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Annual Review - 2017

Stolthaven Bulk Fuel Storage Facility, Mayfield

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Stolthaven Bulk Fuel Storage Facility, Mayfield

Client: Stolthaven Australia Pty Ltd

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1.0 Introduction

This Annual Review has been prepared by AECOM Australia Pty Ltd (AECOM) on behalf of Stolthaven Australia Pty Ltd (Stolthaven) to assess the environmental performance of the fuel import, storage and dispatch facility (the Site) on industrial land managed by the Port of Newcastle Pty Ltd (PON), Newcastle, New South Wales. The Site is operated under the State Significant Development (SSD) development consent SSD_6664 (as modified) issued on 16 April 2015 under Part 4 of the *Environmental Planning and Assessment Act* (EP&A Act). The Site was originally approved under the now superseded Part 3A of the EP&A Act, under Project Approval MP08_130 which has now been relinquished.

In accordance with Schedule 4 Condition 5 of SSD_6664 (as modified) and the letter addressed to Stolthaven from Department of Planning and Environment (DP&E) dated 23 February 2017 this Annual Review has been prepared to assess the environmental performance of the Site to the satisfaction of the Director-General. This Annual Review includes the reporting period from 1 January – 31 December 2017.

This Annual Review provides:

- An overview of the Site (**Section 2.0**);
- A description of the operations carried out over the past calendar year (2017) which represents the reporting period (**Section 2.1**);
- Analysis of the environmental monitoring results for the reporting period and a comparison of these results with relevant performance criteria and previous data (**Sections 3.0** to **7.0**);
- Identification of any non-compliances throughout the reporting period and actions taken to rectify the issue (**Section 10.0**);
- Identification of trends in monitoring data over the life of the Site (**Sections 3.0** to **7.0**); and
- A summary of recommendations to improve the environmental performance of the Site (**Section 11.0**).

Any trends identified in monitoring data will be limited to the available data set. As monitoring continues over the life of the Site, the reliability of any trends identified in monitoring data will improve with larger data sets being available.

1.1 Site Location and Description

The Site is located on part of the former BHP Steelworks Site, approximately 5 km north-west of Newcastle CBD. The land on which the Site is located is leased from the PON and is currently subject to concept approval MP 09_0096 held by PON. The Site is located within the Port of Newcastle, and the area surrounding the Site is characterised by a mixture of port related activities, industrial uses and residential and commercial areas. The Site is situated on the southern bank of the South Arm of the Hunter River, opposite industrial and port operations on Kooragang Island (**Figure 1**). The Site and adjoining land is topographically flat and lies at approximately 1.89m Australian Height Datum.

The storage terminal consists of:

- Ship unloading facilities at the Mayfield Berth 4 (M4) wharf facility (outside the project approval area);
- A delivery pipeline from M4 to the terminal;
- Nine (9) storage tanks from 535m^3 to 18,003m^3 as summarised in **Table 1**;
- A four (4) bay automated truck loading and unloading facility;
- Pumping capacity for bulk tanker (truck loading);
- Appropriate drainage and spill containment systems; and
- Fire protection systems.

The approved terminal layout is provided in **Figure 2** and the proposed Expansion Area includes the parcels of land (Lot 36, Lot 37 and Lot 38) south of the existing facility.

Table 1 Schedule of Fuels Storage Tanks

Tank ID No.	Design Product	Tank Diameter (m)	Shell Height (m)	Maximum Storage Volume (m^3)
1	Diesel	36.6	17.1	17,703
2	Diesel	36.6	17.1	17,695
3	Diesel	36.6	17.1	17,691
4	Biodiesel	7.6	12.0	535
5	Diesel	36.6	17.1	17,584
6	Diesel	36.6	17.1	17,611
7	Biodiesel	18.0	17.0	4,242
8	Diesel	36.6	17.1	17,998
9	Diesel	36.6	17.1	18,003

1.2 Site History

The Site is located on part of the former BHP Steelworks Site. BHP was located on the site from 1915 to 1999. In 2002, ownership of that part of the former BHP Steelworks Site known as the Closure Area Site was transferred to the State Government. In March 2007, the Hunter Development Corporation (HDC) (formerly the Regional Land Management Corporation Pty Ltd) was created by the Government to manage the day-to-day activities of the former BHP Steelworks Site and other Crown lands in the Lower Hunter Region, including remedial and redevelopment works for the Closure Area Site (SKM 2004).

On 14 June 2001, under former Section 21 of the *Contaminated Land Management Act 1997* (CLM Act), the Environment Protection Authority (EPA) declared the Closure Area Site to be a remediation site. A Remediation Action Plan (RAP) was prepared by SKM in 2004 to address contamination issues associated with soils and groundwater. A Voluntary Remediation Agreement (VRA No 26025) for the remediation of the Site was issued by the EPA on 30 August 2005. HDC undertook to fulfil these remediation commitments.

In March 2008, a Contaminated Site Management Plan (CSMP) for the Closure Area Site was prepared by HDC. The CSMP provided a common framework to be applied across the whole of the site for the design, implementation, completion, use and maintenance of remediation and project works. In mid-2008, HDC completed Stage 1 of the remediation works. Stage 2 of the remediation works were subsequently completed in 2013.

Following a handover in ownership to the Newcastle Port Corporation (NPC), now PON, a Concept Plan application for the future strategic development of the former BHP Steelworks Site was approved by the Minister for Planning in July 2012. The Concept Plan approval made provision for the future development of part of the former BHP site for bulk liquid related industries.

Stolthaven was the first, and is the only, operation currently active on the former BHP Steelworks Site, having received initial approval for their Site in June 2012. PON also operates Mayfield No.4 berth (M4) within the Concept Plan area, which is a general purposes berth currently used by Stolthaven for the import of fuels.

1.3 Operations and Approval

The Site operates in accordance with SSD_6664 issued on 16 April 2015 under Part 4 of the EP&A Act. The Site was originally approved under Project Approval MP 08_0130, issued on 8 June 2012 under the former Part 3A (repealed) of the EP&A Act. Site operations are described below in sequence of approval history.

Table 2 Approvals

Approval	Section	Expiry Date
Original Project Approval MP08_0130	**Section 1.3.1**	NA
Current Development Consent SSD_6664	**Section 1.3.2**	NA
Development Consent SSD_7065	**Section 1.3.3**	As per Condition B5 of the SSD_7065, this consent lapses five years from the date of approval (i.e 15 December 2021)
Environment Protection Licence (EPL) 20193	**Section 1.3.4**	NA
Concept Plan MP09_0096	**Section 1.3.5**	NA

1.3.1 Original Project Approval MP08_0130

The original Project Approval MP08_0130 was approved by the Minister for Planning on 8 June 2012 under Part 3A (repealed) of the EP&A Act. In summary, the original project comprised the following elements:

- Use of an existing ship berthing facility via M4 to deliver fuels from bulk tankers. Fuel to be pumped along a 300 mm diameter steel pipeline from M4 to the Site;
- Storage of bulk fuels in above ground tanks (3 x 18ML diesel and 3ML biodiesel) with a total permitted annual throughput of 300 ML combined;
- Distribution of fuels by road tankers; and
- Ancillary components including site office, car parking and truck loading gantry.

Construction of the Site as approved under the original Project Approval was completed in late 2013, with the first shipment of fuels commencing 19 November 2013.

Subsequent modification to the original Project Approval included the following:

- MOD 1 – Two additional 18ML diesel tanks, one additional 4.2ML biodiesel tank and an additional 100ML pa throughput. Approved 26 July 2013;
- MOD 2 – Paper modification to the wording of Condition 6 to remove reference to the Department of Health. i.e. no changes to the composition of the approved Facility. Approved 15 November 2013; and
- MOD 3 – Increase throughput from 400ML pa to a total of 500ML pa. No additional tanks or infrastructure. Approved 10 July 2014.

1.3.2 Current Development Consent SSD_6664

Stolthaven operates under SSD development consent 6664 (SSD_6664) which was issued under Part 4 of the EP&A Act following a request for increase to the throughput of the facility and to construct two additional storage tanks. The current SSD_6664 consent transferred the Site from the MP08_0130 Part 3A approval to an SSD approval. One of the conditions of SSD_6664 included the requirement to surrender Project Approval MP08_0130. The SSD_6664 consent permitted the Facility's capacity to be increased through an additional:

- Two 18ML diesel storage tanks; and
- Throughput to total 1,010ML pa.

Following the approval of SSD_6664, a modification to SSD_6664 was approved to increase the annual throughput from 1,010 ML to 1,300 ML per year. SSD_6664 Modification 1 does not require an increase in storage capacity at the Site nor does it require construction of additional fuel storage tanks or associated infrastructure. This modification was approved on 28 September 2015.

1.3.3 Development Consent SSD_7065

Stolthaven applied to expand its existing fuel storage at Mayfield. This expansion will involve:

- Increasing the throughput of the facility from 1,300ML to 3,500ML per year;
- Importing flammable fuels (petroleum, ethanol and jet fuel), in addition to combustibles (diesel and biodiesel) already imported;
- 17 new fuel storage tanks and bunds, in addition to the 10 existing tanks;
- A marine loading arm, pumps and dual pipeline to transfer fuels to the terminal from ships docking at the new Mayfield No.7 berth; and
- A new six bay truck loading gantry, vapour control system, office and firefighting systems.

DP&E approved the application on 15 December 2016. SSD_7065 was not in force during the reporting period as the increase of throughput of combustible liquids beyond 1,300ML throughput per year, or the ability to store flammable liquids will not occur until SSD_6664 has been surrendered and an amended EPL issued.

No works have been initiated to act upon SSD_7065, nor have site operations altered beyond the scope of SSD_6664, and therefore SSD_6664 continues to be the applicable approval under which the Site operates. Stolthaven will consult with DP&E regarding any approval required for the construction or operation of future stages of the terminal.

1.3.4 Environmental Protection Licence

The Site operates under EPL 20193 which is administered by the NSW EPA under the *Protection of the Environment Operations Act 1997* (POEO Act). A variation to EPL 20193 was approved on 2 October 2015 to incorporate the modifications made under SSD_6664 Modification 1. EPL 20193 permits the scheduled activities of Chemical Storage, Shipping in Bulk and Extractive Activities on the site. The Extractive Activities approved under EPL 20193 relate to the dredging operations being undertaken for construction of the Mayfield Berth No. 7, which is complying development (refer to **Section 1.3.5**). EPL 20193 was amended on 28 August 2017, to include updates to the groundwater monitoring well network, redefined noise criteria and the requirement to perform ambient monitoring during dredging operations. It is noted that only those EPL conditions relating to the development as approved under SSD_6664 are reported in this Annual Review (i.e. not those relating to berth construction or dredging activities, which are approved under a complying development certificate from Newcastle City Council).

1.3.5 Other Relevant Approvals

Mayfield Concept Plan Approval

Concept Plan (MP09_0096) was approved by the Minister under Section 75M of the EP&A Act on 16 July 2012 to enable development of the former BHP Steelworks site (known as the Closure Area or Concept Plan area), a 90 hectare portside portion of land on the South Arm of the Hunter River within which the Site sits. The Concept Plan area is to be developed progressively in stages to accommodate anticipated future trade needs over a 20-25 year timeframe.

Mayfield Berth No. 4 DA-293-08-00

Development Consent DA-293-08-00 MOD 9, dated 29 August 2013, is applicable to the M4 berth, and ships filling or depositing at this berth must comply with relevant conditions of this consent (e.g. operational noise limits).

Mayfield Berth No. 7 – Complying Development Certificate

Stolthaven is currently in the process of constructing a dedicated bulk liquids berth to service both the Site and other bulk liquid operators. Under the provisions of *State Environmental Planning Policy (Three Ports) 2013* (Three Ports SEPP) the construction of the berth is complying development. A complying development certificate has been obtained from the Newcastle City Council. The berth was still being constructed during the reporting period and therefore the Site did not accept any fuels from berth 7 during the reporting period.

G:\ENVGIS\Projects\60326869 Stolthaven\FIGURES\3500ML Modification\EIS\60326869 F1 Regional Context 06 10 2015 TO

AECOM

REGIONAL CONTEXT

Bulk Fuel Storage Facility
State Significant Development - Stolthaven Stage 3

FIGURE 1

G:\ENV\GIS\Projects\60326869 Stolthaven\FIGURES\3500ML Modification\EIS\60326869 F4 Approved Terminal Layout 30 11 2015.TO

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APPROVED TERMINAL LAYOUT

Bulk Fuel Storage Facility
State Significant Development - Stolthaven Stage 3

FIGURE 2

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2.0 Site Operations

2.1 Description of Operations

Operations undertaken at the Site include the receipt, storage and dispatch of bulk diesel and biodiesel, as well as bulk tanker loading at M4. The Site operates 24 hours a day, seven days a week. The Site is partially automated and manned with Stolthaven personnel undertaking daily inspections. Primary operations include:

- The bulk storage of diesel and biodiesel at the Site in the storage tanks listed in **Table 1**;
- The bulk transfer of diesel fuel from berthed ships to the Site's above ground storage tanks; and
- The filling of road tankers with diesel and biodiesel products for transfer to customers.

2.2 Major Operational Changes in 2017

A variation to EPL 20193 was issued on 28 August 2017. The variation included updates to the groundwater monitoring well network, redefined noise criteria and the requirement to perform ambient monitoring during dredging operations.

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3.0 Groundwater

3.1 Groundwater Monitoring

Groundwater quality at the Site is managed in accordance with a groundwater monitoring program, adherence to the Site's Groundwater Management Plan (GMP) and the conditions of EPL 20193. Groundwater beneath the Site discharges into the Hunter River via groundwater migration.

Four groundwater monitoring wells were installed by Stolthaven in October 2013 (identified as Monitoring Points 1-4 in EPL 20193) and are identified as MW01, MW02, MW03 and MW04 in this report. Five additional groundwater monitoring wells were installed by Stolthaven in the proposed Expansion Area in July 2017 (identified as Monitoring Points 16-20 in EPL 20193) and are identified as MW05, MW06, MW07, MW08 and MW09 in this report (refer to **Figure 3**).

The groundwater monitoring program consists of quarterly data collection and samples from the groundwater wells. Monitoring events are scheduled so that groundwater conditions beneath the Site are investigated during both wet and dry seasons. The schedule of groundwater monitoring wells is provided in **Table 3**.

Table 3 Groundwater Monitoring Points at the Site

EPA Identification Number	Monitoring Well Reference in this Report	Type of Monitoring Point	Sampling Frequency
1	MW01	Groundwater	Quarterly
2	MW02	Groundwater	Quarterly
3	MW03	Groundwater	Quarterly
4	MW04	Groundwater	Quarterly
16	MW05	Groundwater	Quarterly
17	MW06	Groundwater	Quarterly
18	MW07	Groundwater	Quarterly
19	MW08	Groundwater	Quarterly
20	MW09	Groundwater	Quarterly

Background monitoring was conducted prior to commencement of operations in 2013 to assess the condition of groundwater entering and leaving the Site (particularly for the presence of petroleum hydrocarbons) in order to establish baseline groundwater quality within the Site. Background monitoring was conducted in the proposed Expansion Area during the fourth quarter of 2017 to begin assessing the groundwater quality prior to site operations within this area. The results of background monitoring are included alongside groundwater monitoring results for the reporting period in **Section 3.2**.

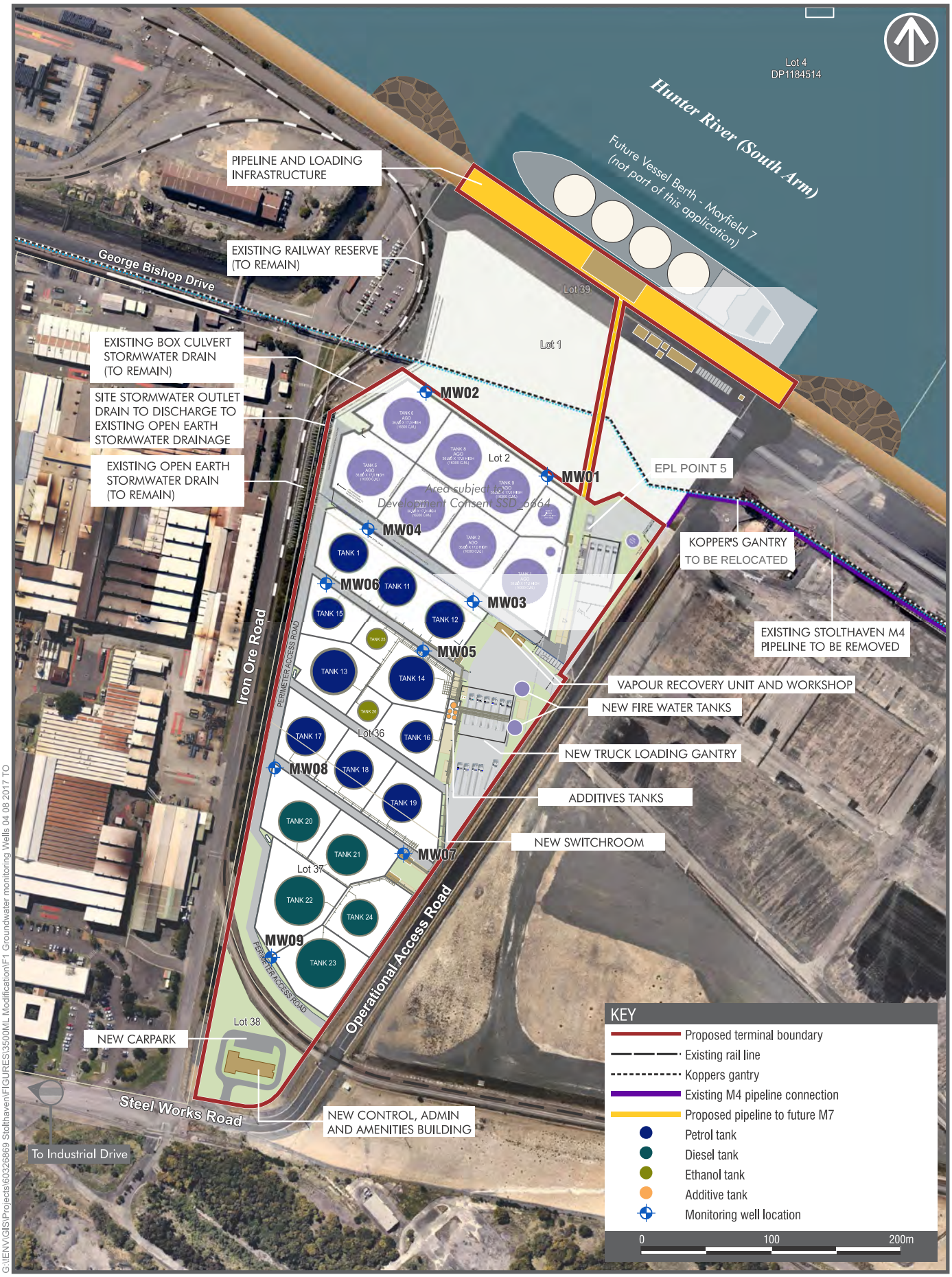
Groundwater monitoring results are assessed against the Site's Groundwater Assessment Criteria (GAC) as part of the GMP, and the background concentrations established in 2013. The thresholds that form the GAC are sourced from the ANZECC (2000) *Australia New Zealand Water Quality Guidelines for Fresh and Marine Waters,* 95% Species Protection for Marine Waters Criterion. Where trigger values have not been published, ANZECC (2000) low reliability trigger values were adopted. There are no groundwater quality requirements under the Site's EPL. The GAC is set out in **Table 4**.

Samples are analysed for pollutants by a NATA accredited laboratory. Indicators of potential adverse groundwater quality impact will include (but are not limited to) the following:

- Evidence of non-aqueous phase liquid (NAPL) (e.g. a separate fuel layer) on the groundwater table;
- Changes in clarity, colour and odour of groundwater; and
- Increases in concentrations of dissolved hydrocarbons.

Table 4 Groundwater Assessment Criteria

Compound	Units	ANZECC (2000) 95% Low Reliability Values	ANZECC (2000) 95% Trigger Values	EPL Concentration Limit
BTEX				
Benzene	(µg/L)	-	500	-
Ethylbenzene	(µg/L)	80	-	-
Toluene	(µg/L)	180	-	-
o-xylene	(µg/L)	350	-	-
p-xylene	(µg/L)	200	-	-
m-xylene	(µg/L)	80	-	-
Total Xylene	(µg/L)	-	-	-
Total Recoverable Hydrocarbons				
C6-C10 Fraction	(µg/L)	-	-	-
C6-C10 - BTEX	(µg/L)	-	-	-
>C10-C16 Fraction	(µg/L)	-	-	-
>C16-C34 Fraction	(µg/L)	-	-	-
>C34-C40 Fraction	(µg/L)	-	-	-
>C10-C16 Fraction – Naphthalene	(µg/L)	-	-	-



G:\ENV\GIS\Projects\60326869 Stolthaven\FIGURES\3500ML Modification\F1 Groundwater monitoring Wells 04 08 2017 TO

AECOM

TERMINAL LAYOUT

Bulk Fuel Storage Facility

FIGURE 3

3.2 Groundwater Monitoring Results

Groundwater monitoring results are presented in **Table 5** to **Table 13** with commentary on the analysis provided below in **Section 3.3**.

3.2.1 MW01

Table 5 Groundwater Monitoring Results for MW01

Analyte	Laboratory Limit of Reporting	Q1 2017	Q2 2017	Q3 2017	Q4 2017	Background Range	GAC
pH							
pH	0.01	9.21	9.24	9.19	9.27	7.0 – 9.79	-
BTEX (µg/L)							
Benzene	1	<1	<1	<1	<1	<1 to 5	500
Ethylbenzene	2	<2	<2	<2	<2	<2	80
Toluene	2	<2	<2	<2	<2	<2	180
Xylene (o)	2	<2	<2	<2	<2	<2	350
Xylene (m&p)	2	<2	<2	<2	<2	<2	80*
Total Recoverable Hydrocarbons (µg/L)							
C6-C10 Fraction	20	<20	<20	<20	<20	<20	-
C6-C10 minus BTEX (F1)	20	<20	<20	<20	<20	<20	-
>C10-C16 Fraction	100	<100	<100	<100	**300**	<100	-
>C16-C34 Fraction	100	<100	<100	<100	**300**	<100 to 380	-
>C34-C40 Fraction	100	<100	<100	<100	**1610**	<100	-
>C10-C16 Fraction – Naphthalene	100	<100	<100	<100	**320**	<100	-

*Lesser value of m-xylene adopted as GAC

Bold denotes exceedance of adopted GAC.

Following the elevated TRH result that returned from the Q4 monitoring event AECOM requested that the laboratory undertake a retest to confirm the results. There was insufficient water left over from the monitoring event to produce another extract as the laboratory would normally do for a re-test therefore they could only re-run the test on the existing sample extract. Similarly the laboratory had to use available sample from the Volatile vial instead of the correct semi volatile bottle, (it is noted that the re-run from the vial is not representative as it was not the correct bottle for TPH Analysis). Results did not differ significantly from the original test however.

3.2.2 MW02

Table 6 Groundwater Monitoring Results for MW02

Analyte	Laboratory Limit of Reporting	Q1 2017	Q2 2017	Q3 2017	Q4 2017	Background Range	GAC
pH							
pH	0.01	7.44	7.57	7.64	7.65	7.0 to 9.79	-
BTEX (µg/L)							
Benzene	1	<1	<1	<1	<1	<1 to 5	500
Ethylbenzene	2	<2	<2	<2	<2	<2	80
Toluene	2	<2	<2	<2	<2	<2	180
Xylene (o)	2	<2	<2	<2	<2	<2	350
Xylene (m&p)	2	<2	<2	<2	<2	<2	80*
Total Recoverable Hydrocarbons (µg/L)							
C6-C10 Fraction	20	<20	<20	<20	<20	<20	-
C6-C10 minus BTEX (F1)	20	<20	<20	<20	<20	<20	-
>C10-C16 Fraction	100	<100	<100	<100	<100	<100	-
>C16-C34 Fraction	100	<100	<100	<100	<100	<100 to 380	-
>C34-C40 Fraction	100	<100	<100	<100	<100	<100	-
>C10-C16 Fraction – Naphthalene	100	<100	<100	<100	<100	<100	-

*Lesser value of m-xylene adopted as GAC

3.2.3 MW03

Table 7 Groundwater Monitoring Results for MW03

Analyte	Laboratory Limit of Reporting	Q1 2017	Q2 2017	Q3 2017	Q4 2017	Background Range	GAC
pH							
pH	0.01	8.01	7.88	8.05	8.03	7.0 to 9.79	-
BTEX (µg/L)							
Benzene	1	<1	<1	<1	<1	<1 to 5	500
Ethylbenzene	2	<2	<2	<2	<2	<2	80
Toluene	2	<2	<2	<2	<2	<2	180
Xylene (o)	2	<2	<2	<2	<2	<2	350
Xylene (m&p)	2	<2	<2	<2	<2	<2	80*
Total Recoverable Hydrocarbons (µg/L)							
C6-C10 Fraction	20	<20	<20	<20	<20	<20	-
C6-C10 minus BTEX (F1)	20	<20	<20	<20	<20	<20	-
>C10-C16 Fraction	100	<100	<100	<100	<100	<100	-
>C16-C34 Fraction	100	<100	<100	<100	<100	<100 to 380	-
>C34-C40 Fraction	100	<100	<100	<100	<100	<100	-
>C10-C16 Fraction – Naphthalene	100	<100	<100	<100	<100	<100	-

*Lesser value of m-xylene adopted as GAC

3.2.4 MW04

Table 8 Groundwater Monitoring Results for MW04

Analyte	Laboratory Limit of Reporting	Q1 2017	Q2 2017	Q3 2017	Q4 2017	Background Range	GAC
pH							
pH	0.01	7.91	8.03	8.28	8.09	7.0 to 9.79	-
BTEX (µg/L)							
Benzene	1	<1	<1	<1	<1	<1 to 5	500
Ethylbenzene	2	<2	<2	<2	<2	<2	80
Toluene	2	<2	<2	<2	<2	<2	180
Xylene (o)	2	<2	<2	<2	<2	<2	350
Xylene (m&p)	2	<2	<2	<2	<2	<2	80*
Total Recoverable Hydrocarbons (µg/L)							
C6-C10 Fraction	20	<20	<20	<20	<20	<20	-
C6-C10 minus BTEX (F1)	20	<20	<20	<20	<20	<20	-
>C10-C16 Fraction	100	<100	<100	<100	<100	<100	-
>C16-C34 Fraction	100	<100	<100	<100	<100	<100 to 380	-
>C34-C40 Fraction	100	<100	<100	<100	<100	<100	-
>C10-C16 Fraction – Naphthalene	100	<100	<100	<100	<100	<100	-

*Lesser value of m-xylene adopted as GAC

3.2.5 MW05

Table 9 Groundwater Monitoring Results for MW05

Analyte	Laboratory Limit of Reporting	Q4 2017	GAC
pH			
pH	0.01	8.97	-
BTEX (µg/L)			
Benzene	1	<1	500
Ethylbenzene	2	<2	80
Toluene	2	<2	180
Xylene (o)	2	<2	350
Xylene (m&p)	2	<2	80*
Total Recoverable Hydrocarbons (µg/L)			
C6-C10 Fraction	20	<20	-
C6-C10 minus BTEX (F1)	20	<20	-
>C10-C16 Fraction	100	<100	-
>C16-C34 Fraction	100	<100	-
>C34-C40 Fraction	100	<100	-
>C10-C16 Fraction – Naphthalene	100	<100	-

*Lesser value of m-xylene adopted as GAC

3.2.6 MW06

Table 10 Groundwater Monitoring Results for MW06

Analyte	Laboratory Limit of Reporting	Q4 2017	GAC
pH			
pH	0.01	8.93	-
BTEX (µg/L)			
Benzene	1	<1	500
Ethylbenzene	2	<2	80
Toluene	2	<2	180
Xylene (o)	2	<2	350
Xylene (m&p)	2	<2	80*
Total Recoverable Hydrocarbons (µg/L)			
C6-C10 Fraction	20	<20	-
C6-C10 minus BTEX (F1)	20	<20	-
>C10-C16 Fraction	100	<100	-
>C16-C34 Fraction	100	<100	-
>C34-C40 Fraction	100	<100	-
>C10-C16 Fraction – Naphthalene	100	<100	-

*Lesser value of m-xylene adopted as GAC

3.2.7 MW07

Table 11 Groundwater Monitoring Results for MW07

Analyte	Laboratory Limit of Reporting	Q4 2017	GAC
pH			
pH	0.01	9.15	-
BTEX (µg/L)			
Benzene	1	1	500
Ethylbenzene	2	<2	80
Toluene	2	<2	180
Xylene (o)	2	<2	350
Xylene (m&p)	2	<2	80*
Total Recoverable Hydrocarbons (µg/L)			
C6-C10 Fraction	20	<20	-
C6-C10 minus BTEX (F1)	20	<20	-
>C10-C16 Fraction	100	<100	-
>C16-C34 Fraction	100	<100	-
>C34-C40 Fraction	100	<100	-
>C10-C16 Fraction – Naphthalene	100	<100	-

*Lesser value of m-xylene adopted as GAC

3.2.8 MW08

Table 12 Groundwater Monitoring Results for MW08

Analyte	Laboratory Limit of Reporting	Q4 2017	GAC
pH			
pH	0.01	6.97	-
BTEX (µg/L)			
Benzene	1	**16800**	500
Ethylbenzene	2	<50**	80
Toluene	2	**568**	180
Xylene (o)	2	50	350
Xylene (m&p)	2	**88**	80*
Total Recoverable Hydrocarbons (µg/L)			
C6-C10 Fraction	20	16600	-
C6-C10 minus BTEX (F1)	20	<1000**	-
>C10-C16 Fraction	100	12300	-
>C16-C34 Fraction	100	4700	-
>C34-C40 Fraction	100	<100	-
>C10-C16 Fraction – Naphthalene	100	7600	-

Notes:
*Lesser value of m-xylene adopted as GAC
**Samples required Dilution due to the presence of high level contaminants (e.g. sediment / hydrocarbon). LOR values have been raised accordingly.
Bold denotes exceedance of adopted GAC.

3.2.9 MW09

Table 13 Groundwater Monitoring Results for MW09

Analyte	Laboratory Limit of Reporting	Q4 2017	GAC
pH			
pH	0.01	7.95	-
BTEX (µg/L)			
Benzene	1	7	500
Ethylbenzene	2	<2	80
Toluene	2	<2	180
Xylene (o)	2	<2	350
Xylene (m&p)	2	<2	80*
Total Recoverable Hydrocarbons (µg/L)			
C6-C10 Fraction	20	<20	-
C6-C10 minus BTEX (F1)	20	<20	-
>C10-C16 Fraction	100	<100	-
>C16-C34 Fraction	100	130	-
>C34-C40 Fraction	100	130	-
>C10-C16 Fraction – Naphthalene	100	<100	-

3.3 Analysis of Results

A statistical trend analysis was undertaken for selected analytes at four monitoring locations, MW01-MW04 to determine if any trends were apparent in the dataset. An upper confidence level of 95% was set in order to determine if any trends identified were statistically significant. Trend analysis has not yet been undertaken for MW05 – MW09 due to the lack of available background data at this time.

Published guidance states that a minimum of six data points are required to perform statistical trend analysis, with greater sample sizes resulting in greater confidence in any trends that are identified. As of this Annual Review, eighteen data points are available for trend analysis with monitoring at the Site having commenced in October 2013.

3.3.1 MW01

Recorded pH levels at MW01 for this reporting period ranged from 9.19 – 9.27, remaining within background levels recorded at the Site. Trend analysis concluded there was sufficient statistical evidence of a decreasing trend in pH at MW01 (refer **Figure 4**).

Total Recoverable Hydrocarbons (TRH) concentrations were below Laboratory Limits of Reporting (LOR) at MW01 and were consistent with background levels established for the Site for the first three quarters of 2017. TRH concentrations at MW01 have been consistently below the laboratory LOR since monitoring records began in October 2013, with the exception of the 2017 fourth quarter result.

The 2017 fourth quarter groundwater monitoring event (GME) saw some hydrocarbon results above the background range. The groundwater monitoring well MW01 had practically no groundwater recharge from the aquifer during purging and sampling, resulting in a light brown colour due to sample turbidity. This resulted in some sediment (silt) being extracted from the well during sampling and filling

of the sample bottles causing turbidity. Since TRH samples are not field or lab-filtered, it is considered likely that the silt present within the groundwater sample has absorbed hydrocarbons, resulting in an elevated TRH concentration above acceptance criteria. This is a common occurrence when sampling in groundwater aquifers where recharge is negligible during sampling where the presence of suspended solids can report in a false positive result.

BTEX concentrations were below the LOR at this monitoring point and it appears that BTEX concentrations are stable below the LOR at MW01.

During the preparation of this annual review, the first quarter 2018 monitoring results were available, which indicated levels of all monitored parameters at MW01 were within acceptable levels after elevated results were measured in fourth quarter 2017. This may indicate that results from fourth quarter 2017 were an anomaly and not representative of Site groundwater conditions. This will be assessed further by future monitoring events and reported accordingly.

MW01 will be closely monitored with a focus on TRH in the next reporting period to determine any trends.

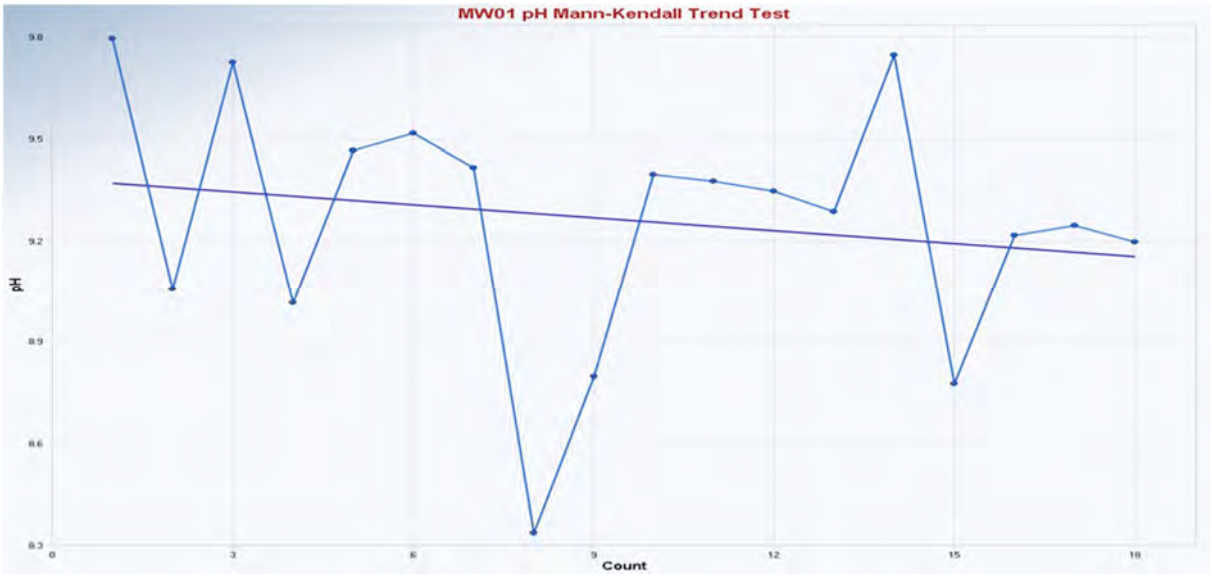


Figure 4 Statistical trend analysis for pH levels at MW01

3.3.2 MW02

Recorded pH levels at MW02 for this reporting period ranged from 7.44 – 7.65, remaining within background levels recorded at the Site. Trend analysis showed statistically significant evidence of a decreasing trend in pH at MW02 (refer **Figure 5**).

TRH concentrations were below the LOR at MW02 and were consistent with background levels established for the Site. TRH fractions have generally not been recorded at MW02 since monitoring at the Site began, apart from one recorded low concentration in the >C16-C34 fraction (380 µg/L) in October 2013. Overall, TRH concentrations appear to be stable at below LOR concentrations.

Consistent with the previous analysis undertaken since August 2015, BTEX concentrations were also below the LOR at this monitoring point. Therefore no trend analysis of these analytes was undertaken.

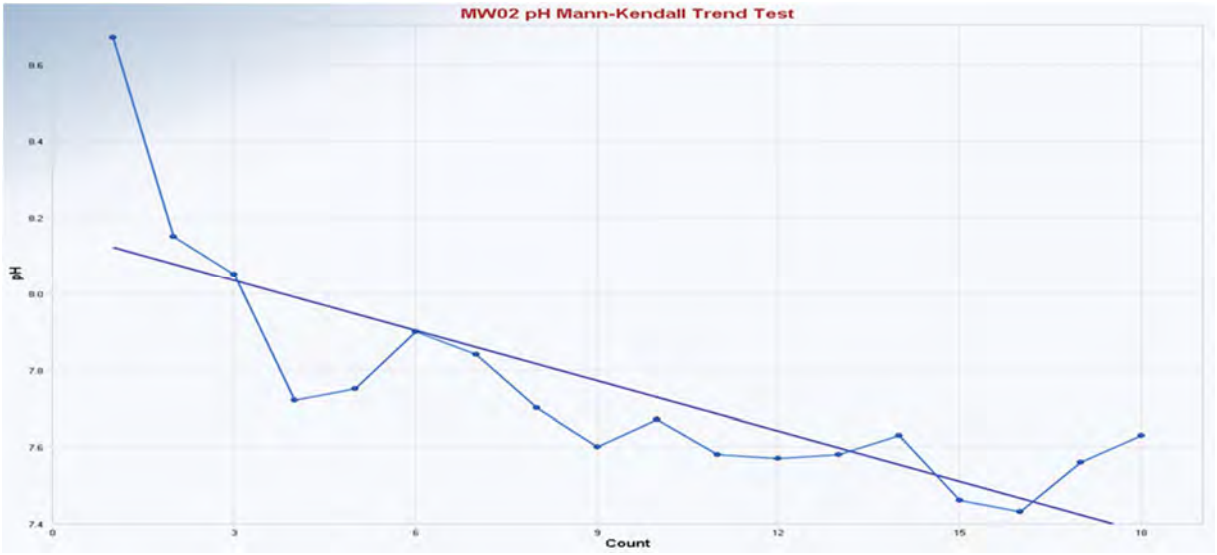


Figure 5 Statistical trend analysis for pH levels at MW02

3.3.3 MW03

Recorded pH levels at MW03 for this reporting period ranged from 7.88 – 8.05, remaining within background levels recorded at the Site. The pH values at this location had increased steadily since monitoring began until the beginning of 2016 when pH levels decreased and have remained reasonably stable since. **Figure 6** below shows overall there is evidence of an increasing trend in the data. This apparent increasing trend should be confirmed by further monitoring events.

TRH concentrations were below the LOR at MW03 and were consistent with background levels established for the Site. TRH fractions have generally not been recorded at MW03 since monitoring at the Site began, apart from one recorded low concentration in the >C16-C34 fraction (180 µg/L) in October 2013. Overall, TRH concentrations appear to be stable at below LOR concentrations.

BTEX concentrations were also below the LOR at this monitoring point and it appears that BTEX concentrations are stable below the LOR at MW03.

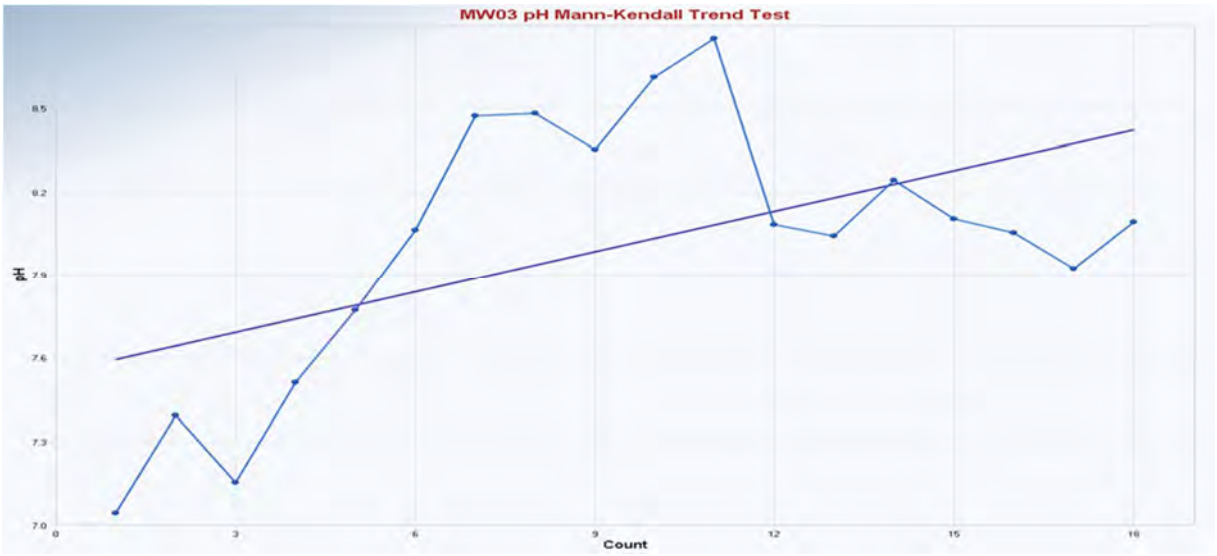


Figure 6 Statistical trend analysis for pH levels at MW03

3.3.4 MW04

Recorded pH levels at MW04 for this reporting period ranged from 7.91 – 8.28, remaining within background levels recorded at the Site. Trend analysis showed statistically significant evidence of a decreasing trend in pH at MW04 (refer **Figure 7**).

TRH concentrations were below the LOR at MW04 and were consistent with background levels established for the Site.

BTEX concentrations were also below the LOR at this monitoring point and it appears that BTEX concentrations are stable below the LOR at MW04.

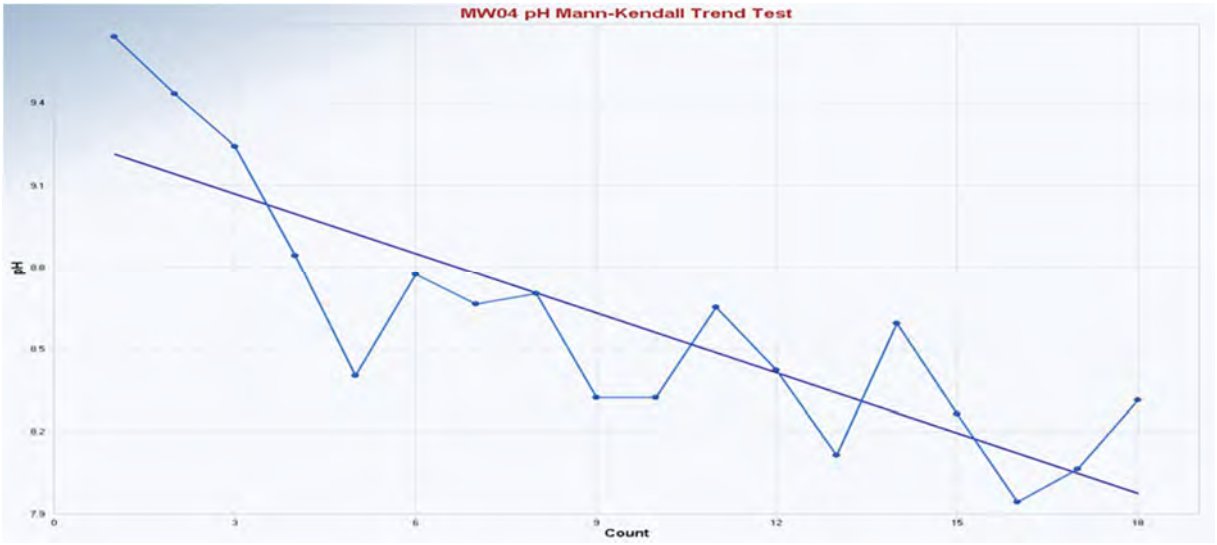


Figure 7 Statistical trend analysis for pH levels at MW04

3.3.5 MW05

MW05 is a new groundwater monitoring point in the proposed Expansion Area, with the first GME undertaken in the fourth quarter of the reporting period. Monitoring returned a result of 8.97 for pH, this is within the normal range found at MW01 – MW04.

TRH concentrations were below the LOR at this monitoring point, and may be considered typical for this site if future monitoring continues to return results less than LOR.

BTEX concentrations were also below the LOR at this monitoring point and may be considered typical for this site if future monitoring continues to return results less than LOR.

It should be noted that no trends have been provided for this location as there is insufficient data. As monitoring continues at this location the analytical results will be used to create a background range for the location.

3.3.6 MW06

MW06 is a new groundwater monitoring point in the proposed Expansion Area, with the first GME undertaken in the fourth quarter of the reporting period. Monitoring returned a result of 8.93 for pH, this is within the normal range found at MW01 – MW04.

TRH concentrations were below the LOR at this monitoring point, and may be considered typical for this site if future monitoring continues to return results less than LOR.

BTEX concentrations were also below the LOR at this monitoring point and may be considered typical for this site if future monitoring continues to return results less than LOR.

It should be noted that no trends have been provided for this location as there is insufficient data. As monitoring continues at this location the analytical results will be used to create a background range for the location.

3.3.7 MW07

MW07 is a new groundwater monitoring point in the proposed Expansion Area, with the first GME undertaken in the fourth quarter of the reporting period. Monitoring returned a result of 9.15 for pH, this is within the normal range found at MW01 – MW04.

TRH concentrations were below the LOR at this monitoring point, and may be considered typical for this site if future monitoring continues to return results less than LOR.

Most BTEX concentrations were below the LOR at this monitoring point, with the exception of benzene which returned a result of 1 ug/L, which is below the adopted GAC for the location. Future monitoring will concentrate on Benzene concentrations and will determine if this is typical for this location.

It should be noted that no trends have been provided for this location as there is insufficient data. As monitoring continues at this location the analytical results will be used to create a background range for the location.

3.3.8 MW08

MW08 is a new groundwater monitoring point in the proposed Expansion Area, with the first GME undertaken in the fourth quarter of the reporting period. Monitoring returned a result of 6.97 for pH, this is slightly less than the normal range found at MW01 – MW04 (7.00-9.79), however is not of immediate concern as the data gained from this location will be used as pre operational data, and is not considered an impact of current Site operations.

Analytical results indicate elevated concentrations of TRH and BTEX. Concentrations of Benzene, Toluene and Xylene (m&p) exceeded the adopted GAC at MW08. There is no adopted GAC for TRH. Concentrations of hydrocarbon chemicals of potential concern (CoPC) at these locations are inferred to be residual and related to the remediation of the former BHP Steelworks (which previously occupied areas of the Site and proposed Expansion Area), and unrelated to current operations at the Site.

Groundwater quality at the proposed Expansion Area is considered uncharacteristic of conditions at the Site, and should therefore not be assessed against background ranges (derived from pre-operational conditions) at the Site.

The sample contained a high level of contaminants, and LOR values were raised accordingly. Future GME's will indicate whether this is typical of the groundwater quality at this location.

It should be noted that no trends have been provided for this location as there is insufficient data. As monitoring continues at this location the analytical results will be used to create a background range for the location.

Stolthaven in conjunction with PON are in the process of installing two additional groundwater monitoring wells to investigate the extent of the groundwater contamination plume in close proximity to and upstream and downstream of MW08. Results of monitoring will be discussed in future reports.

3.3.9 MW09

MW09 is a new groundwater monitoring point in the proposed Expansion Area, with the first GME undertaken in the fourth quarter of the reporting period. Monitoring returned a result of 7.95 for pH, this is within the normal range found at MW01 – MW04.

Some TRH concentrations were found to be elevated at this location. There is no adopted GAC for TRH. Concentrations of hydrocarbon CoPC at these locations are inferred to be residual and related to the remediation of the former BHP Steelworks (which previously occupied areas of the Site and proposed Expansion Area), and unrelated to current operations at the Site.

Groundwater quality at the proposed Expansion Area is considered uncharacteristic of conditions at the Site, and should therefore not be assessed against background ranges (derived from pre-operational conditions) at the Site.

Most BTEX concentrations were below the LOR at this monitoring point, with the exception of benzene which returned a result of 7 ug/L, which is below the adopted GAC for the location. Future monitoring will concentrate on Benzene concentrations and will determine if this is typical for this location.

It should be noted that no trends have been provided for this location as there is insufficient data. As monitoring continues at this location the analytical results will be used to create a background range for the location.

3.4 Summary of Groundwater Results

Where appropriate, statistical trend analysis was undertaken on individual analytes at selected monitoring wells using an upper confidence level of 95%.

Some preliminary trends were identified for pH levels, including a decreasing trend at MW01, MW02 and MW04 and an increasing trend at MW03. Further data obtained during future monitoring events will confirm the reliability of the preliminary trends identified above.

Trends in BTEX and TRH concentrations were largely non-calculable given the small dataset available and the high proportion of Non-Detect values in the data (caused by data points with results below LOR concentrations). Benzene concentrations at MW02 appear to have stabilised at below LOR concentrations over the past fourteen monitoring events.

Elevated TRH fractions were recorded in the 2017 fourth quarter monitoring event at MW01. This is inconsistent with background and quarterly monitoring undertaken at the site since operations commenced (no result greater than LOR has previously been recorded at MW01). The groundwater monitoring well MW01 had practically no groundwater recharge from the aquifer during purging and sampling, resulting in a light brown colour due to sample turbidity. This resulted in some sediment (silt) being extracted from the well (MW01) during sampling and filling of the sample bottles causing turbidity. Since TRH samples are not field or lab-filtered, it is considered likely that the silt present within the groundwater sample has absorbed hydrocarbons, resulting in an elevated TRH concentration above acceptance criteria. This is a common occurrence when sampling in groundwater aquifers where recharge is negligible during sampling where the presence of suspended solids can report in a false positive result.

Based on all previous groundwater monitoring events undertaken by AECOM, we are of the opinion that the groundwater result recorded at MW01 during this GME is not characteristic of shallow groundwater quality within the Site. Moreover, the hydrocarbon fractions show that the chemical speciation is characteristic of heavier hydrocarbon products such as heavy fuel oil or lubricating oils and not characteristic of the Diesel products stored on site. Since the Site is located on the former BHP steel works that has under gone remediation via capping and containment of contamination below the site and Stolthaven confirming no product loss, spills or incidents, it is considered that the elevated TRH result is due to historical contamination and not attributed to current Site operations.

TRH concentrations for wells MW02 – MW04 were below the laboratory LOR for this reporting period, generally consistent with results obtained during background monitoring.

Analytical results indicate elevated concentrations of TRH and BTEX are present in groundwater at the proposed Expansion Area. Concentrations of Benzene, Toluene and Xylene (m&p) exceeded the adopted GAC at MW08. Additionally, concentrations of these CoPC were reported above background conditions established for MW01-MW04. Concentrations of Benzene also exceeded MW01-MW04 background conditions at MW09. Two additional wells are in the process of being installed in close proximity to MW08 and will serve to provide a better understanding of existing groundwater quality in the proposed expansion area, specifically surrounding MW08. An immediate round of groundwater monitoring is planned post well development, and results from this monitoring event will aid in determining the extent of the contamination plume and guide the development of appropriate management strategies.

It is noted that background ranges (separate to those developed at MW01-MW04) will be developed for wells MW05-MW09 in the proposed Expansion Area, and will be assessed separately from the current Site well network. These background ranges will be developed from analytical results collected in the current reporting period and future monitoring events before any site operations occur in the proposed Expansion Area.

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4.0 Stormwater

4.1 Stormwater Monitoring

Monitoring of stormwater discharges is undertaken as part of the Site's Stormwater Management Plan (SWMP) to assess the effectiveness of stormwater runoff quality controls implemented at the Site. Monitoring of stormwater at the Site consists of:

- Visual inspection of the site and areas receiving runoff from the Site; and
- Water quality is monitored after rainfall events.

Indicators of potential adverse water quality impacts as assessed through water quality monitoring include:

- Evidence of erosion and scouring around the stormwater pipe discharge outlets;
- Changes in clarity, colour and odour of receiving waters;
- Presence of debris and rubbish;
- Evidence of stress on flora or fauna;
- Presence of an oily film on water surfaces; and
- Orange/brown coating on banks, water surfaces or substrate.

There are currently eight concrete bund walls around the Site's bulk storage area designed to contain any spills onsite and prevent environmental harm. The bunds are referred to as Bund 1, Bund 2, Bund 3, Bund 5, Bund 6, Bund 7, Bund 8 and Bund 9. After every rainfall event all bunds are sampled and tested before release through the Puraceptor on Site according to the SWMP. In order to ensure the quality of stormwater collected from the bunds, the outlet from the bunds is kept closed at all times.

The Puraceptor is a water quality and hydrocarbon detector located at the Site's licenced discharge point at the Hunter River. In order to confirm that stormwater measures implemented at the site do not adversely impact on the Hunter River, samples are collected following rainfall events that result in sufficient stormwater discharge to collect surface water samples.

The water samples at Point 5 are analysed prior to discharge for the pollutants as shown in **Table 14**. Concentration limits are taken from EPL 20193. Once water quality results are obtained for the water in the Puraceptor, water is discharged into the Hunter River via an outfall drain. If water quality is found to be noncompliant with the parameters prescribed in the Site's EPL it is retested and if the results are above prescribed limits again a licenced trade waste contractor is engaged to dispose of the waste water. It is noted that Biological Oxygen Demand (BOD) was removed from the EPL criteria on 27 August 2015 and was not sampled during the 2017 reporting period.

Table 14 Water Quality Criteria (EPL 20193)

Pollutant	Units of Measure	Frequency	Method	100 percentile concentration limit
Dissolved Oxygen	Milligrams per litre	Weekly during any discharge	Grab sample	>2
Oil and Grease	Milligrams per litre	Weekly during any discharge	Grab sample	10
pH	pH	Weekly during any discharge	Grab sample	6.5 – 8.5
Total Suspended Solids	Milligrams per litre	Weekly during any discharge	Grab sample	30
Volume	Megalitres per day	Continuous during discharge	Special Method 1	-

4.2 Stormwater Monitoring Results

Results from stormwater monitoring are presented below. Water quality results from the Site's licenced discharge point are presented in **Table 15** and water quality results from bund water sampling are summarised in **Table 16**. A full copy of the data from stormwater monitoring is provided in **Appendix A**.

Table 15 Discharged Water Quality Results (EPA Point 5)

Sample Date	Dissolved Oxygen (mg/L)	Oil and Grease (mg/L)	pH	Total Suspended Solids (mg/L)	Volume discharged (L)
Concentration Limit	>2	10	6.5-8.5	30	-
5/01/2017	6.60	< 2	6.60	14	35,000
23/01/2017	6.80	< 2	7.62	3	35,000
6/02/2017	6.77	< 2	7.51	18	35,000
15/02/2017	6.54	< 2	7.66	2	25,000
27/02/2017	5.49	< 2	6.92	8	35,000
6/03/2017	6.94	< 2	7.26	8	35,000
14/03/2017	3.78	< 2	7.28	12	35,000
20/03/2017	5.06	< 2	7.74	1	35,000
24/03/2017	5.39	< 2	7.24	9	35,000
31/03/2017	8.18	< 2	7.79	4	25,000
12/04/2017	7.39	< 2	7.04	19	25,000
28/04/2017	5.20	< 2	6.95	12	10,000
23/05/2017	6.60	< 2	7.20	8	20,000
6/06/2017	6.73	< 2	6.99	2	35,000
19/06/2017	8.79	2	7.79	**114**	Nil Discharge
21/06/2017[1]	8.40	<2	7.66	**44**	Nil Discharge
12/07/2017	9.01	< 2	7.08	10	35,000
10/08/2017	7.73	< 2	7.62	16	15,000
28/08/2017	8.65	< 2	7.55	28	30,000
17/10/2017	7.93	< 2	7.37	4	15,000
6/11/2017	7.36	< 2	7.39	15	35,000
6/12/2017	7.45	< 2	7.49	16	25,000
27/12/2017	7.49	< 2	7.46	2	25,000
MINIMUM	3.78	<2	6.60	1	
MAXIMUM	9.01	2	7.79	114	
AVERAGE	6.97	1	7.36	16	

Bold indicates an exceedance of the criteria

Note 1: [1]Indictaes a retest. Retest failed and volume removed by licenced trade waste contractor.

Table 16 Bund Water Quality Results

Parameter	Minimum	Maximum	Average
pH	5.14	9.70	7.25
Total Dissolved Solids (ppm)	17.1	110.0	44.19
Dissolved Oxygen (%SAT)	30.5	140.0	60.1
Dissolved Oxygen (mg/L)	4.3	8.9	7.0
Conductivity (µS/cm)	18.0	130.0	62.3

4.3 Analysis of Results

4.3.1 Discharged Water Quality Results

The water quality results recorded at EPA Monitoring Point 5 are summarised in **Table 15** and are analysed below. While the water sampling identified some exceedances of the EPA criteria, any water which exceeded EPA criteria was resampled and retested and met the allowable limits. Should any water sample exceed EPA criteria twice, Site procedures require the removal of this water by a licenced contractor. In the reporting period there was one occasion where water had to be removed by a licenced contractor, due to TSS being above the prescribed limit. The high TSS results from testing on 19 and 21 June 2017 were understood to be a result of road works on Steelworks Road with heavy vehicles tracking dirt on to the site. Site cleaned the Point 5 pit post contractor pump out and increased road surface cleaning with the on-site sweeper. All water discharged from the Site was compliant with all conditions of the Site's EPL.

The following sections identify trends that have emerged for each of the parameters. Considering the small sample size of available water quality data, it should be noted that only preliminary trends have been identified in the data and these trends could be subject to significant change in later reporting periods.

Dissolved Oxygen

The dissolved oxygen levels recorded at Monitoring Point 5 complied with the Site's EPL criteria, with all results above the prescribed minimum concentration limit of 2 mg/L. No exceedances of the criteria were recorded during the reporting period. The results for the reporting period are shown in **Figure 8** along with historical data. The average dissolved oxygen level recorded during the reporting year was 6.97 mg/L, with a minimum level of 3.78 mg/L and a maximum of 9.01mg/L. The historical results indicate that dissolved oxygen at Monitoring Point 5 is variable, with no apparent trend identified.

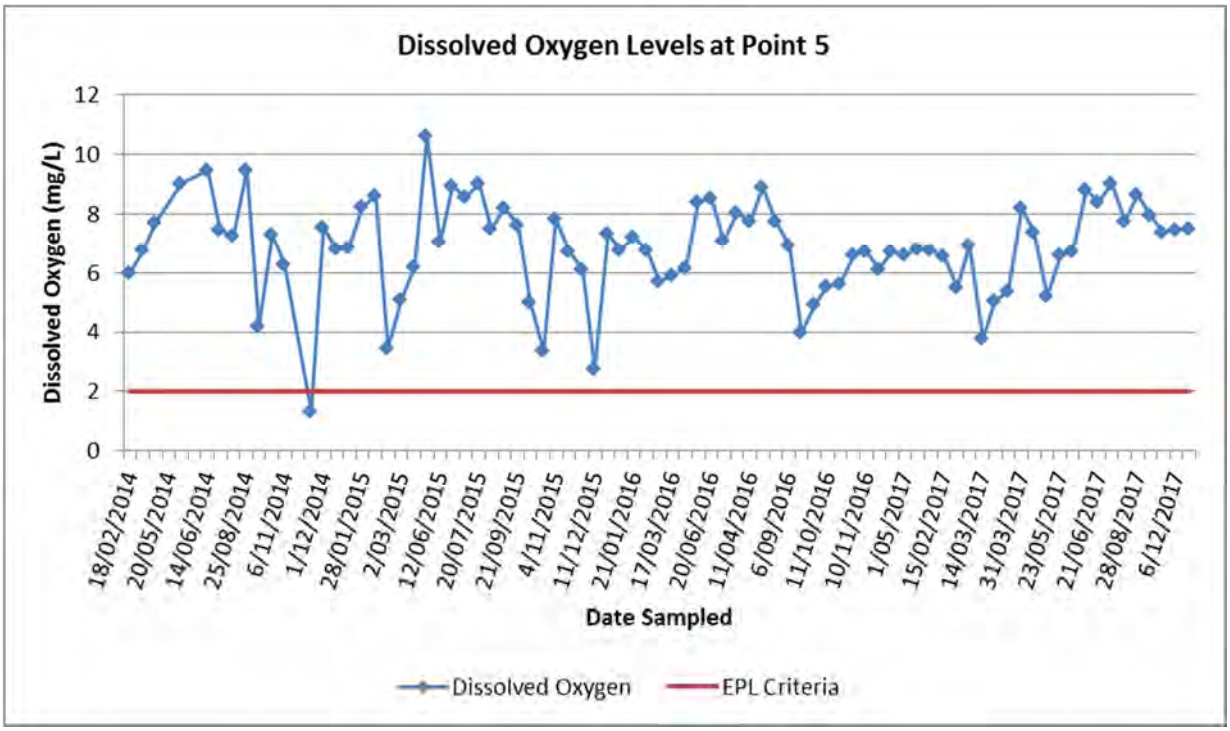

Figure 8 Dissolved Oxygen levels at Monitoring Point 5

Oil and Grease

The oil and grease levels recorded at Monitoring Point 5 during the reporting period were compliant with the EPL concentration limit of 10 mg/L. There were no exceedances of the criterion recorded during the reporting period. The results for the reporting period are shown in **Figure 9** along with the historical results for oil and grease levels recorded at Monitoring Point 5. The average level of oil and grease recorded during the reporting period was 1mg/L, with a maximum of 2mg/L. The results shown in **Figure 9** indicate that oil and grease levels generally remain < 2 mg/L.

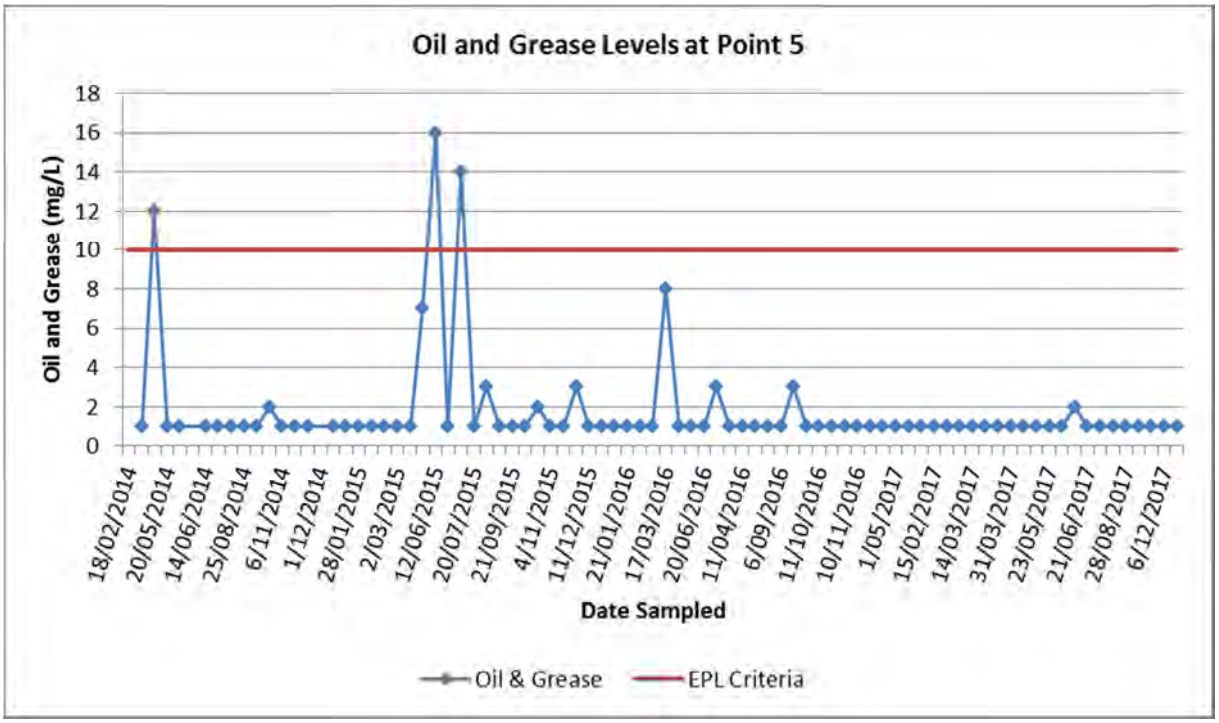

Figure 9 Oil and Grease levels at Monitoring Point 5

Note: Concentrations recorded as below the LOR for Oil and Grease (<2 mg/L) are represented as 1 mg/L

pH

The pH levels recorded at Monitoring Point 5 complied with the Site's EPL criteria, remaining within the prescribed pH range of 6.5 – 8.5. The results for the reporting period are shown in **Figure 10** along with the historical results for pH levels recorded at Monitoring Point 5. During the reporting period, the average pH level was 7.36 with a minimum of 6.60 and a maximum of 7.79. The historical results indicate that pH levels at Monitoring Point 5 generally remain within the range of 6.5 to 8.5.

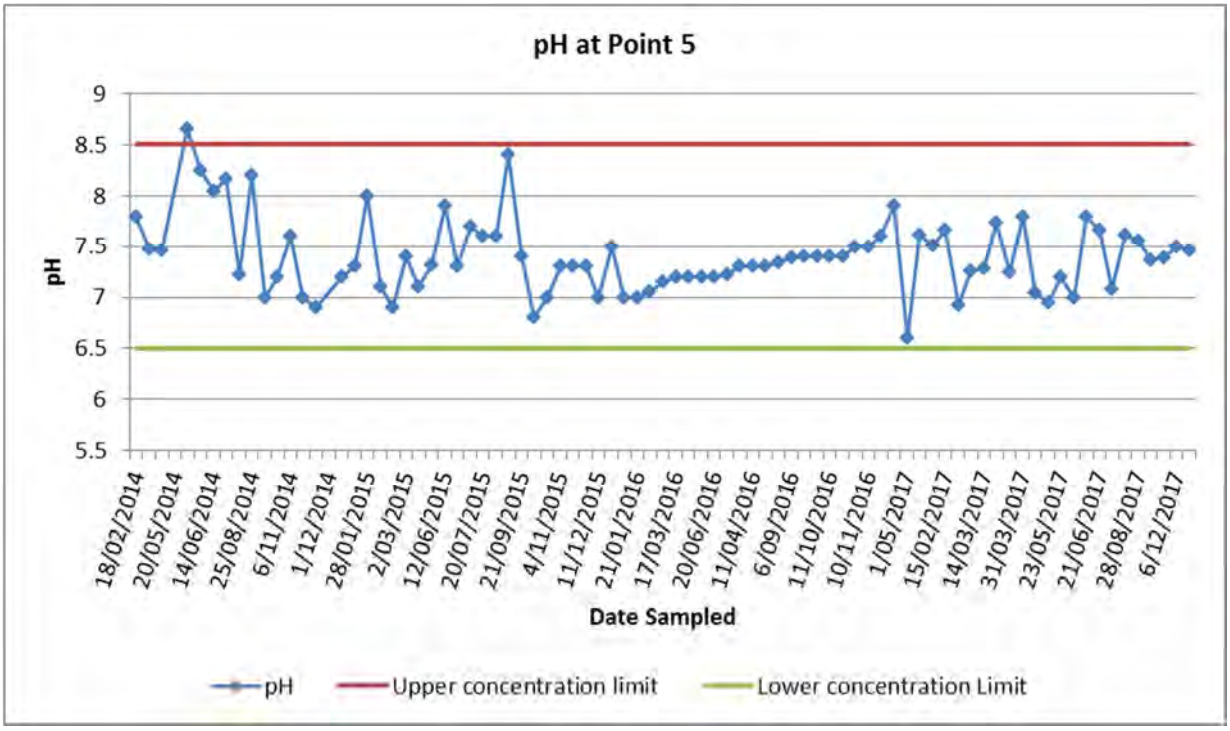

Figure 10 pH levels at Monitoring Point 5

Total Suspended Solids

The total suspended solids levels recorded at Monitoring Point 5 varied throughout the reporting period. On one occasion the affected water was treated, retested and removed by a licenced contractor.

Results for the reporting period are shown in **Figure 11** along with the historical results for total suspended solids levels recorded at Monitoring Point 5. During the reporting period, the average level of total suspended solids was 16mg/L, with a minimum of 1 mg/L and a maximum recording of 114 mg/L. The historical results indicate that the level of total suspended solids at Monitoring Point 5 is variable, with no apparent trend identified.

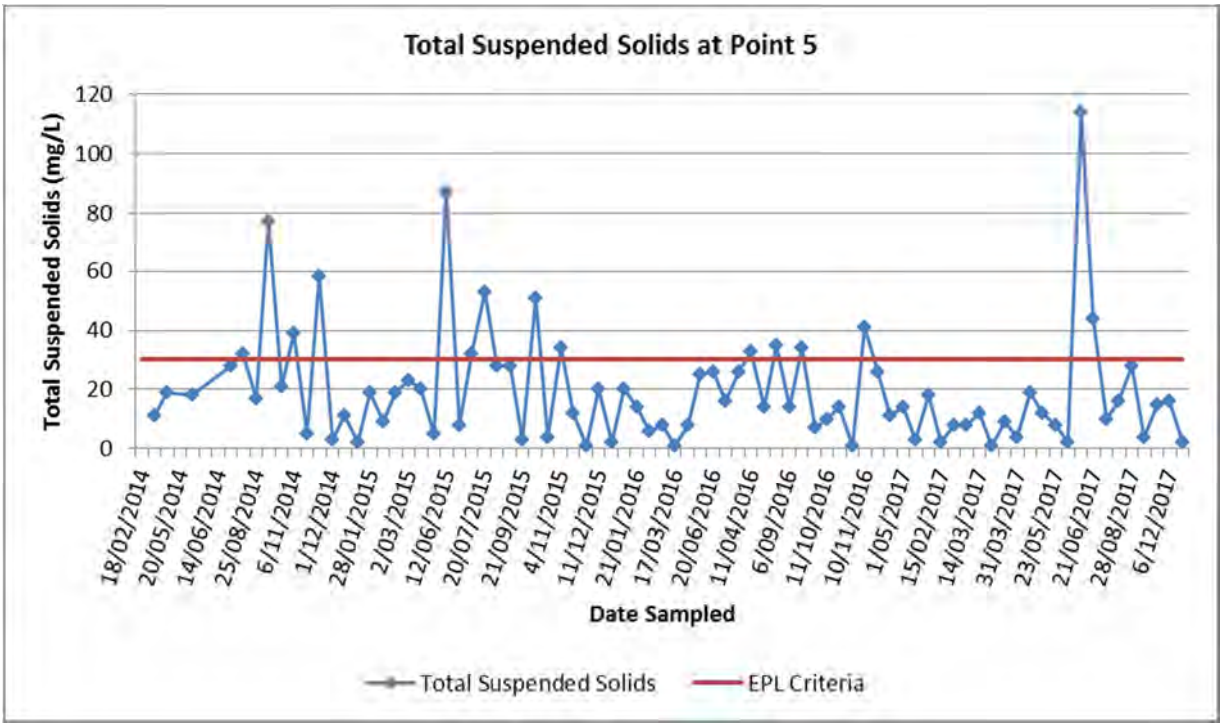

Figure 11 Total suspended solids levels at Monitoring Point 5

4.3.2 Bund Water Quality Results

The water quality results recorded for bund water following rainfall events are summarised in **Table 16** and are analysed below. There are currently no specific limits for bund water quality as they do not discharge into waterways. Bund water is sampled following rainfall and then treated before it is released through the Puraceptor out of the Site's licenced discharge point (Point 5) after water quality analysis confirms the water can be safely discharged into the Hunter River.

The following sections identify trends that have emerged for each of the parameters. Bund water quality has been compared against the Site's own baseline data and significant deviations from this baseline data are highlighted and assessed. In future reporting periods, the data series will grow in accuracy and bund water quality trends and issues will be identified with greater confidence and appropriate management measures can be recommended to address any issues identified.

pH

The pH levels recorded in the bund water during the reporting period ranged from 5.14 to 9.70, with an average of 7.25. Results for the reporting period are shown in **Figure 12** along with historical results. The pH levels during the reporting period were generally within the pH range of 6.5 – 8.5 prescribed in EPL criteria for the licensed discharge point (Monitoring Point 5). On one occasion pH was recorded as being above the maximum pH limit of 8.5 (pH of 9.70 on 23/01/17). On three occasions, 27 February, 16 October and 6 November pH was measured below 6.5. The linear trend shows pH is stable at an acceptable level. The occasional pH measurement outside of the EPL criteria is not of great concern as the Site employs measures to ensure water quality is at acceptable levels before it is discharged from Site. Nonetheless, this trend should be closely monitored in the future.

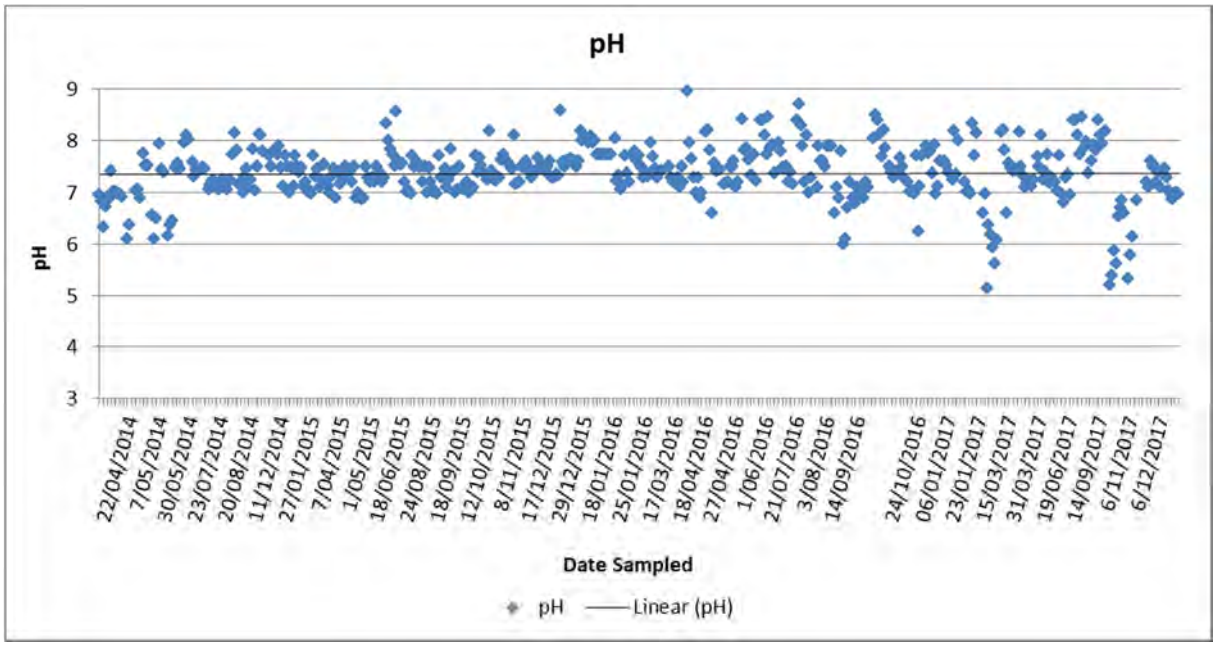

Figure 12 pH levels recorded in bund water at the Site

Total Dissolved Solids (TDS)

TDS levels in bund water during the reporting period ranged from 17.1 to 110.0 ppm, with an average of 44.2 ppm. Results for the reporting period are shown in **Figure 13** along with historical results. TDS levels at the Site during the reporting period were consistent with historic samples which have been relatively stable between 0 -100 ppm, with the exception of occasional samples with higher levels. During the reporting period only one sample recorded a level higher than 100 ppm (110 ppm on 6/12/17). Comparison of historic and 2017 data reveal a slight decreasing linear trend in TDS levels recorded in bund water at the Site.

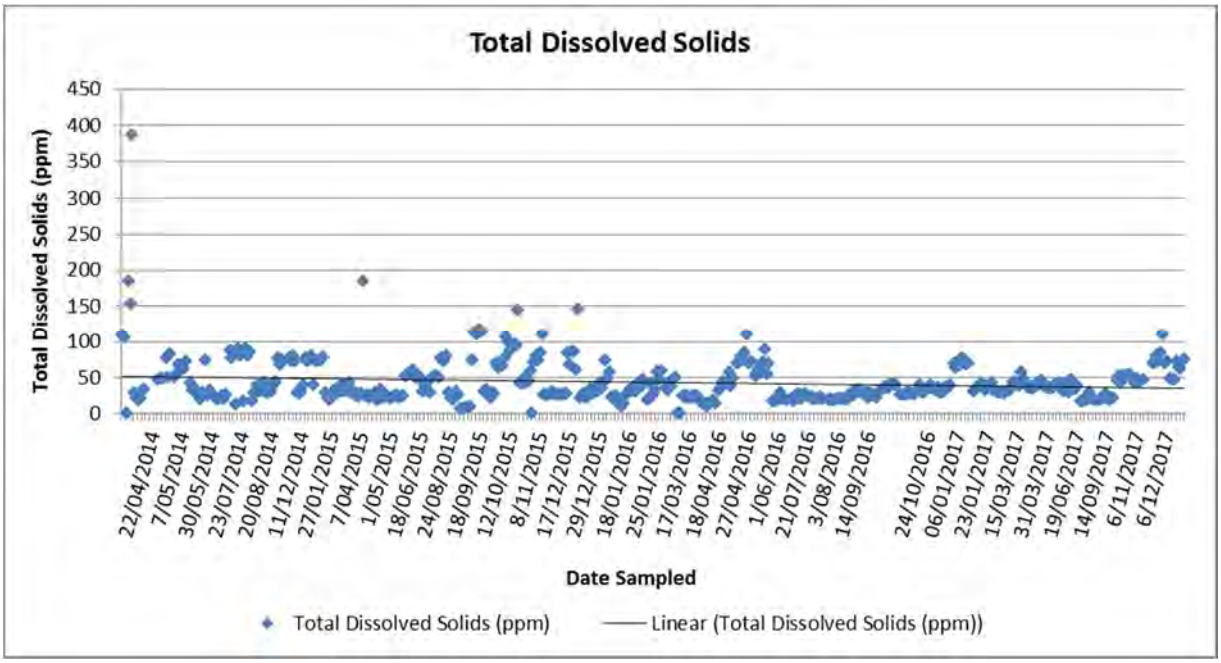

Figure 13 Total Dissolved Solids concentrations recorded in bund water at the Site

Dissolved Oxygen

Dissolved oxygen concentrations in bund water during the reporting period were measured in mg/L and %SAT. Concentrations ranged from 4.3 to 8.9 mg/L, with an average concentration of 7.0mg/L. Concentrations ranged from 30.5 to 140.0 %SAT, with an average concentration of 60.1%SAT. Results for the reporting period are shown in **Figure 14**. While dissolved oxygen concentrations were varied throughout the reporting period, an increasing linear trend was found for %SAT, which has the larger data set. A decreasing trend is shown for mg/L, yet the data set is limited and therefore the trend is of low confidence due to previous datasets including a mixture of reporting units which cannot be identified. It is recommended that data is captured and recorded in a consistent manner in the future regarding dissolved oxygen.

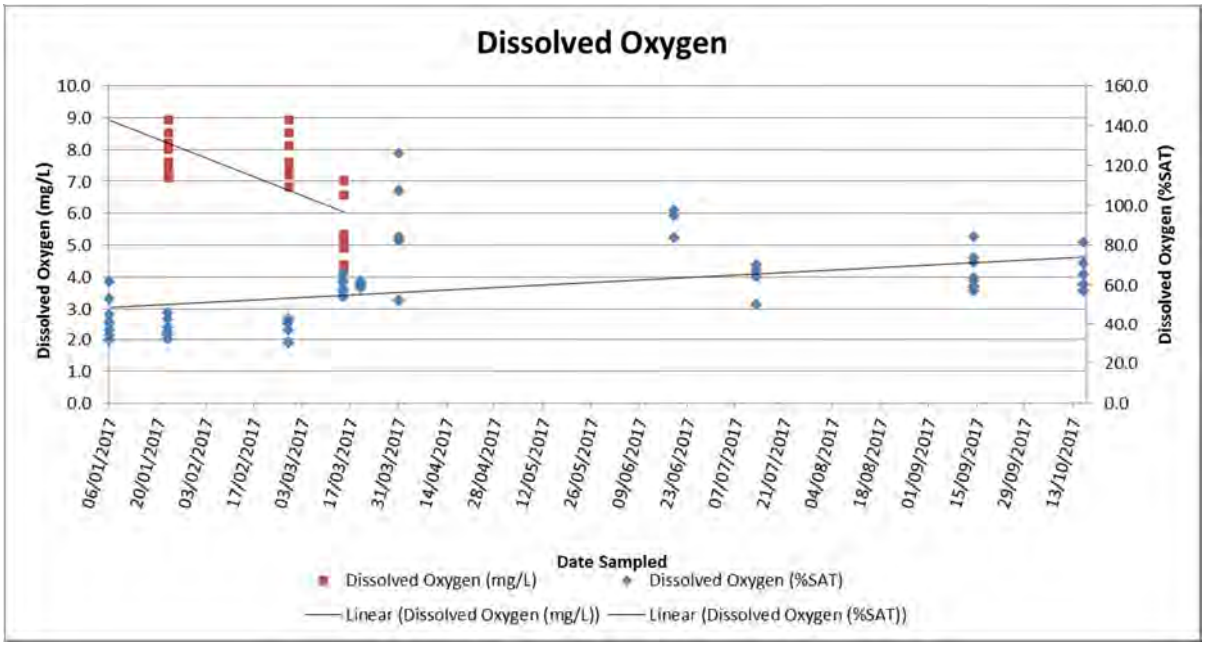

Figure 14 Dissolved oxygen levels in bund water at the Site

Conductivity

Conductivity levels in bund water during the reporting period ranged from 18 to 130 µS/cm, with an average conductivity of 62µS/cm. Results for the reporting period are shown in **Figure 15** along with historical results. While conductivity levels varied during the reporting period, a decreasing linear trend was identified. This trend is not of great concern at present, given the small data sample size (four years) and the treatment measures in place to control the water quality parameters for water discharged from the Site. Nonetheless, this trend should be closely monitored during future monitoring events.

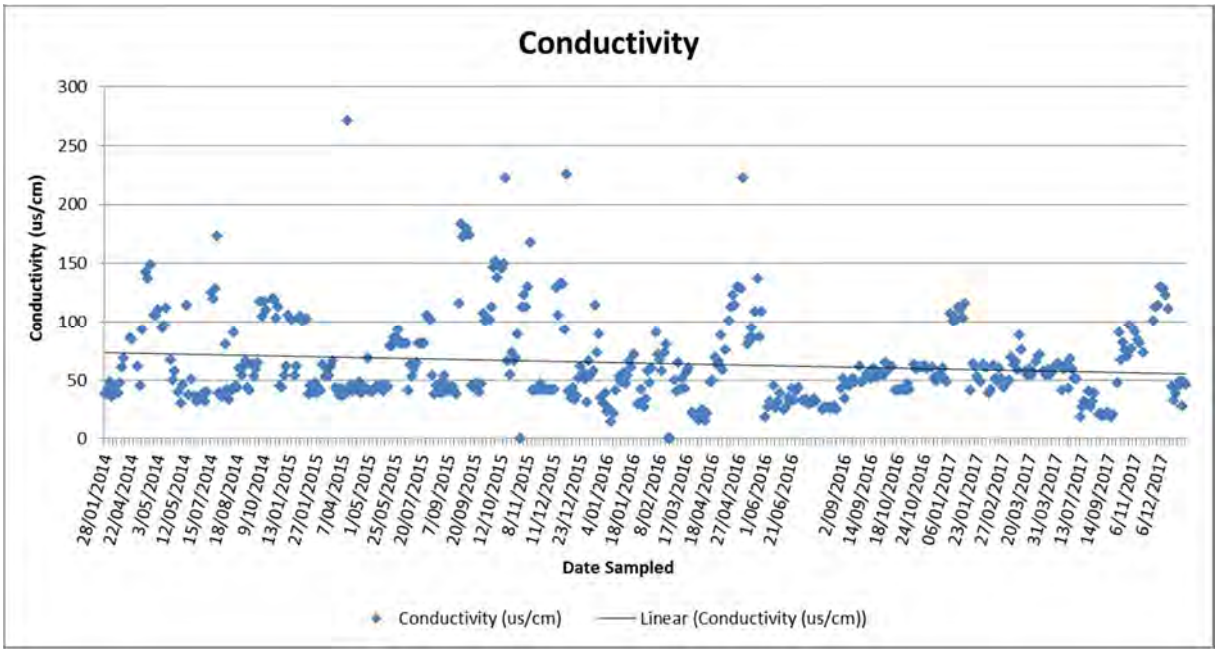

Figure 15 Conductivity levels in bund water at the Site

4.4 Summary of Stormwater Results

Stormwater management and monitoring measures implemented at the Site have been successful in preventing environmental harm in this reporting period. Sampling identified one exceedance of the EPL criteria, being TSS. The source of the exceedance is potentially related to heavy rain. Other potential sources could be airborne material which have been blown onto the Stolthaven site, or tracked in from tyres of trucks moving through the site. Management measures implemented by Stolthaven, such as investing in a sweeper unit to manage materials on the sites driveway areas, appear to be successfully ensuring that all stormwater discharged from the Site is compliant with the requirements of EPL 20193.

Consistent future monitoring of bund water after rainfall events will improve the Site's available baseline data and ability to identify trends and issues as well as to identify necessary environmental management measures to improve the environmental performance of the Site.

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5.0 Noise

5.1 Operational Noise

Operational noise generation is managed and monitored according to the Site's Noise Management Plan. The main noise sources at the site are summarised in **Table 17**. During operations, haulage ships dock at M4 and pump fuel into storage tanks to be blended and held on site. Haulage trucks receive the blended fuels and transport it through an access road leading to the intersection of Industrial Drive and Ingall Street. All these operations have the potential to result in noise emissions.

Table 17 Noise Emitters at the Site

Operational Activity	Noise Source
Internal Private Access Roads	Moving trucks, idling trucks, airbrake event
Industrial Noise Sources*	Fuel pumps
	Haulage tanker trucks filling
	Compressor Operation

**Ships in berth and transferring fuel fall under the provisions of DA-293-08-00 as modified.*

The nearest residential areas to the site are located to the south-west of the Facility at Mayfield, with the closest receivers in Crebert Street, approximately 900 m away. To the south east there are residential receivers located in Carrington, approximately 2 km away, and residential receivers located in Stockton, approximately 3 km away.

Operational noise levels at the Site are required to be within limits set out in Condition L5.1 of EPL 20193. The operational noise criteria that have to be met as prescribed by the EPL are shown in **Table 18**.

The SSD_6664 consent requires operational noise levels at the Site to comply with the relevant noise goals contained in the Mayfield Concept Plan MP09_0096, or any noise quota established by the PON for the development. A methodology to deal with cumulative noise from the entire Mayfield Concept Plan area is currently in development and is yet to be finalised. Therefore, noise quota levels have not yet been issued for the facility.

EPL 20193 was varied during the reporting period, with changes to noise monitoring locations and limits. **Table 18** below details the updated monitoring locations and limits.

Table 18 Operational Noise Criteria

Receiver	Location	Day	Evening	Night	
		L_{Aeq} (15min)	L_{Aeq} (15min)	L_{Aeq} (15min)	LA1 (1min)
R1	Mayfield	35	35	35	45
R2	Mayfield	35	35	35	48
R3	Mayfield	41	41	41	49
R4	Mayfield	40	40	40	47
R5	Mayfield	42	42	42	51
R6	Mayfield	41	41	41	50
R7	Mayfield	35	35	35	50
R8	Mayfield	35	35	35	48

5.2 Noise Modelling Results

Attended noise measurements were undertaken on 27 and 28 November 2017 at the closest nearby residential receiver locations. During the attended measurements it was not possible to quantify the noise contribution from operations at the Facility due to the influence from extraneous noise sources i.e. existing industrial noise from other industrial areas unrelated to the facility and traffic noise on Industrial Drive. The compliance assessment was therefore carried out using SoundPLAN noise modelling software, based upon on-site attended and unattended noise measurements, in accordance with the NSW EPA Industrial Noise Policy (INP). Noise emissions were assessed under worst case prevailing wind and temperature inversion conditions in two different operations scenarios on site. The results of this assessment are provided in **Table 19**, **Table 20** and **Table 21**.

Table 19 Predicted Intrusive Noise Levels - Reasonable worst case scenario (15 minute period)

Receiver	EPL noise limits $L_{Aeq,15min}$ dB(A)[1]	Predicted noise level, $L_{Aeq,15min}$ dB(A)		Compliance
		Neutral weather	Adverse weather[2]	
Worst Case – Truck Movements				
R1	35	27	32	Yes
R2	35	28	32	Yes
R3	41	34	39	Yes
R4	40	34	39	Yes
R5	42	35	39	Yes
R6	41	33	37	Yes
R7	35	29	33	Yes
R8	35	29	33	Yes
Worst Case – Site Operations				
R1	35	28	32	Yes
R2	35	29	33	Yes
R3	41	36	41	Yes
R4	40	35	40	Yes
R5	42	35	40	Yes
R6	41	34	37	Yes
R7	35	29	34	Yes
R8	35	29	34	Yes

Notes:
1. Operational noise limits are based on the most stringent operational noise limits (i.e. night-time period).
2. Adverse weather considers the worst case of 3m/s source to receiver wind and temperature inversions.

Table 20 Predicted Amenity Noise Levels – Reasonable worst case scenario (whole of assessment period)

Receiver	MCP noise quota $L_{Aeq,period}$ dB(A)[1]	Predicted noise level, $L_{Aeq,period}$ dB(A)		Compliance
		Neutral weather	Adverse weather	
Daytime				
A	47	22	27	Yes
B	51	30	35	Yes
C	42	13	18	Yes
D	39	12	18	Yes
Evening				
A	36	24	29	Yes
B	40	32	37	Yes
C	30	18	23	Yes
D	28	18	24	Yes
Night-time				
A	30	22	27	Yes
B	34	30	34	Yes
C	25	12	18	Yes
D	22	11	17	Yes

Notes:

1. Operational noise limits are based on the most stringent operational noise limits (i.e. night-time period).
2. Adverse weather considers the worst case of 3m/s source to receiver wind and temperature inversions.

Table 21 Predicted Noise Levels – Sleep Disturbance Assessment, Night-time Period

Receiver	Criteria dB(A)	Predicted noise level, $L_{A1,}$ dB(A)		Compliance
		Neutral weather	Adverse weather[1]	
R1	45	40	44	Yes
R2	48	45	48	Yes
R3	49	45	49	Yes
R4	47	43	47	Yes
R5	51	48	51	Yes
R6	50	48[1]	50	Yes
R7	50	43	47	Yes
R8	48	45	48	Yes

Notes:

1. Operational noise limits are based on the most stringent operational noise limits (i.e. night-time period).

5.3 Analysis of Results

Compliance was found against the requirements of all site approval documents, at all receiver locations, during all assessment periods under all prevailing meteorological conditions.

A Noise and Vibration Impacts Assessment was prepared as part of the Environmental Impact Statement (EIS) for the SSD_6664 modification application to increase throughput to 1,300 ML per year. A Noise and Vibration Assessment was also prepared for the subsequent Modification application to increase annual throughput to 1,300ML. Noise modelling was undertaken to examine the noise and vibration impacts of the construction and operational phases of the Project, as well as the cumulative impacts which may result from each phase of the proposed facility. The assessment concluded that there would be no exceedance of the noise criteria under all operational scenarios, for day and night activities. The results of noise modelling undertaken during this reporting period indicate that the Site is operating in accordance with the predictions made in the EIS.

Noise levels were found to be consistent with operations in previous years with small 1 dB to 2 dB increases due to different equipment measured on site.

Results of the noise compliance modelling showed that the operation of the facility complies with the noise limits stated in EPL 20193 in addition to the project specific noise goals in the MCP for all outlined receivers.

6.0 Fuel Storage and Transport

6.1 Fuel Storage

Approximately 1,019 ML was received on site and 985 ML was transported off site during the reporting period. A breakdown of fuel stored, received, and dispatched is provided in **Table 22**. On balance, the combined volume of fuel initially stored at the start of the reporting period plus the volume of fuel received during the reporting period should approximately equal the combined volume of fuel dispatched throughout the reporting period plus the volume of fuel stored at the end of the reporting period. It should be noted however that Site measurement equipment has a tolerance of 0.5% which over the course of a year can lead to these amounts not matching. Other factors that contribute to the discrepancy include:

- Product volume onsite is accounted for by a daily and monthly reconciliation process;
- Some variation is caused by the heating and cooling of products being received and the temperature and therefore density at the different times of measurement/pumping; and
- Bulk tanks are manually dipped by a third party Surveyor before and after every shipping receipt.

Gantry meters are calibrated on a 6 monthly schedule to minimise potential for measurement errors.

Table 22 Volume of Fuel Stored, Received and Dispatched

Fuel type	Volume Stored (at start of reporting period)	Volume Received (during reporting period)	Volume Dispatched (during reporting period)	Volume Stored (at end of reporting period)
Diesel (L)	15,776,573	1,019,150,251	984,934,732	50,809,389
Biodiesel (L)	0	0	0	0
Additive (L)	22,370	0	617	21,762
Slops (L)	10,603	*	265,500	13,695
Total (L)	**15,809,546**	**1,019,150,251**	**985,200,849**	**50,844,846**

**note that slops are not transported to Site but are generated onsite as a result of site activities.*

The annual throughput approved under SSD_6664 was increased via modification from 1,010 ML to 1,300 ML on 28 September 2015. The annual throughput approved under the EPL was amended on 2 October 2015 with the current annual throughput limit approved under Condition A1.4 of the EPL being 1,300 ML. No exceedances of throughput limits occurred during the reporting period.

6.2 Truck Movements

Over the reporting period there were a total of 41,176 truck movements at an average of approximately 3,431 each month. This equates to approximately 113 truck movements per day. A breakdown of hourly truck movements is provided at **Appendix B.**

A Traffic Impact Assessment (TIA) was conducted as part of the EIS for the SSD_6664 modification application to increase throughput to 1,300ML per year. The TIA assessed a worst case potential operational traffic scenario of 200 truck movements per day. Although there are no specific traffic movement requirements in either the Project approval or EPL, assessment of average daily truck movements at the site for this reporting period indicates compliance with this predicted traffic volume for all months.

Monthly traffic movements for the reporting period compared to those of the previous reporting years is provided in **Figure 16**.

6.2.1 Mayfield Concept Plan Traffic Movements

Condition 2.3 of the Mayfield Concept Plan Approval provides that the following truck numbers should not be exceeded prior to additional traffic monitoring being undertaken and any potential impacts to the road networks operation of infrastructure requirements identified:

- Total Mayfield Concept Plan Truck Movements per day – 1,268; and
- Total Mayfield Concept Plan Truck Movements per hour – 95.

During the busiest month of operations throughout the review period (May 2017), movements from Stolthaven averaged up to 123 movements per day which is the equivalent of approximately 5 per hour. This is well within the Concept Plan's limits listed above, with 2017 generally showing a lower level of truck movements than 2015 which has had the highest movements to date.

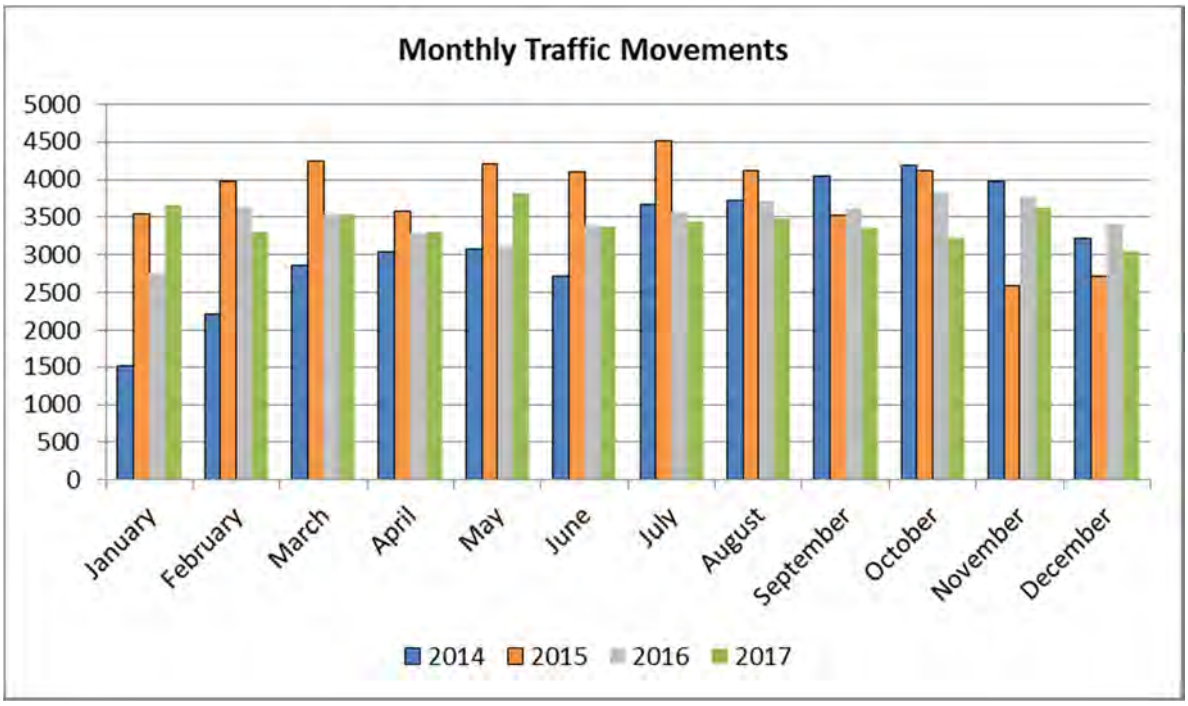

Figure 16 Comparison of Monthly Truck Movements

7.0 Waste

Waste is managed according to the Site's Waste Management Plan (WMP) and is minimised or recycled where possible. Solid waste is disposed of in appropriate receptacles and removed by local waste contractors.

Liquid waste generated on Site is stored in the tanks listed in **Table 23**. Waste is discharged from the Site once it has been treated to an acceptable quality or is disposed of by an appropriately licenced waste collector. Waste removed from the Site in the current reporting period is summarised in **Table 23**.

Table 23 Waste Removal Totals

Tank	Date	Volume (L)
Septic Tank (Effluent)	5/01/2017	2,500
	12/01/2017	3,000
	19/01/2017	3,000
	27/01/2017	2,000
	2/02/2017	2,000
	9/02/2017	3,000
	16/02/2017	3,000
	23/02/2017	3,000
	2/03/2017	4,000
	9/03/2017	3,500
	16/03/2017	3,500
	23/03/2017	3,500
	30/03/2017	3,500
	6/04/2017	3,500
	13/04/2017	3,500
	20/04/2017	3,500
	27/04/2017	3,000
	4/05/2017	3,500
	11/05/2017	3,000
	18/05/2017	3,000
	25/05/2017	3,000
	1/06/2017	3,000
	8/06/2017	2,800
	15/06/2017	3,000
	23/06/2017	3,000
	29/06/2017	2,100
	6/07/2017	3,000
	13/07/2017	3,000
	20/07/2017	2,500

Tank	Date	Volume (L)
	27/07/2017	3,000
	4/08/2017	3,000
	10/08/2017	3,000
	17/08/2017	3,000
	25/08/2017	3,000
	31/08/2017	3,000
	7/09/2017	3,000
	14/09/2017	3,000
	21/09/2017	3,000
	28/09/2017	3,000
	5/10/2017	3,000
	13/10/2017	3,000
	19/10/2017	3,000
	26/10/2017	3,000
	2/11/2017	3,000
	9/11/2017	3,000
	16/11/2017	3,000
	23/11/2017	3,000
	30/11/2017	3,000
	7/12/2017	3,500
	14/12/2017	3,000
	21/12/2017	3,000
	28/12/2017	3,000
	TOTAL (Septic Tank)	**157,400**
Slops Tank*	12/01/2017	14,300
	7/02/2017	21,200
	7/03/2017	18,700
	4/04/2017	19,400
	3/05/2017	18,700
	1/06/2017	1,600
	5/06/2017	20,000
	26/06/2017	16,200
	27/06/2017	25,000
	27/06/2017	8,500
	19/07/2017	14,500
	7/08/2017	11,700
	28/08/2017	14,400

Tank	Date	Volume (L)
	10/09/2017	14,600
	18/09/2017	13,400
	30/10/2017	10,200
	27/11/2017	15,900
	12/01/2017	7,200
	TOTAL (Slops)	**265,500**

*slops consist of a mix of diesel, motor spirit and water

7.1 Spills and Site Contamination

Records of reportable spills and site contamination are described in the incident register provided in **Appendix C**. Following incidents, Stolthaven prepares an Incident Report in accordance with their internal Incident Investigation procedure. These reports are saved against the incident in the Incident Register.

No non-compliances or reportable incidents in relation to spills and site contamination occurred during the reporting period. All incidents relating to potential spills and site contamination were minor and effectively managed on the Site.

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8.0 Aesthetic

Weed control and vegetation management activities are conducted monthly according to the Site's maintenance checklist and in accordance with the Site's Landscape Management Plan. These controls ensure fire and safety risks are managed effectively at the Site through the prevention of any vegetation build-up. No complaints were received by Stolthaven regarding aesthetic issues at the Site.

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9.0 Community Engagement and Complaints

9.1 Community Engagement

In February 2017 an email was sent to the Mayfield community group to arrange a meeting, however no response was received.

On 14 August 2017 and 16 October 2017 a representative from Stolthaven attended The Port of Newcastle Community group meetings.

9.2 Stolthaven was not the subject of any issues from community engagement activities during 2017. Complaints

No complaints were received by Stolthaven during the reporting period.

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10.0 Compliance

No non-compliances or reportable incidents were identified during the reporting period.

10.1 Statement of Compliance

The statement of compliance against the conditions specified in SSD_6664 as modified is presented in **Appendix E**.

There are no non-compliances to report for the reporting period.

10.2 Complaint Trending

Table 24 details historical complaints received by Stolthaven due to their operations. Since site operations commenced in November 2013 Stolthaven have not received any complaints.

Table 24 Complaints Received

Reporting Period	Number of Complaints
2014	0
2015	0
2016	0
2017	0

10.3 Pipeline Integrity

An Annual Pipeline Pressure Test was conducted at the Stolthaven Terminal on the wharf pipeline on 30 October 2017 by Hancock & Owen Services. The test confirmed the integrity of the pipeline. A copy of the test report is included in **Appendix D**.

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11.0 Conclusion and Recommendations

The data collected and reviewed for the reporting period indicates that the Site's impact on the surrounding environment is of an acceptable level and in accordance with the SSD_6664 consent and the Site Operational Environmental Management Plan. This level of environmental performance can be attributed to the design and operation of the facility as well as to the environmental management plans and measures undertaken at the Site.

Monitoring data collected and analysed during this reporting period has been analysed against baseline monitoring data for the Site, where possible. However, the dataset available is still relatively small given that the Site has only been operational since November 2013. In future reporting periods as the amount of monitoring data available for analysis increases, trends in monitoring data will be able to be identified with greater confidence. From the limited data available for this reporting period, no significant trends were identified that would necessitate environmental management actions from Stolthaven for the Site.

Data from the groundwater monitoring program could not identify trends in TRH and BTEX as concentrations were largely non-calculable given the small dataset available for analysis and the high proportion of Non-Detect values in the data (caused by data points with results below LOR concentrations). Some preliminary trends were identified for pH levels, including a decreasing trend at MW01, MW02 and MW04 and an increasing trend at MW03.

Fourth quarter monitoring saw elevated levels of TRH at MW01, which is not considered typical for the location, as discussed in **Section 3.4.** Future GME's will closely monitor TRH at MW01 to ensure it is not an increasing trend or a result of Site operations. MW02-MW04 returned results similar to previous reporting periods, and suggest Site operations are not having an impact on groundwater quality.

The groundwater monitoring network was expanded in the fourth quarter of 2017 to provide monitoring of the proposed Expansion Area as described in SSD_7065. Monitoring of these additional wells (MW05 – MW09) will provide background groundwater quality data for the proposed Expansion Area. It should be noted that elevated levels of TRH and BTEX were found at some of the new monitoring locations, and will be closely monitored by future GME's. It should be noted that elevated results in the proposed Expansion Area are not considered to be caused by Site operations, and are considered to be BHP legacy contamination.. The two additional groundwater monitoring wells are currently being installed upstream and downstream of MW08. These will serve to provide a better understanding of the local groundwater quality in the proposed expansion area. Future monitoring events will provide certainty of data for background water quality. Results of groundwater monitoring will continue to be analysed quarterly to assess the development of these trends.

Stormwater management and monitoring measures implemented at the Site have been successful in preventing environmental harm in this reporting period. All stormwater discharged from the Site was compliant with the requirements of EPL 20193. Consistent future monitoring of bund water after rainfall events will improve the Site's available baseline data and ability to identify trends and issues as well as to identify necessary environmental management measures to improve the environmental performance of the Site.

Noise monitoring identified compliance with all site approval documents at all receiver locations. Truck movements during the reporting period remain consistent with the predictions made in the EIS for the SSD_6664 application as modified.

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Appendix A

Stormwater Monitoring

Appendix A Stormwater Monitoring

2017 FIRST FLUSH RESULTS

Samples Collected:	Samples Tested:	Dissolved Oxygen (mg/L)	Oil and Grease (mg/L)	pH	Total Suspended Solids (TSS)	Volume (L)	Comments
05/01/2017	05/01/2017	6.60	< 2	6.60	14	35,000	
23/01/2017	23/01/2017	6.80	< 2	7.62	3	35,000	
6/02/2017	6/02/2017	6.77	< 2	7.51	18	35,000	
15/02/2017	15/02/2017	6.54	< 2	7.66	2	25,000	
27/02/2017	28/02/2017	5.49	< 2	6.92	8	35,000	
6/03/2017	6/03/2017	6.94	< 2	7.26	8	35,000	
14/03/2017	15/03/2017	3.78	< 2	7.28	12	35,000	
20/03/2017	21/03/2017	5.06	< 2	7.74	1	35,000	
24/03/2017	27/03/2017	5.39	< 2	7.24	9	35,000	
31/03/2017	3/04/2017	8.18	< 2	7.79	4	25,000	
12/04/2017	19/04/2017	7.39	< 2	7.04	19	25,000	
28/04/2017	1/05/2017	5.20	< 2	6.95	12	10,000	
23/05/2017	24/05/2017	6.60	< 2	7.20	8	20,000	
6/06/2017	7/06/2017	6.73	< 2	6.99	2	35,000	
19/06/2017	20/06/2017	8.79	2	7.79	114	0	Test Fail
21/06/2017	22/06/2017	8.40	< 2	7.66	44	0	Re-test fail. Pumped out by cert trade waste.
12/07/2017	14/07/2017	9.01	< 2	7.08	10	35,000	

2017 FIRST FLUSH RESULTS

Samples Collected:	Samples Tested:	Dissolved Oxygen (mg/L)	Oil and Grease (mg/L)	pH	Total Suspended Solids (TSS)	Volume (L)	Comments
10/08/2017	11/08/2017	7.73	< 2	7.62	16	15,000	
28/08/2017	29/08/2017	8.65	< 2	7.55	28	30,000	
17/10/2017	18/10/2017	7.93	< 2	7.37	4	15,000	
6/11/2017	7/11/2017	7.36	< 2	7.39	15	35,000	
6/12/2017	7/12/2017	7.45	< 2	7.49	16	25,000	
27/12/2017	28/12/2017	7.49	< 2	7.46	2	25,000	
	MINIMUM	3.78	<2	6.60	1		
	MAXIMUM	9.01	2	7.79	114		
	AVERAGE	6.97	1	7.36	16		

2017 BUND WATER RESULTS

Samples Collected:	Samples Tested:	Location	Temp (°C)	pH	Total Dissolved Solids (ppm)	Dissolved Oxygen (% SAT)	Dissolved Oxygen (mg/L)	Conductivity (uS/cm)	Appearance
06/01/2017	06/01/2017	Bund 1	19.4	7.60	69.0	73.4		107.0	Clear
		Bund 2	18.2	7.53	64.3	64.9		100.8	Clear
		Bund 3	17.6	7.39	67.4	65.4		104.2	Clear
		Bund 5	17.7	7.36	66.0	57.1		101.7	Clear
		Bund 6	18.7	7.25	76.4	56.9		112.8	Clear
		Bund 7	17.1	8.18	75.7	81.6		110.5	Clear
		Bund 8	18.8	7.35	68.2	60.2		103.0	Clear
		Bund 9	19.0	8.00	70.1	70.9		115.7	Clear
23/01/2017	23/01/2017	Bund 1	24.0	7.20	31.2		7.4	41.0	Clear
		Bund 2	23.2	7.02	33.6		7.6	63.9	Clear
		Bund 3	23.9	7.05	36.3		8.2	61.2	Clear
		Bund 5	24.1	6.98	41.4		7.1	52.8	Clear
		Bund 6	23.8	8.34	39.2		8.0	49.6	Clear
		Bund 7	24.2	7.70	39.6		7.3	47.9	Clear
		Bund 8	24..0	8.14	32.7		8.9	62.8	Clear
		Bund 9	23.1	9.70	38.4		8.5	60.4	Clear
27/02/2017	27/02/2017	Bund 1	21.6	6.60	43.0		7.6	39.0	Clear
		Bund 2	22.3	6.98	32.6		8.5	41.6	Clear
		Bund 3	21.9	5.14	31.8		7.2	62.4	Clear

		Bund 5	22.0	6.38	28.7		8.1	51.7	Clear
		Bund 6	22.4	6.19	29.2		7.3	48.6	Clear
		Bund 7	23.6	5.94	31.0		8.9	59.6	Clear
		Bund 8	21.4	5.63	28.1		6.8	51.7	Clear
		Bund 9	21.9	6.09	29.1		7.6	43.8	Clear
15/03/2017	15/03/2017	Bund 1	22.6	8.17	31.8		7.0	48.5	Clear
		Bund 2	22.6	8.20	36.4		6.6	50.0	Clear
		Bund 3	22.5	7.82	44.8		5.3	69.5	Clear
		Bund 5	22.4	6.61	41.5		5.0	63.2	Clear
		Bund 6	22.5	7.57	42.6		4.9	65.2	Clear
		Bund 7	22.9	7.49	37.7		5.3	58.1	Clear
		Bund 8	22.5	7.41	57.6		4.4	88.1	Clear
		Bund 9	22.5	7.43	49.4		4.3	75.5	Clear
20/03/2017	20/03/2017	Bund 1	27.3	8.17	37.4	41.4		57.6	Clear
		Bund 2	27.5	7.51	35.1	31.7		53.8	Clear
		Bund 3	27.2	7.34	38.1	40.1		58.8	Clear
		Bund 5	27.4	7.11	34.7	36.8		53.3	Clear
		Bund 6	27.4	7.19	36.8	45.2		56.8	Clear
		Bund 7	27.5	7.24	42.9	34.5		65.6	Clear
		Bund 8	27.8	7.13	43.5	61.7		69.8	Clear
		Bund 9	27.7	7.26	46.3	52.9		71.8	Clear
31/03/2017	31/03/2017	Bund 1	22.8	7.68	37.0	40.1		57.8	Clear
		Bund 2	23.0	7.50	34.8	36.0		54.0	Clear

		Bund 3	22.9	8.10	37.4	32.2		58.7	Clear
		Bund 5	22.7	7.25	35.0	34.6		54.2	Clear
		Bund 6	23.1	7.40	36.4	38.3		56.6	Clear
		Bund 7	23.5	7.72	41.2	46.1		60.1	Clear
		Bund 8	23.2	7.18	40.9	36.4		62.9	Clear
		Bund 9	23.4	7.30	42.3	42.7		63.8	Clear
19/06/2017	19/06/2017	Bund 1	18.1	7.20	31.3	40.4		41.0	Clear
		Bund 2	18.7	7.05	43.2	30.8		58.9	Clear
		Bund 3	17.9	7.70	39.9	30.5		63.2	Clear
		Bund 5	17.8	6.98	29.2	41.7		42.7	Clear
		Bund 6	18.0	6.82	47.6	40.6		68.0	Clear
		Bund 7	18.1	7.30	38.7	42.7		59.3	Clear
		Bund 8	17.8	7.35	33.4	36.9		51.2	Clear
		Bund 9	17.5	6.96	37.6	39.8		50.4	Clear
13/07/2017		Bund 1	18.7	8.39	17.5	52.0		18.0	Clear
		Bund 2	18.5	8.40	17.1	62.1		27.3	Clear
		Bund 3	18.8	8.10	19.6	65.3		32.1	Clear
		Bund 5	18.9	7.72	19.0	61.0		29.4	Clear
		Bund 6	19.0	8.45	28.7	57.5		40.1	Clear
		Bund 7	19.2	7.85	22.4	53.7		27.3	Clear
		Bund 8	18.5	7.99	19.6	58.1		32.0	Clear
		Bund 9	18.6	7.38	19.2	56.4		38.6	Clear
14/09/2017	14/09/2017	Bund 1	18.9	7.60	19.2	60.7		20.6	Clear
		Bund 2	18.1	7.91	19.9	61.0		21.2	Clear
		Bund 3	18.7	7.82	21.7	60.9		19.4	Clear

		Bund 5	18.7	8.39	28.4	59.4		20.1	Clear
		Bund 6	19.0	8.10	26.7	58.6		22.6	Clear
		Bund 7	18.2	7.94	19.2	61.7		20.3	Clear
		Bund 8	18.1	8.17	22.4	59.6		18.7	Clear
		Bund 9	19.1	8.19	21.6	61.4		20.6	Clear
16/10/2017	16/10/2017	Bund 1	25.6	5.21	45.7	140.0		47.5	Clear
		Bund 2	25.6	5.40	51.4	125.8		90.9	Clear
		Bund 3	25.9	5.87	43.2	107.2		67.0	Clear
		Bund 5	26.7	5.62	53.2	82.5		82.3	Clear
		Bund 6	27.1	6.55	50.1	52.2		75.4	Clear
		Bund 7	26.0	6.70	52.6	82.5		69.9	Clear
		Bund 8	26.5	6.85	54.2	52.1		96.9	Clear
		Bund 9	25.9	6.60	53.7	84.0		76.6	Clear
06/11/2017	06/11/2017	Bund 1	23.5	5.34	42.2	122.4		91.5	Clear
		Bund 2	22.8	5.80	49.3	94.8		84.3	Clear
		Bund 3	23.0	6.15	43.4	97.6		81.0	Clear
		Bund 5	Insufficient water to sample						
		Bund 6	23.2	6.85	47.2	83.7		73.6	Clear
		Bund 7	Insufficient water to sample						
		Bund 8	Insufficient water to sample						
		Bund 9	Insufficient water to sample						
06/12/2017	06/12/2017	Bund 1	22.9	7.20	70.2	57.0		101.1	Clear
		Bund 2	23.2	7.10	71.1	50.0		112.9	Clear
		Bund 3	22.7	7.60	80.5	67.0		113.9	Clear
		Bund 5	22.7	7.50	73.0	64.0		130.0	Clear

		Bund 6	22.6	7.50	84.1	67.3		129.0	Clear
		Bund 7	23.0	7.20	110.0	69.9		128.4	Clear
		Bund 8	22.9	7.40	70.0	67.0		122.7	Clear
		Bund 9	23.3	7.10	72.9	50.2		110.6	Clear
27/12/2017	27/12/2017	Bund 1	26.0	7.45	48.1	61.3		44.4	Clear
		Bund 2	25.8	7.30	47.3	62.0		32.2	Clear
		Bund 3	26.1	7.05	47.9	71.2		38.1	Clear
		Bund 5	25.9	6.95	73.0	59.3		45.4	Clear
		Bund 6	25.2	6.87	65.6	57.1		48.9	Clear
		Bund 7	25.8	6.97	62.4	58.7		27.6	Clear
		Bund 8	25.4	7.01	72.9	84.3		48.0	Clear
		Bund 9	25.3	6.98	75.6	63.3		45.7	Clear
		MINIMUM	17.1	5.14	17.1	30.5	4.3	18.0	
		MAXIMUM	27.8	9.70	110.0	140.0	8.9	130.0	
		AVERAGE	22.3	7.25	44.2	60.1	7.0	62.3	

Appendix B

Hourly Truck Movements

Appendix B Hourly Truck Movements

REPORTING PERIOD: January 2017

Bay Occupancy Data

Start	12:00:00 AM	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM
Finish	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM	12:00:00 PM
Bay 1	20	40	33	27	20	14	23	19	30	9	10	14
Bay 2	13	34	39	22	21	20	16	17	19	13	6	11
Bay 3	28	24	17	16	16	15	33	27	18	17	23	34
Bay 4	14	18	7	3	8	6	26	24	12	16	16	22
Total	75	116	96	68	65	55	98	87	79	55	55	81

Start	12:00:00 PM	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM
Finish	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM	12:00:00 AM
Bay 1	23	35	37	28	26	19	24	25	27	13	12	3
Bay 2	16	32	32	31	22	18	17	14	15	5	6	4
Bay 3	30	29	23	17	21	21	22	21	19	23	24	13
Bay 4	19	22	11	10	14	10	17	9	11	14	11	7
Total	88	118	103	86	83	68	80	69	72	55	53	27

Traffic Movement Assessment Data

	00:00 to 01:00	01:00 to 02:00	02:00 to 03:00	03:00 to 04:00	04:00 to 05:00	05:00 to 06:00	06:00 to 07:00	07:00 to 08:00	08:00 to 09:00	09:00 to 10:00	10:00 to 11:00	11:00 to 12:00
Start	12:00:00 AM	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM
Finish	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM	12:00:00 PM
1/01/2017	3	1	2	2	1	1	3	2	1	2	0	5
2/01/2017	1	1	1	1	3	1	3	2	4	1	0	3
3/01/2017	2	3	2	2	3	1	3	2	2	3	1	5
4/01/2017	1	6	4	2	4	0	4	2	6	1	1	2
5/01/2017	3	5	4	0	1	3	2	1	3	0	4	2
6/01/2017	3	5	4	2	3	2	3	4	3	2	1	0
7/01/2017	2	5	3	4	0	0	3	2	1	3	1	0
8/01/2017	3	2	0	2	1	2	3	1	1	2	1	7
9/01/2017	1	4	5	1	2	2	2	2	2	3	0	2
10/01/2017	1	5	3	3	2	2	2	1	5	1	2	2
11/01/2017	4	4	2	5	2	1	5	3	1	2	0	2
12/01/2017	4	3	6	3	2	0	4	2	3	1	1	2
13/01/2017	2	5	3	3	4	2	5	3	1	2	3	1
14/01/2017	2	1	3	1	0	3	4	2	2	0	3	1
15/01/2017	4	2	3	2	1	0	2	3	3	1	4	2
16/01/2017	2	4	4	4	4	2	4	5	3	3	0	5
17/01/2017	1	6	2	0	2	1	3	4	3	2	2	2
18/01/2017	5	3	4	3	1	0	3	4	0	3	4	3
19/01/2017	3	5	0	3	6	2	1	1	4	1	1	4
20/01/2017	3	6	3	4	4	1	2	3	4	2	2	2
21/01/2017	1	4	5	1	1	0	2	2	2	0	1	2
22/01/2017	2	3	2	1	0	1	3	1	1	1	1	1
23/01/2017	4	4	4	3	4	2	2	5	2	3	4	3
24/01/2017	3	3	2	1	0	4	6	3	3	0	4	4
25/01/2017	4	1	5	2	3	5	4	2	1	2	3	3
26/01/2017	1	2	4	1	3	1	3	5	1	1	0	2
27/01/2017	1	2	3	2	1	4	3	2	6	2	1	2
28/01/2017	2	5	1	2	1	3	2	2	2	1	3	3
29/01/2017	2	5	3	0	1	1	2	4	1	1	2	2
30/01/2017	3	1	4	3	1	3	5	5	1	3	1	3
31/01/2017	1	6	4	1	2	3	2	5	5	1	2	2
Total	74	112	95	64	63	53	95	85	77	50	53	79

	12:00 to 13:00	13:00 to 14:00	14:00 to 15:00	15:00 to 16:00	16:00 to 17:00	17:00 to 18:00	18:00 to 19:00	19:00 to 20:00	20:00 to 21:00	21:00 to 22:00	22:00 to 23:00	23:00 to 24:00
Start	12:00:00 PM	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM
Finish	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM	12:00:00 AM
1/01/2017	0	3	0	3	1	1	1	1	2	2	2	1
2/01/2017	2	3	5	2	2	3	3	2	2	1	1	1
3/01/2017	2	5	2	4	4	1	1	2	2	3	1	0
4/01/2017	3	5	2	4	4	1	1	1	1	2	3	1
5/01/2017	4	4	6	2	3	5	0	3	2	1	2	0
6/01/2017	3	4	5	4	1	2	2	2	4	0	0	0
7/01/2017	4	3	4	1	1	0	5	2	3	0	1	1
8/01/2017	0	2	1	2	3	3	3	1	3	3	1	0
9/01/2017	4	5	2	3	2	1	3	1	4	0	2	0
10/01/2017	3	5	6	5	2	2	5	3	0	2	1	1
11/01/2017	5	2	7	1	7	1	2	3	4	3	0	3
12/01/2017	3	5	3	2	3	4	3	3	1	1	3	0
13/01/2017	6	3	2	4	2	2	4	1	3	0	3	1
14/01/2017	6	4	0	1	1	0	3	1	1	1	1	1
15/01/2017	3	0	3	1	3	0	1	1	1	3	2	0
16/01/2017	1	6	5	6	2	3	2	3	5	0	2	2
17/01/2017	2	2	5	5	2	3	3	3	4	1	1	0
18/01/2017	3	3	2	2	4	2	3	3	2	4	0	1
19/01/2017	4	3	5	2	4	5	1	2	1	1	1	0
20/01/2017	1	4	4	3	1	3	1	3	4	2	0	1
21/01/2017	2	6	4	1	2	0	4	3	0	1	2	2
22/01/2017	3	5	2	0	2	1	6	3	1	0	4	1
23/01/2017	4	5	3	4	2	3	1	2	1	2	2	3
24/01/2017	3	3	3	5	2	4	3	4	3	2	3	1
25/01/2017	2	4	2	2	5	0	6	1	1	2	3	1
26/01/2017	1	5	4	1	3	4	2	1	2	2	2	1
27/01/2017	5	2	2	2	3	3	2	3	2	3	2	0
28/01/2017	2	3	1	2	1	2	0	1	3	1	1	0
29/01/2017	1	2	3	2	1	1	1	1	3	1	2	1
30/01/2017	2	7	3	1	1	2	2	3	3	2	3	1
31/01/2017	2	2	6	3	5	3	3	1	2	5	2	1
Total	86	115	102	80	79	65	77	64	70	51	53	26

REPORTING PERIOD: February 2017

Bay Occupancy Data

Start	12:00:00 AM	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM
Finish	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM	12:00:00 PM
Bay 1	18	32	40	22	27	21	22	22	24	17	16	14
Bay 2	10	32	33	23	23	24	17	19	23	16	13	7
Bay 3	17	14	8	13	14	20	29	15	10	16	25	25
Bay 4	6	7	4	4	9	9	15	9	8	9	14	19
Total	51	85	85	62	73	74	83	65	65	58	68	65
Start	12:00:00 PM	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM
Finish	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM	12:00:00 AM
Bay 1	23	28	36	29	29	14	20	26	15	16	12	5
Bay 2	18	31	24	28	23	16	21	16	15	9	8	5
Bay 3	17	15	22	24	26	23	17	19	18	25	18	12
Bay 4	18	6	8	10	16	10	7	11	7	12	10	2
Total	76	80	90	91	94	63	65	72	55	62	48	24

Traffic Movement Assessment Data

	00:00 to 01:00	01:00 to 02:00	02:00 to 03:00	03:00 to 04:00	04:00 to 05:00	05:00 to 06:00	06:00 to 07:00	07:00 to 08:00	08:00 to 09:00	09:00 to 10:00	10:00 to 11:00	11:00 to 12:00
Start	12:00:00 AM	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM
Finish	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM	12:00:00 PM
1/02/2017	1	4	1	4	2	2	3	2	2	5	2	2
2/02/2017	2	4	4	3	3	3	3	2	2	1	2	2
3/02/2017	1	0	3	5	1	3	4	1	3	3	4	3
4/02/2017	1	1	3	0	2	3	4	3	2	1	2	3
5/02/2017	2	2	2	0	0	3	3	1	1	1	2	3
6/02/2017	0	3	6	1	5	2	2	1	4	4	1	1
7/02/2017	3	4	4	1	3	3	2	2	4	0	1	3
8/02/2017	4	4	2	2	4	2	5	2	2	6	2	2
9/02/2017	1	5	3	2	3	4	1	3	3	6	4	0
10/02/2017	1	2	3	8	3	1	0	2	4	2	3	0
11/02/2017	3	1	1	4	1	1	3	1	1	1	2	1
12/02/2017	2	0	2	1	3	1	5	2	3	0	2	2
13/02/2017	2	2	3	0	5	5	6	1	2	3	6	2
14/02/2017	2	4	3	1	2	2	3	3	2	3	3	1
15/02/2017	1	5	2	1	5	3	2	2	2	0	1	2
16/02/2017	0	3	3	4	2	2	2	0	1	4	2	4
17/02/2017	1	5	2	3	4	2	3	1	1	0	4	3
18/02/2017	0	1	2	0	0	4	5	2	2	0	1	2
19/02/2017	1	1	3	0	2	0	3	2	0	1	2	1
20/02/2017	2	4	3	4	1	2	3	3	1	2	1	3
21/02/2017	2	3	3	3	3	5	2	2	2	2	2	2
22/02/2017	2	3	3	4	2	0	5	3	2	1	3	1
23/02/2017	3	5	5	1	0	1	2	9	1	0	2	7
24/02/2017	3	4	3	1	1	5	2	2	6	1	2	4
25/02/2017	3	5	1	3	2	1	3	1	1	4	2	3
26/02/2017	2	1	2	1	3	1	1	0	2	1	3	1
27/02/2017	2	4	3	2	5	3	3	4	3	3	2	3
28/02/2017	2	4	4	1	5	6	2	3	4	2	2	1
1/03/2017	2	1	6	2	1	4	1	5	2	1	3	3
2/03/2017	0	0	0	0	0	0	0	0	0	0	0	0
3/03/2017	0	0	0	0	0	0	0	0	0	0	0	0
Total	51	85	85	62	73	74	83	65	65	58	68	65

	12:00 to 13:00	13:00 to 14:00	14:00 to 15:00	15:00 to 16:00	16:00 to 17:00	17:00 to 18:00	18:00 to 19:00	19:00 to 20:00	20:00 to 21:00	21:00 to 22:00	22:00 to 23:00	23:00 to 24:00
Start	12:00:00 PM	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM
Finish	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM	12:00:00 AM
1/02/2017	2	3	1	6	4	3	3	5	2	4	0	1
2/02/2017	3	3	2	4	6	1	2	4	2	3	0	2
3/02/2017	2	2	2	4	4	2	3	2	1	4	4	0
4/02/2017	4	2	3	1	1	2	1	1	1	2	0	1
5/02/2017	1	2	2	1	3	2	0	1	3	2	2	1
6/02/2017	3	3	4	5	0	5	2	3	3	2	1	1
7/02/2017	3	1	3	3	4	2	4	4	1	2	1	1
8/02/2017	3	4	5	5	4	3	5	1	4	2	0	1
9/02/2017	2	3	4	1	6	1	0	3	4	1	3	1
10/02/2017	2	2	3	4	3	4	1	3	2	1	2	1
11/02/2017	1	0	1	5	2	1	2	2	1	2	2	1
12/02/2017	3	0	2	3	2	0	3	2	0	1	3	1
13/02/2017	2	5	5	4	3	4	2	2	0	3	1	2
14/02/2017	2	4	5	2	3	3	2	3	4	1	1	0
15/02/2017	1	7	3	5	4	1	1	5	1	3	2	2
16/02/2017	2	3	2	3	4	3	2	0	3	4	3	0
17/02/2017	5	4	2	2	4	1	3	2	1	4	1	0
18/02/2017	3	1	5	1	1	1	2	2	2	2	1	0
19/02/2017	4	0	4	0	4	1	3	3	2	0	2	0
20/02/2017	3	4	5	2	3	4	3	4	2	1	4	1
21/02/2017	4	2	2	3	4	4	3	1	0	3	2	1
22/02/2017	2	4	7	2	3	2	3	2	0	3	2	0
23/02/2017	3	3	3	6	3	1	3	0	3	2	1	1
24/02/2017	1	3	4	3	1	5	3	5	2	0	1	2
25/02/2017	1	0	0	3	4	2	1	0	2	4	0	0
26/02/2017	2	1	0	1	4	1	2	1	1	3	2	0
27/02/2017	3	3	6	5	3	0	2	3	3	1	2	2
28/02/2017	5	6	4	3	5	1	1	5	4	2	1	0
1/03/2017	4	5	1	4	2	3	3	3	1	0	4	1
2/03/2017	0	0	0	0	0	0	0	0	0	0	0	0
3/03/2017	0	0	0	0	0	0	0	0	0	0	0	0
Total	76	80	90	91	94	63	65	72	55	62	48	24

REPORTING PERIOD: March 2017

Bay Occupancy Data

Start	12:00:00 AM	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM
Finish	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM	12:00:00 PM
Bay 1	20	28	36	28	28	27	21	14	19	22	19	18
Bay 2	10	23	34	24	31	29	19	10	14	15	15	16
Bay 3	25	16	13	13	13	17	27	24	19	19	19	31
Bay 4	13	7	7	11	11	11	18	15	14	11	16	20
Total	68	74	90	76	83	84	85	63	66	67	69	85

Start	12:00:00 PM	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM
Finish	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM	12:00:00 AM
Bay 1	22	28	38	32	30	19	30	21	22	15	17	9
Bay 2	13	22	36	22	29	15	12	13	12	6	11	6
Bay 3	31	29	17	20	17	28	22	23	14	14	10	5
Bay 4	15	17	15	13	9	18	14	18	7	9	9	3
Total	81	96	106	87	85	80	78	75	55	44	47	23

Traffic Movement Assessment Data

	00:00 to 01:00	01:00 to 02:00	02:00 to 03:00	03:00 to 04:00	04:00 to 05:00	05:00 to 06:00	06:00 to 07:00	07:00 to 08:00	08:00 to 09:00	09:00 to 10:00	10:00 to 11:00	11:00 to 12:00
Start	12:00:00 AM	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM
Finish	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM	12:00:00 PM
1/03/2017	2	1	6	2	1	4	1	5	2	1	3	3
2/03/2017	1	0	3	4	5	2	2	3	4	3	3	2
3/03/2017	1	3	4	4	5	1	2	3	1	4	1	3
4/03/2017	2	1	1	4	0	3	3	0	2	3	0	2
5/03/2017	2	2	0	3	0	2	2	2	2	2	1	2
6/03/2017	2	3	4	0	1	3	8	0	3	1	2	3
7/03/2017	3	2	2	3	3	4	2	0	3	2	1	2
8/03/2017	2	3	3	1	3	3	2	4	0	1	2	2
9/03/2017	4	3	3	4	3	2	2	3	3	2	2	3
10/03/2017	0	5	2	2	4	3	0	2	2	3	2	3
11/03/2017	3	3	2	2	3	2	5	1	0	0	1	4
12/03/2017	2	2	1	0	2	1	3	2	0	2	2	2
13/03/2017	4	2	2	3	3	2	4	2	0	3	2	2
14/03/2017	2	5	3	3	3	2	3	2	3	1	0	2
15/03/2017	2	2	4	3	1	3	5	1	3	4	0	4
16/03/2017	2	3	1	3	1	2	2	5	3	3	3	4
17/03/2017	1	0	2	3	6	4	1	3	6	2	3	3
18/03/2017	2	3	2	4	3	4	2	3	4	1	2	3
19/03/2017	1	0	1	3	4	3	2	0	1	4	1	0
20/03/2017	1	4	3	0	3	3	4	4	3	3	2	4
21/03/2017	3	3	5	3	3	4	5	2	2	2	3	3
22/03/2017	3	2	5	0	2	3	3	1	1	2	3	2
23/03/2017	4	4	3	1	2	4	1	4	2	3	1	4
24/03/2017	4	1	6	2	1	4	0	3	6	0	2	4
25/03/2017	1	2	3	0	1	2	2	2	1	4	0	2
26/03/2017	4	0	3	0	1	2	4	2	2	0	3	1
27/03/2017	3	4	5	4	4	2	1	1	2	2	4	3
28/03/2017	2	5	4	4	6	2	2	0	1	2	5	4
29/03/2017	0	1	3	4	5	2	3	0	0	4	5	4
30/03/2017	1	3	3	4	2	5	5	3	2	0	6	2
31/03/2017	4	2	1	3	2	1	4	0	2	3	4	3
Total	68	74	90	76	83	84	85	63	66	67	69	85

	12:00 to 13:00	13:00 to 14:00	14:00 to 15:00	15:00 to 16:00	16:00 to 17:00	17:00 to 18:00	18:00 to 19:00	19:00 to 20:00	20:00 to 21:00	21:00 to 22:00	22:00 to 23:00	23:00 to 24:00
Start	12:00:00 PM	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM
Finish	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM	12:00:00 AM
1/03/2017	4	5	1	4	2	3	3	3	1	0	4	1
2/03/2017	4	1	5	5	1	4	4	1	3	2	2	2
3/03/2017	3	2	2	3	3	3	2	3	4	2	0	0
4/03/2017	1	4	4	3	0	1	3	3	1	0	0	1
5/03/2017	3	1	2	1	0	4	2	1	0	1	1	1
6/03/2017	3	3	4	6	4	0	2	2	3	2	1	3
7/03/2017	3	2	4	3	0	4	4	1	3	0	1	0
8/03/2017	3	4	3	2	5	4	2	3	2	3	1	0
9/03/2017	2	4	3	1	5	2	4	4	3	1	4	1
10/03/2017	2	4	3	4	1	3	3	2	3	1	3	0
11/03/2017	1	3	3	2	1	4	3	1	2	2	3	1
12/03/2017	2	1	2	1	3	1	2	0	1	1	3	0
13/03/2017	3	3	2	4	3	3	3	1	1	1	3	1
14/03/2017	3	3	7	3	2	2	3	3	5	0	0	2
15/03/2017	3	4	4	4	4	2	0	2	3	2	0	1
16/03/2017	2	4	7	2	5	3	2	3	0	2	2	0
17/03/2017	4	3	4	5	3	3	5	1	4	1	1	1
18/03/2017	2	2	5	3	0	2	3	1	0	1	1	1
19/03/2017	1	2	5	2	1	0	1	3	1	2	1	0
20/03/2017	2	4	3	3	2	3	2	7	0	0	3	1
21/03/2017	4	3	5	2	4	3	3	3	1	0	2	0
22/03/2017	4	5	3	5	2	1	4	1	1	1	1	0
23/03/2017	4	4	2	0	4	2	1	4	3	2	0	0
24/03/2017	2	4	5	0	3	3	1	1	3	2	3	1
25/03/2017	1	4	3	0	2	2	2	0	0	3	0	0
26/03/2017	3	0	4	2	1	0	2	2	2	1	0	0
27/03/2017	2	3	4	2	5	5	0	4	1	4	1	0
28/03/2017	0	2	3	5	7	3	2	2	1	4	1	1
29/03/2017	2	3	2	5	5	4	4	3	1	2	2	1
30/03/2017	3	6	1	3	3	3	4	4	1	0	2	1
31/03/2017	5	3	1	2	4	3	2	6	1	1	1	2
Total	81	96	106	87	85	80	78	75	55	44	47	23

REPORTING PERIOD: April 2017

Bay Occupancy Data

Start	12:00:00 AM	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM
Finish	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM	12:00:00 PM
Bay 1	30	33	34	20	22	16	21	28	23	9	14	14
Bay 2	16	32	32	22	18	19	22	19	19	10	10	13
Bay 3	21	10	10	10	15	19	31	22	13	17	22	31
Bay 4	14	4	4	8	9	8	22	11	6	10	11	25
Total	81	79	80	60	64	62	96	80	61	46	57	83

Start	12:00:00 PM	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM
Finish	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM	12:00:00 AM
Bay 1	28	32	32	27	23	20	23	23	21	11	13	4
Bay 2	14	28	31	22	18	10	16	17	15	7	6	3
Bay 3	27	13	14	18	20	27	16	15	16	21	17	8
Bay 4	19	6	12	10	10	20	14	10	10	14	10	6
Total	88	79	89	77	71	77	69	65	62	53	46	21

Traffic Movement Assessment Data

	00:00 to 01:00	01:00 to 02:00	02:00 to 03:00	03:00 to 04:00	04:00 to 05:00	05:00 to 06:00	06:00 to 07:00	07:00 to 08:00	08:00 to 09:00	09:00 to 10:00	10:00 to 11:00	11:00 to 12:00
Start	12:00:00 AM	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM
Finish	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM	12:00:00 PM
1/04/2017	2	2	1	1	0	0	4	4	0	0	1	2
2/04/2017	3	1	0	2	1	1	3	2	1	1	0	2
3/04/2017	3	3	2	3	2	3	3	5	3	2	2	4
4/04/2017	2	2	4	5	1	0	1	1	2	4	3	2
5/04/2017	3	2	2	1	3	3	3	2	1	0	2	0
6/04/2017	3	2	3	3	3	3	3	5	1	1	4	4
7/04/2017	1	4	2	4	4	3	2	1	3	2	2	0
8/04/2017	0	1	2	3	1	1	1	3	1	0	1	1
9/04/2017	4	3	1	0	0	1	4	3	1	0	2	3
10/04/2017	6	2	4	1	2	3	2	4	1	4	2	6
11/04/2017	3	2	2	2	3	5	7	1	1	5	0	4
12/04/2017	3	3	3	1	3	3	6	2	1	0	3	5
13/04/2017	2	4	4	1	7	2	2	4	1	3	2	4
14/04/2017	1	4	1	2	3	4	1	2	3	2	1	2
15/04/2017	4	1	1	2	1	2	5	2	1	0	0	3
16/04/2017	2	2	2	2	0	3	2	2	1	1	1	3
17/04/2017	1	4	4	2	4	2	2	5	2	0	1	3
18/04/2017	6	3	4	0	2	5	3	4	4	5	2	5
19/04/2017	5	2	4	2	1	5	3	1	7	0	1	4
20/04/2017	4	2	1	4	5	0	3	3	1	2	1	4
21/04/2017	2	2	5	4	1	1	7	4	2	2	2	1
22/04/2017	3	0	3	2	1	3	3	2	2	4	3	2
23/04/2017	1	1	1	1	1	2	2	0	4	0	1	2
24/04/2017	0	6	5	3	3	2	4	2	2	3	2	1
25/04/2017	1	5	5	1	1	1	3	6	4	0	1	2
26/04/2017	5	5	4	1	2	2	6	0	0	0	4	2
27/04/2017	3	2	5	2	4	2	1	5	4	2	4	5
28/04/2017	1	4	4	3	2	0	4	4	2	1	4	3
29/04/2017	5	3	1	0	2	0	3	1	3	2	2	2
30/04/2017	2	2	0	2	1	0	3	0	2	0	3	2
1/05/2017	0	0	0	0	0	0	0	0	0	0	0	0
Total	81	79	80	60	64	62	96	80	61	46	57	83

	12:00 to 13:00	13:00 to 14:00	14:00 to 15:00	15:00 to 16:00	16:00 to 17:00	17:00 to 18:00	18:00 to 19:00	19:00 to 20:00	20:00 to 21:00	21:00 to 22:00	22:00 to 23:00	23:00 to 24:00
Start	12:00:00 PM	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM
Finish	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM	12:00:00 AM
1/04/2017	2	4	1	3	0	1	6	1	0	2	1	1
2/04/2017	4	1	1	3	0	3	2	1	1	1	4	1
3/04/2017	1	4	2	1	7	4	2	2	1	4	0	0
4/04/2017	5	1	4	5	4	3	2	0	2	1	3	0
5/04/2017	6	1	3	5	3	6	2	2	4	2	1	0
6/04/2017	2	4	4	2	3	3	2	4	3	1	1	1
7/04/2017	4	3	2	2	2	1	0	2	1	3	2	1
8/04/2017	2	2	4	3	1	2	1	0	5	2	0	0
9/04/2017	1	3	1	2	0	2	1	3	2	1	0	2
10/04/2017	3	2	5	4	3	3	3	2	1	1	4	1
11/04/2017	4	3	3	3	3	4	3	2	2	1	1	0
12/04/2017	3	5	2	1	4	5	4	1	1	0	4	0
13/04/2017	4	1	1	4	4	3	3	1	1	4	2	0
14/04/2017	3	3	2	5	2	1	6	1	3	2	0	0
15/04/2017	3	4	2	0	0	0	3	2	0	1	0	0
16/04/2017	2	1	2	2	0	2	0	2	3	0	1	1
17/04/2017	5	5	4	1	2	4	2	2	3	2	0	1
18/04/2017	4	1	3	1	2	7	1	3	1	3	3	1
19/04/2017	2	3	2	2	4	1	3	4	2	0	2	2
20/04/2017	3	2	3	0	2	5	3	1	1	5	4	1
21/04/2017	6	4	3	3	3	2	3	5	1	4	1	0
22/04/2017	1	2	5	2	4	0	1	4	1	1	1	4
23/04/2017	2	1	5	3	3	1	1	3	3	2	3	0
24/04/2017	3	3	4	4	2	2	1	2	3	2	1	1
25/04/2017	1	5	5	3	1	1	3	5	1	0	0	0
26/04/2017	3	4	4	3	2	2	4	3	2	2	2	2
27/04/2017	4	4	2	2	3	4	3	1	4	2	1	1
28/04/2017	2	0	5	6	4	2	1	2	4	2	1	0
29/04/2017	2	2	3	2	1	2	3	2	2	1	1	0
30/04/2017	1	1	2	0	2	1	0	2	4	1	2	0
1/05/2017	0	0	0	0	0	0	0	0	0	0	0	0
Total	88	79	89	77	71	77	69	65	62	53	46	21

REPORTING PERIOD: May 2017

Bay Occupancy Data

Start	12:00:00 AM	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM
Finish	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM	12:00:00 PM
Bay 1	22	27	35	36	28	24	26	24	30	15	17	14
Bay 2	18	21	35	29	28	20	18	15	20	19	10	9
Bay 3	22	10	17	13	14	12	31	20	18	16	22	30
Bay 4	8	11	5	12	15	7	26	23	20	15	11	22
Total	70	69	92	90	85	63	101	82	88	65	60	75

Start	12:00:00 PM	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM
Finish	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM	12:00:00 AM
Bay 1	32	34	37	30	33	32	27	19	22	16	15	8
Bay 2	19	28	31	31	30	21	24	11	13	12	12	3
Bay 3	31	24	27	19	18	16	23	22	16	23	17	7
Bay 4	20	16	14	22	15	22	17	16	11	15	15	6
Total	102	102	109	102	96	91	91	68	62	66	59	24

Traffic Movement Assessment Data

	00:00 to 01:00	01:00 to 02:00	02:00 to 03:00	03:00 to 04:00	04:00 to 05:00	05:00 to 06:00	06:00 to 07:00	07:00 to 08:00	08:00 to 09:00	09:00 to 10:00	10:00 to 11:00	11:00 to 12:00
Start	12:00:00 AM	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM
Finish	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM	12:00:00 PM
1/05/2017	4	2	4	4	1	2	3	2	6	3	2	2
2/05/2017	3	3	3	3	2	1	3	4	2	3	3	3
3/05/2017	1	4	3	2	4	2	4	0	3	4	1	3
4/05/2017	0	1	3	0	3	6	3	5	1	0	4	2
5/05/2017	4	1	3	3	2	1	4	3	4	3	3	3
6/05/2017	1	1	1	3	3	0	1	3	0	2	2	0
7/05/2017	2	1	1	4	0	0	2	2	3	2	0	2
8/05/2017	0	5	4	3	1	4	3	3	6	1	2	1
9/05/2017	6	4	0	5	4	1	2	5	3	4	0	2
10/05/2017	4	3	3	3	3	1	3	1	2	3	1	2
11/05/2017	5	0	4	2	7	4	9	3	2	1	3	4
12/05/2017	4	2	2	2	4	5	4	1	4	2	3	2
13/05/2017	0	1	2	2	3	1	3	4	4	1	3	2
14/05/2017	0	0	3	2	2	2	3	1	3	1	3	3
15/05/2017	0	5	5	3	2	3	5	1	0	4	1	2
16/05/2017	3	3	3	2	5	2	4	4	0	2	1	2
17/05/2017	2	5	4	4	1	3	4	4	4	2	4	3
18/05/2017	2	2	3	4	7	1	3	3	4	4	3	6
19/05/2017	2	3	1	4	6	2	0	3	3	3	4	1
20/05/2017	3	2	3	0	1	1	1	3	2	2	1	3
21/05/2017	3	0	2	2	3	2	5	1	1	2	1	1
22/05/2017	5	4	4	4	2	0	5	2	2	1	1	1
23/05/2017	0	4	6	4	1	1	3	2	4	1	0	1
24/05/2017	1	0	3	6	3	2	2	0	2	5	3	3
25/05/2017	1	1	5	4	3	6	2	3	4	1	3	3
26/05/2017	1	0	4	2	3	2	2	0	5	2	4	3
27/05/2017	1	3	2	2	3	1	5	3	2	2	2	1
28/05/2017	2	3	2	0	2	0	4	3	2	0	0	2
29/05/2017	3	2	2	5	1	3	6	5	5	1	1	4
30/05/2017	4	2	3	1	2	1	3	5	4	1	0	4
31/05/2017	3	2	4	5	1	3	0	3	1	2	1	4
Total	70	69	92	90	85	63	101	82	88	65	60	75

	12:00 to 13:00	13:00 to 14:00	14:00 to 15:00	15:00 to 16:00	16:00 to 17:00	17:00 to 18:00	18:00 to 19:00	19:00 to 20:00	20:00 to 21:00	21:00 to 22:00	22:00 to 23:00	23:00 to 24:00
Start	12:00:00 PM	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM
Finish	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM	12:00:00 AM
1/05/2017	4	3	5	5	3	2	2	3	3	0	1	3
2/05/2017	3	4	5	4	4	5	1	2	1	4	0	2
3/05/2017	3	3	4	2	4	4	5	2	2	3	4	2
4/05/2017	6	5	2	3	3	3	6	3	1	1	3	2
5/05/2017	5	5	2	4	4	6	5	3	0	1	5	0
6/05/2017	5	4	4	2	1	1	4	2	2	3	1	0
7/05/2017	1	2	4	3	0	1	1	1	5	0	1	2
8/05/2017	2	5	5	3	2	4	1	1	2	4	1	0
9/05/2017	3	6	6	4	3	1	5	0	3	2	2	2
10/05/2017	6	5	3	4	6	5	4	3	2	0	3	0
11/05/2017	6	4	1	2	4	3	5	4	3	4	2	1
12/05/2017	4	0	5	6	6	4	2	6	2	4	2	0
13/05/2017	1	2	4	2	2	2	2	0	1	3	1	2
14/05/2017	3	1	2	0	2	0	2	2	1	0	1	0
15/05/2017	4	5	4	1	3	3	4	3	1	2	4	0
16/05/2017	5	5	5	2	5	5	5	2	1	2	4	0
17/05/2017	1	5	6	4	2	6	2	2	2	6	0	0
18/05/2017	2	5	3	6	4	3	2	2	2	2	1	0
19/05/2017	3	0	7	3	3	2	4	1	3	4	1	0
20/05/2017	2	4	2	3	2	2	1	3	2	1	2	0
21/05/2017	1	2	1	3	1	1	2	0	3	2	0	0
22/05/2017	6	2	0	5	2	5	2	0	2	3	1	1
23/05/2017	4	3	1	7	6	3	1	2	3	2	4	1
24/05/2017	5	0	5	3	3	5	6	3	4	1	0	1
25/05/2017	2	2	5	4	4	1	1	3	2	2	2	0
26/05/2017	4	3	1	4	3	3	3	4	1	1	3	0
27/05/2017	2	5	3	1	1	0	1	3	1	1	0	0
28/05/2017	3	2	2	0	1	2	3	0	3	0	2	1
29/05/2017	3	2	4	4	3	5	2	3	1	3	4	2
30/05/2017	1	3	5	4	3	0	5	2	3	1	2	0
31/05/2017	2	5	3	4	6	4	2	3	0	4	2	2
Total	102	102	109	102	96	91	91	68	62	66	59	24

REPORTING PERIOD: June 2017

Bay Occupancy Data

Start	12:00:00 AM	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM
Finish	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM	12:00:00 PM
Bay 1	25	26	35	26	22	19	22	21	27	10	9	15
Bay 2	19	28	33	27	23	21	26	13	21	13	8	11
Bay 3	18	15	16	17	16	9	23	27	16	19	26	26
Bay 4	10	6	10	13	18	9	19	13	15	20	14	16
Total	72	75	94	83	79	58	90	74	79	62	57	68

Start	12:00:00 PM	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM
Finish	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM	12:00:00 AM
Bay 1	26	31	33	29	31	25	26	21	19	17	10	7
Bay 2	19	25	31	24	21	18	20	19	14	8	6	3
Bay 3	24	19	18	21	17	13	19	14	13	14	10	2
Bay 4	20	14	9	15	6	12	12	10	9	10	7	7
Total	89	89	91	89	75	68	77	64	55	49	33	19

Traffic Movement Assessment Data

	00:00 to 01:00	01:00 to 02:00	02:00 to 03:00	03:00 to 04:00	04:00 to 05:00	05:00 to 06:00	06:00 to 07:00	07:00 to 08:00	08:00 to 09:00	09:00 to 10:00	10:00 to 11:00	11:00 to 12:00
Start	12:00:00 AM	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM
Finish	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM	12:00:00 PM
1/06/2017	1	3	3	4	3	3	2	6	3	3	2	3
2/06/2017	3	2	2	5	3	2	5	2	3	4	1	1
3/06/2017	2	2	3	3	1	1	3	2	2	0	3	2
4/06/2017	2	2	1	3	0	3	6	1	3	1	0	2
5/06/2017	2	6	3	2	3	3	3	3	3	1	2	4
6/06/2017	2	4	5	2	1	3	1	3	5	2	1	1
7/06/2017	4	5	2	3	1	1	1	4	2	4	3	1
8/06/2017	6	4	2	2	4	0	1	3	2	4	2	3
9/06/2017	2	0	5	4	2	2	3	1	4	3	4	1
10/06/2017	0	0	3	1	2	1	1	4	2	1	1	4
11/06/2017	2	0	3	2	1	0	3	1	1	2	2	2
12/06/2017	2	3	4	3	3	1	2	3	2	0	1	1
13/06/2017	4	2	2	2	3	0	3	2	2	0	1	3
14/06/2017	4	3	3	5	2	2	4	0	3	2	3	3
15/06/2017	2	3	3	1	5	1	2	4	3	0	3	1
16/06/2017	1	3	2	5	4	2	2	3	1	2	1	3
17/06/2017	4	4	4	1	0	0	3	3	1	1	0	4
18/06/2017	3	0	2	0	2	1	4	1	0	2	2	2
19/06/2017	4	2	7	3	0	3	5	3	5	2	1	1
20/06/2017	1	4	3	3	4	1	5	3	4	2	2	0
21/06/2017	4	2	3	2	6	3	5	1	6	3	0	7
22/06/2017	1	1	6	2	3	3	5	3	2	5	1	2
23/06/2017	1	5	2	4	4	6	2	2	3	2	2	4
24/06/2017	2	3	0	0	3	3	3	1	3	0	2	0
25/06/2017	1	2	2	3	1	0	1	2	0	3	2	2
26/06/2017	3	4	5	3	3	4	2	2	3	2	2	2
27/06/2017	2	3	4	5	6	2	2	3	3	3	6	1
28/06/2017	2	2	4	2	5	3	4	2	4	6	2	2
29/06/2017	3	0	6	4	3	3	4	4	3	0	3	1
30/06/2017	2	1	0	4	1	1	3	2	1	2	2	5
1/07/2017	0	0	0	0	0	0	0	0	0	0	0	0
Total	72	75	94	83	79	58	90	74	79	62	57	68

	12:00 to 13:00	13:00 to 14:00	14:00 to 15:00	15:00 to 16:00	16:00 to 17:00	17:00 to 18:00	18:00 to 19:00	19:00 to 20:00	20:00 to 21:00	21:00 to 22:00	22:00 to 23:00	23:00 to 24:00
Start	12:00:00 PM	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM
Finish	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM	12:00:00 AM
1/06/2017	5	3	3	4	4	4	2	2	1	1	2	1
2/06/2017	5	4	2	3	2	3	6	2	2	5	3	0
3/06/2017	3	1	2	4	3	0	0	4	0	4	0	1
4/06/2017	2	1	2	3	0	2	3	5	1	1	1	1
5/06/2017	2	5	3	3	1	2	0	3	4	1	0	2
6/06/2017	0	6	7	2	3	2	5	4	5	0	0	1
7/06/2017	2	4	6	6	4	1	3	3	2	2	1	0
8/06/2017	3	6	4	2	4	2	3	0	3	0	1	0
9/06/2017	3	2	3	4	2	4	2	3	1	3	3	0
10/06/2017	0	5	0	1	0	1	2	3	0	0	1	0
11/06/2017	0	1	0	1	0	2	1	0	0	1	0	3
12/06/2017	5	2	2	2	1	3	4	1	2	2	3	2
13/06/2017	4	1	4	8	3	0	2	1	1	1	0	0
14/06/2017	2	4	3	4	3	4	1	0	3	3	0	0
15/06/2017	0	2	2	4	1	2	4	0	1	1	2	0
16/06/2017	0	4	3	2	3	2	1	5	3	3	1	0
17/06/2017	4	2	0	0	1	3	2	1	0	1	1	0
18/06/2017	3	2	1	0	2	2	1	2	0	2	1	0
19/06/2017	5	1	4	6	4	4	2	1	2	1	0	2
20/06/2017	2	2	4	7	3	2	2	2	3	2	0	0
21/06/2017	5	2	5	2	4	2	4	1	2	1	0	1
22/06/2017	3	6	5	1	1	4	3	1	1	2	2	2
23/06/2017	3	2	2	3	5	4	3	2	2	2	2	1
24/06/2017	2	3	3	2	2	1	2	3	0	2	0	1
25/06/2017	1	1	2	1	1	1	3	1	1	2	0	0
26/06/2017	7	4	5	1	4	5	2	3	2	2	3	0
27/06/2017	5	2	5	7	3	1	4	4	2	1	1	1
28/06/2017	5	4	3	3	4	0	3	2	3	1	1	0
29/06/2017	4	5	3	1	3	1	3	2	5	0	2	0
30/06/2017	4	2	3	2	4	4	4	3	3	2	2	0
1/07/2017	0	0	0	0	0	0	0	0	0	0	0	0
Total	89	89	91	89	75	68	77	64	55	49	33	19

REPORTING PERIOD: July 2017

Bay Occupancy Data

Start	12:00:00 AM	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM
Finish	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM	12:00:00 PM
Bay 1	28	36	42	25	21	29	28	24	26	19	16	15
Bay 2	17	25	37	21	24	27	15	19	20	7	13	13
Bay 3	18	13	12	18	17	15	25	16	21	13	27	24
Bay 4	11	10	2	13	12	14	19	11	8	13	19	14
Total	74	84	93	77	74	85	87	70	75	52	75	66

Start	12:00:00 PM	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM
Finish	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM	12:00:00 AM
Bay 1	27	30	32	22	28	19	27	23	23	15	21	5
Bay 2	25	27	36	29	25	16	20	18	18	10	9	4
Bay 3	30	15	13	9	11	18	19	13	15	20	13	6
Bay 4	17	11	11	10	10	11	8	11	7	11	9	2
Total	99	83	92	70	74	64	74	65	63	56	52	17

Traffic Movement Assessment Data

	00:00 to 01:00	01:00 to 02:00	02:00 to 03:00	03:00 to 04:00	04:00 to 05:00	05:00 to 06:00	06:00 to 07:00	07:00 to 08:00	08:00 to 09:00	09:00 to 10:00	10:00 to 11:00	11:00 to 12:00
Start	12:00:00 AM	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM
Finish	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM	12:00:00 PM
1/07/2017	2	2	2	2	1	4	1	1	2	0	4	2
2/07/2017	3	5	0	1	3	1	3	1	1	1	3	3
3/07/2017	1	4	2	0	5	4	2	2	0	2	2	2
4/07/2017	2	3	2	1	2	4	4	1	2	2	1	4
5/07/2017	1	3	3	0	2	5	4	1	2	4	5	5
6/07/2017	1	3	5	1	0	2	6	6	2	3	2	4
7/07/2017	3	2	3	4	3	3	5	1	4	2	3	0
8/07/2017	2	1	1	4	1	1	3	4	2	3	1	0
9/07/2017	4	0	1	3	2	0	2	1	2	2	0	0
10/07/2017	2	5	4	2	4	0	4	2	3	2	1	5
11/07/2017	2	3	3	3	1	2	2	2	3	0	3	2
12/07/2017	2	3	1	5	4	3	3	3	2	2	4	2
13/07/2017	3	3	4	3	1	4	1	3	0	0	9	1
14/07/2017	2	3	5	4	5	2	1	5	2	3	1	4
15/07/2017	4	1	1	1	2	4	6	3	0	1	2	0
16/07/2017	3	2	0	1	3	3	1	2	1	2	1	2
17/07/2017	4	2	3	3	0	4	2	3	2	2	0	2
18/07/2017	0	2	6	5	1	2	5	4	4	2	3	1
19/07/2017	1	2	3	5	2	3	0	3	4	0	2	5
20/07/2017	5	3	4	2	0	4	3	2	3	1	3	5
21/07/2017	4	1	4	1	5	6	1	2	4	2	4	2
22/07/2017	5	0	3	1	3	3	3	3	1	2	2	0
23/07/2017	3	2	2	1	0	1	2	1	5	0	0	1
24/07/2017	1	4	3	4	2	3	3	2	4	0	4	0
25/07/2017	3	4	4	4	2	5	4	2	2	2	1	5
26/07/2017	1	6	4	2	4	1	3	2	2	3	1	2
27/07/2017	4	1	2	5	5	4	4	1	4	4	4	3
28/07/2017	2	2	5	4	6	3	1	2	3	2	6	3
29/07/2017	1	3	4	3	1	1	2	2	3	1	0	0
30/07/2017	1	4	3	1	1	2	3	0	3	1	1	0
31/07/2017	2	5	6	1	3	1	3	3	3	1	2	1
Total	74	84	93	77	74	85	87	70	75	52	75	66

	12:00 to 13:00	13:00 to 14:00	14:00 to 15:00	15:00 to 16:00	16:00 to 17:00	17:00 to 18:00	18:00 to 19:00	19:00 to 20:00	20:00 to 21:00	21:00 to 22:00	22:00 to 23:00	23:00 to 24:00
Start	12:00:00 PM	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM
Finish	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM	12:00:00 AM
1/07/2017	4	3	2	1	2	0	2	1	2	1	0	0
2/07/2017	3	1	2	0	0	2	1	0	3	2	2	1
3/07/2017	5	2	4	3	2	3	2	5	3	2	1	2
4/07/2017	5	4	4	1	4	4	5	1	2	2	0	0
5/07/2017	5	3	1	3	5	2	5	2	2	2	2	0
6/07/2017	3	2	2	3	3	4	2	1	2	3	2	0
7/07/2017	3	5	3	1	4	4	2	2	3	2	0	2
8/07/2017	2	4	4	2	2	1	0	4	2	1	1	0
9/07/2017	4	2	3	2	1	1	3	0	2	2	1	1
10/07/2017	3	4	4	1	1	1	3	4	2	2	3	0
11/07/2017	4	3	5	3	1	3	2	4	2	3	1	1
12/07/2017	3	1	4	4	4	2	1	1	1	3	1	1
13/07/2017	2	5	3	4	1	2	1	2	1	1	6	0
14/07/2017	3	0	4	5	5	3	1	1	3	4	4	0
15/07/2017	4	0	0	2	1	1	2	3	2	0	2	0
16/07/2017	3	2	3	1	0	0	2	1	1	2	1	1
17/07/2017	4	2	3	3	2	3	3	1	3	3	1	0
18/07/2017	4	6	3	5	3	2	3	3	1	3	2	1
19/07/2017	3	1	3	2	3	1	2	3	5	1	0	0
20/07/2017	2	0	4	5	5	3	3	3	1	1	2	1
21/07/2017	3	2	4	0	4	4	7	3	2	4	3	0
22/07/2017	1	5	2	2	1	2	1	3	2	0	1	0
23/07/2017	4	3	1	0	0	2	1	2	0	1	0	2
24/07/2017	4	4	1	2	3	5	1	4	2	0	3	1
25/07/2017	3	4	3	2	2	2	3	3	1	1	0	0
26/07/2017	1	3	6	2	2	1	4	2	1	1	3	0
27/07/2017	3	3	1	4	5	1	2	0	2	2	3	1
28/07/2017	0	0	5	1	3	2	3	1	2	3	4	0
29/07/2017	4	4	1	1	0	1	2	1	4	1	0	0
30/07/2017	2	3	1	2	1	1	2	1	2	1	2	0
31/07/2017	5	2	6	3	4	1	3	3	2	2	1	2
Total	99	83	92	70	74	64	74	65	63	56	52	17

REPORTING PERIOD: August 2017

Bay Occupancy Data

Start	12:00:00 AM	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM
Finish	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM	12:00:00 PM
Bay 1	24	37	33	24	31	24	21	22	28	12	7	27
Bay 2	19	31	35	21	29	28	15	19	26	12	7	18
Bay 3	16	21	13	13	16	20	24	24	15	19	22	18
Bay 4	11	13	12	17	13	9	18	19	14	11	12	21
Total	70	102	93	75	89	81	78	84	83	54	48	84

Start	12:00:00 PM	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM
Finish	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM	12:00:00 AM
Bay 1	26	35	42	26	20	25	23	22	19	12	15	7
Bay 2	25	28	34	29	14	21	17	18	14	8	11	9
Bay 3	27	24	12	19	12	21	12	18	8	15	20	5
Bay 4	13	13	8	17	11	15	10	3	5	3	8	1
Total	91	100	96	91	57	82	62	61	46	38	54	22

Traffic Movement Assessment Data

	00:00 to 01:00	01:00 to 02:00	02:00 to 03:00	03:00 to 04:00	04:00 to 05:00	05:00 to 06:00	06:00 to 07:00	07:00 to 08:00	08:00 to 09:00	09:00 to 10:00	10:00 to 11:00	11:00 to 12:00
Start	12:00:00 AM	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM
Finish	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM	12:00:00 PM
1/08/2017	0	2	4	3	6	4	1	2	0	2	2	1
2/08/2017	2	5	4	1	5	3	1	5	1	2	0	2
3/08/2017	3	2	3	3	1	4	5	0	3	2	2	5
4/08/2017	1	4	3	6	2	0	1	3	5	1	2	1
5/08/2017	2	3	3	1	1	6	1	3	2	3	1	3
6/08/2017	1	1	3	1	4	2	1	0	4	1	1	2
7/08/2017	2	4	4	0	4	1	3	2	3	2	2	2
8/08/2017	4	4	5	2	3	2	0	0	0	0	0	0
9/08/2017	2	2	2	4	3	3	1	2	1	0	2	3
10/08/2017	4	1	4	2	4	5	2	6	5	2	1	5
11/08/2017	3	2	4	4	3	2	5	1	4	4	3	4
12/08/2017	4	4	1	0	2	1	2	3	3	2	0	2
13/08/2017	1	4	1	0	2	2	3	2	1	0	0	3
14/08/2017	3	3	5	2	2	2	4	4	2	0	1	5
15/08/2017	0	4	4	0	4	2	5	3	2	2	2	3
16/08/2017	4	3	3	4	2	4	2	1	4	2	2	1
17/08/2017	0	1	0	4	0	2	3	0	4	0	3	0
18/08/2017	3	2	4	5	3	2	1	2	3	1	2	5
19/08/2017	4	2	0	1	3	3	3	1	1	3	1	2
20/08/2017	2	2	1	1	0	1	1	0	2	2	1	3
21/08/2017	1	4	6	5	5	4	2	3	6	2	3	3
22/08/2017	0	3	5	3	3	5	6	6	1	2	2	6
23/08/2017	2	5	4	5	5	3	3	7	5	2	2	4
24/08/2017	5	4	4	2	4	3	3	3	5	1	1	4
25/08/2017	3	6	4	0	5	3	2	3	3	4	1	4
26/08/2017	1	2	2	4	2	1	5	1	2	1	3	1
27/08/2017	2	5	0	0	4	2	2	2	1	1	1	1
28/08/2017	2	5	6	3	0	4	1	3	3	2	2	5
29/08/2017	2	5	2	4	2	1	3	4	3	2	1	1
30/08/2017	3	4	1	4	2	1	4	4	2	4	1	3
31/08/2017	4	4	1	1	3	3	2	8	2	2	3	0
Total	70	102	93	75	89	81	78	84	83	54	48	84

	12:00 to 13:00	13:00 to 14:00	14:00 to 15:00	15:00 to 16:00	16:00 to 17:00	17:00 to 18:00	18:00 to 19:00	19:00 to 20:00	20:00 to 21:00	21:00 to 22:00	22:00 to 23:00	23:00 to 24:00
Start	12:00:00 PM	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM
Finish	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM	12:00:00 AM
1/08/2017	4	4	1	5	3	4	1	1	2	1	3	1
2/08/2017	5	3	2	3	1	2	3	1	1	2	1	2
3/08/2017	2	0	5	4	2	7	5	2	0	5	1	1
4/08/2017	4	4	3	2	2	2	1	2	1	1	1	0
5/08/2017	2	5	2	2	1	0	0	3	2	0	0	0
6/08/2017	1	3	2	1	0	3	1	3	1	0	1	0
7/08/2017	2	6	4	3	2	5	1	3	1	0	4	0
8/08/2017	0	0	0	1	3	4	4	0	3	2	4	0
9/08/2017	5	3	4	4	2	4	1	3	2	0	3	0
10/08/2017	3	2	5	4	1	1	6	2	0	3	0	1
11/08/2017	1	2	5	3	4	1	3	2	3	2	0	0
12/08/2017	3	4	0	0	3	3	1	2	1	2	1	1
13/08/2017	1	4	1	1	2	1	2	4	1	0	1	1
14/08/2017	4	5	1	4	3	3	1	3	2	0	3	1
15/08/2017	4	2	4	3	4	4	1	0	0	2	0	0
16/08/2017	3	2	3	3	0	6	1	2	1	1	4	1
17/08/2017	1	3	4	6	1	2	2	1	1	0	3	0
18/08/2017	2	6	5	5	2	0	1	4	1	2	3	0
19/08/2017	3	4	5	2	0	3	2	1	2	2	1	0
20/08/2017	1	1	1	2	0	3	1	0	2	1	1	1
21/08/2017	6	4	4	1	1	3	2	2	3	2	3	3
22/08/2017	2	4	2	4	2	1	4	2	3	1	1	2
23/08/2017	4	4	4	6	4	3	1	4	2	0	1	0
24/08/2017	4	5	4	2	1	4	2	2	2	0	2	2
25/08/2017	0	2	4	4	4	2	1	3	1	2	2	1
26/08/2017	3	3	3	0	1	0	2	0	1	0	3	0
27/08/2017	5	0	3	2	1	0	1	2	1	1	3	0
28/08/2017	3	3	4	3	1	3	3	0	1	3	0	0
29/08/2017	3	4	3	4	3	2	3	4	2	1	1	1
30/08/2017	4	5	3	4	1	3	1	2	2	0	0	0
31/08/2017	6	3	5	3	2	3	4	1	1	2	3	3
Total	91	100	96	91	57	82	62	61	46	38	54	22

REPORTING PERIOD: September 2017

Bay Occupancy Data

Start	12:00:00 AM	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM
Finish	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM	12:00:00 PM
Bay 1	24	38	35	20	22	16	28	30	22	20	13	18
Bay 2	18	38	29	29	24	18	18	25	21	13	9	16
Bay 3	19	19	10	14	14	21	25	21	20	24	24	29
Bay 4	9	5	6	15	5	10	14	12	13	9	15	25
Total	70	100	80	78	65	65	85	88	76	66	61	88
Start	12:00:00 PM	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM
Finish	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM	12:00:00 AM
Bay 1	28	34	27	33	18	23	21	26	16	14	8	6
Bay 2	26	32	30	25	19	19	25	16	15	12	4	4
Bay 3	29	14	23	14	17	20	21	11	10	12	15	3
Bay 4	16	7	8	5	8	12	12	5	4	5	5	2
Total	99	87	88	77	62	74	79	58	45	43	32	15

Traffic Movement Assessment Data

	00:00 to 01:00	01:00 to 02:00	02:00 to 03:00	03:00 to 04:00	04:00 to 05:00	05:00 to 06:00	06:00 to 07:00	07:00 to 08:00	08:00 to 09:00	09:00 to 10:00	10:00 to 11:00	11:00 to 12:00
Start	12:00:00 AM	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM
Finish	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM	12:00:00 PM
1/09/2017	3	4	4	4	1	2	2	2	4	5	1	0
2/09/2017	0	6	2	3	1	1	2	5	3	1	1	2
3/09/2017	1	3	1	2	0	5	0	1	4	1	2	1
4/09/2017	1	5	3	3	4	4	3	5	3	1	1	1
5/09/2017	5	5	3	2	1	2	0	2	5	2	3	3
6/09/2017	2	2	4	6	3	1	3	3	2	4	2	1
7/09/2017	6	2	1	2	4	2	4	1	3	4	3	1
8/09/2017	2	6	4	2	4	2	4	3	3	0	2	3
9/09/2017	3	2	1	2	2	1	4	2	2	4	0	4
10/09/2017	3	3	0	0	2	2	2	1	1	2	4	4
11/09/2017	2	4	4	0	2	0	1	5	3	0	3	2
12/09/2017	3	7	3	4	1	2	3	3	1	3	1	6
13/09/2017	4	2	4	4	1	2	3	1	3	3	2	3
14/09/2017	1	3	4	5	4	4	3	2	3	3	3	4
15/09/2017	1	6	4	3	2	2	4	3	5	4	0	2
16/09/2017	1	3	1	3	3	1	3	3	3	2	1	0
17/09/2017	1	2	0	4	1	0	2	3	0	0	1	4
18/09/2017	4	4	4	1	2	1	3	4	3	3	0	4
19/09/2017	1	3	5	4	0	1	3	4	2	2	7	3
20/09/2017	4	2	4	2	4	2	3	2	3	1	2	4
21/09/2017	4	2	5	4	3	2	3	2	1	4	4	2
22/09/2017	3	2	3	5	3	2	3	3	3	2	3	4
23/09/2017	1	2	2	0	1	3	2	2	1	1	1	1
24/09/2017	0	4	0	0	1	2	2	4	2	0	2	1
25/09/2017	2	4	4	2	1	3	3	4	2	1	2	7
26/09/2017	2	3	3	1	7	4	2	3	3	2	0	5
27/09/2017	1	4	3	3	2	3	5	3	1	3	1	6
28/09/2017	2	2	1	3	2	4	4	2	1	5	3	5
29/09/2017	0	1	3	2	2	2	3	3	3	0	3	2
30/09/2017	6	0	0	1	1	3	3	3	1	2	1	1
1/10/2017	1	2	0	1	0	0	3	4	2	1	2	2
Total	70	100	80	78	65	65	85	88	76	66	61	88

	12:00 to 13:00	13:00 to 14:00	14:00 to 15:00	15:00 to 16:00	16:00 to 17:00	17:00 to 18:00	18:00 to 19:00	19:00 to 20:00	20:00 to 21:00	21:00 to 22:00	22:00 to 23:00	23:00 to 24:00
Start	12:00:00 PM	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM
Finish	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM	12:00:00 AM
1/09/2017	2	5	5	3	1	4	0	2	1	2	2	0
2/09/2017	6	3	0	1	0	1	1	3	1	0	0	0
3/09/2017	2	2	3	2	0	2	2	1	2	0	0	1
4/09/2017	4	3	3	4	3	4	2	2	0	2	1	0
5/09/2017	2	3	2	5	2	1	5	0	2	1	0	0
6/09/2017	6	3	4	1	1	2	4	4	2	1	1	0
7/09/2017	4	5	4	3	3	3	2	4	0	3	0	0
8/09/2017	3	4	3	3	1	3	4	1	2	1	2	1
9/09/2017	4	2	3	0	0	2	2	2	3	0	1	0
10/09/2017	2	1	2	0	1	2	3	1	2	1	2	1
11/09/2017	3	3	3	3	5	3	0	3	3	1	2	0
12/09/2017	5	5	2	3	1	5	2	3	3	3	1	1
13/09/2017	2	2	2	6	2	2	1	2	1	2	1	1
14/09/2017	2	3	5	4	3	2	3	1	1	2	2	1
15/09/2017	3	2	3	2	4	2	3	1	4	0	2	0
16/09/2017	2	2	4	3	0	1	0	4	0	3	1	0
17/09/2017	1	0	2	3	0	2	2	3	1	0	3	0
18/09/2017	2	3	5	2	4	4	2	0	3	0	1	0
19/09/2017	4	2	4	3	5	3	3	0	1	1	1	0
20/09/2017	3	3	5	1	1	2	6	0	1	4	1	0
21/09/2017	1	5	3	1	3	2	4	0	3	1	2	0
22/09/2017	3	2	0	5	3	3	5	3	1	2	1	1
23/09/2017	4	2	3	1	2	2	1	3	1	1	1	1
24/09/2017	3	3	1	1	4	2	3	1	2	0	0	2
25/09/2017	3	3	2	2	4	1	3	1	1	1	1	2
26/09/2017	4	0	5	4	2	4	1	1	0	3	0	0
27/09/2017	3	4	3	2	3	2	3	1	1	5	0	0
28/09/2017	5	1	2	3	0	3	5	2	0	1	3	1
29/09/2017	5	4	3	4	2	3	3	4	1	2	0	0
30/09/2017	3	4	1	2	1	1	3	2	1	0	0	1
1/10/2017	3	3	1	0	1	1	1	3	1	0	0	1
Total	99	87	88	77	62	74	79	58	45	43	32	15

REPORTING PERIOD: October 2017

Bay Occupancy Data

Start	12:00:00 AM	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM
Finish	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM	12:00:00 PM
Bay 1	21	30	32	29	27	13	26	22	30	16	11	19
Bay 2	14	30	36	31	23	16	21	23	19	9	6	13
Bay 3	21	15	6	12	11	16	22	28	17	12	13	29
Bay 4	13	10	6	12	8	12	21	18	11	8	12	26
Total	69	85	80	84	69	57	90	91	77	45	42	87

Start	12:00:00 PM	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM
Finish	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM	12:00:00 AM
Bay 1	22	31	39	30	19	18	22	23	21	10	11	11
Bay 2	17	33	34	27	22	13	15	15	20	6	8	5
Bay 3	17	21	13	11	16	15	19	19	10	14	13	4
Bay 4	11	12	10	8	7	6	15	9	8	3	2	0
Total	67	97	96	76	64	52	71	66	59	33	34	20

Traffic Movement Assessment Data

	00:00 to 01:00	01:00 to 02:00	02:00 to 03:00	03:00 to 04:00	04:00 to 05:00	05:00 to 06:00	06:00 to 07:00	07:00 to 08:00	08:00 to 09:00	09:00 to 10:00	10:00 to 11:00	11:00 to 12:00
Start	12:00:00 AM	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM
Finish	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM	12:00:00 PM
1/10/2017	1	2	0	1	0	0	3	4	2	1	2	2
2/10/2017	0	4	1	2	2	4	2	3	1	1	1	3
3/10/2017	5	1	3	5	1	2	4	1	4	1	2	2
4/10/2017	1	4	5	3	2	3	1	5	1	1	2	5
5/10/2017	0	2	3	5	2	2	3	1	7	2	1	7
6/10/2017	2	3	6	4	2	1	3	3	2	2	1	3
7/10/2017	3	2	1	2	2	0	6	1	1	1	0	0
8/10/2017	3	4	1	0	1	4	3	0	3	0	2	3
9/10/2017	3	5	3	4	0	4	3	3	2	0	1	5
10/10/2017	5	3	4	1	3	3	4	4	2	0	1	2
11/10/2017	1	5	2	4	2	2	4	2	4	4	0	2
12/10/2017	1	1	4	1	3	1	1	5	2	2	0	3
13/10/2017	4	4	5	3	2	0	1	6	1	2	2	2
14/10/2017	1	3	1	1	3	2	3	2	1	0	2	1
15/10/2017	2	1	0	2	1	1	2	3	1	2	0	1
16/10/2017	2	2	2	4	3	3	4	3	3	5	1	5
17/10/2017	1	3	3	4	2	0	3	3	2	1	5	3
18/10/2017	5	2	5	2	3	1	4	2	2	1	1	4
19/10/2017	1	5	2	3	4	1	6	2	3	2	1	3
20/10/2017	4	1	4	3	3	2	0	4	3	0	2	2
21/10/2017	1	2	0	2	2	1	2	1	4	3	0	2
22/10/2017	2	2	2	1	0	0	2	4	2	0	2	2
23/10/2017	1	2	1	3	8	0	0	4	3	5	0	1
24/10/2017	2	1	4	3	3	2	4	5	3	2	0	6
25/10/2017	1	5	5	2	1	3	1	4	3	3	3	4
26/10/2017	5	3	4	2	1	4	3	4	1	1	2	0
27/10/2017	1	0	0	8	5	3	1	2	5	0	1	4
28/10/2017	4	2	2	0	2	4	5	0	1	1	2	4
29/10/2017	4	1	0	0	1	1	3	2	1	0	1	1
30/10/2017	1	4	5	4	1	2	6	3	5	1	0	3
31/10/2017	2	6	2	5	4	1	3	5	2	1	4	2
Total	69	85	80	84	69	57	90	91	77	45	42	87

	12:00 to 13:00	13:00 to 14:00	14:00 to 15:00	15:00 to 16:00	16:00 to 17:00	17:00 to 18:00	18:00 to 19:00	19:00 to 20:00	20:00 to 21:00	21:00 to 22:00	22:00 to 23:00	23:00 to 24:00
Start	12:00:00 PM	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM
Finish	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM	12:00:00 AM
1/10/2017	3	3	1	0	1	1	1	3	1	0	0	1
2/10/2017	4	4	1	2	4	1	2	2	0	1	2	0
3/10/2017	3	3	4	5	3	0	2	2	5	0	0	0
4/10/2017	3	6	3	2	3	1	2	3	2	0	2	1
5/10/2017	3	2	3	3	2	3	1	3	0	2	1	1
6/10/2017	1	5	5	2	3	1	1	3	1	0	1	0
7/10/2017	4	3	2	1	0	1	4	2	0	0	2	0
8/10/2017	1	0	2	1	2	1	2	2	0	1	1	0
9/10/2017	3	4	3	2	3	1	2	2	3	2	2	0
10/10/2017	0	5	3	6	2	1	3	2	5	0	2	1
11/10/2017	3	5	2	4	3	3	1	2	2	4	0	1
12/10/2017	2	5	1	3	3	4	4	3	4	0	2	1
13/10/2017	2	2	2	6	4	0	3	1	3	1	0	0
14/10/2017	1	4	4	1	5	2	0	3	0	1	0	1
15/10/2017	4	3	1	2	2	0	2	2	0	2	0	2
16/10/2017	0	3	4	1	6	2	4	2	2	2	0	0
17/10/2017	2	4	4	2	0	5	3	2	3	1	2	2
18/10/2017	0	3	7	3	1	1	4	5	1	4	1	0
19/10/2017	2	4	4	2	3	3	3	3	2	0	1	0
20/10/2017	2	1	2	3	2	3	3	0	2	2	1	0
21/10/2017	1	2	3	2	1	0	1	1	3	0	0	0
22/10/2017	2	3	0	1	3	2	1	2	2	2	1	2
23/10/2017	3	1	5	2	0	3	2	2	1	2	0	1
24/10/2017	5	2	4	3	2	3	1	3	1	1	0	1
25/10/2017	3	3	3	3	0	1	5	1	1	1	3	1
26/10/2017	0	4	9	5	1	1	2	1	4	2	0	0
27/10/2017	1	3	3	1	3	2	2	2	3	2	2	1
28/10/2017	1	1	2	2	0	1	4	1	3	0	1	0
29/10/2017	2	4	1	0	0	0	0	2	0	0	1	0
30/10/2017	5	1	4	4	0	3	3	4	2	0	2	0
31/10/2017	1	4	4	2	2	2	3	0	3	0	4	3
Total	67	97	96	76	64	52	71	66	59	33	34	20

REPORTING PERIOD: November 2017

Bay Occupancy Data

Start	12:00:00 AM	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM
Finish	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM	12:00:00 PM
Bay 1	23	26	32	26	23	23	25	18	29	18	15	15
Bay 2	16	24	30	26	23	15	20	17	16	13	7	9
Bay 3	26	23	12	14	22	17	36	24	17	30	30	40
Bay 4	10	17	8	6	17	16	27	22	10	25	29	29
Total	75	90	82	72	85	71	108	81	72	86	81	93

Start	12:00:00 PM	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM
Finish	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM	12:00:00 AM
Bay 1	34	23	38	23	20	21	20	24	18	11	16	5
Bay 2	25	23	27	24	21	17	17	11	13	6	10	4
Bay 3	31	17	17	17	24	20	15	17	21	16	15	6
Bay 4	26	13	17	10	15	10	17	9	12	8	8	2
Total	116	76	99	74	80	68	69	61	64	41	49	17

Traffic Movement Assessment Data

	00:00 to 01:00	01:00 to 02:00	02:00 to 03:00	03:00 to 04:00	04:00 to 05:00	05:00 to 06:00	06:00 to 07:00	07:00 to 08:00	08:00 to 09:00	09:00 to 10:00	10:00 to 11:00	11:00 to 12:00
Start	12:00:00 AM	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM
Finish	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM	12:00:00 PM
1/11/2017	1	4	3	2	3	1	5	2	1	5	1	4
2/11/2017	2	3	3	4	3	2	3	3	3	1	2	4
3/11/2017	3	4	4	3	5	2	5	2	3	1	2	4
4/11/2017	2	2	3	0	1	1	4	0	1	2	1	4
5/11/2017	1	2	0	2	1	4	0	1	0	2	2	2
6/11/2017	2	2	6	2	2	1	1	4	4	1	2	1
7/11/2017	1	3	6	1	4	4	0	2	5	2	6	1
8/11/2017	3	4	5	2	0	3	4	2	2	0	4	1
9/11/2017	1	5	0	2	4	3	5	5	1	5	3	3
10/11/2017	6	4	2	2	6	2	4	2	1	2	3	3
11/11/2017	3	0	0	1	4	2	5	0	1	4	3	0
12/11/2017	4	0	3	0	3	1	2	3	1	0	3	2
13/11/2017	3	4	5	6	3	2	2	2	2	5	1	5
14/11/2017	2	3	3	4	4	3	4	3	3	3	5	1
15/11/2017	1	2	7	3	4	5	4	3	6	4	2	4
16/11/2017	3	5	0	2	5	5	3	4	3	6	3	7
17/11/2017	2	5	1	6	2	0	2	5	2	4	6	1
18/11/2017	3	1	0	2	2	2	5	2	2	3	2	2
19/11/2017	1	2	2	1	1	1	5	1	3	1	0	3
20/11/2017	2	4	5	3	3	3	6	2	2	4	3	3
21/11/2017	3	3	5	2	5	0	6	4	4	5	3	2
22/11/2017	4	1	2	1	3	3	4	3	3	4	5	5
23/11/2017	4	4	1	2	2	6	5	3	2	1	1	2
24/11/2017	2	3	3	5	4	0	4	2	0	3	3	5
25/11/2017	1	0	2	1	1	1	0	0	1	2	2	0
26/11/2017	2	3	0	1	1	0	2	0	0	1	0	3
27/11/2017	4	2	3	2	1	4	3	4	4	4	0	5
28/11/2017	3	6	6	2	4	4	6	6	2	3	5	5
29/11/2017	4	4	1	4	2	3	4	6	6	4	4	5
30/11/2017	2	5	1	4	2	3	5	5	4	4	4	6
1/12/2017	0	0	0	0	0	0	0	0	0	0	0	0
Total	75	90	82	72	85	71	108	81	72	86	81	93

	12:00 to 13:00	13:00 to 14:00	14:00 to 15:00	15:00 to 16:00	16:00 to 17:00	17:00 to 18:00	18:00 to 19:00	19:00 to 20:00	20:00 to 21:00	21:00 to 22:00	22:00 to 23:00	23:00 to 24:00
Start	12:00:00 PM	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM
Finish	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM	12:00:00 AM
1/11/2017	5	1	3	2	4	2	1	1	2	2	1	0
2/11/2017	6	1	2	4	3	1	2	4	1	3	0	0
3/11/2017	4	4	2	4	2	3	2	3	3	2	1	0
4/11/2017	2	2	1	2	3	1	2	1	1	0	1	0
5/11/2017	1	0	1	3	2	2	0	1	1	1	3	0
6/11/2017	4	4	5	3	2	1	2	0	4	1	1	0
7/11/2017	3	5	4	2	2	2	3	1	1	0	3	2
8/11/2017	6	1	2	2	5	6	3	1	0	1	5	3
9/11/2017	4	3	1	2	3	5	3	0	1	2	3	0
10/11/2017	3	1	5	2	4	1	3	0	2	2	1	0
11/11/2017	1	2	2	3	2	0	3	1	1	4	0	0
12/11/2017	3	0	2	2	1	2	1	1	1	1	1	0
13/11/2017	3	5	6	1	2	2	5	3	4	2	3	1
14/11/2017	6	6	3	0	4	3	3	2	3	1	2	0
15/11/2017	5	7	4	2	1	3	5	3	3	5	2	1
16/11/2017	7	2	3	1	5	1	3	5	3	1	2	0
17/11/2017	5	1	5	3	4	1	0	4	2	2	2	1
18/11/2017	3	1	3	1	1	2	3	1	1	0	3	0
19/11/2017	5	1	3	0	1	3	4	1	1	0	1	2
20/11/2017	3	5	5	2	5	2	0	3	3	2	1	1
21/11/2017	5	3	6	3	3	5	3	3	3	1	3	1
22/11/2017	2	0	4	5	3	2	2	5	1	0	3	0
23/11/2017	3	3	3	1	3	3	2	3	5	1	0	1
24/11/2017	6	3	3	3	4	5	2	1	1	0	0	1
25/11/2017	1	2	2	3	0	0	2	1	0	0	0	0
26/11/2017	1	0	3	1	0	0	0	1	1	0	2	0
27/11/2017	5	2	1	1	0	0	2	0	3	1	0	0
28/11/2017	4	4	4	6	5	3	3	5	6	1	3	0
29/11/2017	4	3	4	4	5	3	3	4	2	3	1	2
30/11/2017	6	4	7	6	1	4	2	2	4	2	1	1
1/12/2017	0	0	0	0	0	0	0	0	0	0	0	0
Total	116	76	99	74	80	68	69	61	64	41	49	17

REPORTING PERIOD: December 2017

Bay Occupancy Data

Start	12:00:00 AM	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM
Finish	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM	12:00:00 PM
Bay 1	18	24	28	25	16	25	25	21	30	14	12	17
Bay 2	15	24	32	26	26	27	26	29	23	15	3	19
Bay 3	18	12	11	14	11	17	21	17	18	16	16	25
Bay 4	13	6	9	4	9	9	11	5	10	8	12	19
Total	64	66	80	69	62	78	83	72	81	53	43	80
Start	12:00:00 PM	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM
Finish	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM	12:00:00 AM
Bay 1	25	27	32	22	24	14	25	18	19	9	8	8
Bay 2	27	27	31	21	25	17	23	22	16	11	8	10
Bay 3	19	19	11	10	12	11	15	12	9	6	12	10
Bay 4	16	7	5	6	5	9	8	9	4	2	5	2
Total	87	80	79	59	66	51	71	61	48	28	33	30

Traffic Movement Assessment Data

	00:00 to 01:00	01:00 to 02:00	02:00 to 03:00	03:00 to 04:00	04:00 to 05:00	05:00 to 06:00	06:00 to 07:00	07:00 to 08:00	08:00 to 09:00	09:00 to 10:00	10:00 to 11:00	11:00 to 12:00
Start	12:00:00 AM	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM
Finish	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM	12:00:00 PM
1/12/2017	2	6	4	2	3	4	2	4	7	4	6	6
2/12/2017	4	1	3	0	1	4	4	4	0	1	0	6
3/12/2017	2	1	5	1	2	1	3	0	5	1	3	3
4/12/2017	4	3	4	2	3	2	3	4	1	2	0	4
5/12/2017	1	1	2	3	5	1	1	3	1	2	2	4
6/12/2017	1	2	3	0	3	5	2	2	3	3	1	2
7/12/2017	2	2	3	5	1	2	2	2	4	1	2	0
8/12/2017	4	2	3	2	3	4	4	1	2	2	2	0
9/12/2017	1	1	2	0	1	1	1	3	2	3	0	1
10/12/2017	2	0	0	1	0	1	2	1	2	0	0	3
11/12/2017	2	4	2	3	2	2	1	2	3	3	0	1
12/12/2017	1	2	4	2	3	1	2	2	6	1	4	1
13/12/2017	0	5	2	3	5	2	1	3	2	1	1	4
14/12/2017	3	1	2	5	1	2	3	4	4	1	2	3
15/12/2017	4	4	2	4	1	2	6	4	1	1	2	5
16/12/2017	4	2	1	2	1	2	3	1	4	1	0	3
17/12/2017	4	0	3	1	0	4	1	3	3	1	0	3
18/12/2017	3	4	5	4	1	4	4	3	3	2	3	3
19/12/2017	1	5	5	1	3	3	1	5	7	1	0	2
20/12/2017	1	3	3	4	1	4	1	4	2	2	3	6
21/12/2017	4	2	0	4	4	2	5	3	2	2	3	2
22/12/2017	4	2	4	2	3	3	4	3	2	6	1	4
23/12/2017	1	1	3	1	3	3	2	4	2	1	2	4
24/12/2017	1	0	0	1	1	2	3	0	0	1	2	2
25/12/2017	0	0	0	0	0	0	0	0	0	0	0	0
26/12/2017	0	1	2	5	0	3	0	0	1	0	0	0
27/12/2017	0	4	4	5	2	4	4	2	3	4	0	2
28/12/2017	3	4	5	3	3	2	4	3	3	3	1	1
29/12/2017	3	1	3	2	3	4	7	0	2	2	1	1
30/12/2017	1	1	0	1	1	3	3	2	3	1	1	1
31/12/2017	1	1	1	0	2	1	4	0	1	0	1	3
Total	64	66	80	69	62	78	83	72	81	53	43	80

	12:00 to 13:00	13:00 to 14:00	14:00 to 15:00	15:00 to 16:00	16:00 to 17:00	17:00 to 18:00	18:00 to 19:00	19:00 to 20:00	20:00 to 21:00	21:00 to 22:00	22:00 to 23:00	23:00 to 24:00
Start	12:00:00 PM	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM
Finish	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM	12:00:00 AM
1/12/2017	7	5	4	4	3	2	2	4	2	2	2	1
2/12/2017	2	2	1	3	1	1	4	3	1	0	3	2
3/12/2017	0	4	1	0	2	1	2	3	2	0	0	1
4/12/2017	3	3	4	1	2	2	1	2	2	0	1	1
5/12/2017	2	2	4	1	4	2	0	1	4	2	0	0
6/12/2017	4	3	2	2	0	0	1	2	2	1	0	0
7/12/2017	1	4	1	2	2	3	2	4	1	1	1	1
8/12/2017	4	0	2	1	5	3	2	1	3	2	0	4
9/12/2017	3	3	0	0	0	0	1	1	2	0	2	0
10/12/2017	1	1	3	0	0	2	1	1	1	0	3	1
11/12/2017	2	5	4	5	0	1	3	3	2	0	1	0
12/12/2017	5	2	2	2	2	1	3	1	2	1	1	2
13/12/2017	4	0	5	2	3	1	4	2	1	3	0	1
14/12/2017	2	4	5	3	2	2	3	1	4	1	2	1
15/12/2017	6	2	2	5	1	3	3	3	1	1	0	0
16/12/2017	0	2	3	2	0	1	1	3	1	0	0	0
17/12/2017	4	1	2	0	0	3	1	2	0	1	0	0
18/12/2017	5	3	4	5	4	0	5	3	1	1	0	1
19/12/2017	3	6	3	1	5	3	4	6	3	1	3	1
20/12/2017	2	4	3	5	4	4	5	2	1	2	0	2
21/12/2017	4	5	4	2	5	4	5	3	0	1	3	1
22/12/2017	5	5	2	1	8	4	4	1	2	3	2	1
23/12/2017	3	1	0	2	0	0	3	2	2	1	0	1
24/12/2017	0	0	1	0	0	0	0	0	0	0	0	0
25/12/2017	0	0	0	0	0	0	0	0	0	0	1	0
26/12/2017	0	2	1	0	3	0	0	1	1	2	2	1
27/12/2017	2	1	5	1	3	2	2	1	4	0	2	1
28/12/2017	5	4	3	4	2	1	2	2	1	1	0	2
29/12/2017	5	2	4	2	2	2	3	0	2	0	0	2
30/12/2017	2	3	3	1	1	1	3	2	0	0	1	2
31/12/2017	1	1	1	2	2	2	1	1	0	1	3	0
Total	87	80	79	59	66	51	71	61	48	28	33	30

Appendix C

Incident Register

Appendix C Incident Register

Incidents

	Name	Date and time of the incident:	Severity gauge	Type of incident:	What happened (please, explain briefly):	Last Update
	00621					
	Australia, Newcastle - Plant & Equipment Damage/Failure - Not significant - Fire Alarm Text Alert AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Dec 22, 2017		Plant & Equipment Damage/Failure	AT 02:20hrs On Call Terminal Staff received text alert indicating fire alarm fault for Fire Pump Input # 1	Jan 11, 2018
	00624					
	Australia, Newcastle - Quality - Not significant - Extended Loading Time 60 minutes AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Dec 26, 2017		Quality	Rear Trailer Scully Issue	Jan 2, 2018
	00625					
	Australia, Newcastle - Quality - Not significant - Extended Loading Time 60 minutes AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Dec 27, 2017		Quality	Rear Trailer Scully Issue	Jan 2, 2018

00614 Australia, Newcastle - Plant & Equipment Damage/Failure - Not significant - Fire Alarm Text Alert AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Dec 20, 2017		Plant & Equipment Damage/Failure	At 18:08hrs text alert system advised Fire Alarm / Fault for FirePump House	Dec 28, 2017
00619 Australia, Newcastle - Injury - Not significant - Finger injury from valve handle AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Dec 20, 2017		Injury	Operator blistered two fingers on valve handle	Dec 28, 2017
00622 Australia, Newcastle - Deviation/Non-Conformance - Not significant - Delayed loading Bay 1 AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Dec 22, 2017		Deviation/Non-Conformance	Problems with Viva Scheduling - 1h 10mins to complete load. See BoL 183213	Dec 22, 2017
00597 Australia, Newcastle - Safety - Not significant - Pipeline Safety Buffer Encroached AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Dec 7, 2017		Safety	During pipeline inspection noted third party had stacked lifting frames within 2-3m of pipeline	Dec 8, 2017

00592 Australia, Newcastle - Quality - Not significant - Isolation left in place AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Dec 6, 2017	0	Quality	Isolation on wharf electrical equipment post vessel discharge	Dec 6, 2017
00578 Australia, Newcastle - Near miss - Not significant - Drum dropped in harbour. AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Nov 29, 2017	0	Near miss	Ships crew dropped a 20l drum overboard. Recoverd by oil response vessel. No product to tide, drum remained sealed.	Nov 29, 2017
00572 Australia, Newcastle - Quality - Not significant - FAS fault recieved . AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Nov 26, 2017	0	Quality	Fire panel fault alarmed.	Nov 27, 2017
00562 Australia, Newcastle - Near miss - Not significant - Near Miss with One Steel Traffic AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Nov 14, 2017	0	Near miss	One Steel traffic failing to stop at Stop sign - West Tankers rolled through Stop sign in front of motorbike (author) and car requiring them to take avoidance action. Ongoing issue that seems to be increasing in frequency, recent events have been noted by staff on 10 Nov (Semi trailer), 15 Nov (Semi Trailer and works ute)	Nov 16, 2017
00552	Nov 3, 2017	0	Near miss	Truck removed from site by tow truck	Nov 6, 2017

	Australia, Newcastle - Near miss, Plant & Equipment Damage/Failure - Not significant - Truck breakdown on site AUSTRALIA NEWCASTLE NOT NOTIFIABLE		Plant & Equipment Damage/Failure		
	00545				
	Australia, Newcastle - Near miss - Not significant - Driver delayed waiting for BoL AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Nov 1, 2017	Near miss	Load number changed by Viva caused system to hang up on completion of load	Nov 1, 2017
	00541				
	Australia, Newcastle - Near miss - Not significant - Truck runs over drip tray AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Oct 28, 2017	Near miss	Driver failed to remove drip tray prior moving trailer combination	Nov 1, 2017
	00526				
	Australia, Newcastle - Quality - Not significant - Loading failure - customer impact AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Oct 23, 2017	Quality	Gantry loading failed	Oct 30, 2017
	00539	Oct 25, 2017	Near miss	Customer presented vessel's Q88 for port and terminal clearance. Failure by vessel owners to declare collison that occurred in Mar 2017	Oct 27, 2017

	Australia, Newcastle - Near miss - Not significant - Q88 presented with incorrect information AUSTRALIA NEWCASTLE NOT NOTIFIABLE					
	00537 Australia, Newcastle - Quality - Not significant - Unplanned Sitewide Outage AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Oct 27, 2017		Quality	Power cut to site	Oct 27, 2017
	00535 Australia, Newcastle - Quality - Not significant - Server outage - 2.5 downtime AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Oct 26, 2017		Quality	Server performed check disk which caused a 2.5 hr downtime event	Oct 26, 2017
	00519 Australia, Newcastle - Quality - Not significant - Connection issues AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Oct 15, 2017		Quality	Fuels Manager and Viva connectiosn lost/Bay 3 issue	Oct 19, 2017
	00514 Australia, Newcastle - Injury - Minor - Cut to finger	Oct 9, 2017		Injury	Staff member cut finger when opening box with a pair of scissors	Oct 11, 2017

AUSTRALIA MINOR NEWCASTLE

00504

Australia, Newcastle - Near miss - Not significant - Blocked 25mm Drain Dry Hose

AUSTRALIA NEWCASTLE

NOT NOTIFIABLE

Sep 29, 2017

Near miss

Driver reported no suction on drain dry system Bay 3. Operator investigated and found hose blocked with a broken grease nipple and swarf.

Oct 9, 2017

00496

Australia, Newcastle - Near miss - Not significant - Compressor High Temp Warning

AUSTRALIA NEWCASTLE

NOT NOTIFIABLE

Sep 25, 2017

Near miss

Daily check noted No.3 compressor with high temp warning and oil residue in water drain

Sep 27, 2017

00481

Australia, Newcastle - Near miss, Environmental, Plant & Equipment Damage/Failure - Not significant - Ships pipework leaking

AUSTRALIA NEWCASTLE

NOT NOTIFIABLE

Sep 15, 2017

Near miss
Environmental
Plant & Equipment Damage/Failure

Ship requested temporary discharge stoppage due pump issue. Shore Officer visited vessel to find that above deck pipework / valve was leaking.

Sep 18, 2017

00468

Australia, Newcastle - Near miss - Stevedores forklift safety buffer

AUSTRALIA NEWCASTLE

Aug 31, 2017

Near miss

Stevedores forklift loading trucks opposite Wharf Attendant container

Sep 18, 2017

NOT NOTIFIABLE

00472

Australia, Newcastle - Quality - Not significant - Driver Reports Cloudy Diesel

AUSTRALIA NEWCASTLE

NOT NOTIFIABLE

Sep 7, 2017

Quality

After loading driver noted what appeared to be cloudy diesel in some trailer compartments

Sep 7, 2017

00471

Australia, Newcastle - Safety - Not significant - JLP Driver loading truck with incorrect PPE.

AUSTRALIA NEWCASTLE

NOT NOTIFIABLE

Sep 6, 2017

Safety

A driver was found to loading his truck with no hard hat on

Sep 6, 2017

00432

Australia, Newcastle - Near miss - Not significant - Thermal relief leakage P18 Transfer Line

AUSTRALIA NEWCASTLE

NOT NOTIFIABLE

Aug 11, 2017

Near miss

Thermal relief issue at P18 as a result of locked in pressure (no engineered thermal pathway)

Sep 6, 2017

00455

Australia, Newcastle - Quality - Not significant - Viva IT connection lost

AUSTRALIA NEWCASTLE

NOT NOTIFIABLE

Aug 23, 2017

Quality

Big Air connection lost to Stolt Newcastle site

Aug 24, 2017

00439 Australia, Newcastle - Near miss - Not significant - Debris in Filter Basket AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Aug 11, 2017		Near miss	Whilst checking gantry filters a large metal disc found in damaged basket at Bay 2 Arm 1 (Viva Bay) - see photo. Suspect this has been lying in a pocket or bend somewhere and has finally worked it's way through until captured by the gantry filter basket.	Aug 15, 2017
00429 Australia, Newcastle - Safety - Not significant - Driver not wearing correct PPE while loading. AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Aug 7, 2017		Safety	At approx. 14:45 on 07/08/17 a driver in Bay 4 had a door open under the sleeper and the light was on also the driver didn't have the correct safety glasses on.	Aug 9, 2017
00406 Australia, Newcastle - Plant & Equipment Damage/Failure - Gantry Accuload and Gates System Fault AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Jul 14, 2017		Plant & Equipment Damage/Failure	Gantry system froze leading to failed comms at gates - see incident 00394 (repeat incident)	Aug 3, 2017
00391 Australia, Newcastle - Plant & Equipment Damage/Failure - Failed Fuels Manager memory alert AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Jun 25, 2017		Plant & Equipment Damage/Failure	Recieved an Alert from Alltasks - "physical memory usage, warning to failed."	Aug 3, 2017

00416

Australia, Newcastle - Quality - Not significant - Gantry Loading Issue

AUSTRALIA NEWCASTLE

NOT NOTIFIABLE

Jul 28, 2017

Quality

Comms error to bay 2 & 4, incorrect volumes recorded on BOL

Aug 2, 2017

00394

Australia, Newcastle - Plant & Equipment Damage/Failure - Not significant - Gantry Accuload and Gates System fault

AUSTRALIA NEWCASTLE

NOT NOTIFIABLE

Jul 3, 2017

Plant & Equipment Damage/Failure

Drivers started experiencing issues from 01:59hrs and system eventually froze requiring FM reboot

Aug 2, 2017

00417

Australia, Newcastle - Safety - Not significant - Splash to face - drilling

AUSTRALIA NEWCASTLE

NOT NOTIFIABLE

Jul 19, 2017

Safety

During drilling operations for new GWM, a driller was splashed in the face with ground material

Aug 2, 2017

00410

Australia, Newcastle - Near miss - Not significant - Suspicious Email Received

AUSTRALIA NEWCASTLE

NOT NOTIFIABLE

Jul 24, 2017

Near miss

Email received from a Customer's transport carrier. Body of email and detail seemed legimate, but the sender was unfamiliar along with the detail of the message which seemed unrelated to our operations.

Jul 24, 2017

00402 Australia, Newcastle - Near miss - Not significant - Driver parks truck across exit for 15mins blocking gantry exit route AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Jul 6, 2017		Near miss	Truck was left in the exit route whilst driver decided to investigate paperwork issue	Jul 15, 2017
00395 Australia, Newcastle - Near miss - Not significant - Ships manifold reducers badly corroded AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Jul 4, 2017		Near miss	Prior hose connection shore officer noted heavy corrosion on all of the ships reducers being presented for discharge	Jul 15, 2017
00390 Australia, Newcastle - Environmental - Not significant - First Flush Pit Fails Sampling AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Jun 22, 2017		Environmental	Sample obtained from pit failed EPA release limits	Jul 15, 2017
00380 Australia, Newcastle - Plant & Equipment Damage/Failure - Not significant - Accuload error AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Jun 16, 2017		Plant & Equipment Damage/Failure	correct data did not flow through to Viva SAP.	Jul 15, 2017

00379 Australia, Newcastle - Near miss - Not significant - Truck leaking diesel from running tank AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Jun 14, 2017		Near miss	Truck leaking fuel from breather line prior entry to terminal	Jul 15, 2017
00377 Australia, Newcastle - Plant & Equipment Damage/Failure - Minor - Electrical incident - P22 VSD AUSTRALIA MINOR NEWCASTLE	Jun 13, 2017		Plant & Equipment Damage/Failure	P22 isolator shorted resulting in damage to cabling/switch and VSD	Jul 15, 2017
00374 Australia, Newcastle - Near miss - Not significant - Air Dryer Failure AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Jun 8, 2017		Near miss	During discharge of Eagle Melbourne air dryer tripped RCD circuit	Jul 15, 2017
00368 Australia, Newcastle - Quality - BOL corruption AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Jun 2, 2017		Quality	BOL figures incorrect	Jul 15, 2017
00365 Australia, Newcastle - Plant & Equipment Damage/Failure -	Jun 5, 2017		Plant & Equipment Damage/Failure	Pump issue on gantry drain dry system	Jul 15, 2017

Not significant - Drain Dry System Failure

AUSTRALIA NEWCASTLE

NOT NOTIFIABLE

00372

Australia, Newcastle - Near miss - Not significant - Pipleine Patroller Excessive Hours

AUSTRALIA NEWCASTLE

NOT NOTIFIABLE

Jun 7, 2017

Near miss

During routine check of wharf paperwork during discharge of Eagle Melbourne noted that Pipeline Patroller had been on duty for 15 hours

Jul 15, 2017

00359

Australia, Newcastle - Safety - Minor - Snake spotted

AUSTRALIA MINOR NEWCASTLE

May 25, 2017

Safety

Red Belly Black snake spotted at site fenceline

Jul 15, 2017

00352

Australia, Newcastle - Quality, Plant & Equipment Damage/Failure - Not significant - Gantry loading issues

AUSTRALIA NEWCASTLE

NOT NOTIFIABLE

May 20, 2017

Quality Plant & Equipment Damage/Failure

Multiple incidents of gantry issue, preventing loading

Jul 15, 2017

00341

Australia, Newcastle - Near miss - Not significant - Two way radio battery failure at crucial tank swap

May 17, 2017

Near miss

Tankship discharge - Shore Officer was preparing for tank swap when radio battery went flat without warning

Jul 15, 2017

AUSTRALIA NEWCASTLE

NOT NOTIFIABLE

00326

Australia, Newcastle - Near miss, Quality, Deviation/Non-Conformance - Not significant - Contaminated trailer compartments presented for loading

May 5, 2017

Near miss
Quality
Deviation/Non-Conformance

Drtiver instructed to load diesel after unloading incompatible product without tank wash prior arriving at site

Jul 15, 2017

AUSTRALIA NEWCASTLE

NOT NOTIFIABLE

00312

Australia, Newcastle - Near miss - Not significant - Container forklift damages landside restricted zone barrier

May 1, 2017

Near miss

Container forklift, whilst reversing back from container stack clipped landside restricted zone water barrier with rear wheel

Jul 15, 2017

AUSTRALIA NEWCASTLE

NOT NOTIFIABLE

00310

Australia, Newcastle - Plant & Equipment Damage/Failure - Not significant - Gantry system failure

Apr 25, 2017

Plant & Equipment Damage/Failure

Comms lost to Accuload and gate access

Jul 15, 2017

AUSTRALIA NEWCASTLE

NOT NOTIFIABLE

00309

Apr 25, 2017

0

Quality

Viva load exceeded 60 min load time

Jul 15, 2017

Australia, Newcastle - Quality - Not significant - Load exceeded 60 min

AUSTRALIA NEWCASTLE

NOT NOTIFIABLE

00308

Australia, Newcastle - Deviation/Non-Conformance - Not significant - Load time exceeded 45 min AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Apr 24, 2017		Deviation/Non-Conformance	Shipment number changed by Viva causing delay to loading	Jul 15, 2017

00307

Australia, Newcastle - Deviation/Non-Conformance - Not significant - Failed to load under 40min (load time circa 45mins) AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Apr 22, 2017		Deviation/Non-Conformance	Problems with shipment number delaying loading progress - load re-issued by Viva scheduler with new load ID	Jul 15, 2017

00294

Australia, Newcastle - Deviation/Non-Conformance - Not significant - OneSteel security gatehouse compliant AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Apr 6, 2017		Deviation/Non-Conformance	OneSteel security gatehouse complained of drivers actions passsing through security gate	Jul 15, 2017

00293 Australia, Newcastle - Quality - Not significant - Deadman activation received by SMS AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Apr 6, 2017		Quality	Deadman alarm activation - Ncl gantry	Jul 15, 2017
00288 Australia, Newcastle - Near miss - Not significant - Linesman drives ute into wharf exclusion zone AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Mar 26, 2017		Near miss	End of discharge with wharf hoses disconnected Svitzer lineman drove ute between water barricades snapping the safety rope	Jul 15, 2017
00284 Australia, Newcastle - Near miss - Not significant - Extreme weather event causes flooding in office - electrical connection compromised AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Mar 18, 2017		Near miss	Live extension power block found in floodwater	Jul 15, 2017
00280 Australia, Newcastle - Plant & Equipment Damage/Failure - Not significant - Automated Fire Alarm Message alerting to fault at Fire Pumphouse	Mar 18, 2017		Plant & Equipment Damage/Failure	Email alert message for fire alarm fault was received	Jul 15, 2017

AUSTRALIA NEWCASTLE

NOT NOTIFIABLE

00270

Australia, Newcastle - Plant & Equipment Damage/Failure - Not significant

AUSTRALIA NEWCASTLE

NOT NOTIFIABLE

Jan 31, 2017

Plant & Equipment Damage/Failure

66 minute load time: 01/02/17 @ 01:45 a driver had trouble loading due to low air pressure in his truck.

Jul 15, 2017

00268

Australia, Newcastle - Near miss - Not significant

AUSTRALIA NEWCASTLE

NOT NOTIFIABLE

Mar 2, 2017

Near miss

Public compliant regarding driver speed on Industrial/Ingall St

Jul 15, 2017

00265

Australia, Newcastle - Plant & Equipment Damage/Failure - Not significant

AUSTRALIA NEWCASTLE

NOT NOTIFIABLE

Mar 1, 2017

Plant & Equipment Damage/Failure

Generator failure of inverter power supply output for Seta Flash Tester at wharf - discharge of Ardmore Seavaliant

Jul 15, 2017

00251

Australia, Newcastle - Near miss, Safety - Not significant

AUSTRALIA NEWCASTLE

NOT NOTIFIABLE

Feb 16, 2017

Near miss Safety

Brown snake in work area

Jul 15, 2017

00247

Feb 11, 2017

Safety

High High Level Activation NN9

Jul 15, 2017

	Australia, Newcastle - Safety - Minor AUSTRALIA MINOR NEWCASTLE					
	00241					
	Australia, Newcastle - Plant & Equipment Damage/Failure - Minor AUSTRALIA MINOR NEWCASTLE	Feb 7, 2017		Plant & Equipment Damage/Failure	Fire Alarm Activation	Jul 15, 2017
	00238					
	Australia, Newcastle - Plant & Equipment Damage/Failure - Not significant AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Feb 1, 2017		Plant & Equipment Damage/Failure	Surveyor using dip tape unspools into tank NN8, hand reel lost down sample point and sitting on bottom of tank.	Jul 15, 2017
	00237					
	Australia, Newcastle - Plant & Equipment Damage/Failure - Not significant AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Jan 28, 2017		Plant & Equipment Damage/Failure	Second weep discovered on stainless dewater line from tank NN8 (G10)	Jul 15, 2017
	00221					
	Australia, Newcastle - Plant & Equipment Damage/Failure - Not significant AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Jan 19, 2017		Plant & Equipment Damage/Failure	RCD's tripped for left hand Entry Gate and Exit Gate	Jul 15, 2017

	00229 Australia, Newcastle - Quality - Not significant AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Jan 19, 2017	0	Quality	Vehicle loading exceeded 60 minutes	Jul 15, 2017
	00231 Australia, Newcastle - Safety - Not significant AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Jan 24, 2017	0	Safety	Ship advice - unable to utilise Starboard gangway for emergency access (weather damaged)	Jul 15, 2017
	00225 Australia, Newcastle - Quality - Not significant AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Jan 20, 2017	0	Quality	Loss of connection to Fuels Manager, preventing afterhours support	Jul 15, 2017
	00220 Australia, Newcastle - Environmental, Plant & Equipment Damage/Failure - Not significant AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Jan 17, 2017	0	Environmental Plant & Equipment Damage/Failure	Small pin hole leak discovered on NN8 dewater line	Jul 15, 2017
	00211 Australia, Newcastle - Near miss - Not significant AUSTRALIA NEWCASTLE	Jan 10, 2017	0	Near miss	Stolen car set on fire on neighbouring property	Jul 15, 2017

NOT NOTIFIABLE

00210

Australia, Newcastle - Plant & Equipment Damage/Failure - Minor AUSTRALIA MINOR NEWCASTLE	Jan 9, 2017		Plant & Equipment Damage/Failure	Fire Pump No.1 and Alarm Activation	Jul 15, 2017

00208

Australia, Newcastle - Plant & Equipment Damage/Failure - Not significant AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Jan 1, 2017		Plant & Equipment Damage/Failure	RCD for office wallsockets and drivers room tripped - no fault evident	Jul 15, 2017

Appendix D

Pipeline Integrity Test Report

Appendix D Pipeline Integrity Test Report

Hancock & Owen Services Pty Ltd

PIPELINE PRESSURE TEST CERTIFICATE

Customer Site: Stolthaven	**Certificate No. HO 301017**

Project Name: Wharfline	**System**:
Flow Medium: Diesel	**Location**: Newcastle
Site Drawing No. (s) :	

Piping Code: ASME B31.3	**Design Temp.**: 0-40 deg C

Test Medium: Diesel	**Test Pressure**: 1500 kpa		
Test Duration: 1 hour	**Start** 10.30am	**Finish**	11.30am
Test Date: 30/10/17	**Testing Officer: Russell Hancock**		
ISO No.	**LINE No.**		
	Wharfline		

Gauge No: HO01

	Completed By	Approved By	Accepted By
Company	H&O	H&O	Stolthaven
Name	Russell Hancock	Tom Relf	Ryan Duckmanton
Signature			
Date	30/10/17	30/10/17	30/10/17

Appendix E

Conditions of Consent SSD_6664

Appendix E Conditions of Consent SSD_6664

Schedule 2 – General Administrative Conditions – Compliance Requirements		
No	**Description**	**Statement of Compliance**
1	**Obligation to Minimise Harm to the Environment** The Proponent must implement all reasonable and feasible measures to prevent and/or minimise any harm to the environment that may result from the construction, operation or decommissioning of the Development	Noted
2	**Terms of Consent** The Applicant must carry out the Development generally in accordance with the: a) EIS and RTS; b) development layout plans and drawings in the EIS (see Appendix 1); c) Applicant's Management and Mitigation Measures (see Appendix 2); d) MOD 1; and e) conditions of this consent.	Noted
3	If there is any inconsistency between the above documents, the most recent document shall prevail to the extent of the inconsistency. However, the conditions of this consent shall prevail to the extent of any inconsistency.	Noted
4	The Applicant must comply with all reasonable requirements of the Secretary arising from the Department's assessment of: a) any reports, strategies, plans, programs, reviews, audits or correspondence that are submitted in accordance with this consent; and b) the implementation of any actions or measures contained in these documents.	Noted
5	**Limits of Consent** The Applicant shall not receive, store and dispatch more than 500 million litres of diesel and biodiesel fuel per year, until the Applicant has received an amended EPL for the Development. The Applicant shall provide a copy of the amended EPL to the Secretary prior to increasing throughput above 500 million litres a year.	EPL variations were issued on 14 May 2015, 27 august 2015 and 2 October 2015. A copy of the amended EPL was provided to the Secretary of the DP&E.
6	Following the receipt of an amended EPL for the Development, the Applicant shall not receive, store and dispatch more than 1,300 million litres of diesel and biodiesel fuel per year.	No exceedance of annual throughput limits (refer to **Section 6.0** of this Annual Review)
6A	The storage capacity of the tank farm must not exceed 131 million litres at any one time.	Noted (refer to **Table 1** of this Annual Review)
6B	With the exception of the following tanks, the proponent must not store flammable liquids, as classified under the *Australian Code for the Transport of Dangerous Goods by Road or Rail*, in bulk at the premises: (i) The 30,000 litre Slops Tank (UN 1203) identified on site as 'SL1'; and (ii) The 50,000 litre Additive Tank (UN 3082) identified on site as 'AT1'	No flammable liquids other than those specified in this condition were stored in bulk at the Site (refer to **Section 6.0** of this Annual Review)
7	**Surrender of Existing Development Consents** Following the receipt of an amended EPL for the Development, or as otherwise agreed to in writing by the Secretary, the Applicant shall surrender Project Approval MP 08_0130 for the site in accordance with Clause 97 of the EP&A Regulation. Note: This requirement does not extend to the surrender of construction and occupation certificates for existing and	MP 08_0130 has been surrendered.

	proposed building works under Part 4A of the EP&A Act. Surrender of a consent or consent should not be understood as implying that works legally constructed under a valid consent or consent can no longer be legally maintained or used.	
8	**Statutory Requirements** The Applicant must ensure that all necessary licences, permits and approvals are obtained and kept up-to-date as required throughout the life of the Development. No condition of this consent removes the obligation for the Applicant to obtain, renew or comply with such licences, permits or approvals.	EPL updated 28 August 2017
9	**Other Consents and Approvals** Nothing in this consent will impact on the following consents/approvals: a) PA 12/001 issued under Section 111 of the EP&A Act dated 20 February 2012; b) DA 293-08-00 as modified issued under Section 80 of the EP&A Act dated 6 April 2001; and c) any other consents or consents issued under the EP&A Act.	Noted
10	**Structural Adequacy** The Applicant must ensure that any new buildings and structures, and any alterations or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the BCA. Notes: • Under Part 4A of the EP&A Act, the Applicant is required to obtain construction and occupation certificates for any building works. • Part 8 of the EP&A Regulation sets out the detailed requirements for the certification of a Development.	No new buildings or structures built during the reporting period.
11	**Protection of Public Infrastructure** The Applicant must: a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by the Development; and b) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the Development.	Noted
12	**Utilities** Prior to the construction of any utility works, the Applicant must obtain relevant approvals from service providers.	There was no construction of utility works during the reporting period.
13	**Operation of Plant and Equipment** The Applicant must ensure that any plant and equipment used on site, or in connection with the Development is: a) maintained in a proper and efficient condition; and b) operated in a proper and efficient manner.	Noted
14	**Staged Submission of Strategies, Plans or Programs** With the written consent of the Secretary, the Applicant may submit any strategy, plan or program required by this consent on a progressive basis.	NA. No plans amended during the reporting period.
15	With the written consent of the Secretary, the Applicant may use the strategies, plans or programs approved under MP 08_0130 to address the requirements of this consent.	Consent previously received.

16	**Development Contribution** Prior to the commencement of operation of the Development, the Applicant shall pay Council $11,058.00 in development contributions. Note: This contribution is subject to indexation to reflect quarterly variations in the Consumer Price Index All Group Index Number for Sydney, as published by the Australian Bureau of Statistics.	Paid
17	**Dispute Resolution** In the event that a dispute arises between the Applicant and Council or a public authority other than the Department, in relation to a specification or requirement applicable under this consent, the matter must be referred by either party to the Secretary, or if not resolved, to the Minister, whose determination of the dispute shall be final and binding to all parties. For the purpose of this condition, 'public authority' has the same meaning as provided under Section 4 of the EP&A Act.	Noted
17A	A Hazard Analysis shall be undertaken twelve months after the commencement of operations and every three years thereafter, or at such intervals as the Secretary may agree, in accordance with the requirements for projects associated with the Mayfield Concept Plan Approval No. 09_0096 Condition No. 2.28 that involve the transport, handling or storage of hazardous or dangerous materials. The audits shall be carried out by a qualified person or team, independent of the project, and shall be consistent with the Department of Planning's Hazardous Industry Planning Advisory No. 5 'Hazard Audit Guidelines'. Each audit shall be submitted to the Secretary within one month of the audit being undertaken. An electronic copy of each audit must be provided to PON at the same time as submission to the Secretary.	Hazard audit was not required during the reporting period.
Schedule 3 – Specific Environmental Conditions – Compliance Requirements		
No.	**Description**	**Statement of Compliance**
1	**Statutory Requirements** The Applicant shall carry out the Development in accordance with the requirements of the: a) VRA; b) RAP; and c) CSMP.	Copy of site auditor correspondence previously provided.
2	Prior to commencement of construction, the Applicant shall provide written evidence to the Secretary from the Site Auditor confirming that all construction works associated with the Development meets the requirements of the documents listed in Condition 1 above.	No construction works took place during the reporting period.
3	Prior to commencement of operation, the Applicant shall provide written evidence to the Secretary from the Site Auditor confirming that all works associated with the Development have been constructed in accordance with the requirements of the documents listed in Condition 1 above.	No construction works took place during the reporting period.
4	**Human Health Risk** The Applicant shall provide written advice from the Site Auditor confirming that all works associated with the Development would be constructed to address any risk of harm to human health posed by the potential ingress of volatile vapours into buildings and confined spaces.	Copy of site auditor correspondence previously provided.

5	**Imported Soil** The Applicant shall: a) ensure that only VENM or ENM or other material approved in writing by the EPA or the Site Auditor is used as fill on the site; b) keep accurate records of the volume and type of fill to be used on site; and c) make these records available to PON and the Department upon request.	No soil imported during the reporting period.
6	**SOIL AND WATER** **Water Licences** The Applicant is required to obtain the necessary water licences for the Development under the Water Act 1912 and/or the Water Management Act 2000. Note: Licences are required for groundwater bores, excavations that may intercept groundwater, dewatering activities and extraction or interception of surface water.	Existing Groundwater Monitoring bores installed pursuant to the Water Management Act 2000.
7	**Discharge Limits** The Applicant shall ensure that all water discharges from the site comply with the: a) discharge limits (both volume and quality) set for the Development in any EPL; or b) the relevant provisions of the POEO Act.	All water discharged from the Site complied with the relevant EPL conditions (refer to **Section 4.3.1** of this Annual Review)
8	**Bunding and Storage of Liquids** The Applicant shall store all chemicals, fuels and oils used on-site in appropriately bunded areas in accordance with the requirements of all relevant Australian Standards, and/or the EPA's Storing and Handling of Liquids: Environmental Protection – Participants Handbook.	Refer Aurecon Design Compliance Statement previously provided to DP&E.
9	**Stormwater and Drainage System** The Applicant shall maintain the stormwater and drainage system for the Development to the satisfaction of PON.	No changes occurred to the stormwater management system previously approved by PON.
10	**Stormwater and Drainage Management Plan** The Applicant shall update the existing Stormwater and Drainage Management Plan for the site to include the Development, to the satisfaction of the Secretary. The plan shall: a) be updated prior to the commencement of construction; b) be prepared in accordance with OEH's Managing Urban Stormwater and any other relevant guidelines; c) show what stormwater, treatment and control infrastructure will be installed as part of the stormwater and drainage system for the Development and how it will integrate with other stormwater and drainage systems in the area; d) describe the measures that will be implemented to maintain this infrastructure over time; e) include a program to monitor stormwater quality and quantity; and f) include a strategy to integrate the stormwater management system with the broader system to be provided by PON for the Mayfield Concept Plan area. Note: The intent of condition 10(e) is to ensure coordinated delivery of infrastructure across the Mayfield Concept Plan area.	Updated. See letter from DP&E

11	**Water Management Plan** The Applicant shall update the existing Water Management Plan for the site to include the Development, to the satisfaction of the Secretary. The plan shall: a) be updated prior to the commencement of operation; b) include procedures for the prevention and management of spills and leaks from the Development, including the M4 berth, pipeline and fuel storage facility; c) include a surface and groundwater monitoring program to measure the quality and quantity of water discharges from the site; and d) include a surface and groundwater response plan, including remedial actions and procedures that will be followed in the event of an incident.	Updated. See letter from DP&E
12	**Traffic Movements** The Applicant shall: a) keep accurate records of: • the number of truck movements to and from the site; and • the volume of diesel and biodiesel that is received, stored and dispatched. b) make these records available in its Annual Review; and c) provide these records to PON on a bimonthly basis	Records are maintained and reported in accordance with this condition (refer to **Section 6.1**, **Section 6.2**, and **Appendix B** of this Annual Review).
13	**Traffic Management Plan** The Applicant shall update the existing Traffic Management Plan for the site to include the Development, to the satisfaction of the Secretary. The plan shall: a) be approved by the Secretary prior to the commencement of construction; b) be prepared in consultation with PON, HDC, Council, RMS adjoining land owners and the local community; c) detail construction and operational vehicle routes, access arrangements and coordination with other developments in the Mayfield Concept Plan area; d) include details of driver training awareness to minimise noise, in particular from reversing alarms and compression braking; e) detail procedures for managing operational traffic, including adherence to the Australian Code for Transport of Dangerous Goods by Road and Rail, January 1998 or its latest version; and f) be consistent with the Traffic Management Plan required under the Mayfield Concept Plan.	Updated. See letter from DP&E
14	**Access and Parking** The Applicant must ensure that all internal roads and parking (including driveways, grades, lighting, aisle widths, aisle lengths, turning paths, sight distance requirements and parking bay dimensions) associated with the Development are designed and constructed in accordance with the latest versions of the Australian Standards 2890.1:2004 and 2890.2:2002, and AUSTROADS for heavy vehicle usage.	No new parking or roads built.

15	**HAZARDS** The Applicant shall update the Fire Safety Study for the site to incorporate the changes due to the Development, prior to the commencement of construction. This plan must: a) be approved by the Secretary, prior to the commencement of construction b) cover the relevant aspects of the Department's *Hazardous Industry Planning Advisory Paper No. 2 – Fire Safety Study Guidelines and the Best Practice Guidelines for Contaminated Water Retention and Treatment Systems*; b) be prepared in consultation with adjacent landowners, including OneSteel; and c) meet the requirements of NSW Fire and Rescue. Note: Construction, other than of preliminary works that are outside the scope of the Fire Safety Study, shall not commence until the study recommendations have been considered, and where appropriate, acted upon.	Fire Safety Study was approved prior to construction of the Site.
16	The Applicant shall update the Emergency Plan for the site to incorporate any changes due to the Development, prior to the commencement of operation. The updated plan shall: a) be prepared in consultation with PON; b) be consistent with the Department's *Hazardous Industry Planning Advisory Paper No. 1 – Emergency Planning*; and c) detail the emergency procedures for the Development.	Emergency Plan previously supplied to and approved by PON and DP&E.
17	The Applicant shall contribute to, in so far as it relates to the Development, preparation of the following plans and audits for the Mayfield Concept Plan, in consultation with PON: a) a Port Emergency Response Plan, consistent with the Department's *Hazardous Industry Advisory Paper No. 1 – Emergency Planning*; b) a Safety Management System, consistent with the Department's *Hazardous Industry Advisory Paper No. 9 – Safety Management*; and c) hazard audits, consistent with the Department's *Hazardous Industry Advisory Paper No. 5 – Hazard Audit Guidelines*. Notes: • The intent of the condition is to ensure any cumulative hazard issues across the Mayfield Concept Plan area are identified and managed; and • The relative contribution by the Applicant and timing shall be determined in consultation with PON, to the satisfaction of the Secretary.	The Sites safety and emergency operational plans have been prepared in consultation with PON and are consistent with the listed documents.

18	**UTILITIES AND SERVICES** The Applicant shall update and implement the existing Utilities and Services Plan for the site to include the Development, to the satisfaction of the Secretary. The plan must: a) be updated prior to the commencement of operation; b) be prepared in consultation with relevant utility and service providers and adjacent landowners, where relevant; c) include an implementation schedule which shows how all essential utilities and services are to be provided to the site; d) provide a copy of all necessary consents from relevant utility and service providers showing that access to these utilities and services is available and secured; and e) include a strategy to integrate all utilities and services with the broader system to be provided by PON for the Mayfield Concept Plan. Note: The intent of condition 18(d) is to ensure coordinated delivery of infrastructure across the Mayfield Concept Plan area.	Updated
19	**Construction Noise** The Applicant must ensure that all reasonable and feasible management and mitigation measures are employed so that construction noise generated by the Development meets the construction noise goals in Table 1 (refer to Table 1 'Construction Noise Goals' in Development Consent)	Construction complete
20	**Operational Noise** Prior to the commencement of construction, the Applicant shall provide the Noise and Vibration Impact Assessment for the Development prepared by AECOM, dated 8 December 2014 including all modelling data, to the PON for the purposes of updating the Site Noise Model for the Mayfield Concept Plan.	Previously provided
21	Prior to the commencement of operation, the Applicant shall provide written evidence to the Secretary demonstrating that the PON is satisfied that the methodology and outcomes of the Noise and Vibration Impact Assessment for the Development, dated 8 December 2014 are consistent with the Site Noise Model for the Mayfield Concept Plan.	Previously provided to DP&E.
22	The Applicant shall, in consultation with the PON ensure that noise from the Development: a) fits within the Site Noise Model developed for the Mayfield Concept Plan; and b) does not exceed any noise quota or levels provided by PON for the Development, in accordance with the Site Noise Model for the Mayfield Concept Plan.	Evidence of consultation previously provided to DP&E.
23	The Applicant shall comply with the directions of the PON in relation to the management of noise from the Development.	Noted
24	**Construction and Operation Hours** The Applicant must comply with the hours of construction and operation in Table 2, unless otherwise agreed to in writing by the Secretary (refer to Table 2 'Hours of Work' in Development Consent).	No construction during the reporting period.

25	**Operating Conditions** The Applicant shall implement best practice noise and vibration management, including all reasonable and feasible measures to minimise the noise and vibration emissions of the Development.	Noted
26	**Noise Management Plan** The Applicant shall update the existing Noise Management Plan for the site to include the Development, to the satisfaction of the Secretary. The plan must: a) be prepared by a suitably qualified expert, in accordance with EPA Guidelines; b) be approved by the Secretary prior to the commencement of construction; c) describe the measures that would be implemented to ensure compliance with the relevant noise goals included in the Mayfield Concept Plan or noise quota established by the PON; d) include a procedure for implementing noise mitigation measures, should the Applicant be directed to by the PON, or should non-compliances be detected; and e) include procedures to receive, record and respond to complaints.	Updated
27	**Noise Monitoring** The Applicant shall monitor noise from operation of the Development, to the satisfaction of the Secretary. The monitoring shall: a) be undertaken annually or to address genuine noise complaints that are related to the Development as determined by the Department or the EPA; b) be undertaken in accordance with the *Industrial Noise Policy*; c) demonstrate compliance with the relevant noise goals contained in the Mayfield Concept Plan, or any noise quota established by the PON for the Development.	Noise monitoring is undertaken in accordance with this condition (refer to **Section 5.0** of this Annual Review)
28	**AIR QUALITY AND GREENHOUSE GAS** **Dust Minimisation** The Applicant shall carry out all reasonable and feasible measures to minimise dust generated by the Development.	Noted
29	**Offensive Odour** The Applicant must not cause or permit the emission of offensive odours from the site, as defined under Section 129 of the POEO Act.	Noted
30	**Energy Efficiency and Greenhouse Gas Emissions** The Applicant shall implement all reasonable and feasible measures to minimise energy use and greenhouse gas emissions from the Development.	Noted
31	**Air Quality Discharges** The Applicant must comply with all load limits, air quality criteria and air quality monitoring requirements as specified in the amended EPL for the site.	Noted
32	**Dust Mitigation Measures** The Applicant must design, construct, operate and maintain the Development in a manner that minimises or prevents the emission of dust from the site and complies with any monitoring requirements in the EPL.	Noted

33	**Air Quality and Greenhouse Gas Management Plan** The Applicant shall update the existing Air Quality and Greenhouse Gas Management Plan for the site to include the Development, to the satisfaction of the Secretary. This plan must: a) be approved by the Secretary prior to the commencement of construction; b) describe the measures that would be implemented to ensure compliance with the relevant conditions of this consent; c) include an air monitoring program to measure the performance of the Development against the relevant conditions of this consent; d) describe a protocol that has been agreed with PON for the provision of input to the broader Site Air Quality Model required under the Mayfield Concept Plan. Note: The monitoring requirements of condition 31(c) could be satisfied by the monitoring network required for the Mayfield Concept Plan, if sufficient justification is provided.	Updated
34	**Energy Efficiency Plan** The Applicant shall update the existing Energy Efficiency Plan for the site to include the Development, to the satisfaction of the Secretary. The plan shall: a) be updated prior to the commencement of operation; b) describe the measures to be implemented to minimise energy use on the site including energy consumption levels, predicted energy savings and options for alternative energy sources including solar power generation, potential for third party access to roofs for solar generation, and co-generation; and c) include a program for monitoring the effectiveness of these measures, and a protocol for the periodic review of the plan.	Updated
35	**VISUAL AMENITY** **Design and Landscaping** The Applicant shall update the existing design and landscape management plan for the site to include the Development, to the satisfaction of the Secretary. The Plan must: a) be prepared in consultation with PON; b) be updated prior to the commencement of construction; c) demonstrate the building treatments are of sufficient design quality to minimise the visual impacts of the Development, and include a variety of materials and external finishes; d) illustrate the location, species and mature heights of plants to be established on site; e) provide for the maintenance of the landscaping on site; and f) illustrate how the design of the buildings would integrate with the landscaping proposed, ensuring landscaping is used to minimise views of the site.	Updated
36	**Construction Materials** Where possible the Applicant must utilise building materials that will minimise the potential visibility of the Development (ie. use of non-reflective materials).	Noted

37	**Lighting** The Applicant shall ensure that any lighting associated with the Development: a) complies with the latest version of Australian Standard AS *4282(INT)-Control of Obtrusive Effects of Outdoor Lighting*; and b) is mounted, screened and directed in such a manner that it does not create a nuisance to surrounding properties or the public road network.	Complete.
38	**Signage** The Applicant must not install any advertising signs on the site without the written consent of the Secretary.	Noted
39	**SITE SECURITY** The Applicant shall: a) install and maintain a perimeter fence and security gates on the site; and b) ensure that the security gates on site are locked whenever the site is unattended.	Noted
40	**WASTE** The Applicant shall ensure that all waste generated on the site during construction and operation of the Development is stored, handled and disposed of in accordance with the EPA's Waste Classification Guidelines.	Noted
41	**AVIATION SAFETY** Prior to the commencement of construction, the Applicant must obtain all necessary approvals from the Air Base Command Post of RAAF Base Williamstown and the Directorate of External Land Planning within the Defence Support Group of the Department of Defence for the erection of all structures that constitute transient/temporary or permanent obstructions in accordance with the *Operation of cranes and tall structures in the vicinity of Newcastle Airport (Department of Defence, 2013).*	Complete
Schedule 4 – Environmental Management Reporting – Compliance Requirements		
No.	**Description**	**Statement of Compliance**

1	**Environmental Management Strategy** The Applicant shall update the existing Environmental Management Strategy for the site to include the Development. This strategy must be approved by the Secretary prior to the commencement of construction and shall: a) provide the strategic context for environmental management of construction and operation of the Development; b) identify the statutory requirements that apply to the Development; c) describe in general how the environmental performance of the Development would be monitored and managed; d) describe the procedures that would be implemented to: • keep the local community and relevant agencies informed about the operation and environmental performance of the Development; • receive, handle, respond to, and record complaints; • resolve any disputes that may arise in relation to operations at the Development; • respond to any non-compliance; • manage cumulative impacts; • respond to emergencies; and e) describe the role, responsibility, authority, and accountability of all the key personnel involved in environmental management of the Development.	Updated
2	**Management Plan Requirements** The Applicant must ensure that the management plans required under this consent are prepared in accordance with any relevant guidelines, and include: a) detailed baseline data; b) a description of: • the relevant statutory requirements (including any relevant consent, licence or lease conditions); • any relevant limits or performance measures/criteria; and • the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the Development or any management measures; c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria; d) a program to monitor and report on the: • impacts and environmental performance of the Development; and • effectiveness of any management measures (see c) above); e) a contingency plan to manage any unpredicted impacts and their consequences; f) a program to investigate and implement ways to improve the environmental performance of the Development over time; g) a protocol for managing and reporting any: • incidents; • complaints; • non-compliances with statutory requirements; and • exceedances of the relevant limits and/or performance measures / criteria; and	Complete

	h) a protocol for periodic review of the plan.	
3	**Construction Environmental Management Plan** The Applicant shall update the existing Construction Environmental Management Plan for the site to include the Development. The Plan must: a) be approved by the Secretary prior to commencement of construction; b) include: • a soil and water management plan; • a traffic management plan; • a noise and vibration management plan; • an air quality (dust) management plan; • a utilities and services provision plan; and • a waste management plan.	Noted
4	**Revisions to Strategies, Plans and Programs** Within 3 months of the submission of an: a) audit under condition 8 of schedule 5; b) incident report under conditions 6 and 7 of schedule 5; c) annual review under condition 5 of schedule 5; and/or d) a modification to this consent, the Applicant must review, and if necessary revise, the strategies, plans, and programs required under this consent to the satisfaction of the Secretary. *Note: This is to ensure the strategies, plans and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the Development.*	Noted
5	**REPORTING** **Annual Review** By the end of December each year, and annually thereafter, the Applicant shall review the environmental performance of the Development, to the satisfaction of the Secretary. This review must: a) describe the operations that were carried out in the past year; b) analyse the monitoring results and complaints records of the Development over the past year, which includes a comparison of these results against the • relevant statutory requirements, limits or performance measures/criteria; • monitoring results of previous years; and • relevant predictions in the EIS; c) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance; d) identify any trends in the monitoring data over the life of the Development; and e) describe what measure will be implemented over the next year to improve the environmental performance of the Development. f) describe what measure will be implemented over the next year to improve the environmental performance of the Development.	This Annual Review is prepared in accordance with this condition.

6	**Incident Reporting** Within 24 hours of the occurrence of an incident that causes (or may cause) harm to the environment, the Applicant shall notify the Secretary and any other relevant agencies of the incident.	Noted
7	Within 7 days of the detection of the incident, the Applicant shall provide the Secretary and any relevant agencies with a detailed report on the incident.	Noted
8	**INDEPENDANT ENVIRONMENTAL AUDIT** Within 1 year of the date of this consent, and every 3 years thereafter, unless the Secretary directs otherwise, the Applicant must commission and pay the full cost of an Independent Environmental Audit of the Development. This audit must: a) be carried out by a suitably qualified, experienced and independent audit team whose appointment has been endorsed by the Secretary; b) include consultation with EPA and PON; c) assess the environmental performance of the Development, and its effects on the surrounding environment; d) determine whether the Development is complying with the relevant standards, performance measures and statutory requirements; e) review the adequacy of the Environmental Management Strategy for the Development, compliance with the requirements of this consent, and any other licences and consents; and, if necessary; f) recommend measures or actions to improve the environmental performance of the Development, and/or any plan/program required under this consent.	Previous audit undertaken in 2016 so not due until the next reporting period.
9	Within 3 months of commissioning the audit, or as otherwise agreed by the Secretary, the Applicant must submit a copy of the audit report to both the EPA and the Secretary with a response to any recommendations contained in the audit report.	Noted
10	**ACCESS TO INFORMATION** From the commencement of the construction of the Development, the Applicant must make the following information publicly available on its website as it is progressively required by the consent: a) a copy of all current statutory consents; b) a copy of the current plans and programs required under this consent; c) a summary of the monitoring results of the Development, which have been reported in accordance with the various plans and programs approved under the conditions of this consent; d) a complaints register, which is to be updated on a monthly basis; e) a copy of the Annual Reviews (over the last 5 years); f) a copy of any Independent Environmental Audit, and the Applicant's response to the recommendations in any audit; and g) any other matter required by the Secretary.	This information is available on Stolthaven's website: https://www.stolt-nielsen.com/en/our-businesses/stolthaven-terminals/terminal-network/stolthaven-newcastle/

11	**COMMUNITY CONSULTATION STRATEGY** The Applicant shall contribute to the Community Communication Strategy required for the Mayfield Concept Plan. The level and timing of this contribution by the Applicant and timing shall be determined in consultation with PON.	Community consultation has been undertaken as described in **Section 9.0** of this Annual Review.

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