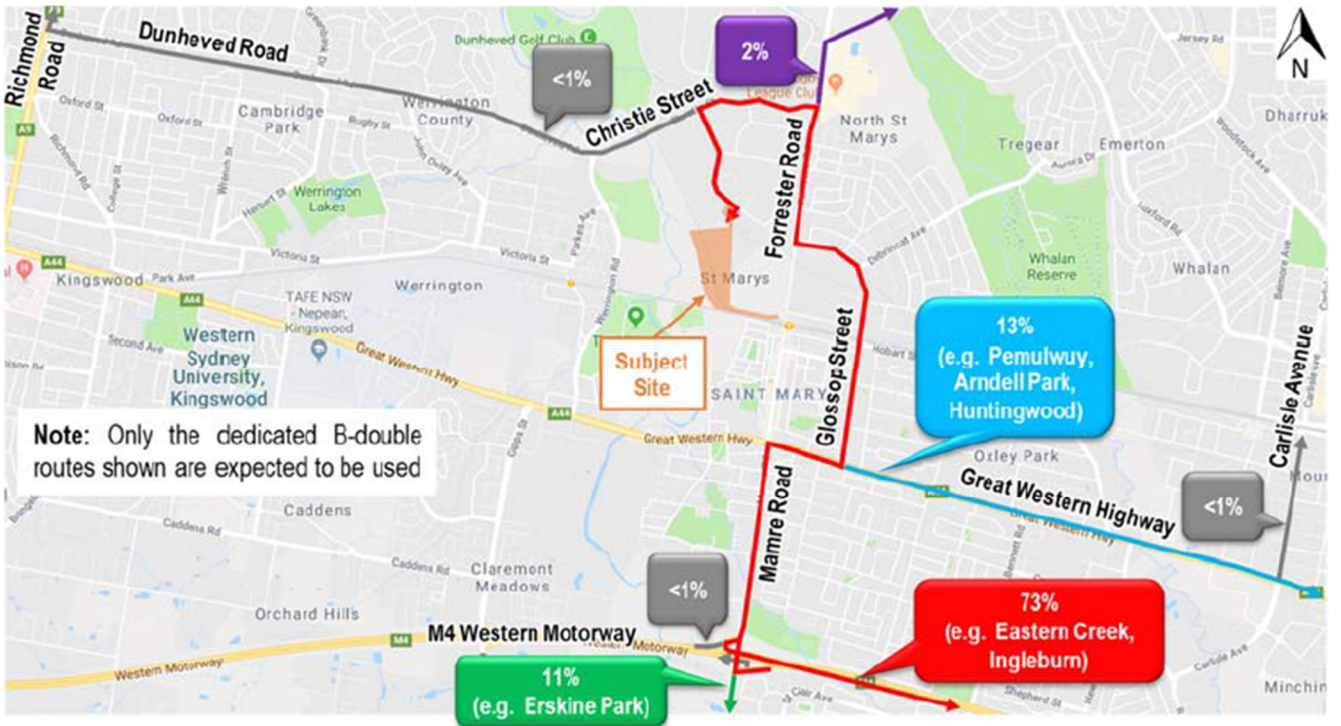


FIGURE 31 TRUCK ROUTE - OPTION 1

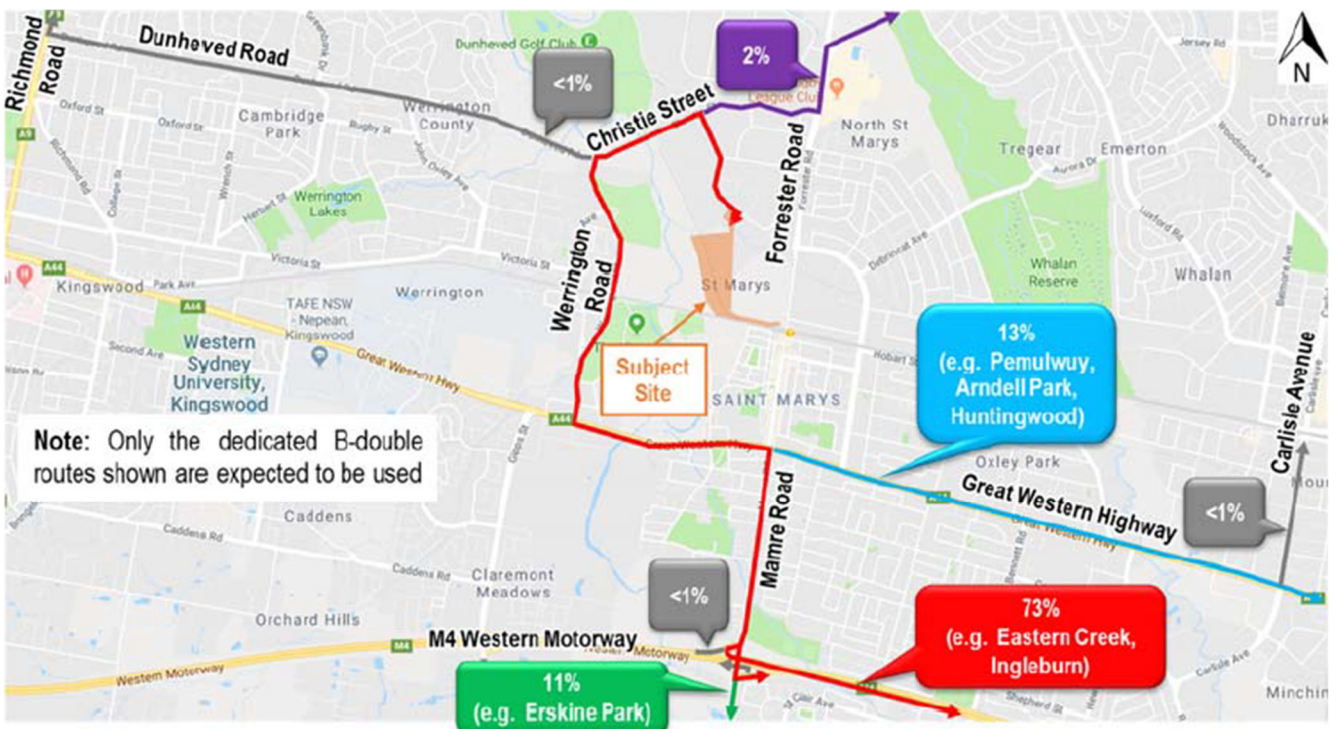


FIGURE 32 TRUCK ROUTE - OPTION 2

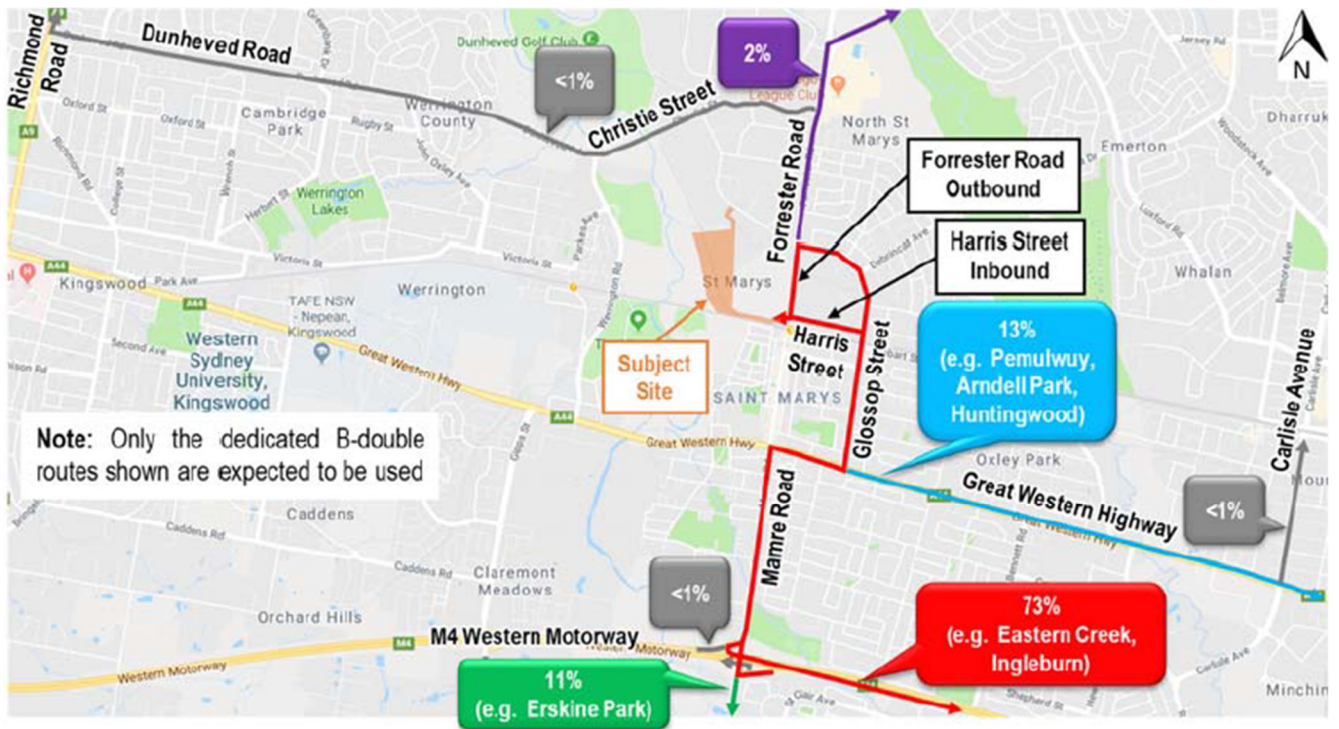


FIGURE 33 TRUCK ROUTE - OPTION 3



FIGURE 34 TRUCK ROUTE - OPTION 4

With respect to the three (3) additional options, the key findings of the assessment were as follows:

- For all assessed intersections the Level of Service (LoS) and Degree of Saturation (DoS) were compared between the Base Case and the With Development cases using SIDRA. At all intersections there was no change in intersection LoS and DoS increased by a maximum of 5% when the St Marys Freight Hub truck traffic was added.

- Option 2 - It is noted that many of the intersections on the roads north of the site are also forecast to be at capacity by 2030 primarily due to the extent of growth predicted in the catchments to the north. These intersections include those on the Option 2 route. Even though the Freight Hub will contribute a negligible proportion of the trips through these intersections, given future capacity limitations Option 2 has been discarded on this basis.
- Option 3 - Option 3 overcomes the issue with using roads to north, but required use of Harris Street that is not designed for B Double Trucks. Harris Street is also a key access to St Marys Train Station Park and Ride and has parking on each side. B Doubles using this route would likely block traffic. Upgrading Harris Street for this purpose is not a pragmatic option and on this basis Option 3 has been discarded.
- Option 4 - The intersection analysis has revealed that Option 4 provides the least impacts to surrounding intersections, uses roads that have been created for use by truck traffic with the minimum impacts on residential property amenity possible given the current road network options. Option 4 requires trucks to both enter and exit using Forrester Road and whilst the probability of an entering truck and an exiting truck needing to use this crossover at the same time ($p < 1.0\%$ per peak hour), the entrance driveway can be designed to cater for simultaneous inbound B-double turning manoeuvres.

The traffic assessment demonstrates that Option 4 is the most suitable options for the following reasons:

- It will have no impact of the Level of Service for accessed intersections and only results in an increase by a maximum of 5% on the Degree of Saturation of the intersections analysed using SIDRA method.
- Based on the assumed traffic volume distribution, peak traffic volumes (for Option 4) (based on 2019 traffic volumes) will only increase by:
 - 1.6% on Forrester Road for trucks heading north after the intersection of Glossop Street and Forrester Road;
 - 1.3% on Glossop Street; and
 - 9% increase on Forrester Road south of Glossop Street. This portion of Forrester currently carries only 176 vehicles per hour per south bound in the AM peak and 281 per northbound in the PM peak, despite the typical capacity of a single lane urban road at 1,200 vehicles per hour. As a consequence, the low volumes of traffic make any relatively small increase in truck movements appear more significant.
- It utilises Classified State and Regional Roads and approved 26m B Double roads;
- It avoids the use of the roads that will experience the most congestion in the future, such as Christie Street;
- It does not use local residential streets;
- Results in 430,000 fewer truck kilometres per annum;
- The route passes fewer residential properties and through fewer intersections than Option 1 (exhibited option).

In response to comments about sensitivity analysis on backloading and impacts on traffic volumes

generated by the development, the Bitzios report states that even if the truck-traffic generation numbers were doubled, the volumes through the key intersections are insignificant compared to background traffic demands.

In response to comments about the suitability of roads to accommodate truck traffic, the Bitzios report reiterates that Glossop Street is a Classified Regional Road and Mamre Road is a Classified State Road, where the function of these roads is to provide high-order transport routes and road connections for heavy vehicles from the Dunheved Business (Industrial) Park into Sydney's regional road network.

Based on the findings of the assessment and recommendation to implement Option 4, the key design and operational changes are summarised as:

- No heavy vehicle movements on Christie Street, Forester Road (north of Glossop Street) or Lee Holm Road (to be imposed by operator);
- Heavy vehicle access/egress to the subject site has been re-routed from Lee Holm Road to Forrester Road;
- Light Vehicle access/egress to the subject site has been re-routed from Forrester Road to Lee Holm Road;
- The access management strategy for the site will prioritise the access of an incoming truck by temporarily holding an outgoing truck within the property boundary at the holding line.
- The internal layout has been modified to reflect the changes in the access arrangements ensuring appropriate separation of truck and light vehicle movements within the site; and staff and visitor parking has been relocated to provide direct access from Lee Holm Road and suitable pedestrian access to work and visitor areas away from internal truck movements.

In response to questions about the traffic generation for the St Marys Freight Hub, the methodology to calculate traffic is explained and qualified by the key limiting factors that underpin truck trips associated with the facility.

Truck trips are controlled by five train paths with each train having a capacity of 87 twenty-foot equivalent units (TEUs). A train is limited to 87 TEUs due to the maximum trailing weight allowance of 2000 tonnes (approx.) and train length of 600m in accordance with Sydney Trains & ARTC requirements. A maximum capacity of 87 TEUs per train equals 435 TEUs inbound by rail at 100% utilisation of asset per day.

With truck trip generation based on 2 TEUs per truck (semitrailer) and 435 TEUs arriving at St Marys by train, this equates to 218 semitrailer movements out of St Marys per day. Trucks return to St Marys with empty containers for return to Port Botany by train at the same rate (218 trucks returning). The above factors form a robust basis for calculating traffic generation for the proposed development and more detailed explanation is included in the Bitzios report.

In considering traffic generation for St Marys, it is important to note:

- Peak hour 15 in / 15 out per hour (conservatively high) incentivised to travel outside peak hours for better efficiency (reduce travel times);



- Projected import container growth in operations are:
 - Year 1 = 75k TEUs
 - Year 2 = 100k TEUs
 - Year 3 onwards up to 110K to 150.5K TEUs
- Freight is import only and there is no export in the proposal;
- There is no unpacking of containers or distribution onsite;
- St Marys Freight Hub is serviced by onsite truck fleet using quality equipment used for fleet (i.e. Euro Tier 5/6 vehicles); and
- Majority of customers are within 20km (Erskine Park, Eastern Creek) with single truck completing a delivery in 1.25 hours.

Transport from the St Marys Freight Hub results the following key benefits:

- One truck from St Marys replaces 9-10 trucks traveling from Port Botany; and
- There is a reduction of 8.7 million Vehicle Kilometres Travelled (VKT) per annum on Sydney's regional road network.

8.2 NOISE AND VIBRATION

Issues relating to:

- Noise Modelling;
- Construction Noise disturbance outside standard construction hours;
- Night time Noise and Vibration disturbance; and
- Rail Noise;

were raised in submissions by:

- Penrith City Council;
- Environmental Protection Agency (NSW EPA);
- Department of Planning, Industry and Environment (DPIE);
- Transport for New South Wales; and
- One public submission.

Refer to **Appendix 1 – Response to Submissions Matrix**.

The outcomes of further investigations, recommendations and the design response are summarised below and detailed in **Appendix 5 – St Marys Freight Hub Noise and Vibration Impact Assessment – Post Exhibition Version**.

In response to those issues raised AECOM have updated the Noise and Vibration Impact Assessment (NVA) to provide additional information and address the following:

- Additional information regarding ambient noise monitoring and project trigger levels;
- Additional information regarding extended hours construction noise impact assessment;
- Performance testing of soft landing technology on reach stackers;
- Additional assessment of operational noise and feasible and reasonable noise mitigation measures including the use of soft landing technology on reach stackers;



- Additional assessment of operational rail noise including brake squeal, wagon bunching and curve squeal;
- Modified heavy vehicle and light vehicle site access, remodelling and introduction of noise barrier; and
- Additional information regarding detailed operational road traffic noise assessment.

The key finding of each of these has been summarised into the following key areas

- Construction Noise;
- Operational Noise
 - Site operation noise;
 - Operational road noise; and
 - Operational rail noise.

8.2.1 CONSTRUCTION NOISE

The construction works are anticipated to take 7 months to complete and will generally be undertaken during standard construction hours, with some pavement works proposed to be undertaken outside standard hours for a 3-4 month period.

Construction noise outside standard work hours and impacts on sleep disturbance did not form part of the original NVA Assessment. These have now been modelled and have also informed the location of the proposed pavement construction works during the extended work hours period (refer to **Figure 35** – Area of Extended Construction Hours (Pavement Works)). Modelling of the proposed extended hours works construction noise impacts demonstrates that the works will be located in a defined area to ensure compliance with the noise management levels at nearby sensitive receivers and no exceedances of the sleep disturbance screening criteria at any residential receivers is expected. Therefore, there will be no projected impact on sensitive receivers from works during the extended hours period.

If additional works are required to be completed outside of working standard hours, additional approval would be sought.



ST MARYS
Freight Hub

pacificnational

AECOM



0 50 100m

Extended work hours construction area

- Extended work hours construction area
- Subject Site

ST MARYS FREIGHT HUB - RESPONSE TO SUBMISSIONS
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FIGURE 35 AREA OF EXTENDED CONSTRUCTION HOURS (PAVEMENT WORKS)

Adequate separation distances ensure there is no noise impact from extended hours construction works on sensitive receivers.

The predicted construction noise levels remain unchanged in the updated NVA Report. The predicted construction noise levels during standard construction hours for the proposal identifies that at the closest noise sensitive receivers some residents will be 'Noise Affected' No residents will be 'Highly Noise Affected' Noise exceedances during the standard hours works period are generally unavoidable given the proposed works and proximity to receivers, notwithstanding the implementation of feasible and reasonable noise mitigation measures

A Construction Noise and Vibration Management Plan will be implemented prior to the commencement of construction activities that includes mitigation measures recommended in the NSW Government Interim Construction Noise Guidelines to manage construction impacts.

8.2.2 OPERATIONAL NOISE

8.2.2.1 SITE OPERATIONAL NOISE

Noise levels have been assessed in accordance with the Noise Policy for Industry and are predicted to comply with operational noise criteria at most noise sensitive receivers. The use of reach stacker soft landing technology has now been modelled and applied which will reduce the L_{max} noise levels associated with container handling at night time. The soft landing system comprises an ultrasonic sensor which automatically slows the speed of the reach stacker boom as it engages with the container. The operator is also committed to using rubber dampeners on the containers that will have further noise mitigation effects.

With the changed heavy vehicle access arrangements to Forrester Road, additional noise modelling and assessment has been completed. The updated NVA report has remodelled the potential noise emission impacts and predicts operational noise exceedances for receivers to the south of the T1 Western Line. An acoustic fence of 2.4 metres in height is to be installed along the entry road to assist in the mitigation of noise impacts on residential properties to the south.

In addition to the acoustic fence, seventeen properties on Kalang Avenue, Camira Street and Carinya Avenue are predicted to experience a marginal impact (≥ 3 but ≤ 5 dB above the project trigger levels) during the daytime and night-time periods and would therefore qualify for treatment.

Various noise barrier height scenarios have been considered to optimise mitigation of all environmental impacts. An acoustic barrier at least 5 metres in height would reduce the noise impacts on the residential properties to the south. However, the erection of a 5 metre structure on the property boundary adjacent to a State Listed Heritage item is not considered to be an acceptable environmental outcome. There are also adverse visual impacts, safety issues and concern the barrier would attract vandalism and graffiti. Therefore, the 2.4 metre acoustic fence that provides acoustic attenuation so the properties to the south experience lower and marginal noise impact exceedances, with additional of at-property treatments, is considered the best overall environmental outcome.

To further mitigate the remaining noise exceedances the following measures are proposed:

- Offering treatment (comprising mechanical ventilation and/or air conditioning) to seventeen receivers that are marginally affected (3-5 dB(A) exceedance);
- Erect a 2.4 metre acoustic fence along the southern boundary of the internal access road from Forrester Road;
- Including clauses in reach stacker and container handler operator employment contracts that require minimisation of noise and compliance with directions from management to minimise noise;
- Adopt the use of rubber dampeners for container handling;
- Regularly informing reach stacker and container handler operators of the importance of noise minimisation on site and training them to use equipment in ways to minimise noise; and
- Operational noise monitoring should be completed within 12 months of opening.

8.2.2.2 OPERATIONAL ROAD TRAFFIC NOISE

The Freight Hub will generate up to 218 heavy vehicle and 60 light vehicle movements in and out per day with up to 30 truck movements per hour during daytime hours and 4 truck movements per hour during the night. Vehicles utilising the Freight Hub will access the site using the local road network, primarily consisting of Forrester Road (south of Glossop Street), Glossop Street, Great Western Highway and Mamre Road.

The operational noise assessment undertaken by AECOM and as outlined in the NVA Report shows that the existing traffic volumes are substantially greater than the proposed operational traffic numbers generated by the Freight Hub. Vehicles associated with the Freight Hub will as a consequence have a minor impact on existing road traffic noise in the area of up to 1 dB(A).

Generally, an increase of 50-60% in traffic volumes is required to increase traffic noise levels by 2 dB(A).

8.2.2.3 OPERATIONAL RAIL NOISE

The exhibited NVA Report did not include an assessment of the operational noise impacts of the proposed Freight Hub on nearby sensitive receivers. This modelling now forms part of the updated NVA Report with the following key findings.

Train movements into and out of the site are expected to comply with the Rail Infrastructure Noise Guideline criteria. Sleep disturbance exceedances due to rail movements are predicted at NCA 2. Curve squeal is predicted to cause exceedances of up to 8 dB(A) and bunching is expected to cause marginal exceedances of up to 4 dB(A). L_{Amax} noise levels due to the Proposal are not predicted to exceed the awakening reaction level of 65 dB(A) at any noise sensitive receiver. It is noted that this type of noise is already a feature of this area due to rail movements on the main western railway line.

The following measures should be considered to mitigate the maximum noise levels generated by the rail movements:

- Use of track lubrication and wagon steering to minimise curve squeal
- Use of electronically controlled pneumatic braking systems to minimise brake squeal



- Permanent noise monitoring systems with associated reporting and provision of digital data records to the Secretary; and
- Policies and procedures that demonstrate acceptance, monitoring and reporting on locomotive and rolling stock's performance communicated to operators using the St Marys Freight Hub.

It is also be noted that NCA 2 already experiences LA_{max} noise levels in excess of 70 dB(A) during the night due to existing industrial noise and train pass-bys. The type of noise likely to be generated by operation of the Proposal will be of the same nature and generally a lower level. The predicted exceedances due to the Proposal are worst case, noise levels would generally be lower for most of the night.

8.3 SOIL AND WATER

Issues relating to:

- Water quality of the existing sediment dam and discharge of stormwater into Little Creek and South Creek;
- Stormwater management in regard to the impact on adjoining properties and pre/post development flows;

were raised in submissions by:

- Penrith City Council;
- Environmental Protection Agency (NSW EPA);
- Department of Planning, Industry and Environment (DPIE);
- Department of Planning, Industry and Environment – Lands, Water and Department of Industries; and
- Blacktown and Districts Environmental Group Inc.

Refer to **Appendix 1 – Response to Submissions Matrix**.

The outcomes of further investigations, recommendations and the design response are summarised below and detailed in **Appendix 6 – St Marys Freight Hub Stormwater Management Report** and **Appendix 7 – Dam Dewatering Plan**.

8.3.1 WATER QUALITY

In response to comments raised about water quality, the updated BG&E Stormwater Management Report confirms:

- Water Sensitive Urban Design (WSUD) objectives raised in submissions have been addressed;
- To limit the level of pollutants discharging to downstream waterways a best practice treatment trains is proposed, comprising:
 - Rainwater tanks with reuse;
 - Bio retention and sediment pre-treatment; and
 - Grows pollutant traps;
- The redesigned water quality treatment train exceeds the Penrith City Council's standards. Refer to **Table 7 – Pollution Reduction Results**.

**TABLE 7 POLLUTION REDUCTION RESULTS**

POLLUTANT	REDUCTION TARGET REQUIRED (%)	POLLUTANT REDUCTION ACHIEVED (%)	COMPLIANCE
Gross Pollutants (GP)	90	99.9	Achieves Target
Total Suspended Solids (TSS)	85	95.6	Achieves Target
Total Phosphorus (TP)	60	81.1	Achieves Target
Total Nitrogen (TN)	45	54	Achieves Target
Free Oils and Grease with no visible discharge	90	NA	MUSIC does not report on oils and grease. Oil and grease typically binds to TSS particles and is expected to be captured to the required levels.

- MUSIC modelling has been undertaken to assess the effectiveness of the proposed train in meeting the WSUD objectives and determine the stream erosion index and the results demonstrate that the proposed treatment train sufficiently improves runoff quality to meet the requirements of:
 - Penrith City Council
 - NSW EPA; and
 - DPIE; and
- Sediment and erosion control measures will address concerns relating to potential impacts on water quality during the construction phase;

In response to comments raised about water quality and re-use of the existing sediment basin, Eco Logical prepared a Dam Dewatering Plan, which confirms;

- Water within the dam is generally better than the water downstream in South Creek;
- In the dam, only Ammonia and Total Nitrogen concentration exceed ANZECC trigger values, but not by a large amount;
- The dam water had low Faecal Coliform concentration and low Biological Oxygen Demand, and is therefore suitable for irrigation and secondary human contact;

and proposes:

- To slowly discharge the dam into the adjacent ephemeral creek leading to South Creek;
- Undertake dewatering prior to vegetation removal to slow flows, prevent erosion and sedimentation downstream;
- The use of erosion controls (staked haybales) to absorb initial velocity and dissipate flows across a broader area;
- Dewatering of the final 0.3 – 0.5m of water to be discharged away from the drainage line and onto dry open land where the mud can settle; and
- a methodology and timeline for the dewatering that outlines the approach to:
 - fauna rescue; and
 - sediment testing and excavation post dewatering.

Based on the findings of additional site investigations, stormwater modelling and the proposed dam dewatering approach, the key design changes are summarised as:



- Attenuation of smaller events will be incorporated into the treatment train to assist in protecting the geomorphic values of the receiving waterways; and
- A 1000m² sediment and bio-retention basin is proposed as a part of the treatment train to manage water quality between the pit and pipe network and Little Creek;

8.3.2 STORMWATER MANAGEMENT

In response to comments raised regarding the impact of stormwater management on adjoining properties and pre/post development flows, the earlier and updated BG&E reports confirm that:

- The overland flow path, through the site, for external catchments will be retained/reinstated as follows:
 - Via a proposed pipe along the eastern boundary located outside the existing easement, conveying water to the north and discharging into Little Creek; and
 - Via the existing 675mm diameter pipe, conveying water to the west with the intention to minimise the pre-development flows regime as closely as possible for a range of storm durations and that based on preliminary modelling, post development flows through the existing pipe will approximately match pre development levels.
- Whilst the development area for the site does have an increased peak discharge due to an increase in impervious area, the peak flow immediately downstream of the site will not increase. This is due to the site's immediate proximity to Little Creek, resulting in the peak flow from the site passing prior to the occurrence of the peak flows within Little Creek. (Refer to Figure 3 of Appendix 6)

Based on the findings of additional site investigations and stormwater modelling, the key design changes are summarised as:

- A drainage pipe is proposed to run along the eastern boundary located outside the existing easement to convey the existing overland flow paths from the upstream catchments northward for discharge into Little Creek;
- Attenuation of smaller events will be incorporated into the treatment train; and
- Onsite Stormwater Determination (OSD) is not proposed as the site's peak flow will pass prior to the overall peak flows of Little Creek (Refer to Figure 3 of Appendix 6).

8.4 FLOODING

Comments relating to localised flooding and impacts on adjoining properties were raised in submissions by:

- Penrith City Council;
- Department of Planning, Industry and Environment; and
- Charter Hall.

Refer to **Appendix 1 – Response to Submissions Matrix**.

The outcomes of further investigations, recommendations and the design response are summarised below and detailed in **Appendix 8 – St Marys Freight Hub Flood Impact Assessment**.



In response to comments raised regarding flooding risks and the impact on adjoining properties, the updated BG&E report confirm that:

- Several design events were assessed, including 5%, 1%, 0.5%, 0.2% AEP and PMF events;
- Several refinements were made to the model in order to better represent flooding conditions in and around the development site and to allow for hydraulic impacts;
- The development design was developed through an iterative process to minimise flood impacts and work within the various development constraints;
- The proposed development earthworks, existing drainage modifications, drainage and culverts beneath the access road from Lee Holm Road were incorporated into the flood model and run for the range of flood events to assess potential impacts to existing flood behaviour;
- The design intent, as outlined in the Stormwater Management Report (B18028-RPT-003 BG&E), is to ensure that stormwater run-off generated from the subject site is segregated from the external catchment flows conveyed through the site;
- The mapping for the full range of events assessed shows that:
 - There are no significant increases in flood level outside of the land owned by Pacific National, except for a minor increase in the PMF event near the site access to Forrester Road and the vehicle parking area of the Westbus site. At both locations, the PMF flood hazard remains classified as low and the minor increase in flood levels does not affect flood hazard, nor have any adverse effect on the operability of the property compared to pre-development flooding conditions;
 - There are predicted reductions in flood extents in all other design events assessed due to the improve drainage along the site access road; and
 - There is a localised increase in flood level of up to 360 mm within the existing swale due to encroachment of the development pad into the swale. As a result, there is a slight encroachment of inundation onto 10 Forester Road property. However, this is fully contained within the existing Sydney Trains swale with no impact on 10 Forester Road which is protected from flooding by the nature and formation of the swale in all events up to and including the PMF event. Impacts on adjoining properties are within the allowed afflux requirements; and
 - Acceptable outcomes are achieved with the inclusion of the proposed culvert under the access road to Lee Holm Road;
- An assessment on the need for onsite detention (OSD) has been and shows that no OSD is required due to the proximity of the site to the Little Creek outlet;
- An assessment into the hazard and likelihood of container impact during the South Creek PMF event has been undertaken and shows that the likelihood of containers floating and causing blockage as a result of PMF flooding within the site (due to rising waters from the backing up of South Creek), is negligible given a significant proportion of the pavement area will be free of inundation;
- A shelter in place is an appropriate response due to the short duration of flooding for Little Creek. Flood inundation occurs for surrounding roads during low frequency events which limits egress. During these events the site has ample flood free areas which can be used as shelters in place.



The South Creek peak flooding occurs after 36 hours which provides ample time for egress from the site. Flooding for surrounding roads during the PMF event cuts off numerous access roads, leaving the site as the best location for shelter during this event;

- Afflux cannot be eliminated. Numerous controls have been put in place to mitigate the impact of the development. The development complies with the afflux requirements and retains the existing flow regime and is outlined in the flood report; and
- The proposed development is compliant with the State Government Floodplain Development Manual and Council's Local Environmental Plan and Development Control Plan for Flood Liable Lands desired outcomes.

No design or operational changes have resulted from the findings of additional site investigations and flood modelling.

8.5 CONTAMINATION

8.5.1 STOCKPILE AND RAILWAY CORRIDOR INVESTIGATION

Douglas Partners initial investigations to the support the EIS flagged two areas of Potential Areas of Environmental Concern (PAEC) being:

- PAEC 3 – the large stockpile of soil (SP3) likely created from historical topsoil stripping works; and
- PAEC 6 – the railway corridor for asbestos contamination from the discarded brake shoes.

A supplementary contamination assessment (SCA) (DP ref. 94525.02.R.002.Rev1) was completed in April 2019 to assess the identified PAEC and determine any remediation requirements. The results of the SCA are outlined below:

- Sampling in Stockpile SP3 did not identify any COPC at concentrations exceeding site assessment criteria in all samples;
- A walkover across the railway corridor did not identify fragments of asbestos containing material (ACM) on the site surface;
- Sampling (three surface soil samples) across the railway corridor did not identify asbestos in all samples.

Submissions lodged by NSW EPA and Penrith City Council sought further sampling as follows:

- Further sampling of SP3 to address comments by the NSW EPA (ref# DOC19/544951) to fully characterise the stockpile with a quantitative asbestos assessment; and
- A site walkover and further sampling of the corridor was required to address comments by Penrith City Council in the Notice of Exhibition (ref# ECM:8712576).

Additional investigation fieldwork was completed in late July 2019 and included, but was not limited to, an additional sixty (60) test pits in Stockpile SP3 and six (6) surface soil samples along the length of the railway corridor.

With the results of fieldwork and laboratory testing, Douglas Partners concluded that:

“The results of the previous and current investigations have not identified asbestos at concentrations exceeding SAC (commercial/industrial land use) in all soil samples collected from stockpile SP3 and the railway corridor. From a contamination perspective, based on the findings of this and previous environmental investigations, it is concluded that no further investigations or remediation works are warranted for stockpile SP3 and the railway corridor.

Notwithstanding the above, the potential remains for isolated pockets of contamination to be present in stockpile SP3 and the railway corridor. To appropriately manage unexpected potential contamination issues encountered during development works, DP recommends the implementation of the Contingency for Unexpected Finds as described in Section 8.4 of the RAP (ref.94525.03.R.001.Rev1). Additionally, any materials requiring off-site disposal must be classified, managed and disposed in accordance with the Protection of the Environment Operations Act 1997. This may require further chemical and asbestos testing of the soil.”

Refer to **Appendix 9 – Stockpile SP3 and Railway Corridor Investigation**.

8.5.2 FURTHER ASBESTOS INVESTIGATION

A supplementary contamination assessment (SCA) (DP ref. 94525.02.R.002.Rev1) completed in April 2019 identified bonded asbestos containing material (ACM) impacted fill within two (2) test pits (TP205 and TP208), completed within the site (referred to as PAEC 1 in the SCA) at concentrations exceeding applicable screening levels.

Douglas Partners undertook further investigations to define the location and volume of impacted fill that requires remediation. In addition, the investigations would provide additional data across the site to reduce the risk of unexpected finds being encountered during construction of the northern portion of the site.

Additional investigation fieldwork was completed in mid-June 2019 and included, but was not limited to, twenty to thirty five (20 – 35) test pits across the site through fill material into natural soils.

With the results of fieldwork and laboratory testing, Douglas Partners key conclusions are as follows:

“Asbestos within bonded ACM in fill was detected at concentrations exceeding commercial/industrial (0.05% w/w) criteria in the following locations:

- *During the SCA at test pit locations TP205 and TP208; and*
- *During this investigation at test pit locations TP224 and TP225 completed approximately 2m to the east and south, respectively of TP205...*

...In addition, friable asbestos (FA/AF) was also identified within fill in one test pit TP227 during this investigation at a concentration exceeding SAC. Therefore, all fill within the known area requiring remediation should now be treated as impacted with both friable and bonded forms of asbestos...

...Given that friable asbestos has now been identified within the area requiring remediation emu-picking is no longer considered an appropriate remedial option...

Drawing 4 in the Douglas Partners report outlines the approximate extent of known fill and depths encountered requiring remediation, based on test pit data to date.

As discussed in Section 8.5.3 below, the Remediation Action Plan has been updated to remove reference to emu-picking as a suitable remedial option as a result of friable asbestos being identified on the site.

Refer to **Appendix 10 – Further Asbestos Investigation**.

8.5.3 REMEDIATION ACTION PLAN

A Remediation Action Plan (RAP) was prepared in May 2019 to establish appropriate remediation objectives, strategies, methodologies and validation processes to enable remediation of the site (PAEC 1) defined by the supplementary contamination assessment (SCA) (DP ref. 94525.02.R.002.Rev1) in accordance with the EPA requirements.

Further environmental investigation confirmed that the site can be made suitable for the proposed development subject to:

- the successful remediation and validation of asbestos impacted soil at PAEC 1, located in the far northern portion of the site (in the location of the proposed light vehicle access road); and
- onsite management of specific site soils in relation to pesticide, metal and PAH impacts.

The RAP identified emu-picking as an option for site remediation, however with the identification of friable asbestos during further asbestos investigations (refer to Section 8.5.2 above), emu-picking is no longer considered an appropriate remedial option.

An updated RAP (August 2019) has been prepared to reflect the findings of additional onsite investigations and outlines the strategy (including delineation, excavation and validation) for onsite containment of soils requiring remediation within a dedicated containment cell (Pacific National's preferred approach).

Refer to **Appendix 11 – Remediation Action Plan**.

8.5.4 INTERIM ENVIRONMENTAL MANAGEMENT PLAN

An Interim Environmental Management Plan (IERM) has been prepared to for the management of the proposed containment cell that will contain:

- Asbestos impacted fill soils proposed to be excavated from the northern portion of the site; and

- Soil proposed to be excavated from Stockpile SP4 impacted with pesticides at levels exceeding scheduled chemical waste criteria.

The IEMP provides ongoing control measures to aid in the management of the risks associated with the impacted filling within the proposed containment cell and the site to protect human health and the environment.

The EMP is an interim document on the basis that the containment cell is yet to be constructed. Following completion of the remediation works and construction of the containment cell, the EMP will be updated, amended and issued as a final EMP to guide ongoing management of the risks.

Refer to **Appendix 11 – Interim Environmental Management Plan**.

8.6 BIODIVERSITY

Comments relating to biodiversity were raised in submissions by:

- NSW DPIE – Environment, Energy and Science Group
and
- Blacktown and Districts Environmental Group Inc.

Refer to **Appendix 1 – Response to Submissions Matrix**.

The outcomes of further investigations, recommendations and the design response are summarised below and detailed in **Appendix 13 – St Marys Freight Hub Biodiversity Development Assessment Report (BDAR)** and **Appendix 7 – Dam Dewatering Plan**.

In response to matters raised the BDAR has been updated to:

- provide additional justification for not including PCT 1071 as a TEC in Section 1.4.4 which confirms that the PCT 1071 is not consistent with the TEC Freshwater Wetlands on Coastal Floodplains or the NSW Scientific Determination for the EEC Freshwater Wetlands on Coastal Floodplains;
- provide a description in Sections 1.4.5 and 1.4.6 of areas not mapped as native vegetation;
- correct the error in Table 10 to reflect *Grevillea juniperina* ssp being found on site;
- include additional references and justification in Section 1.6.1 for the mapping of the *Myotis macropus* species polygon;
- expand Table 15 to address and justify the biodiversity impacts of the development, including unavoidable impacts and confirmed that the following outcomes have been considered in regard to residual biodiversity impacts:
 - Habitat connectivity will be maintained with the retained with the majority of the vegetated corridor in the north of the site to be retain;
 - Where achievable within the scope of the development, impacts to vegetation and *Grevillea juniperina* have been avoided;
 - The footprint has been refined to minimise biodiversity impacts;
 - Designing surface water treatment to minimise downstream impacts;

- Impacts on native vegetation and threatened species will be offset in accordance with the Biodiversity Offsets Scheme (BOS); and
- to include a Biodiversity Credit Report in Appendix D.

In response to comments made regarding the plant species to be planted across the site, the updated EIS documents commit to planning species as part of the landscape design that will be derived from the species list for the relevant Plant Community Type, using Figure 3 of the BDAR as a guide.

Eco Logical prepared a Dam Dewatering Plan, which confirms;

- Observations during a brief field survey found no permanent bird population occupying or nesting in the dam;
- At least one bird species visits the dam;
- One common species of frog was heard calling in the fringing rushes;
- Large numbers of small bodied pest fish were observed in the shallows and other pest species may occur;
- No native fish or reptiles were observed;
- It is predicted that native aquatic fauna could inhabit the dam (Shortfin Eel, Longfin Eel, Eastern Long-neck Turtle and Fathead Gudgeon; and
- No aquatic or noxious weeds were detected in or immediately surrounding the dam; and
- Proposes a methodology and timeline for dewatering and fauna rescue.

Additional investigations and reporting have not resulted in any design or operational changes to the proposed development.

8.7 AIR QUALITY

Comments relating emissions and modelling of plant equipment were raised in submissions by:

- Penrith City Council;
- NSW Environmental Protection Agency; and
- Charter Hall.

Refer to **Appendix 1 – Response to Submissions Matrix**.

The outcomes of further investigations, recommendations and the design response are summarised below and detailed in **Appendix 14 – St Marys Freight Hub Air Quality Impact Assessment**.

To respond to comments made in submissions, AECOM undertook additional investigations to inform the updated Air Quality Impact Assessment, however no design or operational changes have resulted from the additional investigation and reporting.

Confirmation that the modelling conditions considers the worst case scenario additional benchmark modelling of the current locomotive fleet and upgrade kits has been completed.

As documented in the updated Air Quality assessment, St Marys facility is committed to the Industry Code of Practice and non-road emissions complying with Euro III emissions (for non-locomotive

sources) and Tier O+ with Upgrade kits (following the next major Locomotive overhaul).

The AQIA has been modelled based on the Locomotives and Non-road diesel vehicle expected to be used for the project. Minimum standards assumed include Tier O+ for Locomotives and Euro III for non-road diesel vehicles.

In addition, air quality impacts have been better illustrated with the addition of contour mapping.

8.8 CONSTRUCTION

Comments relating to the proposed construction program and perceived impacts were raised in submissions by:

- Penrith City Council;
- Department of Planning, Industry and Environment; and
- Charter Hall.

Refer to **Appendix 1 – Response to Submissions Matrix**.

The outcomes of further investigations, recommendations and the design response are summarised below and detailed in **Appendix 15 – St Marys Freight Hub Extended Hours Work Statement** and **Appendix 16 – Construction Program**.

8.8.1 EXTENDED WORK HOURS

In regard to comments raised in submissions, the Extended Hours Work Statement has clarified:

- duration of the extended work hours construction program (3-4 months);
- extended hours works schedule;
- construction site access from Lee Holm Road;
- the type of works undertaken during the extended hours period;
- includes a noise impact assessment of works during the extended hours period: and
- evaluates the impacts of the extended hours works on nearby residential receivers.

The post exhibition noise assessment by AECOM has also been updated to include assessment of night time noise impacts from extended hours construction activities. The assessment defines a works area within the development site where there is no noise impact from extended hours construction works on sensitive receivers due to imposing adequate separation distances (minimum 350m).

An Extended Work Hours Statement details the noise assessment modelling and compliance with the steps for assessing noise impacts in accordance with the Interim Construction Noise Guideline, which is included in Appendix 15. Importantly, there is no impact on nearby residences from the proposed night time construction works.

8.8.2 WASTE MANAGEMENT

In regard to comments raised in submissions, the following responses are provided:



- The asbestos delineation assessment, revised Remediation Action Plan (RAP) and Interim Environmental Management Plan (EMP), including an Unexpected Finds Protocol (UFP), has been prepared and is enclosed. The Construction Environmental Management Plan (CEMP) will also capture this requirement in accordance with the statutory requirements as it relates to contaminated materials;
- The stockpile location forms part of the procedural coordination of construction for the facility. Material handling will be managed to appropriate environmental management standards; and
- Consultation with the Freight Hub operator confirms there will be no mass storage of tyres onsite and the Operation Waste Management Plan prepared prior to occupation will be updated accordingly.

8.8.3 CONSTRUCTION PROGRAM

The construction program has been prepared by the contractor, McMahon Services, commissioned to deliver the Freight Hub facility. McMahon Services is recognised construction company with experience in large-scale construction projects across many sectors throughout Australia.

The duration of the construction period is 7 months providing construction can occur during the extended hours works period. If works during the extended hours period does not occur the duration of the construction period will extend by 3 to 4 months.

A summary of the construction program is as follows:

- Pre-site works commencing in Month 1;
- Month 2 to Month 6 – Construction of heavy vehicle access road, bulk earth works and hard stand areas. The Stage 1 works enable the St Marys Freight Hub to commence operation at a reduced capacity whilst other parts of the project are still under construction;
- Month 3 to Month 8 – Construction of administration building site, fuel storage, wash bay, transport workshop and container repair workshop sites. These works are estimated to take 4 months with completion in Month 8 and approvals for the office/administration buildings and workshop buildings will be progressed separately;
- Month 2 to Month 3 – Light vehicle access road and associated parking; and
- Month 5 to Month 7 – Finishing works including landscaping, lighting, fencing, signage.

The submissions questioned the length of the construction period and expressed concern the construction period and any potential residual impacts would be longer than proposed. It is therefore supported that the duration of construction works on surrounding properties and the local area should be minimised by allowing low risk construction activity during the proposed extended work hours period.

Accordingly, the proposal includes a construction works program with extended hours works that will significantly reduce the duration of the construction period (by up to 4 months) and reduce exposure to surrounding landowners during construction.

The construction program is consistent across all post exhibition assessments and documents.



9. POST EXHIBITION PROJECT EVALUATION

The submissions received on the St Marys Freight Hub have been comprehensively considered and further environmental assessment has been undertaken to ensure the construction and operation of St Marys can proceed with the minimal level of impact.

Submissions were received from government agencies, Penrith City Council, corporations, a special interest group and individuals within the local community. Of the 16 submissions, there were 3 submissions supporting the proposal, 3 objecting to the proposal and 10 provided comments and/or sought further clarification/information.

The key issues from the submissions include:

- Transport routes & impacts
- Traffic generation
- Noise (night time sleep disturbance)
- Water Quality
- Flooding & stormwater management
- Contamination
- Extended work hours
- Air quality

Representatives from the local community, including the local business community and public, showed strong support for the St Marys Freight Hub. In addition, there was also strong support from NSW Ports.

Penrith City Council did not support the proposal, primarily on traffic and transport issues, and raised several other concerns including water quality and stormwater management issues. An adjoining landowner did not support the proposal due to the 'ambitious' construction program, construction site access from Forrester Road and alleged inconsistencies in the construction details. A local special interest group also did not support the proposal for biodiversity reasons.

The remaining submissions generally sought further information, in particular the EPA who requested further assessment of various environmental aspects of the proposal, such as air quality, noise and contamination.

There has been good support for the project from the local business community and each of the submission comments have been reviewed and addressed in this updated proposal for the ST Marys Freight Hub. There have been no objections from the public opposing the project.

Pacific National has also proactively undertaken additional consultation with the local business community and residents. This has included additional public notices and information desks during the public exhibition period. In addition to websites, information 1800 numbers and enquiry emails setup as part of the consultation strategy.

The key changes to the design and operation of St Marys Freight Hub proposal in response to the submissions include:

- Changing the heavy vehicle access from Lee Holm Road to Forrester Road, and
- Redesign of the water quality treatment train to include a bio-retention basin.

Changing the heavy vehicle access has resulted in numerous improvements and benefits for the St Marys Freight Hub. Transport routes are now more efficient, use high-order roads in western Sydney's state and regional road network and use approved heavy vehicle roads for B Double vehicles. The changed heavy vehicle access arrangements mean that heavy vehicles will avoid usage of already congested roads and intersections including Christie Street and Werrington Road. The revised access and associated transport routes also have significantly less impacts on the local road network with 430,000 less kilometres than the exhibited option.

The redesign of the water quality treatment train and inclusion of the bio-retention basin ensures that Penrith City Council standards are achieved and exceeded. This ensures stormwater discharge from the site into the natural system is of a high standard and compliance with both state and local water quality objectives and standards.

The design changes have resulted in minor modifications to the development footprint for the project. The development area has been reassessed for biodiversity impacts, which has resulted in a change on impacts on native vegetation and fauna. The latest Biodiversity Development Assessment Report requires a reduced value in credits for biodiversity offsets.

Further assessment of noise, air quality and contamination has also been undertaken to ensure environmental standards during construction and operations are achieved. The performance assessment of soft landing technology for container handling has demonstrated significantly reduced maximum noise levels during night time hours to acceptable standards. Emissions and details on plant and equipment have been verified and remodelled to confirm compliance with the applicable standards. Extensive additional testing and assessment on contamination to EPA standards has been undertaken and more refined reporting on the remediation and management of contaminated material has been completed.

Additional information has been provided on construction activity during the extended work hours and flooding impacts for the site. The assessment on extended work hours demonstrates that construction activity outside standard work hours can occur without any impact on nearby sensitive receivers. The additional information in the flood assessment confirms that there are no significant flood impacts resulting from the proposal and that shelter-in-place is the best response to a PMF flood event.

The site has unique characteristics and competitive advantages that support a compelling case for use as an intermodal terminal, including:

- Immediate and unrestricted access to an existing rail spur line and the broader freight rail network, connecting to Port Botany and the regional and national freight rail network;
- Existing allocation of 5 train paths to service the development;

- Direct connection to Classified State and Regional Roads;
- Direct connection to approved B Double routes;
- Land zoned for industrial purposes that is unconstrained by any significant site contamination, biodiversity, utilities or other construction and operational restrictions;
- Located in close proximity to strategic employment lands, logistics clusters and key customers, including freight forwarders, warehousing and distribution centres at Erskine Park, Eastern Creek, Wetherill Park and Marsden Park; and
- Surrounding land uses are either complementary and consistent with adjoining industrial and commercial activities or provide a buffer to sensitive land uses.

Delivery of the St Marys Freight Hub provides the opportunity to significantly improve supply chain efficiency into Western Sydney, facilitate greater rail container mode share and facilitate a significant reduction in heavy vehicle container movements across the greater Sydney road network, including local freight road routes servicing Port Botany.

It is projected that around 8.7 million truck kilometres per year will be removed from the regional and state road networks between Port Botany and Western Sydney. Not only is this a significant reduction of traffic on Sydney's motorways, it is a significant reduction in air emissions compared to transporting containers by rail.

The proposal is consistent with the State Government's transport and freight policies and objectives relating to the Port Botany expansion and achieving an ultimate throughput of 7,500,000 TEU's (shipping containers) annually. The proposal also aligns with, and supports, the Local, State and Federal Government's strategic intent and objectives as outlined in:

- National Ports Strategy;
- National Freight and Supply Chain Strategy;
- Draft National Ports Strategy;
- Greater Sydney Region Plan;
- Western Sydney District Plan;
- Future Transport Strategy 2056;
- 2013 NSW Freight and Ports Strategy;
- 2017 NSW Draft Freight and Ports Plan; and
- Penrith City Strategy.

The proposed St Marys Freight Hub and associated port shuttle service will result in a significant reduction in the road-based container transport between Port Botany and Western Sydney in favour of rail, with local traffic impacts able to be managed within the existing road network, which consists of Classified Regional and State Roads and approved heavy vehicle routes. Amenity impacts along these designated high-order transport routes have been assessed, including noise, air quality and traffic impacts, and there are no significant impacts resulting from the proposal.

In addition to the supply chain benefits that will be delivered by the project across greater western Sydney, the St Marys Freight Hub will deliver local economic benefits including local job creation, gross



regional product and increased local expenditure.

The proposed St Marys Freight Hub has widespread economic, employment, transport and community benefits and it has been demonstrated that all environmental impacts can be successfully managed. Accordingly, the delivery of the St Marys Freight Hub is in the public interest.



APPENDIX 1

1. RESPONSE TO SUBMISSIONS MATRIX

Local Government
Government Agencies
Special Interest Groups
Corporate and Individuals



APPENDIX 2

2. CONCEPT LAYOUT AND STAGING PLANS (UPDATED)

BG&E

(Dated: 5 September 2019 and 17 September 2019)



APPENDIX 3

3. EIS COMMUNITY ENGAGEMENT REPORT AND ONGOING CONSULTATION STRATEGY (UPDATED)

Primary Communication
(Dated: 13 September 2019)



APPENDIX 4

4. TRAFFIC AND TRANSPORT ASSESSMENT (UPDATED)

Bitzios Consulting

(Dated: 10 September 2019)



APPENDIX 5

5. NOISE AND VIBRATION IMPACT ASSESSMENT (UPDATED)

AECOM

(Dated: 3 October 2019)



APPENDIX 6

6. STORMWATER MANAGEMENT PLAN (UPDATED)

BG&E

(Dated: 30 September 2019)



APPENDIX 7

7. DAM DEWATERING PLAN

Eco Logical

(Dated: 12 September 2019)



APPENDIX 8

8. FLOOD IMPACT ASSESSMENT (UPDATED)

BG&E

(Dated: 26 September 2019)



APPENDIX 9

9. STOCKPILE SP3 AND RAILWAY CORRIDOR INVESTIGATION

Douglas Partners
(Dated: 15 August 2019)



APPENDIX 10

10. FURTHER ASBESTOS INVESTIGATION

Douglas Partners
(Dated: 27 June 2019)



APPENDIX 11

11. REMEDIATION ACTION PLAN

Douglas Partners
(Dated: 12 August 2019)



APPENDIX 12

12. INTERIM ENVIRONMENTAL MANAGEMENT PLAN

Douglas Partners
(Dated: 26 September 2019)



APPENDIX 13

13. BIODIVERSITY DEVELOPMENT ASSESSMENT REPORT (UPDATED)

Eco Logical

(Dated: 13 September 2019)



APPENDIX 14

14. AIR QUALITY IMPACT ASSESSMENT (UPDATED)

AECOM

(Dated: 23 September 2019)



APPENDIX 16

15. EXTENDED WORK HOURS STATEMENT

Urbanco

(Dated: 25 September 2019)



16. CONSTRUCTION PROGRAM (UPDATED)

McMahon Services and Pacific National

(Dated: 19 December 2018)

