PATONS LANE RESOURCE RECOVERY CENTRE

Orchard Hills Waste and Resource Management Facility

MP09_0074

Annual Environmental Management Review

April 2018 to March 2020

25 AUGUST 2022

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SRC OPERATIONS PTY LTD

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Orchard Hills Waste and Resource Management Facility

Annual Environmental Management Review

April 2018 to March 2020

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2	11/12/2020	Updated to address Client comments	HT	KP
3	07/03/2021	Updated to address further Client comments	HT	KP
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ACRONYMS AND GLOSSARY

Acronym	Meaning
AHD	Australian Height Datum
AQMP	Air Quality and Greenhouse Gas Management Plan
AEMR	Annual Environmental Management Review
BH	Borehole
BWL&VMP	Bund Wall, Landscaping and Vegetation Management Plan and Rehabilitation Plan
CAMP	Contamination & Asbestos Management Plan
CLC	Community Liaison Committee (CLC)
CoC	Conditions of Consent
C&I	Commercial and industrial
C&D	Construction and demolition
DD	Deposited dust
DO	Dissolved oxygen
DPIE	Department of Planning, Industry and Environment
EC	Electrical conductivity
EPA	Environmental Protection Authority
EP&A Act	*Environmental Planning and Assessment Act 1979*
EPL	Environmental Protection Licence
FEMP	Fire and Emergency Management Plan
LDP	Licenced discharge point
LEMP	Landfill Environmental Management Plan
LMP	Litter Management Plan
MWOO	Mixed waste organic outputs
NML	Noise management levels
NSL	No specific limit
PLRRC	Patons Lane Resource Recovery Centre
PM_{10}	Particulate matter < 10 µm
QOMP	Quarry Operation Management Plan
ONMP	Operational Noise Management Plan
RRC	Resource Recovery Centre
Reporting Period 1:	April 2018 to March 2019
Reporting Period 2:	April 2019 to March 2020
Sch	Schedule
SWLMP	Soil, Water and Leachate Management Plan
TDS	TDS – total dissolved solids
TEOM	Tapered Element Oscillating Microbalances

Acronym	Meaning
TNMP	Traffic Noise Management Plan
TOC	Total organic carbon
TSP	Total suspended particulates
TSS	Total suspended solids
WRRMP	Waste and Resource Recovery Monitoring Program

FACILITY DETAILS

Name of operation	Patons Lane Resource Recovery Centre *(Approval refers to Orchard Hills Waste and Resource Management Facility)*
Name of operator	SRC Operations Pty Limited (a wholly owned subsidiary of Bingo Industries Limited)
Development consent	MP09_0074 as Modified (March 2016)
Name of holder of development	SRC Operations Pty Limited (a wholly owned subsidiary of Bingo Industries Limited)
EPL	Resource Recovery EPL 21259 Waste disposal (application to land) EPL 20814
Annual Review start date	April 2018
Annual Review end date	March 2020

I, Ros Dent, certify that this audit report is a true and accurate record of the compliance status of Patons Lane Resource Recovery Centre for the period April 2018 to March 2020 and that I am authorised to make this statement on behalf of SRC Operations Pty Limited / Bingo Industries Limited.

Note.

a) *The Annual Review is an 'environmental audit' for the purposes of section 122B(2) of the Environmental Planning and Assessment Act 1979. Section 122E provides that a person must not include false or misleading information (or provide information for inclusion in) an audit report produced to the Minister in connection with an environmental audit if the person knows that the information is false or misleading in a material respect. The maximum penalty is, in the case of a corporation, $1 million and for an individual, $250,000.*

b) *The Crimes Act 1900 contains other offences relating to false and misleading information: section 192G (Intention to defraud by false or misleading statement—maximum penalty 5 years imprisonment); sections 307A, 307B and 307C (False or misleading applications/information/documents—maximum penalty 2 years imprisonment or $22,000, or both).*

Name of authorised reporting officer	Ros Dent
Title of authorised reporting officer	NSW Environmental Manager
Signature of authorised reporting officer	
Date	

EXECUTIVE SUMMARY

In accordance with Schedule 5 Condition 5A (Sch 5 C5A) of Project Approval MP09_0074 (as Modified), the Proponent shall submit an Annual Environmental Management Report one year after the commencement of site establishment, and annually from the date of approval thereafter to review the environmental performance of the Project to the satisfaction of the Secretary.

This Annual Environmental Management Report (AEMR) has been prepared to address the requirements of the Sch5 C5A, and has also considered the requirements of the compliance reporting guideline '*Compliance Reporting Post Approval Requirements' (DPE, 2018)* and provides information to assess the Facilities post approval activities, monitoring and reporting.

Statement of Compliance

During the reporting period there were five non-compliances identified and reported by the proponent.

An overview of the status of compliance with each relevant approval for the reporting periods is presented in the tables below.

Details of the non-compliances including actions taken or proposed by the proponent to address the non-compliance is provided in **Section 9.1**, and where required further detail has been provided throughout the document.

Were all conditions of approval complied with:	Yes / No	Total
Development Consent MP09_0074 (as modified)	No	2
Waste disposal (application to land) – EPL 20814	No	3
Resource Recovery (RR) – EPL 21259	Yes	-

Non-compliances *(refer to **Section 9.1** for further detail)*

Relevant Approval	Condition	Comment	Where addressed
MP09_0074	Sch5 C5A	Reporting requirements related to the submission of annual AEMR	Section 1.2 Section 3 Table 8-2
	Sch 4 C13	Currently no Total suspended particulate (TSP) matter is monitored or reported within the monthly monitoring reports.	Section 5.3.3 Table 5-1
EPL 20814 (landfill)	P1.2	Currently no Total suspended particulate (TSP) matter is monitored or reported within the monthly monitoring reports.	Section 5.3.3 Table 5-1
	L2.4	Non-compliance noted in annual return for 8 November 2018 to 7 November 2019 Annual Return	Section 9.1
	R1.5	Non-compliance noted in annual return for 8 November 2018 7 November 2019 Annual Return	Section 9.1
EPL 21259 (RR)	NA	Annual return period is 28 June 2019 to 27 June 2020 – *Note that this is outside of the reporting period for this AEMR*	NA

AEMR structure

- **Section 1** Provides an overall context and introduction to the AEMR.
- **Section 2** Details the approvals relevant to the facility, including any relevant changes and/or modifications proposed or implemented (particularly during the reporting period).
- **Section 3** Includes an overview of the operation of the facility during the reporting period.
- **Section 4** Provides an update on the status of non-compliances identified by previous reports, including previous Independent Environmental Audits, Annual Environmental Reviews or other stakeholder/regulator Audits or reports.
- **Section 5** Provides a comprehensive review of the environmental management and performance (monitoring results) of the project during the reporting periods.
- **Section 6** identifies the emerging trends and/or discrepancies between the predicted and actual impacts of the project.
- **Section 7** Details the complaints received during the reporting period including actions taken or proposed by the proponent to address the complaint and also details the activities undertaken to engage with the community.
- **Section 8** Discusses the findings of the independent audits undertaken during the reporting period.
- **Section 9** Lists and provides details of incidents which occurred, or where applicable, updates to previously reported incidents for which there was noteworthy action taken during the reporting period Details the non-compliances identified during the reporting period including actions taken or proposed by the proponent to address the non-compliance.
- **Section 10** Provides an overview of the activities to be completed to improve environmental performance during the next reporting period
- **Appendix A** Compliance status of each condition of Development Consent MP09_0074 (as modified)
- **Appendix B** Groundwater quality monitoring results
- **Appendix C** Quarry dewatering monitoring results

1 INTRODUCTION

The Patons Lane Resource Recovery Centre (PLRRC) is located in Orchard Hills, NSW and is a resource management facility comprising Lot 40, DP 738126, within the former Erskine Park Quarry owned by SRC Properties Pty Ltd (the Proponent).

Project Approval MP09_0074 was granted by the Land and Environment Court for the establishment and operation of the resource recovery centre in August 2012 and approved the landfilling of commercial and industrial (C&I) and construction and demolition (C&D) waste types (general solid (non-putrescible) waste).

A Section 75W modification (MP09_0074 MOD1), submitted in September 2015, was assessed and approved under the previous Part3A[1] system. The modification was considered to be Administrative and sought to add some flexibility to the time constraints imposed by the original 2012 Approval but did not seek to alter the purpose or material content of any other Condition of Consent (CoC). The Modification was approved on the 30 March 2016.

The objectives of Patons Lane Resource Recovery Centre (RRF) are to:

- Provide a facility to assist the NSW Government to meet the recycling targets for C&I and C&D waste
- Recover a high proportion of clay/shale resources for the brick and construction industry
- Receive and emplace wastes and residuals from the on-site recycling
- Receive and emplace approved waste and residuals from third party waste providers
- Progressively rehabilitate a disused quarry to re-instate the agriculturally productive land consistent with the surrounding lands.

The PLRRC will operate in accordance with three key stages. The stages are summarised in **Table 1-1**.

Table 1-1: PLRRC staged operation

Stage	Description	Time frame
Stage 1	Stage 1 works and activities are made up of the following components: • Site establishment works and activities • Construction of the recycling and reprocessing area (RRA) • Operation of the landfill and the RRC and cell construction up to the completion of the excavation of Cell 1 (made up of Cells 1A, 1B and 1C). **Site establishment commenced on 19 April 2018.**	5-7 years (completion estimated to be 2023-2025)
Stage 2	Excavation and operation Cell 2	TBD
Stage 3	Excavation and operation Cell 3 and final landform rehabilitation	TBD

[1] Part 3A of the *Environmental Planning and Assessment Act 1979* (NSW) was repealed in 2011. However, the Part 3A system for major project assessment still applies to many project applications that were submitted before the repeal, as well as to modifications for projects that were initially approved under Part 3A.

1.1 Purpose of the Annual Environmental Management Review (AEMR)

This AEMR has been prepared to address Sch5 C5A[2]. **Table 1-2** details how and where this CoC has been addressed in this AEMR.

Table 1-2: Compliance with Sch5, C5A

Condition Requirement	Document Reference
One year after the commencement of site establishment, and annually from the date of approval thereafter, the Proponent shall submit an Annual Environmental Management Report to review the environmental performance of the Project to the satisfaction of the Secretary. This report must:	This Report
1. describe the operations that were carried out in the past year;	**Current reporting period** Section 3.1 April 2018 to March 2019 Section 3.2 April 2019 to March 2020 **Forecast for next reporting period** Section 3.3 April 2020 to March 2021
2. analyse the monitoring results and complaints records of the Project over the past year, which includes a comparison of these results against the:	See below
i. relevant statutory requirements, limits or performance measures / criteria;	**Appendix A** Table 5-1 – Compliance with limits Table 6-1 – Compliance with EIS Section 7.4 – Complaints
ii. monitoring results of previous years; and	**Section 5 – Monitoring results** Section 5.2 – Noise Section 5.2.5 – Dust Section 5.3.5 – Weather Section 5.5 – Surface water Section 5.5.6 – Groundwater Section 5.7 – Leachate Section 5.8 – Landfill gas Section 5.9 – Waste Section 5.10 – Truck numbers Section 5.11 – Rehabilitation Appendix B – Groundwater Appendix C – Quarry void dewatering
iii. relevant predictions in the EA;	Section 6 of this Report
3. identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;	Section 9
4. identify any trends in the monitoring data over the life of the Project; and	Table 5-1
5. describe what measures will be implemented over the next year to improve the environmental performance of the Project.	Table 5-1

[2] The Schedule 5 of the Conditions of Consent currently include two Condition 5. The AEMR condition is numbered Schedule 5 Condition 5A to avoid confusion.

1.2 Scope of the AEMR

This AEMR covers the following periods:

- Reporting Period 1: April 2018 to March 2019
- Reporting Period 2: April 2019 to March 2020.

2 APPROVALS

An application to establish the PLRRC was submitted under Section 75 of the former Part 3A of the *Environmental Planning and Assessment Act 1979*. This application was refused by the Minister for Planning in September 2009, but was appealed by the then Proponent. Appeal No. 10928 of 2010 was made and upheld in the NSW Land and Environment Court and the project was granted approval on the 13 July 2012.

A Section 75W modification (MP09_0074 MOD1), submitted in September 2015, was assessed and approved under the previous Part3A system. The modification was considered to be Administrative and approved on the 30 March 2016.

Table 2-1 summarises all the approvals currently in place for the PLRRC which are relevant to the construction and operation of the PLRRC. **Table 2-2** lists any changes to those approvals that occurred during the reporting period.

Table 2-1: Summary of PLRRC approvals

Approval	Date of Approval	Summary
MP09_0074 Original Approval	13 July 2012	Construction and operation of a waste recycling and re-processing facility. Development and operation of staged waste emplacement cells to contain all residual wastes from the recycling facility, other imported wastes (unable to be re-processed) and selected construction and demolition wastes recovered from the on-site existing perimeter bund walls.
Modification 1	30 March 2016	Schedule 3 Conditions 18 and 19 were modified to confirm the definition of 'Site Establishment' and 'Operation' within Schedule 2. The definition of site establishment was updated to be cover the construction work for Cell 1A and any clay/shale extraction associated with the construction of Cell 1A. Operation includes the construction of Cells 1B to 4.
EPL 20814 (landfill)	8 November 2016	**Fee Based Activity:** Land-based extractive activity (> 100000-500000 T annual capacity to extract, process or store) Waste disposal by application to land (Any capacity) **Limits:** General solid waste (non-putrescible) – Maximum 205,000 tonnes in any 12-month period
EPL 21259 (RRC)	28 June 2019	**Fee Based Activity:** Recovery of general waste (Any general waste recovered) Waste storage - other types of waste (Any other types of waste stored) **Limits:** The authorised amount of waste permitted on the premises cannot exceed 140,000 tonnes at any one time. The maximum quantity of waste permitted to be received at the Premises is 350,000 tonnes in any 12-month period.

Table 2-2: PLRRC approvals and amendments

Approval / Approval date	Updates/Changes to Approval during reporting period	Amendment approval
MP09_0074		
13 July 2012	None	N/A
MP09_0074_MOD1		
30 March 2016	None	N/A
EPL 20814 (landfill)		
8 November 2016	**Variation issued during reporting period** The EPA varied the Licence to add conditions to permit dewatering of the void to occur, and also to include specific conditions related to sampling, monitoring and reporting to the EPA in relation to that process. The following conditions were amended: • P1.2 to reflect the new monitoring point • L2.4 to add pollutant concentration limits • M2.2 to add monitoring and sampling requirements • E1 reflect that the SDMP has been approved by the EPA. A new Condition L7.2 was added to reflect operating hours for site establishment under Development Consent MP09_0074.	20 August 2019
	A variation application to EPA on 28 January 2020 seeking approval to use alternative daily cover materials, is still pending approval.	Pending
EPL 21259 (resource recovery)		
28 June 2019	None	N/A

3 OPERATIONS SUMMARY

The following sections describe the development that was carried out in the reporting period (April 2018 to March 2019, and April 2019 to March 2020).

The subsequent sections provide a forecast for activities, mainly operation that will be carried out over the next reporting year (April 2020 to March 2021).

3.1 Reporting Period 1: April 2018 to March 2019

3.1.1 Site Establishment Works

Site establishment works commenced 19 April 2018 and included the following activities. The activities should be read in conjunction with the figures provided below.

- The surface water controls were constructed, and the dams integrated as required.
- Excavation of the stockpiled clay/shale and construction of the northern face (external and Internal slopes). The area north of the northern face was regraded and shaped, and the northern face was landscaped (**Figure 3-1**).
- The height of the eastern face was maintained at 57 m to 58 m AHD, with the outer slope reduced for landscaping.
- The quarry void was dewatered.
- The recycling and re-processing area was excavated to 48 m to 49 m AHD. Clay was extracted to create the required landform and the recycling and re-processing area infrastructure was constructed (**Figure 3-2**).
- Clay and shale was extracted in Cell 1A, and further extractions will occur over the next few reporting periods (**Figure 3-3**).
- The leachate riser and drainage layer was installed in Cell 1A and the initial leachate evaporation pond was constructed.
- The following surface water dams were constructed and re-established.
  - Dam 3 (3A&B)
  - Dam 4 (4A)
  - Dam 5 (5A)
  - Dam 6.
- The internal sealed and unsealed roads were upgraded.
- A wheel wash facility was constructed.
- The site entrance was upgraded.
- Weighbridges were installed
- A site office and car park was constructed
- The southwestern face was reduction in height
- The acoustic mound on the north side of the site was constructed

Figure 3-1, Figure 3-2 and **Figure 3-3** shows the layout of the entire site, the layout of the RRC and the general arrangement of Cell 1. Site establishment was completed in April 2019.

Figure 3-1: Site establishment activities

Figure 3-2: Layout of recycling and reprocessing areas

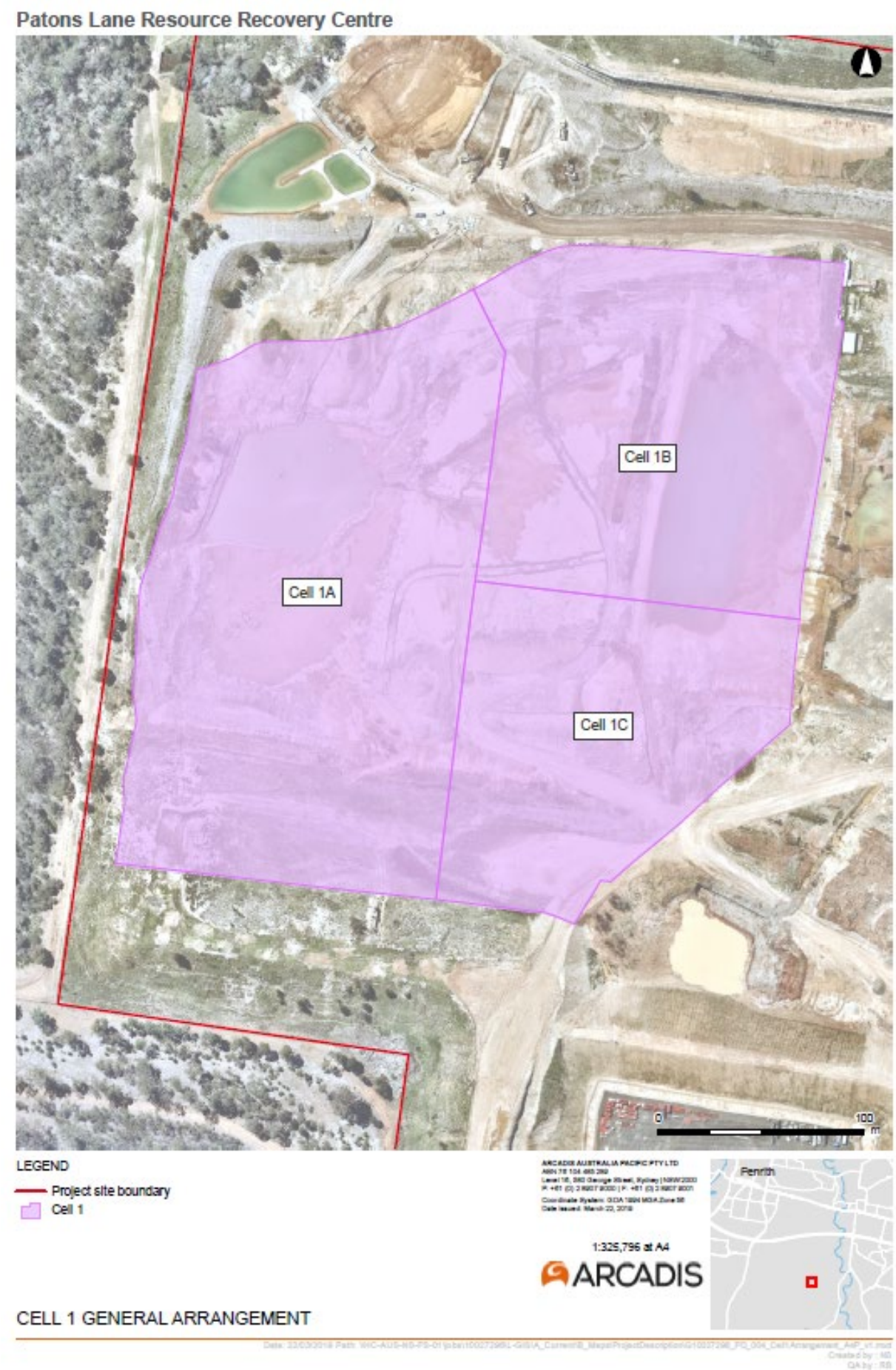

Figure 3-3: Cell 1 general layout

3.1.2 Management Plan Development and Approval

With the site establishment approaching completion, updating of the existing site management plans was commenced. Following a gap analysis of the Conditions of Consent (as Modified) a number of new management plans were identified as being required.

Where required, consultation with the relevant stakeholders and regulatory agencies was commenced.

3.1.3 Other activities

Other activities undertaken during the reporting period include:

- Road upgrades to widen about 480 metres of Luddenham Road commenced in January 2019.
- Quarry void dewatering was undertaken from 16 August 2018 and 11 October 2018.

3.2 Reporting Period 2: April 2019 to March 2020

3.2.1 Site Establishment Works

Site establishment works were completed.

3.2.2 Management Plan Development and Approval

The following management plans were prepared, and submitted to, and approved by, the Department of Planning, Industry and Environment (DPIE). All the following plans were approved on 26 July 2019.

- Soil, Water and Leachate Management Plan (SWLMP) (dated June 2019) (Sch4 C20)
- Contamination & Asbestos Management Plan (CAMP) (dated March 2019) (Sch4 C7)
- Fire and Emergency Management Plan (FEMP) (dated June 2019) (Sch4 C43)
- Operational Noise Management Plan (ONMP) (dated 11 July 2019) (Sch4 C27)
- Traffic Noise Management Plan (TNMP) (dated 11 July 2019) (Sch4 C28)
- Waste and Resource Recovery Monitoring Program (WRRMP) (dated 10 July 2019) (Sch4 C5)
- Air Quality and Greenhouse Gas Management Plan (AQMP) (dated 25 June 2019) (Sch4 C16)
- Bund Wall, Landscaping and Vegetation Management Plan and Rehabilitation Plan (BWL&VMP) (dated July 2019) (Sch4 C40)
- Landfill Environmental Management Plan (LEMP) (dated June 2019) (Sch4 C9)
- Litter Management Plan (LMP) (dated 9 July 2019) (Sch4 C9)
- Quarry Operation Management Plan (QOMP) (dated June 2019) (Sch5 C4)
- Transport Code of Conduct (Sch4 C38).

3.2.3 Other activities

Other activities undertaken during the reporting period include:

- Road upgrades to widen Luddenham Road for about 480 metres were completed in April 2019.
- Clay and shale will continue to be extracted during the construction of Cells 1A-1C. (**Figure 3-3**). This will be ongoing for a number of the future reporting periods.

3.2.4 PLRRC Operation

Following the approval of the environmental management plans (Section 3.2.2), operation of the Patons Lane RRC commenced in August 2019.

Waste monitoring is discussed further in **Section 5.9.**

3.3 Next Reporting Period (forecast): April 2020 to March 2021

3.3.1 Site Operations

- Receipt of 450,000 tonnes of waste at gate
- Receipt and processing of 350,000 tonnes of mixed waste at Recycling Centre
- Recovery of up to 300,000 tonnes of recyclable material from mixed waste
- Landfill of 205,000 tonnes (50,000 tonnes from recycling facility and 155,000 tonnes direct to landfill)
- Progressive lining of Cell 1A1/2

3.3.2 Monitoring activities

- Ongoing monthly noise and dust monitoring
- Continuous weather monitoring
- Annual and quarterly leachate monitoring
- Sampling of wet weather surface water discharges (as required)
- Ongoing quarterly groundwater monitoring
- Ongoing quarterly gas sampling.

4 ACTIONS/REQUIREMENTS FROM PREVIOUS ANNUAL REVIEW

This section is not applicable for this reporting period as this is the first AEMR submitted for the PLRRC.

Table 4-1: Actions from the previous Annual Review

Action required from previous Annual review	Requested by	Action taken by the Operator	Where discussed in annual review
N/A for this AEMR			

5 ENVIRONMENTAL PERFORMANCE

5.1 Summary of monitoring results

This section reports on the monitoring results and environmental outcomes that were intended for the reported period, and whether these outcomes were achieved.

Table 5-1: Environmental performance, implications and management actions

Aspect	Approved limit (if applicable) / EIS Prediction	Performance during the reporting period	Trend / key management implications	Implemented / proposed management actions
Air Quality (Conditions of Consent)				
Sch4 C16(e)	A monitoring program for real-time air quality impacts of the Project	The dust monitoring program for the PLRCC commenced on 1 July 2018 and continued throughout construction and site establishment and continued once operation of the facility commenced in August 2019. The monitoring program includes two TEOMs measuring $PM1_0$ (suspended solids) continuously and seven dust deposition (DD) gauges. The air quality sampling methodologies comply with AS/NZS 3580.9.8[3] (PM_{10} TEOM) and AS/NZS 3580.10.1[4] (DD Gauge). The TEOMs are calibrated in accordance with AS/NZS 3580.9.8.	Rolling averages for DD gauges was below the Max TOTAL DD level 4 g/m2/month for the period. The long- and short-term criteria for PM_{10} was constantly achieved through the reporting period.	No additional management actions (other than what is detailed in the AQMP) are proposed. PM_{10} will be continuously monitored and will be reported on monthly basis for the next reporting period.
Sch4 C13	The long- and short-term criteria for PM_{10} and DD is summarised in Table 5-5 as specified in Sch4 C13 (Tables 4-6). These are the same criteria provided in EPL 20814.	No exceedance of the long- and short-term criteria for PM_{10} were recorded during this reporting period From April 2019 to June 2019, DD criteria were exceeded at DD4 and DD7, but none of the other DD gauges. This was directly attributed to the construction of the north-eastern bund wall	Rolling averages for DD gauges was below the Max TOTAL DD level 4 g/m2/month for the period. The long- and short-term criteria for PM_{10} was constantly achieved through the reporting period.	No additional management actions (other than what is detailed in the AQMP) are proposed. PM_{10} will be continuously monitored and will be reported on monthly basis for the next reporting period.

[3] *AS/NZS 3580.9.8 Methods for sampling and analysis of ambient air Determination of suspended particulate matter - PM10 continuous direct mass method using a tapered element oscillating microbalance analyser*

[4] *AS/NZS 3580.10.1 Methods for sampling and analysis of ambient air Determination of particulate matter - Deposited matter - Gravimetric method*

Aspect	Approved limit (if applicable) / EIS Prediction	Performance during the reporting period	Trend / key management implications	Implemented / proposed management actions
		and the site access road, which were under construction between January to July 2019. Currently Total Suspended Particulate (TSP) matter is not continuously monitored, however, estimates of the annual average background TSP concentrations can be determined from a relationship with the measured PM_{10} concentrations.		
Air Quality (Condition of Consent Sch4 C13 and EPL 20814 - Landfill)				
Particulate matter < 10 µm	• 24-hour average: 50 µg/m^3 ** • Annual average: 30 µg/m^3 **	In general, no exceedances of the daily 24-hour limit were observed throughout the reporting period. Several exceedances of 50 ug/m^3 daily limit were however observed between November 2019 and February 2020 which was attributed to the poor air quality in the greater Sydney area due to bushfires in surrounding areas. See **Table 5-6** for more information.	Generally compliant – The site is managed in accordance with the approved AQMP.	No additional management actions (other than what is detailed in the AQMP) are proposed. PM_{10} will be continuously monitored and will be reported on monthly basis for the next reporting period.
Deposited Dust (DD)	• Max INCREASE in DD level: 2 g/m^2/month **[5] • Max TOTAL DD level: 4 g/m^2/month ***	During construction activities, some of the dust gauges showed some exceedance of the maximum total DD level particularly during the construction of the north-eastern bund wall and the site access road. Once the site became operational in July 2019, the dust gauge results were generally compliant with the EPL conditions. November 2019 to February 2019 however showed of the maximum allowable level, but this was attributed to poor air quality in the greater Sydney area due to bushfires in surrounding areas. See **Table 5-6** for more information	More regular minor exceedances of the maximum total DD level occurred during construction/site establishment works which occurred from April 2018 to July 2019. There was also some construction activity in the local area which may have attributed to some of the higher measurements. Once operation commenced in July 2019, these measurements were generally compliant with the consent limits. The site is managed in accordance with the approved AQMP.	No additional management actions (other than what is detailed in the AQMP) are proposed. DD be monitored and reported on monthly basis during the next reporting period. Review of equipment to determine appropriateness for unpowered location.

[5] ** - Incremental impact (i.e. incremental increase in concentrations due to the activities on their own)
*** - Total impact (i.e. incremental increase in concentrations due to the activities plus background concentrations due to other sources)

Aspect	Approved limit (if applicable) / EIS Prediction	Performance during the reporting period	Trend / key management implications	Implemented / proposed management actions
Total suspended particulates (TSP)	Annual average: 90 µg/m^3	TSP is not currently measured continuously, however, estimates of the annual average background TSP concentrations can be determined from a relationship between measured PM_{10} concentrations. This relationship was established as part of a review of ambient monitoring data collected by co-located TSP and PM_{10} monitors operated for reasonably long periods of time in the Hunter Valley (NSW Minerals Council, 2000) and assumes that 40% of the TSP is PM_{10}. This approach to estimating ambient TSP concentrations in the absence of monitoring data is common throughout NSW and is generally accepted by NSW EPA. Compliance with the TSP annual criteria will be automatically achieved when compliance with PM_{10} annual criteria is achieved.	Generally compliant – The site is managed in accordance with the approved AQMP.	No additional management actions (other than what is detailed in the AQMP) are proposed. PM_{10} will be continuously monitored as required and the same relationship will be used to establish compliance with the TSP annual criteria. Review of equipment to determine appropriateness for unpowered location
Water Quality (Condition of Consent Sch7 H C5(b) and EPL 20814 – Landfill)				
Ammonia	1 mg/L	No exceedance of the limit were recorded during either reporting period	Generally compliant – The site is managed in accordance with the approved SWLMP.	No additional management actions (other than what is detailed in the SWLMP) are proposed.
pH	6.5-8.5	A pH 8.6 to 8.8 was recorded at Point 1 on 18 December 2018 from 10:25 am to 11:30. Wet weather event-based discharge. Rainfall exceeded five-day design event with records indicating 68.2 mm rainfall on site (see **Section 5.5**)	This event did not result in any adverse effects. Following heavy rainfall, runoff accumulated in the void prior to completion of landfill construction work. De-watering of the void was completed.	Construction was subsequently completed and runoff into the void has been restricted as per site surface water management plans
Total suspended solids	50 mg/L	Rainfall for a dewatering/sampling event on 7 February 2020 was well above the Blue Book design criteria (5-day 90th percentile rainfall of 47.6 mm). For this event, as per Section L3.1 in the EPL, the specified concentration limit for TSS did not apply. For context, 326 mm of rainfall was	Measures to minimise water pollution were undertaken	No additional management actions (other than what is detailed in the SWLMP) are proposed and what is permitted in the EPL.

Aspect	Approved limit (if applicable) / EIS Prediction	Performance during the reporting period	Trend / key management implications	Implemented / proposed management actions
		received from 12 pm 6 February 2020 to 9 am 10 February 2020, with the whole South Creek catchment in flood.		
Water Quality (EPL 21259 – RRC)				
Requirements	No limits – however see Sch7 H C5(b) criteria / limits above for more information	Discharge point referenced as Point 2 is known as LDP2 in EPL 20814.	Generally compliant – The site is managed in accordance with the approved SWLMP.	No additional management actions (other than what is detailed in the SWLMP) are proposed.
Waste (Conditions of Consent)				
Sch3 C22 Maximum total waste emplacement	4,300,000 tonnes	A total of 48,318 tonnes of waste has been received to date	The PLRRC is operating well within the maximum emplacement limit	No additional management actions (other than what is detailed in the WRRMP are proposed.
Sch3 C22 Maximum annual waste receipt	450,000 tonnes	A total of 48,318 tonnes of waste was received at the site. This comprised 2,539 tonnes municipal waste, 9,739 tonnes C&I waste, 36,040 tonnes C&D waste	Waste is managed in accordance with the WRRMP and the Bingo Standard Operating Procedures (SOP) including procedures for asbestos, weighbridge operation, visual inspection and non-conforming waste.	No additional management actions (other than what is detailed in the WRRMP are proposed.
Sch3 C22 Maximum annual on-site waste emplacement	205,000 tonnes	Landfilling at the PLRRC only commenced in August 2019.	Waste is managed in accordance with the WRRMP and the Bingo Standard Operating Procedures (SOP)	No additional management actions (other than what is detailed in the WRRMP are proposed.
Sch 4 C7 (asbestos)	7,500 m^3 of special waste (asbestos) permitted in accordance with the Asbestos and Contamination Management Plan	As shown in **Section 5.9** and **Table 5-25**. No asbestos was received during the reporting period.	Waste is managed in accordance with the WRRMP and the Bingo Standard Operating Procedures (SOP)	No additional management actions (other than what is detailed in the WRRMP are proposed.
Sch4 C5	Requires the implementation of a Waste and Resource Recovery Monitoring Program which includes monitoring for: • the quantity, type and source of waste received; and	Operation of the PLRRC commenced in August 2019. Waste received at the PLRRC is reported on a monthly basis through the EPA Waste and Resource Reporting Portal (WARRP) in accordance with the requirements of the *Protection of the Environment Operations Act 1997*.	Waste is managed in accordance with the WRRMP and the Bingo Standard Operating Procedures (SOP). The monthly WARRP reporting details the quantity, type and source of waste received; and quantity, type and quality of the outputs produced.	No additional management actions (other than what is detailed in the WRRMP are proposed.

Aspect	Approved limit (if applicable) / EIS Prediction	Performance during the reporting period	Trend / key management implications	Implemented / proposed management actions
	• quantity, type and quality of the outputs produced.			
Waste (EPL 20814 - Landfill)				
Requirements	The licensee must not cause, permit or allow any waste to be received at the premises, except the wastes expressly referred to in the column titled "Waste" and meeting the definition, if any, in the column titled "Description" in the table below.	As shown in **Section 5.9** and **Table 5-25**, the waste received at this site are in accordance with the waste identified within the EPL. Waste is currently only being emplaced into landfill Cell 1A, as required by Condition L4.3. See below	Waste is managed in accordance with the WRRMP and the Bingo Standard Operating Procedures (SOP) including procedures for asbestos, weighbridge operation, visual inspection and non-conforming waste.	No additional management measures are currently proposed, other than what is detailed in the WRRMP and the relevant Bingo SOPs.
Special Waste	No asbestos is permitted to be received from offsite.	As shown in **Section 5.9** and **Table 5-25**. No asbestos was received during the reporting period.	As above	Weighbridge operators/traffic controllers have a responsibility to visually inspect each load entering the PLRRC and will report any suspicious material in the load to the site manager in accordance with the *SOP BDR001 Asbestos at Recycling Centres*
General solid waste (non-putrescible)	Maximum 205,000 tonnes in any 12-month period is permitted to be landfilled (in Cell 1A)	As shown in **Section 5.9** and **Table 5-25** 48,318 tonnes of waste was received at the site since operation commenced in August 2019.	As above	Waste received at the PLRRC is reported on a monthly basis through the EPA Waste and Resource Reporting Portal (WARRP) in accordance with the requirements of the POEO Act.
Waste (EPL 21259 – RRC)				
Excavated natural material	The licensee must comply with all requirements of a generator of Excavated Natural Material as set out in the Excavated Natural Material Order (as in force from time to time)	Cover during this reporting period was sourced from onsite VENM won from quarrying activities.	Onsite won VENM will continue to be utilised as daily cover for the next reporting.	No additional management measures are currently proposed, other than what is detailed in the LEMP, the BWVLMP and the relevant Bingo SOPs.
Soils Resource recovery waste storage	Need to comply with limits for arsenic (As), cadmium (Cd), mercury (Hg), petroleum hydrocarbon (PH), Polycyclic aromatic hydrocarbons (PAH), Polychlorinated biphenyls	All material brought to site was compliant with the requirements of the EPL during the reporting period. The current process is followed: • Customer advises of soil materials	The existing process and procedures are sufficient to management any non-confirming waste or material. Any material not suitable for resource recovery or for landfilling at the site is	No additional management measures are currently proposed, other than what is detailed in the WRRMP and the relevant Bingo SOPs.

Aspect	Approved limit (if applicable) / EIS Prediction	Performance during the reporting period	Trend / key management implications	Implemented / proposed management actions
	No Acid Sulfate Soil (ASS) or Potential Acid Sulfate Soil (PASS) is to be received at the Premises.	• Waste class is handed to sales, and sales Environmental Engineer (EE) provides the technical reviews • The EE accepts or rejects based on compliance with both guidelines and EPL conditions • Once approved by the technical reviewer the sales team will allocate a specific job number to the soil project once approved, this ensure soils not assessed do not make their way into the facility. The Waste Classification Report is provided with the material and includes source of material, review of ASS, field observations, and results of the laboratory analysis (covering the select parameters) which is undertaken at a NATA accredited laboratory. The report also details the 6-step classification procedure from the NSW EPA Waste Classification Guidelines (2014)	rejected and recorded in the rejected load documentation	
All Waste (e.g. B&D, C&I, paper, wood waste etc)	As defined in the POEO Act, as in force from time to time	As shown in **Section 5.9** and **Table 5-25**, the waste received on this site are in accordance with the waste identified within the EPL.	Waste is managed in accordance with the WRRMP and the Bingo Standard Operating Procedures (SOP) including procedures for asbestos, weighbridge operation, visual inspection and non-conforming waste.	No additional management measures are currently proposed, other than what is detailed in the WRRMP and the relevant Bingo SOPs.
L2.2 Waste Limit	The authorised amount of waste permitted on the premises cannot exceed 140,000 tonnes at any one time.	As shown in **Section 5.9** and **Table 5-25**, the waste received on this site are in accordance with the waste identified within the EPL.	Waste is managed in accordance with the WRRMP and the Bingo Standard Operating Procedures (SOP) including procedures for asbestos, weighbridge operation, visual inspection and non-conforming waste.	No additional management measures are currently proposed, other than what is detailed in the WRRMP and the relevant Bingo SOPs.

Aspect	Approved limit (if applicable) / EIS Prediction	Performance during the reporting period	Trend / key management implications	Implemented / proposed management actions
L2.3 Waste Limit	The maximum quantity of waste permitted to be received at the Premises is 350,000 tonnes in any 12-month period.	As shown in **Section 5.9** and **Table 5-25**, the waste received on this site are in accordance with the waste identified within the EPL.	Waste is managed in accordance with the WRRMP and the Bingo Standard Operating Procedures (SOP) including procedures for asbestos, weighbridge operation, visual inspection and non-conforming waste.	No additional management measures are currently proposed, other than what is detailed in the WRRMP and the relevant Bingo SOPs.
Noise (Conditions of Consent)				
Sch4 C26(k) and Sch4 C27(f)	Requires a program for monitoring the noise impacts	Long term (non-attended) noise monitoring commenced in July 2018, while attended noise monitoring was undertaken on monthly basis from September 2018	Compliant – Noise monitoring is being undertaken in accordance with the Conditions and the NVMP.	No additional management actions proposed. Noise will be monitored (continuously for unattended and monthly for attended) and will be reported on monthly basis during the next reporting period.
Sch4 C21 and C22	Noise criteria are provided in **Table 5-2.** These criteria are the same as those provided in EPL 20814	Exceedances of the noise trigger levels presented in **Table 5-2** were recorded at all monitoring locations throughout the reporting period. However, a review of a sample of the audio files showed that noise from construction and operation of the Facility was occasionally audible and usually at a low level. The exceedances sampled were found to be due to extraneous sources (for example excessive wind, movement near to the monitor, distant traffic, aircraft, birds or other animals, rain, etc).	Generally compliant - no activities from site was audible, and noise measurements were predominately influenced by low winds, bird noise and road traffic.	No additional management actions proposed. Noise will be monitored (continuously for unattended and monthly for attended) and will be reported on monthly basis during the next reporting period.
Noise (EPL 20814 - Landfill)				
EPL requirements	• Day site establishment limit (DSEL) • Day operation limit (DOL) Both measured in ($LA_{eq(15\ min)}$) dB(A) (See **Table 5-2**)	As shown in **Table 5-3** no noise exceedances for attended and unattended noise monitoring events were recorded during the reporting period. Additionally no community complaints have been received during the reporting period (See **Table 7-2**).	Generally compliant – The site is being managed in accordance with the approved NVMP.	No additional management actions proposed. Noise will be monitored (continuously for unattended and monthly for attended) and will be reported on monthly basis during the next reporting period.

Aspect	Approved limit (if applicable) / EIS Prediction	Performance during the reporting period	Trend / key management implications	Implemented / proposed management actions
Daily Cover (EPL 20814 - Landfill)				
Daily Cover	Daily cover: Daily cover material must be either (i) Virgin excavated natural material (VENM); or (ii) NSW EPA approved alternative daily cover (ADC).	Cover during this reporting period was sourced from onsite VENM won from quarrying activities.	Onsite won VENM will continue to be utilised as daily cover for the next reporting.	No additional management measures are currently proposed, other than what is detailed in the LEMP and the BWVLMP and the relevant Bingo SOPs.
Traffic Movements (Conditions of Consent)				
Sch3 C25 and C26	Heavy vehicle traffic generation must not exceed 250 daily heavy vehicle movements.	**Figure 5-18** shows the traffic movements recorded since operation commenced in August 2019. There were no exceedances of the daily heavy vehicle limit of 250 during this reporting period.	An accurate register of daily heavy vehicle movements is maintained at the weighbridge.	No additional management measures are currently proposed, other than what is detailed in the LEMP, the TNMP and the relevant Bingo SOPs.

5.2 Noise Monitoring

Sch4 C26(k) and Sch4 C27(f) of the Conditions of Consent requires a program for monitoring the noise impacts of the Project, including real time noise monitors to measure noise emissions during construction and operation. The noise monitoring program was included in both the Construction Noise Management Plan (CNMP) and the Operational Noise Management Plan (ONMP).

The noise monitoring program for the PLRCC commenced on 1 July 2018 and will continue throughout the construction and operational phases of the project. The locations of the noise monitors are shown on **Figure 5-1.**

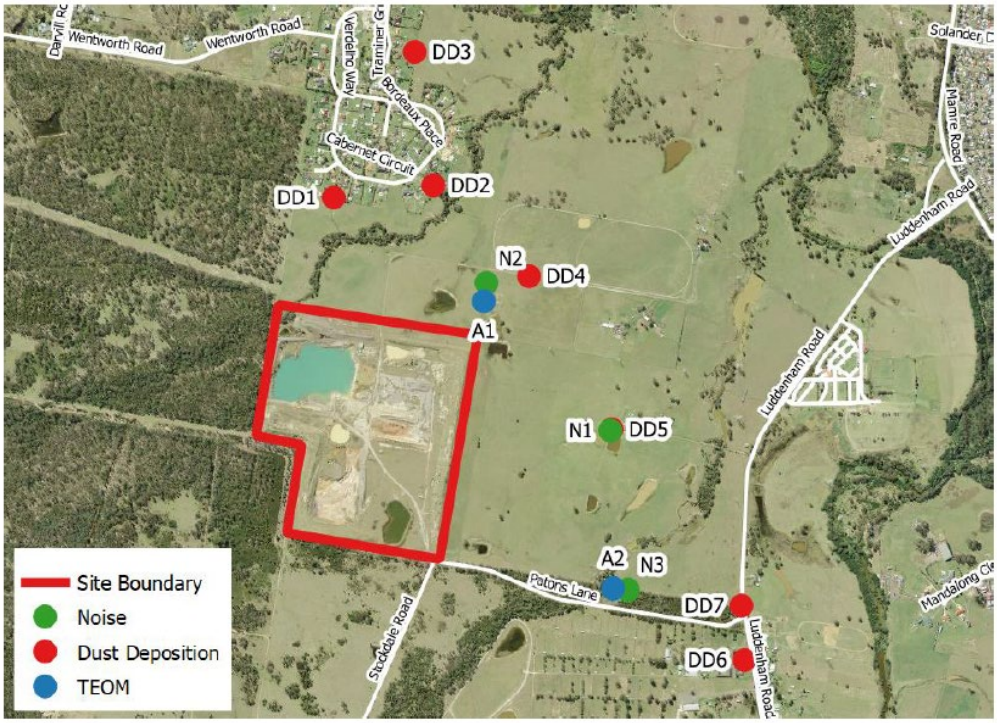

Figure 5-1: Dust and noise monitoring locations (Source: Wilkinson Murray, July 2018)

5.2.1 Equipment

5.2.1.1 Unattended noise monitoring equipment

SmartaData/RION NL–52 unattended noise monitoring systems were installed on 1 June 2018 and their use is ongoing. These environmental noise loggers monitor statistical noise levels and include audio recordings. The loggers are set to A-weighted, fast response, continuously monitoring over 15-minute sampling periods. This equipment is capable of remotely monitoring and storing noise level descriptors that are later uploaded to a central web server detailed analysis.

The noise monitors are NATA calibrated every two years in accordance with *AS1055 Acoustics - Description and measurement of environmental noise* and quality assurance procedures.

5.2.1.2 Attended noise monitoring equipment

Where unattended noise monitoring is conducted, a Brüel & Kjær Type 2250 Sound Level Meter is used. This sound level meter conforms to *AS1259 Acoustics – Sound Level Meters as a Type 1 Precision Sound Level Meter* which has an accuracy suitable for field and laboratory use. The A-Weighting filter is selected, and the time weighting response is set to “Fast”.

Monthly unattended noise monitoring has been undertaken since December 2018.

5.2.1.3 Sound Power Level Data

Attended assessments of construction equipment Sound Power Levels (SWL) at Patons Lane Resource Recovery Centre were conducted to review the modelled equipment sound power levels. Sound power levels are generally assessed quarterly in accordance with *Australian Standard 1217.7 Acoustics – Determination of Sound Power Levels of Noise Sources – Survey Method*.

5.2.2 Noise monitoring limits

In accordance with Sch4 C21 and C22, the Proponent will ensure that the noise generated by the Facility does not exceed the limits detailed in Table 7. These criteria are replicated in **Table 5-2.** Noise will to be measured in accordance with the relevant modifying/correction factors and meteorological conditions in the *NSW Industrial Noise Policy*.

Table 5-2: Sch4 C22 noise limits

Receiver	Day Site Establishment Limit LAeq(15 minute) dB(A)	Day Operation Limit LAeq(15 minute) dB(A)
11 Cabernet Place	43	39
3 Chablis Place	41	38
Roughwood Park, Luddenham Road	39	39
Glenholme Farm, Luddenham Road	39	39
210 Luddenham Road	35	38
Residence & Hall at the Croatian Cultural Association	37	39

The same noise limits are included in EPL 20814**.**

5.2.3 Noise Reporting

Table 5-3 summarises the findings of the monthly reports which are prepared by the noise consultant. The monthly reports are made available on the PLRRC website.

At the PLRRC noise is measured via a microphone plugged into a device, which reports on noise levels every 15 minutes. These decibel frequencies are then converted to Statistical Noise Levels (Ln) and noise monitoring results for the last 24-hours is also available at https://www.patonslane.com.au/noise-monitoring/.

5.2.4 Noise monitoring results

Noise monitoring results for the reporting period are provided in **Table 5-3**.

5.2.4.1 Sound Power Levels

Sound power levels were assessed around six monthly in 2018 and 2019, and have not been included in the table.

When they have been measured, the sound power levels may have higher than the predicted levels for some machinery, however, there have been no exceedances to the NML as outlined in the NMP during the reporting periods.

Compliance has been generally achieved at the nearest residential receivers.

Table 5-3: Noise monitoring results

Date	UNATTENDED MONITORING		ATTENDED MONITORING		Noise Complaints
	Compliance	Comment	Compliance	Comment	
Reporting period 1: April 2018 to March 2019					
Apr 2018	NA	NA – Noise monitoring only commenced in July 2018	NA	NA – Noise monitoring only commenced in July 2018	NA
May 2018	NA	NA – Noise monitoring only commenced in July 2018	NA	NA – Noise monitoring only commenced in July 2018	NA
Jun 2018	NA	NA – Noise monitoring only commenced in July 2018	NA	NA – Noise monitoring only commenced in July 2018	NA
Jul 2018	Yes	No exceedances of the NML levels were attributable to construction activity.	NA	No attended noise monitoring was undertaken in July 2018	No
Aug 2018	Yes	No exceedances of the NML levels were attributable to construction activity.	NA	No attended noise monitoring was undertaken in August 2018	No
Sep 2018	Yes	No exceedances of the NML levels were attributable to construction activity.	Yes	Attended noise measurements were undertaken on 6/09/18. Measurements at all locations were dominated by other ambient sources such as traffic, birds, and other natural sources. NMLs at the nominated receivers are currently being met.	No
Oct 2018	Yes	No exceedances of the NML levels were attributable to construction activity.	Yes	Attended noise measurements were undertaken on 5/10/18. Measurements at all locations were dominated by other ambient sources such as traffic, birds, and other natural sources. NMLs at the nominated receivers are currently being met.	No
Nov 2018	Yes	No exceedances of the NML levels were attributable to construction activity.	Yes	Attended noise measurements were undertaken on 6/11/18. Measurements at all locations were dominated by other ambient sources such as traffic, birds, and other natural sources. NMLs at the nominated receivers are currently being met.	No
Dec 2018	Yes	Based on the analysis performed, there were no significant systemic exceedances of the noise management levels attributable to construction activity.	Yes	Attended noise measurements were undertaken on 5/12/18. Attended measurements at all locations except 210 Luddenham Road showed exceedances between 2dB and 10dB above the NMLs. It was determined that these exceedances were not attributable to site activities.	No
Jan 2019	Yes	No significant systemic exceedances of the NML attributable to construction activity for unattended measurements.	Yes	Attended noise measurements were undertaken on 4/01/19. Noise from site was not detectable at any of the monitored locations.	No

Date	UNATTENDED MONITORING		ATTENDED MONITORING		Noise Complaints
	Compliance	Comment	Compliance	Comment	
Feb 2019	Yes	No significant systemic exceedances of the NML attributable to construction activity for unattended measurements.	Yes	Attended noise measurements were undertaken on 5/02/19. No exceedances were contributable from site, with the exception of those measured at Roughwood Park. A minor 2dB was measured at this location.	No
Mar 2019	Yes	No significant systemic exceedances of the NML attributable to construction activity for unattended measurements.	Yes	Attended noise measurements was undertaken on 5/03/19. No exceedances were contributable from site.	No
Reporting period 2: April 2019 to March 2020					
Apr 2019	Yes	Marginal exceedances of the NML attributable to short term road works along Patons Lane for unattended measurements..	Yes	Attended noise measurements were undertaken on 4/04/19. Minor exceedances were contributable to temporary roadworks and Eastern bund wall construction from site	No
May 2019	Yes	Marginal exceedances of the NML attributable to short term road works along Patons Lane for unattended measurements..	Yes	Attended noise measurements were undertaken on 8/05/19. No exceedances were contributable from site.	No
Jun 2019	Yes	Marginal exceedances of the NML attributable to short term road works along Patons Lane for unattended measurements.	Yes	Attended noise measurements were undertaken on 6/06/19. No exceedances were contributable from site.	No
Jul 2019	Yes	No exceedances of the NML attributable to the construction site for unattended measurements.	Yes	Attended noise measurements were undertaken on 3/07/19. No exceedances were contributable from site.	No
Aug 2019	Yes	No exceedances of the NML attributable to the construction site for unattended measurements.	Yes	Attended noise measurements were undertaken on 2/08/19. No exceedances were contributable from site.	No
Sep 2019	Yes	No exceedances of the NML attributable to the construction site for unattended measurements..	Yes	Attended noise measurements were undertaken on 2/09/19. No exceedances were contributable from site.	No
Oct 2019	Yes	No exceedances of the NML attributable to the construction site for unattended measurements..	Yes	Attended noise measurements were undertaken on 2/10/19. No exceedances were contributable from site.	No
Nov 2019	Yes	No exceedances of the NML attributable to the construction site for unattended measurements.	Yes	Attended noise measurements were undertaken on 1/11/19. No exceedances were contributable from site.	No

Date	UNATTENDED MONITORING		ATTENDED MONITORING		Noise Complaints
	Compliance	Comment	Compliance	Comment	
Dec 2019	Yes	No exceedances of the NML attributable to the construction site for unattended measurements.	Yes	Attended noise measurements were undertaken on 2/12/19. No exceedances were contributable from site.	No
Jan 2020	Yes	No exceedances of the NML attributable to the construction site for unattended measurements.	Yes	Attended noise measurements were undertaken on 21/01/20. No exceedances were contributable from site	No
Feb 2020	Yes	No exceedances of the NML attributable to the construction site for unattended measurements.	Yes	Attended noise measurements were undertaken on 20/02/20. No exceedances were contributable from site	No
Mar 2020	Yes	No exceedances of the NML attributable to the construction site for unattended measurements.	Yes	Attended noise measurements were undertaken on 25/03/20. No exceedances were contributable from site	No

5.2.5 Analysis of noise monitoring of data

During the reporting period, long term (non-attended) noise monitoring commenced in July 2018, while attended noise monitoring was undertaken on monthly basis from September 2018.

Exceedances of the noise trigger levels presented in **Table 5-2** were recorded at all monitoring locations throughout the reporting period. However, a review of a sample of the audio files showed that noise from construction and operation of the Facility was occasionally audible and usually at a low level. The exceedances sampled were found to be due to extraneous sources (for example excessive wind, movement near to the monitor, distant traffic, aircraft, birds or other animals, rain, etc).

This conclusion was also supported by the monthly attended noise monitoring, where no activities from site was audible, and noise measurements were predominately influenced by low winds, bird noise and road traffic.

A summary of the noise monitoring results for the project since inception is provided below:

- There have been no exceedances of the noise criteria for attended and unattended monitoring attributable to construction of the project for the reporting 2018-2019.
- There have been no exceedances of the noise criteria for attended and unattended monitoring attributable to operation of the facility for the reporting 2019-2020.
- Attended noise monitoring has been undertaken on a monthly basis since September 2018. Measurements at all locations have been dominated by other ambient sources such as traffic, birds, and other natural sources.

5.3 Dust and Particulates Monitoring

Sch4 C16(e) requires a monitoring program for real-time air quality impacts of the Project. The program is included in the approved Air Quality and Greenhouse Gas Management Plan (AQMP) for the site and includes deposited dust (DD) gauges and the real time monitoring of particulate matter (PM).

The dust monitoring program for the PLRCC commenced on 1 July 2018 and continued throughout construction and site establishment and continued once operation of the facility commenced in August 2019.

5.3.1 Equipment

The locations of the dust monitors for suspended particulates (PM) and dust deposition (DD) gauges is shown on **Figure 5-1.**

Table 5-4: Dust monitoring locations

Location ID	Parameter	Equipment Installed	Required Under MPs
A1	Suspended Particulates	TEOM[6] PM_{10} Monitor	Yes
A2	Suspended Particulates	TEOM PM_{10} Monitor	Yes
DD1	Deposited Dust	Dust Deposition Gauge	Yes
DD2	Deposited Dust	Dust Deposition Gauge	Yes
DD3	Deposited Dust	Dust Deposition Gauge	Yes
DD4	Deposited Dust	Dust Deposition Gauge	Yes

[6] TEOM - Tapered Element Oscillating Microbalances

Location ID	Parameter	Equipment Installed	Required Under MPs
DD5	Deposited Dust	Dust Deposition Gauge	Yes
DD6	Deposited Dust	Dust Deposition Gauge	Yes
DD7	Deposited Dust	Dust Deposition Gauge	Yes

The air quality sampling methodologies employed for the Patons Lane monitoring program are based on AS/NZS 3580.9.8[7] (PM_{10} TEOM) and AS/NZS 3580.10.1[8] (DD Gauge). The TEOMs are calibrated in accordance with AS/NZS 3580.9.8.

Dust deposition gauges are sent to a NATA Accredited laboratory, where the deposited dust is analysed to obtain the total (soluble and insoluble ie wet plus dry) deposition rates and to obtain the monthly dust deposition level. Dust deposition is analysed in accordance with the requirements of AS/NZS 3580.1.10[9]. Insoluble solids comprise combustible matter and ash. Certificates of analysis are provided within the monthly Noise and Air Quality Monitoring Reports.

5.3.2 Dust monitoring criteria

Sch4 C13 states that the Proponent shall ensure dust and particulates generated at the Premises must not exceed the criteria (both short term and long-term) at any residence or on more than 25% of any privately owned land surrounding the Premises. Table 5-5 summarises the PM and DD criteria as specified in Sch4 C13 (Tables 4-6), the AQMP and on the EPL.

Table 5-5: Sch4 C13 long- and short-term criteria for PM_{10} and DD

Criteria Period	Pollutant	Averaging Period	Criteria
Short-term criteria PM	PM < 10 µm	24-hour average	50 µg/m^3
Long-term criteria PM	PM < 10 µm	Annual average	30 µg/m^3
Long-term criteria TSP	Total suspended particulate (TSP)	Annual average	90 µg/m^3
Long-term criteria dust deposition	Maximum INCREASE in DD level	-	2 g/m^2/month
	Maximum TOTAL DD level	-	4 g/m^2/month ***

5.3.2.1 Relationship between TSP and PM_{10}

Currently Total Suspended Particulate (TSP) matter is not continuously monitored, however, estimates of the annual average background TSP concentrations can be determined from a relationship with the measured PM_{10} concentrations. This relationship was established as part of a review of ambient monitoring data collected by co-located TSP and PM_{10} monitors operated for reasonably long periods of time in the Hunter Valley (NSW Minerals Council, 2000) and assumes that 40% of the TSP is PM10.

This approach to estimating ambient TSP concentrations in the absence of monitoring data is common throughout NSW and is generally accepted by NSW EPA. Compliance with the TSP annual criteria will be automatically achieved when compliance with PM_{10} annual criteria is achieved (Wilkinson Murry).

[7] *AS/NZS 3580.9.8 Methods for sampling and analysis of ambient air Determination of suspended particulate matter - PM10 continuous direct mass method using a tapered element oscillating microbalance analyser*

[8] *AS/NZS 3580.10.1 Methods for sampling and analysis of ambient air Determination of particulate matter - Deposited matter - Gravimetric method*

[9] *AS/NZS 3580.10.1 Methods for sampling and analysis of ambient air Determination of particulate matter - Deposited matter - Gravimetric method*

5.3.3 Dust and particulates reporting

Table 5-6 summarises the findings of the monthly reports which are prepared by the air quality consultant. The monthly reports are made available on the PLRRC website.

PLRRC currently monitors the particle size of PM_{10} in three categories:

- Real-time reading
- One-hour average
- Three hours average

This data generates an instantaneous Particulate Matter (PM) level reading, which is also provided on the PLRRC website at: https://www.patonslane.com.au/air-monitoring/.

5.3.4 Dust monitoring results

Table 5-6: Compliance with DD and PM10 criteria

Date	DUST DEPOSITION (DD)		PM_{10} TEOM		Air quality Complaints
	Compliance	Comment	Compliance	Comment	
Reporting period 1: April 2018 to March 2019					
Apr 2018	NA	NA – Air quality monitoring only commenced in July 2018.	NA	NA – Air quality monitoring only commenced in July 2018.	No
May 2018	NA	NA – Air quality monitoring only commenced in July 2018.	NA	NA – Air quality monitoring only commenced in July 2018.	No
Jun 2018	NA	NA – Air quality monitoring only commenced in July 2018.	NA	NA – Air quality monitoring only commenced in July 2018.	No
Jul 2018	Yes	Based on six of seven DDG. One site vandalised.	No data	No data TEOMs not commissioned.	No
Aug 2018	Yes	Based six of seven DDG. DD7 was unreliable due to equipment tampering.	Yes	TEOMs were commissioned on 3/08/18. No exceedances of the daily 24-hour limit were observed at location A1. No data available from A2 due to technical issues, which were rectified on 29/08/18.	No
Sep 2018	Yes	Compliance achieved at all seven DDGs.	Yes	Compliance with the required particle matter criteria achieved for both TEOMs.	No
Oct 2018	Yes	Compliance achieved at all seven DDGs. DD7 was higher than the other site, likely due to the land use (horse agistment).	Yes	Compliance with the required particle matter criteria achieved for both TEOMs.	No
Nov 2018	Yes	Exceeded the max DD level/month at DD7, likely due to other extraneous activities. All other DDG closer to site were within acceptable limits.	Yes	Exceedances at A1 and A2 observed on 21-22/11/18. This was consistent with the state-wide weather event consisting of 500km wide dust cloud. Activities at site did not contribute to the non-compliance.	No
Dec 2019	Yes	Exceeded the max DD level/month at DD1 and DD7 due to the state-wide dust storm weather. Exceedances are unlikely to be caused by activities on site.	Yes	No exceedances of the daily 24-hour limit were observed	No
Jan 2019	Potentially no	Exceeded max DD level/month at locations DD3, DD4 and DD7. DD3 is located at a residential estate where earthworks are taking place. DD4 is within proximity of the north-eastern bund wall that was under construction from site	Yes	No exceedances of the daily 24-hour limit were observed.	No

Date	DUST DEPOSITION (DD)		PM_{10} TEOM		Air quality Complaints
	Compliance	Comment	Compliance	Comment	
Feb 2019	No	Exceeded max DD level/month at locations DD4 and DD5. DD4 and DD5 are near north-eastern bund wall and the site access road, under construction.	Yes	Daily limits exceeded on 12/02/19, 13/02/19. Consistent with a state-wide 1,500 km wide dust cloud. The site did not contribute to the non-compliance.	No
Mar 2019	No	Exceeded max DD level/month at locations DD3, DD4 and DD7. DD3 is located at a residential estate where earthworks are taking place. DD4 and DD7 is the north-eastern bund wall and the site exist that were both under construction from site.	Yes	Daily limits complied during the recording periods at both locations	No
Reporting period 2: April 2019 to March 2020					
Apr 2019	No	Exceeded max DD level/month at locations DD3, DD4 and DD7. DD3 is located at a residential estate where earthworks are taking place. DD4 and DD7 are near north-eastern bund wall and the site access road, both under construction.	Yes	Daily limits were exceeded on 8-9/4/19 at Location A2.	No
May 2019	No	Exceeded max DD level/month at locations DD1, DD4 and DD7. Measurements were uncharacteristically high during this month, potentially due to the generally dry conditions. DD1, DD4 and DD7 are near north-eastern bund wall and the site access road, both under construction.	Yes	There were no exceedances of the daily PM_{10} limit during the month of May.	No
Jun 2019	No	Exceeded max DD level/month at locations. DD4 and DD7. Measurements were uncharacteristically high during this month, potentially due to the generally dry conditions. DD4 and DD7 are near north-eastern bund wall and the site access road, both under construction.	Yes	There were no exceedances of the daily PM_{10} limit during the month of June.	No
Jul 2019	Yes	Measured levels complied with the maximum deposited dust level per month at all locations.	Yes	There were no exceedances of the daily PM_{10} limit during the month of July.	No
Aug 2019	Yes	Measured levels complied with the maximum deposited dust level per month at all locations.	Yes	There were no exceedances of the daily PM_{10} limit during the month of August.	No

Date	DUST DEPOSITION (DD)		PM_{10} TEOM		Air quality Complaints
	Compliance	Comment	Compliance	Comment	
Sep 2019	Yes	Measured levels complied with the maximum deposited dust level per month at all locations.	Yes	There were no exceedances of the daily PM_{10} limit during the month of September.	No
Oct 2019	Yes	Measured levels complied with the maximum deposited dust level per month at all locations.	Yes	There was one exceedance of the daily PM_{10} limit on 25/10/19 due to increased bushfire activity throughout NSW and subsequent smoke haze, not dust emissions from site.	No
Nov 2019	Yes	3/7 locations dust levels were above the maximum allowable level. DD4 (24g/m^2) was likely contaminated. DD2 and DD6 likely due to dry and dusty local conditions close to the gauge. Exceedances are unlikely due to site activities as DD1 and DD7 measured compliant levels.	Yes	Several exceedances of 50 ug/m^3 daily limit were observed. These exceedances were attributed to poor air quality in the greater Sydney area due to bushfires in surrounding areas. No exceedances to the daily PM_{10} limit were attributable to site operations during the month of November.	No
Dec 2019	Yes	1/7 locations measured dust levels above the maximum allowable level. DD4 (4.7g/m^2) was not in line with other locations and likely due to local conditions.	Yes	Several exceedances of 50 ug/m^3 daily limit were observed. These exceedances were attributed to poor air quality in the greater Sydney area due to bushfires in surrounding areas. No exceedances to the daily PM_{10} limit were attributable to site operations during the month of December.	No
Jan 2020	Yes	7/7 locations measured dust levels above the maximum allowable level. These exceedances are likely to be due to the poor air quality due to bushfires in the surrounding areas.	Yes	Several exceedances of 50 ug/m^3 daily limit were observed. These exceedances were attributed to poor air quality in the greater Sydney area due to bushfires in surrounding areas. No exceedances to the daily PM_{10} limit were attributable to site operations during the month of January.	No
Feb 2020	Yes	7/7 locations measured dust levels above the maximum allowable level. These exceedances are likely to be due to the poor air quality due to bushfires in the surrounding areas.	Yes	Several exceedances of 50 ug/m^3 daily limit were observed. These exceedances were attributed to poor air quality in the greater Sydney area due to bushfires in surrounding areas. No exceedances to the daily PM_{10} limit were attributable to site operations during the month of February.	No
Mar 2020	Yes	3/7 locations measured dust levels above the maximum allowable level. DD2 and DD4 were likely contaminated. DD7 likely due to local conditions close to the gauge as these results were not repeated elsewhere.	Yes	There were no exceedances of the daily PM_{10} limit during the month of March 2020.	

5.3.5 Analysis of dust and particulate monitoring

A summary of the air quality monitoring results for the project since inception is provided below.

5.3.5.1 Dust deposition

Figure 5-2 shows the rolling averages for each DD gauge during the reporting period from April 2019 to March 2020 (Reporting period 2) which cover the period when operations commenced.

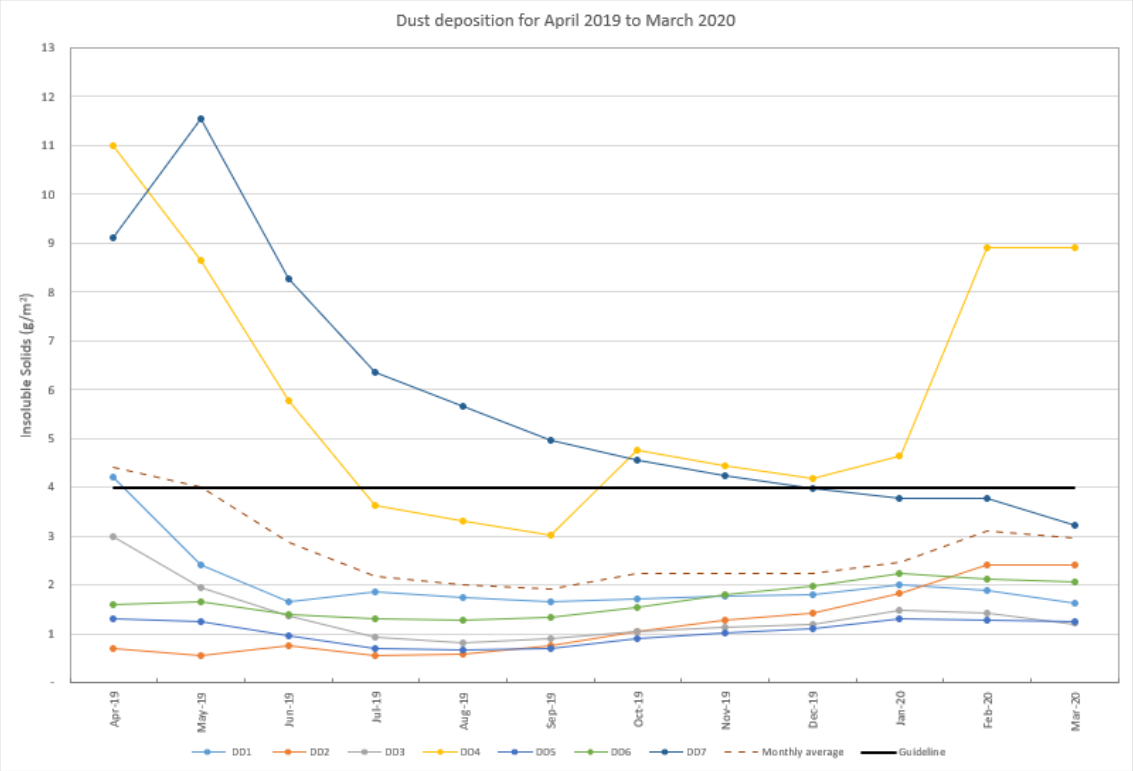

Figure 5-2: Monthly rolling averages for dust deposition

Note that for months 1 to 11 (April 2019 to February 2020) the rolling averages are from start of monitoring (i.e. not annual). From Month 12 (March 2020) the rolling averages are based on the month and the preceding 11 months (i.e. annual rolling average).

From April 2019 to June 2019, exceedances at DD4 and DD7 were consistently recorded. This was directly attributed to the construction of the north-eastern bund wall and the site access road, which were under construction between January to July 2019.

Exceedance at DD3 was attributed to works occurring at a residential site north of the site.

During January 2020 and February 2020, all of the DD gauges exceeded the long-term criteria. These exceedances were likely due to the poor air quality resulting from the bushfires in the surrounding areas. This was also evident in the PM_{10} data for the same period.

Laboratory analysis of the DD material at some of the DD gauges showed that some exceedances were considered likely to be due to contaminants from other local sources not from site activities. These exceedances were also noted to be inconsistent with results from the other DD monitoring locations. Monthly reports detail the split between soluble and insoluble material per DD gauge.

5.3.5.2 Particulate Matter (PM_{10})

No exceedance of the long- and short-term criteria for PM_{10} were recorded during this reporting period.

5.4 Weather monitoring

As required under Sch4 C29, the Proponent has installed a weather station to continuously monitor (by sampling and obtaining results by analysis) the following parameters:

- Rainfall (mm)
- Solar radiation (W/m^2): this is a measure of the intensity of the sunlight at the site and varies throughout the day from 0 watts per square meter (W/m^2) at night to over 1000 W/m^2 during the day.
- Wind speed at 10 metres (m/s)
- Wind direction at 10 meters (degrees)
- Temperature at 2 metres and 10 metres (°C)
- Sigma theta at 10 metres (degN): horizontal wind direction fluctuations, measured in degrees clockwise from true north.

The weather monitoring station is located immediately west of the site office carpark, and monitoring commenced in August 2018.

A summary of the measured parameters are provided in the charts below. An analysis of the data is provided in **Section 5.4.8.**

5.4.1 Rainfall (mm)

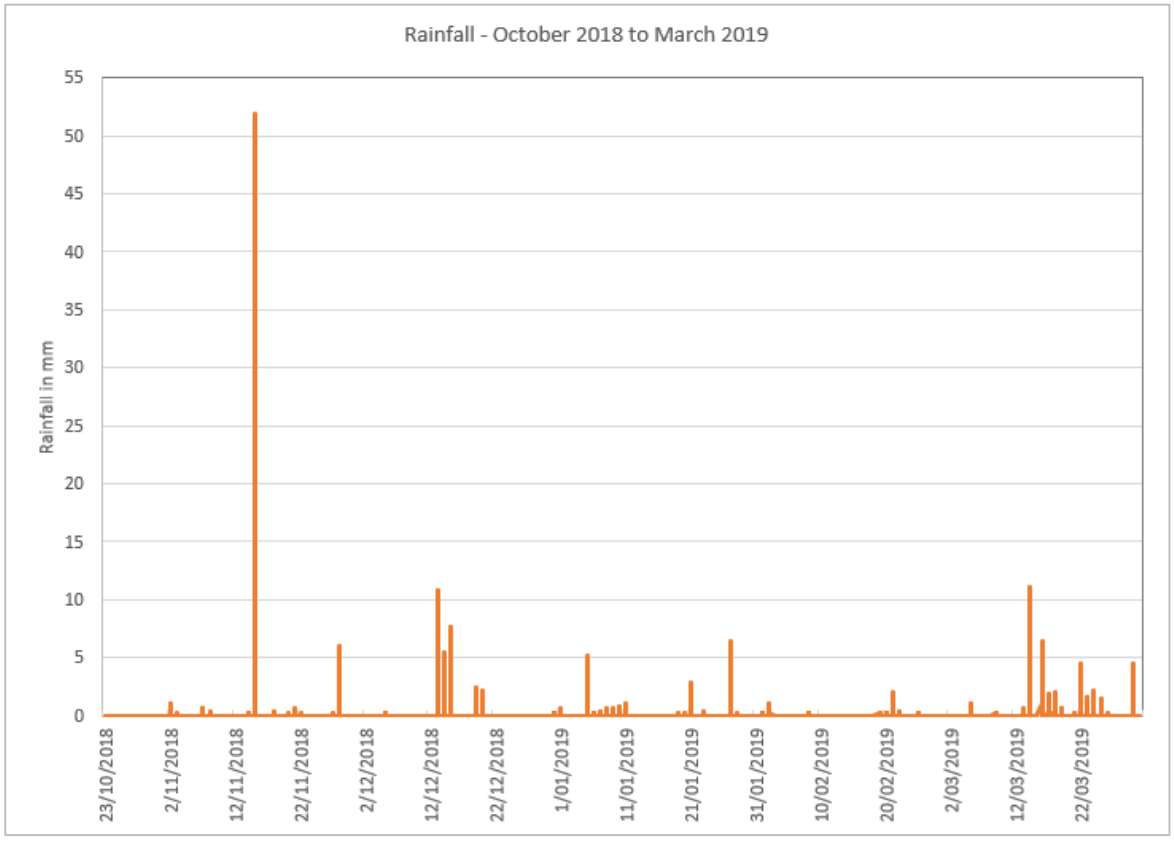

Figure 5-3: Reporting period 1: April 2018 to March 2019 rainfall data

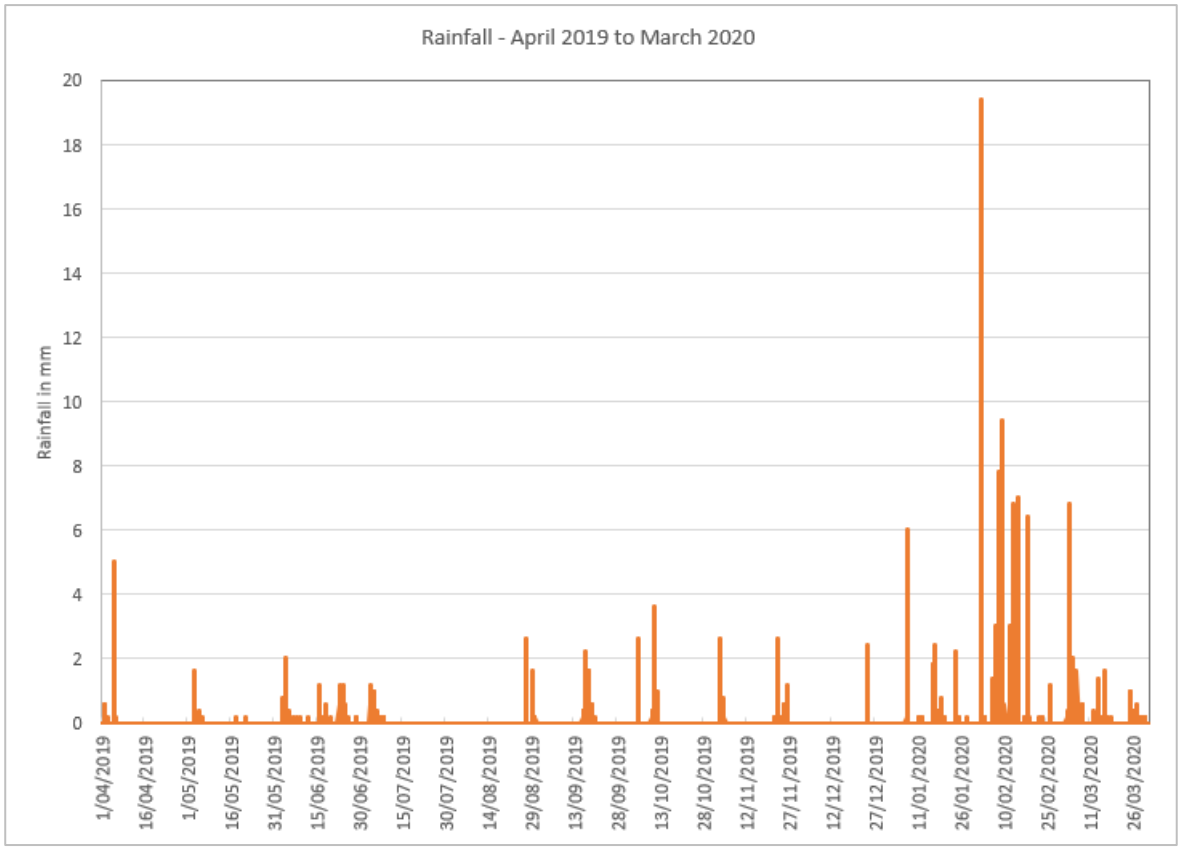

Figure 5-4: Reporting period 2: April 2019 to March 2020 rainfall data

5.4.2 Solar radiation (W/m²)

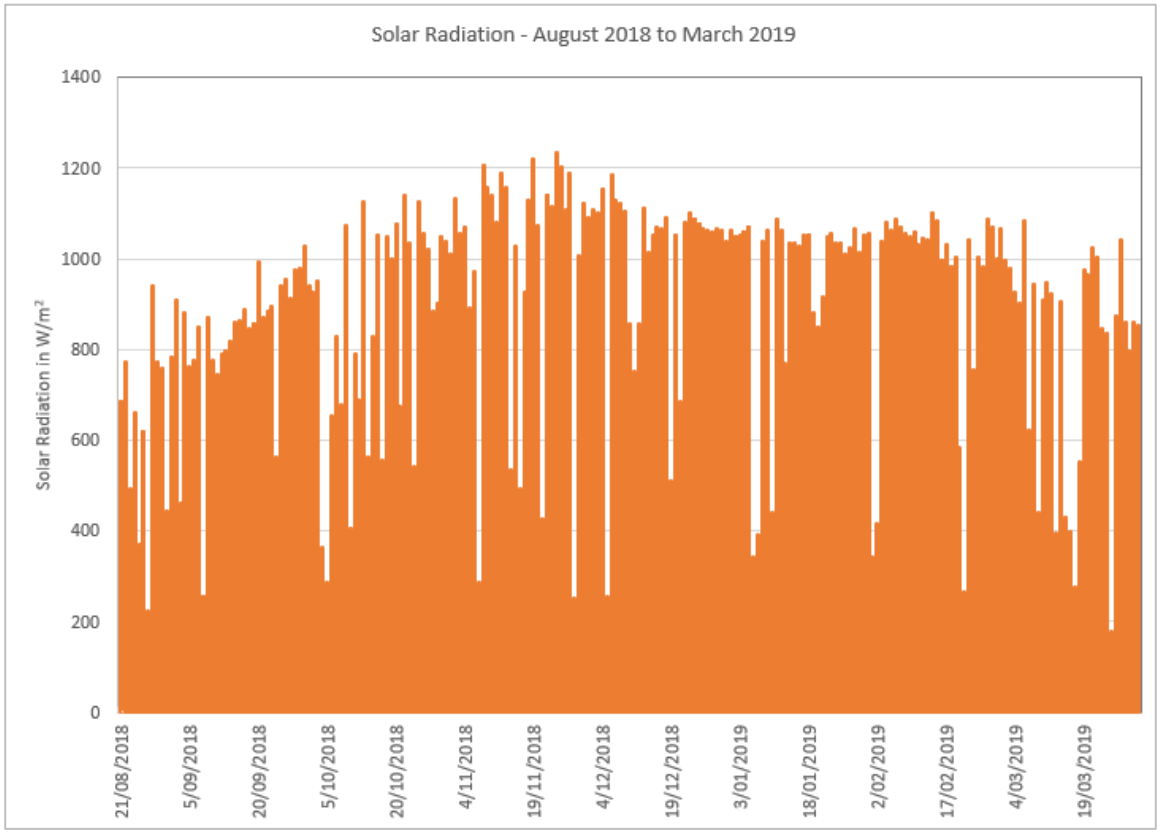

Figure 5-5: Reporting period 1: April 2018 to March 2019 solar radiation data

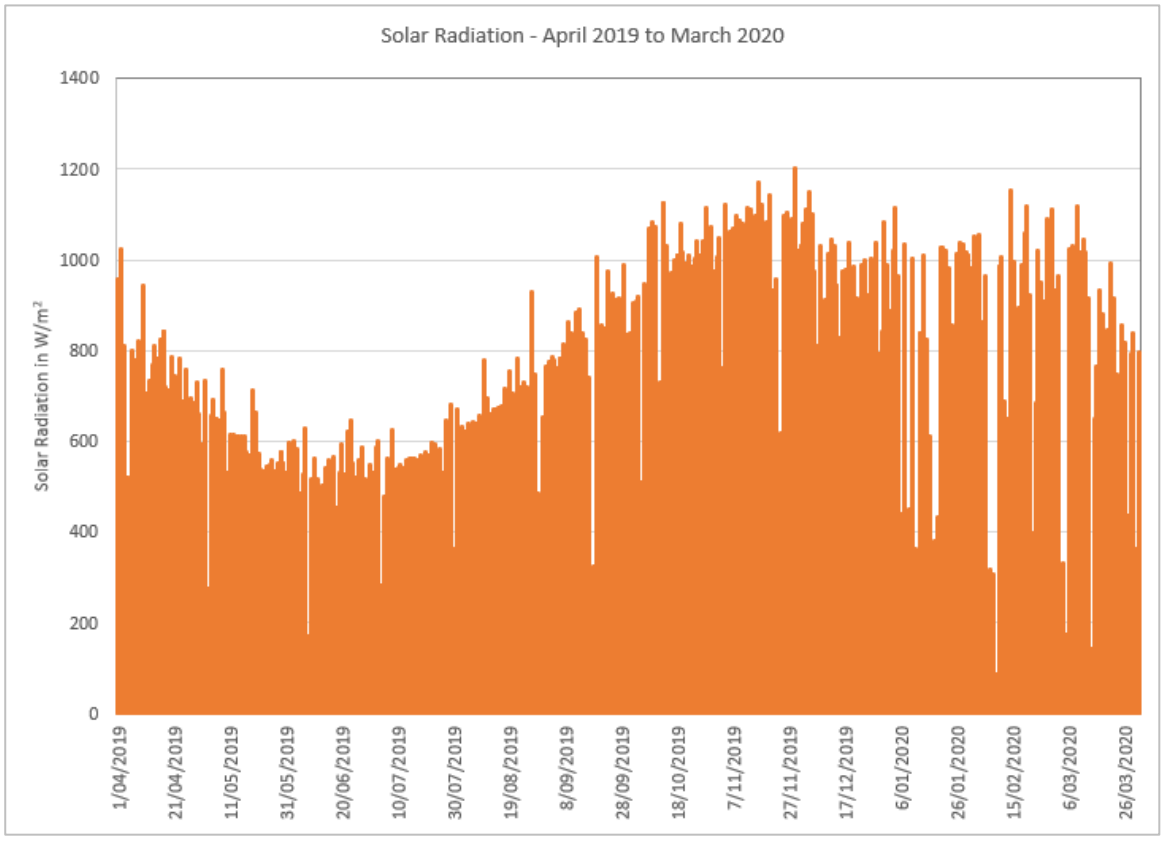

Figure 5-6: Reporting period 2: April 2019 to March 2020 solar radiation data

5.4.3 Wind speed at 10 metres (m/s)

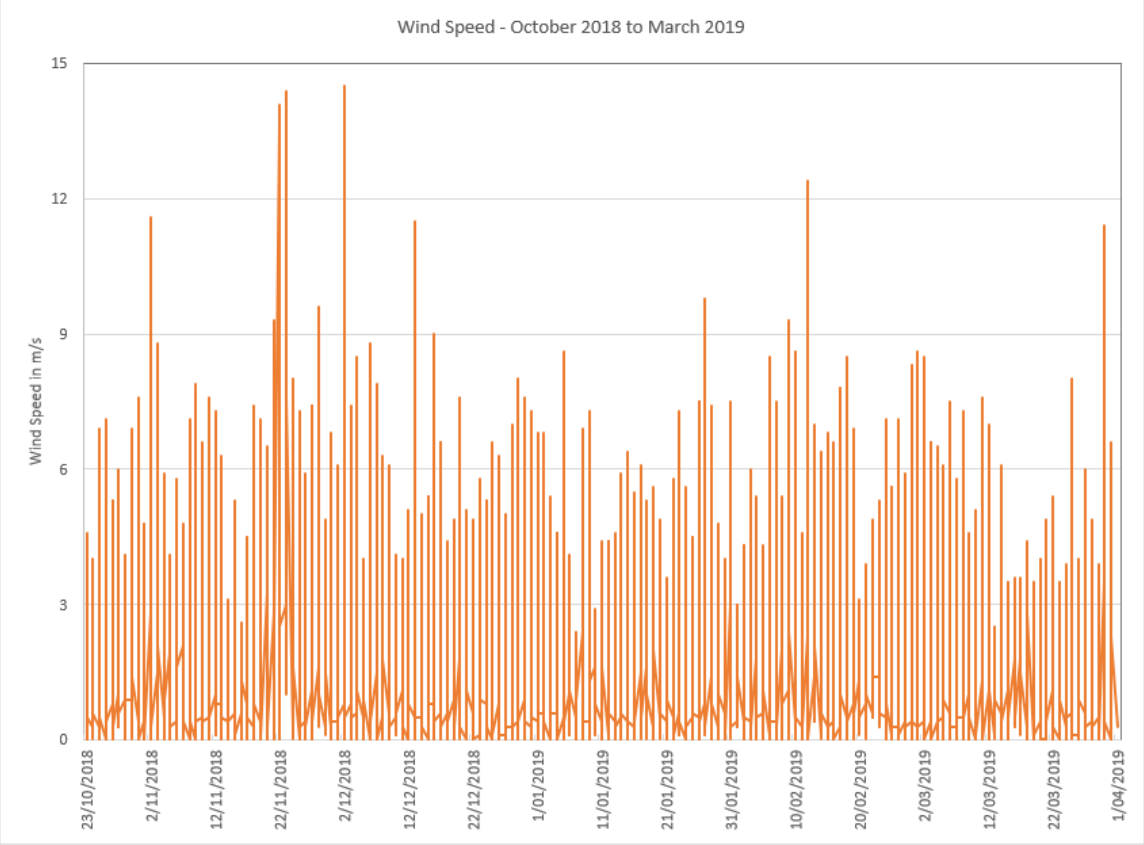

Figure 5-7: Reporting period 1: April 2018 to March 2019 wind speed (10m)

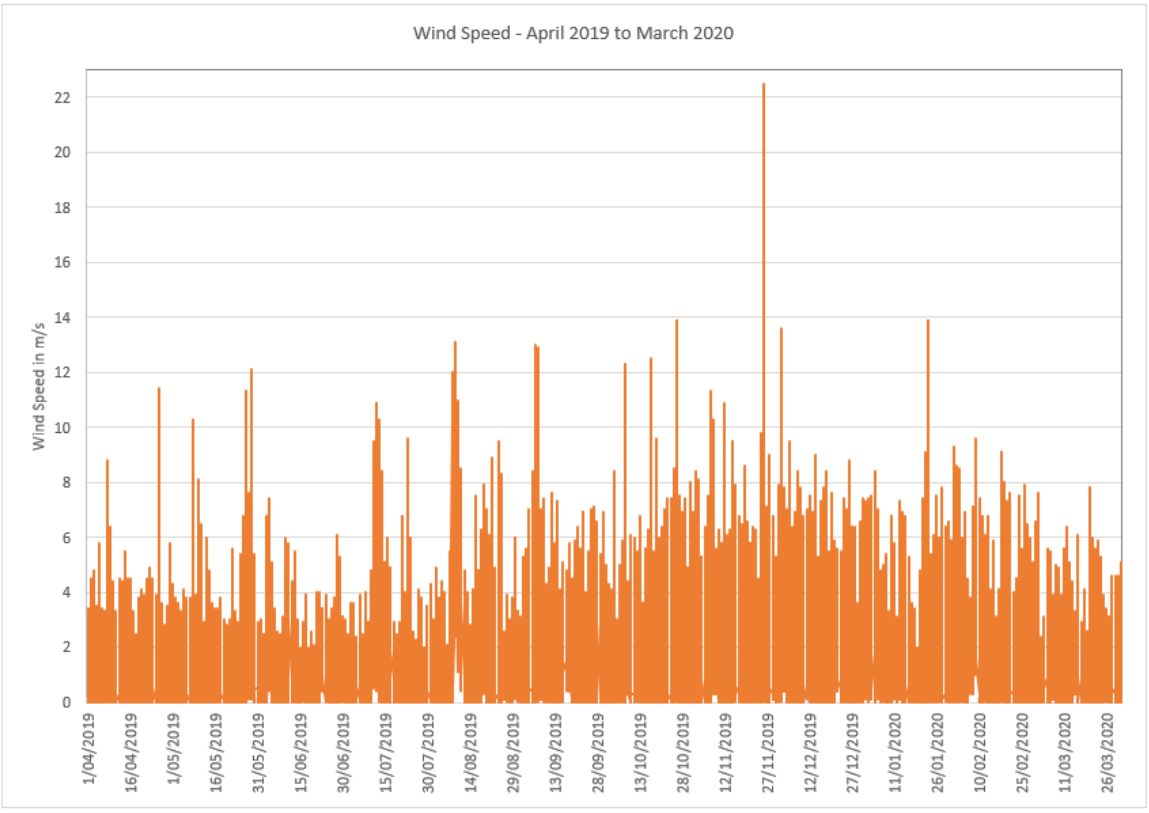

Figure 5-8: Reporting period 2: April 2019 to March 2020 wind speed (10m)

5.4.4 Wind direction

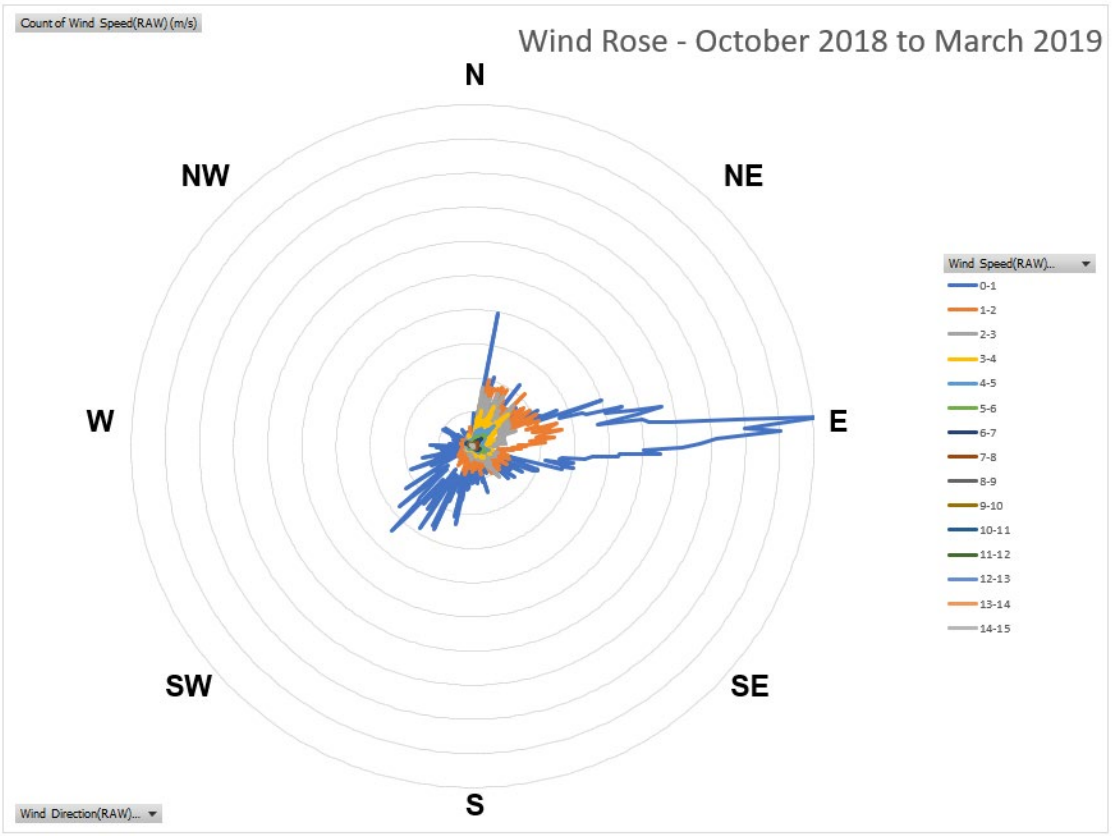

Figure 5-9: Reporting period 1: April 2018 to March 2019 wind direction

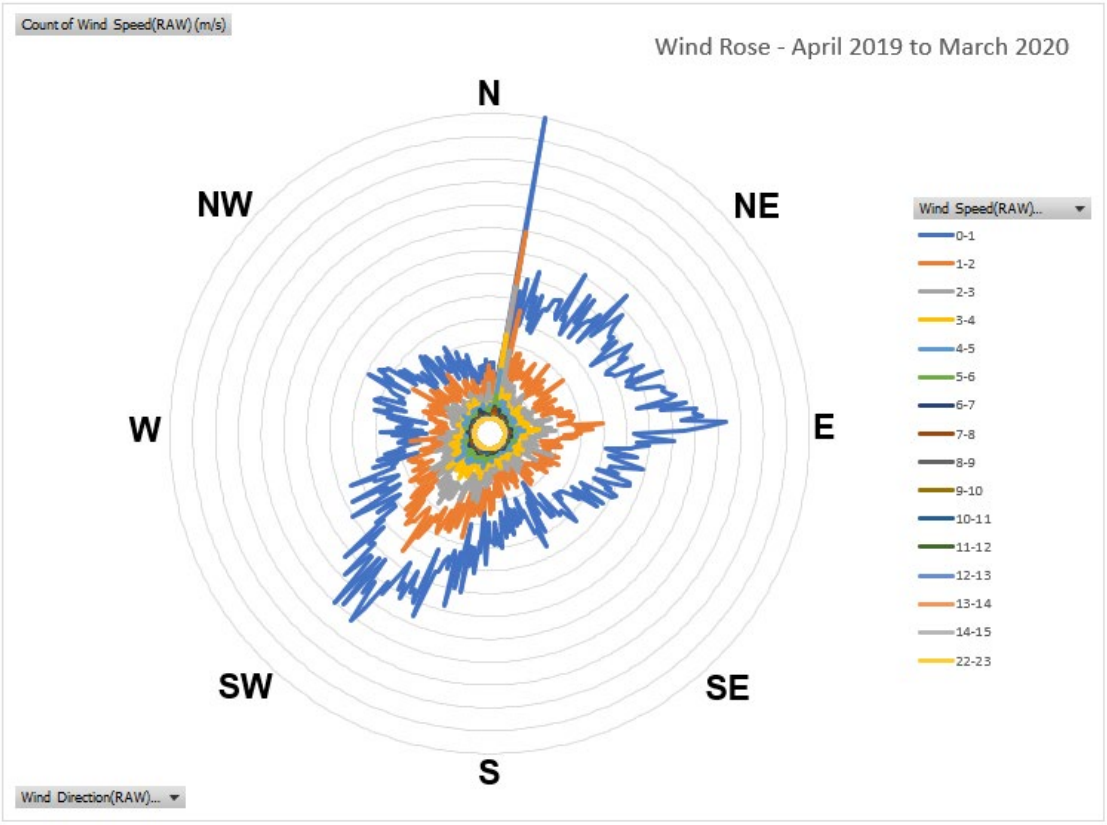

Figure 5-10: Reporting period 2: April 2019 to March 2020 wind direction

5.4.5 Sigma Theta (degN)

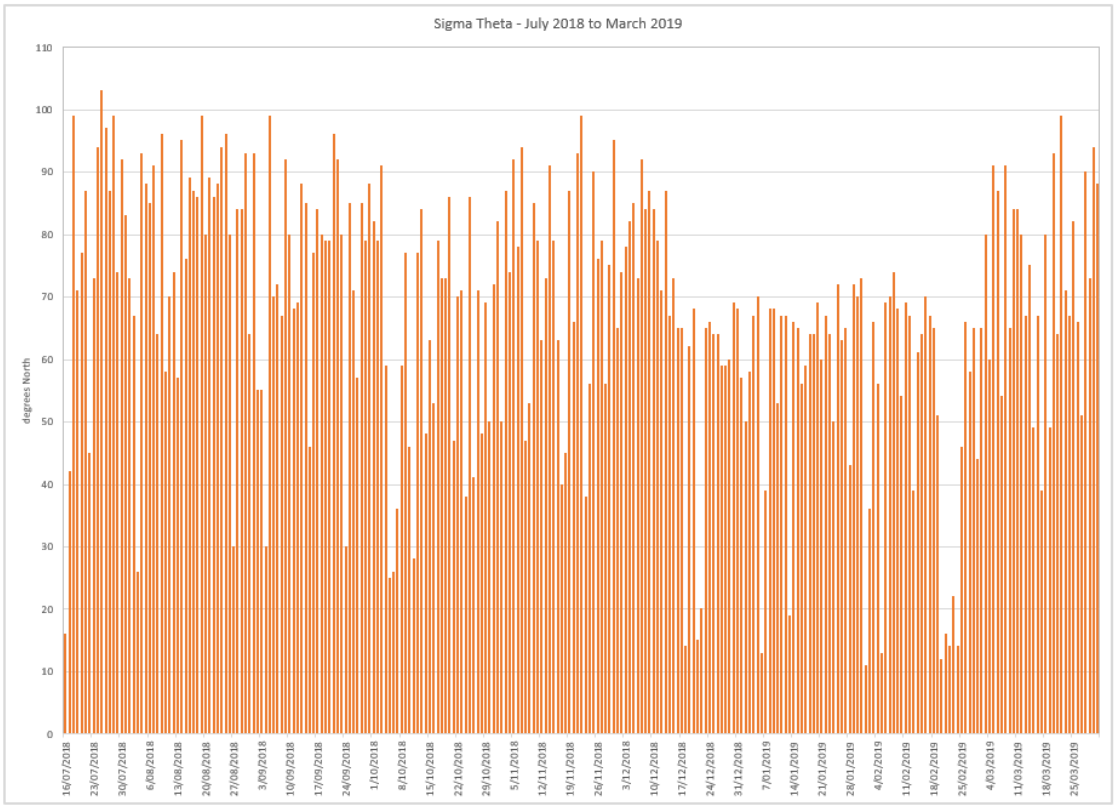

Figure 5-11: Reporting period 1: April 2018 to March 2019 sigma theta (SD_WD)

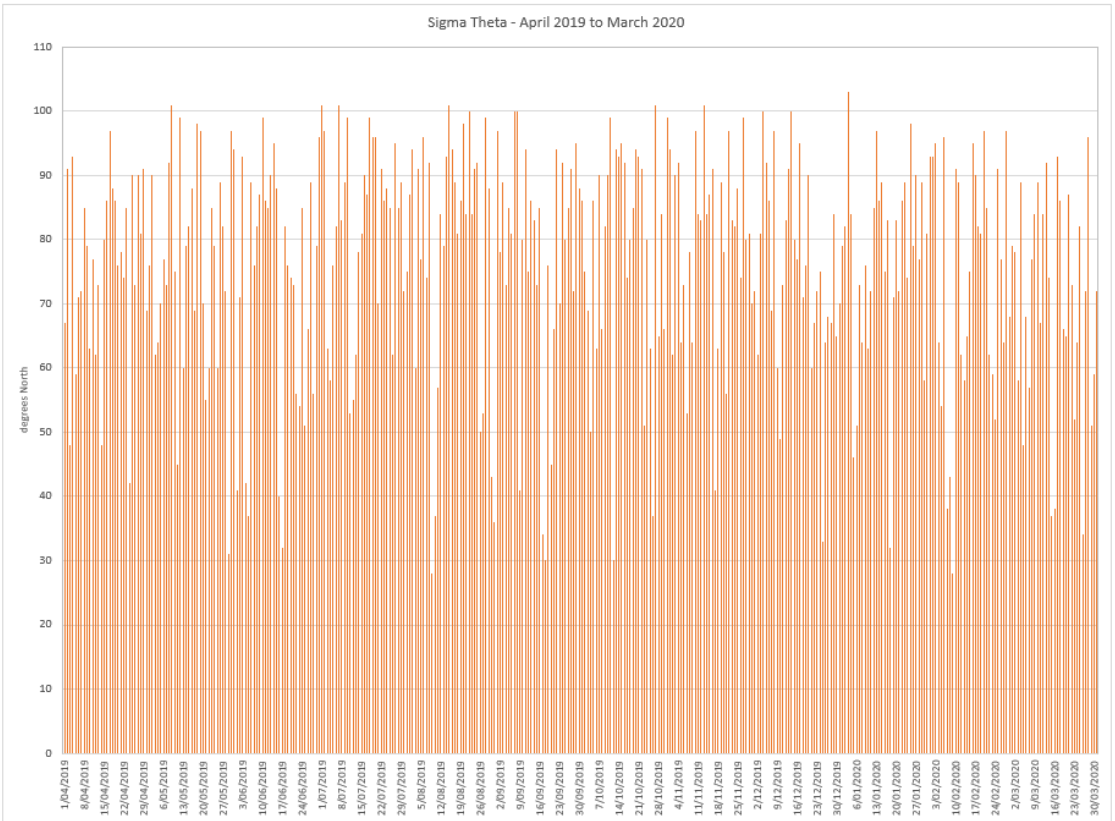

Figure 5-12: Reporting period 2: April 2019 to March 2020 sigma theta (SD_WD)

5.4.6 Temperature at 10 metres (°C)

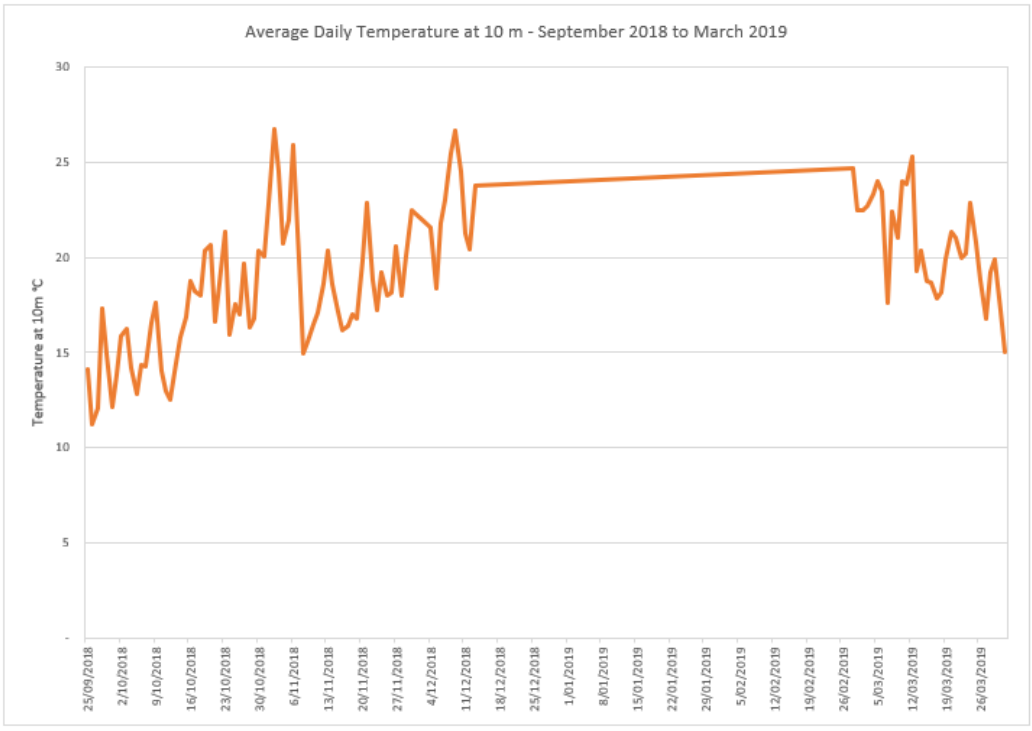

Figure 5-13: Reporting period 1: April 2018 to March 2019 temperature at 10 metres

Temperature at 10 metres was only available from September 2018 and was malfunctioning for December 2018 through to February 2019 period. This data was removed for the purposes of this report to give more accurate reflection of the average temperatures for the period. It is noted that this was rectified as shown **Figure 5-13**.

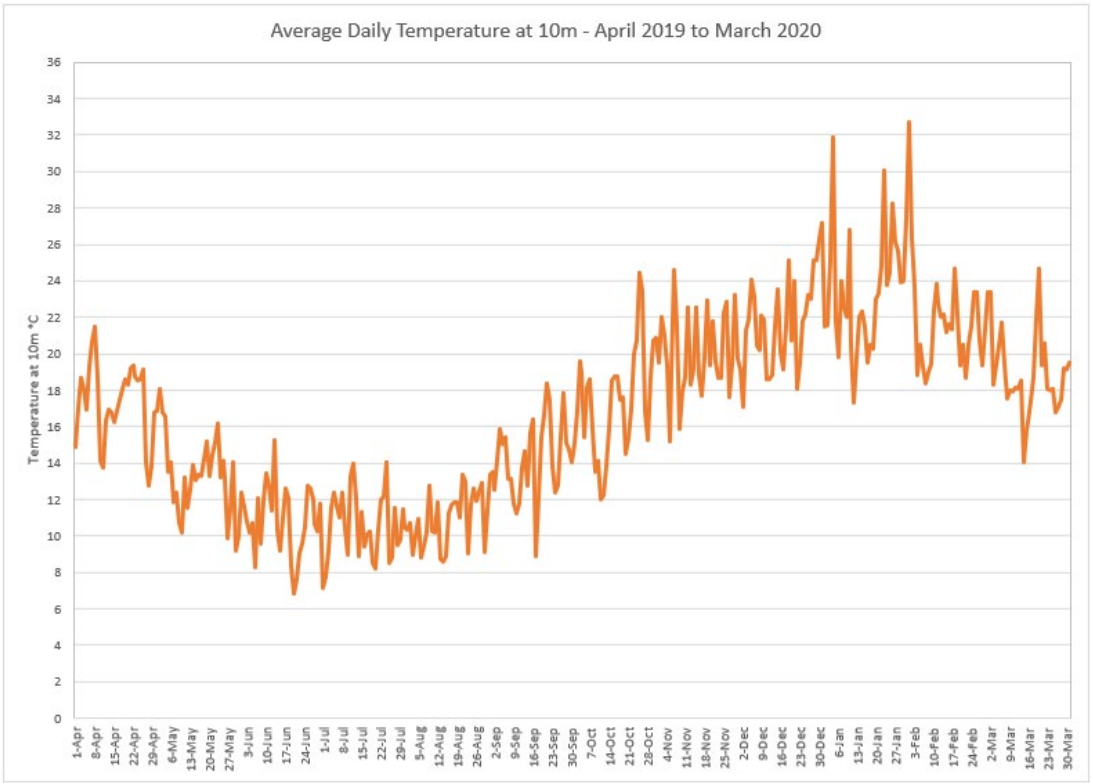

Figure 5-14: Reporting period 2: April 2019 to March 2020 temperature at 10 metres

5.4.7 Temperature at 2 metres (°C)

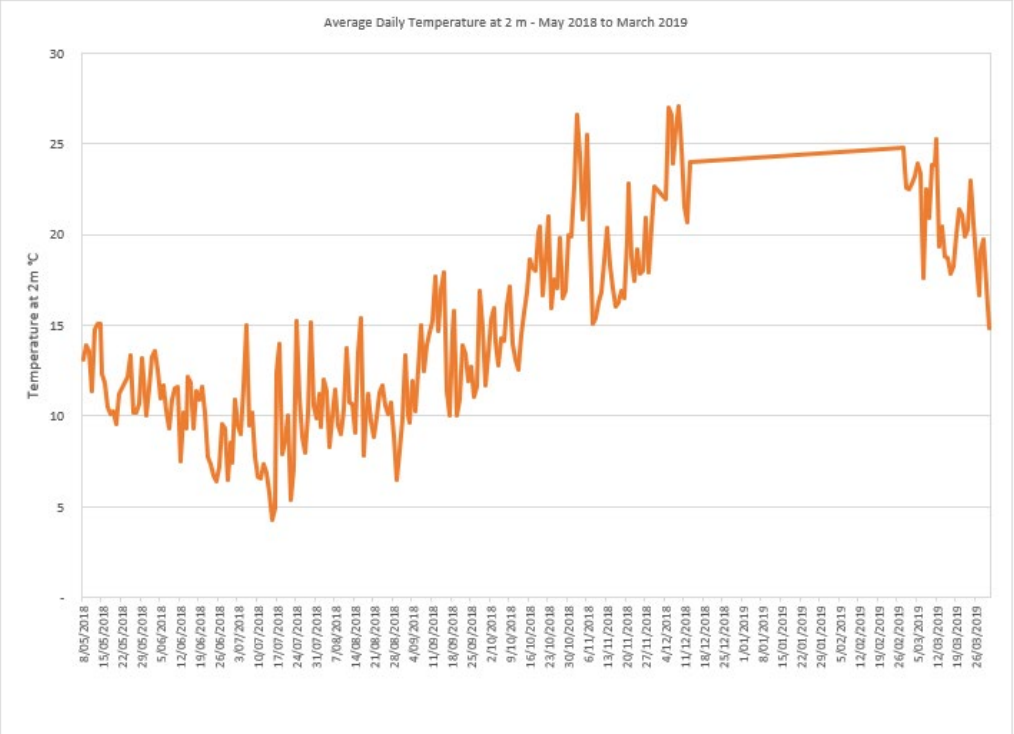

Figure 5-15: Reporting period 1: April 2018 to March 2019 temperature at 2 metres

Data at 2 metres was available from May 2018 and was malfunctioning for part of the December 2018 through to February 2019 period. This data was removed for the purposes of this report to give more accurate reflection of the average temperatures for the period. It is noted that this was rectified as shown Figure 5-16.

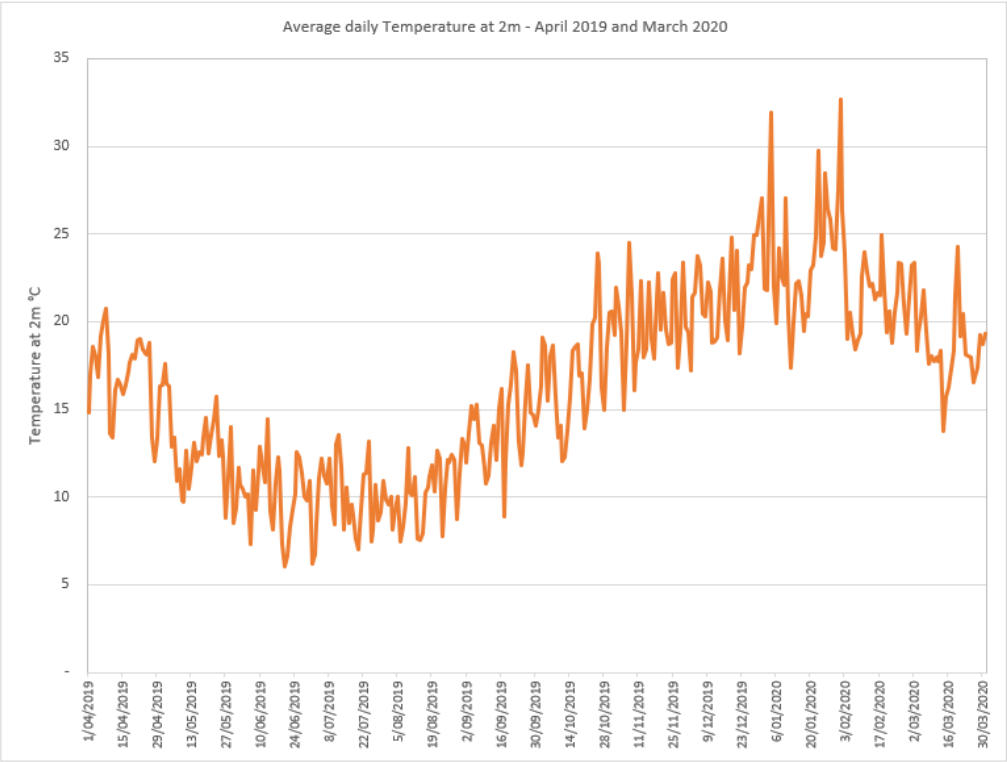

Figure 5-16: Reporting period 2: April 2019 to March 2020 temperature at 2 metres

5.4.8 Analysis of weather monitoring

Table 5-7: Weather monitoring data analysis for reporting period

Location ID	Parameter
Rainfall (mm)	• **2018/19 reporting period (Oct to Mar):** – Total rainfall was 517.4 mm – Average rainfall was 86.3 mm • **2019/20 reporting period (April to Mar):** – Total rainfall was 923.4 mm. – Average rainfall was 121.1 mm • Average rainfall for the two reporting periods was 103.7 mm • Highest monthly rainfall was measured in March 2022 with a total of 441.2 mm recorded, with lowest rainfall recorded in Oct 2018 when no rainfall was recorded for the month. • Highest daily rainfall of 78.7 mm was measured on 9 Dec 2018, followed by 77.1 mm on 30 Nov 2018 • There was no real seasonal variation in the rainfall for this reporting period
Solar radiation (W/m^2).	• Highest solar radiation was recorded in the spring-summer months (Sept to Mar) and the lowest solar radiation was recorded in the autumn-winter months (May to Jul) • The highest daytime solar radiation (1,233.2 W/m^2) during the reporting period was recorded on 24 Nov 2018 at 12:40 pm.
Wind speed at 10 metres (m/s)	**2018/19 reporting period (Oct to Mar):** • Average wind speed for the reporting period was 1.65 m/s • Maximum wind speed recorded was 14.4 m/s on 2 Dec 2018 at 12:50 pm • Minimum wind speed recorded was 0 m/s recorded on various days • Highest monthly average wind speed 2.07 m/s recorded in Nov 2018 • Lowest monthly average wind speed 1.42 m/s in Mar 2018. • Wind speed was predominantly in the 0-4 m/s range and occasionally in the 4-6 m/s range: 0-2 m/s range (69%), 2-4 m/s (22%) and 4-6 m/s (7%). **2019/20 reporting period (Oct to Mar):** • Average wind speed for the reporting period was 1.49 m/s • Maximum wind speed recorded was 17 m/s on 29 Nov 2020 at 1:10 pm • Minimum wind speed recorded was 0 m/s recorded on various days • Highest monthly average wind speed 2.1 m/s recorded in Nov 2021 • Lowest monthly average wind speed 0.96 m/s in Jun 2019. • Wind speed was predominantly in the 0-4 m/s range and occasionally in the 4-6 m/s range: 0-2 m/s range (72%), 2-4 m/s (19%) and 4-6 m/s (6%).

Location ID	Parameter
Wind direction at 10 meters (degrees) Sigma theta at 10 metres (degN)	• The wind rose in **Section 5.4.4**, shows that the wind direction was predominately from the east during reporting period 1 (Apr 2018-Mar 2019), the south-west during reporting period 2 (Apr 2019-Mar 2020), with an occasional wind blowing from the north. • The wind rose was developed using raw wind speed (m/s) and raw wind direction (degrees)
Temperature at 2 metres (°C)	**2018/19 reporting period (Oct to Mar):** Temperature at 2 metres was available from May 2018 and was malfunctioning from Dec 2018 - Feb 2019. This data was removed for the purposes of this report to give more accurate reflection of the average temperatures for the period. These are summarised below: • Average temperature for the reporting period was 14.22°C • Maximum temperature recorded at 10 metres was 26.72°C on 2 Nov 2018 • Minimum temperature recorded was 11.24°C on 26 Sep 2018 • Highest monthly average 24.75°C recorded in Feb 2019 • Lowest monthly average 9.26°C recorded in Sep 2018. **2019/20 reporting period (Oct to Mar):** • Average temperature for the reporting period was 16.39°C • Maximum temperature recorded was 32.69°C on 1 Feb 2020 • Minimum temperature recorded was 6.04°C on 20 Jun 2020 • Highest monthly average 23.48°C recorded in Jan 2020 • Lowest monthly average 9.85°C recorded in July 2020.
Temperature at 10 metres (°C)	**2018/19 reporting period (Oct to Mar):** Temperature at 10 metres was only available from Sep 2018 and was malfunctioning from Dec 2018 - Feb 2019. This data was removed for the purposes of this report to give more accurate reflection of the average temperatures for the period. These are summarised below: • Average temperature for the reporting period was 18.85°C • Maximum temperature recorded at 10 metres was 26.72°C on 2 Nov 2018 • Minimum temperature recorded was 11.24°C on 26 Sep 2018 • Highest monthly average 24.66°C recorded in Feb 2018 • Lowest monthly average 13.59°C recorded in Sep 2018. **2019/20 reporting period (April to Mar):** • Average temperature for the reporting period was 16.7°C • Maximum temperature recorded at 10 metres was 32.7°C on 1 Feb 2020 • Minimum temperature recorded was 6.8°C on 20 Jun 2020 • Highest monthly average 23.39°C recorded in Jan 2020 • Lowest monthly average 10.55°C recorded in July 2020.

5.5 Surface water monitoring

As described in the SWLMP (GHD, 2019), the main purpose of the surface water management system is the collection and treatment of sediment laden runoff prior to discharge via one of three licensed discharge points. Runoff not considered leachate[10] will be collected and discharged into sediment dams or temporary in-cell surface water storage areas, within the bunds, for initial treatment of sediment.

Surface water runoff from intermediate cover areas and bunded areas of the cell floor will be isolated from contact with the waste and will be collected and pumped from the landfill area and treated as stormwater in the surface water management system. Water from the sediment dams will be reused on site where possible for operational purposes (such as dust suppression). Water not re-used will be transferred to external dams beyond the bunds and discharged if above the design rainfall event or otherwise once testing for appropriate water quality has been undertaken. If required flocculant treatment will be undertaken in accordance with the Stormwater Dewatering Management Plan (Niche Environment and Heritage, 2016).

5.5.1 Monitoring locations

The surface water management system encompasses the collection and treatment of sediment laden runoff prior to discharge via monitoring points which are monitored quarterly. The surface water and wet weather monitoring locations are shown on **Figure 5-17** and licensed discharge points are provided EPL 20814 and replicated in **Table 5-8.**

Table 5-8: EPL 20814 Licensed discharge points for surface water

EPA/EPL ID #	Type of discharge point	Sampling Point
1	Wet weather discharge and water quality monitoring	Dam 6 discharge point
2	Wet weather discharge and water quality monitoring	Weir monitoring point
3	Wet weather discharge and water quality monitoring	Dam 3 discharge point
19	Surface water monitoring point	Monitoring gantry

[10] Leachate is stormwater which has contacted surface exposed waste and the liquid collected from the cells which have underdrain collection and extraction systems. The surface water management system will only manage stormwater that has come into contact with VENM, ENM and other inert materials such as unprocessed and processed Building and Demolition wastes and on the basis that the water quality objectives stipulated in the Environment Protection Licence are met. Any water coming into contact with C&I wastes shall be treated as leachate noting that the Project approval requires that all unprocessed C&I wastes are sorted in an enclosed building with impermeable floors draining to a leachate management system.

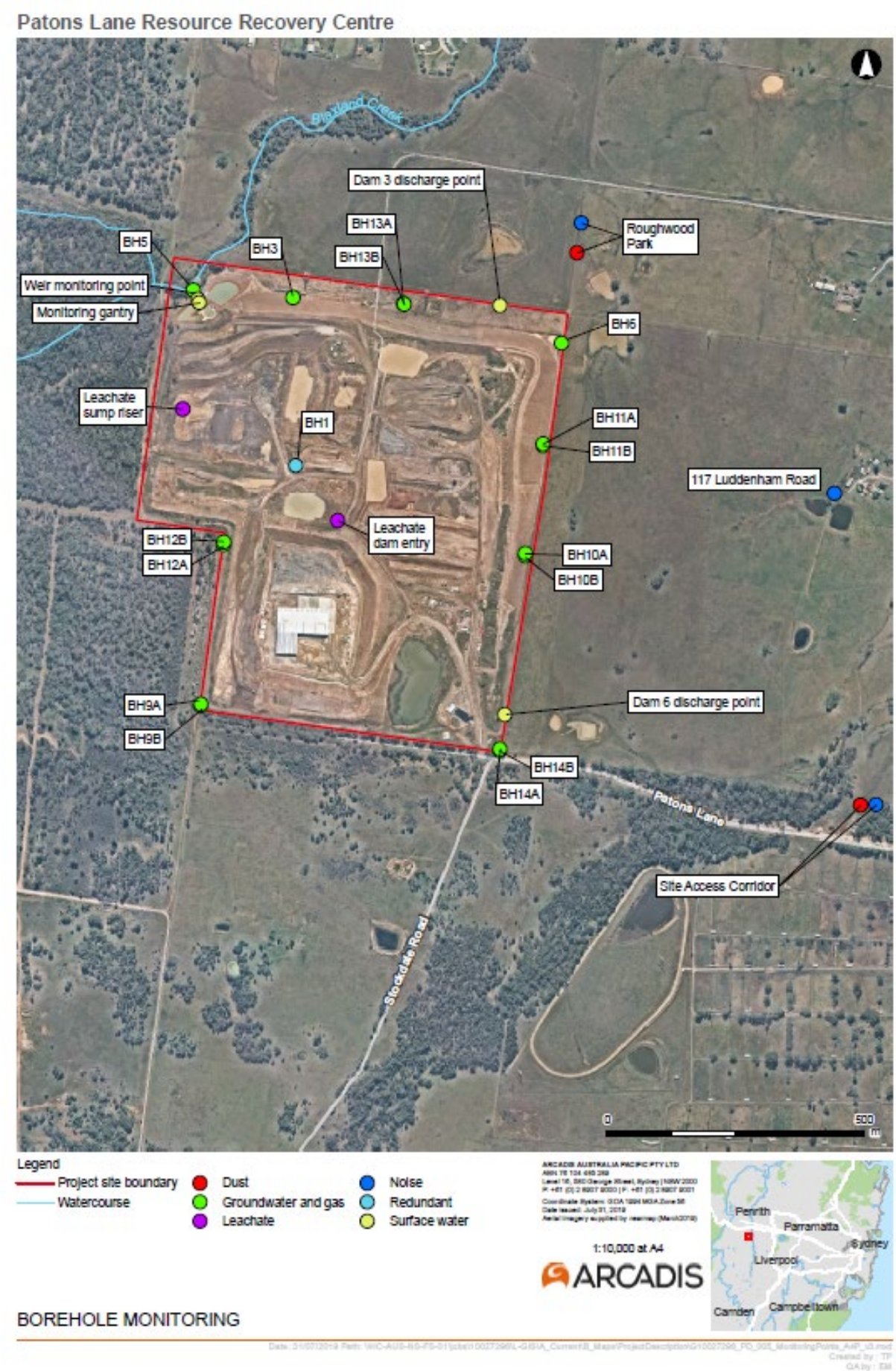

Figure 5-17: Environmental monitoring locations

5.5.2 Monitoring criteria

As per Sch7 H C5(b), the surface water management system includes measures to treat runoff where required to reach acceptable discharge under the EPL, according to guidelines from *Managing Urban Stormwater - Soils and Construction Manual (DECC 2004)* and EPA requirements.

The EPL concentration limits are specified in **Table 5-9.** For each monitoring/discharge point or utilisation area specified, the concentration of a pollutant discharged at that point, or applied to that area, must not exceed these criteria.

Table 5-9: Discharge criteria for surface water for licenced discharge points

Pollutant	Unit	Criteria	Frequency of monitoring
Ammonia	mg/L	1	If discharges occur, the collection of samples within 24 hours of discharge and at a minimum of weekly intervals during discharge;
pH	pH units	6.5-8.5	
Total suspended solids (TSS)	mg/L	50	

5.5.3 Surface water monitoring

The Surface water Assessment (GSS Environmental and BMT WBM Pty Ltd, February 2010) recommended that water quality samples be collected quarterly from all internal and external dams at PLRRC and also quarterly from Blaxland Creek both upstream and downstream of the PLRRC. The SWLMP requires that surface water be monitored quarterly at the sediment dams and wet weather discharge monitoring is also undertaken at the wet weather overflow points.

The SWLMP requires that surface water be monitored quarterly at the sediment dams and wet weather discharge monitoring is also undertaken at the wet weather overflow points. The following monitoring parameters were established in accordance with the landfill guidelines.

- pH
- Total suspended solids (mg/L)
- Turbidity (NTU)
- Dissolved oxygen (mg/L)
- Electrical conductivity (µs/cm)
- Nitrogen – ammonia (mg/L)
- Total organic carbon(mg/L)
- Total dissolved solids(mg/L)
- Potassium (mg/L).

All monitoring of waters will be undertaken in accordance with *Approved Methods for Sampling and* Analysis *of Water Pollutants in NSW* (DECCW, March 2004).

5.5.3.1 Reporting period 1: April 2018 to March 2019

Construction of Dam 2A was completed in October 2018, but remained dry until between December 2018 and March 2019.

5.5.3.2 Reporting period 2: April 2019 to March 2020

Construction of Dams 3 and 6 was completed between March 2019 and July 2019.

Since construction of Dams 2A, 3 and 6, wet weather discharge monitoring has been undertaken at least quarterly at the sediment dams and overflow points. This is taken to have satisfied the requirement for quarterly surface water monitoring.

Wet weather overflow monitoring for the reporting period is addressed in **Section 5.5.5.**

5.5.4 Quarry void dewatering

As part of the approval granted by the NSW Land and Environment Court, two conditions specifically related to the flooded quarry void and dewatering requirements.

The quarry void was dewatered in accordance with the programme described in V*oid and Receiving Waters Characterisation Monitoring Program (March 2016),* prepared by Niche Environment and Heritage and the Stormwater Dewatering Management Plan (SDMP) (Niche Environmental, January 2016).

The programme and plan were prepared in consultation with the EPA and approved by the DPIE.

5.5.4.1 Reporting period 1 – April 2018 to March 2019

Quarry void dewatering was undertaken daily between 13 August 2018 and 11 October 2018. **Table 5-10** summarises the parameters monitored during the dewatering program, and also includes the monitoring EPL criteria and the established Trigger Action Response Plan (TARP) criteria for the dewatering programme.

Table 5-10: Parameters monitored during the dewatering program

Pollutants	Units	Required Frequency	Approved TARP / EPL Criteria	Condition Green	Condition Amber	Condition Red
Turbidity	NTU	Continuous	90th percentile <50	0-40	>40	90th percentile <50
pH	pH units	Continuous	100th percentile 5.5-8.5	7.0-8.0	<7.0 >8.0	100th percentile 6.5-8.5
Electrical Conductivity (EC)	µS/cm	Continuous	90th percentile <1,600	125-1500	>1500	90th percentile <1,600
Dissolved Oxygen (DO)	mg/L	Continuous	90th percentile range 6.0-11.8	6.2-11.8	DO<6.2	90th percentile range > 6
RedOx Potential	mV	Continuous	N/A	Monitor for significant change	N/A	N/A
Discharge	L/Sec	Continuous	280 L/s	0 – 280	N/A	8.64
Discharge	ML	Daily	8.64 ML/day	0 – 8.64	N/A	8.64

Note: Condition Green: Direct Discharge, Untreated
Condition Amber: Review/ Action/ Treatment of pH/Turbidity
Condition Red: Halt Discharge, Confirmation Checks. Adaptive Management

Monitoring results are provided in **Appendix C.**

There were no exceedance of the criteria and there were no exceedances which triggered the TARP.

5.5.4.2 Reporting period 2: April 2019 to March 2020

No further quarry void dewatering was undertaken during this reporting period.

5.5.5 Wet weather overflow monitoring

There are no specific Conditions of Consent that are applicable to wet weather discharges, however, EPL 20814, requires that wet weather overflows are monitored during active discharges.

Wet weather overflow points are located at LDP1 Dam 6 and LDP3 Dam 3. As described above, Dam 3 was constructed between March 2019 and July 2019, Dam 6 was constructed between April 2019 and July 2019 and Dam 2A was constructed between August and October 2018 but did not have any water in it until sometime between December 2018 and March 2019 (See **Section 5.5.3**).

Table 5-17 details the wet weather discharge monitoring criteria.

Sampling of turbidity and pH are undertaken continuously and all other parameters are monitored weekly by means of grab samples. In addition to the above parameters, pH (in pH units) is also monitored monthly during any pumped discharge and during overflow discharges, and within 24 hours after detection of an overflow discharge (during operational hours) while the overflow discharge occurs.

A variation to EPL 20814 was approved in August 2019. The following changes were made:

- Samples for each discharge are also taken at LDP19 within the HES Dam (monitoring gantry).
- Prior to the variation continuous sampling by probe was required for specified analytes. These have also been included in the EPL annual returns.
- LDP1 was re-named LDP2 (HES weir/spillway).

The reporting period for EPL 20814 is from 8 November to 7 November each year.

5.5.5.1 Reporting period 8 November 2018 and 7 November 2019

Seven discharge events between 8 November 2018 and 7 November 2019 were reported at LDP2 (HES weir/spillway). Additional duplicate samples were taken as appropriate under Bingo's QA/QC protocols.

Two of the reported discharge events were sampled on 19 September 2019 and 16 October 2019 at LDP19 (HES Basin Gantry) following the variation of EPL 20814 in August 2019.

Details of these discharges are included in **Table 5-12.**

Table 5-11: Wet weather overflow monitoring for EPL reporting period 2018-2019 for LDP2

Pollutant	Unit of Measure	No. of samples required by licence	No. of samples collected and analysed	Lowest	Mean	Highest
Ammonia	mg/L	7	12	0.01	0.04	0.13
pH (field probe)	pH units	7	12	6.85	7.77	8.19
pH (*in situ* probe) [1]	pH units	*refer footnote 1*	2,454	6.8	7.80	**8.8**[3]
pH (lab)	pH units	N/A	6	7.53	7.70	7.82
Total Suspended Solids	mg/L	7	12	5	13.92	38
Total Dissolved Solids	mg/L	7	12	477	590.75	728
Electrical Conductivity (probe)	µS/cm	7	12	738	1,041.83	1250

Pollutant	Unit of Measure	No. of samples required by licence	No. of samples collected and analysed	Lowest	Mean	Highest
Electrical Conductivity (*in situ* probe)[1]	µS/cm	*refer footnote 1*	2,454	758	1,036.93	1558
Dissolved Oxygen (probe)	mg/L	7	12	6.54	8.88	11.88
Dissolved Oxygen (*in situ* probe)[1]	mg/L	*refer footnote 1*	2,454	0.3	5.63	56.7
Dissolved Oxygen (lab)	*mg/L*	*N/A*	*6*	*8.8*	*9.47*	*10.5*
Potassium (dissolved)	mg/L	7	12	3	3.58	4
Potassium (total)	mg/L	*refer footnote 2*	6	3	3.67	4
Total Organic Carbon (TOC)	mg/L	7	12	2	2.33	3

Note:

1, *EPL 20814 was varied in August 2019. Prior to variation continuous sampling by probe was required for specified analytes. These have also been reported accordingly*

2. *Not Specified in EPL 20814 if dissolved or total potassium. Conservatively reported as dissolved to aid bioavailability assessment as per ANZECC.*

3. *A pH 8.6 to 8.8 was recorded at LP1 on 18 December 2018 from 10:25 am to 11:30. Rainfall exceeded five-day design event with records indicating 68.2 mm rainfall on site.*

Two of the reported discharge events were sampled on 19 September 2019 and 16 October 2019 at LDP19 (HES Basin Gantry) following the variation of EPL 20814 in August 2019.

Details of these discharges are included in **Table 5-12.**

5.5.5.2 8 November 2019 and 31 March 2020

There were seven wet weather discharge events from LDP2 and two from LPD2 during this reporting period. The results are summarised in **Table 5-12.**

Table 5-12: Wet weather overflow monitoring

TDS – total dissolved solids, DO – dissolved oxygen, TOC – total organic carbon, NSL – no specific limit

EC – electrical conductivity – recommended limit of 1600 µS/cm for discharge to Blaxland Creek (or off-site)

Date	Parameter	Unit	Limit	LDP1 Dam 6	S7 Blaxland Creek	Dam 2A	LDP2 HES Gantry	LDP2 HES Spillway	S8 Blaxland Creek	Comment
7/02/20	**pH**	**pH**	**6.8-8.5**	**7.88**	**6.55**	**7.23**	**7.10**	**6.98**	**7.08**	Rainfall: 115 mm (5 days prior to sampling) and 65 mm (1 day prior to sampling) Sampled within 24 h of discharge: Yes Rainfall for the dewatering/sampling event was well above the Blue Book design criteria (5-day 90th percentile rainfall of 47.6 mm). Measures to minimise water pollution were undertaken, the specified concentration limit for TSS does not apply (see Section L3.1 in the EPL). For context, 326 mm of rainfall was received from midday February 6th to 9 am February 10th, with the whole South Creek catchment in flood.
	TSS	**mg/L**	**50**	**213**	**1540**	**285**	**496**	**715**	**790**	
	Ammonia	**mg/L**	**1**	**0.13**	**0.13**	**0.15**	**0.10**	**0.13**	**0.10**	
	EC	µS/cm	NSL	1150	426	1070	1140	1100	1070	
	TDS	mg/L	NSL	760	277	756	738	726	772	
	DO	% sat	NSL	64.9	73.9	91.3	101	101	81.1	
	TOC	mg/L	NSL	8	4	4	3	3	5	
	Potassium	mg/L	NSL	5	10	4	4	4	4	
14/02/20	pH	pH	6.8-8.5	**7.26**	**7.13**	**-**	**7**	**7.2**	**7.13**	Rainfall: 31 mm (72 h prior to sampling) Sampled within 24 h of discharge: Yes EC/TDS: Temporarily elevated due to flocculation treatment. The value in the parentheses is the median value prior to flocculation treatment.
	TSS	mg/L	50	**50**	**29**	**-**	**10**	**22**	**19**	
	Ammonia	mg/L	1	**0.02**	**0.03**	**-**	**0.06**	**0.07**	**0.02**	
	EC	µS/cm	NSL	2930 (1220)	147	-	506	508	149	
	TDS	mg/L	NSL	1620 (793)	129	-	291	300	142	
	DO	% sat	NSL	82.3	87.5	-	78.1	77.0	90.6	
	TOC	mg/L	NSL	16	20	-	2	2	25	
	Potassium	mg/L	NSL	17	3	-	3	3	3	
21/02/20	pH	pH	6.8-8.5	**-**	**7.01**	**-**	**7.16**	**7.19**	**7.15**	Rainfall: 31 mm (72 h prior to sampling) Weekly measurement of on-going dewatering via LDP2 (HES)
	TSS	mg/L	50	**-**	**19**	**-**	**6**	**8**	**8**	
	Ammonia	mg/L	1	**-**	**0.06**	**-**	**0.06**	**0.08**	**0.05**	
	EC	µS/cm	NSL	-	193	-	638	637	549	
	TDS	mg/L	NSL	-	157	-	378	394	335	
	DO	% sat	NSL	-	49.6	-	90.3	90.8	85.4	
	TOC	mg/L	NSL	-	19	-	3	3	6	

TDS – total dissolved solids, DO – dissolved oxygen, TOC – total organic carbon, NSL – no specific limit EC – electrical conductivity – recommended limit of 1600 µS/cm for discharge to Blaxland Creek (or off-site)										
	Potassium	mg/L	NSL	-	4	-	3	3	4	
2/03/20	**pH**	**pH**	**6.8-8.5**	**-**	**6.75**	**-**	**7.69**	**7.78**	**6.93**	Rainfall: 0 mm (72 h prior to sampling) Sampled within 24 h of discharge: Yes
	TSS	**mg/L**	**50**	**-**	**16**	**-**	**<5**	**<5**	**5**	
	Ammonia	**mg/L**	**1**	**-**	**0.01**	**-**	**0.01**	**0.01**	**0.06**	
	EC	µS/cm	NSL	-	327	-	854	849	927	
	TDS	mg/L	NSL	-	28	-	532	503	558	
	DO	% sat	NSL	-	16.7	-	85.5	85.3	32.6	
	TOC	mg/L	NSL	-	1	-	6	6	8	
	Potassium	mg/L	NSL	-	4	-	5	5	4	
9/03/20	**pH**	**pH**	**6.8-8.5**	**-**	**6.81**	**-**	**7.57**	**7.65**	**7.3**	Rainfall: 3 mm (72 h prior to sampling) Sampled within 24 h of discharge: Yes
	TSS	**mg/L**	**50**	**-**	**7**	**-**	**7**	**9**	**<5**	
	Ammonia	**mg/L**	**1**	**-**	**0.06**	**-**	**0.09**	**0.8**	**0.07**	
	EC	µS/cm	NSL	-	226	-	1010	1010	802	
	TDS	mg/L	NSL	-	177	-	610	604	42	
	DO	% sat	NSL	-	51.1	-	85.1	84.8	85.6	
	TOC	mg/L	NSL	-	20	-	7	7	11	
	Potassium	mg/L	NSL	-	4	-	7	7	6	
16/03/20	**pH**	**pH**	**6.8-8.5**	**-**	**6.74**	**-**	**8.05**	**7.94**	**7.34**	Rainfall: 0 mm (72 h prior to sampling) Sampled within 24 h of discharge: Yes
	TSS	**mg/L**	**50**	**-**	**51**	**-**	**9**	**10**	**9**	
	Ammonia	**mg/L**	**1**	**-**	**0.12**	**-**	**0.1**	**0.06**	**0.06**	
	EC	µS/cm	NSL	-	310	-	1140	1140	1020	
	TDS	mg/L	NSL	-	230	-	633	630	556	
	DO	% sat	NSL	-	50.0	-	98.4	87.1	75.9	
	TOC	mg/L	NSL	-	15	-	7	7	9	
	Potassium	mg/L	NSL	-	3	-	6	6	5	

TDS – total dissolved solids, DO – dissolved oxygen, TOC – total organic carbon, NSL – no specific limit EC – electrical conductivity – recommended limit of 1600 µS/cm for discharge to Blaxland Creek (or off-site)										
23/03/20	**pH**	**pH**	**6.8-8.5**	**-**	**6.79**	**-**	**8.28**	**8.22**	**7.51**	Rainfall: 91 mm (72 h prior to sampling) Sampled within 24 h of discharge: Yes
	TSS	**mg/L**	**50**	**-**	**50**	**-**	**<5**	**<5**	**<5**	
	Ammonia	**mg/L**	**1**	**-**	**0.1**	**-**	**0.04**	**0.04**	**0.05**	
	EC	µS/cm	NSL	-	322	-	1250	1260	1230	
	TDS	mg/L	NSL	-	207	-	689	674	728	
	DO	% sat	NSL	-	22.6	-	90.3	88.4	62.5	
	TOC	mg/L	NSL	-	10	-	8	8	8	
	Potassium	mg/L	NSL	-	4	-	7	7	7	

5.5.6 Analysis of surface water monitoring results

5.5.6.1 Reporting period 1: April 2018 to March 2019

Quarry void dewatering was undertaken daily between 13 August 2018 and 11 October 2018. Water quality and water quantity was monitored during dewatering and assessed against the TARP criteria (**Table 5-10**).

- Dewatering was undertaken over the course of 59 days
- Water discharges ranged between 2 ML and 8.63 ML per discharge, below the 8.64 ML per day limit
- There were no exceedances of the approved TARP/EPL criteria for turbidity, pH, EC, DO or ReDOx potential during the discharges.
- Quarry dewatering was completed within the reporting period.

5.5.6.2 Reporting period 8 November 2018 and 7 November 2019

There were seven discharge events recorded between 8 November 2018 and 7 November 2019 – the EPL annual reporting period. A summary of the monitoring data is provided in **Table 5-11**.

A pH 8.6 to 8.8 was recorded at LP1 on 18 December 2018 from 10:25 am to 11:30 am. Rainfall exceeded five-day design event with records indicating 68.2 mm rainfall on site. This exceedance of pH was recorded as a non-compliance and reported to the EPA in the annual returns (See **Section 9.1**). This event did not result in any adverse effects.

5.5.6.3 Reporting period 2: 8 November 2019 to March 2020

There were seven wet weather discharge events from LDP2 and two from LPD2 during this reporting period. The wet weather reporting period has been adjusted to cover the reporting periods for the AEMR (ie April to March).

There was one exceedance of the approved EPL criteria for turbidity/TSS during the discharges. **Table 5-13** summarises the monitoring results.

Table 5-13: Summary of wet weather results for reporting period 2

Parameter	Unit	Limit	Min	Average	Max	Exceedances
pH	**pH**	**6.5-8.5**	6.55	7.35	8.28	None
TSS / Turbidity	**mg/L**	**50**	5	131	1,540	One exceedance during the 7 Feb 2020 discharge event. Rainfall for the dewatering/sampling event was well above the Blue Book design criteria (5-day 90th percentile rainfall of 47.6 mm). 326 mm of rainfall was received from midday 6 Feb 2020 to 9 am 10 Feb 2020, with the whole South Creek catchment in flood. Measures to minimise water pollution were undertaken, however the specified concentration limit for TSS does not apply (see Section L3.1 in the EPL). Average TSS for all events 22.78 mg/L., when the above exceedance is removed.
Ammonia	**mg/L**	**1**	0.01	0.10	0.80	None
EC[11]	µS/cm	1,600	147	790	1,260	EC and TDS were temporarily elevated on the during the 14 Feb 2020 discharge event. Flocculant was used to treat the water prior to discharge.
TDS	mg/L	-	28	456	772	

[11] EC – electrical conductivity – recommended limit of 1600 µS/cm

Parameter	Unit	Limit	Min	Average	Max	Exceedances
DO	% sat	-	17	74	101	Not applicable
TOC	mg/L	-	1.00	8.67	25.00	Not applicable
Potassium	mg/L	-	3.00	5.45	17.00	Not applicable

5.5.6.4 Long term trends

There is still insufficient data to determine long-term trends.

5.6 Groundwater monitoring

Groundwater is monitored at the groundwater monitoring bores proposed for the Project in the *Cell Design and Groundwater Assessment* (Aquaterra Consulting, 2010). Additional boreholes were also installed for the detailed geotechnical investigations.

The groundwater observation bores were drilled around the perimeter of the facility as part of the site establishment works. Bore construction was in accordance with EPA requirements and subsequent sampling has been carried out in accordance with monitoring plan in the SWLMP and in accordance with the relevant EPL.

5.6.1 Groundwater monitoring criteria

There are no specific criteria detailed in the Conditions of Consent. Sch4 C20(g) requires that a groundwater program that is in accordance with the requirements of the EPL, includes collection of baseline data (**Section 5.6.4**); details of the proposed monitoring network (**Figure 5-17** and **Table 5-14**); and the parameters for testing and respective trigger levels for action under the surface water, groundwater and leachate response plan.

Sch4 C20(j) requires that the response plan describes the array of measures that could be implemented to respond to any groundwater contamination that may be caused by any development.

As described in the SWLMP, groundwater quality will be assessed against relevant assessment criteria outlined in *Australian and New Zealand Guidelines for Fresh and Marine Water Quality* ANZECC/ARMCANZ 2000 (*ANZECC 2000)* and background and including historical pre-waste activities.

If an exceedance of the limits/performance criteria or the occurrence of an incident that causes (or may cause) material harm to the environment, the NSW EPA would be notified as soon as practicable after the exceedance or incident.

5.6.2 Groundwater monitoring locations

Groundwater is monitored quarterly at 15 locations around the site. The borehole locations are shown on **Figure 5-17.**

BH1, BH2, BH4 and BH8 were monitored quarterly for standing water level only, prior to being decommissioned.

Table 5-14: EPL 20814 Licensed discharge points for groundwater

Sampling Point	EPA/EPL ID #	Sampling Point	EPA/EPL ID #	Sampling Point	EPA/EPL ID #
BH3	4	BH10A	9	BH12B	14
BH5	5	BH10B	10	BH13A	15
BH6	6	BH11A	11	BH13B	16
BH9A	7	BH11B	12	BH14A	17
BH9B	8	BH12A	13	BH14B	18

5.6.3 Groundwater parameters

Table 5-15 details the parameters and the frequency of monitoring which were established in accordance with the landfill guidelines.

Table 5-15: Groundwater monitoring parameters

Frequency	Parameter
Quarterly	• pH, redox potential and temperature • Standing Water Level (m AHD) • Total Dissolved Solids (mg/L) • Major cations and anions i.e. calcium, magnesium, potassium, sodium, chloride, fluoride and sulfate (as SO_4) • Bicarbonate Alkalinity (as CaCO3) (mg/L) • Total Alkalinity (as $CaCO_3$) (mg/L) • Total Organic Carbon (TOC) (mg/L) • Ammonia and nutrients i.e. Ammonia (as N), nitrate and nitrite (as N), phosphate total (as P)
Yearly	• Metals (mg/L) i.e. aluminium, arsenic, barium, cadmium, chromium, cobalt, copper, lead, manganese, mercury, nickel, zinc • Organic contaminants (mg/L): – Phenols – petroleum hydrocarbons, – monoaromatic hydrocarbons (in particular benzene, toluene, ethylbenzene and xylene) – organochlorine and organophosphate pesticides – polycyclic aromatic hydrocarbons

5.6.4 Groundwater monitoring results

5.6.4.1 Baseline monitoring results

In April 2009, two dual purpose subsurface gas and groundwater monitoring piezometers were installed at the site. Water levels, sampling and hydraulic testing was undertaken in June and July 2009.

The investigations were undertaken to provide data to support the conceptual design for the waste emplacement cells to ensure that leachate and gas would be contained on site and to support the preparation of the 2010 EIS. The water quality for these bores is summarised **Table 5-16**.

Table 5-16: Groundwater baseline data

Frequency	Parameter	Exceeds guidelines[12]
Total Dissolved Solids (TDS)	Ranged from 8,930 mg/L - 13,000 mg/L. The high TDS encountered is reflective of connate (less mobile water) of long residence time and very low recharge	N/A
Major ions	Showed dominance in chloride ions in respect to bicarbonate and calcium ions, which is indicative of old groundwaters, which are not readily recharged and/or are remote from recharge zones.	N/A
Dissolved Metals • Aluminium	Concentrations discussed below are believed to naturally occurring in the groundwater of Bringelly Shale and Hawkesbury Sandstone. Detected in the sample from the NE piezometer at a concentration of 0.09 mg/L, which is above the freshwater ecosystem guideline of 0.055 mg/L	Yes

[12] Freshwater Ecosystem Protection guidelines (ANZECC, 2000)

Frequency	Parameter	Exceeds guidelines[12]
• Zinc	Detected in the NE, NW piezometers and abstraction bore at concentrations of 0.032 mg/L, 0.023 mg/L and 0.017 mg/L respectively, which exceeds the freshwater ecosystem guideline of 0.008 mg/L.	Yes
• Copper	Detected in the NE, NW piezometers and abstraction bore at concentrations of 0.007 mg/L, 0.005 mg/L and 0.002 mg/L respectively, which exceeds the freshwater ecosystem value of 0.0014 mg/L.	Yes
• Cadmium	Detected in NE piezometer and was equal to the freshwater ecosystem guideline of 0.0002 mg/L.	Equal to
Nutrients • Ammonia	Concentration in NW piezometer (2.73 mg/L) and abstraction bore (1.02 mg/L) was above the freshwater ecosystem protection guidelines of 0.9 mg/L. Typical for shale groundwater in the Sydney basin which has been found to have ammonia concentrations greater than 10 mg/L (Old, 1942). Ammonia is an indicator of leachate, however, in this case the ammonia is naturally present within the shales	Yes
• Total nitrogen	Detected in the NE and NW piezometers and the abstraction bore at concentrations of 0.7 mg/L, 3.1 mg/L and 1.5 mg/L, respectively. These are above the freshwater ecosystem protection guidelines of 0.35 mg/L (Total N). The source of the nitrogen is the shale geology (Old, 1942).	Yes
Pesticides and Hydrocarbons (PAH)	No pesticides or polycyclic aromatic hydrocarbons (PAH) were detected in groundwaters at the site.	N/A
BTEX[13]	A recording of 200 µg/L of C6-C9 was detected in the NE piezometer. The sample was analysed further for BTEX and toluene was 105 µg/L and xylene was 10 µg/L. It is expected that the source of these was residual oil and grease on the drilling rods.	N/A

Further sampling and analysis was undertaken in February 2012.

All baseline groundwater monitoring results are provided in **Appendix B**.

5.6.4.2 Reporting period 1: April 2018 to March 2019

During site establishment works, monthly sampling and analysis for all required parameters was undertaken as follows:

- 21-22 November 2018
- 12-13 December 2018
- 15-16 January 2019
- 12-13 February 2019.

These groundwater monitoring results are also provided in **Appendix B**.

5.6.4.3 Reporting period 2: April 2019 to March 2020

Landfill operations commenced in August 2019. Sampling was undertaken as follows:

- 27-28 November 2019
- 27-28 February 2020
- 13 March 2020

[13] Benzene, toluene, ethylbenzene and xylene (BTEX)

Reporting period 2 monitoring results are provided in **Appendix B**.

5.6.5 Analysis of groundwater monitoring results

Baseline borehole monitoring was undertaken in April and the results compares with the Freshwater Ecosystem Protection guidelines (ANZECC, 2000). Results were obtained for total dissolved solids, major ions, dissolved metals (eg aluminium, zinc), nutrients (eg ammonia, total nitrogen) pesticides and hydrocarbons and BTEX (Benzene, toluene, ethylbenzene and xylene).

- High levels of total dissolved solids were recorded which were found to be indicative of less mobile water of long residence time and very low recharge.
- There was a dominance of chloride ions (ie bicarbonate and calcium), which were found to be indicative of old groundwaters.
- Aluminium, zinc and copper were found to be above the ANZECC Guidelines, and cadmium was equal to the ANZECC Guidelines.
- Ammonia and total nitrogen were also both the ANZECC Guidelines, with the source of nitrogen being related to the shale geology in the area.
- No pesticides or PAH were detected
- A small quantity of BTEX was measured, but this was thought to be residual oil and grease on the drilling rods.

Monthly monitoring occurred between November 2018 and February 2019. Once landfill operations commenced in August 2019, quarterly borehole monitoring commenced.

- Total dissolved solids varied between 1,000 mg/L and 4,000 mg/L for all boreholes in November 2019 and steadily reduced to between 200 mg/L and 2,500 mg/L in March 2020, which is within the range measured during the baseline monitoring event. (Baseline was 8,930 mg/L - 13,000 mg/L)
- Chlorides remained steady between November 2019 and March 2020 and measured between 500 mg/L and 2600 mg/L
- There were minimal results for aluminium to provide any commentary
- Zinc measured between 0 mg/L and 4 mg/L in November 2019, but dropped to a range of 0-0.5 mg/L in January 2019 and appear to remain consistent at these levels through to March 2020
- Copper ranged between 0 mg/L and 0.05 mg/L in November 2010 and showed a steady increase until March 2020, but all results were still below 0.1 mg/L.
- There were minimal results for cadmium to provide any commentary
- Ammonia range between 0.1 mg/L and 2.5 mg/L in November 2019 and remained steady for all boreholes through to March 2020.
- Total nitrogen measured in the 0-0.5 mg/L range in November 2019 and appeared to peak in March 2020 at 6 mg/L and 3.8 mg/L for BH09B and BH11B respectively. All other bores remained constant in at around 0-1 mg/L.
- No pesticides or PAH were detected

There were no exceedances of the established criteria during this reporting period.

5.7 Leachate monitoring

The leachate system was installed prior to commencement of landfilling activities. The details of the system are described in the *Patons Lane Resource Recovery Centre Construction Quality Assurance Report Cell 1A-1 and Initial Leachate Pond July 2019,* prepared by SRC Operations Pty Ltd. Stormwater from all site areas which has the potential to interact with waste is managed as leachate.

Washdown water from within the C&I waste stockpile building is separated from surface water and managed as leachate. The leachate management system is completely separate from the surface water management system for the building. The concrete floor has been designed to support the predicted mass of the C&I waste and graded to shed washdown water into the leachate management system. Any runoff from the recycling and re-processing area is tested to confirm it will not impact on the off-site water quality objectives, as part of the surface water monitoring program. Leachate indicators (eg nitrogen – ammonia) have been included to identify if any leachate enters the surface water system such that any relevant issues can be identified and rectified.

5.7.1 Leachate monitoring requirements and criteria

To address Sch4 C20(g) of the Conditions of Consent, a leachate monitoring program has been established to provide data on the quality of the leachate produced by each landfill cell, to record leachate levels and to record details about any irregular discharges or overflows of leachate from the site. Leachate is not treated onsite for release and managed within a closed system.

The monitoring parameters are detailed in **Table 5-17**. Monitoring is undertaken to understand the makeup and the quality is compared with information from relevant literature and historical data. undertaken to understand the makeup and the quality is compared with information from relevant literature and historical data.

5.7.2 Leachate monitoring locations

Leachate is monitored in the initial leachate evaporation pond and the Cell 1 leachate collection sump (See **Figure 5-17**). **Table 5-17** details the EPL 20814 leachate monitoring locations.

Table 5-17: EPL 20814 Licensed discharge points for surface water

EPA/EPL ID #	Type of discharge point	Sampling Point
20	Leachate quality monitoring	Leachate sump riser
21	Leachate quality monitoring	Leachate dam entry

5.7.3 Leachate parameters

Leachate is monitored for the following parameters and frequency in accordance with the landfill guidelines and EPL 20814.

Table 5-18: Leachate monitoring parameters

Frequency	Parameter
Quarterly	• Electrical conductivity (µs/cm) • pH (pH units) • Standing Water Level (m AHD) (leachate head in sump)
Yearly	• TDS (mg/L) • TSS (mg/L) • Major cations and anions i.e. calcium, magnesium, potassium, sodium, chloride, fluoride and sulfate (as SO_4) • Total Alkalinity (bicarbonate and carbonite) (mg/L) • Dissolved organic matter (mg/L) i.e. total organic carbon, biochemical oxygen demand (BOD), chemical oxygen demand (COD) (TOC)

Frequency	Parameter
	• Ammonia and nutrients i.e. nitrate, nitrite, phosphorous • Metals (mg/L) i.e. aluminium, arsenic, barium, cadmium, chromium, cobalt, copper, lead, manganese, mercury, nickel, zinc • Organic contaminants (mg/L): – Phenols – petroleum hydrocarbons, – monoaromatic hydrocarbons (in particular benzene, toluene, ethylbenzene and xylene) – organochlorine and organophosphate pesticides • polycyclic aromatic hydrocarbons

5.7.3.1 Reporting period 1: April 2018 to March 2019

Landfill operations commenced in August 2019, as such there is no leachate monitoring data for this reporting period.

5.7.3.2 Reporting period 2: April 2019 to March 2020

Landfill operations commenced in August 2019. Leachate monitoring data for this reporting period is s provided in **Table 5-19.**

As required by EPL 20814, both quarterly and annually monitoring is required. During this reporting, quarterly monitoring commenced in November 2019. Annual monitoring will commence in August 2020, which will occur in the next reporting period.

Table 5-19: Leachate monitoring for Reporting Period 2

Location / Parameter	May-19	Aug-19	Nov-19	Feb-20
Leachate sump riser				
Electroconductivity (µs/cm)	NA	NA	4,629	1,419
pH	NA	NA	7.21	7.29
Standing Water Level (m AHD)	NA	NA	23.99	27.76
Leachate dam entry				
Electroconductivity (µs/cm)	NA	NA	2,530	1,537
pH	NA	NA	7.5	7.94
Standing Water Level (m AHD)	NA	NA	45.70	45.61

5.7.4 Analysis of leachate monitoring for the reporting period

Landfill operations commenced in August 2019, therefore leachate monitoring only commenced during reporting period 2 (April 2019 to March 2020). Leachate was monitored at the leachate sump rise and the leachate dam entry in November 2010 and February 2020. **Table 5-20** summarises the minimum, average and maximum results for the leachate monitoring parameters. Annual reporting will be undertaken in the next reporting period. There is still insufficient data to determine long-term trends.

Table 5-20: Summary of leachate results for Reporting Period 2

Parameter	Unit	Min	Average	Max
Electroconductivity	(µs/cm)	1,419	2,307	4,629
pH	pH units	7.21	7.43	7.94
Standing Water Level	m AHD	23.99	33.41	45.70

5.8 Landfill gas monitoring

5.8.1 Landfill gas monitoring criteria

Monitoring for subsurface gas, surface gas emissions and gas accumulation is undertaken in accordance with the landfill guidelines. **Table 5-21** summarises the threshold levels that are provided in Guidelines for Solid Waste Landfills and are the threshold levels that have been used to assess the monitoring data during this reporting period.

Table 5-21 Landfill gas monitoring criteria

Aspect	Threshold levels
Landfill gas sub-surface monitoring	Detection of methane levels above 1% methane (v/v) above established natural background levels Carbon dioxide at concentrations of 1.5% carbon dioxide (v/v) above established natural background levels
Landfill gas surface monitoring	Detection of methane levels above 500 ppm (v/v) any point on the landfill surface for intermediate and finally capped areas.
Gas accumulation monitoring in enclosed structures	Detection of methane exceeding 1.2% methane (v/v) (12,500 ppm)

5.8.2 Subsurface landfill gas monitoring

Subsurface landfill gas monitoring is required to be undertaken on a quarterly basis following the commencement of landfilling of the quarry. Landfill operations commenced in August 2019. Subsurface landfill gas monitoring commenced in in November 2019. Locations of subsurface gas monitoring wells are shown on **Figure 5-17.**

as detailed in the *PLRRC Air Quality Management Plan (June 2019)* detection of methane levels above 1.25% methane (v/v) requires the EPA to be notified within 24 hours and also requires an increase in the frequency of monitoring.

5.8.2.1 Reporting period 1: April 2018 to March 2019

No subsurface gas monitoring was undertaken.

5.8.2.2 Reporting period 2: April 2019 to March 2020

Subsurface gas monitoring commenced in November 2019 basis. The results for this reporting period is provided in **Table 5-22.** Any exceedance of the threshold levels for methane are indicated by pink shading.

Table 5-22: Quarterly landfill gas monitoring for Reporting Period 2

LDP	Pollutant	May-19	Aug-19	Nov-19	Feb-20
BH3	Methane	NA	NA	0	0
	CO_2	NA	NA	0.8	0.6
BH5	Methane	NA	NA	0	0
	CO_2	NA	NA	14.5	4.3
BH6	Methane	NA	NA	0	0
	CO_2	NA	NA	4.2	5.1
BH9A	Methane	NA	NA	0.1	0
	CO_2	NA	NA	6.9	5.9

LDP	Pollutant	May-19	Aug-19	Nov-19	Feb-20
BH9B	Methane	NA	NA	0	0
	CO_2	NA	NA	0.7	7.1
BH10A	Methane	NA	NA	0	0
	CO_2	NA	NA	3.0	2.0
BH10B	Methane	NA	NA	0.1	0
	CO_2	NA	NA	10.2	9.4
BH11A	Methane	NA	NA	0	0
	CO_2	NA	NA	0.7	0.5
BH11B	Methane	NA	NA	0	0
	CO_2	NA	NA	1.9	7.7
BH12A	Methane	NA	NA	0	0
	CO_2	NA	NA	30.4	24.8
BH12B	Methane	NA	NA	0	0.1
	CO_2	NA	NA	10.4	0.3
BH13A	Methane	NA	NA	0	0
	CO_2	NA	NA	12.3	3.9
BH13B	Methane	NA	NA	0	0
	CO_2	NA	NA	4.3	3.2
BH14A	Methane	NA	NA	0	0.1
	CO_2	NA	NA	4.9	7.3
BH14B	Methane	NA	NA	0.1	0
	CO_2	NA	NA	7.3	9.1

5.8.3 Surface gas emission monitoring

The Landfill Solid Waste guidelines recommend surface gas emission monitoring is undertaken to demonstrate that the cover material and extraction system is controlling the emission of landfill gas. Monitoring will occur monthly along a regular grid over the landfill surface, with sampling occurring every 25 metres at a height of five centimetres above the ground surface, using a zeroed and calibrated methane gas detector.

This monitoring commences after the intermediate or final capping is applied.

Detection of levels above 500 ppm (v/v) of methane at any point on the landfill surface triggers closer investigation with potential action in the form of repairing or replacing cover material.

5.8.3.1 Reporting period 1: April 2018 to March 2019

Landfill operations commenced in August 2019 as such there is no surface gas emission monitoring data for this reporting period.

5.8.3.2 Reporting period 2: April 2019 to March 2020

Although landfill operations commenced in August 2019, no intermediate or final capping of the waste has occurred and therefor monitoring for surface gas was not required or undertaken.

5.8.4 Gas accumulation monitoring

Gas accumulation in buildings at a landfill site can pose a risk of explosion and should not have gas concentrations exceeding 1.2% methane (v/v) (12,500 ppm). Gas accumulation monitoring occurs at the following locations:

- B1 (Site Office)
- B2 (Weighbridge)
- B3 (MQ Site Office)

5.8.4.1 Reporting period 1: April 2018 to March 2019

Landfill operations commenced in August 2019. There is no gas accumulation emission monitoring data for this reporting period.

5.8.4.2 Reporting period 2: April 2019 to March 2020

Gas accumulation monitoring was undertaken in November 2019, December 2019 and February 2020. The monitoring results are summarised in **Table 5-14**.

Table 5-23:Gas accumulation monitoring data for Reporting Period 2

Date	B1 Site Office (ppm)	B2 Weighbridge (ppm)	B3 MQ Site office (ppm)
Nov 2019	2.3	2.6	2.6
Dec 2019	2.0	1.5	2.6
Feb 2020	2.4	2.4	2.2

After capturing some baseline information, the consultant undertaking the measurements advised that the assessment of building proximity should rather be undertaken on the edge of an immediate active cell or bund wall within the landfill operational areas. With this revision considered, no further building surveys were undertaken.

5.8.5 Analysis of landfill gas monitoring

Landfill operations commenced in August 2019, therefore no landfill gas monitoring was required for Reporting Period 1 (April 2018 to March 2019) and only commenced in November 2019. The following summarises the monitoring result for Reporting Period 2.

Landfill gas sub-surface monitoring:

Monitoring was undertaken in November 2019 and February 2020. There were no exceedances of 1% v/v for methane for this reporting period. There is currently insufficient data to determine if there are any trends in sub-surface landfill gas.

Landfill gas surface monitoring:

Although landfill operations commenced in August 2019, no intermediate or final capping of the waste has occurred and therefor monitoring for surface gas was not required or undertaken for this reporting period.

Gas accumulation monitoring in enclosed structures:

Monitoring was undertaken in November 2019, December 2019 and February 2020 at the site office, weighbridge and the MQ site office. Concentrations exceeding 1.2% methane (v/v) (12,500 ppm) can pose a risk of explosion.

Gas accumulation data was well below this level, with a maximum of 2.6 ppm recorded at the MQ office in November and December 2019 and at the weighbridge in November 2019.

5.9 Waste Monitoring

5.9.1 Waste limits

In accordance with Sch3 C22, the Proponent shall not exceed the waste receipt and waste emplacement volumes specified in **Table 5-24**.

Table 5-24: Maximum waste receipt and emplacement

Maximum total waste emplacement	Maximum annual waste receipt	Maximum annual on-site waste emplacement
4,300,000 tonnes	450,000 tonnes	205,000 tonnes

The conditions permits the proponent to emplace up to 7,500 m^3 of special waste (asbestos) identified under Sch 4 C7 (Asbestos and Contamination Management Plan) in the landfill. All other special waste (asbestos) is required to be disposed off-site at a licenced facility unless agreed to by the Secretary and EPA.

Under EPL 20814, no asbestos is permitted to be received from offsite and a maximum of 205,000 tonnes in any 12-month period is permitted to be landfilled (in Cell 1A).

5.9.2 Waste management and monitoring

Sch4 C5 requires the implementation of a Waste and Resource Recovery Monitoring Program and Sch4 C5(c) which includes monitoring for:

- the quantity, type and source of waste received; and
- quantity, type and quality of the outputs produced.

Operation of the PLRRC commenced in August 2019. Waste received at the PLRRC is reported on a monthly basis through the EPA Waste and Resource Reporting Portal (WARRP) in accordance with the requirements of the *Protection of the Environment Operations Act 1997.*

All waste is managed in accordance with the:

- EPA Waste Guidelines
- The approved WRRMP
- Bingo Standard Operating Procedures (SOP) including procedures for asbestos management, weighbridge operation, visual inspection and non-conforming waste.

5.9.2.1 Asbestos management

Asbestos would be taken off site to a facility that can legally accept it. There is minimal likelihood of asbestos or other unauthorised waste coming onto site as it is pre-sorted or subject to waste classification prior to delivery to site. If the waste is not acceptable, it is recorded in the Rejected Load Register (both on hard copy form and in Nav system). This process was confirmed during the independent audit undertaken October 2019.

5.9.2.2 Waste monitoring

Table 5-27 summarises the amount of waste received and transported from the PLRRC during Reporting Period 2 – April 2019 to March 2020, as recorded in the EPA Waste and Resource Reporting Portal.

Table 5-25: Summary waste received during Reporting Period 2

	Aug 19	Sep 19	Oct 19	Nov 19	Dec 20	Jan 20	Feb 20	Mar 20	Total
								Waste received on site	
Municipal	-	-	-	-	-	-	-	2,539	**2,539**
Mixed waste	18	-	-	-	-	-	1,027	315	**1,360**
Shredder floc	1,966	3,337	-	-	-	-	2,845		**8,148**
Contaminated soil	-	-	-	-	-	-	-	231	**231**
Total C&I	1,984	3,337	-	-	-	-	3,872	546	**9,739**
Mixed Waste (total)	6,441	10,578	-	-	-	-	7,245	2,983	27,247
Soil (not contaminated)	-	636	-	-	-	-	-	26	661
Contaminated soil	-	-	-	-	-	-	7,239	889	8,128
Bricks or concrete	-	-	3	-	-	-	-		**3**
Total C&D	6,441	11,214	3	-	-	-	14,484	3,898	**36.040**
Total Waste Received	**8,425**	**14,551**	**3**	-	-	-	**18,356**	**6,693**	**48,318**
								Waste transported from site	
Offsite disposal	-	-	-	-	-	-	-	-	**0**
Lawful recovery (licensed facility)	-	-	-	-	-	-	51	230	**281**
Resource recovery order	-	-	-	-	-	-	-	-	**0**
Lawful recovery (non-licensed facility)	-	-	-	-	-	-	-	-	**0**
Total waste transported from site	-	-	-	-	-	-	**51**	**230**	**281**

5.9.3 Analysis of waste received and processed

A summary of the waste received:

- A total of 48,318 tonnes of waste was received at the site. This comprised
  - 2,539 tonnes municipal waste
  - 9,739 tonnes C&I waste
  - 36,040 tonnes C&D waste
- C&I waste comprised of mixed waste, shredder floc and contaminated soil
- C&D waste comprised of mixed waste, contaminated and non-contaminated soil and bricks or concrete
- A total of 8,359 tonnes of contaminated soil from C&I and C&D waste was received.
- No asbestos was received during the reporting period.

A summary of the waste transported from site:

- 281 tonnes was transported from site for lawful recovery at a licensed waste facility.
- This included mixed waste, bricks and concrete, and wood, trees or timber.

There were no exceedances of the Conditions of Consent, EPL 21259 and EPL 20814 waste limits for this reporting period.

There are no criteria/limits for leachate monitoring in the Conditions of Consent or the EPL. Analysis of the leachate monitoring results is included in **Section 5.7**.

5.10 Truck numbers

In accordance with Sch3 C25 and C26 heavy vehicle traffic generation must not exceed 250 daily heavy vehicle movements. An accurate register of daily heavy vehicle movements is kept and can be provided to the Secretary upon request.

5.10.1.1 Reporting period 1: April 2018 to March 2019

During the site establishment and construction period daily truck movements were much less frequent and less formal monitoring was undertaken to ensure truck movements did not exceed 250 daily heavy vehicle movements.

5.10.1.2 Reporting period 2: April 2019 to March 2020

An accurate register for daily truck movements has been implemented since operation commenced in August 2019.

Figure 5-18 summarise the daily truck movements for the PLRRC since operation commenced.

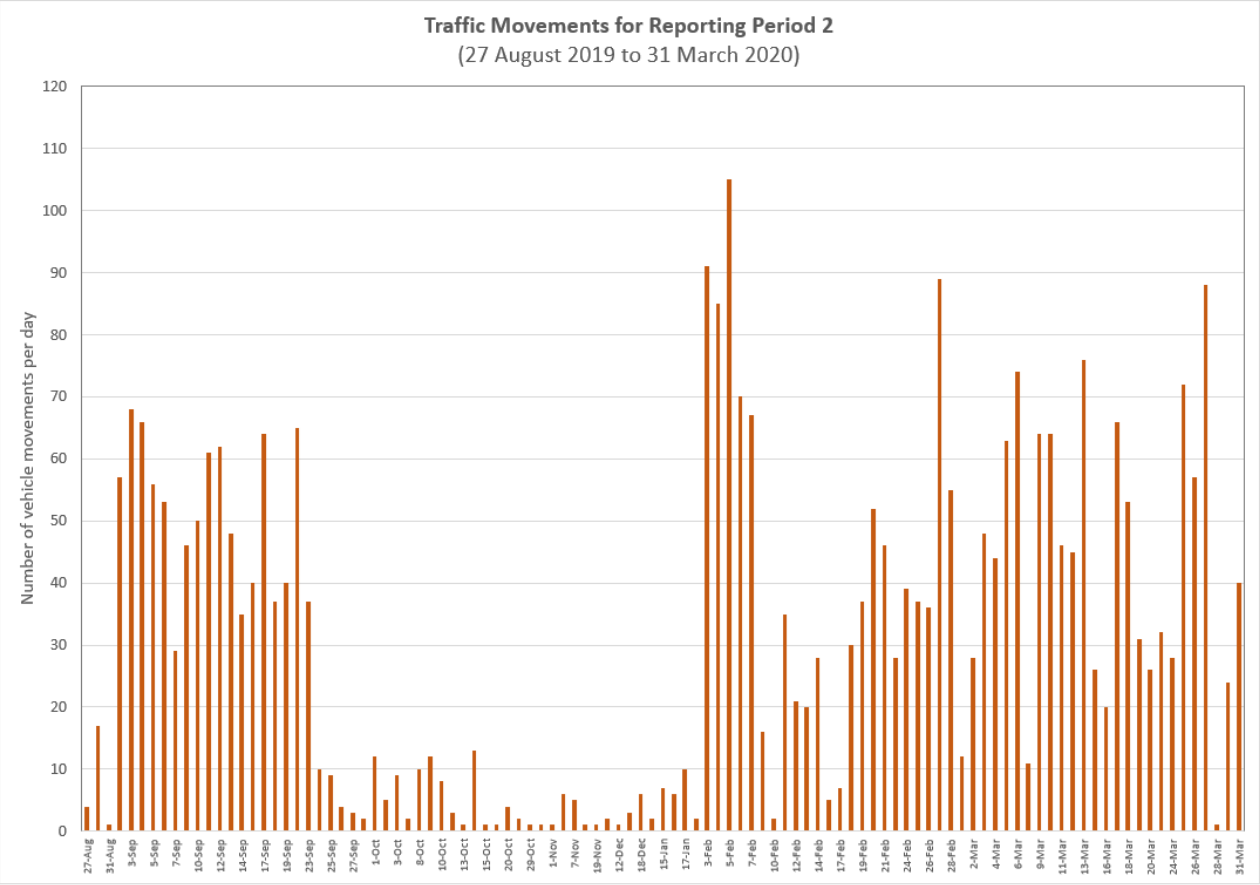

Figure 5-18: Recorded traffic movements for Reporting Period 2

5.10.2 Analysis of traffic movements

Less formal monitoring traffic movements were during the site establishment and construction as daily truck movements were much less frequent. A formal register for daily truck movements was implemented in August 2019. During this reporting period:

- A total of 3,242 traffic movement were recorded
- The maximum daily truck movement recorded was 105, recorded on 5 February 2020.

- One truck movement per day was recorded on 11 days.
- The average daily truck movements for the reporting period was 31.
- The common vehicles received at the site was walking floor (586), followed by Quad dog (230) . Other vehicles included tandems, small and medium marrells, semi trailer, dump trucks and light vehicles.

There were no exceedances of the daily 250 heavy vehicle limit.

5.11 Rehabilitation activities

As required under Sch4 C46, the Proponent must prepare and implement a Rehabilitation Plan to achieve the final landform and landscaping in Figure 2.22 of the F*urther Modified Preferred Project Report (Ex Z in Appeal No 10928 of 2010)*.

Rehabilitation of the site commenced in January 2019. The rehabilitation programme included the following performance criteria for Year 1 of the programme.

5.11.1 Rehabilitation criteria

Table 5-26: Rehabilitation criteria for the reporting period

Criteria	%	Achieved (Yes/NO)
Reduction in weeds on site (density and size)	50%	Yes
Reduction in weeds on site (species and distribution)	10%	Yes
Increase in native plant density	200%	Yes
Increase in native plant size	100%	Yes

5.11.2 Rehabilitation activities completed

A summary of how these performance criteria were achieved and rehabilitation works undertaken for each of the reporting periods is summarised **Table 5-27**. The works were undertaken by Toolijooa Environmental Restoration.

Table 5-27: Rehabilitation works for the reporting period

Date	Works undertaken
Reporting period 1: April 2018 to March 2019	
Jan 2019	Weed spraying targeting exotic herbaceous species and invasive pastoral grasses in the northern grassland and boundary and along the eastern boundary of the site was undertake.
Feb 2019	Weed spraying and some hand weeding targeting invasive pastoral grasses and herbaceous weeds throughout the northern grassland, western boundary, northern bund and western bank of the leachate dam. Weed spraying exotic grasses and herbaceous weeds.
Mar 2019	Weed sprayed targeting herbaceous weeds and invasive grasses within the RRA bund, northern and eastern bunds, northern grassland and leachate dam. Some hand weeding also required to encourage native vegetation expansion. Slashing and spraying undertaken along roads and boundaries to control spread of weeds and maintain access.

Date	Works undertaken
Reporting period 2: April 2019 to March 2020	
Apr 2019	Spraying to target emergent herbaceous weeds and exotic grasses and some slashing in areas to maintain site aesthetics and reduce seed set of exotic species. Hand weeding of exotic grasses to encourage native species expansion in some areas. Works undertaken on the RRA Bund, northern grassland, eastern and northern boundary, Dam 6 footprint, leachate dam and site entrance.
May 2019	Spraying to target emergent herbaceous weeds and exotic grasses and some slashing in areas to maintain site aesthetics and reduce seed set of exotic species. Hand weeding of exotic grasses to encourage native species expansion in some areas. The site entrance was slashed and sprayed areas of high visibility in order to maintain aesthetic appearance. Prepared areas for plant installation (including slashing, ripping and cultivating). The following plants were installed: • A total of 2,300 grasses/groundcovers, and 1,000 shrubs and canopy on the RRA bund • A total of 8,599 grasses/groundcovers, and 793 shrubs and canopy on the northern grassland and constructed habitat piles using existing logs. • A total of 6,672 grasses/groundcovers, and 1,200 shrubs and canopy on the eastern bund
Jun 2019	Spot spraying and spraying undertaken targeting exotic herbaceous species. Conducted a sweep of dam for any weeds of high significance The following plants were installed: • 1,276 grasses/groundcovers and 1,000 shrubs and canopy on the RRA bund and 4,040 semi-aquatic plants were installed along the drainage channels. • 2,500 grasses/groundcovers in the northern grassland • 1,000 grasses/groundcovers and 1,420 shrubs and canopy on the eastern end of the northern bund. • 1,000 grasses/groundcovers and 200 shrubs and canopy on the eastern bund. All planting areas were watered.
Jul 2019	Hand weeding, spot spraying and spraying targeting herbaceous and grass weeds on the RRA bund, northern grassland and leachate dam. All planting areas were watered.
Aug 2019	The following plants were installed: • 200 ground covers around existing dam in central zone (Dam 3A) • 200 groundcovers in tilled planting bed as infill in central zone (northern grassland) • 3,290 semi aquatics and herbaceous groundcovers throughout western bank of leachate dam. • 4,910 grasses in to bottom 10-15 metres of bund wall throughout eastern zone of northern bund. Watered all planting areas and manual removed weeds, specifically targeting: • *Senecio madagascariensis* and • *Andropogon virginicus* • *Onopordum spp. and* • *Solanum sisymbriifolium* • *Chloris gayana*

5.11.3 Analysis of rehabilitation activities

The majority of the rehabilitation activities between January and April 2019 related to the management of herbaceous weeds and invasive grasses by means of targeted weed spraying, slashing and hand weeding. Targeted weed management occurred in the northern grassland, western boundary, northern bund and western bank and RRA bund. The aim was to achieve a 50% reduction in density and size of weeds on site and 10% reduction in species and distribution of weeds, which was achieved during the reporting period.

From May through to August 2019, in addition to ongoing weed management, installation of plant species was undertaken. During the reporting period a total of 11,086 grasses and ground covers and 2,620 shrubs were planted along drainage channels, in the northern grassland, and on the existing northern and eastern bunds. A total of 4,369 semi-aquatic species were planted in the drainage channels and western bank of the leachate dam. The plantings achieved the rehabilitation criteria of increase in native plant density and native plant size by 200% and 100% respectively.

6 PERFORMANCE AGAINST EIS PREDICTIONS

As required under Sch5 CC5A(b)(iii), the Annual Review should include a comparison of the data to predictions made in the EIS. **Table 6-1** summarises the relevant EIS prediction and compares this to the results of the monitoring.

Table 6-1: Environmental Performance, Implications and Management Actions – EIS Predictions

Aspect	EIS Prediction / requirements	Performance during the reporting period	Trend / key management implications	Implemented / proposed management actions
Air quality prediction	Five modelled operational scenarios predicted that 24-hour and annual average PM_{10}, TSP and DD levels at nearest sensitive receptors would be below the DECCW assessment criteria, even when existing background levels are included. However, 24-hour PM_{10} levels would be elevated on a few days per year when background levels are elevated. Odour levels at the nearest residences are predicted to be below the most stringent	In general, the construction and operation of the site is in accordance with the predictions from the 2010 EIS (prepared by R.W. Corkery & Co. Pty. Limited). **Table 7-2** shows that from November 2019 to February 2020 several exceedances of 50 ug/m^3 daily limit were observed. These exceedances were attributed to poor air quality in the greater Sydney area due to bushfires in surrounding areas. No odour complaints have been received during the reporting period (See **Table 7-2**).	Generally compliant – The site is managed in accordance with the approved AQMP.	No additional management actions (other than what is detailed in the AQMP) are proposed. PM_{10} will be continuously monitored and will be reported on monthly basis for the next reporting period.
Noise predictions	No traffic noise impacts are predicted inclusive of the potential for sleep disturbance from early morning truck movements. No noise exceedances are predicted to occur at neighbouring residences during the construction phase of the Project. During the Project's operational phase, the greatest potential for noise impacts results from the need to have mobile equipment operating on the outer side of the perimeter bunding and final landform.	As shown in **Table 5-3** no noise exceedances for attended and unattended noise monitoring events were recorded during the reporting period. Additionally no community complaints have been received during the reporting period (See **Table 7-2**).	Generally compliant – The site is being managed in accordance with the approved NVMP.	No additional management actions proposed. Noise will be monitored (continuously for unattended and monthly for attended) and will be reported on monthly basis during the next reporting period.
Water discharge	During operations surface water discharges to Blaxland Creek would be managed primarily through a series of interconnected internal sediment dams that would capture and treat runoff prior to discharge to Blaxland Creek. The majority of site discharge during Year 1 would be actively managed by pumping from Dam 4.	The surface water management system collects and treats sediment laden runoff prior to discharge via one of three licensed discharge points currently located at the outlet of Dam 2 (LDP2) and to also be included in Dams 3B (LDP3) and 6 (LDP1).	Other than one minor reportable pH exceedance, the site is managed in accordance with the approved SWLMP. Wet weather monitoring will continue to be undertaken in accordance with the current SWMLP and EPL requirements.	No additional management actions (other than what is detailed in the SWLMP) are proposed. Water discharges will continue to be monitored and will be reported as

Aspect	EIS Prediction / requirements	Performance during the reporting period	Trend / key management implications	Implemented / proposed management actions
		Runoff (not leachate) is collected and discharged into sediment dams or temporary in-cell surface water storage areas, within the bunds, for initial treatment of sediment. The internal sediment dams have been sized in accordance with the Blue Book to provide sufficient hydraulic residence time to capture a high proportion of gravels, sands and medium/coarse silt particles. A proportion of fine silt and clay particles would also be captured by settling during extended dry periods when sufficient time is available for settling. Water from the sediment dams will be reused on site where possible for operational purposes (such as dust suppression). Water not re-used is transferred to external dams beyond the bunds and discharged if above the design rainfall event or otherwise once testing for appropriate water quality has been undertaken. Low flow is discharged from the internal sediment dams when the maximum storage level is <50% and >10% of the total storage. Low flows are only discharged on days where rain has not occurred. Low flow discharge rates are discharged to a swale for further treatment prior to flowing into Blaxland Creek. High flows are only discharged from sediment dams when the storage level is >50% of the total storage. Turbidity is monitored prior to discharge, to ensure that turbidity is <50 NTU prior to pumping and discharge of high flows to Blaxland Creek. High flow discharge only occurs following a minimum 5-day period of dry weather and where monitoring indicates that turbidity is <50 NTU. Surface water is monitored quarterly at the sediment dams at the LDPS. See **Table 5-12** for more details.		required and during the next reporting period.
Surface water monitoring	The Proponent is committed to a program of surface water monitoring to assist to understand the quality of water accumulating on site and to demonstrate the discharges of water from the Project Site comply with the criteria identified by GSSE/WBM (2010) and set out in Table 4.7.	Surface water is required to be monitored at the wet weather overflow points daily (for turbidity) and weekly (for all other parameters) during active discharge. Overflow points are LDP1 Dam 6 and LDP3 Dam 3. In addition to the above parameters, pH (in pH units) is also monitored monthly during any pumped discharge and during overflow discharges, and within 24 hours after detection of	As a result of this AEMR, surface water monitoring schedules will be updated to ensure that water quality samples are collected quarterly from all internal and external dams at PLRRC.	No additional management actions (other than what is detailed in the SWLMP) are proposed.

Aspect	EIS Prediction / requirements	Performance during the reporting period	Trend / key management implications	Implemented / proposed management actions
		an overflow discharge (during operational hours) while the overflow discharge occurs. Wet weather discharge monitoring for the reporting period is shown in **Table 5-12**.	Other wet weather monitoring will continue to be undertaken in accordance with the current SWMLP and EPL requirements.	
Surface water monitoring	Quarterly monitoring of internal and external dams	The SWLMP recommended that water quality samples be collected quarterly from all internal and external dams at PLRRC and also quarterly from Blaxland Creek both upstream and downstream of the PLRRC to address this requirement from the EIS. No surface water monitoring was undertaken during any this reporting period.	As a result of this AEMR, surface water monitoring schedules will be updated to ensure that water quality samples are collected quarterly from all internal and external dams at PLRRC and also quarterly from Blaxland Creek both upstream and downstream of the PLRRC as recommended.	Schedules for monitoring will be updated and monitoring in accordance with this recommendation will be implemented.
Surface water monitoring	Wet weather monitoring from LDP (dam 3 and Dam 6) – daily (for turbidity) and weekly for other parameters	Wet weather discharges and discharge monitoring was undertaken during this reporting period. See **Table 5-12** and **Section 5.5.4** for more details.	As above other than one minor reportable pH exceedance in October 2018, the site is managed in accordance with the approved SWLMP.	No additional management actions (other than what is detailed in the SWLMP) are proposed.
Surface water monitoring	Blaxland Creek (Upstream and Downstream of the Licensed Discharge Point)	The SWLMP recommended that water quality samples be collected quarterly from all internal and external dams at PLRRC and also quarterly from Blaxland Creek both upstream and downstream of the PLRRC to address this requirement from the EIS. No surface water monitoring was undertaken during any this reporting period.	As a result of this AEMR, surface water monitoring schedules will be updated to ensure that water quality samples are collected quarterly from all internal and external dams at PLRRC and also quarterly from Blaxland Creek both upstream and downstream of the PLRRC as recommended.	Schedules for monitoring will be updated and monitoring in accordance with this recommendation will be implemented.
Electrical Conductivity (EC)	No substantial changes to the salinity of the water on site is predicted.	There have been no substantial changes to the salinity of the water on the site. The EC recorded on 14 February 2020 was above the recommended limit for discharge prior to discharge being undertaken, however this was believed to be due to flocculation treatment and was temporary in nature.	Monitoring will continue to be undertaken to ensure any significant changes in the salinity of the water is picked up and appropriate measures can be implemented as required.	No additional management actions (other than what is detailed in the SWLMP) are proposed.

Aspect	EIS Prediction / requirements	Performance during the reporting period	Trend / key management implications	Implemented / proposed management actions
pH	pH of surface water accumulating in the Project Site would continue to have a slightly higher pH range (pH 8.0 to 8.5) than Blaxland Creek (pH 7.0 to 7.5).	There have been no substantial changes to the predicted pH ranges during the reporting periods. Other than one minor pH exceedance reported on 18 October 2018, the pH recorded has been within the predicted levels. A pH 8.6 to 8.8 was recorded at LP1 from 10:25 am to 11:30 during a wet weather event-based discharge. Rainfall exceeded five-day design event with records indicating 68.2 mm rainfall on site.	Monitoring will continue to be undertaken to ensure any significant changes in the pH of the water is picked up and appropriate measures can be implemented as required. The surface water monitoring schedules will be updated to ensure that water quality samples are collected quarterly from all internal and external dams at PLRRC	No additional management actions (other than what is detailed in the SWLMP) are proposed.
TSS and Turbidity	Experience to date confirms that both suspended solids concentration and turbidity levels need to be, and can be controlled for water discharged from site.	As described above runoff is collected and discharged into sediment dams or temporary in-cell surface water storage areas, within the bunds, for initial treatment of sediment. The internal sediment dams have been sized in accordance with the Blue Book to provide sufficient hydraulic residence time to capture a high proportion of gravels, sands and medium/coarse silt particles. A proportion of fine silt and clay particles are also captured by settling during extended dry periods when sufficient time is available for settling. No exceedances of the suspended solids concentration and turbidity levels have been recorded during the reporting period, with the exception of the levels measured during a wet weather discharge undertaken on 7 February 2020. Rainfall for the dewatering/sampling event was well above the Blue Book design criteria (5-day 90th percentile rainfall of 47.6 mm), so the specified concentration limit for TSS does did not apply (see Section L3.1 in the EPL). For context, 326 mm from 2 pm 6 February 2020 to 9 am 10 February 2020, with the whole South Creek catchment in flood.	Measures to minimise water pollution were undertaken. Monitoring of TSS and Turbidity will continue to be undertaken and the surface water monitoring schedules will be updated to ensure that water quality samples are collected quarterly from all internal and external dams at PLRRC.	No additional management actions (other than what is detailed in the SWLMP) are proposed and what is permitted in the EPL.
Leachate	The modelling is conservative and is expected to overestimate leachate generation volumes. These results demonstrate that the Initial Leachate Evaporation Pond and Long-Term Leachate Evaporation Pond, both with capacities of 12ML, would adequately store (and evaporate) all leachate generated throughout the life of the Project.	There was adequate storage available for the leachate that was generated during Reporting Period 2. Should the level of leachate in the evaporation ponds reach the pond's freeboard, a signal is sent back to the pumps preventing them from pumping leachate and thereby preventing leachate overflowing from the evaporation pond and entering the stormwater system (with leachate temporarily fluctuating in level within Cell 1).	Levels in the Initial Leachate Evaporation Pond and Long-Term Leachate Evaporation Pond will both continue to be monitored and the leachate modelling will be reviewed with actual site data to determine whether additional leachate storage capacity is required. If the validation assessment of the leachate water balance indicates excess leachate storage is required, then the dam will be extended to provide additional storage, up to	Currently, no additional management actions (other than what is detailed in the SWLMP) are proposed. Contingency measures will be put in place in the event that the storage capacities are inadequate.

Aspect	EIS Prediction / requirements	Performance during the reporting period	Trend / key management implications	Implemented / proposed management actions
		Level sensors and visual indicators are included on the Cell 1 riser to identify if the leachate level is above the criteria. The criteria are: • a maximum leachate level of 0.3 m above the leachate barrier system • a maximum leachate level of 2 m below the inferred groundwater levels to promote the inward flow of groundwater.	a volume of 23 ML as per the Further Modified Preferred Project Report. If validation assessment of the leachate water balance indicates excess leachate storage is required above this volume, then potential contingency arrangements will be developed and implemented to the satisfaction of the NSW EPA.	
Leachate	Also, the volume of leachate which is generated (by each cell), stored and disposed of would be continuously monitored and compared to the model predictions. This data would be collated and reported to demonstrate that the Site continuously has sufficient storage capacity.	As above	As above	As above
Groundwater	The Proponent would undertake a monitoring program to demonstrate the effectiveness of the proposed design and operational safeguards. The following program would be evaluated and reviewed annually to ensure that only meaningful data is being collected.	Groundwater is monitored quarterly at 15 locations around the site in accordance with the requirements of EPL 20814. BH1, BH2, BH4 and BH8 were monitored quarterly for standing water level only, prior to being decommissioned. During site establishment works, monthly sampling and analysis for all required parameters was undertaken from November 2018 to February 2019. Following the commencement of operations in August 2019, quarterly sampling was undertaken. Groundwater quality is being assessed against relevant assessment criteria outlined in *Australian and New Zealand Guidelines for Fresh and Marine Water Quality ANZECC/ARMCANZ 2000 (ANZECC 2000),* as well as background and historical pre-waste activities. **Section 5.5.6** and **Appendix B** details the monitoring results. All monitoring data has been in compliance with the proposed criteria.	Groundwater will continue to be monitored in accordance with the approved SWLMP and EPL 20814. In the event any exceedances are identified during this monitoring, it is likely this will be due to leachate contamination. Contingency measures will be put in place and could include, but not limited to controlling the level of leachate in the landfill to maintain the inward flow of groundwater into the site and to potentially extract groundwater from impacted bores and manage as leachate	Currently, no additional management actions (other than what is detailed in the SWLMP) are proposed. Contingency measures will be put in place in the event that the exceedance are identified.
Rehabilitation / visual	The Project would involve the removal of section of the north-western bund wall from the existing Blaxland Creek Core Riparian Zone and the reduction in slope of the bund wall itself.	Site established works included the construction and shaping of the northern face and much of the eastern face to their final rehabilitated landform. This was followed by landscaping of those faces. The site is divided into three zones:	All fauna, vegetation and landscaping is managed in accordance with the BWLVMP approved in July 2019. All Site Resilience/Weed Management Zones are	Currently, no additional management actions (other than what is detailed in the BWLVMP) are proposed.

Aspect	EIS Prediction / requirements	Performance during the reporting period	Trend / key management implications	Implemented / proposed management actions
	The Project would achieve the objectives of the local planning framework for its rural context via proposed progressive rehabilitation of the Project site through the proposed landform re-construction	• Zone 1: Riparian Zone • Zone 2: Property Boundaries • Zone 3: Maintain and control weeds in grazing/quarry areas. As required under Sch4 C46, a Rehabilitation Plan was prepared and implemented to achieve the final landform and landscaping in Figure 2.22 of the *Further Modified Preferred Project Report (Ex Z in Appeal No 10928 of 2010)*. Rehabilitation activities commenced in January 2019 and **Section 5.11** details the rehabilitation undertaken during the reporting period to achieve the requirements of the plan. The rehabilitation program also achieved the key performance indicators provided in Table 7 of the Bund Wall, Landscaping and Vegetation Management Plan (BWLVMP) approved in July 2019.	mapped on Huon Designs Drawing Nos PL2017/09/A and PL2017/10/A. The location, shape and final finish of the bund walls, dams and bioswales are shown on Drawing SK010 and SK024. The rehabilitation program will also continue to address the key performance indicators provided in Table 7 of the BWLVMP for Years 2-5.	The BWLVMP will also be supported by the implementation of the SWLMP in the event that there are issues with soil erosion and sedimentation.
Fauna	The habitat types represented within Project Site are either highly modified and/or well represented in the locality. Whilst three fauna species listed as vulnerable on the TSC Act occur or are likely to occur, the Project is unlikely to have a significant effect on any of these species or their habitats. AES (2009) concludes that there would be no fauna related constraints on the development and operation of the Project.	No impacts to flora or fauna which required reporting to the regulatory authorities occurred during this reporting period. The site does not currently provide significant habitat other than ponds/dams and pasture/grasslands. Native fauna are visit the site to forage, drink and take advantage of isolated trees and vegetation. Sightings of wallabies, reptiles and a variety of birdlife have been reported anecdotally. The perimeter security fencing limits access or through movement of larger species.	All fauna, vegetation and landscaping is managed in accordance with the Bund Wall, Landscaping and Vegetation Management Plan (BWLVMP) approved in July 2019.	Currently, no additional management actions (other than what is detailed in the BWLVMP) are proposed.
Aboriginal Heritage	As only two artefacts were recorded on degrading surfaces during the investigation the two locations are assessed to be of no research potential. Should any relic be uncovered during Project-related activities, work in the area surrounding the relic would cease and the DECCW, the three Aboriginal organisations that participated in the survey and the Police (if bone is discovered and not clearly identified as being of animal remains) would be informed of the find.	There were no unexpected find Aboriginal Heritage finds which required reporting to the regulatory authorities during this reporting period.	Not applicable	Not applicable

Aspect	EIS Prediction / requirements	Performance during the reporting period	Trend / key management implications	Implemented / proposed management actions
European Heritage	In the absence of any structures or relics of heritage interest on the Project Site ASR (2009b) concludes that there are no constraints on heritage grounds to the Project and provides no specific management recommendations.	There were no unexpected find European Heritage finds which required reporting to the regulatory authorities during this reporting period.	Not applicable	Not applicable
Traffic impacts	The results of the modelling reveal that: • the good Level of Service at the intersections modelled would not change with the estimated additional traffic generation of the proposed development; • the additional traffic demand on the intersections modelled as a consequence of the proposed development would only alter the Degree of Saturation and Total Average Delays minutely; and • the proposed driveway would operate at a very good level of service with minimal delays.	One complaint in relation to the road upgrade (Luddenham Road) was received during a community consultation session. Bingo has noted the concern, addressed the issues with the roads contractors and informed the community that works were almost complete. Other than this complaint, there were no traffic related incidents or issues relating to traffic impacting the level of service within the wider community and there have been no issues relating to delays in traffic entering or exiting the site.	The complaint related to an area outside of the property and was not attributed to traffic generated by the project. The Luddenham Road upgrades are now complete. Traffic impacts will continue to be monitored and complaints assessed if and when they are received. Currently, as discussed below, the number of trucks entering the site are well within the limit of the consent.	Not applicable
Truck and light vehicle movements numbers	The Proponent has placed an upper limit on the combined number of heavy vehicles travelling to the Project Site daily, i.e.. 158 truckloads (in or out) or 316 truck movements. Light vehicle movements are expected to vary from 40 to 60 per day, again with the bulk of those travelling to and from site near the start and end of the day's operations.	The Conditions of Consent stipulated a limit of 250 heavy vehicle movements per day (Sch3 C25 and C26), a reduction on what was proposed in the EIS. **Figure 5-18** shows the traffic movements recorded since operation commenced in August 2019. There were no exceedances of the daily heavy vehicle limit of 250 during this reporting period.	An accurate register of daily heavy vehicle movements is maintained at the weighbridge. Truck numbers will continue to be monitored to ensure that the stipulated limit is not exceeded.	No additional management measures are currently proposed, other than what is detailed in the LEMP, the TNMP and the relevant Bingo SOPs.
Waste capacity	The facility would have the capacity to receive an average of approximately 300,000 tpa and a maximum of 600,000 tpa of general solid waste (non-putrescible) generated predominantly in the Sydney Metropolitan Area with some wastes potentially transported from the Blue Mountains. It is expected that the volume of waste received would ramp up over several	That Conditions of Consent (Sch3 C22) provides the following limits: • Maximum of 4,3 M tonnes • Maximum annual receipt of waste: 450,000 tpa • Maximum annual emplacement: 205,000 tpa Operation of the PLRRC commenced in August 2019 and since operations commended 48,318 tonnes of waste was	Waste is managed in accordance with the WRRMP and the Bingo Standard Operating Procedures (SOP). The monthly WARRP reporting details the quantity, type and source of waste received; and quantity, type and quality of the outputs produced to ensure that the PLRRC operates within these limits.	No additional management actions (other than what is detailed in the WRRMP are proposed and ongoing monthly reporting via the WARRP

Aspect	EIS Prediction / requirements	Performance during the reporting period	Trend / key management implications	Implemented / proposed management actions
	years, with the level of 300,000 tpa of incoming wastes achieved by about Year 4 or 5.	received at the site. This is well below the current limits set by the Conditions of Consent.		
Type of Waste	It is anticipated that this waste would consist predominantly of Construction and Demolition (C&D) and Commercial and Industrial (C&I) waste. No liquid, restricted or dangerous materials would be accepted at the facility. The principal C&D wastes targeted for receipt (and re-processing) include concrete, bitumen, bricks and roofing tiles. It is recognised that C&D wastes delivered may contain very small quantities of asbestos in a bonded matrix	During this reporting period 48,318 tonnes of waste was received at the site. This is well below the current limits set by the Conditions of Consent. The waste received comprised of the following: • 2,539 tonnes municipal waste (5%) • 9,739 tonnes C&I waste (20%) • 36,040 tonnes C&D waste (75%) The C&D waste comprised: mixed waste, non-contaminated soil and bricks or concrete.	As above	As above
Contaminated soil	The Proponent envisages receiving approximately 100,000 tpa of low level contaminated soil from a number of potential sources namely from remediation sites such as old petrol stations or ex-commercial and industrial sites that either have low level contaminated soils or construction and demolition waste that have the potential for low level contamination.	Both contaminated and non-contaminated soils have been received at the PLRRC for processing. During this reporting period a total of 8,359 tonnes of contaminated soil from C&I and C&D waste was received.	As above	As above
Waste suited to recycling and/or re-processing	The Proponent's preliminary market evaluation suggests that, during an average year receiving 300,000 tonnes of waste, between 50% and 67% of the waste received (150,000 tpa / 200,000 tpa on average) on site would be suited to recycling and/or re-processing with the remaining 50% to 33% of the waste received placed directly into the active emplacement cell.	During this reporting period, 281 tonnes of material was transported from site for lawful recovery at a licensed waste facility. This included mixed waste, bricks and concrete, and wood, trees or timber. This is currently 1% of the material received at the PLRRC.	The site only commenced operation in August 2019. This percentage of processed and material transported off-site for further processing or reuse is likely to increase as more waste material is received at the site.	As above

7 COMMUNITY

7.1 Community Liaison Committee

A Community Liaison Committee (CLC) was setup at the early stages of the project and was meeting quarterly from June 2017 until site establishment commenced in April 2018.

The CLC comprises an independent Chairperson (Peter Gordon), who has been a member of the committee since its inception. On 3 April 2017, the Proponent received the Secretary's approval of Peter Gordon to act as interim chairperson of the CLC in accordance with Sch5 C2.

The Proponent also received the Secretary's approval of the draft CLC members, procedures and meeting frequency in accordance with Sch5 C2. The draft procedures will be finalised by the CLC.

The CLC includes representatives from:

- Bingo and Patons RRC, including the Head of Project Development, the Senior Project Manager for the project and Stakeholder & Continuous Improvement Manager
- Penrith City Council
- Community representative
- Local residents
- Environmental consultants as required, including Catalyst Environmental (Water Consultant).

Details and frequency of these meetings are described below. Meeting minutes are prepared for each of the meetings and provide an overview of the activities occurring on site, action items, issues raised etc. The minutes of the CLC meetings are available from the Patons Lane website.

7.1.1 Reporting Period 1: April 2018 to March 2019

During this reporting period, the CLC meetings occurred every two months as summarised below:

- 17 April 2018. This included a site inspection at Bingo’s recycling operation in Auburn followed by the meeting at Twin Creeks Gold Club
- 19 June 2018 at the Twin Creeks Golf Club
- 21 August 2018 at the Twin Creeks Golf Club
- 16 October 2018 at the Twin Creeks Golf Club
- 11 December 2018. This meeting was held at the Patons Lane RRC and included site inspection
- 5 March 2019 at the Twin Creeks Golf Club

7.1.2 Reporting Period 2: April 2019 to March 2020

During this reporting period, the following CLC meetings occurred.

- 7 May 2019. This meeting was held at the Patons Lane RRC and included site inspection.
- 1 October 2019 at Patons Lane.

7.2 Community engagement

OPF Consulting (Communications Consultancy) was engaged to assist in the development and implementation of a continuing community liaison strategy for the PLRRC. In addition to the establishment and operation of the CLC, the following community engagement activities were undertaken:

- All residents within a three-kilometre radius of the Project were hand delivered an introductory newsletter and offered one-on-one meetings with company representatives
- A dedicated Community Liaison Team operate a number of contact methods including email, website enquiry form, Facebook and community hotline, and respond to all enquiries within 48 hours
- The implementation of the website was brought forward and regular updates about the status of the Project and other relevant information have been provided
- A community newsletter is published in both electronic and hard copy, available to all interested parties. The following newsletters were issued during both reporting periods (i.e. April 2018 to March 2020)
  - January 2019
  - April 2019
  - April 2020

  https://www.patonslane.com.au/community/community-newsletter/
- An active Facebook page to provide more general information about the Project and the waste and recovery industry, including important site updates has also been implemented.

7.3 Access to Information

Sch6 C10 requires that the Proponent make information freely available on a publicly accessible website as it is progressively required under the approval.

A website has been established for the PLRRC and up-to-date information about the site's operations has been uploaded. The website includes information relating to:

- Statutory approvals (planning approval, modification notice and EPLs)
- Project documentation, including all approved environmental management plans
- Recent monitoring data, including noise, air and water monitoring data and void dewatering data
- How to register a complaint.

Relevant information applicable to the local community is summarised in **Table 7-1.**

Table 7-1: Contact information for the local community

Format	Details
Website:	https://www.patonslane.com.au/
Email:	community@patonslane.com.au
Facebook:	https://www.facebook.com/patonslanerrc/
Phone:	0431 947 254
Postal Address:	Patons Lane Resource Recovery Centre, 123 Patons Lane, Orchard Hills NSW 2748

7.4 Community Complaints

The following table provides a summary of the community complaints received, and the actions undertaken as a result of the complaints, during the reporting period.

Complaints can be made directly to Bingo via email, dedicated phone number or the SLRRC Facebook page.

Table 7-2: Complaints register summary

Time and date	Source and method	Direct or indirect feedback	Type of feedback	Details of enquiry/feedback	Action taken by Bingo and follow up
Reporting Period 1: April 2018 to March 2019					
No complaints received					
Reporting Period 2: April 2019 to March 2020					
7/05/2019 12:00:00 AM	Community Consultation Meeting	Direct	Road works	Issue raised at community consultation session in relation to the road upgrade works on Luddenham Road causing traffic disruptions and delays.	Bingo noted the concern and addressed the issues with the roads contractors. The following were implemented to improve traffic flow: • The contractors' plans were redesigned to do the work in shorter sections to limit the impact on traffic. • The traffic management plan was also revised including replacing traffic lights on automated settings with traffic controllers to control stoppages. • The community were advised of project schedules which was nearing completion.

8 INDEPENDENT AUDIT

8.1 Reporting Period 1: April 2018 to March 2019

No independent audit was undertaken during this reporting period.

8.2 Reporting Period 2: April 2019 to March 2020

The purpose of the audit was to determine if the pre-operational obligations detailed in the Conditions of Consent. As required by Sch3, C12, an *Independent Pre-operation Environmental Audit (IPEA)* was undertaken by pitt&sherry. The audit was conduction from May 2019 to July 2019 and comprised a series of five site inspections, as well as document reviews and interviews with personnel.

The findings of the audit were reported in *Pre-Operational Independent Environmental Audit Bingo Industries Patons Lane Resource Recovery Centre,* dated 21 October 2019 .

8.2.1 Compliance status

Pitt&sherry states that the operational environmental management activities observed during the site inspection were being carried out in a competent manner, with the non-compliances identified by the Auditors being the exception. **Table 8-1** summarises the findings of the IPEA.

Table 8-1: Summary of statutory compliance identified in IPEA October 2019

No. of Conditions	Compliant	Non- Compliant	Noted	Not Assessed	N/A or Not Triggered
252	118	25	3	45	61

The 25 non-compliances with the conditions of consent of the Project Approval are summarised **Table 8-2**. The status on the compliance has also been provided. Most of the non-compliances raised were of an administrative nature and related to availability of documentation. The majority of these non-compliances have now been closed.

Table 8-2: Summary of non-compliances identified in the IPEA October 2019

NC No	Condition	Aspect	Non- Compliance description / Recommendation	Status	Comment
1	Sch3 C12	Pre-Operational Compliance Audit	Site operations commenced prior to the submission of this report to the DPIE	**CLOSED**	Site establishment works commenced on 19 April 2018 with the majority of works completed in April 2019 whereby operation of the site commenced in August 2019. Environmental Protection Licences for landfill and resource recovery centre were issued by the Environment Protection Authority in June and July 2019, respectively. Bank Guarantee for the value of $1,815,500 in favour of Department Planning, Industry and Environment to satisfy the Rehabilitation Bond requirements of Schedule 3, Condition 7 of project approval MP 09_0074 was accepted by DPIE on 12 July 2019.
	Sch3 C24	Stockpile heights	The existing clay stockpile was observed by the Auditor were above the height of the bunds. • Provide clear written instructions to earthworks operators and supervisors that no stockpile on site is to exceed the height limit of 54m. • Review the LEMP to ensure that all relevant compliance requirements, including stockpile height restrictions are documented, and that the processes and procedures to ensure compliance are fully documented. Refer also to recommendation for Sch3 C22.	**CLOSED**	The Clay stockpile height is below limit. A maximum AHD is noted on page 6 and 38 of the LEMP (approved by the DPIE on 26 July 2019). Stockpile related checks are included in the Supervisor daily checklists and was available at the time of the audit. A specific note in relation to the clay stockpile height has been added to the checklist
3	Sch 4 C16	Air Quality and Greenhouse Gas Management Plan (AQMP)	Correspondence from DPIE confirming the approval of Todoroski Air Services has not been provided to the Auditor • Obtain (and keep on file) a copy of the letter of approval from DPIE for the appointment of Todoroski Air Services for the preparation of the AQMP	**CLOSED**	Todoroski Air Services was endorsed by the Secretary of DP&E on 14 November 2017 The AQMP was approved by DPIE in July 2019 See **Section 3.2.2** of this AEMR
4	Sch 4 C20	Soil, Water, Leachate Management Plan (SWLMP)	Prior to commencement of landfill operations, the installation and commissioning of the leachate management system should be completed.	**CLOSED**	The leachate system was installed prior to commencement of landfilling activities. Reference document: *Patons Lane Resource Recovery Centre Construction Quality Assurance Report Cell 1A-1 and Initial Leachate Pond July 2019,* prepared by SRC Operations Pty Ltd See **Section 5.7** of this AEMR

NC No	Condition	Aspect	Non- Compliance description / Recommendation	Status	Comment
5	Sch 4 C22	Noise Compliance Monitoring Report	The Proponent shall submit a noise compliance assessment to the Director-General three months after the commencement of site establishment. The assessment shall be prepared by a suitably qualified and experienced acoustic consultant and assess compliance with noise limits in Table 7 (Condition 21) for the first three months of work. • Ensure that all future noise monitoring occurs in compliance with the Project Approval.	**CLOSED**	Noise monitoring reports have been prepared monthly since July 2018 by Wilkinson Murray (a suitably qualified and experienced acoustic consultant). The reports have been uploaded to the PLRRC website See **Section 0** of this AEMR.
6	Sch 4 C35(e)	Road upgrades	e) provide adequate car-parking on the site in accordance with AS 2890.1 Parking Facilities to the satisfaction of the Director-General; • Request formal (written) approval of the parking facilities required by Schedule 4 Condition 35 e from DPIE.	**CLOSED**	Parking on site was validated by Mckenzie, the appointed certifier in accordance with *AS 2890.1 Parking Facilities*. An occupation certificate No. 19/124832-5 was issued by McKenzie Group under the *Environmental Planning and Assessment Act 1979* Sections 109C (1) (c) and 109H. This was endorsed by DPIE as demonstrated following the acceptance of the site rehabilitation bond on 12 July 2019.
7	Sch 4 C35(f)	Road upgrades	provide a contribution of $31,200 to the Council towards Council's upgrade of 1.45km of Luddenham Road, south of Mamre Road. • Arrange for payment of the contribution to Council for the upgrade of Luddenham Road.	**CLOSED**	A contribution payment of $31,200 in accordance with Schedule 4, Condition 35(f) of the Project Approval was made to Penrith City Council in 2018 to support Council's upgrade of 1.45 km of Luddenham Rd, south of Mamre Rd.
8	Sch 4 C36	Maintenance of Patons Lane	A Deed of Agreement with Council had been prepared. At the time of the Audit the Deed had not been executed by both Parties. • Request Council execute the Deed of Agreement for maintenance of Patons Lane.	**CLOSED**	The Deed has been executed by both parties.
9	Sch 4 C38	Transport Code of Conduct	A Transport Code of Conduct must be prepared in consultation with the RTA and Council, and approved by the Director-General prior to the commencement of operation; Formal Approval of the Director-General (DG) for the Transport Code of Conduct has not been provided to the Auditor. • Provide Council with the opportunity to review and comment of the draft Transport Code of Conduct. • Provide RMS with the opportunity to review and comment on the draft Transport Code of Conduct. • Conduct and seek formal approval of the Code of Conduct from the DG.	**CLOSED**	The Transport Code of Conduct is included in Appendix B of the TNMP, which was approved in July 2019 The TNMP was prepared in consultation with the relevant stakeholders.

NC No	Condition	Aspect	Non- Compliance description / Recommendation	Status	Comment
10-15	Sch 5 C5A (six clauses)	Annual Environmental Management Review (AEMR)	No AEMRs have been prepared and submitted to DPIE. • Prepare an AEMR in compliance with Sch5 C5 for the last reporting period and issue to DPIE.	**OPEN**	This AEMR has been prepared to address the reporting periods since site establishment (April 2018 to March 2019 and April 2019 to March 2020)
16-20	Sch 5 C10 (five clauses)	Access to information	Limited information was uploaded to the PLRRC website at the time of the audit • Upload EPL 21259 to the website • Upload the following plans (following finalisation of the plans and approval by DPIE • Review the Conditions of Approval and ensure that all reports required under the Approval are uploaded onto the website. • Develop a complaints register and provide an extract of that register on the web site. • Ensure that the AEMR is uploaded to the Website following submission to DPIE. • Upload the Pre-Site Establishment Compliance Report and the Proponents response to the recommendations of that report	**CLOSED**	Relevant information is now provided on the website, including all approved management plans, monitoring reports for noise and air, newsletters etc. See **Section 7.3** of this AEMR
21	Sch 7 Condition C	Minimum design requirements for Cell liners	The Auditor understands that all elements of the groundwater protection system have been installed, however the Construction Quality Assurance Report provided did not verify the installation of the groundwater pressurisation system. The Auditor could not verify compliance with this Condition. • Provide documented evidence that the groundwater depressurisation system has been installed.	**CLOSED**	The groundwater depressurisation system has been installed.
22	Sch 7 Condition H	Surface water and groundwater management	The SWLMP does not identify the location of the wet weather discharge points, parameters to be measured or the frequency of monitoring detailed in EPL 20814. • Update the SWLMP to cover the reuse of stormwater for irrigation of rehabilitation areas. • Update the SWLMP to include the location of the wet weather discharge points, parameters to be measured or the frequency of monitoring detailed in EPL 20814.	**CLOSED**	• Irrigation is only considered in the Stormwater Dewatering Management Plan (Appendix G of the SWLMP) • Section 8.2 of the SWLMP details the surface water monitoring requirements, including requirements and location of wet weather discharge. Table 5 of the SWLMP details the surface water quality parameters for wet weather overflow (including pollutant, frequency and sampling method). The SWLMP was approved by DPIE in July 2019. • The EPL identifies the locations of the all the monitoring points.

NC No	Condition	Aspect	Non- Compliance description / Recommendation	Status	Comment
23	Sch 7 Condition I	Monitoring	The Auditor sighted water quality field measurement records from Catalyst Environmental Solutions. However, no records demonstrating commission for Catalyst (or an alternative independent Consultant) was available that demonstrated that a consultant or consultants had been commissioned to undertake the required monitoring. • Update the SWLMP to include the groundwater monitoring requirements specified in EPL 20814. • Formally commission a consultant (or consultants) to undertake the following monitoring and reporting: a. Groundwater levels and quality; b. Leachate levels in cells and quality; c. Leachate levels in dams and quality; d. Surface water quality at offsite discharge point; e. Cover and capping operations on waste cells; f. Background groundwater characteristics; and g. Clarify the connectivity between the groundwater and Blaxland Creek.	**CLOSED**	• Section 8.3.2 of the SWLMP summarises the monitoring parameters and methodology required by the EPL 20814. • NOTE There are no specific limits included in current EPL other that the Location of the borehole monitoring points and areas • Catalyst Environmental Solutions was formally engaged to undertake the relevant monitoring prior to Bingo acquiring the site.
24	Sch 9 Condition i)	Monitoring	Noise testing of the plant working on top of the stockpiles had not been undertaken by Bingo. This condition could not be verified. • Undertake noise monitoring of all plant and equipment that may be located on top of the stockpiles. Maintain those records as evidence of compliance.	**CLOSED**	The monthly noise and air quality monitoring reports prepared by Wilkinson Murry included an assessment of the Sound Power Level Data. Sound power levels were monitored in September 2018 and in February and May 2019. Operations have been in frequent and ad hoc at times This has now been temporarily suspended due to limited operation. The reports state that compliance is generally achieved where this was monitored at the nearest residential receivers
25	Sch 9 Condition q)	Monitoring	A summary noise monitoring report has not been issued to Council or the EPA. • Ensure that an annual noise monitoring report is issued to Council and the EPA.	**OPEN**	The monthly monitoring reports are available on the PLRRC website; Council participates in the Community Committee and is aware of these reports.

8.3 Independent audits

As required by Sch5, C6, *Independent Environmental Audits* of the Project are required to be undertaken every three years after the commencement of site establishment, unless the Secretary directs otherwise.

The next Independent Environmental Audit will be undertaken in April 2022.

9 INCIDENTS AND NON-COMPLIANCES DURING THE REPORTING PERIOD

9.1 Non-compliances

NC #	Relevant Approval / Condition #	Condition Description	Non-compliance Description	Actions taken to minimise and prevent recurrence if adverse effects of non-compliance	Status of compliance
Reporting Period 1: April 2018 to March 2019					
1	EPL 20814 Condition L2.2	Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.	An exceedance of the pH limit (pH of 8.6 to 8.8) was recorded at LP1. Rainfall exceeded the 5-day design event with records indicating 68.2 mm rainfall on site. This event did not result in any adverse effects.	De-watering of the void has been completed. If following heavy rainfall, runoff has accumulated in the void prior to completion of landfilling, water quality monitoring will continue to be undertaken. Measures detailed in the SWLMP will also be implemented in the event a further breach is recorded. Construction was subsequently completed and runoff into the void has been restricted as per site surface water management plans	**CLOSED**
Reporting Period 2: April 2019 to March 2020					
2	Sch5 C5A of MP49_0074	Preparation of the AEMR for previous reporting period	This report addresses this requirement and includes the monitoring and reporting requirements for both reporting periods. This is an administrative non-compliance and there have been no adverse impact on the environment.	With the preparation of this AEMR, a template has now been established and the relevant data requirements have been established and sourced. This will provide a framework for the AEMR required for April 2020 to March 2021. It is noted that the required monitoring for EPL (i.e. wet weather discharges, noise and dust monitoring) has been undertaken.	**OPEN**
3	EPL 20814 Condition R1.5	The Annual Return for the reporting period was not supplied to the EPA via eConnect EPA or by registered post within the 60 days after the end of each reporting period	The reporting period was from 8 November 2018 to 7 November 2019 and the annual return was submitted on 8 January 2020	Appropriate action has been undertaken by Bingo to ensure annual returns are submitted timeously. The next annual return is due 7 January 2021	**CLOSED**

NC #	Relevant Approval / Condition #	Condition Description	Non-compliance Description	Actions taken to minimise and prevent recurrence if adverse effects of non-compliance	Status of compliance
4	Sch 3 C13	TSP and Particulates (PM_{10})	Continuous monitoring is currently undertaken for PM_{10} and dust gauges are monitored monthly, however Total suspended particulate (TSP) matter is not monitored nor reported within the monthly monitoring reports.	Estimates of the annual average background TSP concentrations can be determined from a relationship between measured PM_{10} concentrations. This relationship was established as part of a review of ambient monitoring data collected by co-located TSP and PM_{10} monitors operated for reasonably long periods of time in the Hunter Valley (NSW Minerals Council, 2000) and assumes that 40% of the TSP is PM_{10}. This approach to estimating ambient TSP concentrations in the absence of monitoring data is common throughout NSW and is generally accepted by NSW EPA. Compliance with the TSP annual criteria will be automatically achieved when compliance with PM_{10} annual criteria is achieved.	**CLOSED**
5	EPL 20814 Condition P1.2	TSP and Particulates (PM_{10})	As above for non-compliance #4	As above for non-compliance #4	**CLOSED**

9.2 Incidents

The following table provides a summary of the incidents that occurred during the reporting periods.

Table 9-1: Summary of incidents during the reporting period

Incident Number[14]	Date	Aspect / Area	Mechanism of environmental incident	Description	Action taken	Status
Reporting Period 1: April 2018 to March 2019						
1	18/12/2018 10:25 AM to 11:30 AM	Water quality	Wet weather event-based discharge	A pH 8.6 to 8.8 was recorded at Point 1. Rainfall exceeded the 5-day design event with records indicating 68.2 mm rainfall on site. This event did not result in any adverse effects.	De-watering of the void was completed. Following heavy rainfall, runoff accumulated in the void prior to completion of landfill construction work. Construction was subsequently completed and runoff into the void has been restricted as per site surface water management plans	**CLOSED**
Reporting Period 2: April 2019 to March 2020						
411	18/09/2019 12:29 PM	Water quality	Control Failure Site maintenance of pollution and pre-treatment controls	Water overflowed from Dam No. 2 before the sedimentation (HES) dam collected the surface waters. The event was triggered by the excessive rain fall over the previous 36 hours and all the dams on site were full.	The second gateway pipe dam between dam 2 and dam 2a is activated at times of increased flow and to reduce likelihood of dam 2 spilling at spillway except in extreme rainfall events	**CLOSED**
791	6/02/2020	Water quantity	Site maintenance of pollution and pre-treatment controls	During the extensive regional rainfall event in February 2020, the site experienced offsite stormwater discharges at the three licensed discharge points (LDP). PLRRC experienced in excess of 400 mm of rain over a period of four days.	Wet weather discharges were monitored following the discharge (See **Section 5.5.4** and **Table 5-12**)	**CLOSED**

[14] Bingo Incident Reporting system generated number

Incident Number[14]	Date	Aspect / Area	Mechanism of environmental incident	Description	Action taken	Status
792	10/02/2020	Flood / inundation	Site maintenance of pollution and pre-treatment controls	As a result of the extensive regional rainfall event in February 2020, Blaxland Creek was flooded which resulted in the upstream water quality monitoring control box being fully submerged resulting in damage to the electrical components.	The box was removed by a technician from Turbid for repairs/replacement.	**CLOSED**
220	2/03/2020 9:55 AM	Water quality	Site maintenance of pollution and pre-treatment controls	Overfull HES dam	Controlled surface stormwater dewatering from HES dam and a sample event within 24hr hours was undertaken. See **Section 5.5.4** and **Table 5-12** for more details on wet weather monitoring.	**CLOSED**
281	18/03/2020 7:25 AM	Water quality	Handling and storage Spill or Leak Chemical -	A forklift operator spilt about 10 litres of water mixed with hydraulic oil on the concrete in front of the RRC building	The staff immediately contained the spill and covered it with absorbent material. There were no injuries or material damages caused. The leak / spill was contained and did not impact on the swale located 10 metres away.	**CLOSED**
345	30/03/2020 3:51 PM	Waste	Illegal Dumping Land - soil and other pollution / contamination	A load of soil and rubbish was tipped by an unknown party in front of the main gate of PLRRC. There was no CCTV installed at this location.	The site team cleaned up and disposed of the rubbish to an appropriately licensed facility. Additional signage and dummy camera installed at the entrance.	**CLOSED**

10 ACTIVITIES TO BE COMPLETED IN THE NEXT REPORTING PERIOD

Bingo is committed to delivering the highest standards of environmental performance to meet or exceed legal and other requirements.

This section identifies the measures to be implemented in the next reporting period to improve the environmental performance of the operation. This Section also briefly outlines forecast operations for the next reporting period with a focus on significant changes and any actions resulting from a condition of a relevant approval that will be triggered in the next reporting period.

The key activities to be completed in the next reporting period are provided in **Table 10-1.**

Table 10-1: Activities to be completed during forecasted reporting period

Activity #	Aspect	Activity	Responsibility	Timeframe
1	Environmental Data Management System (EDMS)	In 2019, Bingo implemented an Environmental Data Management System (EDMS) to improve environmental performance and compliance. The EDMS provides a platform to manage environmental data through the lifecycle of environmental monitoring, including planning, sampling, data validation, storage and reporting. During the next reporting period the EDMS will continue to be embedded within the environmental management of the operation by developing monitoring schedules, engaging with consultants for the use of the EDMS, creating custom reports and templates and documenting procedures.	Environmental Manager NSW	2020-2021
2	Environmental Management and Improvement Programs	The site will continue to implement the existing controls and monitoring plans of the site Environmental Management Plan and associated sub-plans. Additional improvement programs may be implemented in response to findings by ongoing inspections and monitoring as well as findings identified by regulatory inspections.	Environmental Officer PLRRC Site Operations Manager	Ongoing
3	Site rehabilitation	Ongoing site rehabilitation in accordance with the BWLVMP. The BWLVMP will be reviewed due to the impacts of a prolonged drought followed by major rainfall events.	Environmental Officer PLRRC Site Operations Manager	2020-2021

APPENDIX A CONDITIONS OF CONSENT COMPLIANCE TRACKING

Compliant:	Complies with all requirements of the condition(s)
Non-Compliant:	Does not fully comply with all requirements of the condition.
Not Applicable (NA)	There were either no compliance issues related to the condition, or not applicable at the time of the audit
Not triggered:	is a future required action

Schedule	Condition No.	Name of clause	Condition	Comments / Evidence	Compliance
1			**SCHEDULE 1 – APPLICATION AND SITE DESCRIPTION**	**NA**	**NA**
2			**SCHEDULE 2 - DEFINITIONS**	**NA**	**NA**
3			**SCHEDULE 3 - ADMINSTRATIVE CONDTIONS**	**NA**	**NA**
3	1	Obligation to minimise harm	The Proponent shall implement all reasonable and feasible measures to prevent and/or minimise harm to the environment that may result from the Project	NA	**Noted**
3	2	Terms of approval	The Proponent shall carry out the Project generally in accordance with the: a) *Environmental Assessment* prepared by RW Corkery & Co Pty Ltd dated April 2010; b) *Response to Submissions* prepared by RW Corkery & Co Pty Ltd dated July 2010; c) *Further Modified Preferred Project Report for the Orchard Hills Waste and Resource Management Facility September 2011* prepared by R.W. Corkery & Co. Pty. Ltd (Exhibit Z in Appeal No 10928 of 2010); d) *Report for Modifications to Modified Preferred Project – Overview Report: September 2011* prepared by GHD (Exhibit Z in Appeal No 10928 of 2010); e) The documents listed in Schedule 6.	This Pre-Site Establishment Audit has been conducted to determine compliance with the conditions of MP09_0074 in relation to documentation and approvals required to be completed and approved by the Secretary of DP&E prior to commencement of site establishment works on the Patons Lane RRC site.	**Compliant**
3	5	Terms of approval	The Proponent shall comply with any reasonable requirement of the Secretary arising from the Department's assessment of: a) any reports, plans, strategies, programs or correspondence that are submitted in accordance with this approval; and	Management plans have been prepared and approved by the Department	**Noted**
3	5	Terms of approval	b) the implementation of any actions or measures contained in the submitted reports, plans, strategies, programs or correspondence.	Management plans have been prepared and approved by the Department	**Noted**
3	5A	Terms of approval	The facility must not accept waste from members of the public.	No waste is accepted from member of the public .	**Compliant - ongoing**
3	6	Engineering plans	Detailed engineering plans must be prepared and certified by a registered NPER3 engineer prior to commencement of site establishment. The engineering plans must include: a) a detailed geotechnical investigation of the site, including an assessment of the stability of the cell and quarry walls;	The Detailed Engineering Plans for the Patons Lane RRC were prepared and Certified by a registered NER engineer (David Gamble NER 18489) and includes: Geotechnical investigation of the site, including an assessment of the stability of the cell and quarry walls (Douglas Partners April 2015);	**Compliant**
3	6	Engineering plans	b) design for battered slopes of the landfill waste no greater than 1:3 (Vertical:Horizontal), unless otherwise approved by the EPA;	Design for battered slopes of the landfill waste no greater than 1:3 (Vertical: Horizontal), (GHD 3D Terrain Modelling);	**Compliant**
3	6	Engineering plans	c) the engineering specifications for the internal haul road design, including sufficient width to carry two lanes of heavy vehicle traffic where appropriate, and all other internal roads, so as to minimise traffic conflicts within the site;	The engineering specifications for the internal haul road design, including sufficient width to carry two lanes of heavy vehicle traffic where appropriate, and all other internal roads, so as to minimise traffic conflicts within the site;	**Compliant**
		Engineering plans	d) a set of amended staging plans incorporating the results of the detailed geotechnical investigation and engineering design. The amended staging plans must include: • all stages of the quarrying and landfilling operations, to address the incorrect sub-vertical cut and batter slopes in the Further Modified Preferred Project Report Figures including Figure 2.10a, 2.10b, 2.10c, 2.11a, 2.11b, 2.11c, 2.11d, 2.12a, 2.12b, 2.12c, and more clearly show how the measures to be utilised to ensure separation between the landfilling and extraction operations will be undertaken, and the effect of the 1:3 (V:H) landfill batter slopes on the location of the acoustic mounds; • show all active quarrying and landfilling areas, internal bunds, batter slopes (of the earthworks, landfill cell walls, and landfill batter slopes), location of noise and visual bunds / barriers, location of landfill cell access roads and earthwork haul roads, stormwater drainage / management works and leachate manage works.	A set of amended staging plans incorporating the results of the detailed geotechnical investigation and engineering design (*Covering Report - Detailed Engineering Plans, Appendix 5, March 2017)*	**Compliant**

Schedule	Condition No.	Name of clause	Condition	Comments / Evidence	Compliance
3	6	Engineering plans	e) These plans should be consistent with the *Further Modified Preferred Project Report,* other conditions of this approval and the Figure in Schedule 10.	The Detailed Design Plans are generally consistent with the *Further Modified Preferred Project Report*, and conditions of this approval.	**Compliant**
3	6A	Engineering plans	The engineering plans and amended staging plans must be provided to the Secretary prior to the pre-site establishment compliance audit.	The detailed engineering plans and management plans required for the site establishment works were provided to the Secretary prior to this Pre-Site Establishment Audit (August 2017). • Letter from DP&E re Staging of Site Establishment Management Plans, 18 May 2016 • Letter from DP&E re Receipt of Detailed Engineering Plans, 9 Aug 2017	**Compliant**
3	7	Site rehab	Prior to the commencement of Operation, the Proponent shall lodge a rehabilitation bond in the form of a bank guarantee for the project with the Secretary to provide security for the carrying out of site rehabilitation in accordance with this Project approval. The sum of the bond shall be calculated at $5/m2 for the area marked with a red line and shown as 'Project Site Boundary' on the plans at schedule 8 and be to the satisfaction of the Secretary in consultation with the EPA. In determining the amount of the rehabilitation bond, the Secretary will have regard to the level of financial assurance provided to the EPA for the provision of the EPL so that the Proponent is not required to bond the rehabilitation of the site twice.	• Email From Bingo (David Taylor) to DPIE (Kelly McNicol) dated 13 June 2019 requesting confirmation of Rehabilitation Bond amount required. • Transmittal letter from Bingo Industries (D Taylor) to DPIE (B Zhang) dated 12 July 2019 referencing payment of $1,815,500 Rehabilitation Bond. • Letter from the NSW EPA (D Rose, Acting Unit Head Waste Compliance) to Bingo Environmental Manager (R Dent) dated 24 May 2019 relating to the application for variation of EPL 20814). The letter refers to the addition of a Rehabilitation Bond to the EPL. • Email from DPIE (B Zhang Senior Environmental Assessment Officer) to Bingo (D Taylor) dated 8 July 2019 confirming that the proposed Bond amount of $3,015,500 (less the $1,200,000 bond payable to the EPA) met the requirements of DPIE in accordance with Schedule 3 Condition 7.	**Compliant**
3	8	Site rehab	Within 3 months of each Independent Environmental Audit (see condition 6 of schedule 5), the Proponent shall review, and if necessary revise, the sum of the rehabilitation bond to the satisfaction of the Secretary. This review must consider: a) the effects of inflation (CPI); b) any changes to the total area of site disturbance as shown in schedule 8; and c) the performance of the rehabilitation and revegetation to date. In relation to (c) above, if the rehabilitation works or part thereof are completed to the satisfaction of the Secretary, the Secretary will release all or part of the rehabilitation bond. If the rehabilitation works are not completed to the satisfaction of the Secretary, the Secretary may call in all or part of the rehabilitation bond to arrange for the satisfactory completion of the relevant works to the extent that the bond allows.	This condition has not been triggered for this reporting The IEA was due three years after commencement of site establishment, and as such is due in 2021. The rehabilitation bond will to be reviewed after the IEA has been undertaken.	**Not triggered**
3	9	Deleted	**Deleted**	NA	**NA**
3	10	Deleted	**Deleted**	NA	**NA**
3	11	Pre-site establishment audit (IPEA)	The Proponent shall commission and pay the full cost of an independent pre-site establishment compliance audit. The audit must: a) be conducted by a suitably qualified, experienced and independent team of experts covering all facets of the Project whose appointment has been endorsed by the Secretary;.	The Pre-Site Establishment Compliance Audit was conducted by the Lead Auditor, whose appointment was endorsed by the Secretary of DP&E on 31 August 2015;	**Compliant**
3	11	Pre-site establishment audit	b) assess compliance with all pre-site establishment and pre-work conditions of this approval;	The audit assessed compliance with the Conditions of Consent that apply to approvals required prior to commencement of site establishment works (section 4);	**Compliant**
3	11	Pre-site establishment audit	c) assess all pre-site establishment and pre-work management plans, strategies and programs for consistency with the conclusions and recommendations in the documents listed in condition 2 of Schedule 3 and Schedule 6 and condition 6 of Schedule 3; and	Assessed that all pre-site establishment management plans, strategies and programs were prepared and approved by the Secretary of DP&E were generally consistent with the conclusions and recommendations in the documents listed in Schedule 3 condition 2 and Schedule 6, and Schedule 3 condition 6 (section 3 and 4); and	**Compliant**
3	11	Pre-site establishment audit	d) be submitted to the Department prior to the commencement of any work.	The Independent *Pre-site Establishment Audit* has been conducted for submission to the Secretary of DP&E prior to the commencement of any site establishment works.	**Compliant**

Schedule	Condition No.	Name of clause	Condition	Comments / Evidence	Compliance
3	12	Pre-operation audit	The Proponent shall commission and pay the full cost of an independent pre-operation compliance audit. The audit must: a) be conducted by a suitably qualified, experienced and independent team of experts covering all facets of the Project whose appointment has been endorsed by the Secretary;	• An independent environmental audit was undertaken by Pitt & Sherry. The audit team conducted the site inspection (five site visits) component of the audit between May 2019 and July 2019. • Letter from the DPIE (C Ritchie Director Industrial Assessments) to Bingo (D. Taylor General Manager) approving the appointment of the Audit Team dated 12 March 2019 • The audit report dated October 2019 was submitted to the DPIE and a response to the report is being prepared.	Compliant
3	12	Pre-operation audit	b) assess compliance with all pre-operation conditions of this approval;	As above	Compliant
3	12	Pre-operation audit	c) assess all pre-operation management plans, strategies and programs for consistency with the conclusions and recommendations in the documents listed in condition 2 of Schedule 3 and Schedule 6 and condition 6 of Schedule 3; and	As above	Compliant
3	12	Pre-operation audit	d) be submitted to the Department prior to the commencement of operation.	Compliance with the pre-operational Conditions of Consent was reviewed by assessing compliance against the various documentation related to project approval.	Compliant
3	13	Deleted	**Deleted**	NA	NA
3	14	Surrender of exiting development consent	Prior to the commencement of site establishment or as otherwise agreed by the Secretary, the Proponent shall surrender all existing development consent(s) and project approval(s) for the site and project (apart from this approval and DA 2003/0627) in accordance with the EP&A Act.	• The surrender of all existing development consent(s) / project approval(s) for the site and project to the Penrith City Council occurred following receipt of approval to commence site establishment works from the then DP&E (now DPIE) under the Project Consent 09_0074. • The PCC had no objections to deferring the surrender of the existing consents to prior to the commencement of operations. • A formal request to delay the surrender of the existing consents was lodged to the DP&E on 27 July 2017. DPIE advised on 9 August 2017 that surrender of the Consent should occur prior to commencement of operation. • The DPIE approved the surrender of the original consent to allow commencement of operations in July 2019.	Compliant
3	15	Licences and other approvals	The Proponent shall obtain any licence or approval required to undertake the project including, but not limited to, an EPL, a water access licence, and permission for work in the electricity easement, on-site sewage management, and Roads Act approval.	• EPL 20814, issued 20 August 2019 • EPL 21259 issued on 28 June 2019 • Engineering Construction Certificate No. v 05/0630 • TransGrid Easement Permission 2 Feb 2017 • Letter from Penrith Council approving the operation of the on-site sewage treatment system dated 9 August 2018 • Letter from the NSW Department of Primary Industries to SRC Properties granting Water Access Licence WAL24329, dated 2 June 2015. • Email from TransGrid (K O'Brien Pratt) granting approval to work within the TransGrid Easement, dated 27 February 2017. • Letter from the NSW Department of Primary Industries to SRC Properties granting approval for the Controlled Activity 10ERM2009/0789. • Letter from the NSW Natural Resources Regulator to Bingo Patons Lane Pty Ltd granting approval (10WA122909) under the water resources action for the construction and operation of a water supply bore, dated 4 December 2018. • Letter from RMS (D Dehghan-Khalaiji) to Bingo granting Roads Act Approvals for the road works associated with the project, dated 21 May 2019.	Compliant
3	16	Deleted	**Deleted**	NA	NA

Schedule	Condition No.	Name of clause	Condition	Comments / Evidence	Compliance
3	17	Project duration	The Project, including operation and all rehabilitation but excluding site establishment, shall not exceed 25 years duration from the date of commencement of work. This limitation does not apply to any ongoing environmental management and monitoring of the site.	Future requirements	Not triggered
3	18	Site establishment duration	Site establishment shall not exceed 6 months duration from the date of commencement of work, unless otherwise agreed to by the Secretary.	The Project Approval Conditions were modified on 30 March 2016. Under Schedule 3 Condition 18, the timeframe for site establishment was extended from 6 months to 18 months to allow sufficient timeframes for activities such as bulk earthworks and dewatering of void to occur. Operation on the site commenced in July 2019	Compliant
3	19	Lapsing of approval	This approval lapses 5 years from the date of issue unless Site Establishment is completed.	Site establishment was completed and operation on the site commenced in July 2019	Compliant
3	20	Waste receipt, emplacement and throughput	The Proponent shall only receive waste on the site after an occupation certificate has been issued and while the Recycling and Re-Processing Area is operational.	Occupancy Certificate 19/124832-5, issued by McKenzie Group Consulting (NSW) Pty Ltd - the certifier.	Compliant
3	21	Waste receipt, emplacement and throughput	The Proponent shall obtain the Secretary's written approval prior to the emplacement of waste in Cell 3. Before granting approval, the Secretary must consider whether rehabilitation has been adequately progressed according to the approved Rehabilitation Plan.	Not triggered – Cell 3 (stage 3) expected to occur in year 20 of operations (2039)	Not triggered
3	22	Waste receipt, emplacement and throughput	The Proponent shall not exceed the waste receipt and waste emplacement volumes specified in Table 1 **See Table 1 on NOTES TAB**	Addressed in the LEMP and OEMP - Waste tracking undertaken to ensure that the threshold are not exceeded.	Compliant - ongoing
3	23	Resource extraction	The Proponent shall not exceed clay/shale extraction and despatch specified in Table 2. **See Table 2 on NOTES TAB**	Quarrying operations have not yet commenced in relation to development of Cells 1b, 1c, 2 and 3.	Compliant - ongoing
3	24	Stockpile Height	No stockpile of any material shall exceed RL 54 metres AHD.	Addressed in the LEMP and OEMP - No stockpiles exceed the RL 54m in this reporting period	Compliant - ongoing
3	25	HV movements	Despite any other limit in this approval, the Proponent shall ensure that heavy vehicle traffic generation for the Project does not exceed 250 daily heavy vehicle movements	Waste tracking and truck numbers show that to date the 250 daily heavy vehicle movements has not been exceeded.	Compliant - ongoing
3	26	HV movements	The Proponent shall keep an accurate register of daily heavy vehicle movements and provide the register to the Secretary upon request.	The weighbridge operations, waste receival process (including load rejection process) and Weighbridge database operation allows the tracking of waste and heavy vehicle movements	Compliant - ongoing
3	27	Structural adequacy	The Proponent shall ensure that all new buildings and structures, and any alterations or additions to existing buildings and structures, are constructed in accordance with the requirements of the BCA	Occupancy Certificate 19/124832-5, issued by McKenzie Group Consulting (NSW) Pty Ltd - the certifier.	Compliant
3	28	Demolition	The Proponent shall ensure that all demolition work is carried out in accordance with *Australian Standard AS 2601:2001: The Demolition of Structures*.	No demolition works had occurred on Patons Lane site	NA
3	29	Operation of plant and equipment	The Proponent shall ensure that all plant and equipment used for the Project is: a) maintained in a proper and efficient condition; and b) operated in a proper and efficient manner.	Inspections of plant are undertaken in accordance with **STANDARD OPERATING PROCEDURE (SOP) – SOP-BDR009 Mobile Plant Operations**	Compliant - ongoing
3	30	Public infrastructure	Prior to commencement of any work, the Proponent shall: a) prepare a dilapidation report of the public infrastructure in the vicinity of the site (including roads, gutters, footpaths, etc) in consultation with Council; and b) submit a copy of this report to the Secretary.	Dilapidation Report (dated January 2017) was prepared by National Project Consultants Pty Ltd (NPC) Engineers and lodged with the Penrith City Council on 27 January 2017. PCC approved the Dilapidation Report on 2 February 2017. The Dilapidation Report was submitted to DP&E and a letter confirming receipt was received on 9 August 2017.	Compliant
3	31	Public infrastructure	The Proponent shall: a) repair, or if the Secretary agrees pay the full costs associated with repairing, any public infrastructure that is damaged by the Project; and	No public infrastructure had been relocated or damaged due to the Patons Lane RRC construction and operation	Compliant

Schedule	Condition No.	Name of clause	Condition	Comments / Evidence	Compliance
3	31	Public infrastructure	b) relocate, or if the Secretary agrees pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the Project.	No public infrastructure had been relocated or damaged due to the Patons Lane RRC construction and operation	Compliant
3	32	Staged submission	The Proponent may submit any plan or program required by this approval on a progressive basis with the approval of the Secretary.	DP&E approved Staging of Site Establishment Management Plans for the Patons Lane RRC on 18 May 2016: 1. **Stage 1-** would cover the period to the end of the excavation of Cell 1; 2. Stage 2 - would cover the period to the end of the excavation of Cell 2; and 3. Stage 3 - would cover the period to the end of the excavation of Cell 3. Staging of the submission of the management plans was approved on 1 June 2016 by DPIE	Compliant - ongoing
4			**SCHEDULE 4 - SPECIFIC ENVIRONMENTAL CONDITIONS**		NA
4	1	Waste management	The Proponent shall only receive and/or emplace waste on-site that is classified as general solid (non-putrescible waste) unless otherwise authorised for receipt and/or emplacement by an EPL.	The WRRMP (Revision C) prepared by Arcadis dated 10 July 2019 was approved on 26 July 2019. The WRRMP (Table 5) specifies the wastes that are permitted to be disposed of into the Landfill.	Compliant - ongoing
4	2	Waste management	No restricted solid waste shall be permitted to enter the site.	WRRMP Revision C, prepared by Arcadis dated 10 July 2019 and approved on 26 July 2019. The WRRMP (Table 5) specifies the wastes that are permitted to be disposed of into the Landfill.	Compliant - ongoing
4	3	Waste management	Stockpiles of construction and demolition waste shall only be stored within the Material Recycling Facility Warehouse.	WRRMP Revision C, prepared by Arcadis dated 10 July 2019 and approved on 26 July 2019. The WRRMP (Table 5) specifies the wastes that are permitted to be disposed of into the Landfill.	Compliant - ongoing
4	4	Waste management	The Proponent shall store all chemicals, fuels and oils on-site in accordance with the requirements of all relevant Australian standards, including DECCW's Environment Protection Manual, Technical Bulletin Bunding and Spill Management.	• Fuel for mobile plant will delivered in mobile tanker. 400l emergency fuel (diesel) is stored in two small bunded tanks adjacent to the Resource Recovery Building. • Lubricating oil, machine oil is stored in a dedicated storage container located to the north of the Resource Recovery Building. • Flocculant (for water treatment) is located in a roofed bund between Cell 1A and the licenced discharge point.	Compliant - ongoing
4	5	Waste management	The Proponent shall prepare and implement a **Waste and Resource Recovery Monitoring Program (WRRMP)** for the Project to the satisfaction of the Secretary. This program must: a) be prepared in consultation with the EPA;	• The WRRMP Revision C, prepared by Arcadis dated 10 July 2019. • Email (trail) from Bradley Searle (Arcadis) to DPIE agreeing to update the draft Waste and Resource Recovery Program - dated 5 June 2019. • The email trail contains comments from DPIE on the draft program and a statement from DPIE that acknowledges that the EPA has been consulted and requesting that any comments from the EPA be addressed in the final version of the program.	Compliant
4	5	Waste management	b) be approved by the Secretary prior to commencement of operation; and	• Letter from DPIE (B. Zhang) to Bingo Industries (D. Taylor) dated 26 July 2019, stating at all plans and programs required under the Approval have been reviewed and approved by the Department.	Compliant
4	5	Waste management	c) include Except for the following, the Proponent shall dispose of all outputs produced from the Material Recycling Facility Warehouse to the landfill on-site: monitoring for: i) the quantity, type and source of waste received; and ii) quantity, type and quality of the outputs produced.	Section 4.1.2 of the WRRMP Revision C, prepared by Arcadis dated 10 July 2019 and approved on 26 July 2019, describes the waste quantities that may be processed at the site. Section 4.1.3 describes the waste types that may be received at the site.	Compliant
4	6	Waste management	Except for the following, the Proponent shall dispose of all outputs produced from the Material Recycling Facility Warehouse to the landfill on-site: a) recyclables extracted and exported off-site for resource recovery purposes;	The WRRMP details of wastes that are not permitted to be placed in the landfill and therefore disposed off-site.	Compliant

Schedule	Condition No.	Name of clause	Condition	Comments / Evidence	Compliance
4	6	Waste management	b) waste not authorised by an EPL extracted from the input waste stream, which shall be exported for lawful disposal off-site; and	The WRRMP details of wastes that are not permitted to be placed in the landfill and therefore disposed off-site.	Compliant
4	6	Waste management	c) output waste derived materials approved for use under the POEO Act and Regulations.	The WRRMP provides details of wastes that are permitted to be exported from the site for reuse or recycling.	Compliant
4	7	Contamination and asbestos management	The Proponent shall prepare and implement a **Contamination and Asbestos Management Plan (CAMP)** for the Project. This plan must:	The CAMP to satisfy Schedule 4 condition 7 was updated in March 2019 and was approved by the DPIE on 27 July 2019.	Compliant
4	7	Contamination and asbestos management	a) be prepared by an independent expert whose appointment is endorsed by the Secretary;	Was prepared by Hibbs and Associates whose appointment was endorsed by the Secretary of DP&E on 31 August 2015;	Compliant
4	7	Contamination and asbestos management	b) be prepared in consultation with WorkCover NSW, NOW and EPA;	Was prepared in consultation with WorkCover NSW, NOW and EPA;	Compliant
4	7	Contamination and asbestos management	c) be reviewed and endorsed at each stage by an independent accredited site auditor	The CAMP was reviewed and endorsed at each stage by Dr Ian Swane independent accredited site auditor;	Compliant
4	7	Contamination and asbestos management	d) be approved by the Secretary prior to commencement of site establishment;	The CAMP was submitted to DP&E on 15 March 2017 and approved by the Secretary on 9 August 2017. The CAMP was updated in March 2019 and was approved by the DPIE on 27 July 2019	Compliant
4	7	Contamination and asbestos management	e) be based on the results of such further testing or monitoring of the contaminated bunds, the site or groundwater as may be required by the independent accredited site auditor;	The CAMP was based on the results of further testing and monitoring of the contaminated bunds, the site or groundwater as may be required by the independent accredited site auditor;	Compliant
4	7	Contamination and asbestos management	f) adequately characterise the types and quantities of contaminants within the bunds that are proposed to be disturbed and in groundwater in the area of the bunds;	Includes section 5 which characterises the types and quantities of contaminants within the bunds that are proposed to be disturbed and in groundwater in the area of the bunds;	Compliant
4	7	Contamination and asbestos management	g) provide for the appropriate remediation of any contaminated material;	Includes section 6 that describes the appropriate remediation of any contaminated material;	Compliant
4	7	Contamination and asbestos management	h) ensure that the environmental and human health risks posed by contamination are adequately addressed;	Includes section 11 that describes environmental and human health risks posed by contamination;	Compliant
4	7	Contamination and asbestos management	i) provide a protocol for addressing the environmental and human health risks posed by any unexpected finds of contaminants;	Includes sections 8.4 and 11.3, and provides a protocol for addressing the environmental and human health risks posed by any unexpected finds of contaminants;	Compliant
4	7	Contamination and asbestos management	j) demonstrate that the proposed control measures will minimise emissions to the atmosphere of asbestos to the maximum extent achievable in accordance with the "Approved methods for the sampling and analysis air pollutants in NSW";	Sections 11.3 and 11.6, and describe monitoring and handling procedures to demonstrate that proposed control measures will minimise emissions to the atmosphere of asbestos to the maximum extent achievable in accordance with the "*Approved methods for the sampling and analysis air pollutants in NSW";*	Compliant
4	7	Contamination and asbestos management	k) include a Section B Site Audit Statement under the CLM Act; and	Section B includes a Site Audit Statement under the CLM Act which was issued by Dr Ian Swane on 23 December 2016; and	Compliant
4	7	Contamination and asbestos management	l) include a regime for the issue of Section A Site Audit Statements under the CLM Act at appropriate stages of work.	A regime for the issue of Section A Site Audit Statements under the CLM Act is included in section 8.3, 10.7, 10.8 and 12.6 of the CAMP for each appropriate stages of work.	Compliant

Schedule	Condition No.	Name of clause	Condition	Comments / Evidence	Compliance
4	8	Cover and capping	The Proponent shall ensure that all material used to cover and cap waste is Virgin Excavated Natural Material, or excavated natural material provided the use of the excavated natural material is approved in writing by EPA.	Only Virgin Excavated Natural Material sourced from onsite is used.	Compliant - ongoing
4	8A	Cover and capping	The proponent may emplace up to 7,500m3 of special waste (asbestos) identified under Condition 7 Schedule 4 above in the landfill. All other special waste (asbestos) shall be disposed of off-site at a licenced facility unless agreed to by the Secretary and EPA. Nothing in this condition permits an exceedance of the limits of heavy vehicle movements, air quality limits and noise limits set out in this approval.	• The CAMP prepared by Hibbs Associates, dated 3 May 2019, states that Special waste will be placed in the Bunds (not the landfill), and is documented in the Asbestos and Waste Management Plan. • Letter from the Unit Head for Waste Compliance (EPA) to the Senior Planning Offices (DPIE) dated 3 May 2017 commenting on the CAMP	Compliant - ongoing
4	9	Litter	The Proponent shall prepare a **Litter Management Plan (LMP)** which includes:	A LMP (Revision B), prepared by Arcadis, dated 9 July 2019 was approved by DPIE on 26 July 2019.	Compliant
4	9	Litter	a) measures to prevent the proliferation of litter, including the installation and maintenance of a mesh fence of not less than 1.8 metres high around the landfill; and .	The LMP states that the provision of the 1.8 metre fence, inspection program and other litter management actions	Compliant
4	9	Litter	b) establish a regime for daily inspections and a program to clear the site and surrounds of litter.	As above	Compliant
4	9	Litter	The proponent shall include the plan in the **Landfill Operations Management Plan (LEMP)** and implement the plan.	The LEMP (Revision 4), prepared by GHD and dated 25 June 2019, was approved by DPIE on 26 July 2019.	Compliant
4	11	Energy management	The Proponent shall implement all reasonable and feasible measures to minimise energy use.	Low energy use lighting, IT equipment and appliances are in use on site.	Compliant – ongoing
4	12	Air quality and odour	The Proponent shall not cause or permit the emission from the site of offensive odours as defined under Section 129 of the POEO Act.	No odour complaints were received during this reporting period	Compliant – ongoing
4	13	Air quality and odour	The Proponent shall ensure that dust and particulates generated by the Project do not exceed the criteria listed in tables 4, 5 and 6 at any residence or on more than 25 percent of any privately owned land surrounding the Site. **See Table 4 on NOTES TAB**	Monthly monitoring of PM10 and Deposited dust (DD) have been monitored since the July 2018. There have been no exceedances of the PM_{10} or DD limits detailed in Table 4, that could be related to the operation of the site that have occurred since monitoring commenced. Exceedance were recorded in November 18 to March 2019 attributable to the bushfires in the area. Currently Total Suspended Particulate (TSP) matter is not continuously monitored, however, estimates of the annual average background TSP concentrations can be determined from a relationship between measured PM_{10} concentrations. This relationship was established as part of a review of ambient monitoring data collected by co-located TSP and PM_{10} monitors operated for reasonably long periods of time in the Hunter Valley (NSW Minerals Council, 2000) and assumes that 40% of the TSP is PM_{10}. This approach to estimating ambient TSP concentrations in the absence of monitoring data is common throughout NSW and is generally accepted by NSW EPA. Compliance with the TSP annual criteria will be automatically achieved when compliance with PM_{10} annual criteria is achieved.	Compliant – ongoing
4	14	Air quality and odour	Prior to commencement of operation, all operating, storage, unloading and loading areas, including the recycling and re-processing areas of the facility must be paved.	All of the waste receiving and processing area (and roads leading to that area) have been paved.	Compliant - ongoing
4	15	Air quality and odour	The Proponent must employ all feasible and practicable measures to minimise as far as possible any visible dust emissions from the site.	There have been no dust complaints during the reporting period,	Compliant - ongoing
4	16	Air quality and odour	The Proponent shall prepare and implement an **Air Quality and Greenhouse Gas Management Plan (AQGHGMP)**. This plan must:	The Air Quality and Greenhouse Gas Management Plan (AQGHGMP) to satisfy Schedule 4 condition 16:	Compliant
4	16	Air quality and odour	a) be prepared in consultation with EPA by a suitably qualified and experienced expert whose appointment has been endorsed by the Secretary;	The AQGHGMP was prepared in consultation with EPA by Todoroski Air Sciences whose appointment was endorsed by the Secretary of DP&E on 31 August 2015;	Compliant

Schedule	Condition No.	Name of clause	Condition	Comments / Evidence	Compliance
4	16	Air quality and odour	b) be approved by the Secretary prior to commencement of any work;	The plan was submitted to the Secretary on 15 March 2017 and approved on the 9 August 2017, prior to commencement of any site establishment works An updated AQGHGMP was submitted to the Department for Approval prior to the commencement of operation of the landfill. The AQGHGMP was approved on 27 July 2019	Compliant
4	16	Air quality and odour	c) describe in detail the measures that would be implemented to manage the air quality and greenhouse gas impacts of the Project to ensure compliance with this approval and other relevant statutory controls;	Section 6.1 - Air quality monitoring network of the AQGGMP on page 24 details the measures that would be implemented to manage the air quality and greenhouse gas impacts of the Project to ensure compliance with this approval and other relevant statutory controls.	Compliant
4	16	Air quality and odour	d) Include a protocol for the observations and recording of site dust levels on a daily basis. Instances of visible dust must be noted in a log along with date, time, cause and response/remedy;	Section 6.3 - Monitoring data validation and Section 9.8 - Observations of visible dust of the AQGGMP details the protocol for observations and recording of site dust levels on a daily basis.	Compliant
4	16	Air quality and odour	e) include a monitoring program for real-time air quality impacts of the Project;	Section 6 - Air quality monitoring network of the AQGGMP on page 24 details a monitoring program for real-time air quality impacts of the project.	Compliant
4	16	Air quality and odour	f) identify the number and location of continuous monitoring points for fine particulates (PM_{10});	Figure 6.1 - Location of air quality monitoring network for Patons Lane & Table 6.1 - Summary of monitoring locations in the AQGGMP details that the number and location of continuous monitoring points for fine particulates is based on two real-time PM_{10} monitors located in accordance with predominate wind patterns and residential receiver locations.	Compliant
4	16	Air quality and odour	g) include development and identification of PM10 concentration trigger levels at which: i. dust management actions shall be taken, and specification of the relevant actions; and ii. when work at the site shall cease;	Section 5.3 - contingency actions and Table 5.1 - Air quality management actions PM_{10} trigger actions of the AQGGMP detail development and identification of PMIs concentration trigger levels at which: ¡ dust management actions shall be taken, and specification of the relevant actions; and ii when work at the site shall cease; is real-time air quality trigger levels based on multi-level system to promote awareness and prevent dust generation.	Compliant
4	16	Air quality and odour	h) include a program for monitoring subsurface gas, surface gas emission, and gas accumulation in general accordance with the guidance in sections 15-18 of Appendix A of the Environmental Guidelines for Solid Waste Landfills EPA, 1996;	Section 7 - Gas Monitoring of the AQGGMP include a program for monitoring subsurface gas, surface gas emission, and gas accumulation in general accordance with the guidance in sections 15-18 of *Appendix A of the Environmental Guidelines for Solid Waste Landfills EPA, 1996*.	Compliant
4	16	Air quality and odour	i) include a protocol to remedy any-non-compliance	Section 9.4 - Compliance evaluation and Section 9.6 - Corrective and preventative actions of the AQGGMP include a protocol to remedy any-non-compliances.	Compliant
4	17	Soil and water	Except as may be expressly provided in the EPL, the Proponent shall comply with Section 120 of the POEO Act. Note: Section 120 of the POEO Act prohibits the pollution of waters.	The have been no reportable incidents of pollution of water	Compliant - ongoing
4	18	Soil and water	The Proponent shall: a) minimise soil loss;	The Soil, Water and Leachate Management Plan - Patons Lane Resource Recovery Centre 10/05/2019 prepared by GHD, and approved by the Department on 27 July 2019 includes the following: Section 6.6 - Soil and stockpile management and Section 6.7 - Vegetation establishment details the requirements to minimise soil loss;	Compliant - ongoing
4	18	Soil and water	b) set aside any topsoil won on-site for the revegetation and rehabilitation of the site; and	Set aside any topsoil won on-site for the revegetation and rehabilitation of the site; and	Compliant - ongoing
4	18	Soil and water	c) ensure that any topsoil stockpiles on-site are suitably managed to ensure that the topsoil in these stockpiles can be beneficially used in the proposed revegetation and rehabilitation of the site.	Ensure that any topsoil stockpiles on-site are suitably managed to ensure that the topsoil in these stockpiles can be beneficially used in the proposed revegetation and rehabilitation of the site in the SWLMP.	Compliant - ongoing
4	19	Soil and water	The Proponent shall not track mud or waste from vehicles on public roads.	There have been no complaints regarding the tracking of mud onto the public roads. Minimising this impact is detailed in Section 6.3 and Section 6.4 of the SWLMP.	Compliant - ongoing

Schedule	Condition No.	Name of clause	Condition	Comments / Evidence	Compliance
4	**20**	Soil and water	The Proponent shall prepare and implement a **Soil, Water and Leachate Management Plan (SWLMP)** for the Project. This plan must: a) be prepared in consultation with the Council, EPA and NOW by a suitably qualified and experienced expert whose appointment has been endorsed by the Secretary;	The SWLMP to satisfy Schedule 4 condition 20: was prepared in consultation with the Penrith City Council, EPA and DPI-Water by GHD whose appointment has been endorsed by the Secretary of DP&E on 31 August 2015. The SWLMP was updated by GHD, Revision 1 dated 11 July 2019 and was approved on 27 July 2019	**Compliant**
4	**20**	Soil and water	b) be approved by the Secretary prior to commencement of site establishment;	The SWLMP was updated by GHD, Revision 1 dated 11 July 2019 and was approved on 27 July 2019	**Compliant**
4	**20**	Soil and water	c) include a site water balance;	Included section 4.4 and Appendix 4 that present a site water balance	**Compliant**
4	**20**	Soil and water	d) include an erosion and sediment control plan that is consistent with the requirements in the latest version of Managing Urban Stormwater: Soils and Construction (Volume 1, Landcom, and Volume 2b: Waste Landfills, DECCW, 2008);	Included section 5 that presents an erosion and sediment control plan that is consistent with the requirements in the latest version of M*anaging Urban Stormwater: Soils and Construction (Volume 1, Landcom, and Volume 2b: Waste Landfills, DECCW, 2008)*	**Compliant**
4	**20**	Soil and water	e) include a stormwater management scheme that is consistent with the latest version of Managing Urban Stormwater: Volume 2b: Waste Landfills (DECCW, 2008)	Included section 4 - a stormwater management scheme that is consistent with the latest version of *Managing Urban Stormwater: Volume 2b: Waste Landfills (DECCW, 2008)*	**Compliant**
4	**20**	Soil and water	f) include design specifications and plans for the leachate containment system that comply with the minimum design specifications in Schedule 7 of this Approval and the relevant Benchmark Techniques in Appendix A of the Environmental Guidelines for Solid Waste Landfills EPA, 1996, unless otherwise approved by the EPA;	Section 6 and Appendix 6 include design specifications and plans for the leachate containment system that comply with the minimum design specifications in Schedule 7 of the Project Approval and the relevant Benchmark Techniques in Appendix A of the *Environmental Guidelines for Solid Waste Landfills EPA, 1996*, unless otherwise approved by the EPA The leachate system was installed prior to commencement of landfilling activities. See *Patons Lane Resource Recovery Centre Construction Quality Assurance Report Cell 1A-1 and Initial Leachate Pond July 2019,* prepared by SRC Operations Pty Ltd	**Compliant**
4	**20**	Soil and water	g) includes a surface water, groundwater and leachate monitoring program that: (i) is in accordance with the requirements of the EPL; (ii) includes: • collection of baseline data; • details of the proposed monitoring network; and • parameters for testing and respective trigger levels for action under the surface water, groundwater and leachate response plan;	Includes section 7 that presents a surface water, groundwater and leachate monitoring program in accordance with the requirements of the EPL 20814; and includes collection of baseline data, details of the proposed monitoring network; and parameters for testing and respective trigger levels for action under the surface water, groundwater and leachate response plan	**Compliant**
4	**20**	Soil and water	h) specifies that any stormwater from all areas of the site which has the potential to interact with waste shall be managed as leachate and directed into the leachate containment system	Included section 6 that specifies that any stormwater from all areas of the site which has the potential to interact with waste shall be managed as leachate and directed into the leachate containment system	**Compliant**
4	**20**	Soil and water	i) include a sampling and testing program to be developed in consultation with the EPA, to further characterise the quality of the water in the quarry void as well as any settled sediment at the base of the flooded quarry void. This is to occur prior to any of the permitter bunds being disturbed;	References the *Stormwater Dewatering Management Plan, Niche Environment & Heritage, 2016* approved by the EPA includes a sampling and testing program to further characterise the quality of the water in the quarry void as well as any settled sediment at the base of the flooded quarry void. This is to occur prior to any of the permitter bunds being disturbed	**Compliant**
4	**20**	Soil and water	j) includes a surface water, ground water and leachate response plan that: (i) includes a protocol for the investigation, notification to the EPA and mitigation of any exceedances of the respective trigger levels; and (ii) describes the array of measures that could be implemented to respond to any surface or groundwater contamination that may be caused by any development.	Included section 7.6 – The surface water, ground water and leachate response plan includes a protocol for the investigation, notification to the EPA and mitigation of any exceedances of the respective trigger levels; and measures that could be implemented to respond to any surface or groundwater contamination that may be caused by any development.	**Compliant**

Schedule	Condition No.	Name of clause	Condition	Comments / Evidence	Compliance
4	21	Noise	The Proponent shall ensure that the noise generated by the Project does not exceed the limits in Table 7. Noise is to be measured in accordance with the relevant modifying/correction factors and meteorological conditions in the NSW Industrial Noise Policy.**See Table 7 on NOTES TAB**	Noise monitoring for the site commenced in July 2018. Monthly attended noise monitoring is undertaken and unattended noise monitors are installed at relevant locations in accordance with the requirements of the Conditions of Consent and the EPL. There have been no exceedances of noise related to the construction and operation of the site since monitoring commenced.Monthly reports are uploaded to the Facility websites	**Compliant**
4	22	Noise	The Proponent shall submit a noise compliance assessment to the Secretary three months after the commencement of site establishment. The assessment shall be prepared by a suitably qualified and experienced acoustic consultant and assess compliance with noise limits in Table 7 for the first three months of work.	Noise compliance assessment will be conducted for submission to the Secretary DP&E three months after commencement of site establishment.	**Compliant**
4	23	Noise	The Proponent shall comply with the operating hours in Table 8. **See Table 8 on NOTES TAB**	Operation of the Facility commenced in July 2019. Operation only occurs within the hours stipulated in the Conditions of Consent.	**Compliant - ongoing**
4	24	Noise	Notwithstanding the provisions of Table 8 the Proponent shall ensure that: a) heavy vehicles travelling to or from the Site shall not arrive at the site prior to 7am or leave the site after 5pm on a weekday and shall not arrive at the site prior to 8 am or leave the site after 2pm on a Saturday, or any time on a Sunday or Public Holiday; and b) heavy vehicles travelling to or from the Site do not travel upon Luddenham Road south of its junction with Patons Lane.	The Transport Code of Conduct: The code of conduct details a) truck arrival times b) heavy vehicle routes	**Compliant - ongoing**
4	25	**Deleted**	**Deleted**		**NA**
4	26	Noise management plans	The Proponent shall prepare and implement a **Site Establishment Noise Management Plan (SENMP).** This plan must:	The Site Establishment Noise Management Plan to satisfy Schedule 4 condition 26 :	**Compliant**
4	26	Noise management plans	a) be prepared by a suitably qualified expert whose appointment has been approved by the Secretary;	Was prepared by Wilkinson Murray whose appointment has been approved by the Secretary of DP&E on 31 August 2015;	**Compliant**
4	26	Noise management plans	a) be prepared in consultation with the EPA;	Prepared in consultation with the EPA;	**Compliant**
4	26	Noise management plans	b) be approved by the Secretary prior to commencement of site establishment;	Submitted to the DP&E on 15 March 2017 and approved by the Secretary on 9 August 2017 as follows:	**Compliant**
4	26	Noise management plans	c) identify each site establishment work area, site compound and access route (both private and public);	Identified each site establishment work area, site compound and access route (both private and public);	**Compliant**
4	26	Noise management plans	d) identify all potentially affected sensitive receivers;	Identified in Table 4.1 all potentially affected sensitive receivers;	**Compliant**
4	26	Noise management plans	e) specify the construction noise and vibration objectives;	Specified in Table 3.1 the construction noise and vibration objectives;	**Compliant**
4	26	Noise management plans	f) include an assessment of potential noise and vibration from the proposed construction methods (including noise from traffic) against those objectives;	Addressed in section 4 and Tables 4.1 and 4.2 the assessment of potential noise and vibration from the proposed construction methods (including noise from traffic) against those objectives;	**Compliant**
4	26	Noise management plans	g) identify where additional Feasible and Reasonable noise mitigation measures can be implemented;	Addressed in section 5.2 where additional Feasible and Reasonable noise mitigation measures can be implemented;	**Compliant**
4	26	Noise management plans	h) describe management methods, procedures and specific noise mitigation treatments that will be implemented to control noise and vibration during site establishment, including the early erection of noise control barriers and the relevant matters outlined in Schedule 9;	Described in section 5 management methods, procedures and specific noise mitigation treatments that will be implemented to control noise and vibration during site establishment, including the early erection of noise control barriers and the relevant matters outlined in Schedule 9;	**Compliant**
4	26	Noise management plans	i) include procedures for notifying residents of site establishment activities that are likely to affect amenity;	Included in section 7.8 procedures for notifying residents of site establishment activities that are likely to affect amenity;	**Compliant**

Schedule	Condition No.	Name of clause	Condition	Comments / Evidence	Compliance
4	26	Noise management plans	j) include a program for monitoring the noise impacts of the Project, including real time noise monitors to measure noise emissions during site establishment;	Outlined in section 6 and Figure 6.1 the program for monitoring the noise impacts of the Project, including real time noise monitors to measure noise emissions during site establishment;	Compliant
4	26	Noise management plans	k) describe procedures for remedial action when a non-compliance is identified in real time monitoring;	Described in section 7.6 procedures for remedial action when a non-compliance is identified in real time monitoring;	Compliant
4	26	Noise management plans	l) include procedures for reporting non-compliances to the relevant government agencies;	Provided in section 7.5 procedures for reporting non-compliances to the relevant government agencies;	Compliant
4	26	Noise management plans	m) include specifications and protocols for the installation and relocation of mobile noise barriers; and	Included in section 5.3 and Appendix A specifications and protocols for the installation and relocation of mobile noise barriers; and	Compliant
4	26	Noise management plans	n) identify the extent of and/or limitations of the work area behind or associated with mobile noise barriers to maintain compliance with noise limits.	Described in section 5.3 the extent of and/or limitations of the work area behind or associated with mobile noise barriers to maintain compliance with noise limits	Compliant
4	27	Noise management plans	The Proponent shall prepare and implement an **Operation Noise Management Plan (ONMP)**. This plan must:	See below	Compliant
4	27	Noise management plans	a) be prepared by a suitably qualified expert whose appointment has been endorsed by the Secretary;	An email from Email from DPIE (B Zhang Senior Assessment Officer) to Arcadis (B Searle, Environment Director), titled "RE: Submission of Paton Lane Operational Environmental Management Plans", dated 1 May 2019, requested that a copy of DPIE's letter endorsing the appointment of Mr Brian Clarke (from Wilkinson Murray) to prepare the ONMP.	Compliant
4	27	Noise management plans	b) be prepared in consultation with the EPA;	• Email from DPIE (B Zhang Senior Assessment Officer) to Arcadis (B Searle, Environment Director), titled "RE: Submission of Paton Lane Operational Environmental Management Plans", dated 1 May 2019, confirmed the ONMP had been issued by DPIE to the EPA for review and comment. • Email from DPIE (B Zhang Senior Assessment Officer) to Bingo (D Taylor), dated 8 July 2019, confirming that the EPA has notified DPIE that they will not be providing comments on, or approving any Plans relating to this Approval.	Compliant
4	27	Noise management plans	c) be approved by the Secretary prior to commencement of operation;	ONMP (Revision B) dated 11 July 2019 was approved by DPIE on 27 July 2019.	Compliant
4	27	Noise management plans	d) include a system that allows for periodic assessment of BMP and BATEA that has the potential to minimise noise levels from the Project;	Section 5 - management measures detail that the measures in the following sections include the BMP and BATEA, and are intended to mitigate noise impacts at nearby sensitive receivers. The ONMP, will be periodically (at least every six months) reviewed and updated to include the latest BMP and BATEA.	Compliant
4	27	Noise management plans	e) specify effective implementation of identified BMP and BATEA measures and describe management methods, procedures and specific noise mitigation treatments that will be implemented to control noise and vibration during site operations, including the early erection of noise control barriers and the relevant matters outlined in Schedule 9;	Section 5.1- Section 5.6 of the ONMP specify effective implementation of identified BMP and BATEA measures and describe management methods, procedures and specific noise mitigation treatments that will be implemented to control noise and vibration during site operations, including the early erection of noise control barriers and the relevant matters outlined in Schedule 9.	Compliant
	27	Noise management plans	f) include a program for monitoring the noise impacts of the Project, including real time noise monitors to measure noise emissions during operation;	Section 6 - Monitoring and review on page 31 details the proposed operational noise monitoring program and review procedure for the Project.	Compliant
	27	Noise management plans	g) describe procedures for remedial action when a non-compliance is identified by real-time monitoring;	Section 6.1.5 Non-compliance and Remedial Measures describe procedures for remedial action when a noncompliance is identified by real-time monitoring in the ONMP.	Compliant
4	27	Noise management plans	h) include measures to record and respond to complaints;	Section 7 - Complaints Handling Procedure & Consultation details measures to record and respond to complaints in the ONMP.	Compliant
4	27	Noise management plans	i) include measures for community consultation including site contact details; and	Section 7 - Complaints Handling Procedure & Consultation include measures for community consultation including site contact details promoted within the immediate local	Compliant

Schedule	Condition No.	Name of clause	Condition	Comments / Evidence	Compliance
				community with signage on the front gate and the Community Liaison Committee (CLC), a phone hotline, email system will be available.	
4	27	Noise management plans	j) identify the extent of and / or limitations of the work area behind or associated with mobile noise barriers and earth-mounds to maintain compliance with noise limits.	Section 5.6 - Mobile Barriers and Section 5.5 - Staging Plan Measures detailing earth mounding that has been constructed on the northern, eastern and southern boundaries of Site during the periods when operations within the site require them are to be maintained in good condition are not to be degraded without assessment.	**Compliant**
4	28	Traffic noise management	The Proponent shall prepare and implement a **Traffic Noise Management Plan (TNMP)**, which shall ensure that feasible and reasonable noise management strategies for vehicle movements associated with the facility are identified and applied. This plan must:	See below	**Compliant**
4	28	Traffic noise management	i. be prepared by a suitably qualified expert whose appointment has been endorsed by the Secretary;	Email from DPIE (B Zhang Senior Assessment Officer) to Arcadis (B Searle, Environment Director), titled "RE: Submission of Paton Lane Operational Environmental Management Plans", dated 1 May 2019, requested that a copy of DPIE's letter endorsing the appointment of Mr Brian Clarke (from Wilkinson Murray) to prepare the TNMP.	**Compliant**
4	28	Traffic noise management	ii. be prepared in consultation with the EPA;	Email from DPIE (B Zhang Senior Assessment Officer) to Arcadis (B Searle, Environment Director), titled "RE: Submission of Paton Lane Operational Environmental Management Plans", dated 1 May 2019, confirmed the TNMP had been issued by DPIE to the EPA for review and comment. The EPA did not provide comments.	**Compliant**
4	28	Traffic noise management	iii. be approved by the Secretary prior to commencement of operation;	The TNMP, Revision B prepared by Arcadis, dated 11 July 2019 was approved by the DPIE on 27 July 2019	**Compliant**
4	28	Traffic noise management	iv. include driver training to ensure that noisy practices, such as the use of compression engine brakes, are not used near sensitive receivers unless necessary;	Section 5- Management measures, TNM2 states that all drivers accessing the site will be subject to a site induction and would be required to agree to the Transport Code of Conduct which includes measures to minimise traffic noise impacts during operations with the responsibility of the Site Supervisor to implement.	**Compliant**
4	28	Traffic noise management	v. include BATEA for noise suppression in the selection and maintenance of vehicle fleets;	Section 5- Management measures, TNM4 states that when selecting large vehicles aim to procure equipment with lower noise levels, where feasible and reasonable.	**Compliant**
4	28	Traffic noise management	vi. include communication and management strategies for non-licensee/proponent owned and operated vehicles to ensure the provision of the plan are implemented;	Section 5- Management measures, TNM3 states that all heavy vehicles will need to comply with RMS Noise Emission standards for individual vehicles. Any vehicle deemed not to comply with these standards will not be permitted to enter the site. Vehicles deemed by the weighbridge not to comply with noise emission requirements will be excluded from the site until such time that a suitable repair has been undertaken. Contractors accessing the site will be required to supply equipment and trucks that comply with the required noise emission criteria during operations and with the responsibility of the Site Supervisor and Maintenance Supervisor.	**Compliant**
4	28	Traffic noise management	vii. include a system of audited management practices that identifies nonconformances, initiates and monitors corrective and preventative action (including disciplinary action for breaches of noise minimisation procedures) and assesses the implementation and improvement of the plan;	Section 6.1.5 Non-compliance and Remedial Measures details the process that would be implemented by the Site Supervisor.	**Compliant**
4	28	Traffic noise management	viii. specify procedures for drivers to minimise impacts at identified sensitive receivers; and	Section 5 - Management measures, TNMP6, TNMP8, TNMP9 and TNMP12 specifies procedures for drivers to minimise impacts at identified sensitive receivers.	**Compliant**
4	28	Traffic noise management	ix. describe methods for the prevention of heavy vehicle parking outside and near the site. This plan must be documented in the Transport Code of Conduct.	Section 5 - Management measures, TNMP12 states heavy vehicle parking outside or near the site would be managed in accordance with the Transport Code of Conduct.	**Compliant**

Schedule	Condition No.	Name of clause	Condition	Comments / Evidence	Compliance
4	29	Weather monitoring	The Proponent shall install a weather station to monitor (by sampling and obtaining results by analysis) the parameters specified in column 1 of Table 9, using the sampling method, units of measure, averaging period and sampling frequency specified in columns 2 to 5 of Table 9. All data (including raw data and/or reports derived from raw data) shall be made available to the Secretary and EPA on request. **See Table 9 on NOTES TAB**	A meteorological monitoring station was installed at the Patons Lane RRC site on 29 March 2017 in accordance with the requirements of condition 29. The weather station is equipped to provide data on: • Temperature at 2m and 10m • Wind Speed and Direction • Sigma-Theta • Rainfall (mm) • Relative Humidity • Solar Radiation and • Barometric Pressure	**Compliant**
4	30	Traffic and transport	The Proponent shall prepare and implement a **Construction Traffic Management Plan (CTMP)**. The plan must be prepared in consultation with Council and the RMS and approved by the Secretary prior to the commencement of site establishment.	The CTMP was prepared by Traffic Solution Pty Ltd in consultation with RMS and Penrith City Council and was submitted to DP&E and Penrith City Council in March 2017. The Penrith City Council approved the Plan on 3 April 2017. DP&E approved the Construction Traffic Management Plan on 9 August 2017.	**Compliant**
4	31	Traffic and transport	Prior to commencement of site establishment, the Proponent shall engage a suitably qualified person to carry out an investigation of the existing bridge over South Creek on Luddenham Road to assess its capacity to accommodate the anticipated heavy vehicle traffic loadings from the proposed development. If inadequate, the investigation shall make recommendations to render the bridge adequate. The investigation must be carried out in consultation with Council and to the satisfaction of the Secretary.	The Level 3 Bridge over South Creek Load Rating and Inspection Report prepared by Integrity Testing Pty Ltd, dated 21 Feb 2017 concluded: *"The bridge is suitable for traversing by all legally loaded trucks to the Higher Mass Limit (HML) loadings for all categories, in essence this means that ALL legally loaded trucks are safe to use the bridge."*	**Compliant**
4	32	Traffic and transport	Prior to commencement of Operation, the Proponent must upgrade the bridge according to any recommendations made in the investigation specified in Condition 31 above to the satisfaction of the Secretary.	Email from DPIE (B. Zhang) to Bingo (D. Taylor) dated 18 July 2019, stating that DPIE is satisfied that Schedule 4, Condition 32 has been satisfied.	**Compliant**
4	33	Traffic and transport	B-Double trucks must not be used for the Project, including for delivering waste or materials to the site or for removing waste or materials from the site, unless conditions 34(a) and 35(c) are complied with.	There are no current plans to accept B-Doubles for this operation.	**Not triggered**
4	34	Traffic and transport	Prior to the commencement of operation the Proponent must: a) if the Proponent proposes to use B-Double vehicles for the Project, the Proponent must obtain approval for a Restricted Access Vehicle route on Patons Lane and Luddenham Road to service the Project; b) obtain Roads Act approval for the works in Patons Lane and Luddenham Road required in Condition 35 below.	• Letter from Penrith Council (D. Dehghan-Khalaji, Senior Engineer - Major Developments) titled "CCX190004/A Roads Act Approval for Patons Lane Orchard Hills, dated 30 Jan 2019 for the works associated with Schedule 4 Condition 35 (a). • Letter from Penrith Council (D. Dehghan-Khalaji, Senior Engineer - Major Developments) titled "CCX190004/A Roads Act Approval for Patons Lane Orchard Hills, dated 21 May 2019 for the works associated with Schedule 4 Condition 35 (b).	**Compliant**
4	35	Road upgrades and approvals	Prior to the commencement of operation the Proponent must: a) upgrade Patons Lane in the following manner: i. pavement widening and reconstruction of the existing road pavement; ii. trafficable pavement width of 6.6m; iii. 1.2m wide sealed shoulders; iv. 3m wide table drains; v. design loading for the full life of the development; b) upgrade Luddenham Road in the following manner: i. pavement reconstruction from chainage 1.45 to 1.9km south of Mamre Road to accommodate a design traffic loading of 5.31 x 106 Equivalent Standard Axles (ESA).	RMS approved upgrade plans. Letter from Dean Dehghan-Khalaji (Senior Engineer - Major Developments Penrith City Council) to Mr Kathiresu Nandapalan dated 30 January 2019 RE: CCX19/0004/A Roads Act Approval for Patons Lane Orchard Hills including approved Documents listing plans by J Wyndham Prince	**Compliant**

Schedule	Condition No.	Name of clause	Condition	Comments / Evidence	Compliance
			c) if the Proponent proposes to use B-Double vehicles for the Project, the Proponent must upgrade the intersection on the corner of Mamre Road and Luddenham Road in consultation with Council and to the satisfaction of the RTA. The intersection upgrade must provide: i. an acceleration lane and an extension to the acceleration lane contained within the painted 'seagull treatment' on Mamre Road; and ii. adequate storage and acceleration distance within the acceleration lanes for 'B-double' vehicles; d) provide truck turning warning signs in both directions on Mamre Road to the satisfaction of the RTA; and e) provide adequate car-parking on the site in accordance with Australian Standard 2890.1 Parking Facilities to the satisfaction of the Secretary; f) provide a contribution of $31,200 to the Council towards Council's upgrade of 1.45km of Luddenham Road, south of Mamre Road.		
4	**36**	Road upgrades and approvals	Prior to the commencement of operation the applicant must enter a Deed of Agreement with Public Domain and City Works at Council in relation to the upkeep of Patons Lane. The agreement is to include management of illegal dumping, litter removal, security, sweeping of Patons Lane, and routine pavement maintenance along Patons Lane.	Deed of Maintenance Agreement between SRC Operations and Penrith Council has been executed	**Compliant**
4	**37**	Road upgrades and approvals	Prior to the commencement of any roadwork in Patons Lane and Luddenham Road a performance bond is to be lodged with Council for the roadwork in Patons Lane and Luddenham Road and any required bridge works. The value of the bond shall be determined in accordance with Penrith City Council's Bond Policy to the satisfaction of the Secretary.	Deed of Maintenance Agreement between SRC Operations and Penrith Council has been executed	**Compliant**
4	**37A**	Road upgrades and approvals	The Proponent shall ensure that heavy vehicles travelling to or from the site do not travel upon Luddenham Road south of its junction with Patons Lane.	The Transport Code of Conduct specifies the routes permitted to be taken by heavy vehicles associated with the Patons Lane facility.	**Compliant**
4	**38**	Transport code of conduct	The Proponent shall prepare and implement a **Transport Code of Conduct**. This code must: a) be prepared in consultation with the RTA and Council, and approved by the Secretary prior to the commencement of operation;	The Transport Code of Construct is included in Appendix B of the Traffic Noise Management Plan, which was approved by the DPIE on 27 July 2019.	**Compliant**
4	**38**	Transport code of conduct	b) describe the measures to be implemented to minimise the impacts of: i. the Project on the local and regional road network including traffic noise; ii. ensure compliance with the Traffic Noise Management Plan; and iii. minimise conflicts with other road users e.g. school bus operators.	The Transport Code of Conduct does specify the actions to be taken to minimise impacts on other road users (for example school buses) and drivers general compliance obligations.	**Compliant**
4	**38**	Transport code of conduct	c) include measures to ensure truck drivers are aware of the approved routes for the transport of waste by road; and	The Transport Code of Conduct specifies the routes permitted to be taken by heavy vehicles associated with the Patons Lane facility.	**Compliant**
4	**38**	Transport code of conduct	d) include the Traffic Noise Management Plan;	The TNMP, Revision B prepared by Arcadis, dated 11 July 2019 was approved by the DPIE on 27 July 2019. The Code of Conduct references this plan	**Compliant**
4	**38**	Transport code of conduct	e) include a monitoring program and record movements of vehicles out of the site.	The Transport Code of Conduct specifies the truck movement monitoring requirements for the site.	**Compliant**
4	**38**	Transport code of conduct	f) require that heavy vehicles travelling to or from the site do not travel upon Luddenham Road south of its junction with Patons Lane.	The Transport Code of Conduct specifies the routes permitted to be taken by heavy vehicles associated with the Patons Lane facility.	**Compliant**
4	**39**	Landscaping	Prior to site establishment the Proponent shall offer and implement (if the offer is accepted) landscaping treatments, including fencing, to the residents at 202 Luddenham Rd. These measures must be reasonable and feasible and directed toward minimising visual and acoustic impacts of the operation on the residents. If within 3 months of receiving the offer, the proponent and owner cannot agree on landscaping treatment or if there is a dispute about the implementation of these measures then either party may refer the matter to the Director- General for resolution.	Consultation with the owners of 202 Luddenham Road occurred between 8 February 2016 and 24 March 2017 in relation to Schedule 4 condition 39.A Deed of Agreement was signed on 24 March 2017 by Mr Joseph Mifsud accepting double glazing treatment provided and paid for by SRC Operations Pty Limited.The signed Deed of Agreement was submitted to the DP&E. Receipt of the Deed was acknowledged by DP&E on 9 August 2017.	**Compliant**

Schedule	Condition No.	Name of clause	Condition	Comments / Evidence	Compliance
4	40	Landscaping	The Proponent shall prepare and implement a **Bund Wall, Landscaping and Vegetation Management Plan (BWLVMP)** to achieve the final landform and landscaping in Figure 2.22 of the Further Modified Preferred Project Report (Ex Z in Appeal No 10928 of 2010). This plan must:	The BWLVMP was prepared by Rodney Cox of Huon Designs whose appointment was approved by the Secretary on 31 August 2015 to satisfy Schedule 4 condition 40 and includes the Rehabilitation Plan required under Schedule 4 condition	**Compliant**
4	40	Landscaping	a) be prepared in consultation with OEH, EPA and NOW by a suitably qualified and experienced expert(s);	Was prepared in consultation with OEH, EPA, and DPI-Water;	**Compliant**
4	40	Landscaping	b) be approved by the Secretary prior to the commencement of site establishment;	Was submitted to the Secretary of DP&E on 15 March 2017 and approved on 9 August 2017, as follows;	**Compliant**
4	40	Landscaping	c) specify the staging milestones for implementation of landscaping works;	Includes Table 2.5 - Indicative Emplacement and Cell Rehabilitation that specifies the staging milestones for implementation of landscaping works;	**Compliant**
4	40	Landscaping	d) detail specifications for the approved removal, reshaping and/or landscaping of the bund walls;	Includes section 3 that provides specifications for the approved removal, reshaping and/or landscaping of the bund walls;	**Compliant**
4	40	Landscaping	e) specify riparian zone management within 50m of Blaxland Creek (measured from the top of the bank);	Includes section 3 that outlines riparian zone management within 50m of Blaxland Creek;	**Compliant**
4	40	Landscaping	f) include measures to minimise native vegetation loss and additional tree planting to offset this loss;	Section 3.2 that includes measures to minimise native vegetation loss and additional tree planting to offset this loss;	**Compliant**
4	40	Landscaping	g) include a landscape plan identifying locations of planting and identifying species to be planted;	Section 3.2 that includes a landscape plan identifying locations of planting and identifying species to be planted;	**Compliant**
4	40	Landscaping	h) specify the use of only indigenous species propagated from provenant seed;	Section 3.7 and Table 5 that specify the use of indigenous species propagated from provenant seed;	**Compliant**
4	40	Landscaping	i) specify the measures which shall be undertaken to protect the EECs on adjacent lands (particularly to the southern and western boundaries of the site), in particular measures to:	Includes section 3 and reference to the SW&LMP that specify measures to be undertaken to protect the EECs on adjacent lands (particularly the southern and western boundaries of the site), in particular measures to:	**Compliant**
4	40	Landscaping	i) stabilise exposed soils;	i) stabilise exposed soils (SW&LMP);	**Compliant**
4	40	Landscaping	ii) control of invasive weeds to prevent weeds from migrating to the EECs;	ii) section 3.6 addresses control of invasive weeds to prevent weeds from migrating to the EECs;	**Compliant**
4	40	Landscaping	iii) prevent dust from impacting on the EECs;	iii) prevent dust from impacting on the EECs;	**Compliant**
4	40	Landscaping	iv) control sediment, stormwater and surface run-off from impacting on the EECs;	iv) section 3.4 addresses control sediment, stormwater and surface run-off from impacting on the EECs;	**Compliant**
4	40	Landscaping	v) prevent leachate from entering into the groundwater or migrating off-site; and	v) prevent leachate from entering into groundwater or migrating off-site (SW&LMP); and	**Compliant**
4	40	Landscaping	vi) include all of the above measures in corresponding management plans.	vi) include all of the above measures in corresponding management plans.	**Compliant**
4	40	Landscaping	j) identify protection measures for the vegetation and controls for each phase of the development;	Includes section 5 Table 8 that address protection measures for the vegetation and controls for each phase of the development;	**Compliant**
4	40	Landscaping	k) specify details of maintenance actions to ensure the vegetation is maintained at all times including during the operations and for the post-closure period stipulated by the OEH and EPA;	Includes section 4 that presents maintenance actions to ensure the vegetation is maintained at all times including during the operations and for the post-closure period stipulated by the OEH and EPA;	**Compliant**
4	40	Landscaping	l) specify details of a monitoring and compliance program; and	Includes section 4 that details a monitoring and compliance program; and	**Compliant**
4	40	Landscaping	m) require an annual review for inclusion in the Annual Environmental Management Review that reports on the performance of the landscaping and vegetation management, including further recommendations to ensure the successful establishment of vegetation.	Section 4 also outlines the annual review for inclusion in the Annual Environmental Management Review that reports on the performance of the landscaping and vegetation management, including further recommendations to ensure the successful establishment of vegetation.	**Compliant**
4	41	Landscaping	The Proponent shall maintain all landscaping and protection measures to satisfaction of the Secretary over the life of the Project and for a post-closure period stipulated by the OEH and EPA.		**Noted**

Schedule	Condition No.	Name of clause	Condition	Comments / Evidence	Compliance
4	42	pests, vermin and declared noxious weeds	The Proponent shall: a) implement suitable measures to manage **pests, vermin and declared noxious weeds** on-site; and b) inspect the site on a weekly basis to ensure that these measures are working effectively, and that pests, vermin or noxious weeds are not present on-site in sufficient numbers to pose an environmental hazard, or cause the loss of amenity in surrounding area. Note: For the purposes of this condition, noxious weeds are those species subject to an order declared under the Noxious Weed Act 1993.	Weed management is ongoing	Compliant - ongoing
4	43	Fire and emergency management	The Proponent shall prepare and implement a **Fire and Emergency Management Plan (FERMP)** for the Site. This plan must: a) be prepared by a suitably qualified expert whose appointment has been endorsed by the Secretary;	The Fire and Emergency Management Plan Schedule 4 condition 43: was prepared by Planager Consulting P/L whose appointment has been endorsed by the Secretary DP&E on 31 August 2015;	Compliant
4	43	Fire and emergency management	b) be approved by the Secretary prior to the commencement of any work;	Was submitted to the Secretary on 28 March 2017 and approved on 9 August 2017, prior to the commencement of any work;	Compliant
4	43	Fire and emergency management	c) identify all threats to the environment and public health that could arise from the operation of the Project (e.g. fire, overflow or dam failure);	Includes section 2 Tables 2 and 3, and section 3 that identify all threats to the environment and public health that could arise from the operation of the Project;	Compliant
4	43	Fire and emergency management	d) detail a communication strategy for notifying the relevant government agencies and potentially affected community in the event of an emergency; and	Included section 5 and section 8 to detail a communication strategy for notifying the relevant government agencies and potentially affected community in the event of an emergency; and	Compliant
4	43	Fire and emergency management	e) identify strategies to contain and minimise the effects of any threats to the environment and public health such as (but not limited to) measures to: i) minimise the risk of fire on-site, including in the landfill area; ii) promptly extinguish any fires on-site; and iii) ensure adequate fire-fighting capacity on-site, including a fire-fighting tanker	Included section 4, 6 and 7 to address strategies to contain and minimise the effects of any threats to the environment and public health to extinguish any fires on-site and minimise the risk of fire on- site and ensure adequate fire-fighting capacity on-site, including a fire-fighting tanker.	Compliant
4	44	Fire and emergency management	The Proponent shall ensure that the lighting associated with the Project: a) complies with the latest version of 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.	Site Inspection 21 June. The Auditor sighted the external lighting at the site. All operational areas are below the bunds and not visible outside of the site.	Compliant
4	45	Fire and emergency management	The Proponent shall: a) install and maintain a perimeter fence and security gates on-site prior to the commencement of site establishment and which shall be maintained for the life of the Project; and b) ensure that the security gates on-site are locked whenever the site is unattended.	The perimeter fence and security gates on the Patons Lane RRC site have been erected in accordance with the requirements of Consent Condition Schedule 4 condition 45. The security gates on-site are locked whenever the site is unattended.	Compliant
4	46	Rehabilitation	The Proponent shall prepare and implement a **Rehabilitation Plan** to achieve the final landform and landscaping in Figure 2.22 of the Further Modified Preferred Project Report (Ex Z in Appeal No 10928 of 2010). This plan must: a) be prepared by a suitably qualified expert whose appointment has been approved by the Secretary;	The Rehabilitation Plan was prepared as part of the Bund Wall, Landscaping and Vegetation Management and Rehabilitation Plan to satisfy Schedule 4 conditions 40 and 46. The Bund Wall, Landscaping and Vegetation Management and Rehabilitation Plan: was prepared by Rodney Cox of Huon Designs whose appointment was approved by the Secretary on 31 August 2015;	Compliant
4	46	Rehabilitation	b) be prepared in consultation with EPA, NOW and Council;	Was prepared in consultation with OEH, EPA, DPI-Water and Penrith City Council;	Compliant
4	46	Rehabilitation	c) be submitted to and approved by the Secretary prior to commencement of the site establishment works;	Was submitted to and approved by the Secretary prior to commencement of the site establishment works;	Compliant
4	46	Rehabilitation	d) define the objectives and criteria for rehabilitation and closure;	Defined the objectives and criteria for rehabilitation and closure;	Compliant

Schedule	Condition No.	Name of clause	Condition	Comments / Evidence	Compliance
4	46	Rehabilitation	e) comply with the minimum design specifications and operational/post closure requirements in Schedule 7 unless specified by the EPA;	Complies with the minimum design specifications and operational/post closure requirements in Schedule 7 unless specified by the EPA;	**Compliant**
4	46	Rehabilitation	f) identify the works required and the progressive timing to complete the rehabilitation of each part of the Project;	Identifies the works required and the progressive timing to complete the rehabilitation of each part of the Project;	**Compliant**
4	46	Rehabilitation	g) investigate options for the removal of Dam 2 outside the riparian corridor as part of the final landform once the operational purpose of the dam is complete;	Investigated options for the removal of Dam 2 outside the riparian corridor as part of the final landform once the operational purpose of the dam is complete;	**Compliant**
4	46	Rehabilitation	h) investigate options for the future use of the site;	Investigated options for the future use of the site;	**Compliant**
4	46	Rehabilitation	i) include provisions to monitor and manage settlement impacts during and after the operations;	Includes provisions to monitor and manage settlement impacts during and after the operations;	**Compliant**
4	46	Rehabilitation	j) describe the measures that would be implemented to achieve the specified objectives and criteria for the rehabilitation and closure;	Describes the measures that would be implemented to achieve the specified objectives and criteria for the rehabilitation and closure;	**Compliant**
4	46	Rehabilitation	k) calculate the cost of implementing these measures;	Calculates the cost of implementing these measures;	**Compliant**
4	46	Rehabilitation	l) describe how the performance of these measures would be monitored over time;	Described how the performance of these measures would be monitored over time;	**Compliant**
4	46	Rehabilitation	m) address the issue of settlement post-closure and provide designs and ongoing maintenance procedures such as backfilling to maintain slope, drainage and prevent ponding.	Addressed the issue of settlement post-closure and provide designs and ongoing maintenance procedures such as backfilling to maintain slope, drainage and prevent ponding.	**Compliant**
5			**SCHEDULE 5 - ENVIRONMENTAL MANAGEMENT, REPORTING & AUDITING**		
5	1	Community liaison committee	The Proponent shall establish and operate a CLC comprising representatives of the Proponent, local community and Council. Representatives of relevant government agencies may be invited to attend meetings of the CLC, if required. The Chairperson and procedures for the Committee including frequency of meetings shall be determined by the CLC and the CLC must convene at least twice annually over the life of the Project.	The Community Liaison Committee(CLC) has been established and the interim Chairperson and procedures approved by the DP&E. The inaugural CLC meeting was held on 21 June 2016 with a site visit followed by a formal meeting. Regular meetings are held and the minutes of the meeting are uploaded to the Patons Lane RRC website	**Compliant - ongoing**
5	2	Community liaison committee	Within three months of the commencement of work, the Proponent shall submit details of the CLC members (including the Chairperson, procedures and frequency of meetings) for the Secretary's approval.	As above	**Compliant - ongoing**
5	3	Community liaison committee	The Proponent shall inform the Secretary of any change in the composition of the CLC.	As above	**Noted**
5	4	Quarry operation plan	The Proponent shall prepare and implement a **Quarry Operation Management Plan (QOMP)** for the Project. This plan must:	The Quarry Operations Management Plan Version 6 (dated December 2016) of the excavation of Cell 1):	**Compliant**
5	4	Quarry operation plan	a) be prepared by a suitably qualified team of experts;	Prepared by RW Corkery & Co P/L whose appointment was approved by the Secretary on 31 August 2015;	**Compliant**
5	4	Quarry operation plan	b) be prepared in consultation with the EPA and Council;	Prepared in consultation with the EPA and Penrith City Council;	**Compliant**
5	4	Quarry operation plan	c) be approved by the Secretary prior to the commencement of site establishment;	The QOMP was approved by the Secretary on 21 December 2016, prior to commencement of site establishment;	**Compliant**
5	4	Quarry operation plan	d) include stockpile construction methods that minimise the visibility and acoustic impact of the use of equipment during the placement or removal of materials from any part of the stockpile, in particular where any part of the equipment would be above RL 54m AHD;	Included in section 8.3 which addresses stockpile construction methods that minimise the visibility and acoustic impact of the use of equipment during the placement or removal of materials from the stockpiles;	**Compliant**
5	4	Quarry operation plan	e) shows the active land fill cell separate from all extraction activities at all times;	Includes section 7.3 and Figure 7 which show the active landfill cell separate from all extraction activities at all times;	**Compliant**

Schedule	Condition No.	Name of clause	Condition	Comments / Evidence	Compliance
5	4	Quarry operation plan	f) include a protocol to ensure stockpiles of clay/shale materials for use by the brick industry are kept separate from material to be used for cell construction, daily waste covering and capping;	Includes section 8.2 which describes stockpiles of clay /shale materials for use by the brick industry kept separate from material to be used for cell construction, daily waste covering and capping;	Compliant
5	4	Quarry operation plan	g) include provision for all clay/shale stockpiles for brick industry to be sign posted with a description of the material to ensure there is no contamination, and that plant operators know where to place the different materials;	Includes section 8.4 which includes provision for all clay/shale stockpiles for brick industry to be sign posted with a description of the material to ensure there is no contamination, and that plant operators know where to place the different materials;	Compliant
5	4	Quarry operation plan	h) include provision for regular staff or contractor training is to be undertaken to reinforce the importance of keeping the clay types separate;	Includes section 9.3 which addresses regular staff or contractor training to reinforce the importance of keeping the clay types separate;	Compliant
5	4	Quarry operation plan	i) specify management practices so that stockpiles are constructed, accessed and managed as follows:	Includes section 8 which specifies management practices for stockpiles. There will be several stockpiles on site at any one time based on the type of material.	Compliant
5	4	Quarry operation plan	• The clay material to be sold to the brick manufacturing industry will be kept separated from the material to be used during the cell, construction, daily waste covering and capping of the finished areas.	as above	Compliant
5	4	Quarry operation plan	• The light-firing shale stockpiles will be located so as not to interfere with the construction of the cells or the emplacement of waste and all stockpiles will be sign posted with a description of the material to ensure there is no contamination. The sign posting will also ensure that the plant operators and the Stockpile Management Supervisor know where to place the different materials and regular training will take place to reinforce the importance of keeping the clay types separated.	as above	Compliant
5	4	Quarry operation plan	• There will be several stockpiles on site at any one time based on the type of material, i.e. cream-firing clay, light pink-firing clay and red-firing clay. Stockpile Construction	as above	Compliant
5	4	Quarry operation plan	• The construction will use scrapers for placement of the first 5 to 6 metres and then dump trucks and a dozer for the final 2 to 3 metres. Management of Stockpiled Materials	as above	Compliant
5	4	Quarry operation plan	• Once an area on the site has been designated as a stockpile location, signs will be erected describing the material to be deposited within that location. The plant operator responsible for preparing the stockpile will have responsibility for ensuring that only the designated clay is deposited there.	as above	Compliant
5	4	Quarry operation plan	• The Site Manager will arrange for quarterly surveys to be carried out on the stockpiles. The survey results will be correlated against the surveys undertaken on the site as a whole and the information provided in the original geological report undertaken on the site.	as above	Compliant
5	4	Quarry operation plan	• All vehicles exporting material from the site will be required to do so via the weighbridge. A record will be maintained of the type, quantity and destination of the material exported on each vehicle.	as above	Compliant
5	4	Quarry operation plan	• Monthly reports detailing the type of material exported from the site will be prepared for I&I NSW and the EPA if required	as above	Compliant
5	4	Quarry operation plan	j) Includes a protocol that requires surveys of the stockpiles once every three months, with the first survey being on or before the date that operations commence.	as above	Compliant
5	4	Quarry operation plan	k) The batter slopes of stockpiles must be no more than 1:3 (Vertical: Horizontal), unless otherwise approved by the EPA.	as above	Compliant
5	5	Landfill environmental management plan	The Proponent shall prepare and implement a **Landfill Environmental Management Plan (LEMP)** for the Project to the satisfaction of the Secretary. This plan must:	The LEMP was prepared by GHD, dated May 2019 and approved by DPIE on 27 July 2019	Compliant
5	5	Landfill environmental management plan	a) be prepared by a suitably qualified team of experts whose appointment has been endorsed by the Secretary;	A copy if the letter from DPIE approving GHD to prepare the LEMP is provided in Appendix 1 of the report.	Compliant

Schedule	Condition No.	Name of clause	Condition	Comments / Evidence	Compliance
5	**5**	Landfill environmental management plan	b) be prepared in consultation with the EPA, NOW and Council;	• Email from DPIE (B Zhang Senior Assessment Officer) to Arcadis (B Searle, Environment Director), titled "RE: Submission of Paton Lane Operational Environmental Management Plans", dated 1 May 2019, confirmed the plans had been issued by DPIE to the EPA for review and comment. • Email from DPIE (B Zhang Senior Assessment Officer) to Bingo (D Taylor), dated 8 July 2019, confirming that the EPA has notified DPIE that they will not be providing comments on, or approving any Plans relating to this Approval.	**Compliant**
5	**5**	Landfill environmental management plan	c) be approved by the Secretary prior to the commencement of site establishment;	The LEMP was prepared by GHD, dated May 2019 and approved by DPIE on 27 July 2019	**Compliant**
5	**5**	Landfill environmental management plan	d) be updated every five years from the commencement of operation;	Included in the review section of the LEMP	**Compliant**
5	**5**	Landfill environmental management plan	e) provide the strategic framework for environmental management of the Project;	Section 7 of the LEMP provides an overview of the Strategic Framework for the operation.	**Compliant**
5	**5**	Landfill environmental management plan	f) identify the statutory approvals that apply to the Project;	Section 3 of the LEMP provides an overview of the Statutory Approvals for the Project. It is noted that no reference has been made to the requirements of the two Environment Protection Licences that apply to this operation.	**Compliant**
5	**5**	Landfill environmental management plan	g) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the Project;	Sections 6 and 7 of the LEMP provides an overview of the roles and responsibilities related to the implementation of the LEMP.	**Compliant**
5	**5**	Landfill environmental management plan	h) include interim cell rehabilitation measures for the site including landscape details;	Sections 6.11 and 9 of the LEMP provides an overview of the interim cell rehabilitation measures.	**Compliant**
5	**5**	Landfill environmental management plan	i) address the operational requirements and minimum design specifications in Schedule 7;	Appendix C Schedule 7 of the LEMP provides summary of the minimum design specifications that apply to the landfill.	**Compliant**
5	**5**	Landfill environmental management plan	j) describe the procedures that would be implemented to: i. keep the community and relevant agencies informed about the operation and environmental performance of the Project; ii. receive, handle, respond to, and record complaints; iii. resolve any disputes that may arise during the course of the Project; iv. respond to any non-compliance; and v. respond to emergencies;	Section 8.7 of the LEMP provides an overview of the community and stakeholder consultation and liaison processes.	**Compliant**
5	**5**	Landfill environmental management plan	k) include: i. copies of the various strategies, plans and programs that are required under the conditions of this approval once they have been approved; and ii. a clear plan depicting all the monitoring currently being carried out within the Project area;	Section 7 of the LEMP provides an overview of the Strategic Framework for the operation.	**Compliant**
5	**5**	Landfill environmental management plan	l) include the design and operation of the Construction and Industrial Waste Warehouse	Design and operation of the C&I Waste Warehouse was included in Appendix E of the LEMP approved on 27 July 2019	**Compliant**

Schedule	Condition No.	Name of clause	Condition	Comments / Evidence	Compliance
5	**5A**	Annual Environmental Management Report	One year after the commencement of site establishment, and annually from the date of approval thereafter, the Proponent shall submit an Annual Environmental Management Report to review the environmental performance of the Project to the satisfaction of the Secretary. This report must: a) describe the operations that were carried out in the past year; b) analyse the monitoring results and complaints records of the Project over the past year, which includes a comparison of these results against the: i. relevant statutory requirements, limits or performance measures/criteria; ii. monitoring results of previous years; and iii. relevant predictions in the EA; 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 Project; and e) describe what measures will be implemented over the next year to improve the environmental performance of the Project.	No AEMR have been prepared to date for the project. The AEMR date October 2020 addresses the first two years of site establishment and operation of the site	**Not compliant**
5	**6**	Independent Environmental Audit	Every three years after the commencement of site establishment, unless the Secretary directs otherwise, the Proponent shall commission and pay the full cost of an independent environmental audit of the Project. This audit must: a) be conducted by a suitably qualified, experienced, and independent team of experts covering all facets of the Project whose appointment has been endorsed by the Secretary; b) assess the environmental performance of the Project, and its effects on the surrounding environment; c) assess whether the Project is complying with the relevant standards, performance measures and statutory requirements; d) review the adequacy of any strategy/plan/program required under this approval; and e) recommend measures or actions to improve the environmental performance of the Project, and/or any strategy/plan/program required under this approval.	The first Independent Environmental Audit is due in April 2022	**Not triggered**
5	**7**	Incident reporting	Upon detecting an exceedance of the limits/performance criteria in this approval or the occurrence of an incident that causes (or may cause) material harm to the environment, the Proponent shall immediately notify EPA and notify the Department as soon as practicable thereafter of the exceedance/incident.	Where required in accordance with the EPL and the Conditions of Consent, any exceedances of limits will be reported within the timeframes stipulated.One minor exceedance of pH in a water discharge was reported to EPA in the annual return for EPL 20814, however this was not considered to have caused material harm to the environment.	**Compliant - ongoing**
5	**8**	Incident reporting	Within six days of notifying the Department and EPA of an exceedance/incident, the Proponent shall provide the Department and these agencies with a written report that: a) describes the date, time, and nature of the exceedance/incident; b) identifies the cause (or likely cause) of the exceedance/incident; c) describes what action has been taken to date; and d) describes the proposed measures to address the exceedance/incident.	No reportable incidents requiring reporting to the DPIE or EPA has occurred.	**Not triggered**
5	**9**	Revision of plans and programs	Within three months of the submission of an: a) annual review under condition 6 of Schedule 5; b) audit under condition 7 of Schedule 5; and / or c) incident report under condition 8 of Schedule 5; the Proponent shall review and, if necessary, revise the plans and programs required under this approval to the satisfaction of the Secretary. Note: This is to ensure the plans and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the Project.	The management plans were updated to address the issues identified in the pre-operation IEA undertaken in October 2019. The management plans were approved by the DPIE in July 2019.	**compliant**

Schedule	Condition No.	Name of clause	Condition	Comments / Evidence	Compliance
5	**10**	Access to Information	From the commencement of site establishment the Proponent shall make the following information freely available on a publicly accessible website as it is progressively required under the approval: a) all current statutory approvals, including this approval; b) plans and programs required under this approval; c) technical analysis/reports of monitoring results, which have been reported in accordance with the various plans and programs approved under the conditions of this approval; d) a complaints register, which is to be updated on a monthly basis; e) a copy of any Annual Environmental Management Report (over the last 5 years); f) a copy of any Independent Environmental Audit and the Proponent's response to the recommendations; g) real time monitoring data (noise and air quality); and h) any other material as required by the Secretary.	The website for the Patons Lane RRC has been established as required under the approval. The website will be progressively updated as documentation becomes available including: • current statutory approvals, including this Consent; • approved plans and programs required under this consent; • technical analysis/reports of monitoring results; • complaints register; • a copy of any Independent Environmental Audit and the Proponent's response to the recommendations; • real time monitoring data (noise and air quality); and • other material as required by the DP&E.	**Compliant - ongoing**
6			**SCHEDULE 6 - DOCUMENTS COMPRISING THE PROJECT**		
6	**1**	Environmental Impact Assessment	Environmental Assessment prepared by RW Corkery & Co Pty Ltd dated April 2010 (Ex A in Appeal No 10928 of 2010), including: a) Preliminary In-Situ Waste Classification prepared by Douglas Partners Pty Ltd dated September 2009; b) Aboriginal Heritage Assessment prepared Archaeological Surveys and Report Pty Ltd dated September 2009; c) European Heritage Assessment prepared by Archaeological Surveys and Report Pty Ltd dated September 2009; d) Soils and Land Capability Assessment prepared by Geoff Cunningham Natural Resource Pty Ltd dated September 2009; e) Cell Design and Groundwater Assessment prepared by Aquaterra Consulting Pty Ltd dated March 2010; f) Surface Water Assessment prepared by GSS Environmental & BMT WBM Pty Ltd dated February 2010; g) Air Quality Assessment prepared by PAE Holmes dated February 2010; h) Traffic and Parking Assessment prepared by Traffic Solutions Pty Ltd dated February 2010; i) Visual Assessment prepared by Design Collaborative Pty Ltd dated February 2010; j) Flora Assessment prepared by Geoff Cunningham Natural Resources Pty Limited dated September 2009; and k) Fauna Assessment prepared by Aquila Ecological Surveys dated September 2009.	NA	**NA**
6	**2**	Response to Submission	Response to Submissions prepared by RW Corkery & Co Pty Ltd (Ex A in Appeal No 10928 of 2010), comprising: a) Response to Submissions raised dated July 2010; b) Final Statement of Commitments; c) Supplementary Asbestos Assessment prepared by Douglas Partners Pty Ltd dated 19 July 2010; d) Draft Asbestos Management Plan prepared by Douglas Partners Pty Ltd dated May 2010; e) Correspondence re Asbestos Management Plan from Hibbs & Associates Pty Ltd dated 18 May 2010; f) Recycling Resources Recovery Capacity prepared by Mike Ritchie & Associates; g) Justifiable Demand for a Class 2 Landfill prepared by Mike Ritchie & Associates;	NA	**NA**

Schedule	Condition No.	Name of clause	Condition	Comments / Evidence	Compliance
			h) Consultation Record with the Local Community; i) Valuation Letter prepared by CB Richard Ellis;		
6	**3**	Modified Preferred Project Report	Modified Preferred Project Report ("MPPR") prepared by RW Corkery & Co Pty Ltd dated January 2011 (Ex C in Appeal No 10928 of 2010), but only in relation to: a) Planning Assessment prepared by Design Collaborative Pty Ltd (Appendix 1); b) Visual Assessment prepared by Richard Lamb & Associates (Appendix 3);	NA	**NA**
6	**5**	Additional information	Additional information in response to Court Order made 12 May 2011 ("Court Order") filed with the Court on 17 June 2011 (Ex D in Appeal No 10928 of 2010),: a) Letter prepared by Wilkinson Murray dated 18 May 2011; b) Report prepared by Mr Ron Wainberg dated 23 May 2011; c) Report prepared by Natural Resource Consultant Pty Ltd dated 19 May 2011; d) Report prepared by GHD Pty Ltd and GSS Environmental dated 19 May 2011; e) Supplementary Air Quality Assessment prepared by PAEHolmes dated 19 May 2011.	NA	**NA**
6	**6**	Revised overview report	(Revised) Overview Report for the Further Modified Project Report prepared by GHD Pty Ltd dated September 2011 (received 30 September 2011, and incorporating Additional Information in Appendix G. Note this is a revised version of a document with the same name and date) (Ex Z in Appeal No 10928 of 2010).	NA	**NA**
6	**7**	Further modified preferred project report	Further Modified Preferred Project Report prepared by R.W Corkery and GHD Pty Ltd dated September 2011 (Ex Z in Appeal No 10928 of 2010), including the following Figures: (a) Figure 2.5 'Indicative Project Site Layout (Amended)'; (b) Figure 2.6 'Site Establishment Activities (Amended)'; (c) Figure 2.8 'Recycling and Reprocessing Area (Amended)'; (d) Figure 2.9 'Leachate Collection System (Amended)'; (e) Figures 2.10a-c (Amended), 2.11a-d (Amended), 2.12a-c (Amended) and 2.13 (Amended) comprising 'Stages 0 to 11 Operations'; (f) Figure 2.14 'Activities Sequence in Cross Section North/South (Amended)'; (g) Figure 2.15 ''Activities Sequence in Cross Section East/West (Amended)'; (h) Figure 2.16 'Northern Face Typical Sections (Amended)'; (i) Figure 2.17 'Indicative Deconstruction of the Eastern Face (Amended)'; (j) Figure 2.18 'Patons Lane – Approved Road Design'; (k) Figure 2.20 'Indicative Final Landform (Amended)'; (l) Figure 2.21 'Rehabilitation Status following Site Establishment (Amended)'; (m) Figure 2.22 'Final Landform and Landscaping (Amended)'.	NA	**NA**
6	**8**	Acoustic report	Updated Consolidated Acoustic Report by Wilkinson Murray dated February 2012 (Ex DD in Appeal No 10928 of 2010).	NA	**NA**
6	**9**	Contamination assessment	Report on Stage 1 – Investigation and Contamination Assessment prepared by Douglas Partners dated February 2012 (Ex BB in Appeal No 10928 of 2010).	NA	**NA**

Schedule	Condition No.	Name of clause	Condition	Comments / Evidence	Compliance
6	**10**	Bund deconstruction	Draft Bund Deconstruction Management Plan prepared by Douglas Partners dated February 2012 (Ex EE in Appeal No 10928 of 2010).	NA	**NA**
7			**SCHEDULE 7 – MINIMUM DESIGN SPECIFICATIONS AND OPERATIONAL/POST CLOSURE REQUIREMENTS.**		
7	**A**	Designs	The C&I Waste Stockpile building must include the following measures unless otherwise approved by the EPA: (a) Stormwater management measures i. The design of the C&I storage facility stormwater conveyance system must be for the 20-year ARI stormwater event and discharge to stormwater management system (SMS). ii. The sediment dam's storage for the SMS is to be designed for a 90th percentile 5-day rainfall event to ensure that stormwater and leachate are not mixed. The conveyance system is to be designed for the 20-year ARI stormwater event. (b) Leachate management measures i. Washdown water from within the C&I Waste Stockpile building is to be separated from stormwater and managed as leachate. ii. The SMS and the LMS must be completely separate around the border of the C&+C102:C111I waste stockpile building. iii. The concrete floor must be designed to support the mass of C&I waste and to shed washdown water to the LMS. The concrete floor must have a slope to facilitate flows of washdown water into the leachate management system (LMS).	Specifications addressed in the Landfill Environmental Management Plan(LEMP) and the Soil Water and Leachate Management Plan (SWLMP). Specifically, LEMP Appendix C – Schedule 7 Reconciliation and SWLMP Appendix F – Reconciliation of minimum design specifications in Schedule 7. Stormwater, Drainage and Civil Works (design and construction) certification - Certifier S Bridge (CB Commercial) dated 9 May 2019.	**Compliant - ongoing**
7	**B**	Gas collection system design	(a) The lateral collection pipes of the gas collection system are to be located not more than 50m apart. (b) Chimney drains are to be no more than 200 metres apart and must comprise non calcareous granular material with a permeability greater than 1x10-3 m/sec. (c) Chimney drains will be installed on the side liner to facilitate gas venting and prevent perching of leachate. **Appeal No. 10928 of 2010** 41d The landfill gas management system should be designed in accordance with the Handbook for the design, construction, operation, monitoring and maintenance of a passive landfill gas drainage and biofiltration system, UNSW and GHD, NSW DECCW, March 2010 unless otherwise approved by the EPA.	• Stormwater, Drainage and Civil Works (design and construction) certification - Certifier S Bridge (CB Commercial) dated 9 May 2019. • Installation Certificate - Structural - Certifier A Bethune (Davis, Naismith & McGovern), dated 28 May 2019. – Certification of Design and installation of structural works for the Resource Recovery Facility including the concrete footings and slab. • Foundation Inspection Reports - Certifier M. Gallo (Ground Technologies) for the Resource Recovery Facility, dated 20 November 2018. • Pre-pour inspection reports - Certifier B. Smith (Triaxial Consulting) dated 7 December 2018. Certifying that the stormwater system was designed and constructed in accordance with BCA 2016, AS3500.3-2015 and the approved Construction Certificate. • Installation Certificate - Carparks and Roadways - certifier N. Carlos (Jeffsann Excavations P/L) certifying that all roads and carparks had been designed and constructed in accordance with BCA 2016, AS2090.1-2004, AS2890.2-2002, AS2890.6-2009 and the approved Construction Certificate.	**Compliant - ongoing**
7	**C**	Cell liners	(a) The clay basal liner within each cell must: i. Extend up the side of the quarry wall for at least 2m to provide for capture of leachate and prevent leakage at the join of the HDPE side liner and the clay base liner. ii. Achieve an infiltration rate equivalent to or less than 90cm of compacted clay with a maximum permeability of 1 x 10 -9 m/sec. iii. The extension of the clay liner up the side of the quarry wall shall be of equivalent thickness (when measured perpendicular to the liner surface) and permeability as the basal liner. iv. Refer to additional conditions regarding cell 2 below.	• Report titled "SRC Operations Pty Ltd - Patons Lane Resource Recovery Centre - Construction Quality Assurance • Report Cell 1A-1 and Initial Leachate Pond " by GHD, dated July 2019. Section 3.1, 3.2. and 3.3. Table 5 (Compacted Clay Material Conformance) documents that the permeability requirement has been meet.	**Compliant**

Schedule	Condition No.	Name of clause	Condition	Comments / Evidence	Compliance
7	C	Cell liner design	(b) A groundwater depressurisation system (as described in Appendices of the (Revised) Overview Report for the Further Modified Project Report (Ex Z in Appeal No 10928 of 2010), accompanying the Further Modified Preferred Project Report (Ex Z in Appeal No 10928 of 2010) must be installed between the landfill cell liner and the natural geology where the cells are below the ground level. The design for the groundwater depressurisation system must be included in the design for the landfill cells and accompany the application for the EPL.	Report titled "SRC Operations Pty Ltd - Patons Lane Resource Recovery Centre - Construction Quality Assurance Report Cell 1A-1 and Initial Leachate Pond " by GHD, dated July 2019.	**Compliant**
7	C	Cell liner design	(c) The HDPE side liner must: i. Overlap with the basal clay liner (which must extend up the side wall for at least 2m). ii. Be placed against an appropriate geotextile cushion material against the side of the quarry wall. iii. If, in the opinion of a certified CQA assessor, the HDPE will be damaged by the roughness of the inside wall surface, then a composite clay-HDPE liner system must be placed against the entire quarry wall unless otherwise approved by the EPA. iv. Have a minimum thickness of 1.5mm, and conform to the relevant Australian Standards	Report titled "SRC Operations Pty Ltd - Patons Lane Resource Recovery Centre - Construction Quality Assurance Report Cell 1A-1 and Initial Leachate Pond " by GHD, dated July 2019. The CQA report confirms compliance of the compacted HDPE liner with the requirements of this Condition.	**Compliant**
7	C	Cell liner design	(d) Geotextile must be placed on either side of the HDPE side liner.	The CQA report confirms compliance of the compacted geotextile layer with the requirements of this Condition.	**Compliant**
7	C	Cell liner design	(e) All cell construction works are to be assessed by the CQA assessor and certified as suitable before emplacement of waste begins.	The Cell 1A-1 Construction Quality Report has certified that this landfill cell meets all relevant requirements to permit the receival of wastes.	**Compliant**
7	C	Cell liner design	(f) All cells and sub cells must include an active leachate extraction or drainage system as per Section 2.8.4 of the FMPPR	Site Inspection from 27 June 2019 (Surface and Groundwater management specialist auditor confirmed that the leachate extraction system.	**Compliant**
7	D	Capping design	(a) The capping design must be the modified cap design incorporating a geomembrane liner and drainage layer (as specified in Table 2.4 of the FMPPR) (note that the drainage layer is not optional).	This condition has not been triggered as the landfill cap has not yet been designed	**Not triggered**
7	D	Capping design	(b) The drainage layer permeability must be greater than 1x10-3 m/sec. The aggregate used in the drainage layer must not include crushed concrete.	This condition has not been triggered as the landfill cap has not yet been designed	**Not triggered**
7	D	Capping design	(c) The sealing clay layer must be a minimum of 600mm thick and have a permeability of not greater than 10 -8 m/sec.	This condition has not been triggered as the landfill cap has not yet been designed	**Not triggered**
7	D	Capping design	(d) The subsoil layer must be a minimum thickness of 750mm	This condition has not been triggered as the landfill cap has not yet been designed	**Not triggered**
7	D	Capping design	(e) The bund walls on the north eastern and eastern boundaries of the site must be conditioned as part of the site development works and before any waste is placed on the site.	This condition has not been triggered as the landfill cap has not yet been designed	**Not triggered**
7	D	Capping design	(f) All barrier and drainage layers, including geomembrane, must be the subject of approval by the EPA.	This condition has not been triggered as the landfill cap has not yet been designed	**Not triggered**
7	E	Cell 2 design	An additional groundwater depressurisation layer behind the HDPE side liner of Cell 2 must be installed if required to relieve groundwater pressure caused by the increase in depth.	This condition has not been triggered as Cell 2 has not yet been designed.	**Not triggered**
7	F	Landfill operation requirements	1. In addition to the leachate management system specifications indicated above, the landfill operation must comply with the following requirements to ensure that leachate is minimised and that leachate is separated from stormwater throughout the operation of the Project unless otherwise approved by the EPA:	See below	**Compliant - ongoing**
7	F	Landfill operation requirements	(a) The active landfilling face must not exceed 420 m2 in plan area at any time.	Section 6.7.2 - Waste deposition on page 37 states that the active landfilling (uncovered) face will not exceed 420 m2 in plan area at any time. The active landfilling face will be bunded to prevent run-off and run-on of stormwater/leachate from the exposed waste. **STANDARD OPERATING PROCEDURE (SOP) – SOP-BDR012 Daily Landfill Procedures**	**Compliant - ongoing**

Schedule	Condition No.	Name of clause	Condition	Comments / Evidence	Compliance
7	F	Landfill operation requirements	(b) The daily cover must be placed on the active landfill area to a minimum thickness of 150mm. The area of landfilled waste with daily cover should not exceed 1ha.	Section 6.10 - Daily and intermediate cover on page 38 details that the daily cover will be placed on the active landfill area to a minimum thickness of 150 mm. The area of landfilled waste with daily cover should not exceed 1 ha. **STANDARD OPERATING PROCEDURE (SOP) – SOP-BDR012 Daily Landfill Procedures**	**Compliant - ongoing**
7	F	Landfill operation requirements	(c) The active cell must be covered with intermediate cover of clay rich soil, to a minimum thickness of 300mm should it not be landfilled within 90 days of placement of daily cover.	Section 6.10 - Daily and intermediate cover on page 38 details that the active cell will be covered with intermediate cover of clay rich soil, to a minimum thickness of 300 mm should it not be landfilled within 90 days of placement of daily cover. **STANDARD OPERATING PROCEDURE (SOP) – SOP-BDR012 Daily Landfill Procedures**	**Compliant - ongoing**
7	F	Landfill operation requirements	(d) The combined area of daily cover and intermediate cover should not exceed 3 ha at any one time, excluding temporary batter slopes and any sub-cell that is undergoing final capping and revegetation, unless otherwise approved by the EPA.	Section 6.10 - Daily and intermediate cover on page 38 details that the combined area of daily cover and intermediate cover will not exceed 3 ha at any one time, excluding temporary batter slopes and any sub-cell that is undergoing final capping and revegetation, unless otherwise approved by the EPA. **STANDARD OPERATING PROCEDURE (SOP) – SOP-BDR012 Daily Landfill Procedures**	**Compliant - ongoing**
7	F	Landfill operation requirements	(e) Batter slopes must be covered with intermediate cover where exposed for more than 90 days. The final capping and revegetation works of any subcell should be completed within 3 months of all of the landfilled waste in that subcell reaching the approved final landform, unless otherwise approved by the EPA.	Section 6.10 - Daily and intermediate cover on page 38 details that the Batter slopes will be covered with intermediate cover where exposed for more than 90 days. Section 6.11 - Final capping and revegetation on page 38 details that the final capping and revegetation works of any sub cell should be completed within 3 months of all of the landfilled waste in that sub cell reaching the approved final landform, unless otherwise approved by the EPA. However, it is noted that the Proponent has advised that the filling in sub cells 1A and 1B will not reach the approved final landform during Stage 1. Accordingly, the final capping layer will not be implemented during Stage 1. **STANDARD OPERATING PROCEDURE (SOP) – SOP-BDR012 Daily Landfill Procedures**	**Compliant - ongoing**
7	F	Landfill operation requirements	(f) The cell must be progressively capped with the final capping profile as per condition D(a-f) of Schedule 7.	Section 6.11 - Final capping and revegetation on page 38 details that the landfill will be progressively capped and rehabilitated as filling reaches the proposed final landform. This will involve placing an engineered final capping layer over each landfilled area as it is completed, and revegetating the final cap as per Figure 2.20 and Table 2.4 of the Further Modified Preferred Project Report (FMPPR). **STANDARD OPERATING PROCEDURE (SOP) – SOP-BDR012 Daily Landfill Procedures**	**Compliant - ongoing**
7	F	Landfill operation requirements	(g) The active landfilling faces must be bunded to prevent run-off and run-on of stormwater/leachate from the exposed waste.	Section 6.7.2 - Waste deposition on page 37 states that the active landfilling face will be bunded to prevent runoff and run-on of stormwater/leachate from the exposed waste.	**Compliant - ongoing**
7	F	Landfill operation requirements	(h) Collect and extract stormwater runoff from daily and intermediate covered areas and discharge this water as stormwater subject to testing and compliance with the specifications in the EPL.	Section 5.2 - Soil and water management principles on page 21 refers to ensuring all surface water run-off from disturbed areas of the site is managed prior to reuse or discharge off site, by utilising the indicated sediment control measures.	**Compliant - ongoing**

Schedule	Condition No.	Name of clause	Condition	Comments / Evidence	Compliance
7	F	Landfill operation requirements	(i) All leachate drainage and capping drainage material must achieve a permeability of greater than 1x10-3 m/sec and comprise non calcareous granular material.	Section 7.3.2 - Containment on page 31 details that the leachate drainage aggregate: A 0.3 m thick aggregate layer will be installed to collect and convey leachate for eventual disposal. The aggregate will consist of non-calcareous material and have a permeability of greater than 1 x 10-3 m/s and meet the requirements of the landfill guidelines. No reference to capping material in the SWLMP. LEMP Section 5.5.3 on page 26 details that the compacted clay layer will comprise of 0.9 m thick re-compacted clay with a maximum permeability of 1 x 10-9 m/s. The compacted clay layer will extend up the sidewall by a minimum of 2 m to facilitate leachate collection and to key into the sidewall liner system and the leachate drainage aggregate would consist of a 0.3 m thick aggregate layer will be installed to collect and convey leachate for eventual disposal. The aggregate will consist of non-calcareous material and have a permeability of greater than 1 x 10-3 m/s and meet the requirements of the landfill guidelines.	**Compliant - ongoing**
7	F	Landfill operation requirements	(j) The leachate head is to be monitored as part of the monitoring program.	A suitably qualified consultant has been engaged to undertake the regular monitoring (quarterly)	**Compliant - ongoing**
7	F	Landfill operation requirements	(k) The leachate head on the liner system should not exceed 300mm above the cell	SWLMP Section 7.3.3 - Collection and extraction on page 32 details that a vertical leachate riser arrangement will be installed to extract leachate from the sump in Cell 1. The riser will be linked to the leachate pond via a leachate line connected to a pump within the riser, with level switches to control the pumping and maintain the maximum leachate head over the leachate barrier system. The system will be designed to extract leachate in accordance with the landfill guidelines and the FMPPR, specifically: • To maintain a maximum leachate level of 0.3 m above the leachate barrier system • To maintain a maximum leachate level of 2 m below the inferred groundwater levels to promote the inward flow of groundwater. QOMP figure 7 - Approved site layout on page 19 details the plan and location of leachate controls such as the leachate riser and initial leachate evaporation pond.	**Compliant - ongoing**
7	F	Landfill operation requirements	(l) If the leachate head exceeds 300mm, additional leachate, extraction measures are to be implemented immediately to reduce the leachate head to acceptable level.	1. SWLMP Section 8.6 - Response Plan on page 39 and table 10 on page 40 details the incident response plan and table 10 details the mitigation and response measures. Measures include to extract leachate from cells and transfer to the leachate pond for storage, provided the leachate storage pond's freeboard is not exceeded and to extract stormwater from cell when below grade and manage as either stormwater or leachate depending on water quality.	**Compliant - ongoing**
7	F	Landfill operation requirements	(m) The Leachate Management Plan must include contingency measures in the event of failure or severe storm event or excess leachate volumes greater than the modelled predictions or fugitive leachate emission.	SWLMP Section 8.6 - Response Plan on page 39, 40 and tables 8, 9 and 10 list the potential events requiring a response and the suitable response measures for each event.	**Compliant - ongoing**
7	F	Landfill operation requirements	(n) During site establishment, the material within the dam in the Cell 1 area is to be treated as follows: i. Water is to be tested prior to pumping and appropriately disposed of; ii. Sediment is to be tested, classified and appropriately disposed of; iii. Testing procedures are to be carried out in accordance with EPA procedures and for EPA analyte list.	Section 8.5 - Quarry Void on page 38 details that the Principal will conduct a sampling and testing program for the quarry void water within the Cell 1 area to characterise the quality of the water as well as any settled sediment at the base of the void. This will be completed prior to any of the perimeter bunds being disturbed. This is program is described in the Stormwater Dewatering Management Plan (Niche Environment and Heritage, 2016), refer Appendix G. Quarry / void dewatering monitoring was undertaken and wet weather monitoring is undertaken	**Compliant - ongoing**

Schedule	Condition No.	Name of clause	Condition	Comments / Evidence	Compliance
7	G	Waste inspection procedures	1. Detailed waste screening procedures for all waste received at the site and all waste extracted from bund walls are to be prepared and implemented to ensure that all waste meets the classification of general solid (non-putrescible) or special waste for asbestos recovered from the on-site bunds. The procedures must include:	See below and • ONE PAGE LESSON (OPL) – OPL-BDR002 EPA Waste Classifications • STANDARD OPERATING PROCEDURE (SOP) – SOP-BDR001 Asbestos at Recycling Centres • STANDARD OPERATING PROCEDURE (SOP) – SOP-BDR004 Management of Outbound Materials for Disposal, Recycling or Re-use • STANDARD OPERATING PROCEDURE (SOP) – SOP-BDR005 Weighbridge Operation and Maintenance • STANDARD OPERATING PROCEDURE (SOP) – SOP-BDR007 Visual Inspection and Management of Non-Conforming Waste • STANDARD OPERATING PROCEDURE (SOP) – SOP-BDR011 Process for Non-Conforming Waste	**Compliant - ongoing**
7	G	Waste inspection procedures	(a) Visual inspection of all received waste;	• STANDARD OPERATING PROCEDURE (SOP) – SOP-BDR007 Visual Inspection and Management of Non-Conforming Waste • The operation of the weighbridge waste receival process (including load rejection process) and Weighbridge database operation was verified during the pre-operation audit in June 2019	**Compliant - ongoing**
7	G	Waste inspection procedures	(b) All staff members that monitor the site entrance shall be trained in the identification and classification of solid waste. Vehicles with unacceptable loads of waste will be refused entry to the site;	**ONE PAGE LESSON (OPL) – OPL-BDR002 EPA Waste Classifications** All materials accepted at the site for disposal or recovery are inspected and identified by site staff at the site entrance. All staff involved in acceptance of waste at the site entrance or in the relevant operational areas are appropriately trained in the identification and classification of solid waste.	**Compliant - ongoing**
7	G	Waste inspection procedures	(c) Require documentation for all soils received from the site to confirm their origin;	LEMP Section 6.5 - waste screening program page 35 requires documentation for all soils received from the site to confirm their origin	**Compliant - ongoing**
7	G	Waste inspection procedures	(d) Random sampling and testing of soils to confirm that they meet the classification of general solid (non-putrescible) waste;	Random sampling and testing of soils is undertaken to confirm that they meet the classification of general solid (non-putrescible) waste	**Compliant - ongoing**
7	G	Waste inspection procedures	(e) Prominent signage at the entrance to the landfill defining acceptable wastes and directing users to contact the gate person for information regarding disposal of other wastes;	Prominent signage is installed at the entrance to the site which defines acceptable wastes and directing users to contact the gate person for information regarding disposal of other wastes	**Compliant - ongoing**
7	G	Waste inspection procedures	(f) Random daily inspection of vehicles entering the landfill. All vehicles suspected of containing unacceptable waste will be refused permission to deposit waste until the waste is verified as being acceptable. Staff shall require and collect appropriate evidence from the driver of the vehicle, e.g. test certificate, approvals, etc, as appropriate, as verification that the waste is acceptable;	Random daily inspection of vehicles entering the landfill is undertaken. All vehicles suspected of containing unacceptable waste are refused permission to deposit waste until the waste is verified as being acceptable. Site staff collect the appropriate evidence from the driver of the vehicle, e.g. test certificate, approvals, as appropriate, as verification that the waste is acceptable.	**Compliant - ongoing**
7	G	Waste inspection procedures	(g) Directing vehicles with unacceptable wastes to an appropriate disposal facility;	Vehicles with unacceptable wastes are directed to an appropriate disposal facility.	**Compliant - ongoing**
7	G	Waste inspection procedures	(h) Random monitoring and inspection of wastes as they are discharged from vehicles at the waste disposal areas by site personnel. All waste suspected of being unacceptable will be segregated and checked as to its acceptability, e.g. by detailed inspection and/or testing, as deemed appropriate by site staff;	Random monitoring and inspection of wastes is undertaken by site personnel.as waste is discharged from vehicles at the waste disposal areas. All waste suspected of being unacceptable is segregated and checked as to its acceptability, e.g. by detailed inspection and/or testing, as deemed appropriate by site staff	**Compliant - ongoing**
7	G	Waste inspection procedures	(i) Monitoring of the deposited waste during spreading, compaction and covering at the landfill or stockpiling at the site. All waste suspected of being unacceptable will be segregated and checked to determine its acceptability e.g. by detailed inspection and/or testing, as deemed appropriate by site staff; and	Monitoring of the deposited waste is undertaken by site staff during spreading, compaction and covering at the landfill or stockpiling at the site. All waste suspected of being unacceptable is segregated and checked to determine its acceptability e.g. by detailed inspection and/or testing, as deemed appropriate by site staff.	**Compliant - ongoing**

Schedule	Condition No.	Name of clause	Condition	Comments / Evidence	Compliance
7	G	Waste inspection procedures	(j) Recording of all incidences of identification of unacceptable wastes in the site's daily log. The record will include: i. Details of the waste e.g. type; ii. Source of the waste e.g. vehicle identification, driver identification and generator of the waste; iii. Recommended waste management facility(s); iv. Result(s) of contacting the waste management facility; and v. Date contacting the EPA.	All incidences of identification of unacceptable wastes is recorded in the site's daily log. Records will include: • Details of the waste e.g. type • Source of the waste e.g. vehicle identification, driver identification and generator of the waste • Recommended waste management facility(s) • Result(s) of contacting the waste management facility • Date contacted EPA (if required).	**Compliant - ongoing**
7	G	Waste inspection procedures	(k) In the event that unacceptable waste is identified in an incoming vehicle, the vehicle will be refused entry, re-directed, and details of the incident recorded as described above. Site personnel will advise the driver of the vehicle of appropriate waste management facilities, or to contact the EPA for advice on appropriate management of the unacceptable waste;	In the event that unacceptable waste is identified in an incoming vehicle, the vehicle is refused entry, re-directed, and details of the incident recorded as described above. Site personnel advise the driver of the vehicle of appropriate waste management facilities, or to contact the EPA for advice on appropriate management of the unacceptable waste.	**Compliant - ongoing**
7	G	Waste inspection procedures	(l) In the event that unacceptable waste is identified during deposition by a vehicle, staff will immediately segregate and contain the waste away from the active landfilling area or recycling & re-processing area. Site personnel will record the details of the waste, such as type, the source, and the vehicle and driver identification. Site personnel will advise the driver of the vehicle that the waste is not acceptable and may load the waste back onto the vehicle where practical and safe to do so. The vehicle will then be escorted from the landfill by Site personnel. Site personnel will advise the driver of the vehicle to contact the EPA for advice on the appropriate management of the unacceptable waste	In the event that unacceptable waste is identified during deposition by a vehicle, staff immediately segregate and contain the waste away from the active landfilling area or recycling & re-processing area. Site personnel record the details of the waste, such as type, the source, and the vehicle and driver identification. Site personnel advise the driver of the vehicle that the waste is not acceptable and may load the waste back onto the vehicle where practical and safe to do so. The vehicle is then escorted from the landfill by site personnel. Site personnel advise the driver of the vehicle to contact the EPA for advice on the appropriate management of the unacceptable waste.	**Compliant - ongoing**
7	G	Waste inspection procedures	(m) In the event that unacceptable waste is identified during the spreading and compaction of deposited waste or stockpiling at the site, site personnel will segregate and contain the waste away from the active waste disposal or recycling & re-processing areas. Site personnel will make all practical efforts to identify the source of the waste, including: i. Inspecting the waste for possible identification labels on containers; and ii. ii. Identifying the type of waste and consequently the possible sources	In the event that unacceptable waste is identified during the spreading and compaction of deposited waste or stockpiling at the site, site personnel segregate and contain the waste away from the active waste disposal or recycling & re-processing areas. Site personnel make all practical efforts to identify the source of the waste, including: • Inspecting the waste for possible identification labels on containers • Identifying the type of waste and consequently the possible sources.	**Compliant - ongoing**
7	G	Waste inspection procedures	(n) Site personnel will contact the EPA to confirm appropriate management options and will document the final disposition of the unacceptable waste in accordance with the EPA's requirements.	SOPs address non-conforming waste and unexpected finds except in some instances where if required, site personnel would contact the EPA to confirm appropriate management options and will document the final disposition of the unacceptable waste in accordance with the EPA's requirements. There have been no instances requiring the site to contact EPA to date	**Compliant - ongoing**
7	G	Waste inspection procedures	(o) In the case of asbestos and other waste contained in the bund walls a screening procedure must be developed based on information contained in the Preliminary In-Situ Waste Classification dated September 2009 to identify the procedures for ensuring all extracted waste from the bunds is appropriately classified and managed. This procedure should be implemented before waste activities commence at the site.	For asbestos and other waste contained in the bund walls, a screening procedure has been developed based on information contained in the Douglas Partners' Preliminary In-Situ Waste Classification (2009) to identify the procedures for ensuring all extracted waste from the bunds is appropriately classified and managed. This procedure has been implemented and is described in the Asbestos and Contamination Management Plan.	**Compliant - ongoing**
7	H	Surface water and groundwater management	1. A minimum total of seven groundwater observation bores will be drilled around the perimeter of the facility as part of the site establishment works. Bore construction will be in accordance with EPA requirements and sampling will be carried out in accordance with monitoring plan in the LEMP and in accordance with the EPL.	Groundwater and landfill gas are currently monitored in the following boreholes: BH3 (LDP4) BH10A (LDP9) BH12B (LDP14) BH5 (LDP5) BH10B (LDP10) BH13A (LDP15) BH6 (LDP6) BH11A (LDP11) BH13B (LDP16) BH9A (LDP7) BH11B (LDP12) BH14A (LDP17) BH9B (LDP8) BH12A (LDP13) BH14B (LDP18)	**Compliant - ongoing**

Schedule	Condition No.	Name of clause	Condition	Comments / Evidence	Compliance
7	H	Surface water and groundwater management	2. Prior to commencement of waste emplacement the groundwater will be sampled and monitored for an EPA approved analyte list using the bores to establish background conditions in surface water and groundwater.	Baseline groundwater monitoring was undertaken and samples analysed in accordance with the SWLMP	Compliant - ongoing
7	H	Surface water and groundwater management	3. Groundwater will be sampled and monitored throughout the operation of the facility and post closure for as long as deemed necessary by the EPA and at intervals specified by the EPA.	As per 7H(1) above - quarterly monitoring is currently undertaken	Compliant - ongoing
7	H	Surface water and groundwater management	4. Stormwater runoff from intermediate cover areas (minimum 300mm thick) and bunded areas of the cell floor will be isolated from contact with the waste and will be collected and pumped from the landfill area and treated as stormwater in the stormwater management system.	Surface water runoff from intermediate cover areas and bunded areas of the cell floor is being isolated from contacting waste and is being collected and pumped from the landfill area. It is being treated as stormwater in the surface water management system.	Compliant - ongoing
7	H	Surface water and groundwater management	5. Surface water runoff and leachate must be kept separate at all times. To ensure this occurs the applicant is to ensure the control and mitigation measures referred to in the surface water report of GSS are to be incorporated into the design and implemented during each stage/phase/cell of the development, including but not limited to: a. Construct sedimentation dams for sediment-laden runoff. b. The surface water management system is to include measures to treat run off to where required to reach acceptable discharge under the EPL, according to guidelines from Managing Urban Stormwater - Soils and Construction Manual (DECC 2004) and EPA requirements. c. Re-use water from sedimentation dams for dust suppression and revegetation. d. Water discharged from site via a licensed discharge point where its quality is monitored. e. Temporary erosion and sediment control measures to be installed during construction. f. Clean runoff must be directed away from disturbed areas. g. Maintenance of sediment control structures. h. Contingency procedures for breaches and cross-contamination between stormwater and leachate.	Surface water from Cell 1 that has not come into contact with waste (other than virgin excavated natural material (VENM) and approved cover materials) drains to the temporary Cell 1 stormwater storage areas for primary treatment and reuse. Excess surface water is pumped from the cell for further treatment before discharge off site. The active landfilling faces are bunded to prevent run-off and run-on of stormwater/ leachate from the exposed waste. The internal faces of the bunds surrounding cells 1, 2 and 3 drain to a series of drains, swales and pipes to Dams 4A, 3A, 2A and 2 (to the north west), and Dam 6 to the south east.	Compliant - ongoing
7	H	Surface water and groundwater management	6. Only stormwater is to be reused onsite for dust suppression and revegetation, with excess stormwater managed and treated where required for monitored licensed discharge.	Water from the sediment dams is reused on site where possible for operational purposes (such as dust suppression) and in accordance with the SWLMP. Water that is not re-used transferred to external dams beyond the bunds and discharged if above the design rainfall event or otherwise once testing for appropriate water quality has been undertaken. All wet water discharges are sampled to ensure compliance with the limits	Compliant - ongoing
7	H	Surface water and groundwater management	7. The Stormwater Soil, Water and Leachate Management Plan must identify the location of licensed discharge points for stormwater, and monitoring parameters and frequency of monitoring.	The plan was updated to include these requirements and the plan was approved by DPIE in July 2019	Compliant
7	H	Surface water and groundwater management	8. The stormwater system must be designed in accordance with the Managing Urban Stormwater – Soils and Construction Manual (the “Blue Book”) – DECC, 2004.	The stormwater management system was designed in accordance with Volume 2B of the Blue Book. This is stated within the SWLMP which was approved by DPIE in July 2019	Compliant - ongoing
7	H	Surface water and groundwater management	9. Monitoring requirements for surface water and groundwater (parameters and frequency) must be included in the Plan.	A number of groundwater piezometers have been installed around the site to provide initial monitoring points during site establishment. Further piezometers were installed during site establishment works when access to monitoring locations for piezometer was available. A groundwater monitoring programme has been implemented and monitoring is undertaken in accordance with the EPL and the SWLMP	Compliant - ongoing

Schedule	Condition No.	Name of clause	Condition	Comments / Evidence	Compliance
7	**I**	Monitoring	1. All groundwater piezometers must be installed around the site as per Annexure 5 in Appendix 1 contained the Cell Design and Groundwater Assessment (Aquaterra 2010). These piezometers must be installed and appropriately sampled during site establishment, and before any waste is received at the site, to determine background groundwater characteristics (groundwater quality and groundwater flow conditions).	Groundwater piezometers have been installed as per Annexure 5 BH3 (LDP4) BH10A (LDP9) BH12B (LDP14) BH5 (LDP5) BH10B (LDP10) BH13A (LDP15) BH6 (LDP6) BH11A (LDP11) BH13B (LDP16) BH9A (LDP7) BH11B (LDP12) BH14A (LDP17) BH9B (LDP8) BH12A (LDP13) BH14B (LDP18)	**Compliant - ongoing**
7	**I**	Monitoring	2. The piezometers must be sampled during the detailed engineering design and site establishment phases to identify and confirm background groundwater characteristics and clarify the connectivity between groundwater and the creek	A number of groundwater piezometers have been installed around the site to provide initial monitoring points during site establishment. Further piezometers were installed during site establishment works when access to monitoring locations for piezometer was available. A groundwater monitoring programme has been implemented and monitoring is undertaken in accordance with the EPL and the SWLMP. Site Inspection 27 June 2019 by the Groundwater / Surface Water Specialist observed that all required groundwater monitoring bores had been installed.	**Compliant - ongoing**
7	**I**	Monitoring	3. The operator must engage an independent party (or parties) to monitor the following during the life of the project in accordance with the LEMP and the EPL: a. Groundwater levels and quality b. Leachate levels in cells and quality; c. Leachate levels in dams and quality; d. Surface water quality at offsite discharge point; e. Cover and capping operations on waste cells; f. Background groundwater characteristics; and g. Clarify the connectivity between the groundwater and Blaxland Creek.	Independent consultants (GHD and Aquatic Environmental Solutions) have been engaged to monitor groundwater, leachate, surface water in accordance with the SWLMP.	**Compliant - ongoing**
7	**I**	Monitoring	4. Leachate modelling must be validated through independent assessment and monitoring of leachate flows, levels and volumes in leachate storage ponds.	Leachate monitoring is ongoing. Landfilling commenced but has been intermittent during the reporting period. Once a suitable quantity of data is collected the leachate model will be validated in 2021.	**Not triggered**
7	**I**	Monitoring	5. If validation assessment of the leachate model indicates excess leachate storage is required then potential contingency arrangements must be developed and implemented to the satisfaction of the EPA. If directed by the EPA, further waste receipt must be suspended until the EPA is satisfied with the arrangements.	As per 7H(1) above - quarterly monitoring is currently undertaken	**Not triggered**
7	**I**	Monitoring	6. Results of leachate validation assessment compared to the model provisions must be provided to the EPA upon request.	Leachate monitoring is currently ongoing. Landfilling commenced but has been intermittent during the reporting period. Once a suitable quantity of data is collected the leachate model will be validated when requirement is triggered.	**Not triggered**
7	**J**	Construction Quality Assurance Plan	1. A Construction Quality Assurance Plan (CQA) must be prepared and implemented for the entire site, including development works, cell construction, stormwater and leachate management measures, capping and post closure rehabilitation.	A CQA Plan was prepared by GHD dated September 2016 for the development works, cell construction, stormwater and leachate management measures, capping and post closure rehabilitation. A QA Report "SRC Operations Pty Ltd - Patons Lane Resource Recovery Centre - Construction Quality Assurance Report Cell 1A-1 and Initial Leachate Pond " was prepared by GHD, dated July 2019.	**Compliant**
7	**J**	Construction Quality Assurance Plan	2. The CQA plan must include provisions for the following in accordance with the POEO Act:	The CQA Plan includes provisions for the following in accordance with the POEO Act:	**Compliant**
7	**J**	Construction Quality Assurance Plan	a. Sources of construction material;	Sections 3 discusses sources of construction material;	**Compliant**

Schedule	Condition No.	Name of clause	Condition	Comments / Evidence	Compliance
7	J	Construction Quality Assurance Plan	b. Testing of construction materials;	Construction quality control testing and independent conformance testing sections for each material;	Compliant
7	J	Construction Quality Assurance Plan	c. Inspection and testing procedures for constructed cell liners (basal and side);	Section 4 addresses inspection and testing procedures for constructed cell liners (basal and side);	Compliant
7	J	Construction Quality Assurance Plan	d. Construction methodology for compacting clays, including number of lifts and moisture conditioning for each cell;	Section 4 addresses construction methodology for compacting clays, number of lifts and moisture conditioning for each cell;	Compliant
7	J	Construction Quality Assurance Plan	e. Inspection and testing procedures for HDPE and geomembrane liners;	Section 8 addresses inspection and testing procedures for HDPE and geomembrane liners;	Compliant
7	J	Construction Quality Assurance Plan	f. Rectification of non-conforming components;	Section 2.9 addresses rectification of non- conforming components;	Compliant
7	J	Construction Quality Assurance Plan	g. Certification / sign off by suitably qualified assessor on the completion of each of the specified works;	Section 2.4.4 and 14.13 address certification/sign off by qualified assessor on completion of each specified works;	Compliant
7	J	Construction Quality Assurance Plan	h. An independent certification report must be prepared to confirm that each of the specified works were completed as required and in accordance with the CQA plan and any EPL conditions. This report is to be submitted to the EPA at the completion of each of the specified works;	Section 124.13 addresses independent certification reporting to confirm each of the specified works were completed as required and in accordance with the CQA plan and any EPL conditions;	Compliant
7	J	Construction Quality Assurance Plan	i. The CQA plan must be included in the LEMP;	The CQA Plan is referenced in the LEMP and forms part of the LEMP;	Compliant
7	J	Construction Quality Assurance Plan	j. Contingency measures in the event of failure or sever storm event or fugitive leachate emission; and	Contingency measures are addressed in the SWLMP; and	Compliant
7	J	Construction Quality Assurance Plan	k. Leachate modelling for the Project must be provided to confirm the efficacy/adequacy of the proposed final leachate management and surface water management design and incorporated into the SWLMP.	Leachate modelling of the proposed final leachate management and surface water management design will be incorporated into the SWLMP.	Compliant
7	K	Rehabilitation and Post Closure Management	1. The cap design must include a drainage layer.	Future requirement	Not triggered
7	K	Rehabilitation and Post Closure Management	2. Appropriate vegetation must be properly established on site and cap.	Future requirement	Not triggered
7	K	Rehabilitation and Post Closure Management	3. Erosion must be controlled and managed.	Future requirement	Not triggered
7	K	Rehabilitation and Post Closure Management	4. Surface water runoff must meet discharge water quality requirements as specified in the surface water assessment dated February 2010 prepared by GSS Environmental and the EPL.	Future requirement	Not triggered
7	K	Rehabilitation and Post Closure Management	5. Surface water and testing must be incorporated into the monitoring plan of management.	Future requirement	Not triggered
7	K	Rehabilitation and Post Closure Management	6. The final landform height and profile is not to exceed the height and shape specified in Figure 2.20 of the FMPPR.	Future requirement	Not triggered

Schedule	Condition No.	Name of clause	Condition	Comments / Evidence	Compliance
7	K	Rehabilitation and Post Closure Management	7. In order to ensure there is no need to increase the height of the landform, any settlement areas that may result in ponding of surface water will need to be backfilled and this process will continue until the EPA determines that the facility is stable and does not represent a risk to human health or the environment. The following actions must be undertaken: a. Regular maintenance of slopes through backfilling and revegetation of settled areas to prevent ponding of water and facilitate runoff; and b. All backfilling activities are to be undertaken with subsoil of the same composition as proposed subsoil (on site clays) referred to the in the cap profile.	Future requirement	**Not triggered**
7	K	Rehabilitation and Post Closure Management	8. Regular inspection and reporting by an independent, suitably qualified assessor, on an annual basis to assess the integrity of the cap, the grade and the existence of differential settlement areas where ponding could occur.	Future requirement	**Not triggered**
7	K	Rehabilitation and Post Closure Management	9. All reports identified above are to be provided to the EPA and relevant certifying bodies within four weeks of the inspection date. Reports are also to be made publicly.	Future requirement	**Not triggered**
7	K	Rehabilitation and Post Closure Management	10. Monitoring is to continue until the EPA determines the facility is stable and no longer represents a risk to human health or the environment.	Future requirement	**Not triggered**
8			**SCHEDULE 8 PROJECT SITE BOUNDARY (Referred to in conditions 7 and 8 of Schedule 3)**		
9			**SCHEDULE 9 – MANAGEMENT METHODS, PROCEDURES AND SPECIFIC NOISE MITIGATION MEASURES (EX DD IN APPEAL NO 10928 OF 2010)**		
9	a	Noise	The waste recycling and re-processing facility must be sited on the project site at the furthest distance from residences, as shown in Appendix A to the Updated Consolidated Acoustic Report;	The Site Establishment Noise Management Plan Section 5 – Noise and Vibration Mitigation Methods details the specific responses to Schedule 9. The Site Establishment Noise Management Plan was approved by the DP&E on 9 August 2017. The site inspection undertaken on 21 June 2019 confirmed the location of the Resource Recovery Area is located within a sound bund, in accordance with Schedule 9 Condition a).	**Compliant**
9	b	Noise	Earth mounding must be used on the northern, eastern and southern boundaries of the site, as shown in Appendix A to the Updated Consolidated Acoustic Report, during the periods when operations within the site require them;	The site inspection undertaken on 21 June 2019 confirmed the location of the Resource Recovery Area is located within a sound bund, in accordance with Schedule 9 Condition a).	**Compliant**
9	c	Noise	Earth mounds must be provided within the site at the Central and Southern locations at specified times, as shown in Appendix A to the Updated Consolidated Acoustic Report;	The site inspection undertaken on 21 June 2019 confirmed the location of the Resource Recovery Area is located within a sound bund, in accordance with Schedule 9 Condition a).	**Compliant**
9	d	Noise	Acoustic mounding must be used to enclose the waste recycling and re-processing cell;	The site inspection undertaken on 21 June 2019 confirmed the location of the Resource Recovery Area is located within a sound bund, in accordance with Schedule 9 Condition a).	**Compliant**
9	e	Noise	The fixed recycling and re-processing equipment must be housed within acoustic enclosures;	The Site Inspection undertaken on the 21 June 2019 confirmed that the location of the Resource Recovery Area was within a sound bund, in accordance with Schedule 9 Condition e).	**Compliant**
9	f	Noise	During the construction phase, 4m-high mobile acoustic barriers must be deployed on the external perimeter of both the northern and eastern faces, and will be relocated on the outer surface of those faces to acoustically screen the works as required;	Construction is now complete	**Compliant**
9	g	Noise	Acoustic treatment must be applied to selected mobile earthmoving and other equipment to be used on site, to achieve the specified noise criteria shown in Table 5.2 in the Updated Consolidated Acoustic Report;	Construction is now complete. Acoustic testing undertaken by Wilkinson Murray confirmed compliance with Schedule 9 Condition 1.	**Compliant**

Schedule	Condition No.	Name of clause	Condition	Comments / Evidence	Compliance
9	**h**	Noise	Acoustic screening must be used for clay/shale loading operations, specifically in Cell 3, through strategic placement of 4m-high barriers in an east-west orientation across the active stockpile area, so as to always acoustically screen earthmoving equipment during loading operations;	Future requirement - Cell 3 is not due for construction still Stage 3 of the project	**Not triggered**
9	**i**	Noise	No operational equipment having a sound power level greater than 106 dBA (unshielded) or 111 dBA (shielded) will be located on top of stockpiles;	Noise testing of the plant working on top of the stockpiles was previously undertaken. On completion of construction monitoring this was no longer required on a routine basis	**Compliant**
9	**j**	Noise	No bobcats, front end loaders or bulldozers will be located on top of the stockpiles around the processing plant, other than during construction stage.	No bobcats, front end loaders or bulldozers are located on top of the stockpiles around the processing plant, in accordance with the ONMP	**Compliant - ongoing**
9	**k**	Noise	The following procedure for determining and verifying the location of "moveable"/"temporary fixed" barriers, and of any work conducted behind them, should be implemented: i. marking off an area behind the new barriers at which the RL of the ground is no more than 1m higher than that at the base of the barrier, (or lower at greater distances behind), in general accordance with Appendix A to the Updated Consolidated Acoustic Report, and within which there is no line of sight to any residence to the side of the barrier. The permitted work area must be marked off with tape, fibreglass poles or similar, to represent the area within which equipment must operate behind the barrier; and ii. an acoustic engineer must attend the site to formally verify the location of the barrier and the new working area.	The Site Establishment Noise Management Plan Section 5 – Noise and Vibration Mitigation Methods details the specific responses to Schedule 9. The Site Establishment Noise Management Plan was approved by the DP&E on 9 August 2017. The Operation Noise Management Plan provides details of the noise management processes to be implemented to meet the requirements of Schedule 9 Condition k. There have been no noise complaints and no exceedances of the noise limits have been identified during the attended and unattended noise monitoring	**Compliant - ongoing**
9	**l**	Noise	No work will be conducted outside the site's perimeter bunds or the temporary fixed barriers during the above process, except that work required to actually move the barriers.	The Site Establishment Noise Management Plan Section 5 – Noise and Vibration Mitigation Methods details the specific responses to Schedule 9. The Site Establishment Noise Management Plan was approved by the DP&E on 9 August 2017. The Operation Noise Management Plan provides details of the noise management processes to be implemented to meet the requirements of Schedule 9 Condition k. There have been no noise complaints and no exceedances of the noise limits have been identified during the attended and unattended noise monitoring	**Compliant - ongoing**
9	**m**	Noise	Earth mounds are to be used to shield equipment working close to the top of the final landform to control noise from this equipment.	Future requirement	**Not triggered**
9	**n**	Noise	The procedure for removing a bund to provide the final landform for the project must involve: i. initial removal of the top of the bund from behind (south) using a long-reach excavator; and ii. final shaping of the landform using a bobcat, with a sound power level not exceeding 106 dBA.	Future requirement	**Not triggered**
9	**o**	Noise	No work will be conducted outside the shielded areas of the site during the process referred to in (n) above.	Future requirement	**Not triggered**
9	**p**	Noise	The Proponent shall undertake real time continuous noise monitoring, and separately, an ongoing attended noise monitoring program, for the operational life of the project, to be documented in the Site Establishment Noise Management Plan (identified at Condition 26) and Operation Noise Management Plan (identified at Condition 27).	A noise monitoring programme attended and unattended (continuous) noise monitoring is undertaken by Wilkinson Murray and monthly reports are uploaded to the project website.	**Compliant - ongoing**
9	**q**	Noise	The Proponent shall submit a summary report of the real time monitoring results to Council and the OEH, which documents all non-compliances with Table 7, and any rectification works or modification of work practices undertaken to obtain compliance: • at 3-month intervals during Site Establishment and the first two years of operation; and • thereafter, on a six-monthly basis.	A noise monitoring programme of attended and unattended (continuous) noise monitoring is undertaken by Wilkinson Murray and monthly reports are uploaded to the project website. These reports have not been submitted to Council as required by this Condition. It is noted that Council participates in the Community Consultation Committee and is aware that these reports are available to the public on the PLRRC website and the Bingo website	**Not compliant**

Schedule	Condition No.	Name of clause	Condition	Comments / Evidence	Compliance
				To date there have been no exceedances of noise limits due to construction or operation of the site.	
9	**r**	Noise	The ongoing attended noise monitoring program must include environmental noise monitoring of the Project site's total noise emissions including fixed plant and mobile earthmoving equipment auditing, and identify whether fixed plant earthmoving equipment noise levels exceed the sound power levels in Table 5.2 contained in the Updated Consolidated Acoustic Report.	A noise monitoring programme attended and unattended (continuous) noise monitoring is undertaken by Wilkinson Murray and monthly reports are uploaded to the project website. To date there have been no exceedances of noise limits due to construction or operation of the site.	**Compliant - ongoing**
9	**s**	Noise	The real time continuous noise monitoring data must be made available to the Council within 14 days of the Council requesting access to that data.	A noise monitoring programme attended and unattended (continuous) noise monitoring is undertaken by Wilkinson Murray and monthly reports are uploaded to the project website. To date there have been no exceedances of noise limits due to construction or operation of the site.	**Compliant - ongoing**
10			**SCHEDULE 10 - INTERACTION BETWEEN LANDFILL CELL AND QUARRYING WORK (referred to in condition 6 of Schedule 3)**		

APPENDIX B GROUNDWATER MONITORING DATA

Sampled 27 and 28-Nov-19
Obtained 5 and 9-Dec-19
Published

Licensee: SRC Operations Pty Ltd
EPL: 20814

Sampling Point	EPA ID #	Monitoring Frequency	Pollutant	Prefix	Measurement	Limit	Unit	Exceedance (Y/N)	Comments
BH3	4	Quarterly	Ammonia (as N)		1.8	N/A	mg/L	N	
		Quarterly	Bicarbonate Alkalinity (as CaCO3)		910	N/A	mg/L	N	
		Quarterly	Calcium		340	N/A	mg/L	N	
		Quarterly	Carbonate Alkalinity (as CaCO3)	<	10	N/A	mg/L	N	
		Quarterly	Chloride		9200	N/A	mg/L	N	
		Quarterly	Hydroxide Alkalinity (as CaCO3)	<	20	N/A	mg/L	N	
		Quarterly	Magnesium		690	N/A	mg/L	N	
		Quarterly	Nitrate & Nitrite (as N)	<	0.05	N/A	mg/L	N	
		Quarterly	Nitrate (as N)	<	0.02	N/A	mg/L	N	
		Quarterly	Nitrite (as N)	<	0.02	N/A	mg/L	N	
		Quarterly	Phosphate total (as P)		0.04	N/A	mg/L	N	
		Quarterly	Potassium		37	N/A	mg/L	N	
		Quarterly	Sodium		3900	N/A	mg/L	N	
		Quarterly	Sulphate (as SO4)		280	N/A	mg/L	N	
		Quarterly	Total Alkalinity (as CaCO3)		910	N/A	mg/L	N	
		Quarterly	Total Dissolved Solids		17000	N/A	mg/L	N	
		Quarterly	Total Organic Carbon	<	5	N/A	mg/L	N	
		Quarterly	pH		5.78	N/A	pH	N	
		Quarterly	Redox		-130.3	N/A	mV	N	
		Quarterly	Standing Water Level		30.565	N/A	mAHD	N	
		Quarterly	Temperature		19.8	N/A	℃	N	
BH5	5	Quarterly	Ammonia (as N)		0.47	N/A	mg/L	N	
		Quarterly	Bicarbonate Alkalinity (as CaCO3)		570	N/A	mg/L	N	
		Quarterly	Calcium		120	N/A	mg/L	N	
		Quarterly	Carbonate Alkalinity (as CaCO3)	<	10	N/A	mg/L	N	
		Quarterly	Chloride		2600	N/A	mg/L	N	
		Quarterly	Hydroxide Alkalinity (as CaCO3)	<	20	N/A	mg/L	N	
		Quarterly	Magnesium		170	N/A	mg/L	N	
		Quarterly	Nitrate & Nitrite (as N)	<	0.05	N/A	mg/L	N	
		Quarterly	Nitrate (as N)	<	0.02	N/A	mg/L	N	
		Quarterly	Nitrite (as N)	<	0.02	N/A	mg/L	N	
		Quarterly	Phosphate total (as P)		0.06	N/A	mg/L	N	
		Quarterly	Potassium		7.7	N/A	mg/L	N	
		Quarterly	Sodium		1300	N/A	mg/L	N	
		Quarterly	Sulphate (as SO4)		220	N/A	mg/L	N	
		Quarterly	Total Alkalinity (as CaCO3)		570	N/A	mg/L	N	
		Quarterly	Total Dissolved Solids		4700	N/A	mg/L	N	
		Quarterly	Total Organic Carbon		29	N/A	mg/L	N	
		Quarterly	pH		5.82	N/A	pH	N	
		Quarterly	Redox		9.9	N/A	mV	N	
		Quarterly	Standing Water Level		29.545	N/A	mAHD	N	
		Quarterly	Temperature		18.4	N/A	℃	N	
BH6	6	Quarterly	Ammonia (as N)		0.11	N/A	mg/L	N	
		Quarterly	Bicarbonate Alkalinity (as CaCO3)		110	N/A	mg/L	N	
		Quarterly	Calcium		16	N/A	mg/L	N	
		Quarterly	Carbonate Alkalinity (as CaCO3)	<	10	N/A	mg/L	N	
		Quarterly	Chloride		7300	N/A	mg/L	N	
		Quarterly	Hydroxide Alkalinity (as CaCO3)	<	20	N/A	mg/L	N	
		Quarterly	Magnesium		420	N/A	mg/L	N	
		Quarterly	Nitrate & Nitrite (as N)	<	0.05	N/A	mg/L	N	
		Quarterly	Nitrate (as N)	<	0.02	N/A	mg/L	N	
		Quarterly	Nitrite (as N)	<	0.02	N/A	mg/L	N	
		Quarterly	Phosphate total (as P)		0.72	N/A	mg/L	N	
		Quarterly	Potassium	<	5	N/A	mg/L	N	
		Quarterly	Sodium		3200	N/A	mg/L	N	
		Quarterly	Sulphate (as SO4)		190	N/A	mg/L	N	
		Quarterly	Total Alkalinity (as CaCO3)		110	N/A	mg/L	N	
		Quarterly	Total Dissolved Solids		10000	N/A	mg/L	N	
		Quarterly	Total Organic Carbon		16	N/A	mg/L	N	

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Licensee: SRC Operations Pty Ltd
EPL: 20814

Sampling Point	EPA ID #	Monitoring Frequency	Pollutant	Prefix	Measurement	Limit	Unit	Exceedance (Y/N)	Comments
		Quarterly	pH		4.77	N/A	pH	N	
		Quarterly	Redox		140	N/A	mV	N	
		Quarterly	Standing Water Level		38.7	N/A	mAHD	N	
		Quarterly	Temperature		20	N/A	℃	N	
BH9A	7	Quarterly	Ammonia (as N)		2.2	N/A	mg/L	N	
		Quarterly	Bicarbonate Alkalinity (as CaCO3)		1300	N/A	mg/L	N	
		Quarterly	Calcium		280	N/A	mg/L	N	
		Quarterly	Carbonate Alkalinity (as CaCO3)	<	10	N/A	mg/L	N	
		Quarterly	Chloride		8900	N/A	mg/L	N	
		Quarterly	Hydroxide Alkalinity (as CaCO3)	<	20	N/A	mg/L	N	
		Quarterly	Magnesium		920	N/A	mg/L	N	
		Quarterly	Nitrate & Nitrite (as N)		0.05	N/A	mg/L	N	
		Quarterly	Nitrate (as N)	<	0.02	N/A	mg/L	N	
		Quarterly	Nitrite (as N)		0.05	N/A	mg/L	N	
		Quarterly	Phosphate total (as P)		2.4	N/A	mg/L	N	
		Quarterly	Potassium		33	N/A	mg/L	N	
		Quarterly	Sodium		4000	N/A	mg/L	N	
		Quarterly	Sulphate (as SO4)		1600	N/A	mg/L	N	
		Quarterly	Total Alkalinity (as CaCO3)		1300	N/A	mg/L	N	
		Quarterly	Total Dissolved Solids		14000	N/A	mg/L	N	
		Quarterly	Total Organic Carbon		29	N/A	mg/L	N	
		Quarterly	pH		6.7	N/A	pH	N	
		Quarterly	Redox		-108.1	N/A	mV	N	
		Quarterly	Standing Water Level		44.06	N/A	mAHD	N	
		Quarterly	Temperature		20.3	N/A	℃	N	
BH9B	8	Quarterly	Ammonia (as N)		0.1	N/A	mg/L	N	
		Quarterly	Bicarbonate Alkalinity (as CaCO3)		330	N/A	mg/L	N	
		Quarterly	Calcium		79	N/A	mg/L	N	
		Quarterly	Carbonate Alkalinity (as CaCO3)	<	10	N/A	mg/L	N	
		Quarterly	Chloride		7500	N/A	mg/L	N	
		Quarterly	Hydroxide Alkalinity (as CaCO3)	<	20	N/A	mg/L	N	
		Quarterly	Magnesium		900	N/A	mg/L	N	
		Quarterly	Nitrate & Nitrite (as N)		1	N/A	mg/L	N	
		Quarterly	Nitrate (as N)		0.35	N/A	mg/L	N	
		Quarterly	Nitrite (as N)		0.69	N/A	mg/L	N	
		Quarterly	Phosphate total (as P)		0.77	N/A	mg/L	N	
		Quarterly	Potassium		12	N/A	mg/L	N	
		Quarterly	Sodium		3300	N/A	mg/L	N	
		Quarterly	Sulphate (as SO4)		1200	N/A	mg/L	N	
		Quarterly	Total Alkalinity (as CaCO3)		330	N/A	mg/L	N	
		Quarterly	Total Dissolved Solids		12000	N/A	mg/L	N	
		Quarterly	Total Organic Carbon		9.6	N/A	mg/L	N	
		Quarterly	pH		5.84	N/A	pH	N	
		Quarterly	Redox		-13.7	N/A	mV	N	
		Quarterly	Standing Water Level		49.472	N/A	mAHD	N	
		Quarterly	Temperature		20.7	N/A	℃	N	
BH10A	9	Quarterly	Ammonia (as N)		0.26	N/A	mg/L	N	
		Quarterly	Bicarbonate Alkalinity (as CaCO3)		1100	N/A	mg/L	N	
		Quarterly	Calcium		310	N/A	mg/L	N	
		Quarterly	Carbonate Alkalinity (as CaCO3)	<	10	N/A	mg/L	N	
		Quarterly	Chloride		11000	N/A	mg/L	N	
		Quarterly	Hydroxide Alkalinity (as CaCO3)	<	20	N/A	mg/L	N	
		Quarterly	Magnesium		1100	N/A	mg/L	N	
		Quarterly	Nitrate & Nitrite (as N)	<	0.05	N/A	mg/L	N	
		Quarterly	Nitrate (as N)	<	0.02	N/A	mg/L	N	
		Quarterly	Nitrite (as N)	<	0.02	N/A	mg/L	N	
		Quarterly	Phosphate total (as P)		0.13	N/A	mg/L	N	
		Quarterly	Potassium		32	N/A	mg/L	N	
		Quarterly	Sodium		4400	N/A	mg/L	N	

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Sampling Point	EPA ID #	Monitoring Frequency	Pollutant	Prefix	Measurement	Limit	Unit	Exceedance (Y/N)	Comments
		Quarterly	Sulphate (as SO4)		1200	N/A	mg/L	N	
		Quarterly	Total Alkalinity (as CaCO3)		1100	N/A	mg/L	N	
		Quarterly	Total Dissolved Solids		14000	N/A	mg/L	N	
		Quarterly	Total Organic Carbon		10	N/A	mg/L	N	
		Quarterly	pH		6.53	N/A	pH	N	
		Quarterly	Redox		-7.7	N/A	mV	N	
		Quarterly	Standing Water Level		43.71	N/A	mAHD	N	
		Quarterly	Temperature		19.6	N/A	°C	N	
BH10B	10	Quarterly	Ammonia (as N)		0.23	N/A	mg/L	N	
		Quarterly	Bicarbonate Alkalinity (as CaCO3)		1000	N/A	mg/L	N	
		Quarterly	Calcium		220	N/A	mg/L	N	
		Quarterly	Carbonate Alkalinity (as CaCO3)	<	10	N/A	mg/L	N	
		Quarterly	Chloride		20000	N/A	mg/L	N	
		Quarterly	Hydroxide Alkalinity (as CaCO3)	<	20	N/A	mg/L	N	
		Quarterly	Magnesium		1500	N/A	mg/L	N	
		Quarterly	Nitrate & Nitrite (as N)	<	0.05	N/A	mg/L	N	
		Quarterly	Nitrate (as N)		0.02	N/A	mg/L	N	
		Quarterly	Nitrite (as N)	<	0.02	N/A	mg/L	N	
		Quarterly	Phosphate total (as P)		0.08	N/A	mg/L	N	
		Quarterly	Potassium		50	N/A	mg/L	N	
		Quarterly	Sodium		5000	N/A	mg/L	N	
		Quarterly	Sulphate (as SO4)		2700	N/A	mg/L	N	
		Quarterly	Total Alkalinity (as CaCO3)		1000	N/A	mg/L	N	
		Quarterly	Total Dissolved Solids		19000	N/A	mg/L	N	
		Quarterly	Total Organic Carbon		15	N/A	mg/L	N	
		Quarterly	pH		6.15	N/A	pH	N	
		Quarterly	Redox		24	N/A	mV	N	
		Quarterly	Standing Water Level		44.943	N/A	mAHD	N	
		Quarterly	Temperature		20.7	N/A	°C	N	
BH11A	11	Quarterly	Ammonia (as N)		2.3	N/A	mg/L	N	
		Quarterly	Bicarbonate Alkalinity (as CaCO3)		860	N/A	mg/L	N	
		Quarterly	Calcium		470	N/A	mg/L	N	
		Quarterly	Carbonate Alkalinity (as CaCO3)	<	10	N/A	mg/L	N	
		Quarterly	Chloride		11000	N/A	mg/L	N	
		Quarterly	Hydroxide Alkalinity (as CaCO3)	<	20	N/A	mg/L	N	
		Quarterly	Magnesium		1500	N/A	mg/L	N	
		Quarterly	Nitrate & Nitrite (as N)	<	0.05	N/A	mg/L	N	
		Quarterly	Nitrate (as N)	<	0.02	N/A	mg/L	N	
		Quarterly	Nitrite (as N)	<	0.02	N/A	mg/L	N	
		Quarterly	Phosphate total (as P)		0.07	N/A	mg/L	N	
		Quarterly	Potassium		36	N/A	mg/L	N	
		Quarterly	Sodium		5500	N/A	mg/L	N	
		Quarterly	Sulphate (as SO4)		1700	N/A	mg/L	N	
		Quarterly	Total Alkalinity (as CaCO3)		860	N/A	mg/L	N	
		Quarterly	Total Dissolved Solids		19000	N/A	mg/L	N	
		Quarterly	Total Organic Carbon		9.8	N/A	mg/L	N	
		Quarterly	pH		6.71	N/A	pH	N	
		Quarterly	Redox		-124.5	N/A	mV	N	
		Quarterly	Standing Water Level		35.937	N/A	mAHD	N	
		Quarterly	Temperature		20.5	N/A	°C	N	
BH11B	12	Quarterly	Ammonia (as N)		0.26	N/A	mg/L	N	
		Quarterly	Bicarbonate Alkalinity (as CaCO3)		83	N/A	mg/L	N	
		Quarterly	Calcium		35	N/A	mg/L	N	
		Quarterly	Carbonate Alkalinity (as CaCO3)	<	10	N/A	mg/L	N	
		Quarterly	Chloride		13000	N/A	mg/L	N	
		Quarterly	Hydroxide Alkalinity (as CaCO3)	<	20	N/A	mg/L	N	
		Quarterly	Magnesium		1500	N/A	mg/L	N	
		Quarterly	Nitrate & Nitrite (as N)	<	0.05	N/A	mg/L	N	
		Quarterly	Nitrate (as N)	<	0.02	N/A	mg/L	N	

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		Quarterly	Nitrite (as N)	<	0.02	N/A	mg/L	N	
		Quarterly	Phosphate total (as P)		0.57	N/A	mg/L	N	
		Quarterly	Potassium	<	5	N/A	mg/L	N	
		Quarterly	Sodium		6900	N/A	mg/L	N	
		Quarterly	Sulphate (as SO4)		1800	N/A	mg/L	N	
		Quarterly	Total Alkalinity (as CaCO3)		83	N/A	mg/L	N	
		Quarterly	Total Dissolved Solids		18000	N/A	mg/L	N	
		Quarterly	Total Organic Carbon	<	5	N/A	mg/L	N	
		Quarterly	pH		5.17	N/A	pH	N	
		Quarterly	Redox		71.7	N/A	mV	N	
		Quarterly	Standing Water Level		43.1	N/A	mAHD	N	
		Quarterly	Temperature		20	N/A	℃	N	
BH12A	13	Quarterly	Ammonia (as N)		0.89	N/A	mg/L	N	
		Quarterly	Bicarbonate Alkalinity (as CaCO3)		830	N/A	mg/L	N	
		Quarterly	Calcium		360	N/A	mg/L	N	
		Quarterly	Carbonate Alkalinity (as CaCO3)	<	10	N/A	mg/L	N	
		Quarterly	Chloride		13000	N/A	mg/L	N	
		Quarterly	Hydroxide Alkalinity (as CaCO3)	<	20	N/A	mg/L	N	
		Quarterly	Magnesium		1500	N/A	mg/L	N	
		Quarterly	Nitrate & Nitrite (as N)	<	0.05	N/A	mg/L	N	
		Quarterly	Nitrate (as N)	<	0.02	N/A	mg/L	N	
		Quarterly	Nitrite (as N)	<	0.02	N/A	mg/L	N	
		Quarterly	Phosphate total (as P)		6.2	N/A	mg/L	N	
		Quarterly	Potassium		17	N/A	mg/L	N	
		Quarterly	Sodium		8000	N/A	mg/L	N	
		Quarterly	Sulphate (as SO4)		1200	N/A	mg/L	N	
		Quarterly	Total Alkalinity (as CaCO3)		830	N/A	mg/L	N	
		Quarterly	Total Dissolved Solids		18000	N/A	mg/L	N	
		Quarterly	Total Organic Carbon		31	N/A	mg/L	N	
		Quarterly	pH		5.75	N/A	pH	N	
		Quarterly	Redox		43.5	N/A	mV	N	
		Quarterly	Standing Water Level		38.534	N/A	mAHD	N	
		Quarterly	Temperature		20.3	N/A	℃	N	
BH12B	14	Quarterly	Ammonia (as N)		0.25	N/A	mg/L	N	
		Quarterly	Bicarbonate Alkalinity (as CaCO3)		60	N/A	mg/L	N	
		Quarterly	Calcium		7.9	N/A	mg/L	N	
		Quarterly	Carbonate Alkalinity (as CaCO3)	<	10	N/A	mg/L	N	
		Quarterly	Chloride		7900	N/A	mg/L	N	
		Quarterly	Hydroxide Alkalinity (as CaCO3)	<	20	N/A	mg/L	N	
		Quarterly	Magnesium		620	N/A	mg/L	N	
		Quarterly	Nitrate & Nitrite (as N)		0.1	N/A	mg/L	N	
		Quarterly	Nitrate (as N)		0.08	N/A	mg/L	N	
		Quarterly	Nitrite (as N)		0.02	N/A	mg/L	N	
		Quarterly	Phosphate total (as P)		0.03	N/A	mg/L	N	
		Quarterly	Potassium	<	5	N/A	mg/L	N	
		Quarterly	Sodium		3700	N/A	mg/L	N	
		Quarterly	Sulphate (as SO4)		480	N/A	mg/L	N	
		Quarterly	Total Alkalinity (as CaCO3)		60	N/A	mg/L	N	
		Quarterly	Total Dissolved Solids		9300	N/A	mg/L	N	
		Quarterly	Total Organic Carbon	<	5	N/A	mg/L	N	
		Quarterly	pH		4.84	N/A	pH	N	
		Quarterly	Redox		102.5	N/A	mV	N	
		Quarterly	Standing Water Level		46.553	N/A	mAHD	N	
		Quarterly	Temperature		18	N/A	℃	N	
BH13A	15	Quarterly	Ammonia (as N)		0.18	N/A	mg/L	N	
		Quarterly	Bicarbonate Alkalinity (as CaCO3)		530	N/A	mg/L	N	
		Quarterly	Calcium		270	N/A	mg/L	N	
		Quarterly	Carbonate Alkalinity (as CaCO3)	<	10	N/A	mg/L	N	
		Quarterly	Chloride		12000	N/A	mg/L	N	

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Sampling Point	EPA ID #	Monitoring Frequency	Pollutant	Prefix	Measurement	Limit	Unit	Exceedance (Y/N)	Comments
		Quarterly	Hydroxide Alkalinity (as CaCO3)	<	20	N/A	mg/L	N	
		Quarterly	Magnesium		1200	N/A	mg/L	N	
		Quarterly	Nitrate & Nitrite (as N)		0.69	N/A	mg/L	N	
		Quarterly	Nitrate (as N)		0.65	N/A	mg/L	N	
		Quarterly	Nitrite (as N)		0.05	N/A	mg/L	N	
		Quarterly	Phosphate total (as P)		2.1	N/A	mg/L	N	
		Quarterly	Potassium		14	N/A	mg/L	N	
		Quarterly	Sodium		7300	N/A	mg/L	N	
		Quarterly	Sulphate (as SO4)		380	N/A	mg/L	N	
		Quarterly	Total Alkalinity (as CaCO3)		530	N/A	mg/L	N	
		Quarterly	Total Dissolved Solids		20000	N/A	mg/L	N	
		Quarterly	Total Organic Carbon	<	5	N/A	mg/L	N	
		Quarterly	pH		6.26	N/A	pH	N	
		Quarterly	Redox		20.6	N/A	mV	N	
		Quarterly	Standing Water Level		34.784	N/A	mAHD	N	
		Quarterly	Temperature		19.7	N/A	℃	N	
BH13B	16	Quarterly	Ammonia (as N)		0.04	N/A	mg/L	N	
		Quarterly	Bicarbonate Alkalinity (as CaCO3)		26	N/A	mg/L	N	
		Quarterly	Calcium		6.3	N/A	mg/L	N	
		Quarterly	Carbonate Alkalinity (as CaCO3)	<	10	N/A	mg/L	N	
		Quarterly	Chloride		1400	N/A	mg/L	N	
		Quarterly	Hydroxide Alkalinity (as CaCO3)	<	20	N/A	mg/L	N	
		Quarterly	Magnesium		61	N/A	mg/L	N	
		Quarterly	Nitrate & Nitrite (as N)		0.85	N/A	mg/L	N	
		Quarterly	Nitrate (as N)		0.72	N/A	mg/L	N	
		Quarterly	Nitrite (as N)		0.13	N/A	mg/L	N	
		Quarterly	Phosphate total (as P)		0.08	N/A	mg/L	N	
		Quarterly	Potassium	<	5	N/A	mg/L	N	
		Quarterly	Sodium		790	N/A	mg/L	N	
		Quarterly	Sulphate (as SO4)		180	N/A	mg/L	N	
		Quarterly	Total Alkalinity (as CaCO3)		26	N/A	mg/L	N	
		Quarterly	Total Dissolved Solids		2400	N/A	mg/L	N	
		Quarterly	Total Organic Carbon	<	5	N/A	mg/L	N	
		Quarterly	pH		4.57	N/A	pH	N	
		Quarterly	Redox		183.6	N/A	mV	N	
		Quarterly	Standing Water Level		37.357	N/A	mAHD	N	
		Quarterly	Temperature		2.565	N/A	℃	N	
BH14A	17	Quarterly	Ammonia (as N)		0.63	N/A	mg/L	N	
		Quarterly	Bicarbonate Alkalinity (as CaCO3)		1100	N/A	mg/L	N	
		Quarterly	Calcium		260	N/A	mg/L	N	
		Quarterly	Carbonate Alkalinity (as CaCO3)	<	10	N/A	mg/L	N	
		Quarterly	Chloride		8700	N/A	mg/L	N	
		Quarterly	Hydroxide Alkalinity (as CaCO3)	<	20	N/A	mg/L	N	
		Quarterly	Magnesium		840	N/A	mg/L	N	
		Quarterly	Nitrate & Nitrite (as N)	<	0.05	N/A	mg/L	N	
		Quarterly	Nitrate (as N)	<	0.02	N/A	mg/L	N	
		Quarterly	Nitrite (as N)	<	0.02	N/A	mg/L	N	
		Quarterly	Phosphate total (as P)		0.91	N/A	mg/L	N	
		Quarterly	Potassium		29	N/A	mg/L	N	
		Quarterly	Sodium		3400	N/A	mg/L	N	
		Quarterly	Sulphate (as SO4)		610	N/A	mg/L	N	
		Quarterly	Total Alkalinity (as CaCO3)		1100	N/A	mg/L	N	
		Quarterly	Total Dissolved Solids		14000	N/A	mg/L	N	
		Quarterly	Total Organic Carbon		12	N/A	mg/L	N	
		Quarterly	pH		6.45	N/A	pH	N	
		Quarterly	Redox		30.9	N/A	mV	N	
		Quarterly	Standing Water Level		39.648	N/A	mAHD	N	
		Quarterly	Temperature		19.2	N/A	℃	N	
BH14B	18	Quarterly	Ammonia (as N)		0.04	N/A	mg/L	N	

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EPL: 20814

Sampling Point	EPA ID #	Monitoring Frequency	Pollutant	Prefix	Measurement	Limit	Unit	Exceedance (Y/N)	Comments
		Quarterly	Bicarbonate Alkalinity (as CaCO3)		530	N/A	mg/L	N	
		Quarterly	Calcium		160	N/A	mg/L	N	
		Quarterly	Carbonate Alkalinity (as CaCO3)	<	10	N/A	mg/L	N	
		Quarterly	Chloride		14000	N/A	mg/L	N	
		Quarterly	Hydroxide Alkalinity (as CaCO3)	<	20	N/A	mg/L	N	
		Quarterly	Magnesium		790	N/A	mg/L	N	
		Quarterly	Nitrate & Nitrite (as N)		0.14	N/A	mg/L	N	
		Quarterly	Nitrate (as N)		0.14	N/A	mg/L	N	
		Quarterly	Nitrite (as N)	<	0.02	N/A	mg/L	N	
		Quarterly	Phosphate total (as P)		0.03	N/A	mg/L	N	
		Quarterly	Potassium		7.3	N/A	mg/L	N	
		Quarterly	Sodium		4700	N/A	mg/L	N	
		Quarterly	Sulphate (as SO4)		750	N/A	mg/L	N	
		Quarterly	Total Alkalinity (as CaCO3)		530	N/A	mg/L	N	
		Quarterly	Total Dissolved Solids		15000	N/A	mg/L	N	
		Quarterly	Total Organic Carbon	<	5	N/A	mg/L	N	
		Quarterly	pH		5.55	N/A	pH	N	
		Quarterly	Redox		144.5	N/A	mV	N	
		Quarterly	Standing Water Level		39.502	N/A	mAHD	N	
		Quarterly	Temperature		19.2	N/A	℃	N	

Sampled 27-28-Feb-2020 and 13 Mar-2020
Obtained 5 and 10-Mar-2020
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Licensee: SRC Operations Pty Ltd
EPL: 20814

Sampling Point	EPA ID#	Monitoring Frequency	Pollutant	Prefix	Measurement	Limit	Unit	Exceedance (Y/N)	Comments
BH3	4	Quarterly	Ammonia (as N)		2.7	N/A	mg/L	N	
		Quarterly	Bicarbonate Alkalinity (as CaCO3)		780	N/A	mg/L	N	
		Quarterly	Calcium (filtered)		370	N/A	mg/L	N	
		Quarterly	Carbonate Alkalinity (as CaCO3)	<	10	N/A	mg/L	N	
		Quarterly	Chloride		10000	N/A	mg/L	N	
		Quarterly	Hydroxide Alkalinity (as CaCO3)	<	20	N/A	mg/L	N	
		Quarterly	Magnesium (filtered)		680	N/A	mg/L	N	
		Quarterly	Nitrate & Nitrite (as N)		1.3	N/A	mg/L	N	
		Quarterly	Nitrate (as N)		0.35	N/A	mg/L	N	
		Quarterly	Nitrite (as N)		0.97	N/A	mg/L	N	
		Quarterly	Phosphate total (as P)	<	0.05	N/A	mg/L	N	
		Quarterly	Potassium (filtered)		42	N/A	mg/L	N	
		Quarterly	Sodium (filtered)		4300	N/A	mg/L	N	
		Quarterly	Sulphate (as SO4)		210	N/A	mg/L	N	
		Quarterly	Total Alkalinity (as CaCO3)		780	N/A	mg/L	N	
		Quarterly	Total Dissolved Solids		14000	N/A	mg/L	N	
		Quarterly	Total Organic Carbon	<	5	N/A	mg/L	N	
		Quarterly	pH		6.3	N/A	pH	N	
		Quarterly	Redox		-114.7	N/A	mV	N	
		Quarterly	Standing Water Level		30.5	N/A	mAHD	N	
		Quarterly	Temperature		19.7	N/A	°C	N	
BH5	5	Quarterly	Ammonia (as N)		0.51	N/A	mg/L	N	
		Quarterly	Bicarbonate Alkalinity (as CaCO3)		960	N/A	mg/L	N	
		Quarterly	Calcium		120	N/A	mg/L	N	
		Quarterly	Carbonate Alkalinity (as CaCO3)	<	10	N/A	mg/L	N	
		Quarterly	Chloride		2900	N/A	mg/L	N	
		Quarterly	Hydroxide Alkalinity (as CaCO3)	<	20	N/A	mg/L	N	
		Quarterly	Magnesium		160	N/A	mg/L	N	
		Quarterly	Nitrate & Nitrite (as N)		0.08	N/A	mg/L	N	
		Quarterly	Nitrate (as N)		0.08	N/A	mg/L	N	
		Quarterly	Nitrite (as N)	<	0.02	N/A	mg/L	N	
		Quarterly	Phosphate total (as P)		0.1	N/A	mg/L	N	
		Quarterly	Potassium		6.4	N/A	mg/L	N	
		Quarterly	Sodium		1200	N/A	mg/L	N	
		Quarterly	Sulphate (as SO4)		240	N/A	mg/L	N	
		Quarterly	Total Alkalinity (as CaCO3)		960	N/A	mg/L	N	
		Quarterly	Total Dissolved Solids		4500	N/A	mg/L	N	
		Quarterly	Total Organic Carbon		5.4	N/A	mg/L	N	
		Quarterly	pH		6.5	N/A	pH	N	
		Quarterly	Redox		49.3	N/A	mV	N	
		Quarterly	Standing Water Level		29.8	N/A	mAHD	N	
		Quarterly	Temperature		18.4	N/A	°C	N	
BH6	6	Quarterly	Ammonia (as N)		0.008	N/A	mg/L	N	
		Quarterly	Bicarbonate Alkalinity (as CaCO3)		110	N/A	mg/L	N	
		Quarterly	Calcium		18	N/A	mg/L	N	
		Quarterly	Carbonate Alkalinity (as CaCO3)	<	10	N/A	mg/L	N	
		Quarterly	Chloride		6800	N/A	mg/L	N	
		Quarterly	Hydroxide Alkalinity (as CaCO3)	<	20	N/A	mg/L	N	
		Quarterly	Magnesium		380	N/A	mg/L	N	
		Quarterly	Nitrate & Nitrite (as N)	<	0.05	N/A	mg/L	N	
		Quarterly	Nitrate (as N)	<	0.02	N/A	mg/L	N	
		Quarterly	Nitrite (as N)	<	0.02	N/A	mg/L	N	
		Quarterly	Phosphate total (as P)		0.88	N/A	mg/L	N	
		Quarterly	Potassium	<	5	N/A	mg/L	N	
		Quarterly	Sodium		0	N/A	mg/L	N	
		Quarterly	Sulphate (as SO4)		220	N/A	mg/L	N	
		Quarterly	Total Alkalinity (as CaCO3)		110	N/A	mg/L	N	
		Quarterly	Total Dissolved Solids		11000	N/A	mg/L	N	
		Quarterly	Total Organic Carbon		270	N/A	mg/L	N	
		Quarterly	pH		5.5	N/A	pH	N	
		Quarterly	Redox		-641.2	N/A	mV	N	
		Quarterly	Standing Water Level		38.3	N/A	mAHD	N	
		Quarterly	Temperature		20.5	N/A	°C	N	
BH9A	7	Quarterly	Ammonia (as N)		1.3	N/A	mg/L	N	
		Quarterly	Bicarbonate Alkalinity (as CaCO3)		1600	N/A	mg/L	N	
		Quarterly	Calcium		270	N/A	mg/L	N	
		Quarterly	Carbonate Alkalinity (as CaCO3)	<	10	N/A	mg/L	N	
		Quarterly	Chloride		8900	N/A	mg/L	N	
		Quarterly	Hydroxide Alkalinity (as CaCO3)	<	20	N/A	mg/L	N	
		Quarterly	Magnesium		950	N/A	mg/L	N	
		Quarterly	Nitrate & Nitrite (as N)		0.26	N/A	mg/L	N	
		Quarterly	Nitrate (as N)		0.03	N/A	mg/L	N	

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EPL: 20814

Sampling Point	EPA ID#	Monitoring Frequency	Pollutant	Prefix	Measurement	Limit	Unit	Exceedance (Y/N)	Comments
		Quarterly	Nitrite (as N)		0.23	N/A	mg/L	N	
		Quarterly	Phosphate total (as P)	<	0.05	N/A	mg/L	N	
		Quarterly	Potassium		24	N/A	mg/L	N	
		Quarterly	Sodium		4500	N/A	mg/L	N	
		Quarterly	Sulphate (as SO4)		1800	N/A	mg/L	N	
		Quarterly	Total Alkalinity (as CaCO3)		1600	N/A	mg/L	N	
		Quarterly	Total Dissolved Solids		16000	N/A	mg/L	N	
		Quarterly	Total Organic Carbon		7.7	N/A	mg/L	N	
		Quarterly	pH		6.2	N/A	pH	N	
		Quarterly	Redox		55.1	N/A	mV	N	
		Quarterly	Standing Water Level		43.9	N/A	mAHD	N	
		Quarterly	Temperature		19.8	N/A	°C	N	
BH9B	8	Quarterly	Ammonia (as N)		0.006	N/A	mg/L	N	
		Quarterly	Bicarbonate Alkalinity (as CaCO3)		160	N/A	mg/L	N	
		Quarterly	Calcium		29	N/A	mg/L	N	
		Quarterly	Carbonate Alkalinity (as CaCO3)	<	10	N/A	mg/L	N	
		Quarterly	Chloride		4000	N/A	mg/L	N	
		Quarterly	Hydroxide Alkalinity (as CaCO3)	<	20	N/A	mg/L	N	
		Quarterly	Magnesium		370	N/A	mg/L	N	
		Quarterly	Nitrate & Nitrite (as N)		5.8	N/A	mg/L	N	
		Quarterly	Nitrate (as N)		5.8	N/A	mg/L	N	
		Quarterly	Nitrite (as N)		0.02	N/A	mg/L	N	
		Quarterly	Phosphate total (as P)		0.14	N/A	mg/L	N	
		Quarterly	Potassium		6.3	N/A	mg/L	N	
		Quarterly	Sodium		1900	N/A	mg/L	N	
		Quarterly	Sulphate (as SO4)		670	N/A	mg/L	N	
		Quarterly	Total Alkalinity (as CaCO3)		160	N/A	mg/L	N	
		Quarterly	Total Dissolved Solids		6900	N/A	mg/L	N	
		Quarterly	Total Organic Carbon		27	N/A	mg/L	N	
		Quarterly	pH		5.8	N/A	pH	N	
		Quarterly	Redox		-238.8	N/A	mV	N	
		Quarterly	Standing Water Level		48.9	N/A	mAHD	N	
		Quarterly	Temperature		20.6	N/A	°C	N	
BH10A	9	Quarterly	Ammonia (as N)		0.3	N/A	mg/L	N	
		Quarterly	Bicarbonate Alkalinity (as CaCO3)		1100	N/A	mg/L	N	
		Quarterly	Calcium		310	N/A	mg/L	N	
		Quarterly	Carbonate Alkalinity (as CaCO3)	<	10	N/A	mg/L	N	
		Quarterly	Chloride		11000	N/A	mg/L	N	
		Quarterly	Hydroxide Alkalinity (as CaCO3)	<	20	N/A	mg/L	N	
		Quarterly	Magnesium		1100	N/A	mg/L	N	
		Quarterly	Nitrate & Nitrite (as N)	<	0.5	N/A	mg/L	N	
		Quarterly	Nitrate (as N)	<	0.02	N/A	mg/L	N	
		Quarterly	Nitrite (as N)	<	0.02	N/A	mg/L	N	
		Quarterly	Phosphate total (as P)	<	0.05	N/A	mg/L	N	
		Quarterly	Potassium		29	N/A	mg/L	N	
		Quarterly	Sodium		4700	N/A	mg/L	N	
		Quarterly	Sulphate (as SO4)		1500	N/A	mg/L	N	
		Quarterly	Total Alkalinity (as CaCO3)		1100	N/A	mg/L	N	
		Quarterly	Total Dissolved Solids		19000	N/A	mg/L	N	
		Quarterly	Total Organic Carbon	<	5	N/A	mg/L	N	
		Quarterly	pH		6.2	N/A	pH	N	
		Quarterly	Redox		-391.0	N/A	mV	N	
		Quarterly	Standing Water Level		43.7	N/A	mAHD	N	
		Quarterly	Temperature		19.2	N/A	°C	N	
BH10B	10	Quarterly	Ammonia (as N)		0.1	N/A	mg/L	N	
		Quarterly	Bicarbonate Alkalinity (as CaCO3)		1200	N/A	mg/L	N	
		Quarterly	Calcium		210	N/A	mg/L	N	
		Quarterly	Carbonate Alkalinity (as CaCO3)	<	10	N/A	mg/L	N	
		Quarterly	Chloride		12000	N/A	mg/L	N	
		Quarterly	Hydroxide Alkalinity (as CaCO3)	<	20	N/A	mg/L	N	
		Quarterly	Magnesium		1400	N/A	mg/L	N	
		Quarterly	Nitrate & Nitrite (as N)		0.87	N/A	mg/L	N	
		Quarterly	Nitrate (as N)		0.78	N/A	mg/L	N	
		Quarterly	Nitrite (as N)		0.1	N/A	mg/L	N	
		Quarterly	Phosphate total (as P)	<	0.05	N/A	mg/L	N	
		Quarterly	Potassium		49	N/A	mg/L	N	
		Quarterly	Sodium		5500	N/A	mg/L	N	
		Quarterly	Sulphate (as SO4)		2700	N/A	mg/L	N	
		Quarterly	Total Alkalinity (as CaCO3)		1200	N/A	mg/L	N	
		Quarterly	Total Dissolved Solids		22000	N/A	mg/L	N	
		Quarterly	Total Organic Carbon		7.5	N/A	mg/L	N	
		Quarterly	pH		6.4	N/A	pH	N	

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Sampling Point	EPA ID#	Monitoring Frequency	Pollutant	Prefix	Measurement	Limit	Unit	Exceedance (Y/N)	Comments
		Quarterly	Redox		94.4	N/A	mV	N	
		Quarterly	Standing Water Level		43.7	N/A	mAHD	N	
		Quarterly	Temperature		20.2	N/A	°C	N	
BH11A	11	Quarterly	Ammonia (as N)		2.2	N/A	mg/L	N	
		Quarterly	Bicarbonate Alkalinity (as CaCO3)		1100	N/A	mg/L	N	
		Quarterly	Calcium		420	N/A	mg/L	N	
		Quarterly	Carbonate Alkalinity (as CaCO3)	<	10	N/A	mg/L	N	
		Quarterly	Chloride		13000	N/A	mg/L	N	
		Quarterly	Hydroxide Alkalinity (as CaCO3)	<	20	N/A	mg/L	N	
		Quarterly	Magnesium		1300	N/A	mg/L	N	
		Quarterly	Nitrate & Nitrite (as N)	<	0.05	N/A	mg/L	N	
		Quarterly	Nitrate (as N)	<	0.02	N/A	mg/L	N	
		Quarterly	Nitrite (as N)	<	0.02	N/A	mg/L	N	
		Quarterly	Phosphate total (as P)		0.02	N/A	mg/L	N	
		Quarterly	Potassium		36	N/A	mg/L	N	
		Quarterly	Sodium		4900	N/A	mg/L	N	
		Quarterly	Sulphate (as SO4)		1700	N/A	mg/L	N	
		Quarterly	Total Alkalinity (as CaCO3)		1100	N/A	mg/L	N	
		Quarterly	Total Dissolved Solids		25000	N/A	mg/L	N	
		Quarterly	Total Organic Carbon		11	N/A	mg/L	N	
		Quarterly	pH		6.4	N/A	pH	N	
		Quarterly	Redox		-118.0	N/A	mV	N	
		Quarterly	Standing Water Level		32.3	N/A	mAHD	N	
		Quarterly	Temperature		20.0	N/A	°C	N	
BH11B	12	Quarterly	Ammonia (as N)		0.19	N/A	mg/L	N	
		Quarterly	Bicarbonate Alkalinity (as CaCO3)		87	N/A	mg/L	N	
		Quarterly	Calcium		30	N/A	mg/L	N	
		Quarterly	Carbonate Alkalinity (as CaCO3)	<	10	N/A	mg/L	N	
		Quarterly	Chloride		9700	N/A	mg/L	N	
		Quarterly	Hydroxide Alkalinity (as CaCO3)	<	20	N/A	mg/L	N	
		Quarterly	Magnesium		890	N/A	mg/L	N	
		Quarterly	Nitrate & Nitrite (as N)		3.6	N/A	mg/L	N	
		Quarterly	Nitrate (as N)		2.8	N/A	mg/L	N	
		Quarterly	Nitrite (as N)		0.7	N/A	mg/L	N	
		Quarterly	Phosphate total (as P)		0.33	N/A	mg/L	N	
		Quarterly	Potassium	<	5	N/A	mg/L	N	
		Quarterly	Sodium		3900	N/A	mg/L	N	
		Quarterly	Sulphate (as SO4)		1200	N/A	mg/L	N	
		Quarterly	Total Alkalinity (as CaCO3)		87	N/A	mg/L	N	
		Quarterly	Total Dissolved Solids		16000	N/A	mg/L	N	
		Quarterly	Total Organic Carbon		810	N/A	mg/L	N	
		Quarterly	pH		5.5	N/A	pH	N	
		Quarterly	Redox		-615.8	N/A	mV	N	
		Quarterly	Standing Water Level		42.7	N/A	mAHD	N	
		Quarterly	Temperature		20.7	N/A	°C	N	
BH12A	13	Quarterly	Ammonia (as N)		0.96	N/A	mg/L	N	
		Quarterly	Bicarbonate Alkalinity (as CaCO3)		930	N/A	mg/L	N	
		Quarterly	Calcium		320	N/A	mg/L	N	
		Quarterly	Carbonate Alkalinity (as CaCO3)	<	10	N/A	mg/L	N	
		Quarterly	Chloride		22000	N/A	mg/L	N	
		Quarterly	Hydroxide Alkalinity (as CaCO3)	<	20	N/A	mg/L	N	
		Quarterly	Magnesium		1400	N/A	mg/L	N	
		Quarterly	Nitrate & Nitrite (as N)	<	0.05	N/A	mg/L	N	
		Quarterly	Nitrate (as N)	<	0.02	N/A	mg/L	N	
		Quarterly	Nitrite (as N)	<	0.02	N/A	mg/L	N	
		Quarterly	Phosphate total (as P)		2.4	N/A	mg/L	N	
		Quarterly	Potassium		16	N/A	mg/L	N	
		Quarterly	Sodium		5700	N/A	mg/L	N	
		Quarterly	Sulphate (as SO4)		1300	N/A	mg/L	N	
		Quarterly	Total Alkalinity (as CaCO3)		930	N/A	mg/L	N	
		Quarterly	Total Dissolved Solids		24000	N/A	mg/L	N	
		Quarterly	Total Organic Carbon		140	N/A	mg/L	N	
		Quarterly	pH		6.4	N/A	pH	N	
		Quarterly	Redox		-6.5	N/A	mV	N	
		Quarterly	Standing Water Level		39.3	N/A	mAHD	N	
		Quarterly	Temperature		19.5	N/A	°C	N	
BH12B	14	Quarterly	Ammonia (as N)		0.05	N/A	mg/L	N	
		Quarterly	Bicarbonate Alkalinity (as CaCO3)		380	N/A	mg/L	N	
		Quarterly	Calcium		120	N/A	mg/L	N	
		Quarterly	Carbonate Alkalinity (as CaCO3)	<	10	N/A	mg/L	N	
		Quarterly	Chloride		470	N/A	mg/L	N	
		Quarterly	Hydroxide Alkalinity (as CaCO3)	<	20	N/A	mg/L	N	

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Sampling Point	EPA ID#	Monitoring Frequency	Pollutant	Prefix	Measurement	Limit	Unit	Exceedance (Y/N)	Comments
		Quarterly	Magnesium		45	N/A	mg/L	N	
		Quarterly	Nitrate & Nitrite (as N)	<	0.05	N/A	mg/L	N	
		Quarterly	Nitrate (as N)	<	0.02	N/A	mg/L	N	
		Quarterly	Nitrite (as N)	<	0.02	N/A	mg/L	N	
		Quarterly	Phosphate total (as P)		0.08	N/A	mg/L	N	
		Quarterly	Potassium	<	5	N/A	mg/L	N	
		Quarterly	Sodium		300	N/A	mg/L	N	
		Quarterly	Sulphate (as SO4)		340	N/A	mg/L	N	
		Quarterly	Total Alkalinity (as CaCO3)		380	N/A	mg/L	N	
		Quarterly	Total Dissolved Solids		1700	N/A	mg/L	N	
		Quarterly	Total Organic Carbon		370	N/A	mg/L	N	
		Quarterly	pH		6.6	N/A	pH	N	
		Quarterly	Redox		-518.0	N/A	mV	N	
		Quarterly	Standing Water Level		45.0	N/A	mAHD	N	
		Quarterly	Temperature		19.4	N/A	℃	N	
BH13A	15	Quarterly	Ammonia (as N)		0.21	N/A	mg/L	N	
		Quarterly	Bicarbonate Alkalinity (as CaCO3)		690	N/A	mg/L	N	
		Quarterly	Calcium		270	N/A	mg/L	N	
		Quarterly	Carbonate Alkalinity (as CaCO3)	<	10	N/A	mg/L	N	
		Quarterly	Chloride		15000	N/A	mg/L	N	
		Quarterly	Hydroxide Alkalinity (as CaCO3)	<	20	N/A	mg/L	N	
		Quarterly	Magnesium		1100	N/A	mg/L	N	
		Quarterly	Nitrate & Nitrite (as N)		1	N/A	mg/L	N	
		Quarterly	Nitrate (as N)		0.72	N/A	mg/L	N	
		Quarterly	Nitrite (as N)		0.32	N/A	mg/L	N	
		Quarterly	Phosphate total (as P)		2	N/A	mg/L	N	
		Quarterly	Potassium		16	N/A	mg/L	N	
		Quarterly	Sodium		5300	N/A	mg/L	N	
		Quarterly	Sulphate (as SO4)		370	N/A	mg/L	N	
		Quarterly	Total Alkalinity (as CaCO3)		690	N/A	mg/L	N	
		Quarterly	Total Dissolved Solids		24000	N/A	mg/L	N	
		Quarterly	Total Organic Carbon	<	5	N/A	mg/L	N	
		Quarterly	pH		6.0	N/A	pH	N	
		Quarterly	Redox		54.4	N/A	mV	N	
		Quarterly	Standing Water Level		34.7	N/A	mAHD	N	
		Quarterly	Temperature		19.3	N/A	℃	N	
BH13B	16	Quarterly	Ammonia (as N)		0.01	N/A	mg/L	N	
		Quarterly	Bicarbonate Alkalinity (as CaCO3)		26	N/A	mg/L	N	
		Quarterly	Calcium		5	N/A	mg/L	N	
		Quarterly	Carbonate Alkalinity (as CaCO3)	<	10	N/A	mg/L	N	
		Quarterly	Chloride		1200	N/A	mg/L	N	
		Quarterly	Hydroxide Alkalinity (as CaCO3)	<	20	N/A	mg/L	N	
		Quarterly	Magnesium		47	N/A	mg/L	N	
		Quarterly	Nitrate & Nitrite (as N)		1.1	N/A	mg/L	N	
		Quarterly	Nitrate (as N)		1.1	N/A	mg/L	N	
		Quarterly	Nitrite (as N)	<	0.02	N/A	mg/L	N	
		Quarterly	Phosphate total (as P)		0.03	N/A	mg/L	N	
		Quarterly	Potassium	<	5	N/A	mg/L	N	
		Quarterly	Sodium		660	N/A	mg/L	N	
		Quarterly	Sulphate (as SO4)		150	N/A	mg/L	N	
		Quarterly	Total Alkalinity (as CaCO3)		26	N/A	mg/L	N	
		Quarterly	Total Dissolved Solids		2300	N/A	mg/L	N	
		Quarterly	Total Organic Carbon		21	N/A	mg/L	N	
		Quarterly	pH		5.6	N/A	pH	N	
		Quarterly	Redox		198.7	N/A	mV	N	
		Quarterly	Standing Water Level		33.0	N/A	mAHD	N	
		Quarterly	Temperature		22.1	N/A	℃	N	
BH14A	17	Quarterly	Ammonia (as N)		0.48	N/A	mg/L	N	
		Quarterly	Bicarbonate Alkalinity (as CaCO3)		1400	N/A	mg/L	N	
		Quarterly	Calcium		240	N/A	mg/L	N	
		Quarterly	Carbonate Alkalinity (as CaCO3)	<	10	N/A	mg/L	N	
		Quarterly	Chloride		8400	N/A	mg/L	N	
		Quarterly	Hydroxide Alkalinity (as CaCO3)	<	20	N/A	mg/L	N	
		Quarterly	Magnesium		790	N/A	mg/L	N	
		Quarterly	Nitrate & Nitrite (as N)	<	0.05	N/A	mg/L	N	
		Quarterly	Nitrate (as N)		0.02	N/A	mg/L	N	
		Quarterly	Nitrite (as N)	<	0.02	N/A	mg/L	N	
		Quarterly	Phosphate total (as P)		0.05	N/A	mg/L	N	
		Quarterly	Potassium		26	N/A	mg/L	N	
		Quarterly	Sodium		3700	N/A	mg/L	N	
		Quarterly	Sulphate (as SO4)		790	N/A	mg/L	N	
		Quarterly	Total Alkalinity (as CaCO3)		1400	N/A	mg/L	N	

APPENDIX C QUARRY VOID DEWATERING MONITORING DATA

PATONS LANE RRC
RESOURCE RECOVERY CENTRE

WEEKLY OPERATIONAL DISCHARGE REPORT

NPE NATIONAL PUMP & ENERGY

turbid WATER SOLUTIONS

REPORTING PERIOD: 16/08/18 to 23/08/18

Pollutants	Units	Required Frequency	No. of times measured during period	Approved TARP/EPL Criteria	Criteria Period	Min Value During Discharge	Max Value During Discharge	100th Percentile *	90th Percentile *	Exceedance Y/N	Approved Trigger Levels For Discharged Water: **Condition Green** (Direct Discharge, Untreated)	**Condition Amber** (Review/ Action/ Treatment of pH/Turbidity)	**Condition Red**[1] (Halt Discharge, Confirmation Checks. Adaptive Management)
Turbidity	**NTU**	Continuous as per SDMP	Continuous	90th percentile <50	Daily	1	50	N/A	3	N	0-40	>40	90th percentile <50
pH	**pH units**	Continuous as per SDMP	Continuous	100th percentile 5.5-8.5	Daily	6.7	8.5	8.5	N/A	N	7.0-8.0	<7.0 >8.0	100th percentile 6.5-8.5
Electrical Conductivity (EC)	**µS/cm**	Continuous as per SDMP	Continuous	90th percentile <1600	Daily	1391	1527	N/A	1430	N	125-1500	>1500	90th percentile <1600
Dissolved Oxygen (DO)	**mg/L**	Continuous as per SDMP	Continuous	90th percentile range 6.0-11.8	Daily	8.8	12.2	N/A	12.1	N	6.2-11.8	DO<6.2	90th percentile range > 6
RedOx Potential	**mV**	Continuous as per SDMP	Continuous	N/A	Daily	297.0	371.0	N/A	N/A	N	Monitor for significant change	N/A	N/A
Discharge	**L/Sec**	Continuous as per SDMP	Continuous	280 litres per second	Daily	0.0	271.25	N/A	N/A	N	0 - 280	N/A	8.64
Discharge	**ML**	Daily	16/8/18	8.64 Ml per day	Daily	N/A	7.36	N/A	N/A	N	0 - 8.64	N/A	8.64
Discharge	**ML**	Daily	17/8/18	8.64 Ml per day	Daily	N/A	8.55	N/A	N/A	N	0 - 8.64	N/A	8.64
Discharge	**ML**	Daily	18/8/18	8.64 Ml per day	Daily	N/A	4.17	N/A	N/A	N	0 - 8.64	N/A	8.64
Discharge	**ML**	Daily	20/8/18	8.64 Ml per day	Daily	N/A	6.8	N/A	N/A	N	0 - 8.64	N/A	8.64
Discharge	**ML**	Daily	21/8/18	8.64 Ml per day	Daily	N/A	8.63	N/A	N/A	N	0 - 8.64	N/A	8.64
Discharge	**ML**	Daily	22/8/18	8.64 Ml per day	Daily	N/A	8.4	N/A	N/A	N	0 - 8.64	N/A	8.64
Discharge	**ML**	Daily	23/8/18	8.64 Ml per day	Daily	N/A	8.2	N/A	N/A	N	0 - 8.64	N/A	8.64

* Percentiles applicable to relevant reporting period

PATONS LANE RRC
RESOURCE RECOVERY CENTRE

WEEKLY OPERATIONAL DISCHARGE REPORT

NPE NATIONAL PUMP & ENERGY

turbid WATER SOLUTIONS

REPORTING PERIOD: 24/08/18 to 30/08/18

Approved Trigger Levels For Discharged Water

Pollutants	Units	Required Frequency	No. of times measured during period	Approved TARP/EPL Criteria	Criteria Period	Min Value During Discharge	Max Value During Discharge	100th Percentile *	90th Percentile *	Exceedance Y/N	**Condition Green** (Direct Discharge, Untreated)	**Condition Amber** (Review/ Action/ Treatment of pH/Turbidity)	**Condition Red**[1] (Halt Discharge, Confirmation Checks. Adaptive Management)
Turbidity	**NTU**	Continuous as per SDMP	Continuous	90th percentile <50	Daily	2	3	N/A	3	N	0-40	>40	90th percentile <50
pH	**pH units**	Continuous as per SDMP	Continuous	100th percentile 5.5-8.5	Daily	6.9	8.1	8.1	N/A	N	7.0-8.0	<7.0 >8.0	100th percentile 6.5-8.5
Electrical Conductivity (EC)	**µS/cm**	Continuous as per SDMP	Continuous	90th percentile <1600	Daily	1351	1494	N/A	1433	N	125-1500	>1500	90th percentile <1600
Dissolved Oxygen (DO)	**mg/L**	Continuous as per SDMP	Continuous	90th percentile range 6.0-11.8	Daily	8.6	18.9	N/A	18.38	N	6.2-11.8	DO<6.2	90th percentile range > 6
RedOx Potential	**mV**	Continuous as per SDMP	Continuous	N/A	Daily	282	383	N/A	N/A	N	Monitor for significant change	N/A	N/A
Discharge	**L/Sec**	Continuous as per SDMP	Continuous	280 litres per second	Daily	0	274	N/A	N/A	N	0 - 280	N/A	8.64
Discharge	**ML**	Daily	24/8/18	8.64 Ml per day	Daily	N/A	8.2	N/A	N/A	N	0 - 8.64	N/A	8.64
Discharge	**ML**	Daily	25/8/18	8.64 Ml per day	Daily	N/A	3.7	N/A	N/A	N	0 - 8.64	N/A	8.64
Discharge	**ML**	Daily	27/8/18	8.64 Ml per day	Daily	N/A	6.1	N/A	N/A	N	0 - 8.64	N/A	8.64
Discharge	**ML**	Daily	28/8/18	8.64 Ml per day	Daily	N/A	7.5	N/A	N/A	N	0 - 8.64	N/A	8.64
Discharge	**ML**	Daily	29/8/18	8.64 Ml per day	Daily	N/A	6.8	N/A	N/A	N	0 - 8.64	N/A	8.64
Discharge	**ML**	Daily	30/8/18	8.64 Ml per day	Daily	N/A	4.1	N/A	N/A	N	0 - 8.64	N/A	8.64

* Percentiles applicable to relevant reporting period

PATONS LANE RRC
RESOURCE RECOVERY CENTRE

WEEKLY OPERATIONAL DISCHARGE REPORT

NPE NATIONAL PUMP & ENERGY

turbid WATER SOLUTIONS

REPORTING PERIOD: 31/8/18 to 06/09/18

Approved Trigger Levels For Discharged Water

Pollutants	Units	Required Frequency	No. of times measured during period	Approved TARP/EPL Criteria	Criteria Period	Min Value During Discharge	Max Value During Discharge	100th Percentile *	90th Percentile *	Exceedance Y/N	**Condition Green** (Direct Discharge, Untreated)	**Condition Amber** (Review/ Action/ Treatment of pH/Turbidity)	**Condition Red**[1] (Halt Discharge, Confirmation Checks. Adaptive Management)
Turbidity	**NTU**	Continuous as per SDMP	Continuous	90th percentile <50	Daily	2	6	N/A	5	N	0-40	>40	90th percentile <50
pH	**pH units**	Continuous as per SDMP	Continuous	100th percentile 5.5-8.5	Daily	7.7	8.3	8.3	N/A	N	7.0-8.0	<7.0 >8.0	100th percentile 6.5-8.5
Electrical Conductivity (EC)	**µS/cm**	Continuous as per SDMP	Continuous	90th percentile <1600	Daily	1402	1494	N/A	1432	N	125-1500	>1500	90th percentile <1600
Dissolved Oxygen (DO)	**mg/L**	Continuous as per SDMP	Continuous	90th percentile range 6.0-11.8	Daily	11.5	19.1	N/A	18.3	N	6.2-11.8	DO<6.2	90th percentile range > 6
RedOx Potential	**mV**	Continuous as per SDMP	Continuous	N/A	Daily	305	352	N/A		N	Monitor for significant change	N/A	N/A
Discharge	**L/Sec**	Continuous as per SDMP	Continuous	280 litres per second	Daily	0	256	N/A	N/A	N	0 - 280	N/A	
Discharge	**ML**	Daily	31/8/18	8.64 Ml per day	Daily	N/A	7.9	N/A	N/A	N	0 - 8.64	N/A	8.64
Discharge	**ML**	Daily	1/9/18	8.64 Ml per day	Daily	N/A	2	N/A	N/A	N	0 - 8.64	N/A	8.64
Discharge	**ML**	Daily	3/9/18	8.64 Ml per day	Daily	N/A	8.4	N/A	N/A	N	0 - 8.64	N/A	8.64
Discharge	**ML**	Daily	4/9/18	8.64 Ml per day	Daily	N/A	6.8	N/A	N/A	N	0 - 8.64	N/A	8.64
Discharge	**ML**	Daily	5/9/18	8.64 Ml per day	Daily	N/A	7.6	N/A	N/A	N	0 - 8.64	N/A	8.64
Discharge	**ML**	Daily	6/9/18	8.64 Ml per day	Daily	N/A	8	N/A	N/A	N	0 - 8.64	N/A	8.64

* Percentiles applicable to relevant reporting period

PATONS LANE RRC
RESOURCE RECOVERY CENTRE

WEEKLY OPERATIONAL DISCHARGE REPORT

NPE NATIONAL PUMP & ENERGY

turbid WATER SOLUTIONS

REPORTING PERIOD: 07/9/18 to 13/09/18

Approved Trigger Levels For Discharged Water

Pollutants	Units	Required Frequency	No. of times measured during period	Approved TARP/EPL Criteria	Criteria Period	Min Value During Discharge	Max Value During Discharge	100th Percentile *	90th Percentile *	Exceedance Y/N	**Condition Green** (Direct Discharge, Untreated)	**Condition Amber** (Review/ Action/ Treatment of pH/Turbidity)	**Condition Red**[1] (Halt Discharge, Confirmation Checks. Adaptive Management)
Turbidity	**NTU**	Continuous as per SDMP	Continuous	90th percentile <50	Daily	3	80	N/A	5	N	0-40	>40	90th percentile <50
pH	**pH units**	Continuous as per SDMP	Continuous	100th percentile 5.5-8.5	Daily	7.6	8.2	8.2	N/A	N	7.0-8.0	<7.0 >8.0	100th percentile 6.5-8.5
Electrical Conductivity (EC)	**µS/cm**	Continuous as per SDMP	Continuous	90th percentile <1600	Daily	1374	1448	N/A	1422	N	125-1500	>1500	90th percentile <1600
Dissolved Oxygen (DO)	**mg/L**	Continuous as per SDMP	Continuous	90th percentile range 6.0-11.8	Daily	11.3	18	N/A	17.3	N	6.2-11.8	DO<6.2	90th percentile range > 6
RedOx Potential	**mV**	Continuous as per SDMP	Continuous	N/A	Daily	224	349	N/A	N/A	N	Monitor for significant change	N/A	N/A
Discharge	**L/Sec**	Continuous as per SDMP	Continuous	280 litres per second	Daily	0	261	N/A	N/A	N	0 - 280	N/A	8.64
Discharge	**ML**	Daily	7/9/18	8.64 Ml per day	Daily	N/A	6.9	N/A	N/A	N	0 - 8.64	N/A	8.64
Discharge	**ML**	Daily	8/9/18	8.64 Ml per day	Daily	N/A	2	N/A	N/A	N	0 - 8.64	N/A	8.64
Discharge	**ML**	Daily	10/9/18	8.64 Ml per day	Daily	N/A	5.168	N/A	N/A	N	0 - 8.64	N/A	8.64
Discharge	**ML**	Daily	11/9/18	8.64 Ml per day	Daily	N/A	7.252	N/A	N/A	N	0 - 8.64	N/A	8.64
Discharge	**ML**	Daily	12/9/18	8.64 Ml per day	Daily	N/A	8.115	N/A	N/A	N	0 - 8.64	N/A	8.64
Discharge	**ML**	Daily	13/9/18	8.64 Ml per day	Daily	N/A	8.464	N/A	N/A	N	0 - 8.64	N/A	8.64

* Percentiles applicable to relevant reporting period

PATONS LANE RRC
RESOURCE RECOVERY CENTRE

WEEKLY OPERATIONAL DISCHARGE REPORT

NPE NATIONAL PUMP & ENERGY

turbid WATER SOLUTIONS

REPORTING PERIOD: 14/9/18 to 20/09/18

Approved Trigger Levels For Discharged Water

Pollutants	Units	Required Frequency	No. of times measured during period	Approved TARP/EPL Criteria	Criteria Period	Min Value During Discharge	Max Value During Discharge	100th Percentile *	90th Percentile *	Exceedance Y/N	**Condition Green** (Direct Discharge, Untreated)	**Condition Amber** (Review/ Action/ Treatment of pH/Turbidity)	**Condition Red**[1] (Halt Discharge, Confirmation Checks. Adaptive Management)
Turbidity	**NTU**	Continuous as per SDMP	Continuous	90th percentile <50	Daily	3	15	N/A	11	N	0-40	>40	90th percentile <50
pH	**pH units**	Continuous as per SDMP	Continuous	100th percentile 5.5-8.5	Daily	7.5	8.4	8.4	N/A	N	7.0-8.0	<7.0 >8.0	100th percentile 6.5-8.5
Electrical Conductivity (EC)	**µS/cm**	Continuous as per SDMP	Continuous	90th percentile <1600	Daily	1403	1513	N/A	1443	N	125-1500	>1500	90th percentile <1600
Dissolved Oxygen (DO)	**mg/L**	Continuous as per SDMP	Continuous	90th percentile range 6.0-11.8	Daily	8.2	17	N/A	16.5	N	6.2-11.8	DO<6.2	90th percentile range > 6
RedOx Potential	**mV**	Continuous as per SDMP	Continuous	N/A	Daily	281	340	N/A	N/A	N	Monitor for significant change	N/A	N/A
Discharge	**L/Sec**	Continuous as per SDMP	Continuous	280 litres per second	Daily	0	270	N/A	N/A	N	0 - 280	N/A	8.64
Discharge	**ML**	Daily	14/9/18	8.64 Ml per day	Daily	N/A	7.91	N/A	N/A	N	0 - 8.64	N/A	8.64
Discharge	**ML**	Daily	15/9/18	8.64 Ml per day	Daily	N/A	3.35	N/A	N/A	N	0 - 8.64	N/A	8.64
Discharge	**ML**	Daily	17/9/18	8.64 Ml per day	Daily	N/A	7.51	N/A	N/A	N	0 - 8.64	N/A	8.64
Discharge	**ML**	Daily	18/9/18	8.64 Ml per day	Daily	N/A	7.68	N/A	N/A	N	0 - 8.64	N/A	8.64
Discharge	**ML**	Daily	19/9/18	8.64 Ml per day	Daily	N/A	7.69	N/A	N/A	N	0 - 8.64	N/A	8.64
Discharge	**ML**	Daily	20/9/18	8.64 Ml per day	Daily	N/A	8.54	N/A	N/A	N	0 - 8.64	N/A	8.64

* Percentiles applicable to relevant reporting period

PATONS LANE RRC
RESOURCE RECOVERY CENTRE

WEEKLY OPERATIONAL DISCHARGE REPORT

NPE NATIONAL PUMP & ENERGY

turbid WATER SOLUTIONS

REPORTING PERIOD: 21/9/18 to 27/09/18

											Approved Trigger Levels For Discharged Water		
Pollutants	**Units**	**Required Frequency**	**No. of times measured during period**	**Approved TARP/EPL Criteria**	**Criteria Period**	**Min Value During Discharge**	**Max Value During Discharge**	**100th Percentile ***	**90th Percentile ***	**Exceedance Y/N**	**Condition Green** (Direct Discharge, Untreated)	**Condition Amber** (Review/ Action/ Treatment of pH/Turbidity)	**Condition Red**[1] (Halt Discharge, Confirmation Checks. Adaptive Management)
Turbidity	**NTU**	Continuous as per SDMP	Continuous	90th percentile <50	Daily	6	28	N/A	12	N	0-40	>40	90th percentile <50
pH	**pH units**	Continuous as per SDMP	Continuous	100th percentile 5.5-8.5	Daily	7.6	8.4	8.4	N/A	N	7.0-8.0	<7.0 >8.0	100th percentile 6.5-8.5
Electrical Conductivity (EC)	**µS/cm**	Continuous as per SDMP	Continuous	90th percentile <1600	Daily	1409	1502	N/A	1444	N	125-1500	>1500	90th percentile <1600
Dissolved Oxygen (DO)	**mg/L**	Continuous as per SDMP	Continuous	90th percentile range > 6.0	Daily	9.8	17	N/A	16.3	N	6.2-11.8	DO<6.2	90th percentile range > 6
RedOx Potential	**mV**	Continuous as per SDMP	Continuous	N/A	Daily	286	350	N/A	N/A	N	Monitor for significant change	N/A	N/A
Discharge	**L/Sec**	Continuous as per SDMP	Continuous	280 litres per second	Daily	0	274	N/A	N/A	N	0 - 280	N/A	8.64
Discharge	**ML**	Daily	21/9/18	8.64 Ml per day	Daily	N/A	7.75	N/A	N/A	N	0 - 8.64	N/A	8.64
Discharge	**ML**	Daily	22/9/18	8.64 Ml per day	Daily	N/A	3.38	N/A	N/A	N	0 - 8.64	N/A	8.64
Discharge	**ML**	Daily	24/9/18	8.64 Ml per day	Daily	N/A	8.29	N/A	N/A	N	0 - 8.64	N/A	8.64
Discharge	**ML**	Daily	25/9/18	8.64 Ml per day	Daily	N/A	8.53	N/A	N/A	N	0 - 8.64	N/A	8.64
Discharge	**ML**	Daily	26/9/18	8.64 Ml per day	Daily	N/A	8.19	N/A	N/A	N	0 - 8.64	N/A	8.64
Discharge	**ML**	Daily	27/9/18	8.64 Ml per day	Daily	N/A	8.32	N/A	N/A	N	0 - 8.64	N/A	8.64

* Percentiles applicable to relevant reporting period

PATONS LANE RRC
RESOURCE RECOVERY CENTRE

WEEKLY OPERATIONAL DISCHARGE REPORT

NPE NATIONAL PUMP & ENERGY

turbid WATER SOLUTIONS

REPORTING PERIOD: 28/9/18 to 04/10/18

Approved Trigger Levels For Discharged Water

Pollutants	Units	Required Frequency	No. of times measured during period	Approved TARP/EPL Criteria	Criteria Period	Min Value During Discharge	Max Value During Discharge	100th Percentile *	90th Percentile *	Exceedance Y/N	**Condition Green** (Direct Discharge, Untreated)	**Condition Amber** (Review/ Action/ Treatment of pH/Turbidity)	**Condition Red**[1] (Halt Discharge, Confirmation Checks. Adaptive Management)
Turbidity	**NTU**	Continuous as per SDMP	Continuous	90th percentile <50	Daily	4	13	N/A	12	N	0-40	>40	90th percentile <50
pH	**pH units**	Continuous as per SDMP	Continuous	100th percentile 5.5-8.5	Daily	7.3	8.1	8.1	N/A	N	7.0-8.0	<7.0 >8.0	100th percentile 6.5-8.5
Electrical Conductivity (EC)	**µS/cm**	Continuous as per SDMP	Continuous	90th percentile <1600	Daily	1219	1499	N/A	1441	N	125-1500	>1500	90th percentile <1600
Dissolved Oxygen (DO)	**mg/L**	Continuous as per SDMP	Continuous	90th percentile range > 6	Daily	9.6	17	N/A	16.1	N	6.2-11.8	DO<6.2	90th percentile range > 6
RedOx Potential	**mV**	Continuous as per SDMP	Continuous	N/A	Daily	342	362	N/A	N/A	N	Monitor for significant change	N/A	N/A
Discharge	**L/Sec**	Continuous as per SDMP	Continuous	280 litres per second	Daily	0	262	N/A	N/A	N	0 - 280	N/A	8.64
Discharge	**ML**	Daily	28/9/18	8.64 Ml per day	Daily	N/A	5.37	N/A	N/A	N	0 - 8.64	N/A	8.64
Discharge	**ML**	Daily	29/9/18	8.64 Ml per day	Daily	N/A	0	N/A	N/A	N	0 - 8.64	N/A	8.64
Discharge	**ML**	Daily	1/10/18	8.64 Ml per day	Daily	N/A	0	N/A	N/A	N	0 - 8.64	N/A	8.64
Discharge	**ML**	Daily	2/10/18	8.64 Ml per day	Daily	N/A	0	N/A	N/A	N	0 - 8.64	N/A	8.64
Discharge	**ML**	Daily	3/10/18	8.64 Ml per day	Daily	N/A	0	N/A	N/A	N	0 - 8.64	N/A	8.64
Discharge	**ML**	Daily	4/10/18	8.64 Ml per day	Daily	N/A	0	N/A	N/A	N	0 - 8.64	N/A	8.64

* Percentiles applicable to relevant reporting period

PATONS LANE RRC
RESOURCE RECOVERY CENTRE

WEEKLY OPERATIONAL DISCHARGE REPORT

NPE NATIONAL PUMP & ENERGY

turbid WATER SOLUTIONS

REPORTING PERIOD: 05/10/18 to 11/10/18

Approved Trigger Levels For Discharged Water

Pollutants	Units	Required Frequency	No. of times measured during period	Approved TARP/EPL Criteria	Criteria Period	Min Value During Discharge	Max Value During Discharge	100th Percentile *	90th Percentile *	Exceedance Y/N	**Condition Green** (Direct Discharge, Untreated)	**Condition Amber** (Review/ Action/ Treatment of pH/Turbidity)	**Condition Red**[1] (Halt Discharge, Confirmation Checks. Adaptive Management)
Turbidity	**NTU**	Continuous as per SDMP	Continuous	90th percentile <50	Daily	5	45	N/A	30	N	0-40	>40	90th percentile <50
pH	**pH units**	Continuous as per SDMP	Continuous	100th percentile 5.5-8.5	Daily	7.2	8.4	8.4	N/A	N	7.0-8.0	<7.0 >8.0	100th percentile 6.5-8.5
Electrical Conductivity (EC)	**µS/cm**	Continuous as per SDMP	Continuous	90th percentile <1600	Daily	969	1200	N/A	1172	N	125-1500	>1500	90th percentile <1600
Dissolved Oxygen (DO)	**mg/L**	Continuous as per SDMP	Continuous	90th percentile range > 6.0	Daily	10.3	23	N/A	18.95	N	6.2-11.8	DO<6.2	90th percentile range > 6
RedOx Potential	**mV**	Continuous as per SDMP	Continuous	N/A	Daily	318	371	N/A	N/A	N	Monitor for significant change	N/A	N/A
Discharge	**L/Sec**	Continuous as per SDMP	Continuous	280 litres per second	Daily	0	273	N/A	N/A	N	0 - 280	N/A	8.64
Discharge	**ML**	Daily	5/10/18	8.64 Ml per day	Daily	N/A	6.77	N/A	N/A	N	0 - 8.64	N/A	8.64
Discharge	**ML**	Daily	6/10/18	8.64 Ml per day	Daily	N/A	2.62	N/A	N/A	N	0 - 8.64	N/A	8.64
Discharge	**ML**	Daily	8/10/18	8.64 Ml per day	Daily	N/A	5.54	N/A	N/A	N	0 - 8.64	N/A	8.64
Discharge	**ML**	Daily	9/10/18	8.64 Ml per day	Daily	N/A	4.94	N/A	N/A	N	0 - 8.64	N/A	8.64
Discharge	**ML**	Daily	10/10/18	8.64 Ml per day	Daily	N/A	7.95	N/A	N/A	N	0 - 8.64	N/A	8.64
Discharge	**ML**	Daily	11/10/18	8.64 Ml per day	Daily	N/A	6.66	N/A	N/A	N	0 - 8.64	N/A	8.64

* Percentiles applicable to relevant reporting period