

# Annual Review

Erskine Park Resource Management Facility – Stage 1 – Waste Transfer Facility

| Date:           | November 2019                                  |
|-----------------|--|
| Prepared<br>by: | SLR Consulting Australia Pty Ltd and Cleanaway |
| Version:        | Final  |

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## Title block

| Name of Operation   | Erskine Park Waste Transfer Station (Stage 1) |
|---|---|
| Name of Operator  | Cleanaway Waste Management Pty Ltd            |
| Development consent / project approval #                    | SSD 7075                                      |
| Name of holder of development consent / project<br>approval | Cleanaway Waste Management Pty Ltd            |
| Annual Review start date                                    | 1 November 2018                               |
| Annual Review end date                                      | 31 October 2019                               |

I, Westley Trist, certify that this audit report is a true and accurate record of the compliance status of the Erskine Park Waste Transfer Station site for the period 1 November 2018 to 31 October 2019 and that I am authorised to make this statement on behalf of Cleanaway Waste Management Pty Ltd.

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 Title of authorised reporting officer Signature of authorised reporting officer Date Westley Trist

**Operations Manager** 

## 1. Statement of Compliance

During the reporting period the Erskine Park Waste Transfer Site (WTS) had a high level of compliance with its major approvals. A summary of compliance against the major approvals is provided in **Table 1**.

#### Table 1 – Statement of Compliance

| Relevant Erskine Park WTS Approvals | Compliance (Yes/No) |
|-------------------------------------|---------------------|
| SSD 7075                            | No                  |
| EPL 20986                           | No                  |

The non-compliances identified during the 2018/2019 reporting period are summarised in **Table 2** and discussed further in **Section 11**. The non-compliances are separated into the categories as defined by the *Annual Review* Guideline (2015) presented in Table 3.

Cleanaway were required to submit a copy of the Odour Audit Report to Department of Planning, Infrastructure and Environment (DPIE), Environment Protection Authority (EPA) and Penrith City Council (Council) within two (2) months of commissioning the Odour Audit, in accordance with SSD 7075 condition B13 and EPL 20986 condition E3.2. The Odour Audit was commissioned in early March 2019 and was therefore required to be submitted to the regulators by early May 2019. The Odour Audit Report was lodged to EPA on 21 November 2019. Cleanaway sought an extension from EPA to submit the Odour Audit Report on this date. Cleanaway did not seek such an extension from DPIE and Council. A non-compliance therefore occurred with SSD 7075 condition B13, as the Odour Audit Report was not submitted to DPIE and Council within the required timeframe.

| Relevant<br>Approval | Condition<br>#   | Condition Description   | Compliance<br>Status    | Comment   | Relevant<br>Section of<br>Annual<br>Review |
|----------------------|------------------|---|-------------------------|---|--|
| SSD 7075             | Condition<br>B13 | Within two months of commissioning this audit, the<br>Applicant shall submit a copy of the audit report to<br>the Secretary, the EPA and Penrith City Council,<br>together with its response to any recommendations<br>contained in the audit report. | Admin Non-<br>compliant | Odour Audit Report<br>not submitted to<br>DPIE and Council<br>within the required<br>timeframe. | Section 10 &<br>11                         |

#### Table 2 – Non-Compliances

|  | Table 3 – | Compliance | Status | Categories |
|--|-----------|------------|--------|------------|
|--|-----------|------------|--------|------------|

| Risk Level                    | Colour Code   | Description  |
|-------------------------------|---------------|--|
| High                          | Non-Compliant | Non-compliance with potential for significant environmental consequences, regardless of the likelihood of occurrence   |
| Medium                        | Non-Compliant | Non-compliance with potential for serious environmental consequences,<br>but is unlikely to occur; or potential for moderate environmental<br>consequences, but is likely to occur |
| Low                           | Non-Compliant | Non-compliance with potential for moderate environmental consequences,<br>but is unlikely to occur; or potential for low environmental consequences,<br>but is likely to occur     |
| Administrative non-compliance | Non-Compliant | Non-compliance which does not result in any risk of environmental harm   |

**Section 6** provides detail on environmental performance for aspects including noise and air quality. Detail on the management of surface water and ground water at the Erskine Park WTS is provided in **Section 7.** 

## 2. Introduction

## 2.1 Annual Review

This document represents the second Annual Review for the site, as required under Condition C10 (Schedule C) of Development Consent SSD 7075, as modified. The Annual Review covers the period from 1 November 2018 until 31 October 2019.

## 2.2 Background

The Planning Assessment Commission (PAC), acting as delegate of the Minister for Planning, approved an application for the Erskine Park Waste and Resource Management Facility (WRMF) Staged Development Application (SSD 7075) on the 5 October 2016, comprising:

- A concept proposal for a Waste and Resource Management Facility with a maximum processing capacity of 300,000 tpa. All waste received at the WRMF shall enter the Waste Transfer Station (Stage 1), up to 150,000 tpa of this waste may be recycled at the Resource Recovery Facility (RRF) (Stage 2).
- Construction and operation of the Stage 1 Waste Transfer Station with a maximum processing capacity of 300,000 tpa.

The WRMF will be developed in two stages, the first being a Waste Transfer Station (WTS) and the second being a Resource Recovery Facility (RRF).

The WTS will receive commercial and household waste from the Western Sydney region which would subsequently be transported to a licenced waste management facility off-site. A proportion of the waste received at the WTS would be diverted to the RRF for recycling and recovery of saleable products. The design capacity of the completed WRMF is 300,000 tonnes per annum, inclusive of both stages.

A key consideration in the planning and design of the WTS has been to avoid impacting on the amenity of the surrounding residential community, particularly in relation to odour, noise and traffic issues.

Construction of Stage 1 of the WTS was completed during the reporting period. The WTS was opened on the 14 December 2018 and commenced accepting waste on the 27 December 2018. Stage 2 (the RRF) will be developed at a later point.

## 2.3 Site Description

The site is located approximately 11 kilometres south-east of Penrith in western Sydney, NSW (see **Figure 1**). It is addressed to 85-87 Quarry Road, Erskine Park NSW, and is identified as Lot 1 in Deposited Plan (DP) 1140063 in the Penrith Local Government Area (LGA). The title comprises approximately 3 hectares. As shown the site is west of and adjacent to the existing Erskine Park Landfill that is located adjacent to the site (Lot 4, DP 1094504).



The area surrounding the site is primarily industrial land uses, including Stramit Building Products and Hasbro to the north, Dutt Transport, Viscount Plastics, Dincel Construction Systems, Devondale Dairy and Stockland to the south, Cleanaway Depot to the west, and the Cleanaway Erskine Park Landfill to the east

The nearest residential dwellings are located within the suburb of St. Clair, approximately 0.7 km to the north of the site, and rural-residential properties located in Orchard Hills, approximately 0.7 km to the west of the site.

A child care centre is located approximately 670m to the west of the closest boundary of the site.

The layout of the WTS and site boundary (that encompasses Stage 1 and Stage 2 of the Development) is shown in **Figure 2.** The Site Layout for the Concept Plan and Full Site Development is provided in **Figure 3**.

The key aspects of the completed WTS are:

- A steel framed and clad waste transfer station building with associated offices, amenities and lower level transfer vehicle load-out area;
- A manual sort line within the WTS building for basic resource recovery;
- Fast acting roller shutter doors which will be normally closed;
- Transfer station working floor with concrete and asphalt peripheral roads;
- An active ventilation system and air treatment system with controlled discharge as part of the overall approach to air emissions and odour management;
- Associated infrastructure including all hardstand areas, car park, weighbridges, and sealed roads; and
- Ancillaries including perimeter security fencing, security gates, rain water harvesting, fire suppression system, signage, landscaping, drainage and services.

The WTS has a nominal daily volume of approximately 1,040 tonnes of putrescible waste per day (design capacity 300,000 tonnes per annum [tpa]). However, subject to market factors, initially around 90,000 tpa of putrescible waste will be received at the site. During this reporting period, with operations undertaken between 14 December 2018 and 31 October 2019, 80,157 tonnes of non-putrescible and putrescible waste was received at the site.

Waste delivery vehicles enter the site from the adjoining Quarry Road and weigh on the incoming weighbridge located adjacent to the office. Delivery vehicles then proceed to the eastern side of the building where they align with one of the roller shutter door entrances on the eastern elevation. The vehicles reverse through one of the rapid acting roller shutter doors, discharge their waste and then drive out of the building, down a ramp and proceed to the south of the transfer station towards the outgoing weighbridge, exiting the site onto Quarry Road. The majority of the material received is waste from commercial waste collection trucks, stationary compactor (packer) hooklift loads and side-loader collections (e.g. 240L mobile garbage bin collections from commercial premises).

Waste offloaded on the tipping floor is separated into two categories; putrescible and non-putrescible incl. wood, masonry, rigid plastics, and old corrugated cardboard. The non-putrescible waste is sorted for recycling, while the remaining waste is consolidated with the putrescible waste and transferred into transfer vehicles by a front-end loader which lifts the material over a wall opening for top loading.





Waste is transferred from the site using B-Doubles or single trailers to an appropriately licensed waste management facility in accordance with relevant waste management regulations.

When the RRF is operational, waste deemed suitable (recyclable) would be diverted to the RRF for recycling and recovery of saleable products.

The site does not have any offsets areas.

During the reporting period construction of the WTS was completed, and operations commenced on 14 December 2019.

## 2.4 Key Contact Details

The contact details for the person responsible for environmental management and community relations of Cleanaway during the reporting period is provided in **Table 4**.

### Table 4 – Primary Contact for Erskine Park WTS

| Contact       | Position           | Contact Details                       |  |
|---------------|--------------------|---------------------------------------|--|
| Westley Trist | Operations Manager | Ph: (02) 8602 8724                    |  |
|               |                    | Email: Westley.Trist@cleanaway.com.au |  |

## 3. Approvals

## 3.1 Development Consent

As mentioned in **Section 2.2** above, the construction and operation of the Stage 1 WTS was approved on the 5 October 2016. Since the approval of the Development, four modifications (Mods) to the Development Consent have been approved by the DPIE, as below:

- In July 2017 a Development Approval (DA) Modification document was submitted to the DPIE to request a number of modifications to the Development design and Concept Plan. These modifications included; changes to site levels, construction of an interim carpark, use of a temporary office, removal of truck parking, construction of landfill entry and exit ramps, amendment to the load out area and amendment to the stormwater management system. The DA Mod 1 was approved by DPIE on 28 August 2017;
- Modification 2 (Mod 2) was approved on the 26 February 2018. Mod 2 sought to increase site levels and relocate the car park, to a location adjacent to the inbound road;
- Modification 3 (Mod 3) was approved by DPIE on the 24 October 2018, to install a manual sorting line in the WTS; and
- Modification 4 (Mod 4) was approved by the DPIE on the 25 October 2018, to extend construction hours.

## 3.2 Environment Protection Licence (EPL)

An Environment Protection Licence (EPL) 20986 was obtained from the EPA on the 18 September 2017, which covered the construction phase of the WTS.

During reporting period, an application was submitted by Cleanaway to vary the EPL, to support the operational phase of WTS. The EPL variation was granted on 30 November 2018. The varied licence is attached to this report (see **Appendix A**).

## 3.3 Sydney Water Approvals

In accordance with Condition B23 of the Development Consent SSD 7075, as modified, a Section 73 Compliance Certificate covering water and sewer requirements for the Development was obtained from Sydney Water for the site. Building Plan approval was also obtained from Sydney Water.

A Trade Waste Agreement exists between Cleanaway and Sydney Water for the site (landfill), allowing for a maximum discharge volume of 1036kL/day and average daily discharge of 750kL/day average. The Trade Waste Agreement was maintained for the construction and operations of the WTS.

## 3.4 Principal Contractor Approvals

The Principal Contractor (CIP Constructions [NSW] Pty Ltd) obtained approvals from Endeavour Energy for upgrades required to electrical infrastructure, during the construction stage of the WTS.

The Principal Contractor also obtained relevant approvals for temporary infrastructure/utilities and relevant approvals for crushing of concrete, tiles and bricks, for the construction of the WTS.

## 4. **Operations Summary**

During the reporting period late stage construction works were undertaken at the site. Construction works commenced at the site during the previous reporting period (during November 2017) and concluded on 14 December 2018, when the site became operational.

The construction works were carried out by CIP Constructions (NSW) Pty Ltd (CIP), in accordance with the site's Construction Environmental Management Plan (CEMP) (SLR 2017). The construction activities undertaken during the reporting period are summarised below. For a list of specific construction activities undertaken during the reporting period refer to **Appendix B**.

Once the WTS commenced operations a nominal amount of waste was processed to identify and manage any initial issues, to ensure that the facility would function effectively and efficiently as designed, and that the environmental management systems in place were functioning adequately. The WTS opened on 14 December 2018 and became fully operational on 27 December 2019, when the first load of waste was accepted at the site. An overview of the WTS operations during the reporting period is outlined in **Section 4.2**, below. Operations were undertaken in accordance with the WTS's Operational Environmental Management Plan (OEMP) (SLR 2018a).

## 4.1 Construction Activities

## **Construction Staging**

Construction was staged during the reporting period, to maintain continuous access to the adjacent landfill site, enabling continued operation and closure.

Construction was undertaken in a number of key stages, including:

- Award of Contract;
- Detailed Design and Approvals;
- Demolition and civil works;
- Re-location and preparation of the office block;
- Construction of the WTS; and
- External Works (some completed).

During the previous reporting period the bulk of construction works had been completed. Construction works undertaken during this reporting period are outlined below.

## **Construction Method**

Traditional methods of construction were employed by the contractor to construct the WTS. Consideration was given to stage construction of access ways and weighbridges, prior to removal of existing structures, to ensure business continuity for existing landfilling operations, and access for post-closure rehabilitation activities. Approximately 30 to 50 construction workers were employed during the construction phase of the Development.

Early construction works commenced on-site in October 2017 and included earthworks and demolition of buildings, car parks, sheds, laydown areas, weighbridge and sealed roads and clearing of minor vegetation. Earthworks commenced in late December 2017.

Construction works included the following activities:

## Site Clearance, Earthworks and Preparation

Site demolition included heavy duty tracked excavators and breakers to remove existing concrete and pavement on-site and deeper excavation to remove existing building foundations. Concrete was crushed off-site, for reuse in construction or sent off-site for recycling, whilst steel (metal) was removed from site for recycling.

Cranes were utilised on-site to remove above ground structures, and during the building erection and installation of structural steel elements.

Heavy earthmoving plant (e.g. tracked excavators, wheeled loaders, dump trucks) was utilised to excavate and prepare site levels, and to transport excess material to the existing landfill.

Significant earthworks comprised of excavation to reduce levels of the site. A ground investigation prior to construction works identified ground to a depth of 3.0m to 5.0m. The level of the transfer building was reduced to 50m (as approved by DPIE in SSD 7075 Mod 4) to reduce the depth of excavation and foundations required for founding onto competent ground. This platform level required a reduction in ground level which produced surplus material of approximately 50,000m<sup>3</sup>. This material was transported to a stockpile within (nominally) 300m of the transfer station site for later use as material for the closure of the nearby landfill (i.e. it requires transportation outside of the overall site).

Retaining walls and substructure required excavation, fixing of steel bar reinforcement, formwork and concrete placement with concrete pumps, delivery vehicles and cranage.

The sewer and water line was temporarily disconnected to allow construction activities to be undertaken. Temporary septic tanks and a temporary water lines were installed and utilised while these disconnections were in place. During the removal of the sewer and water system, demolition materials such as concrete were sent off-site for recycling.

### **Building Construction**

Site services were installed prior to this reporting period and included trenching, laying of pipework and ducting, placement of stone and concrete surrounds and backfilling in layers with a vibrating wheeled roller.

Building foundations were established by excavation of supports (where required), placement of mass concrete and reinforcement of concrete foundations.

For the steel frame superstructure, heavy delivery vehicles and cranage were used for delivery, unloading and erection of the steel members. Scaffolding was used for the installation of the roof, wall cladding and installation of guttering.

Granular capping material was placed on top of the concrete slab for internal floor slab construction to increase the durability of the slab. Concrete was poured in the bays, together with hot rolled asphalt that was laid to form road pavements and ramps.

The existing transportable offices on-site were moved and have been re-instated now as interim offices.

Building services, including lighting (internal and external), ventilation and fire/water services installation were also retrofitted after the main superstructure was installed.

## **Construction Works Undertaken during the Reporting Period**

Bitumen and concrete roadways were constructed during the reporting period. The "Stage 2" development area was also sealed with asphalt and fenced.

During the reporting period the stormwater controls doe the Development were also installed. These included:

- Two (2) x 80 kL Rainwater tanks;
- Two (2) x Stormwater 360 Vortsentry Filtration Units;
- A On-site Stormwater Detention (OSD) tank system;
- Bio-retention basin; and
- Pit / pipe stormwater conveyance system.

#### **Construction Materials**

A Building and Material Schedule was prepared for the Development and is contained within **Appendix C**. The Schedule provides the type and quantity of materials that have been used for the construction of the WTS.

#### **Construction Hours**

In accordance with Condition B28 (Schedule C) of Development Consent SSD 7075 as modified, construction works were undertaken during the hours listed in **Table 5**.

#### Table 5 - Construction Hours

| Activity     | Day                        | Hours        |
|--------------|----------------------------|--------------|
| Construction | Monday – Friday            | 5 am to 6 pm |
|              | Saturday                   | 5 am to 5 pm |
|              | Sunday and Public Holidays | Nil          |

## 4.2 **Operational Activities**

### Waste Received and Processed

The amount of waste that has been received at the WTS since the site opened on 14 December 2018 is outlined in **Table 6**, below. The total amount of waste that was received and processed at the site was 80,157 tonnes. This amount was within the site's maximum processing capacity of 300,000 tpa, as set by SSD 7075, as modified, and EPL 20986. This waste consisted of 9,395 tonnes of non-putrescible waste and 70,762 tonnes of putrescible waste.

#### Table 6 – Waste Volumes Received at the WTS

| Month          | Non-Putrescible Waste<br>(tonnes) | Putrescible Waste<br>(tonnes) |
|----------------|-----------------------------------|-------------------------------|
| November 2018  | 0                                 | 0                             |
| December 2018  | 37                                | 184                           |
| January 2019   | 605                               | 2,715                         |
| February 2019  | 573                               | 4,142                         |
| March 2019     | 673                               | 5,697                         |
| April 2019     | 685                               | 5,935                         |
| May 2019       | 1,149                             | 7,496                         |
| June 2019      | 1,192                             | 7,162                         |
| July 2019      | 1,192                             | 9,374                         |
| August 2019    | 1,221                             | 8,855                         |
| September 2019 | 971                               | 9,580                         |
| October 2019   | 1,097                             | 9,622                         |
| Total          | 9,395                             | 70,762                        |

## **Resource Recovery**

The amount of waste that was recovered by the sorting line during the reporting period was 9,605 tonnes, as outlined by **Table 7**.

#### Table 7 – Waste Recovered at the WTS

| Month          | Waste (tonnes) |
|----------------|----------------|
| November 2018  | 0              |
| December 2018  | 0              |
| January 2019   | 331            |
| February 2019  | 636            |
| March 2019     | 1,404          |
| April 2019     | 1,538          |
| May 2019       | 1,750          |
| June 2019      | 1,104          |
| July 2019      | 972            |
| August 2019    | 512            |
| September 2019 | 579            |
| October 2019   | 780            |
| Total          | 9,605          |

## **Contaminated Waste**

No contaminated/hazardous waste was transported to the WTS and required managing during the reporting period.

## **Transportation Rates**

The number of trucks that entered and left the site laden with waste and recyclables is provided in **Table 8**. A total of 16,972 waste trucks entered the site and a total of 3,931 trucks left the site laden with compacted waste, during the reporting year. No trucks left the site with recyclables, during the reporting period.

The Environmental Impact Statement (EIS) (SLR 2015a) predicted approximately 200 inbound waste delivery vehicles per day (or 72,800 incoming trucks per year) and approximately 30 outbound waste transfer vehicles would depart the site each day (or 10,920 outgoing trucks per year). Actual numbers of incoming and outgoing waste transfer vehicles were less than those predicted in the EIS. The amount of trucks accessing the WTS will increase as more waste is accepted at the site.

| Month             | Refuse Collection Vehicles Entering the site with Waste | Trucks Leaving the site<br>with Waste* | Trucks Leaving the site with<br>Recyclables |
|-------------------|---|--|---|
| November<br>2018  | 0   | 0                                      | 0   |
| December<br>2018  | 47  | 11                                     | 0   |
| January 2019      | 819   | 139                                    | 0   |
| February 2019     | 1,054   | 328                                    | 0   |
| March 2019        | 1,320   | 339                                    | 0   |
| April 2019        | 1,408   | 308                                    | 0   |
| May 2019          | 1,810   | 398                                    | 0   |
| June 2019         | 1,828   | 367                                    | 0   |
| July 2019         | 2,268   | 570                                    | 0   |
| August 2019       | 2,141   | 497                                    | 0   |
| September<br>2019 | 2,074   | 489                                    | 0   |
| October 2019      | 2,203   | 485                                    | 0   |
| Total             | 16,972  | 3,931                                  | 0   |

#### Table 8 – Transportation Rates

Note: \*The dry component of waste is sent to Resource Co for waste to energy (recovery of waste and diversion of waste from landfill). In future Annual Reviews a breakdown of landfill/recovered waste will be provided.

### Employees

During the reporting period 6 number of people were employed at the WTS. This number of employees is less than the anticipated number of employees at the site (25 people), as outlined in the

*Erskine Park Waste and Resource Management Facility Modification to Approved SSD 7075 Environmental Assessment Report* (EME 2018).

## **Operational hours**

The WTS is permitted to operate 24/7, in accordance with Condition B28, Schedule C, of SSD 7075, as modified. Actual operating hours during the reporting period were 3am till 6pm.

## 4.3 Next Reporting Period

Works and operations to be undertaken at the site during the next reporting period are discussed in **Section 12.** 

## 5. Actions required from Previous Annual Review

The Regional Manager for the facility vacated the role during the reporting period for this Annual Review. To the best of our knowledge no comments were received from the DPIE following lodgement of the 2018 Annual Review. As a result Cleanaway's understanding is there were no actions arising from the 2018 Annual Review.

Any actions required by DPIE, after the review of this Annual Review, will be incorporated into the 2020 Annual Review.

## 6. Environmental Performance

## 6.1 Meteorological

## **Environmental Management**

Condition A9 (Schedule C) of SSD7075, as modified, and Condition M2.2 of EPL 20986 require continuous meteorological monitoring at the site. Erskine Park has established a weather station at the site. The weather station is located in the south-east corner of the site, adjacent to the landfill, as shown on **Figure 4**.

## **Environmental Performance**

### **Rainfall Monitoring**

Monthly rainfall recorded at Erskine Park WTS during the reporting period is provided in **Table 9**.

#### Table 9 – Monthly Rainfall Averages

| Month          | Rainfall (mm) |
|----------------|---------------|
| November 2018  | 117.6         |
| December 2018  | 134.4         |
| January 2019   | 85.8          |
| February 2019  | 17.8          |
| March 2019     | 202.0         |
| April 2019     | 10.6          |
| May 2019       | 11.0          |
| June 2019      | 56.6          |
| July 2019      | 19.6          |
| August 2019    | 21.0          |
| September 2019 | 102.4         |
| October 2019   | 32.2          |
| Total          | 811           |



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| 13-Nov-2019          |
|----------------------|
| AB                   |
| 1:4,000              |
| A4                   |
| GDA 1994 MGA Zone 56 |
|                      |

## **Monitoring Site Locations**

FIGURE 4

From November 2018 to October 2019, 811 mm of rainfall was recorded at the site. Majority of the rainfall was recorded during the first part of the reporting period, with the largest monthly rainfall recorded as 202 mm in March 2019. The rainfall recorded at this site during the reporting period was more than the rainfall recorded during the prior year (282.5mm).<sup>1</sup>

The Bureau of Meteorology (BOM) long term rainfall data is publicly available at nearby monitoring stations at Shanes Park (067081), between 2017 and 2019, and Erskine Park Reservoir (067066), between 2013 and 2019. Total rainfall at these monitoring locations was 790.6 mm and 740 mm, respectively, during the reporting period.

## Wind Monitoring

Wind velocity and direction are measured at the Erskine Park weather station. Wind was generally from a southerly direction, from December 2018 to February 2019, and from a westerly direction in April to June 2019 and September 2019 to October 2019. Between July and August 2019 wind was generally from a northly direction.

## **Comparison against EIS Predictions**

No relevant predictions for weather/climate are provided in the EIS (SLR 2015a).

## **Incidents and Improvements**

The weather station was fully operational during the reporting period. There were no incidents related to the weather station.

The weather station will be operated and maintained during the next reporting period.

## 6.2 Noise and Vibration

## **Environmental Management**

### Noise

Noise mitigation measures as outlined in the CEMP (SLR 2017) and OEMP (SLR 2018a) were implemented at the site during the reporting period to control construction and operations noise (refer to **Table 10** below). Construction activities were also undertaken within the hours specified by the Development Consent (SSD 7075, as modified) and EPL 20986. Hours of operation of the WTS are unlimited (i.e. 24/7), however during the reporting period the site only operated between 3am till 6pm.

<sup>&</sup>lt;sup>1</sup> The 2017/2018 rainfall data is based on actual data from the site's weather station, except for November 2017 and December 2017. The data for these months is based on data from the nearest BOM weather station to the site (Erskine Park Reservoir [station number 067066]), as the site's weather station malfunctioned during November 2017 and December 2017 and data was not recorded during this period.

#### Table 10 – Noise Mitigation Measures

| Development<br>Consent Condition | Mitigation Measure  |
|----------------------------------|---|
| Condition B29,<br>Schedule C     | Best management practice is implemented at the site, including all reasonable and feasible noise management and mitigation measures to prevent and minimise operational, low frequency and traffic noise. |
| Condition B29,<br>Schedule C     | Noise impacts of the Development are minimised during adverse meteorological conditions.  |
| Condition B29,<br>Schedule C     | Noise suppression equipment on plant is maintained.   |
| Condition B29,<br>Schedule C     | Defective plant is not used, until it is fully repaired.  |
| Statement of<br>Commitments      | All Cleanaway owned vehicles operating on the site are fitted with the High and Low Buzzer system, designed to minimise noise associated with reversing alarms.   |
| Condition B29c),<br>Schedule C   | Cleanaway regularly assess noise emissions and relocate, modify and/or stop operations to ensure compliance with the relevant conditions of consent (SSD 7075).   |
| Statement of<br>Commitments      | All mobile plant operating inside the WTS building are fitted with low frequency white noise reversing alarms.  |

Both the Development Consent and EPL 20986 do not require noise monitoring to be conducted at the site, although condition L3.1 of EPL 20986 sets the noise limit for the site. Noise emissions from the WTS are required to comply with the requirements of the NSW EPA's Industrial Noise Policy, in accordance with Condition L3.1, EPL 20986. The Policy recommends that LAeq noise levels arising from industrial noise sources should not exceed the levels indicated in **Table 11**.

| Receiver  | Noise<br>Amenity<br>Area | Time of Day <sup>1</sup>                  | Recommended Amenity Noise Level<br>LAeq(period)   |
|---|--------------------------|---|---|
|   | Rural                    | Day                                       | 50 dBA  |
|   |                          | Evening                                   | 45 dBA  |
|   |                          | Night                                     | 40 dBA  |
|   | Suburban                 | Day                                       | 55 dBA  |
| Residence   |                          | Evening                                   | 45 dBA  |
|   |                          | Night                                     | 40 dBA  |
|   | Urban                    | Day                                       | 60 dBA  |
|   |                          | Evening                                   | 50 dBA  |
|   |                          | Night                                     | 45 dBA  |
| Hotels, motels, caretakers' quarters,<br>holiday accommodation, permanent<br>resident caravan parks | See column<br>4          | See column 4                              | 5 dB(A) above the recommended amenity<br>noise level for a residence for the relevant<br>noise amenity area and time of day |
| School classrooms - internal  | All                      | Noisiest 1-<br>hour period<br>when in use | 35 dBA  |
| Hospital ward internal external   | All                      | Noisiest 1-<br>hour                       | 35<br>50  |
| Area specifically for passive recreation  | All                      | When in use                               | 50 dBA  |
| Active recreation area (e.g. School playground, golf course)  | All                      | When in use                               | 55 dBA  |
| Commercial premises   | All                      | When in use                               | 65 dBA  |
| Industrial premises   | All                      | When in use                               | 70 dBA  |
| Industrial (applicable only to residential noise amenity areas)                                     | All                      | All                                       | Add 5 dB(A) to recommended noise amenity area   |

#### Table 11 – Recommended LAeq Noise Levels from Industrial Noise Sources

However, EPA's Noise Policy for Industry does not apply to construction activities. Instead, EPA's *"Interim Construction Noise Guideline"* (ICNG or Guideline) (EPA 2009) applies. This Guideline recommends that the LAeq(15minute) noise levels arising from a construction project, measured within the curtilage of an occupied noise-sensitive premises (i.e. at boundary or within 30 m of the residence, whichever is the lesser) should not exceed the levels indicated in **Table 12**.

#### Table 12 – Recommended EPA General NMLs for Construction Works

| Period of Noise Exposure           | LAeq(15minute) Construction NML                       |
|------------------------------------|---|
| Decommonded Standard Hours         | Noise affected <sup>1</sup> RBL <sup>2</sup> + 10 dBA |
| Recommended Standard Hours         | Highly noise affected <sup>3</sup> 75 dBA             |
| Outside Recommended Standard Hours | Noise affected <sup>1</sup> RBL + 5 dBA               |

<sup>1</sup> The noise affected level represents the point above which there may be some community reaction to noise

<sup>2</sup> Refer to Table 4 and Appendix A of EPA's Guideline

<sup>3</sup>The highly noise affected level represents the point above which there may be strong community reaction to noise.

Noise monitoring was not undertaken at the site during the reporting period, as this is not required.

### Vibration

Vibration limits have been set for the site. The vibrations limits are continuous or impulsive vibration criteria included in EPA's *Assessing Vibration: A Technical Guideline* (February 2006) at residential receivers. These criteria are provided in **Table 13** below.

| Table 13 – Preferred and maximum weighted root mean square (rms) values for continuous and impulsive |
|--|
| vibration acceleration (m/s2) 1–80 Hz  |

| Location   | Assessment period <sup>1</sup> | Preferred values |               | Maximum values |               |
|--|--------------------------------|------------------|---------------|----------------|---------------|
|  |                                | z-axis           | x- and y-axes | z-axis         | x- and y-axes |
| Continuous vibration   | Day- or night-time             | 0.0050           | 0.0036        | 0.010          | 0.0072        |
| Critical areas <sup>2</sup>                                      | Daytime                        | 0.010            | 0.0071        | 0.020          | 0.014         |
| Residences   | Night-time                     | 0.007            | 0.005         | 0.014          | 0.010         |
| Offices, schools, educational institutions and places of worship | Day- or night-time             | 0.020            | 0.014         | 0.040          | 0.028         |
| Workshops  | Day- or night-time             | 0.04             | 0.029         | 0.080          | 0.058         |
| Impulsive vibration  |                                |                  |               |                |               |
| Critical areas <sup>2</sup>                                      | Day- or night-time             | 0.0050           | 0.0036        | 0.010          | 0.0072        |
| Residences   | Daytime                        | 0.30             | 0.21          | 0.60           | 0.42          |
|  | Night-time                     | 0.10             | 0.071         | 0.20           | 0.14          |
| Offices, schools, educational institutions and places of worship | Day- or night-time             | 0.64             | 0.46          | 1.28           | 0.92          |
| Workshops  | Day- or night-time             | 0.64             | 0.46          | 1.28           | 0.92          |

1 Daytime is 7.00 am to 10.00 pm and night-time is 10.00 pm to 7.00 am

2 Examples include hospital operating theatres and precision laboratories where sensitive operations are occurring. There may be cases where sensitive equipment or delicate tasks require more stringent criteria than the human comfort criteria specified above. Stipulation of such criteria is outside the scope of this policy, and other guidance documents (e.g. relevant standards) should be referred to. Source: BS 6472–1992

Vibration monitoring is not required to be undertaken at the site.

### **Environmental Performance**

No noise or vibration monitoring was undertaken during the reporting period as this is not required for the site.

Noise and vibration were kept within reasonable levels at the site by implementing mitigation measures, with no noise or vibration complaints received, and no remedial actions/additional mitigation measures required to be implemented during the reporting period.

No noise complaints were received at the site.

#### **Comparison against Predictions**

A comparison against predictions made in the EIS or trends in data is not provided as there was no noise or vibration monitoring required to be undertaken at the site, during the reporting period.

## **Incidents and Improvements**

No reportable incidents associated with noise or vibration occurred during the reporting period. Subsequently, no improvements related to these aspects will be implemented during the next reporting period.

## 6.3 Blasting

Blasting was not required for the construction or operational works.

## 6.4 Air Quality

## **Environmental Management**

Air Quality (dust and odour) mitigation measures were undertaken at the site during the reporting period, as specified by the CEMP (SLR 2017) and OEMP (SLR 2018a). During the reporting year the site was also landscaped (revegetated) and stabilised, reducing the potential for dust emissions from the site.

In accordance with Condition B10 (Schedule C) of SSD 7075, as modified, an Odour Management Plan (OMP) was prepared for the Development. Relevant mitigation measures in the OMP were implemented at the site during the reporting period.

Prior to the commencement of operations of the site, the Odour Management System (OMS) was installed, tested and commissioned. The OMS consists of:

- (i) A wet scrubber;
- (ii) Dilution stacks (Tri-stack system);
- (iii) Fast acting roller doors; and
- (iv) Water sprays/misters.

The air pollution control system will be maintained during the operation of the site.

A meteorological station has also been installed at the site (refer to **Figure 4**) that complies with the requirements in the latest version of the Approved Methods for Sampling of Air Pollutants in New South Wales. Cleanaway continuously operated the meteorological station during the reporting year, and maintained records of meteorological data.

**Figure 5 Location of Dust Monitoring Sites** 



A dust monitoring program was undertaken at the site while construction works were undertaken, in accordance with the Statement of Commitments requirements in Appendix 3 of SSD 7075, as modified. Three depositional dust gauges were set-up at the site in January 2018. The first at the north-western corner of the site (D10), the second at the wheel wash (D11) and a third entrance of the site (D12) for the purposes of the site's monitoring program (refer to **Figure 5)**.

During the reporting period monitoring site D12 was replaced, as this was removed during the previous reporting period (October 2018), due to construction works. Dust monitoring gauge D11 was also removed during the same construction works, but was not replaced.

Depositional dust was monitored at these sites on a monthly basis, during construction, in accordance with Australian standard 3580.10.1-1991. Dust monitoring was not required to be undertaken during site operations. Samples collected from the depositional dust gauges were analysed for total solids, soluble matter, total insoluble matter, combustible matter and ash content. It should be noted that dust limits have not been set for the site by either the site's Development Consent or EPL.

EPA goals for allowable dust deposition are used to measure performance, in accordance with the site's CEMP (SLR 2015b) (see **Table 14**).

| Averaging Period | Maximum Increase in Deposited Dust Level | Maximum Total Deposited Dust Level |
|------------------|--|------------------------------------|
| Annual           | 2 g/m²/month                             | 4 g/m²/month                       |
|                  |  |                                    |

| Tabla 11    |     | Coole for | Allowahla | Durat Da |          |
|-------------|-----|-----------|-----------|----------|----------|
| 1 abie 14 – | EPA | Goals for | Allowable | Dust De  | DOSILION |
|             |     |           |           |          |          |

Odour monitoring (surveys) was also undertaken during the reporting period (from 28 March 2019 to 30 April 2019), in accordance with the SSD 7075 statement of commitments. Monitoring was in the form of efficiency trials on the scrubber system, to demonstrate optimal performance. The Emission Control (scrubber) System was operated during the following times, during the surveys:

- Day time (7:00am till 6:00pm) Two (2) fans running and no scrubber in operation;
- Night time (6:01pm till next day 6:59am) One (1) fan and one (1) scrubber (with water), running at 15m<sup>3</sup>/hr through the scrubber; and
- From 1pm Saturdays till 6:59am Monday One (1) fan and one (1) scrubber (with water), running at 15m<sup>3</sup>/hr through the scrubber.

Follow-up monitoring of the scrubber system will be undertaken during the operational lifetime of the WTS.

## **Environmental Performance**

Dust monitoring results for November 2018 and December 2018 (for the months dust monitoring was required at the site) are included in the table below. Results are only provided for D10, D11 and D12 as these are the dust gauges located at the site. The other dust gauges (shown on **Figure 5**) are monitored as part of the Erskine Park Landfill operations and results from these are reported separately.

| Operation        | Monitoring Site | Insoluble Matter Deposited* (g/m²/mth) |          | Ash De<br>(g/m², | Criteria |     |
|------------------|-----------------|--|----------|------------------|----------|-----|
|                  |                 | Nov 2018                               | Dec 2018 | Nov 2018         | Dec 2018 |     |
| Erskine Park WTS | D10             | 3.6                                    | 6.1**    | 3.1              | 5.5**    | 4.0 |
|                  | D11***          | -                                      | -        | -                | -        | 4.0 |
|                  | D12             | 6.4**                                  | 24.2     | 5.5**            | 19.9     | 4.0 |

#### Table 15 – Construction Dust Monitoring Results

Note: \*Data reported is for the period of time construction works were undertaken at site (i.e. November 2018 and December 2018).

\*\*Exceedances due to presence of insects in the sample.

\*\*\*Depositional dust monitoring gauge (D11) was removed during construction works and was not replaced.

Average insoluble matter and average ash deposit data for D10 and D12 exceeded EPA criteria. These results were also higher than baseline data (is 1.18 g/m2/month) provided in the CEMP (SLR 2015b). As indicated in **Table 15**, a number of exceedances were a result of contamination of the sample bottle. The exceedances for D12 in December 2019 were likely a result of landscaping activities that were undertaken around this depositional dust monitoring gauge. Compared to last year's dust monitoring results, this year's dust levels were higher.

Odour monitoring was undertaken between 28 March 2019 and 7 June 2019 by The Odour Unit (TOU). The monitoring determined that the Tri-stack system was operating to its design airflow specification for each fan unit as specified in the OMP.

Nine (9) complaints regarding odour were received during the reporting period (refer to **Section 9**). No complaints were received regarding dust.

## **Comparison against Predictions**

The potential impacts of construction phase activities giving rise to nuisance dust or causing health related dust impacts was assessed by the EIS (SLR 2015a) using a risk-based approach. The following risks were identified:

- High Risk: Dust soiling impacts from trackout along a short section of Quarry Road on the Erskine Park Industrial Precinct;
- Medium Risks: Dust health impacts associated with demolition, earthworks and trackout. These
  impacts were all associated with the neighbouring premises on the Erskine Park Industrial
  Precinct and not at any residential areas; and
- Low Risks: Dust soiling impacts associated with demolition, earthworks and construction, and dust health impacts associated with construction. These impacts were all associated with the neighbouring premises on the Erskine Park Industrial Precinct and not at any residential areas.

Based upon the above identified risks, a comprehensive series of mitigation measures was identified as being required to manage these risks. The mitigated risks associated with construction works were assessed in the EIS (SLR 2015a) as negligible. These mitigation measures were implemented during the construction works, resulting in relatively low levels of dust at the site, except at monitoring point D12.

The EIS (SLR 2015a) assessment of potential dust related impacts during operations did not predict any exceedence of the relevant air quality standards for TSP, PM10 or PM2.5, or for dust nuisance (as determined by dust deposition rates). Dust monitoring is not required to be undertaken at the site during operations, however with no dust complaints lodged during the reporting period and operations, it can be considered that the site performed in accordance with EIS (SLR 2015a) predictions.

The Air Quality Impact Assessment (AQIA) (SLR 2015c) prepared for the EIS (SLR 2015a) modelled odour impacts associated with the operation of the WTS. This model assessed the WTS operating at its maximum future capacity and used an odour emission rate (OER) of 503.1 ou.m3/tonnes per second (ou.m3/t.s) of waste on the floor. This rate was based on TOU published data, adjusted upwards. TOU's subsequent re-run used the original published OER of 113.5 ou.m3/t.s. Odour monitoring determined that the OMS at the WTS is performing well below the estimated OER of 113.5 ou.m3/t.s.

## Incidents and Improvements

No reportable incidents related to air quality occurred during the reporting period. Exceedances in EPA dust depositional data did occur during the reporting period, although these exceedances are not classified as non-compliances with the Development Consent or the site's EPL.

In response to the odour complaints, odour surveys and an odour audit was undertaken (refer to **Section 9**).

## 6.5 Biodiversity

The site is highly disturbed. There is little remnant vegetation at the site. Areas of vegetation are predominantly maintained lawns of exotic grasses (Couch and Kikuyu) and weeds (Paddy's Lucerne, Cobblers Peg Red-flowered Mallow), with scattered planted trees (Sydney Blue Gum, Blackbutt, Lemon-scented Gum and Spotted Gum). Most of this remnant vegetation was cleared to make way for construction works, although no trees were removed from the site.

During the reporting period the site was rehabilitated in accordance with the site's Landscape Plan (refer to **Appendix D**).

The site is not required to maintain any offset areas.

During the reporting period pest (bird) control activities were undertaken in the WTS shed. Weed control activities were also undertaken in the sites gardens and pavement areas.

## 6.6 Heritage (Aboriginal and non-Aboriginal)

The site does not contain any Aboriginal and non-Aboriginal sites. No Aboriginal cultural object(s) or archaeological objectives were uncovered during construction.

## 6.7 Traffic

## **Environmental Management**

During the reporting period traffic was managed in accordance with the CEMP (SLR 2017) and OEMP (SLR 2018a). **Table 16** lists additional management and mitigation measures that have been implemented during the reporting period to minimise the impacts of traffic and access.

| Development Consent<br>Condition   | Mitigation Measure  |
|--|---|
| Development Consent<br>Condition B30 (d)   | Site access, driveways and parking areas are constructed in accordance with the latest versions of Australian Standards AS 2890.1, AS 2890.2, AS 2890.6 and AS 1428.1.  |
| Development Consent<br>Condition B30 (e)   | The swept paths of the longest vehicle entering and exiting the subject site, as well as manoeuvrability through the site, are constructed in accordance with AUSTROADS Guide to Road Design.   |
| Development Consent<br>B30   | Signage is installed to ensure traffic from the adjacent landfill provides right-of-way to construction traffic.  |
| Development Consent -<br>Appendix 3<br>Response to<br>Submissions (RTS)<br>Section 3.4 | Designated pedestrian access is provided from Quarry Road to the offices.   |
| Development Consent -<br>Appendix 3<br>RTS Section 3.4                                 | Any existing unnecessary property access is removed, the kerb reinstated to suit the existing kerb, and the verge area reinstated with grass seeded topsoil or turf, which are addressed in further designed stages.  |
| EIS Appendix A (Section 7.5)   | Methods of communication are by two-way radio, mobile phone, visual and verbal.<br>Site supervisors, traffic controllers and employees/contractors (as appropriate) have a two-<br>way radio to be contactable at all times. The communication channels for two-way radio<br>are advised. |

#### Table 16 – Traffic Mitigation Measures

## **Environmental Performance**

Transport rates during the reporting period are presented in Section 4.2.

No complaints related to construction or operations traffic were received during the reporting period.

## **Comparison against Predictions**

A comparison against EIS (SLR 2015a) predictions is not provided for construction traffic as monitoring of construction traffic is not required and an analysis of construction traffic impacts was not prepared for the site as part of the EIS.

The EIS (SLR 2015a) predicted that at full operation the total number of inbound vehicles delivering waste to the Erskine Park WRMF would be in the vicinity of 200 per day. The number of outbound waste transfer vehicles from the WTS was estimated at approximately 30 larger vehicles (semi-trailers and B-doubles per day). The actual traffic experienced at the site during the reporting period was lower than predicted, with incoming traffic volumes was 25% of what was predicted and outgoing traffic was 30% of that predicted.

## **Incidents and Improvements**

No reportable incidents related to construction traffic occurred during the reporting period.

## 6.8 Waste Management

During the reporting period waste was managed in accordance with the CEMP (SLR 2017) and Operational Waste Management Plan (OWMP) (SLR 2018a). Additional waste management measures that were implemented at the site are included in **Table 17**.

| Development<br>Consent Condition                      | Mitigation Measure  |
|---|---|
| Development<br>Consent Condition B1                   | Only materials and waste is received at the site, which are permitted by the site's EPL 2093.                           |
| Waste Reuse, Recycling                                | g and Disposal  |
| EIS Appendix I<br>(Section 5.5)<br>EIS Section 7.12.4 | During the construction works, excavated materials were re-used on-site or disposed of to a suitably licensed site.     |
|   | Green waste is mulched and re-used in landscaping on-site or used off-site.   |
|   | Concrete, tiles (where applicable) and bricks were crushed on off-site, where possible, for reuse or recycled off-site. |
|   | Steel from demolition works was recycled off-site; all other metals were recycled where economically viable.            |
|   | Colour bond roof material off cuts were stockpiled on-site for reuse or recycling.                                      |
|   | Framing timber was reused on-site or recycled off-site.   |

| Table | 17 – | Waste  | Management | Measures         |
|-------|------|--------|------------|------------------|
| TUDIC | ±/   | vvusic | wanagement | i i i cu sui c s |

| Development<br>Consent Condition                      | Mitigation Measure  |  |  |
|---|---|--|--|
|   | Windows, doors and joinery was recycled off-site (where possible).  |  |  |
|   | Waste oil was recycled or disposed of in an appropriate manner.   |  |  |
|   | All used crates were stored for reuse, unless damaged.  |  |  |
|   | Glass was recycled, where it was economically viable.   |  |  |
|   | All solid waste timber, brick, concrete, rock that cannot be reused or recycled was taken to an appropriate licenced landfill facility and disposed of in an approved manner.                   |  |  |
|   | All asbestos, hazardous and/or intractable wastes would be disposed of in accordance with WorkCover Authority and EPA requirements.   |  |  |
|   | Provision is made on-site for the collection of batteries, fluorescent tubes, smoke detectors and other recyclable resources.   |  |  |
| EIS Appendix I<br>(Section 5.5)                       | Container and paper/cardboard recycling is provided on-site for employee use. Alternatively, these items are separated at an appropriately licensed facility and sent for recycling             |  |  |
| EIS Section 7.12.4                                    | All waste generated at the site is disposed of via a council approved system.   |  |  |
|   | All other solid construction waste, including bitumen paving, tile, rock and soil, is taken to an appropriate materials recycling facility/landfill site and processed in an approved manner.   |  |  |
|   | All garbage is disposed of via a council approved system.   |  |  |
| Waste Storage   |   |  |  |
| EIS Appendix I<br>(Section 5.6)<br>EIS Section 7.12.4 | Waste skips (or stockpiles for materials to be reused on-site) are provided for various waste streams listed above.   |  |  |
|   | Separate receptacles for the safe disposal of hazardous waste types (i.e. light bulbs, batteries, etc.) are also provided where applicable.   |  |  |
| Waste Servicing                                       |   |  |  |
| EIS Appendix I<br>(Section 5.6.2)                     | Skip bins are checked on a daily basis. If the skips are reaching capacity, removal and replacement is organised for the next 24 hours.   |  |  |
| EIS Section 7.12.4                                    | All skips leaving the site are suitably covered to avoid waste spillage while in transit.   |  |  |
|   | All waste collection for construction works was conducted between 7am and 6pm.  |  |  |
| Waste Avoidance                                       |   |  |  |
| EIS Appendix I  | Site disturbance was minimised to reduce unnecessary excavation.  |  |  |
| (Section 5.4)<br>EIS Section 7.12.4                   | Where possible, materials were ordered to size or ordered as pre-cut and prefabricated materials  |  |  |
|   | Construction materials were selected in consideration of their lifespan and potential re-use.   |  |  |
|   | Where possible, construction formwork was reused on-site  |  |  |
|   | Subcontractors were informed of site waste management procedures.   |  |  |
|   | Packing wastes was reduced, where possible, by returning packaging to the suppliers (e.g. pallets, reels), purchasing in bulk and requesting cardboard or metal drums (as opposed to plastics). |  |  |

| Development<br>Consent Condition                        | Mitigation Measure  |
|---|---|
| EIS Appendix I<br>(Section 5.4)<br>EIS Section 7.12.4   | The Construction Principal Contractor advised on material selection for the reduction of embodied energy and resource depletion.  |
| Liquid Waste  |   |
| EIS Appendix I<br>(Section 5.6.4)<br>EIS Section 7.12.4 | Liquid wastes and dangerous goods wastes generated construction activities was disposed of by a suitably qualified contractor to an appropriately licensed disposal facility. |
|   | Equipment/plant/machinery/vehicles was washed down within an appropriately bunded wash-down bay.  |

## **Environmental Performance**

During the reporting period the Construction Contractor recorded the types and quantities of waste produced at the site. Construction waste produced at the site during the reporting period is summarised in **Table 18**. A total of 48.3 tonnes of construction waste was removed from the site during the reporting period. Construction waste was only generated at the site during November and December 2018, when construction was undertaken.

During site operations (December 2018 to October 2019) no waste and no recyclables were produced by the site.

## **Comparison against Predictions**

The revised WMP, contained as a sub-plan in the CEMP (SLR 2017) (the original was a Technical Appendix of the EIS), provides the following (refer to **Table 19**) total waste volume estimate for the WTS, during construction.

| Building                     | Approximate Area | Estimated Waste Generation | Total tonnes waste |
|------------------------------|------------------|----------------------------|--------------------|
|                              | (m²)             | (m <sup>3</sup> )          | (t)                |
| Transfer Station<br>Building | 4,250            | 595                        | 408                |

### Table 18 – Estimated Waste Generation – Major Construction Activities

Last year, the amount of construction waste generated at the site was 53.1 tonnes. Together with this year's construction waste amount, the total volume of construction waste generated at the site is 101.4 tonnes, well below predicted volumes.

**Table 20** indicates the amount of waste predicted to be generated during the operations of the site(Cleanaway 2018a).

#### Table 19 – Estimated Waste Generation during Site Operations

| Area      | Estimated Weekly Waste Generation (L) | Estimated Weekly Recycling Generation (L) |
|-----------|---------------------------------------|---|
| Offices   | 35                                    | 35  |
| Kitchen   | 20                                    | 20  |
| Warehouse | 380                                   | 380                                       |
| Total     | 435                                   | 435                                       |

The total volume of waste and recyclables produced at the site, during the reporting period, was nil.

## **Incidents and Improvements**

No reportable incidents related to waste (generated from site activities) occurred during the reporting period.

During the next reporting period the site's waste management program will continue to be implemented, in accordance with the site's OWMP. In accordance with this Plan, operations waste will continue to be sent to a licenced landfill facility and disposed of in an approved manner. Operations waste (if produced) will also be recycled, where possible.

## 6.9 Visual Amenity

## **Environmental Management**

Management and mitigation measures were implemented at the site during the reporting period to minimise direct and indirect impacts on visual amenity, in accordance with the CEMP (SLR 2017) and OEMP (SLR 2018a). Light impacts from the Development were also minimised, with all construction works undertaken during the day.

Improvements to the visual appearance of the site, undertaken during the reporting period, included:

- A 3-metre screen was installed on the western side of the site office;
- Trees and shrubs were planted at the site, in accordance with the Landscape Plan; and
- The office was painted the same external colour scheme as the main transfer station building.


Photo 1 Screen and Landscaping Adjacent to the Site's Office

## **Environmental Performance**

No complaints regarding visual impacts were received by the site.

## **Comparison against Predictions**

A Visual Impact Assessment (VIA) (Green Bean Design 2015) was undertaken (As part of the EIS) to assess the impact of the Development on the existing landscape character of the surrounding environment. The VIA found that the Development is consistent with the existing industrial development and with the implementation of identified mitigation measures it would have limited visual impacts during construction. The Development would therefore have negligible impact on the visual amenity of people living in or traveling through the landscape of the surrounding area. All the required mitigation measures were undertaken during the reporting period, therefore the visual impacts of the Development were consistent with the EIS predictions.

## **Incidents and Improvements**

No reportable incidents related to visual impacts occurred during the reporting period. Therefore, no visual amenity improvements are proposed for the site during the next reporting period.

## 6.10 Contamination

### **Environmental Management**

Mitigation measures were implemented during the construction and operation of the Development, in accordance with the CEMP (SLR 2017) and OEMP (SLR 2018a), to minimise the potential for contamination.

#### **Environmental Performance**

During the construction works (excavations) undertaken during the reporting period, no contamination was discovered at the site.

No contaminated/hazardous waste was brought to the site in waste loads.

During the reporting period no complaints regarding hazardous material were received.

#### **Comparison against Predictions**

A soil, geology and contamination assessment was undertaken for the EIS (SLR 2015a). A total of nine (9) test pits were excavated. The test pit locations are presented in **Figure 6**. Visual assessment of material exposed during excavation of the geotechnical boreholes (test pits) and subsequent laboratory analysis of samples concluded there was no potential source or evidence of contamination within the site. These predictions made in the EIS were confirmed, with no contamination discovered at the site during the reporting period.

#### Figure 6 Site Plan Showing Borehole and Test Pit Locations



The EIS (SLR 2015a) did not quantify (predict) the amount of contaminated/hazardous material that could potentially be brought to the site.

#### **Incidents and Improvements**

During the reporting period there were no accidental spills of chemicals/hydrocarbons.

Any contaminated/hazardous material that is brought to the site in waste loads will be managed appropriately, during the next reporting period.

# 7. Water Management

The sections below provide details regarding water management and water monitoring results for the site, during the reporting period.

The site does not have any water licences therefore water take is not reported. In addition, the site does not discharge water (besides sewage), belong to a salinity trading scheme or provide compensatory water to other users.

## 7.1 Surface Water

## **Environmental Management**

An Erosion and Sediment Control Plan (ESCP) was prepared for the construction of the Development, and was attached to the CEMP (SLR 2017). The erosion and sediment controls were established by a certified contractor, during the prior reporting period. During this reporting year, the erosion and sediment controls were monitored and maintained while construction works were undertaken, in accordance with the ESCP.

During the reporting period, mitigation measures were implemented to minimise direct and indirect impacts on surface water. These were undertaken in accordance with the CEMP (SLR 2017) and OEMP (SLR 2018a). Cleanaway also complied with Section 120 of the *Protection of Environment Operations (POEO) Act 1997*, during the reporting period.

The Statement of Commitments in Appendix 3 of SSD 7075, as modified, requires water quality monitoring of water within the sediment basins, during the construction phase of the Development (SLR 2015b). Monitoring of surface water quality is required at sediment basins (Dam 1 and Dam 2), prior to any controlled release (discharge). Dam 1 is the existing sediment dam located in the north-west corner of the site. Dam 2 was constructed at the site during the prior reporting period and was used while the site underwent construction. The water quality monitoring program for the sediment dams is summarised in the table below.

| Quality Characteristic          | Limit      | Frequency  |
|---------------------------------|------------|--|
| Total Suspended Solids<br>(TSS) | 50<br>mg/L | Fortnightly or following significant rainfall event (i.e. >10mm in a 24hr period). |
| рН                              | 6.5 – 8    |  |
| Oil and grease                  | 15<br>mg/L |  |

## Table 20 – Sediment Dam Water Quality Monitoring Program

A Stormwater Management Scheme (Stormwater Maintenance and Operations Plan [SMOP] [SLR 2018b)) has been prepared for the site, consistent with the Stormwater Management Plan for the catchment, in accordance with Condition B16 (Schedule C) of SSD 7075, as modified. Implementation of the scheme will mitigate the impacts of stormwater run-off from and within the premises. The SMOP stormwater controls were installed and implemented during the reporting period. Further details of the stormwater controls are provided in **Section 4.1**.

The SMOP also outlines the stormwater quality monitoring for the site, as summarised in Table 22.

### Table 21 – Stormwater Water Quality Monitoring Program

| Parameter                                       | Default<br>Trigger<br>Value*   | Inspection Frequency                        | Responsibility |  |
|---|--|---|----------------|--|
| Chlorophyll a (Chl a) (mg/L)                    | 0.003  |   | Cleanaway      |  |
| Total Phosphorous (TP)<br>(mg/L)                | Total Phosphorous (TP)<br>(mg/L)0.025Filterable reactive<br>phosphate (FRP) (mg/L)0.02 |   |                |  |
| Filterable reactive<br>phosphate (FRP) (mg/L)   |  |   |                |  |
| Total Nitrogen (TN) (mg/L)                      | 0.35   |   |                |  |
| Oxides of Nitrogen (NOx)<br>(mg/L)              | 0.04   | Monthly during discharge for first year and |                |  |
| Ammonium (NH4+) (mg/L)                          | 0.02   | bi-annually during discharge thereafter     |                |  |
| Dissolved oxygen (DO)<br>(daytime % saturation) | 85% - 110%   |   |                |  |
| рН  | 6.5 – 8.5  |   |                |  |
| Salinity (µS/cm)                                | 125 – 220 **   |   |                |  |
| Turbidity (NTU)                                 | 6-50 ***   |   |                |  |
| Total Suspended Solids                          | 50mg/L   |   |                |  |

The SMOP also outlines the stormwater structures monitoring and maintenance program that is summarised in **Table 23**.

| System /<br>Device                   | Inspection /<br>Maintenance Tasks   | Responsibility          | Inspection<br>Frequency  | Mitigation Actions  |
|--------------------------------------|---|-------------------------|--|---|
| Bioretention<br>Vegetation           | Check for weeds.<br>Check health of plants.<br>Note – the health of the<br>plants is crucial to the<br>treatment process. | Landscape<br>Contractor | Monthly for first 6<br>months and<br>Quarterly thereafter  | Control weeds<br>Replacement of plants<br>as required.<br>Investigate causes<br>of significant die<br>back / dead plants  |
| Bioretention Filter<br>Media Surface | Inspect filter media for<br>sediment build up,<br>litter, erosion or scour<br>damage.                                     | Cleanaway               | Monthly and after<br>heavy rainfall events<br>(>30mm in 24 hours)<br>for first 6 months<br>and Quarterly<br>thereafter | Removal of any litter<br>from bioretention filter<br>media surface. Scrape<br>away small amounts of<br>isolated sediment<br>build up (if required).<br>Seek advice from a<br>suitably qualified<br>stormwater engineer<br>or consultant where<br>significant erosion,<br>scour or filter media<br>damage is observed. |

Table 22 – Stormwater Structures Monitoring and Maintenance Program

| System /<br>Device  | Inspection /<br>Maintenance Tasks  | Responsibility                          | Inspection<br>Frequency  | Mitigation Actions   |
|---|--|---|--|--|
| Basin Inlet Forebay   | Inspect forebay for litter<br>and sediment build up.<br>Check depth of<br>sediment in forebay. | Cleanaway                               | Quarterly  | Remove any litter from<br>forebay.<br>Schedule removal of<br>sediment to rock<br>level if greater than<br>50% of forebay is full<br>of sediment.   |
| Basin Inlets and<br>Outlets   | Inspect inlets and outlets for blockage and debris.  | Cleanaway                               | Monthly and after<br>heavy rainfall events<br>(>30mm in 24 hours)  | Unblock inlets and<br>outlets if required.<br>Seek advice from a<br>suitably qualified<br>stormwater engineer<br>or consultant where<br>inlets or outlets are<br>significantly<br>damaged. |
| Bioretention<br>Underdrainage   | Inspect for blockages<br>and isolated surface<br>ponding                                       | Cleanaway                               | Quarterly  | Flush underdrainage<br>at flush points if<br>required.   |
| Humocontors   | Inspection in accordance<br>with Humeceptor<br>inspection procedures.                          | Cleanaway /<br>Contractor               | Quarterly for first<br>year. Establish<br>appropriate<br>frequency based on<br>findings of first year<br>of inspections        | Schedule cleaning as required.   |
|   | Cleaning in accordance<br>with Humeceptor<br>cleaning procedure                                | Vacuum /<br>eductor truck<br>contractor | Annually –<br>subject to<br>inspection<br>observations   | Not applicable   |
| Atlantis Flow-<br>Tank OSD System   | Inspect for blockages<br>and sediment build up<br>including inlet and<br>outlet pipes          | Cleanaway                               | Bi-annually  | Remove blockages<br>and de-silt as<br>required.  |
| Pits and Pipes<br>(including trash<br>racks and Ecosol<br>Litter Baskets) | Inspect for blockages<br>and debris, or excessive<br>build-up of sediment                      | Cleanaway                               | Quarterly for first<br>year.<br>Establish<br>appropriate<br>frequency based<br>on findings of first<br>year of<br>inspections. | Remove blockages<br>and debris as<br>required manually<br>or via vacuum.   |

| System /<br>Device | Inspection /<br>Maintenance Tasks   | Responsibility | Inspection<br>Frequency                                    | Mitigation Actions  |
|--------------------|---|----------------|--|---|
| Rainwater<br>tanks | Inspect the structural<br>integrity of the tank,<br>blockages, sediment<br>build up and evidence<br>of animal access<br>including the<br>associated pipework,<br>inlets / outlets, insect<br>proofing and leaf<br>filters | Cleanaway      | Quarterly for first<br>year and bi-annually<br>thereafter. | Cleaning and repair of<br>tank as required.<br>Seek advice from a<br>suitably qualified<br>consultant where<br>structural damage is<br>observed.<br>If significant issue is<br>observed then the<br>access points will<br>be temporarily<br>closed. |
| Roof gutters       | Check for accumulated debris including leaf litter.   | Cleanaway      | Annually   | Clean out of gutters.   |
| Bunded areas       | Inspect for spills and integrity of bunds   | Cleanaway      | Weekly   | Disposal of any<br>spilled hazardous<br>materials in a<br>suitable manner.<br>Re-instate bunds as<br>required.  |

Leachate is managed at the WTS in accordance with the Leachate Management System (Protocol), in accordance with Condition B17 of SSD 7075. In accordance with the Protocol, leachate from the WTS operations was transferred to the adjacent leachate treatment plant (LTP) for treatment, refer to **Figure 2**. Once treated, the leachate was then discharged into the Penrith City Council (PCC) sewer system in accordance with the existing trade waste discharge agreement with Sydney Water. No leachate was sent off-site for treatment, during the reporting period.

Water quality monitoring of the treated leachate in the LTP is undertaken in accordance with the existing trade waste agreement.

## **Environmental Performance**

Monitoring of the water quality of the sediment basins (Dam 1 and Dam 2) was not undertaken during the reporting period, as there were no controlled discharges from the dams.

Stormwater quality monitoring results are not available, as discharges from the sediment basin during the operations of the WTS were not monitored. This included offsite stormwater discharges during two overnight storm events. This is a non-compliance with the site's OEMP (SLR 2018a) and SMOP (SLR 2018b).

The LTP is managed by Cleanaway's landfill operations. This includes the leachate monitoring program. Subsequently, leachate monitoring results are not provided. They are reported separately.

## **Comparison against Predictions**

The Erskine Park WTS EIS (SLR, 2015a) predicts there will be no impacts on local water resources including the flow and quality of surface water. The factors which contributed this prediction included:

• Absence of floodable land shown on Broader Western Sydney Employment Area draft Structure Plan 2013;

- Water requirements of RMF will be serviced by existing infrastructure;
- Stormwater runoff will be captured by existing retention pond which overflows to the Council's stormwater system by an outlet structure;
- The absence of on-site waste disposal or long-term waste stockpiling; and
- No Acid sulphate soils with moderate salinity levels present on-site (SLR, 2015a).

There were no impacts to external surface water during the reporting period, with no discharges from the site during construction works. In addition, during operations, stormwater runoff was captured by the retention pond, prior to release.

## **Incidents and Improvements**

No incidents or complaints relating to surface water occurred during the reporting period.

Mitigation measures for stormwater and leachate will continue to be implemented, during the next reporting period. Stormwater and leachate monitoring will also be undertaken, during the upcoming year.

A monitoring consultant will be engaged to investigate options for installing sampling equipment at the bioretention basin, to ensure future discharge events are sampled in accordance with the SMOP.

## 7.2 Groundwater

## **Environmental Management**

The Statement of Commitments in Appendix 3 of SSD 7075, as modified, requires a program of groundwater monitoring to be undertaken at the site, building on the ongoing groundwater monitoring program undertaken for the adjacent Erskine Park landfill.

Monitoring is undertaken at 14 groundwater bores surrounding the Erskine Park landfill in accordance with the site's EPL (EPL 4865). Three (3) of the groundwater bores (BH5, BH17D and BH17E) are within the site. Quarterly groundwater monitoring at these bores was undertaken during the reporting period. Samples were analysed for the same parameters as those monitored for the landfill groundwater monitoring program).

Groundwater quality criteria/limits have not been set for the site. However, EPL 4865 sets a detection limit for ammonia (15 mg/L). In accordance with EPL 4865, if an ammonia level of 15 mg/L or more is detected, confirmation sampling will occur, and Cleanaway will prepare a report that proposes actions that will be implemented to prevent the release of contaminated groundwater from the premises.

## **Environmental Performance**

Groundwater monitoring results for the bores within the site are provided in **Table 24**. Other groundwater bores, as depicted on **Figure 4**, are monitored as part of the Erskine Park Landfill EPL 4865 requirements, and therefore the results of these are not reported here.

Groundwater monitoring results for groundwater bore (BH5) are not available as the bore was removed during construction. This is a non-compliance with the CEMP and OEMP.

|                              | BH17D  | BH17E  | LOR (mg/L) |
|------------------------------|--------|--------|------------|
| Total Dissolved Solids (TDS) | 1173.3 | 5626.7 | 10         |
| тос                          | 5.3    | 3.3    | 1          |
| Ammonia                      | 13.6   | 4.2    | 0.01       |
| Calcium                      | 14.0   | 291.0  | 1          |

| <b>T</b> - 1-1 - | 22   | A       | <b>•</b> ••••••••••••••••••••••••••••••••••• | <b>.</b>    | <b>c</b> | C          |          |        | D     |
|------------------|------|---------|--|-------------|----------|------------|----------|--------|-------|
| lable            | 23 - | Average | Quarterly                                    | / Results ' | tor      | Groundwate | r ivioni | toring | Bores |

|             | BH17D | BH17E  | LOR (mg/L) |
|-------------|-------|--------|------------|
| Magnesium   | 79.3  | 153.3  | 1          |
| Sodium      | 407.3 | 1446.0 | 1          |
| Potassium   | 15.7  | 36.0   | 1          |
| Chloride    | 438.3 | 2955.7 | 1          |
| Sulphate    | 62.0  | 16.3   | 1          |
| Alkalinity  | 519.7 | 775.3  | 1          |
| Hydroxide   | <1    | <1     | 1          |
| Carbonate   | <1    | <1     | 1          |
| Bicarbonate | 519.7 | 775.3  | 1          |

The ammonia level for the monitored groundwater monitoring bores was below the EPL 4865 detection limit. Baseline groundwater data for BH17D and BH17E is included in **Appendix E.** Groundwater quality levels for BH17D were generally lower than baseline levels, except for TDS, ammonia and magnesium, with these values higher than historic readings. For BH17E groundwater quality levels were higher than baseline levels for all parameters except for sulphate, alkalinity and TOC.

Average groundwater depths for BH17D and BH17E during the reporting period were 17.7 m and 7.1 m, respectively. These depths were marginally higher (closer to the surface) than those recorded during the last reporting period.

## **Comparison against Predictions**

The Erskine Park EIS (SLR, 2015a) predicted that the local groundwater was unlikely to be impacted by the Development. The site performed in accordance with EIS predictions.

## **Incidents and Improvements**

No reportable incidents related to groundwater occurred during the reporting period, therefore no improvements are proposed by Cleanaway.

The groundwater monitoring program will continue to be undertaken during the reporting period. Groundwater monitoring bore BH5 will also be replaced.

# 8. Rehabilitation (Landscaping)

Landscaping (rehabilitation) was undertaken at the site in December 2018, after handover by the Construction Contractor to Cleanaway was completed. All landscaping was undertaken in accordance with the Landscape Plan. The Landscape Plan (Jocelyn Ramsay & Associates 2018) is included in **Appendix D**. Landscaping works undertaken included:

- Mulching;
- Planting of trees;
- Establishment of turf; and
- Seeding of grass.

Photo's provided in **Appendix F** indicate landscaping that has been undertaken at the site, during the reporting period.

Since landscaping has been undertaken, these landscaped areas have been maintained.

# 9. Community

## 9.1 Community Sponsorship

The site sponsored the Mindaribba Warriors Rugby League Club's 2018 Japan tour, during the reporting period.

## 9.2 Community Consultation and Information Strategy

In accordance with Condition C1 and C3 of SSD 7075, as modified, a Community Consultation and Information Strategy was prepared for the construction and operation phases of the Development and is included in the CEMP (SLR 2017) and OEMP (SLR 2018a). This Community Consultation and Information Strategy was implemented during the reporting period (construction works), with a Development email address, Development contact number and website maintained for the site.

## 9.3 Project Website

In accordance with Condition C3 of SSD 7075, as modified, the community is kept informed of the operation and environmental performance of the Development, with all Annual Reviews posted on the Development's website.

In accordance with condition C13 SSD 7075, as modified, the website provides the following information:

- Staged Development application;
- EIS (SLR 2015a);
- RTS (SLR 2015b);
- Statutory approvals;
- Monitoring results;
- Management plans; and
- Complaints Register.

The website also includes Community Newsletters and updates on information discussed at community briefing sessions.

## 9.4 Complaints

During the reporting period there were nine complaints related to odour. Additional detail regarding the complaints is provided in **Table 25** and in the Complaints Register published on the site's website.

Last year there were only two complaints; one related to dust monitoring and the other related to removal of hazardous material from the site. These complaints related to the construction of the site, compared to the complaints for this reporting period which relate to operations.

#### Table 24 – Complaints received during the Reporting Period

| Subject | Detail  | Timing                 | Action  | Outcome  |
|---------|---|------------------------|---|--|
| Odour   | Multiple odour complaints received by<br>EPA prior to 26 February 2019. EPA<br>undertook follow-up odour surveys. This<br>included an odour survey on 26 February<br>2019 that detected odour, with the<br>source believed to be the WTS. | 26<br>February<br>2019 | Standard<br>responses<br>provided to<br>EPA queries. <sup>2</sup> | Undertake odour survey and odour<br>audit.   |
| Odour   | Odour complaint   | 20 March<br>2019       | Standard<br>responses<br>provided to<br>EPA queries.              | Undertake odour survey and odour audit.  |
| Odour   | Odour complaint   | 21 March<br>2019       | Standard<br>responses<br>provided to<br>EPA queries.              | Undertake odour survey and odour<br>audit.   |
| Odour   | Odour complaint received by EPA.  | 27 March<br>2019       | Standard<br>responses<br>provided to<br>EPA queries.              | Undertake odour survey and odour audit.  |
| Odour   | Complaint about odours received by EPA.   | 9 April<br>2019        | Standard<br>responses<br>provided to<br>EPA queries.              | Undertake odour survey and odour audit.  |
| Odour   | Three odour complaints received by EPA.<br>Due to the wind direction and description<br>of the odour the EPA suspected that the<br>WTS was the potential source of the<br>alleged odours.   | 12 June<br>2019        | Standard<br>responses<br>provided to<br>EPA queries.              | Cleanaway infers that the WTS was not<br>the source of the alleged odour.<br>Cleanaway engaged "EC Control" to<br>upgrade/install a software to allow<br>historical data retrieval from the tri-<br>stack fans and scrubber system.<br>A performance odour audit report was<br>due to Cleanaway on 5 July 2019.<br>Cleanaway to use consultant feedback<br>to operate wet scrubber pollution<br>control system in an effective manner. |
| Odour   | Complaint about odour received by EPA.<br>Due to the wind direction and description<br>of the odour the EPA suspected that the<br>WTS was a potential source of the alleged<br>odours.  | 13 June<br>2019        | Standard<br>responses<br>provided to<br>EPA queries.              | Cleanaway engaged "EC Control" to<br>upgrade/install a software to allow<br>historical data retrieval from the tri-<br>stack fans and scrubber system.<br>A performance odour audit report was<br>due to Cleanaway on 5 July 2019.<br>Cleanaway to use consultant feedback<br>to operate wet scrubber pollution<br>control system in an effective manner.  |

<sup>&</sup>lt;sup>2</sup> Standard response includes such details as; the amount of putrescible and non-putrescible waste material on the Premises at the time of the complaint, if air was being discharged out of the stacks, if the wet scrubber pollution control system was being used, if all the air from the receival hall was being put through the wet scrubber, if there was any other activities occurring that could have generated the alleged odour, a copy of the real time monitoring data from the emissions control system and a copy of the hourly wind rose from the onsite weather station.

# 10. Independent Audit

In accordance with Condition C8 and C9 (Schedule C) of SSD 7075 (as modified) Cleanaway will commission an Independent Environmental Audit (IEA) within 1 year of the date of the commencement of operation of the Development, and every 3 years afterward. The first IEA is due to be commissioned on 17 December 2019.

In accordance with SSD 7075 condition B12 and EPL 20986 condition E3.1 Cleanaway are required to carry out an Odour Audit within six (6) months of commencement of operation of the WTS. Cleanaway are also required to submit a copy of the odour audit report to DPIE, EPA and Penrith City Council (Council) within two (2) months of commissioning the Odour Audit, in accordance with SSD 7075 condition B13 and EPL 20986 condition E3.2. The Odour Unit (TOU) was commissioned to undertake the audit in early March 2019. The site inspection component of the odour audit was undertaken on 9 April 2019. Prior to the odour audit two preliminary site investigations (visits) were conducted on the 3 April and 4 April 2019. The Odour Audit Report was submitted to the EPA on 21 November 2019. The Audit Report will be submitted to DPIE and Council with this Annual Review.

Based on the Odour Audit the following findings were made:

- The Tri-stack system was operating to its design airflow specification for each fan unit as specified in the OMP;
- The Audit was unable to verify the discharge stack velocity of the Tri-stack system due to accessibility issues and a lack of suitable measurement point;
- From an odour and Ammonia (NH<sub>3</sub>) inlet concentration loading perspective, the scrubber system is lightly loaded, to the extent where both odour and NH<sub>3</sub> levels are well below levels that would require treatment. As such, there is no evidence found in the Audit to warrant a variation in the current scrubbing liquor from water to chemical dosing;
- The inlet air quality of the WTS under normal operating conditions was found to be of good quality given the waste volume levels being processed and the operation of only two fans during the day and one fan during the night;
- The current operation of the WTS building louvres requires optimisation to maximise building air containment and minimise fugitive emission release under the current Tri-stack fan system operation;
- The louvres automatically shut when a fast-acting roller door has remained open for longer than thirty (30) seconds. The Audit supports this mode of operation; and
- The weather station connected to the OMS was found to be in a non-ideal location. The weather station installer should be approached, and justification provided on the integrity of the existing meteorological station location and readings.

# 11. Incidents and non-compliances during the reporting period

## **11.1** Non-compliances

One (1) non-compliance occurred during the reporting period.

Cleanaway were required to submit a copy of the Odour Audit Report to DPIE, EPA and Penrith City Council (Council) within two (2) months of commissioning the Odour Audit, in accordance with SSD 7075 condition B13 and EPL 20986 condition E3.2. The Odour Audit was not submitted to these regulators within this timeframe. Cleanaway sought an extension to submit the Odour Audit Report to EPA at a later date, but no such extension was sought from DPIE or Council. Therefore Cleanaway was non-compliant with SSD 7075 condition B13.

## **11.2** Incidents

No reportable incidents or exceedances occurred during the reporting period.

## **11.3** Other

Cleanaway did not receive any official cautions, warning letters, penalty notices or undertake prosecution proceedings for the site, during the reporting period.

# **12 Activities to be completed in the next reporting period**

The WTS will receive and process approximately 150,000 tonnes of waste during the next reporting period.

Activities to be completed in the next reporting period to improve the environmental or community performance of the operation:

- Maintain landscaping at the site;
- Continue groundwater monitoring at the site;
- Groundwater monitoring borehole BH5 will be replaced;
- Conduct stormwater monitoring at the site, in accordance with the SMOP;
- Engage a monitoring consultant to investigate options for installing sampling equipment at the bioretention basin, to ensure future discharge events are sampled in accordance with the SMOP;
- Continue to undertake stormwater structures monitoring at the site;
- Continue to operate the weather monitoring station at the site;
- Manage any complaints received at the site;
- Undertake Odour Audit follow-up actions;
- Consult with DPIE regarding Stage 2 of the Development;
- Commission the first IEA for the site. Implement any actions following the IEA; and
- Submit the site's first Annual Return to the EPA.

# References

Cleanaway (2018) Operational Waste Management Plan - Erskine Park Waste Transfer Station – Stage 1.

DPIE (2015) Annual Review Guideline. Post-approval Requirements for State Significant Mining Developments.

EME (2018) Erskine Park Waste and Resource Management Facility Modification to approved SSD 7075 (Modification 3) Environmental Assessment Report.

EPA (2006) Assessing Vibration: A Technical Guideline.

EPA (2009) Interim Construction Noise Guideline (ICNG or Guideline)

Green Bean Design (2015) Erskine Park Waste Transfer Station. Visual Impact Assessment.

Jocelyn Ramsay & Associates (2018) Erskine Park WTS Landscape Site Plan.

SLR (2015a) Erskine Park Resource Management Facility. Staged SSD (SSD – 7075) Concept Plan and Stage 1 Waste Transfer Station. Environmental Impact Statement (EIS).

SLR (2015b) Erskine Park Resource Management Facility. Staged SSD (SSD – 7075) Concept Plan and Stage 1 Waste Transfer Station. Response to Submissions (RTS)

SLR (2015c) Erskine Park Resource Management Facility Staged SSD. Air Quality Impact Assessment (AQIA).

SLR (2017) Construction Environmental Management Plan - Erskine Park Resource Management Facility Stage 1 Waste Transfer Station.

SLR (2018a) Operational Environmental Management Plan - Erskine Park Resource Management Facility Stage 1 Waste Transfer Station.

SLR (2018b) Stormwater Maintenance and Operations Plan. Erskine Park Transfer Station – Stage 1.

The Odour Unit (TOU) (2019) Erskine Park Resource Management Facility – Waste Transfer Station Odour Audit.

Appendix A Varied Environment Protection Licence (EPL) 20986

Licence - 20986

| Licence Details    |              |  |  |
|--------------------|--------------|--|--|
| Number:            | 20986        |  |  |
| Anniversary Date:  | 18-September |  |  |
|                    |              |  |  |
| Licensee           |              |  |  |
| CLEANAWAY PTY LTD  |              |  |  |
| 441 ST KILDA RD    |              |  |  |
| MELBOURNE VIC 3004 |              |  |  |

## **Premises**

ERSKINE PARK WASTE TRANSFER STATION

85-87 QUARRY ROAD

**ERSKINE PARK NSW 2759** 

## **Scheduled Activity**

Chemical storage

Waste processing (non-thermal treatment)

Waste storage

## Fee Based Activity

General chemicals storage

Non-thermal treatment of general waste

Waste storage - other types of waste

## <u>Region</u>

Waste & Resource Recovery 59-61 Goulburn Street SYDNEY NSW 2000 Phone: (02) 9995 5000

Fax: (02) 9995 5999

PO Box A290

SYDNEY SOUTH NSW 1232

| Scale                           |
|---------------------------------|
| 0-5000 kL storage capacity      |
| Any annual processing capacity  |
| Any other types of waste stored |



Licence - 20986



| INF | ORMATION ABOUT THIS LICENCE                          | 4  |
|-----|--|----|
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| 3   | LIMIT CONDITIONS                                     | 7  |
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## Information about this licence

## Dictionary

A definition of terms used in the licence can be found in the dictionary at the end of this licence.

## **Responsibilities of licensee**

Separate to the requirements of this licence, general obligations of licensees are set out in the Protection of the Environment Operations Act 1997 ("the Act") and the Regulations made under the Act. These include obligations to:

- ensure persons associated with you comply with this licence, as set out in section 64 of the Act;
- control the pollution of waters and the pollution of air (see for example sections 120 132 of the Act);
- report incidents causing or threatening material environmental harm to the environment, as set out in Part 5.7 of the Act.

## Variation of licence conditions

The licence holder can apply to vary the conditions of this licence. An application form for this purpose is available from the EPA.

The EPA may also vary the conditions of the licence at any time by written notice without an application being made.

Where a licence has been granted in relation to development which was assessed under the Environmental Planning and Assessment Act 1979 in accordance with the procedures applying to integrated development, the EPA may not impose conditions which are inconsistent with the development consent conditions until the licence is first reviewed under Part 3.6 of the Act.

## **Duration of licence**

This licence will remain in force until the licence is surrendered by the licence holder or until it is suspended or revoked by the EPA or the Minister. A licence may only be surrendered with the written approval of the EPA.

## Licence review

The Act requires that the EPA review your licence at least every 5 years after the issue of the licence, as set out in Part 3.6 and Schedule 5 of the Act. You will receive advance notice of the licence review.

## Fees and annual return to be sent to the EPA

For each licence fee period you must pay:

- an administrative fee; and
- a load-based fee (if applicable).





The EPA publication "A Guide to Licensing" contains information about how to calculate your licence fees. The licence requires that an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints), be submitted to the EPA. The Annual Return must be submitted within 60 days after the end of each reporting period. See condition R1 regarding the Annual Return reporting requirements.

Usually the licence fee period is the same as the reporting period.

## Transfer of licence

The licence holder can apply to transfer the licence to another person. An application form for this purpose is available from the EPA.

## Public register and access to monitoring data

Part 9.5 of the Act requires the EPA to keep a public register of details and decisions of the EPA in relation to, for example:

- licence applications;
- licence conditions and variations;
- statements of compliance;
- load based licensing information; and
- load reduction agreements.

Under s320 of the Act application can be made to the EPA for access to monitoring data which has been submitted to the EPA by licensees.

## This licence is issued to:

## CLEANAWAY PTY LTD 441 ST KILDA RD

MELBOURNE VIC 3004

subject to the conditions which follow.

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## **1** Administrative Conditions

## A1 What the licence authorises and regulates

A1.1 This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

| Scheduled Activity                          | Fee Based Activity                     | Scale                             |
|---|--|-----------------------------------|
| Chemical storage                            | General chemicals storage              | 0 - 5000 kL storage<br>capacity   |
| Waste processing<br>(non-thermal treatment) | Non-thermal treatment of general waste | Any annual processing<br>capacity |
| Waste storage                               | Waste storage - other types of waste   | Any other types of waste stored   |

## A2 Premises or plant to which this licence applies

A2.1 The licence applies to the following premises:

| Premises Details                    |
|-------------------------------------|
| ERSKINE PARK WASTE TRANSFER STATION |
| 85-87 QUARRY ROAD                   |
| ERSKINE PARK                        |
| NSW 2759                            |
| LOT 1 DP 1140063                    |

## A3 Information supplied to the EPA

A3.1 Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.

In this condition the reference to "the licence application" includes a reference to:

a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and

b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.

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## 2 Discharges to Air and Water and Applications to Land

## P1 Location of monitoring/discharge points and areas

P1.1 The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.

## 3 Limit Conditions

## L1 Pollution of waters

L1.1 Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.

## L2 Waste

L2.1 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.

Any waste received at the premises must only be used for the activities referred to in relation to that waste in the column titled "Activity" in the table below.

Any waste received at the premises is subject to those limits or conditions, if any, referred to in relation to that waste contained in the column titled "Other Limits" in the table below.

This condition does not limit any other conditions in this licence.

| Code | Waste                                    | Description  | Activity  | Other Limits |
|------|--|--|---|--------------|
| NA   | General solid waste<br>(putrescible)     | As defined in Schedule<br>1 of the POEO Act, as<br>in force from time to<br>time | Waste processing<br>(non-thermal<br>treatment)<br>Waste storage |              |
| NA   | General solid waste<br>(non-putrescible) | As defined in Schedule<br>1 of the POEO Act, as<br>in force from time to<br>time | Waste processing<br>(non-thermal<br>treatment)<br>Waste storage |              |

- L2.2 No more than 300,000 tonnes of waste is to be received at the Premises per annum.
- L2.3 The amount of waste received at the Premises must be recorded (in tonnes) on a daily basis.
- L2.4 The authorised amount of waste permitted on the Premises must not exceed 1,040 tonnes at any one time.

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#### L3 **Noise limits**

L3.1 Noise emissions from the Premises must be in compliance with the requirements of the NSW EPA's Industrial Noise Policy.

#### L4 Hours of operation

L4.1 The hours of operation are 24 hours per day seven days a week.

#### L5 Potentially offensive odour

- L5.1 No condition of this licence identifies a potentially offensive odour for the purposes of section 129 of the Protection of the Environment Operations Act 1997.
- Note: Section 129 of the Protection of the Environment Operations Act 1997, provides that the licensee must not cause or permit the emission of any offensive odour from the premises but provides a defence if the emission is identified in the relevant environment protection licence as a potentially offensive odour and the odour was emitted in accordance with the conditions of a licence directed at minimising odour.

#### **Operating Conditions** 4

#### 01 Activities must be carried out in a competent manner

- O1.1 Licensed activities must be carried out in a competent manner.
  - This includes:

a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and

b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.

#### 02 Maintenance of plant and equipment

- O2.1 All plant and equipment installed at the premises or used in connection with the licensed activity: a) must be maintained in a proper and efficient condition; and

  - b) must be operated in a proper and efficient manner.

#### **O**3 Dust

03.1 Trucks entering or leaving the Premises that are carrying loads must be covered, except during loading and unloading.

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- O3.2 All vehicles leaving the Premises must not track dirt, sand or other materials onto public roads.
- O3.3 The premises must be maintained in a condition which minimises or prevents the emission of dust from the premises.

## O4 Other operating conditions

O4.1 The licensee must ensure that any waste received and/or stored at the Premises is assessed and classified in accordance with the EPA's *Waste Classification Guidelines* as in force from time to time.

## 5 Monitoring and Recording Conditions

## M1 Monitoring records

- M1.1 The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.
- M1.2 All records required to be kept by this licence must be: a) in a legible form, or in a form that can readily be reduced to a legible form;
  - b) kept for at least 4 years after the monitoring or event to which they relate took place; and
  - c) produced in a legible form to any authorised officer of the EPA who asks to see them.
- M1.3 The following records must be kept in respect of any samples required to be collected for the purposes of this licence:
  - a) the date(s) on which the sample was taken;
  - b) the time(s) at which the sample was collected;
  - c) the point at which the sample was taken; and
  - d) the name of the person who collected the sample.

## M2 Weather monitoring

- M2.1 The Licensee must ensure that there is a suitable meteorological station on the Premises that complies with the requirements in the latest version of the *Approved Methods of Sampling of Air Pollutants in New South Wales.*
- M2.2 The Licensee must operate the meteorological station and maintain continuous, auditable records of meteorological data.

## M3 Recording of pollution complaints

- M3.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.
- M3.2 The record must include details of the following:

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a) the date and time of the complaint;

b) the method by which the complaint was made;

c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;

d) the nature of the complaint;

e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and

f) if no action was taken by the licensee, the reasons why no action was taken.

- M3.3 The record of a complaint must be kept for at least 4 years after the complaint was made.
- M3.4 The record must be produced to any authorised officer of the EPA who asks to see them.

## M4 Telephone complaints line

- M4.1 The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.
- M4.2 The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.
- M4.3 The preceding two conditions do not apply until one (1) month the date of the issue of this licence.

## 6 Reporting Conditions

## R1 Annual return documents

R1.1 The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:

- 1. a Statement of Compliance,
- 2. a Monitoring and Complaints Summary,
- 3. a Statement of Compliance Licence Conditions,
- 4. a Statement of Compliance Load based Fee,
- 5. a Statement of Compliance Requirement to Prepare Pollution Incident Response Management Plan,
- 6. a Statement of Compliance Requirement to Publish Pollution Monitoring Data; and
- 7. a Statement of Compliance Environmental Management Systems and Practices.

At the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.

R1.2 An Annual Return must be prepared in respect of each reporting period, except as provided below.

Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the

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Annual Return until after the end of the reporting period.

R1.3 Where this licence is transferred from the licensee to a new licensee:a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and

b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.

- Note: An application to transfer a licence must be made in the approved form for this purpose.
- R1.4 Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on:

a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or

b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.

- R1.5 The Annual Return for the reporting period must be supplied to the EPA via eConnect *EPA* or by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').
- R1.6 The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.
- R1.7 Within the Annual Return, the Statements of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:a) the licence holder; or
  - b) by a person approved in writing by the EPA to sign on behalf of the licence holder.

## R2 Notification of environmental harm

- R2.1 Notifications must be made by telephoning the Environment Line service on 131 555.
- Note: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.
- R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

## **R3** Written report

R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:

a) where this licence applies to premises, an event has occurred at the premises; or

b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence,

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and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.

- R3.2 The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.
- R3.3 The request may require a report which includes any or all of the following information:
  - a) the cause, time and duration of the event;
  - b) the type, volume and concentration of every pollutant discharged as a result of the event;

c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event;

d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;

e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;

f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and

g) any other relevant matters.

R3.4 The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

## 7 General Conditions

## G1 Copy of licence kept at the premises or plant

- G1.1 A copy of this licence must be kept at the premises to which the licence applies.
- G1.2 The licence must be produced to any authorised officer of the EPA who asks to see it.
- G1.3 The licence must be available for inspection by any employee or agent of the licensee working at the premises.

## 8 Special Conditions

## E1 Financial Assurance

- E1.1 A financial assurance in the form of an unconditional and irrevocable and on demand guarantee from a bank, building society or credit union operating in Australia as "Authorised Deposit-taking Institutions" under the *Banking Act 1959* of the Commonwealth of Australia and supervised by the Australian Prudential Regulatory Authority (APRA) must be provided to the EPA by 30 January 2019.
- E1.2 The financial assurance must be in favour of the Environment Protection Authority in the amount of two



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hundred thousand dollars (\$200,000). The financial assurance is required to secure or guarantee funding for works or programs required by or under this licence. The financial assurance must contain a term that provides that any monies claimed can be paid to the EPA or, at the written direction of the EPA to any other person. The licensee must provide to the EPA, along with the original counterpart guarantees, confirmation in writing that the financial institution providing the guarantees is subject to supervision by APRA.

- E1.3 The financial assurance must be maintained during the operation of the facility and thereafter until such time as the EPA is satisfied the premises is environmentally secure.
- E1.4 The EPA may require an increase in the amount of the financial assurance at any time as a result of reassessment of the total likely costs and expenses of rehabilitation of the premises.
- E1.5 The EPA may claim on a financial assurance under s303 of the POEO Act if a licensee fails to carry out any work or program required to comply with the conditions of this licence.
- E1.6 The financial assurance must be replenished by the full amount claimed or realised if the EPA has claimed on or realised the financial assurance or any part of it to undertake a work or program required to be carried out by the licence which has not been undertaken by the licence holder.

## E2 Environmental obligations of licensee

E2.1 While the licensee's premises are being used for the purpose to which the licence relates, the licensee must:

a) Clean up any spill, leak or other discharge of any waste(s) or other material(s) as soon as practicable after it becomes known to the licensee or to one of the licensee's employees or agents.

b) In the event(s) that any liquid and non-liquid waste(s) is unlawfully deposited on the premises, such waste(s) must be removed and lawfully disposed of as soon as practicable or in accordance with any direction given by the EPA.

c) Provide all monitoring data as required by the conditions of this licence or as directed by the EPA.

- E2.2 In the event of an earthquake, storm, fire, flood or any other event where it is reasonable to suspect that a pollution incident has occurred, is occurring or is likely to occur, the licensee must:
  - a) Make all efforts to contain all fire water on the premises;
  - b) Make all efforts to control air pollution from the premises;
  - c) Make all efforts to contain any discharge, spill or run-off from the premises;
  - d) Make all efforts to prevent flood water entering the premises;
  - e) Remediate and rehabilitate any exposed areas of soil and/or waste;

f) Lawfully dispose of all liquid and solid waste(s) stored on the premises that is not already securely disposed of;

g) At the request of the EPA, monitor groundwater beneath the premises and its potential to migrate from the premises;

- h) At the request of the EPA, monitor surface water leaving the premises; and
- i) Ensure the premises is secure.
- E2.3 After the licensee's premises cease to be used for the purposes to which the licence relates or in the event that the licensee ceases to carry out the activity that is the subject of this licence, that licensee must:
  - a) Remove and lawfully dispose of all liquid and non-liquid waste stored on the licensee's premises; and

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b) Rehabilitate the premises, including conducting an assessment of the site and if required remediation of any site contamination.

## E3 Post-commissioning Odour Audit

- E3.1 The licensee must carry out an Odour Audit within six (6) months of commencement of operation of the Waste Transfer Station.
- E3.2 A copy of the audit report from the Odour Audit referred to in condition E3.1 must be submitted to the EPA within two (2) months of commissioning the Odour Audit and must include the Licensee's response to recommendations contained in the audit report

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## Dictionary

## **General Dictionary**

| 3DGM [in relation<br>to a concentration<br>limit] | Means the three day geometric mean, which is calculated by multiplying the results of the analysis of three samples collected on consecutive days and then taking the cubed root of that amount. Where one or more of the samples is zero or below the detection limit for the analysis, then 1 or the detection limit respectively should be used in place of those samples |  |  |
|---|--|--|--|
| Act   | Means the Protection of the Environment Operations Act 1997  |  |  |
| activity  | Means a scheduled or non-scheduled activity within the meaning of the Protection of the Environment<br>Operations Act 1997   |  |  |
| actual load                                       | Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009  |  |  |
| АМ  | Together with a number, means an ambient air monitoring method of that number prescribed by the<br>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales.  |  |  |
| AMG   | Australian Map Grid  |  |  |
| anniversary date                                  | The anniversary date is the anniversary each year of the date of issue of the licence. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.                            |  |  |
| annual return                                     | Is defined in R1.1   |  |  |
| Approved Methods<br>Publication                   | Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009  |  |  |
| assessable<br>pollutants                          | Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009  |  |  |
| BOD   | Means biochemical oxygen demand  |  |  |
| CEM   | Together with a number, means a continuous emission monitoring method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .  |  |  |
| COD   | Means chemical oxygen demand   |  |  |
| composite sample                                  | Unless otherwise specifically approved in writing by the EPA, a sample consisting of 24 individual samples collected at hourly intervals and each having an equivalent volume.   |  |  |
| cond.   | Means conductivity   |  |  |
| environment                                       | Has the same meaning as in the Protection of the Environment Operations Act 1997   |  |  |
| environment<br>protection<br>legislation          | Has the same meaning as in the Protection of the Environment Administration Act 1991   |  |  |
| EPA   | Means Environment Protection Authority of New South Wales.   |  |  |
| fee-based activity classification                 | Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations (General) Regulation 2009.   |  |  |
| general solid waste<br>(non-putrescible)          | Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997   |  |  |

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| flow weighted composite sample   | Means a sample whose composites are sized in proportion to the flow at each composites time of collection.   |
|--|--|
| general solid waste<br>(putrescible)                                   | Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environmen t Operations Act 1997  |
| grab sample  | Means a single sample taken at a point at a single time  |
| hazardous waste  | Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997   |
| licensee   | Means the licence holder described at the front of this licence  |
| load calculation<br>protocol   | Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009  |
| local authority  | Has the same meaning as in the Protection of the Environment Operations Act 1997   |
| material harm  | Has the same meaning as in section 147 Protection of the Environment Operations Act 1997   |
| MBAS   | Means methylene blue active substances   |
| Minister   | Means the Minister administering the Protection of the Environment Operations Act 1997   |
| mobile plant   | Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997   |
| motor vehicle  | Has the same meaning as in the Protection of the Environment Operations Act 1997   |
| O&G  | Means oil and grease   |
| percentile [in<br>relation to a<br>concentration limit<br>of a sample] | Means that percentage [eg.50%] of the number of samples taken that must meet the concentration limit specified in the licence for that pollutant over a specified period of time. In this licence, the specified period of time is the Reporting Period unless otherwise stated in this licence.   |
| plant  | Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as motor vehicles.  |
| pollution of waters<br>[or water pollution]                            | Has the same meaning as in the Protection of the Environment Operations Act 1997   |
| premises   | Means the premises described in condition A2.1   |
| public authority   | Has the same meaning as in the Protection of the Environment Operations Act 1997   |
| regional office  | Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence   |
| reporting period   | For the purposes of this licence, the reporting period means the period of 12 months after the issue of the licence, and each subsequent period of 12 months. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act. |
| restricted solid<br>waste  | Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997   |
| scheduled activity   | Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997  |
| special waste  | Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997   |
| тм   | Together with a number, means a test method of that number prescribed by the Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales.  |

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| TSP              | Means total suspended particles   |  |
|------------------|---|--|
| TSS              | Means total suspended solids  |  |
| Type 1 substance | Means the elements antimony, arsenic, cadmium, lead or mercury or any compound containing one or more of those elements                               |  |
| Type 2 substance | Means the elements beryllium, chromium, cobalt, manganese, nickel, selenium, tin or vanadium or any compound containing one or more of those elements |  |
| utilisation area | Means any area shown as a utilisation area on a map submitted with the application for this licence   |  |
| waste            | Has the same meaning as in the Protection of the Environment Operations Act 1997  |  |
| waste type       | Means liquid, restricted solid waste, general solid waste (putrescible), general solid waste (non - putrescible), special waste or hazardous waste    |  |

Ms Ruth Owler

**Environment Protection Authority** 

(By Delegation)

Date of this edition: 18-September-2017

## **End Notes**

2 Licence varied by notice 1572918 issued on 30-Nov-2018

## Appendix B Construction Activities Completed

| CIP Constru | ctions (NSW) Pty Ltd            |
|-------------|---------------------------------|
| ABN:        | 65 114 214 069                  |
| Address:    | Suite 59, 26 - 32 Pirrama Road, |
|             | Pyrmont NSW 2009                |
| Client:     | Cleanaway Pty Ltd               |
| ABN:        | 79 000 164 938                  |
| Address:    | Level 4, 441 St Kilda Road,     |
|             | Melbourne, VIC 3004             |
|             |                                 |

## Project: Cleanaway Waste Transfer Station, Erskine Park NSW

| Item  | Description   | % Complete |
|-------|---|------------|
| 1     | Section 1 - Demolition  |            |
| 1 1 2 | Demolish existing concrete slab, hardstandings and                  | 100.00%    |
| 1.13  | bitumen pavements   | 100.00%    |
|       | Demolish existing weighbridges (to be maintained during             |            |
| 1.14  | construction works for landfill traffic) - refer Instructions       | 100.00%    |
|       | to Tenderers and Civil Specification.                               |            |
| 1.16  | Demolish existing steel post and mesh fencing                       | 100.00%    |
| 1 10  | Salvaging value from item 12 (for offset against new                | 100.00%    |
| 1.19  | item/material purchase)   | 100.00%    |
| 1 20  | Salvaging value from items 13-18 (for offset against new            | 100.00%    |
| 1.20  | item/material purchase)   | 100.00%    |
|       | Allow to removal offsite and drain down existing                    |            |
|       | underground storage tanks - PC SUM                                  |            |
|       |   |            |
| 2     | Section 2 - Site Preparation  |            |
|       | Bulk excavation to reduce levels and stockpile on                   |            |
| 2 5   | adjacent landfill site (Assume NO rock excavation                   | 100.00%    |
| 2.5   | required) - quantity reflects cut/fill plan provided in             | 100.00%    |
|       | Tender Drawings   |            |
|       | Bulk excavation to reduce levels and place as filling               |            |
| 2.6   | where required - quantity reflects cut/fill plan provided in        | 100.00%    |
|       | Tender Drawings   |            |
|       | Allow to trim and compact surface of cut or fill to receive         |            |
| 2.7   | new finishes - quantity reflects cut/fill plan provided in          | 100.00%    |
|       | Tender Drawings   |            |
|       |   |            |
| 3     | Section 3 - Transfer Station  |            |
| 2 1   | Prices for concrete elements should include for concrete,           | 100 00%    |
| 5.1   | formwork and reinforcement  | 100.00%    |
| 2 5   | Formwork to sides of pad foundations (Class 5) - (m <sup>2</sup> )  | 100.00%    |
| 5.5   | (assumed included above)  |            |
| 2.6   | Formwork to sides of retaining wall (Class 5/3) - (m <sup>2</sup> ) | 100.00%    |
| 5.0   | (assumed included above)  |            |
| Item | Description  | % Complete |
|------|--|------------|
| 3.7  | Bar reinforcement in pad foundations - (t) (assumed included above)                        | 100.00%    |
| 3.8  | Bar reinforcement in retaining wall - (t) (assumed included above)                         | 100.00%    |
| 3.9  | Slab aggregate to be crushed rock with angular faces and LA abrasion rating of 18 or less. | 100.00%    |
| 3.10 | Allow for additional geotechnical testing as required                                      | 100.00%    |
| 3.21 | Bar reinforcement in edge beam along Grid 1 - (t)<br>(assumed included above)              | 100.00%    |
| 3.24 | Allow for shop drawings (assumed included below)   | 100.00%    |
| 3.30 | Allowance for attached and loose connections bolts, etc (assumed included above)           | 100.00%    |
| 3.31 | HD galvanising to steelwork (assumed included above)                                       | 100.00%    |
| 3.32 | Allow for shop drawings (assumed included below)   | 100.00%    |
| 3.40 | HD galvanising to steelwork (assumed included above)                                       | 100.00%    |
| 3.49 | Eaves gutter   | 100.00%    |
| 3.50 | Syphonic outlets fitted into eaves gutter and connected to downpipe                        | 100.00%    |
| 3.51 | 110 HDPE aerial syphonic pipework  | 100.00%    |
| 3.52 | '160 HDPE aerial syphonic pipework   | 100.00%    |
| 3.53 | '200 HDPE aerial syphonic pipework   | 100.00%    |
| 3.54 | 250 HDPE aerial syphonic pipework  | 100.00%    |
| 3.55 | Allow for pipework fittings  | 100.00%    |
| 3.57 | Steel framed metal deck roof platform  | 100.00%    |
| 3.58 | Steel stair to roof plant area   | 100.00%    |
| 3.59 | Balustrade to steel stair and roof platform (Monowills or equal)                           | 100.00%    |
| 3.60 | Steel framed metal deck escape gantry  | 100.00%    |
| 3.61 | Steel escape stair from gantry   | 100.00%    |
| 3.62 | Balustrade to escape gantry and stair (Monowills or equal) (assumed included above)        | 100.00%    |
| 3.63 | Allow for shop drawings (assumed included below)   | 100.00%    |
| 3.70 | Paint finish to externally exposed concrete walls including preparation (CWY blue)         | 100.00%    |
| 3.75 | HD galvanising to steelwork (assumed included above)                                       | 100.00%    |
| 3.76 | Greedy board / heavy duty flashing, 10mm ms plate  | 100.00%    |
| 3.77 | 180 PFC greedy board/ flashing support beam  | 100.00%    |
| 3.78 | Wall protection, 1440 high x 18 ms plate with 20mm x 160 stude cast into wall              | 100.00%    |
| 3.79 | HD galvanising to steelwork (assumed included above)                                       | 100.00%    |
| 3.80 | M12 chemical anchors   | 100.00%    |
| 3.81 | Colorbond metal cladding including girts at max. 1500 centres                              | 100.00%    |
| 3.83 | Colorbond metal cladding including girts to soffit at base of external wall                | 100.00%    |
| 3.84 | Trim at vertical corners and to base of metal cladding                                     | 100.00%    |
| 3.85 | Footings to bollard protection are included in<br>Substructure section                     | 100.00%    |

#### 25-11-2019

| Item  | Description  | % Complete |
|-------|--|------------|
| 3.87  | Formwork to sides of bollards and column protection - (m <sup>2</sup> ) (assumed included above)         | 100.00%    |
| 3.88  | Bar reinforcement in wall - (t) (assumed included above)   | 100.00%    |
| 3.89  | 125x125x8 RSA corner protection, including 12 dia. x 100 long studs at 400 centres                       | 100.00%    |
| 3.90  | Steel plate 8mm thick to sides of bollards   | 100.00%    |
| 3.91  | Fall Protection - Assumed included in other pricing elements   | 100.00%    |
| 3.92  | Single external door including frame, hardware and paint finish  | 100.00%    |
| 3.93  | Automated vertical lifting fabric door, Assa Abloy or similar, 6000mm wide x 8500mm high (Outer door)    | 100.00%    |
| 3.94  | Motorised steel roller shutter door, 6000mm wide<br>8500mm high (Inner door)                             | 100.00%    |
| 3.95  | Automated vertical lifting fabric door, Assa Abloy or similar, 3500mm wide x 4500mm high.                | 100.00%    |
| 3.96  | Allow for any necessary additional steelwork required to suit doors                                      | 100.00%    |
| 3.97  | Steel blade fixed louvres  | 100.00%    |
| 3.98  | Allow for shop drawings (assumed included in costs)  | 100.00%    |
| 3.99  | Allow for water reticulation to Transfer Building  | 100.00%    |
| 3.100 | Dust suppression system  | 100.00%    |
| 3.101 | Fire suppression tanks (refer Rainwater storage tanks)   | 100.00%    |
| 3.102 | Sprinkler system including connection to storage tanks   | 100.00%    |
| 3.103 | Allow for FLIR infra red fire detection system   | 100.00%    |
| 3.104 | General light and power (Including MSB)  | 100.00%    |
| 3.106 | Traffic lights to doors (3 sets; 1 x red/green per doorway)  | 100.00%    |
| 3.107 | Note: Provision for future installation of Photovoltaic system mounted on roof including support framing | 100.00%    |
| 3.110 | Extra costs for SLR design for Waste transfer station foundations - PC SUM                               | 100.00%    |
| 3.111 | Extra costs for Truss option to transfer station in lieu of Portal frame steel frame option - PC SUM     | 100.00%    |
|       |  |            |
| 4     | Section 4 - Offices  |            |
| 4.2   | Provision of services, incl electrical, sewer, water, power,   | 100.00%    |
|       | comms (assumed included above)   |            |
| 4.4   | Repaint  | 100.00%    |
| 4.6   | Repaint  | 100.00%    |
| 4.7   | External canopies and screen - reuse existing or replace   | 100.00%    |
| 4.8   | Aluminium framed double glazed windows reuse existing<br>or replace                                      | 100.00%    |
| 4.13  | Mechanical ventilation, use existing or replace if required  | 100.00%    |
| 4.14  | Smoke detection system   | 100.00%    |
| 4.15  | Fire hose reels and extinguishers  | 100.00%    |

| ltem | Description   | % Complete |  |  |  |
|------|---|------------|--|--|--|
| 4.17 | Earthing & lightning protection                             | 100.00%    |  |  |  |
| / 10 | Allowance for telephone system, use existing or replace if  | 100.00%    |  |  |  |
| 4.10 | required  | 100.00%    |  |  |  |
|      |   |            |  |  |  |
| 5    | Section 5 - External Works                                  |            |  |  |  |
|      | Bitumen roadway including compacted subgrade, 150           |            |  |  |  |
| 5.1  | basecourse and 200 sub-base layers to carpark and           | 100.00%    |  |  |  |
|      | access roadway  |            |  |  |  |
| 5.2  | Bitumen roadway including compacted subgrade, 150           | 100.000/   |  |  |  |
| 5.2  | basecourse and 200 sub-base layers to site roads and        | 100.00%    |  |  |  |
|      | hardstands (minimum 40mm wearing course)                    |            |  |  |  |
| гр   | 40MPa Concrete roadway 200 thick, including SL92            | 100.00%    |  |  |  |
| 5.5  | habric reinforcement, compacted subgrade and 350 sub-       | 100.00%    |  |  |  |
|      | base layer to site roads and hardstands                     |            |  |  |  |
| E /  | 4000Pa Ramped concrete roadway 200 tilles, including        | 100.00%    |  |  |  |
| 5.4  | sub base layer to site reads and bardstands                 | 100.00%    |  |  |  |
| 55   | Concrete median   | 50.00%     |  |  |  |
| 5.5  | Concrete kerb and channel                                   | 100.00%    |  |  |  |
| 5.0  | Concrete footnath including reinforcement edge              | 100.0076   |  |  |  |
| 57   | formwork surface finish and compacted subgrade and          | 100 00%    |  |  |  |
| 5.7  | hasecourse  | 100.00%    |  |  |  |
| 5.8  | Gravel hardstand including compacted subgrade               | 100.00%    |  |  |  |
| 5.9  | Bollards  | 100.00%    |  |  |  |
| 5.10 | Allow for line marking                                      | 100.00%    |  |  |  |
|      | Gravel hardstand to landfill access roads including         |            |  |  |  |
| 5.11 | compacted subgrade (within red line Site Boundary only)     | 100.00%    |  |  |  |
|      |   |            |  |  |  |
| 5.12 | Vehicle barriers (Armco railing or equivalent)              | 100.00%    |  |  |  |
| 5.16 | Weep holes through retaining walls                          |            |  |  |  |
| F 10 | Vehicle barrier, circular on plan, to top of retaining wall | 100.00%    |  |  |  |
| 5.19 | (RW5)   | 100.00%    |  |  |  |
|      | Earth retaining wall complete with mass levelling pad,      |            |  |  |  |
| 5 20 | keystone charcoal facing blocks, geogrid soil               | 100 00%    |  |  |  |
| 5.20 | reinforcement, perforated land drain and compacted          | 100.0070   |  |  |  |
|      | backfilling (height varies 2m-6m)                           |            |  |  |  |
| 5.21 | Allow for removal/ modification of existing Southern        | 100.00%    |  |  |  |
|      | boundary modular wall                                       |            |  |  |  |
| 5.22 | Composite panel screen wall                                 | 100.00%    |  |  |  |
| 5.23 | Allow for builder's margin on above                         | 100.00%    |  |  |  |
| 5.24 | Allow for paint finish if required (Allow Dulux Acrasand    | 100.00%    |  |  |  |
|      | texture finish and Exterior Acrylic)                        |            |  |  |  |
| 5.25 | Allow for vegetative planting / landscaping along modular   | 100.00%    |  |  |  |
|      | Wall  |            |  |  |  |
| 5.26 | chain wire tence 2210 overall high, with 1830 mesh and      | 100.00%    |  |  |  |
| E 27 | Allow for additional 8m wide double gate                    | 100.000/   |  |  |  |
| 5.27 | Allow to relocate existing 12m double gate                  | 100.00%    |  |  |  |

| ltem  | Description   | % Complete |
|-------|---|------------|
| 5.29  | Black palisade fence 1800 high with post footings                       | 100.00%    |
| 5.30  | Black palisade fence for sliding entry gate 10m wide                    | 100.00%    |
| 5.31  | Black palisade fence for sliding exit gate 15m wide                     | 100.00%    |
| 5 27  | General landscaping in accordance with Landscape Plan                   | 100.00%    |
| 5.52  | and dwgs in CEMP  | 100.0078   |
|       | Planting of low to medium height vegetation on south                    |            |
| 5 33  | side of new composite panel screen wall (as shown on                    | 100 00%    |
| 5.55  | Artist's Impression) - final details to be agreed with                  | 100.0070   |
|       | owner of neighbouring site  |            |
| 5.34  | Stormwater from Transfer building roof to be collected                  | 100.00%    |
| 0.0.1 | via downpipes to rainwater storage tanks                                |            |
| 5.35  | Extend existing detention pond to provide min. 465m3 of                 | 100.00%    |
|       | storage capacity  |            |
| 5.47  | Rainwater harvesting / fire suppression tanks installed                 | 100.00%    |
|       | complete (2 x 80kL)   |            |
| 5.48  | Pump house including slab   | 100.00%    |
|       | Allow to protect and maintain existing leachate discharge               |            |
| 5.58  | pipeline from foul connection to LTP (Approx 375m long)                 | 100.00%    |
|       |   |            |
| 5.61  | Assume that new water main commences inside existing                    | 100.00%    |
| 5.60  | meter location - no new meter required                                  | 400.000/   |
| 5.63  | Hydrant system around building  | 100.00%    |
| 5.04  | Fire water tank (Refer rainwater storage tanks)                         | 100.00%    |
| 5.65  | Fire pumps (1 x diesei and 1 x electric including housing)              | 100.00%    |
| 5.66  | Booster assembly  | 100.00%    |
| 5.72  | Earthing grid   | 100.00%    |
| E 70  | Supply and installation of weather station as described in              | 100.00%    |
| 5.75  | Section 11.0 of Electrical Specification                                | 100.00%    |
| 5 82  | Contractor attendance, incl. cranage for installation of                | 100 00%    |
| 5.62  | weighbridge   | 100.00%    |
| 5.83  | Scrubber foundation and containment bund                                | 100.00%    |
| 5.84  | Boom gates to weighbridge bypass lanes                                  | 100.00%    |
| 5.85  | Intercom and CCTV System  | 100.00%    |
| 5.87  | External Lightning (CIP Property Only)                                  | 100.00%    |
| 5.88  | Traffic Control during Construction Period                              | 100.00%    |
|       |   |            |
| 6     | Section 6 - Odour Management Systems                                    |            |
| 6.4   | Tendered pricing to include all OMS requirements, as                    | 400.000/   |
| 6.1   | identified in Section 10.0 of the Mechanical Specification              | 100.00%    |
| 6.2   | and as shown on relevant drawings                                       | 100.00%    |
| b.3   | Louvres to external walls of building                                   | 100.00%    |
| 6.4   | cupport etc)  | 100.00%    |
|       | Support Etc)<br>Ducting - External (including values, domners, fittings |            |
| 6.5   | cupport etc)  | 100.00%    |
|       | Tristacks (or alternate high nlume dispersion stack                     |            |
| 6.6   | system if approved by Principal)  | 100.00%    |

| Item | Description  | % Complete |  |
|------|--|------------|--|
| 6.8  | Odour Management System control panel and Electrical<br>Sub Board  | 100.00%    |  |
| 6.9  | On Site Installation Odour Management System including items 3-8   | 100.00%    |  |
| 6.10 | Factory Acceptance Testing (FAT), Site Acceptance<br>Testing (SAT) and Commissioning (assumed included<br>above)   | 100.00%    |  |
| 6.11 | Training and Manuals (assumed included above)  | 100.00%    |  |
| 6.12 | Odour Management Monitoring System   | 100.00%    |  |
| 6.13 | Odour Management System - Performance Testing  | 100.00%    |  |
| 6.14 | Self-closing wall inlet lourves  | 100.00%    |  |
| 6.15 | Opposed blade air extraction dampers or extraction grills  | 100.00%    |  |
| 6.16 | Header duct sized for 45/m3/h total flow   | 100.00%    |  |
| 6.17 | OMS inlet duct duct (FRP) sized for 45m3/h total flow  | 100.00%    |  |
| 6.18 | Actuated flow control dampers at OMS infeed. 1 bypass, 1 infeed.   | 100.00%    |  |
| 6.19 | Scrubber mechanical & electrical install   | 100.00%    |  |
| 6.20 | Chemical storage container   | 100.00%    |  |
| 6.21 | Commissioning Chemicals  | 100.00%    |  |
| 6.22 | Outlet duct (FRP) to roof fans   | 100.00%    |  |
| 6.23 | Main controller  | 100.00%    |  |
| 6.25 | FAT tests - Tristack fans  | 100.00%    |  |
| 6.26 | Reliability Test (7day)  | 100.00%    |  |
| 6.27 | Preventative maintenance (12 months)   | 100.00%    |  |
| 8    | Section 8 - Consultant Design & Builder's margin   |            |  |
| 8.2  | Builder's Margin   | 100.00%    |  |
|      |  |            |  |
| 9    | Section 9 - Provisional Sums   |            |  |
| 9.1  | Planting of low to medium height vegetation on south<br>side of new composite panel screen wall (as shown on<br>Artist's Impression) - final details to be agreed with<br>owner of neighbouring site | 100.00%    |  |
| 9.2  | Intercom and CCTV system   | 100.00%    |  |
| 9.3  | Allow to remove offsite and drain down existing<br>underground storage tanks   | 100.00%    |  |
| 9.4  | Disable ramp and external lighting   | 100.00%    |  |
| 9.5  | Odour Management system - Performance Testing  | 100.00%    |  |
| 9.6  | Traffic Control during the construction period   | 100.00%    |  |
| 9.8  | Odour Management Monitoring System   | 100.00%    |  |
| 9.11 | Sprinkler System including connection to storage tank  | 100.00%    |  |
|      | l  | 100.00%    |  |

| Item                 | Description  | % Complete |
|----------------------|--|------------|
| CIP Variation<br>No. | Variations   | % Complete |
|                      | Head Contract Variations:  |            |
| 1                    | Supply and Installation of 99Kw Solar Panel System -<br>Submitted  | 100.00%    |
| 2                    | Supply and Installation of time lapse camera for the duration of the project - Approved  | 100.00%    |
| 3                    | Supply of 6m x 3m site shed for Client use within CIP compound - Cancelled   | 100.00%    |
| 5                    | Supply of a brand new offices instead of relocating the existing one - Cancelled   | 100.00%    |
| 8                    | Gravel hardstand to between the carpark and the south of the building as per Fire Report - Approved                                    | 100.00%    |
| 10                   | Additional footings only to push walls to the west side of the building between grids C & J - Cancelled                                | 100.00%    |
| 11                   | Additional translucent sheeting to 10% of the east wall to allow vision transition allow for vision transition - Budget Only           | 100.00%    |
| 13                   | Grading to tip access due to steep grade that doesn't allow sufficient room for transition - Cancelled                                 | 100.00%    |
| 14                   | Cost reduction due to reduction in the roof height -<br>Cancelled  | 100.00%    |
| 15                   | steel structure for the dolly shield in the loading tunnel<br>including the supply and installation of the dolly shield -<br>Submitted | 100.00%    |
| 17                   | Unexpected Finds within site: Approved   |            |
| 19                   | Changing steel chamfer to concrete on top of the push walls - to be priced   | 100.00%    |
| 21                   | Option for PIR panels on top of the push walls instead of colorbond wall cladding - Cancelled  | 100.00%    |
| 22                   | Changing asphalt pavement to concrete pavement -<br>Submitted  | 100.00%    |
| 25                   | Fire Services Provisional Sum adjustments  | 100.00%    |
| 35                   | Drivers Rest Station-TRI031 received 23/02/18  | 100.00%    |
| 36                   | Northern Access Road - TRI032  | 100.00%    |

#### 25-11-2019

| Item | Description  | % Complete |  |
|------|--|------------|--|
| 45   | Credit for replacing of 2 roller shutter doors by metal wall<br>cladding | 100.00%    |  |
| 46   | Supply and installation of safety showers                                | 100.00%    |  |
| 58   | Supply and install grate drainage to multiple areas                      | 100.00%    |  |
| 59   | Supply and Installation of Retaining Wall 6 (OMS area)                   | 100.00%    |  |
| 64   | Fire services for sorting system - TRI 026                               | 100.00%    |  |
| 65   | Supply and install washdown hose taps (Rainwater reuse water)            | 100.00%    |  |
| 66   | Fire Separation ( Sprinkler) between WTS and Office                      | 100.00%    |  |
| 73   | Additional flood lights to office  | 100.00%    |  |
| 75   | Supply & install additional cable tray                                   | 100.00%    |  |
| 76   | Water supply for treatment plant   | 100.00%    |  |
|      |  |            |  |
|      |  |            |  |
|      |  |            |  |
|      |  | 100.00%    |  |

# Appendix C Building and Material Schedule



global environmental solutions

Building Material Schedule Stage 1 Erskine Park Waste Management Facility

Report Number 610.15771.00100-R01

6 June 2017

Cleanaway Pty Ltd 85 - 87 Quarry Road Erskine Park, NSW, 2759

Version: v0.1

### **Building Material Schedule**

### Stage 1 Erskine Park

### Waste Management Facility

PREPARED BY:

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> This report has been prepared by SLR Consulting Australia Pty Ltd with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with the Client. Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

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SLR disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the work.

#### DOCUMENT CONTROL

| Reference                | Date        | Prepared         | Checked     | Authorised     |  |
|--------------------------|-------------|------------------|-------------|----------------|--|
| 610.15771.00100-R01-v0.1 | 6 June 2017 | Lester Nankivell | Tracey Ball | Martin Gravett |  |

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#### Table 1 Stage 1 Erskine Park General Works Building Material Schedule

| General Works                       |   |  |  |  |  |
|-------------------------------------|---|--|--|--|--|
| Item Description                    | Material                                    | Approx. Quantities                                     | Additional Notes   |  |  |
| Demolition and site clearance       | Existing steel, cladding, concrete, asphalt | Steel – 10 t<br>Concrete/asphalt – 2,000m <sup>3</sup> | Existing buildings, sheds, weighbridges<br>and road surfacing. Steel to be recycled,<br>concrete to be crushed and reused. |  |  |
| Earthworks                          | Existing made ground                        | 35,000m <sup>3</sup>                                   | Excavate to required level and reuse for adjacent landfill restoration   |  |  |
| Drainage                            | Plastic Pipework and stone surrounds        | 750m   | Surface water and sewer pipework   |  |  |
| Building Foundations and floor slab | Concrete and steel reinforcement            | 1,450m <sup>3</sup>                                    | Mass and reinforced concrete   |  |  |
| Reinforced concrete retaining walls | Concrete and reinforcement bars             | 450m <sup>3</sup>                                      | External walls and push walls inside building  |  |  |
| Crib/gabion walls                   | Concrete, rock and steel cage units units   | 150m   | Concrete units on north and eastern boundaries, some rock filled gabion walls  |  |  |
| Granular capping                    | Graded Stone                                | 10,700m <sup>2</sup>                                   | Road and hardstanding construction   |  |  |
| Asphalt paving                      | Tarmacadam                                  | 4,400m <sup>2</sup>                                    | Road construction  |  |  |
| Concrete hardstanding               | Concrete and steel mesh                     | 1,250m <sup>3</sup>                                    | 200mm thick external hardstanding  |  |  |
| Fencing                             | Steel and composite panels                  | 540m   | Reuse existing fencing on north boundary   |  |  |
| Weighbridges                        | Steel                                       | 2 nr. units  | 30m long weighbridge units   |  |  |

#### Table 2 Stage 1 Erskine Park Building Material Schedule for Site Buildings

| Building Construction  |                                     |                                  |  |  |  |  |
|------------------------|-------------------------------------|----------------------------------|--|--|--|--|
| Building               | Item Description                    | Material                         | Approx. Quantities   | Additional Notes   |  |  |
| Waste Transfer Station | Building Foundations and floor slab | Concrete and steel reinforcement | 1,450m <sup>3</sup>  | Mass and reinforced concrete                             |  |  |
|                        | Transfer Building Wall<br>cladding  | Colorbond steel sheets           | 2,100m <sup>2</sup>  | 0.42 BMT trapezoidal metal sheeting                      |  |  |
|                        | Transfer Building Roof<br>cladding  | Colorbond steel sheets           | 3,800m <sup>2</sup>  | 0.42 BMT trapezoidal metal sheeting                      |  |  |
|                        | Roller shutter doors                | Fabric and steel                 | Fabric rapid closure doors -<br>185m <sup>2</sup> ,<br>steel shutter doors – 255m <sup>2</sup> | 5 nr. Fabric roller shutter doors, 5 steel shutter doors |  |  |
|                        | Steel superstructure                | Structural steel                 | 160 t  | Columns, rafters and secondary steelwork                 |  |  |
| Office                 | Office and Amenities                | Modular units                    | 360m <sup>2</sup>  | Existing site units to be relocated and upgraded         |  |  |

# Appendix D Landscape Plan



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AMENDMENTS

DATE

6



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AMENDMENTS

DATE

LA

17-016/L02

| ant schedule.  |                |            |   |  |   |                                |  |
|--|----------------|------------|---|--|---|--------------------------------|--|
| ME   | KEY            | QTY        | SIZE  | STAKE  | COMMON NAME   | est ht x sp @ mat              |  |
| CALYPTUS TERETICORNIS<br>CALYPTUS TERETICORNIS   | Е <sup>Т</sup> | 8<br>1     | 100L<br>25L                                 | +<br>+   | Forest Red gum<br>Forest red gum  | 30 x 12m →'C'<br>30 x 12m →'C' |  |
| DRYMBIA MACULATA<br>ELALEUCA DECORA  | С <sub>D</sub> | 5<br>4     | 25L<br>25L                                  | +<br>+   | Spotted gum<br>White feather honeymyrtle  | 18 x 8m<br>8 x 4m ⊷—'C'        |  |
| LLISTEMON VIMINALIS 'SLIM'   | V              | 23         | 5L  |  | Bottlebrush var   | 2.5 x 1m                       |  |
| MANDRA MULTIFLORA<br>MANDRA 'TANIKA'   | 'LM'<br>'LT'   | 285<br>123 | 150 dic<br>150 dic                          | a pot<br>a pot   | Mat rush var<br>Mat rush var  | 0.75 x 0.75m<br>0.6 x 0.6m     |  |
| ROJECT.<br>RSKINE PARK RMF,STAGE 1<br>/ASTE TRANSFER STATION<br>RAWING.<br>ANDSCAPE PLAN- PART S<br>ANDSCAPE DETAILS | I-<br>ITE      |            | JO<br>A.B.N<br>LAI<br>P.C<br>CH<br>ph<br>em | CELYN I<br>NDSCAP<br>D. BOX 2<br>IERRYBP<br>. 0412<br>nail:jocel | RAMSAY & ASSOC. PTY. LT<br>PE ARCHITECTS.<br>292<br>ROOK NSW 2126<br>7 227843<br>yn@jrla.com.au | D                              |  |



| D     | NEW DRAWING -ENTRY DRIVEWAY & | 07.11.18 |
|-------|-------------------------------|----------|
|       | CARPARK REVISED               |          |
| С     | AMENDS FOLL COUNCIL REVIEW    | 11.09.17 |
| В     | CONSTRUCTION CERTIFICATE      | 22.06.17 |
| А     | PRELIMINARY- CLIENT REVIEW    | 21.06.17 |
| ISSUE | AMENDMENTS                    | DATE     |









| D     | NEW DRAWING -ENTRY DRIVEWAY & | 07.11.18 |
|-------|-------------------------------|----------|
|       | CARPARK REVISED               |          |
| С     | AMENDS FOLL COUNCIL REVIEW    | 11.09.17 |
| В     | CONSTRUCTION CERTIFICATE      | 22.06.17 |
| А     | PRELIMINARY- CLIENT REVIEW    | 21.06.17 |
| ISSUE | AMENDMENTS                    | DATE     |

| PLANT SCHEDULE.  |             |             |                   |             |  |
|--|-------------|-------------|-------------------|-------------|--|
| NAME   | KEY         | QTY         | SIZE              | STAKE       | COMMON NA  |
| CORYMBIA MACULATA<br>EUCALYPTUS TERETICORNIS<br>MELALEUCA DECORA | C<br>E<br>D | 3<br>1<br>4 | 25L<br>25L<br>25L | +<br>+<br>+ | Spotted gum<br>Forest red gum<br>White feather H |
| CALLISTEMON SALIGNUS   | S           | 27          | 5L                |             | Bottlebrush var                                  |
| LOMANDRA MULTIFLORA  | 'LM'        | 568         | 150 di            | a pot       | Mat rush var                                     |







| IENT.  |          |          |      |
|--------|----------|----------|------|
| ANAWAY | WASTE MA | ANAGEMEN | T LT |
|        |          |          |      |







# Appendix E Baseline Groundwater Monitoring Data

#### Table E1 – Average Quarterly Results for Groundwater Monitoring Bores

| Parameters                   | BH17D   | BH17E  | LOR<br>(mg/L) |
|------------------------------|---------|--------|---------------|
| Total Dissolved Solids (TDS) | 5.43    | 2.76   | 10            |
| тос                          | 21.54   | 5.03   | 1             |
| Ammonia                      | 6.81    | 1.16   | 0.01          |
| Calcium                      | 22.71   | 35.8   | 1             |
| Magnesium                    | 42.4    | 48.71  | 1             |
| Sodium                       | 971     | 289.69 | 1             |
| Potassium                    | 63.71   | 10.97  | 1             |
| Chloride                     | 1413.31 | 19.6   | 1             |
| Sulphate                     | 65.60   | 38.76  | 1             |
| Alkalinity                   | 690.8   | 875.34 | 1             |
| Hydroxide                    | -       | -      | 1             |
| Carbonate                    | -       | -      | 1             |
| Bicarbonate                  | -       | -      | 1             |

Appendix FPhotographs of Landscaping Completed at the WTSduring the Reporting Period



Photo F1 Landscaping adjacent to the North-eastern Boundary of the Facility



Photo F2 Landscaping adjacent to the Southern side of the WTS Building



Photo F3 Landscaping at the Entrance of the WTS



Photo F4 Landscaping Adjacent to Southern side of the WTS



Photo F5 Landscaping at the WTS Entrance (Foreground) and Adjacent to the carpark (Background)



Photo F6 Landscaping in the North Eastern Corner of the Site