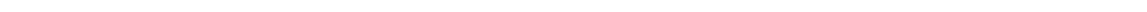




**Kemps Creek Advanced Resource Recovery Technology Facility | Part 3A**  
**ANNUAL ENVIRONMENTAL**  
**MANAGEMENT REPORT 2023-2024**

Prepared for Cleanaway Pty Ltd | 29 July 2024





# Kemps Creek Advanced Resource Recovery Technology Facility

## PART 3A | ANNUAL ENVIRONMENTAL MANAGEMENT REPORT 2023-2024

Prepared for Cleanaway Pty Ltd  
29 July 2024

PR361

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Revision	Date	Description	Prepared by	Reviewed by
D0	22 July 2024	For review	Element Environment	Cleanaway Pty Ltd
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# CHAPTER 1

## INTRODUCTION





# 1 INTRODUCTION

## 1.1 Background

The Kemps Creek Advanced Resource Recovery Technology (ARRT) facility (the facility) is in the north-west corner of Lot 740 DP 810111 at 1725A Elizabeth Drive, Kemps Creek in the Penrith local government area (LGA). The site covers approximately 8 hectares (ha) of the EDL (refer Figure 2-1), which is approximately 40 kilometres (km) west of Sydney central business district. The site is surrounded by agricultural, rural and large lot residential land use. The construction of the M12 Motorway runs along the sites northern and western boundary which will provide direct access to the Western Sydney International Airport. The M12 Motorway is approximately 100 metres (m) from the sites northern lot boundary.

Land uses immediately surrounding the site can be summarised as:

- North – Rural land uses and access road for Sydney's new airport. Large lot residential development approximately 700m north.
- South – site of Sydney's new airport.
- West – access road for Sydney's new airport.
- East – Kemps Creek Landfill (Cleanaway site) and Kingsfield Stud.

The nearest residential area is Twin Creeks Estate.

An environmental assessment (EA) was prepared in June 2007 to consider the environmental effects of the facility and support the development application. The facility received Project Approval MP06\_0185 (PA) on 15 April 2008 under the now repealed Part 3A of the NSW *Environment Planning and Assessment Act 1979* (EP&A Act) and has been operational since 25 March 2009. Since determination of the original development consent, three modifications have been submitted:

- Modification 1 (MOD 1) – change to operating hours;
- Modification 2 (MOD 2) – increase annual processing capacity; and
- Modification 3 (MOD 3) – upgrades to the maturation pads and process.

MOD 1 was determined on 20 September 2010, MOD 2 was withdrawn prior to determination, and MOD 3 was determined on 24 January 2014.

## 1.2 Purpose and reporting period

The purpose of this report is to address the requirements specified in Condition 5 of Schedule 4 of the Project Approval (refer Table 1-1). The period of reporting for this annual environmental management report (AEMR) is 15 April 2023 to 14 April 2024.

**Table 1-1 Compliance with Condition 5 of Schedule 4 of the Project Approval**

Requirement	Reference
Every year from the date of this approval, unless the Director-General agrees otherwise, the Proponent shall submit an AEMR to the Director-General and relevant agencies. The AEMR shall:	
(a) identify the standards and performance measures that apply to the development;	Section 2
(b) include a summary of the complaints received during the past year, and compare this to the complaints received in previous years;	Section 3
(c) include a summary of the monitoring results for the development during the past year;	Section 3
(d) include an analysis of these monitoring results against the relevant:	Section 3

Requirement	Reference
<ul style="list-style-type: none"> <li>▪ impact assessment criteria;</li> <li>▪ monitoring results from previous years; and</li> <li>▪ predictions in the EA.</li> </ul>	
(e) identify any trends in the monitoring results over the life of the development;	Section 3
(f) identify any non-compliance during the previous year; and	Section 4
(g) describe what actions were, or are, being taken to ensure compliance.	Section 4

### 1.3 Objective

The objective of this report is to document the environmental performance and compliance of the facility for the period of 15 April 2023 to 14 April 2024 and describe any corrective actions.

# CHAPTER 2

## PROJECT OVERVIEW



## 2 PROJECT OVERVIEW

### 2.1 The approved development

The facility operates under the PA and an Environment Protection Licence (EPL 12889). The PA and EPL allow the facility to receive and process up to 120,000 tonnes per annum (tpa) of general solid waste and 14,400 tpa of biosolids from sewage treatment plants.

The facility processes these waste streams to produce compost municipal solid waste for organic output, salvage recyclable materials from the waste stream, and capture residual inert wastes for disposal (refer Table 3-1).

Waste operations are approved for 20 years from the commencement of operations on site, which was approved in 2008 and commenced in 2009. Key components of the approved development are detailed in Table 2-1.

**Table 2-1 Key components of the approved development**

Aspect	Description
Waste Receipt	Up to 120,000 tpa of General solid waste and 14,400 tpa of biosolids. Waste is transported in domestic waste collection vehicles along Elizabeth Drive and the existing landfill access road.
Receival Hall	The receival hall is ~9.2 metres (m) high, has a floor area of 2,400 m <sup>2</sup> and is fully enclosed under negative pressure. Waste delivered to the receival hall is initially sorted and large waste items recovered. Mixed waste and source separated organics are transported separately by conveyor to the resource recovery building.
Resource Recovery Building	The resource recovery building is ~10.5 metres high, has a floor area of 2,130 m <sup>2</sup> and is enclosed under negative pressure. Mixed waste and source separated organics are processed separately using: <ul style="list-style-type: none"> <li>▪ trommels;</li> <li>▪ manual sorting;</li> <li>▪ magnetic and eddy current separators to remove metals; and</li> </ul> The refined waste streams are transported separately by conveyor to the composting tunnels.
Composting Tunnels	Thirty, 24 m long ventilated and fully enclosed tunnels are used for biological treatment of the separate waste streams. Moisture, temperature and oxygen levels are controlled to maximise rot prior to disposal at EDL.
Maturation Area	MSW is not allowed to be kept outside as per licence conditions.
Refining Building	The refining building is enclosed, ~10.5 m high, with a floor area of 1,020 m <sup>2</sup> . It is used for the final refining of the compost. <i>Note: there has been no refining activities since the NSW Environment Protection Authority (EPA) 2021 Gazette.</i>
Outputs	The facility has the following outputs: <ul style="list-style-type: none"> <li>▪ 30,000-35,000 tpa of compost</li> <li>▪ 15,000-20,000 tpa of leachate</li> <li>▪ 400-500 tpa of recyclables including steel and aluminium</li> <li>▪ 20,000-25,000 tpa of residual non-putrescible waste for disposal at EDL or another suitably licensed facility landfill.</li> </ul>
Water Management	Stormwater drainage and pond, leachate ponds, an overflow pond, mains water connection and a self-contained sewerage plant. Leachate is sent to a licensed liquid waste treatment facility.
Associated Infrastructure	Office and amenities buildings, electricity connection, sealed internal access road and weighbridge.
Odour Management	Semi-enclosed biofilters feed air through scrubbers to reduce odour.
Hours of Operation	Waste Receipt, outdoor operations and product dispatch: <ul style="list-style-type: none"> <li>▪ Monday-Friday, 6 am-6 pm.</li> </ul>

Aspect	Description
	<ul style="list-style-type: none"> <li>▪ Saturday, 8 am-5 pm; and</li> <li>▪ Sunday, 8 am-4 pm.</li> </ul> Outdoor operations: <ul style="list-style-type: none"> <li>▪ Monday-Friday, 6 pm-10 pm; and</li> <li>▪ Public holidays, 7 am-4 pm.</li> </ul> Indoor operations: Monday-Saturday, 7 am-11 pm. Emergency: Anytime.
Traffic	Approximately 236 vehicle movements a day.

## 2.2 Current activities

The site has been receiving up to 120,000 tpa of general solid waste, separating recyclables such as steel and aluminium from the waste stream for recycling and removing residual inert wastes for suitable disposal.

The organics facility can only accept waste that is listed in condition L3.1 of EPL 12889. Whilst not essential to the composting operation, the site also has the capability to receive and treat up to 14,400 tpa of biosolids in addition to the above waste.

The Organics facility is designed to recover recyclable materials (e.g. steel, aluminium) and produce compost. Inert residual material will be disposed of in Cleanaway's adjacent Waste Non-Putrescible Landfill.

Compost has been produced in the composting tunnels, however, due to the EPA's ban on the use of mixed waste organic material (MWOO), this compost is transported to EDL for disposal. There has been no storage of compost on the external maturation pads since 2018 and the refining area of the building has not been used since 2021.

## 2.3 Approvals, licences and permits

Approvals, licences and permits held or applicable to the reporting period are described in Table 2-2.

**Table 2-2 Approvals, licences and permits**

Type	Reference	Description
Approval	MP06_0185	Project Approval under section 75J of the EP&A Act.
Approval	MP06_0185-Mod-1	MOD 1 under section 75W of the EP&A Act.
Approval	MP06_0185-Mod-3	MOD 3 under section 75W of the EP&A Act.
Licence	Environment Protection Licence (EPL) 12889	Environment Protection Licence granted under section 55 of the NSW <i>Protection of the Environment Operations Act 1997</i> (POEO Act).
Licence	Environmental Protection Licence (EPL) 12889 - Variation	Vary condition A2.1 to update the Premises details. The variation was requested to return the area of the final product pad for Mixed Waste Organic Output (MWOO) from within the licensed boundary of the Kemps Creek Advanced Resource Recovery Technology (ARRT) Facility (EPL no. 12889) to the licensee's adjacent landfill premise (EPL no. 4068).

## 2.4 Environmental performance criteria

Environmental performance criteria in Table 2-3 have been sourced from the facility's approvals, licences and permits listed in Table 2-2.

**Table 2-3 Environmental performance criteria**

Aspect	Source	Criteria	Requirement																																
Waste management	EPL 12889	Limit on waste types	The site may only receive the following waste types: <ul style="list-style-type: none"> <li>▪ general solid waste (putrescible);</li> <li>▪ general solid waste (non-putrescible); and</li> <li>▪ biosolids categorised as unrestricted use, or as restricted use 1, 2 or 3, in accordance with the criteria set out in the biosolids guidelines.</li> </ul>																																
	MP06_0185; EPL 12889	Limit on input	The site must not receive more than: <ul style="list-style-type: none"> <li>▪ 120,000 t of general solid waste; and</li> <li>▪ 14,400 t of biosolids.</li> </ul>																																
	EPL 12889	Limit on waste storage	The authorised amount of waste permitted on site at any one time cannot exceed 32,100 t.																																
Odour	MP06_0185; EPL 12889	Limit on odour	The site must not cause or permit the emission of any offensive odour from the site.																																
Dust	MP06_0185; EPL 12889	Limit on dust	The site must minimise and prevent the emission of dust.																																
Noise	MP06_0185; EPL 12889	Limit on noise	Noise generated by the site must not exceed the limits in the tables below:																																
			<table border="1"> <thead> <tr> <th>Location</th> <th>Day L<sub>Aeq</sub> (15 min)</th> <th>Evening L<sub>Aeq</sub> (15 min)</th> <th>Night L<sub>Aeq</sub> (15 min)</th> <th>Night L<sub>Amax</sub></th> </tr> </thead> <tbody> <tr> <td>McGarvie Smith Farm</td> <td>42</td> <td>39</td> <td>35</td> <td>n/a</td> </tr> <tr> <td>1745 Elizabeth Drive</td> <td>41</td> <td>40</td> <td>37</td> <td>47</td> </tr> <tr> <td>1669A Elizabeth Drive</td> <td>38</td> <td>38</td> <td>35</td> <td>n/a</td> </tr> <tr> <td>Caretakers Residence 1669A Elizabeth Drive</td> <td>42</td> <td>42</td> <td>38</td> <td>53</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Location</th> <th>6am to 7am, Monday to Friday L<sub>Aeq</sub> (15 minute)</th> </tr> </thead> <tbody> <tr> <td>McGarvie Smith Farm</td> <td>39</td> </tr> <tr> <td>1745 Elizabeth Drive</td> <td>40</td> </tr> <tr> <td>1669A Elizabeth Drive</td> <td>38</td> </tr> <tr> <td>Caretakers Residence 1669A Elizabeth Drive</td> <td>42</td> </tr> </tbody> </table>	Location	Day L <sub>Aeq</sub> (15 min)	Evening L <sub>Aeq</sub> (15 min)	Night L <sub>Aeq</sub> (15 min)	Night L <sub>Amax</sub>	McGarvie Smith Farm	42	39	35	n/a	1745 Elizabeth Drive	41	40	37	47	1669A Elizabeth Drive	38	38	35	n/a	Caretakers Residence 1669A Elizabeth Drive	42	42	38	53	Location	6am to 7am, Monday to Friday L <sub>Aeq</sub> (15 minute)	McGarvie Smith Farm	39	1745 Elizabeth Drive	40	1669A Elizabeth Drive
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Water quality	MP06_0185; EPL 12889	Pollution of water	The site must not cause or permit any waters to be polluted.  “waters” mean the whole or any part of— (a) any river, stream, lake, lagoon, swamp, wetlands, unconfined surface water, natural or artificial watercourse, dam or tidal waters (including the sea), or																																

Aspect	Source	Criteria	Requirement												
			(b) any water stored in artificial works, any water in water mains, water pipes or water channels, or any underground or artesian water.												
	EPL 12889	Discharge water quality limit	Surface water may discharge from the site only from one location, EPL monitoring point 1. Water discharged from Point 1 must always comply with the concentration limits in the table below:												
			<table border="1"> <thead> <tr> <th>Pollutant</th> <th>UoM</th> <th>Limit</th> </tr> </thead> <tbody> <tr> <td>Ammonia</td> <td>mg/L</td> <td>0.9</td> </tr> <tr> <td>pH</td> <td>pH</td> <td>6.5-8.5</td> </tr> <tr> <td>Total suspended solids (TSS)</td> <td>mg/L</td> <td>50</td> </tr> </tbody> </table>	Pollutant	UoM	Limit	Ammonia	mg/L	0.9	pH	pH	6.5-8.5	Total suspended solids (TSS)	mg/L	50
Pollutant	UoM	Limit													
Ammonia	mg/L	0.9													
pH	pH	6.5-8.5													
Total suspended solids (TSS)	mg/L	50													

## 2.5 Environmental monitoring requirements

Environmental monitoring requirements in Table 2-4 have been sourced from the facility's approvals, licences and permits listed in Table 2-2.

**Table 2-4 Environmental monitoring requirements**

Aspect	Source	Criteria	Requirement
Waste	MP06_0185	Waste inputs	The site must monitor the following incoming requirements of waste: <ul style="list-style-type: none"> <li>quantity;</li> <li>type; and</li> <li>source of waste.</li> </ul>
		Waste outputs	The site must monitor the following outgoing requirements of waste: <ul style="list-style-type: none"> <li>quantity;</li> <li>type;</li> <li>destination and</li> <li>quality of the outputs.</li> </ul>
Noise	MP06_0185	Operational noise monitoring	Monitor operational noise in accordance with the Noise Monitoring Program, as defined in the environmental management plan (OEMP), which stipulates a five-yearly monitoring frequency. Operational noise monitoring was last conducted in December 2021; the next scheduled round of operational noise monitoring is planned for December 2026.
Water quality	EPL 12889	Discharge water quality	EPL monitoring point 1 must be sampled during discharge at least four times per year for ammonia, biochemical oxygen demand (BOD), conductivity, oil and grease, pH, total organic carbon and TSS.  Analysis results from EPL monitoring point 1 should take into consideration this location's concentration limits stipulated in EPL 12889.
		Leachate water quality	Leachate dams (EPL monitoring points 2,3 and 6) must be sampled once per year and analysed for ammonia, BOD, chemical oxygen demand (COD), pH and TSS.



## 2.6 EPL 12889

Environmental audits and records for the site will be maintained and recorded during the reporting period. The sites EPL, annual return and audits have been reviewed and are listed in Table 2-5.

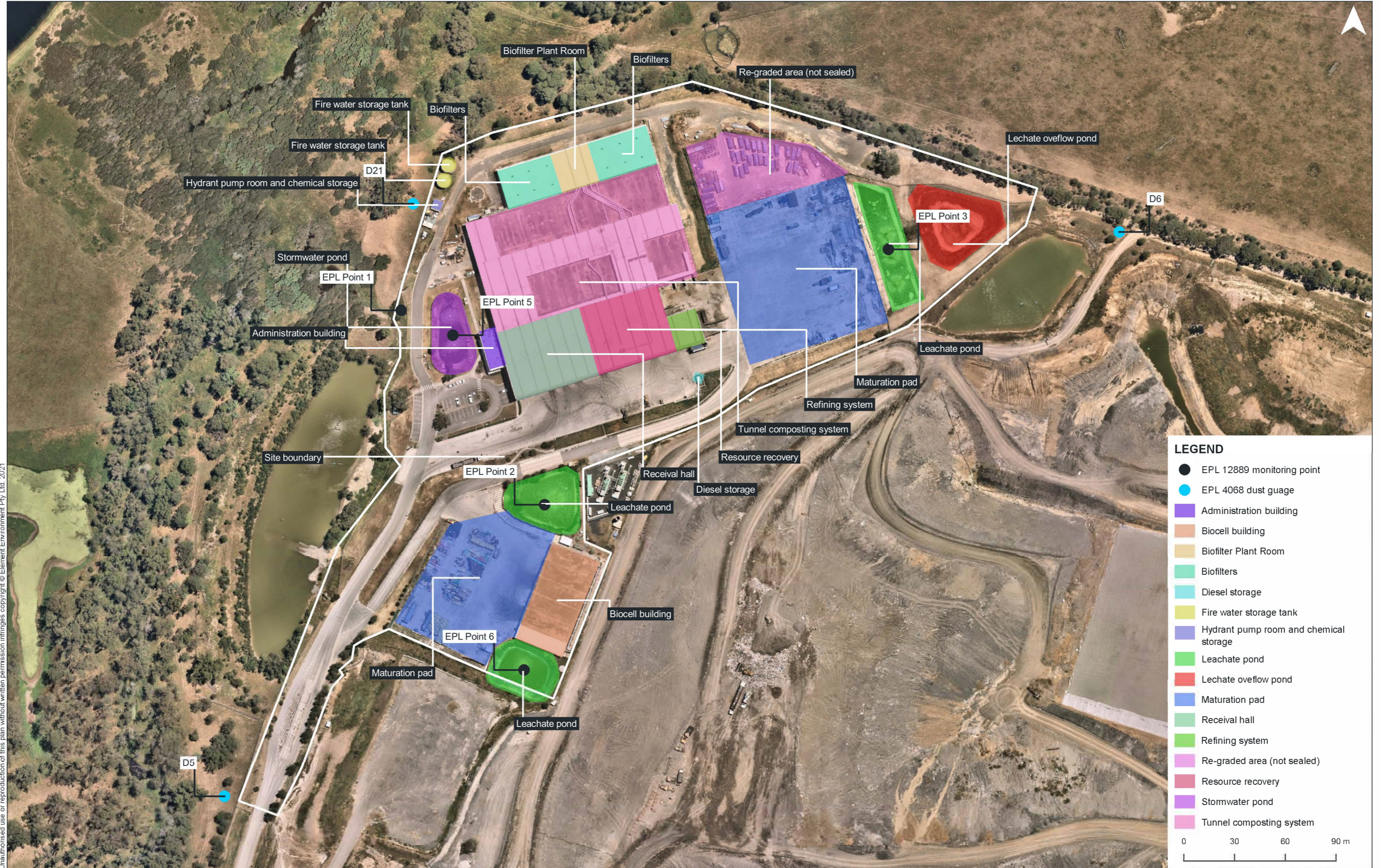
**Table 2-5 EPL 12899 - annual returns and audits**

Details	Description
Environment Protection License (EPL) 12889	Environment Protection Licence granted under section 55 of the NSW <i>Protection of the Environment Operations Act 1997</i> (POEO Act).
Licence (EPL) 12889 - Variation	Vary condition A2.1 to update the Premises details. The variation was requested to return the area of the final product pad for Mixed Waste Organic Output (MWO) from within the licensed boundary of the Kemps Creek Advanced Resource Recovery Technology (ARRT) Facility (EPL no. 12889) to the licensee's adjacent landfill premise (EPL no. 4068).
Annual Returns	<p>During the reporting period, the site met all annual return requirements of the EPL. The following requirements included:</p> <ul style="list-style-type: none"> <li>▪ Monitoring and complaints summary - no complaints were recorded.</li> <li>▪ Statement of compliance – all licence conditions and requirements were achieved.</li> <li>▪ Statement of compliance – All PIRMP requirements prepared.</li> <li>▪ Statement of compliance – Publish pollution monitoring data available online.</li> </ul>
Regulator Audits	<p>The EPA undertook audits on the following dates:</p> <ul style="list-style-type: none"> <li>▪ 23 June 2023 – 5 yearly Environmental Risk Assessment Review</li> <li>▪ 30 March 2023 – Odour issues within the Kemps Creek area</li> </ul>



Figure 2-1  
Site location plan

KEMPS CREEK ADVANCED RESOURCE RECOVERY TECHNOLOGY FACILITY  
ANNUAL ENVIRONMENTAL MANAGEMENT REPORT



**LEGEND**

- EPL 12889 monitoring point
- EPL 4068 dust gauge
- Administration building
- Biocell building
- Biofilter Plant Room
- Biofilters
- Diesel storage
- Fire water storage tank
- Hydrant pump room and chemical storage
- Leachate pond
- Lechate overflow pond
- Maturation pad
- Receiving hall
- Refining system
- Re-graded area (not sealed)
- Resource recovery
- Stormwater pond
- Tunnel composting system

0 30 60 90 m

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# CHAPTER 3

## ENVIRONMENTAL PERFORMANCE



## 3 ENVIRONMENTAL PERFORMANCE

The Kemps Creek ARRT undertake daily, weekly and monthly site inspections to ensure regular checks to ensure environmental controls are functioning and demonstrates the sites compliance with its environmental performance and management criteria.

### 3.1 Cleanaway Operational Environmental Management System

Cleanaway is committed to undertaking all activities in an environmentally responsible way, preventing pollution and proactively developing environmentally sustainable practices. This commitment is reflected within the Environmental, Quality and Safety Management System (EQSMS) which is certified to the following standards:

- AS/NZS 4801:2001 Occupational Health and Safety Management Systems
- ISO 14001:2015 Environmental Management Systems, and
- ISO 9001:2015 Quality Management System.

Schedule 4 of the Project Approval requires preparing and implementing an Environmental Management Plan for the project. The current approved Operational Environmental Management Plan (OEMP) was prepared by Cleanaway Pty Ltd (Cleanaway) on 8 May 2024, based on the previous OEMP version prepared by SUEZ (the previous owner of the site). Cleanaway acquired the site since on 18 December 2021. The OEMP describes all operational activities including environmental management practices at the ARRT that have or are likely to impact the environment. In particular, the OEMP:

- provide a comprehensive overview of the environmental management strategy for site operations;
- ensure that potential environmental impacts associated with the site operations are identified along with management solutions;
- describes in detail the ARRT layout and operations;
- describes the incident management and stakeholder engagement procedures;
- describes the process for the acceptance of waste, including stockpiling and export;
- provides specific environmental mitigation measures and controls that are applied to avoid or minimise adverse environmental impacts from the facility's operations;
- provides specific mechanisms for ensuring compliance with applicable approvals, licences and permits;
- describes the environmental management-related roles and responsibilities of site personnel;
- states objectives and targets for issues that are important to the environmental performance of the facility; and
- outlines a monitoring regime to check the adequacy of environmental controls.

The OEMP is an overarching plan for a suite of environmental management documents for the facility, including:

- Waste Monitoring Plan (WMP)
- Operational Noise Monitoring Program (ONMP)
- Soil, Water and Leachate Management Plan (SWLMP)
- Vegetation Management (VMP)

Though not a specific requirement of the Planning approval, Cleanaway also maintains a separate Environmental Risk Register, Stormwater Management Plan and Liquid & Solid Waste Storage Plan for the site. The Soil, Water and Leachate Management Plan combines the Stormwater Management Plan and information is provided within Sections 6.5 and 6.6 of the OEMP.

## 3.2 Waste management

Before delivery of waste, it is a requirement that the consignor of the waste has assessed the waste in accordance with the NSW *Waste Classification Guidelines*.

All waste deliveries are via a weighbridge, where an operator records the details and weight of the vehicle. Deliveries are received via the receival hall, where loads are visibly inspected prior to input into the recovery process.

Waste that does not meet the categories listed in the EPL is not accepted onsite, and there is currently no waste stockpiling on site.

### 3.2.1 Waste monitoring

A tracking system called 'Mandalay' is used to track all incoming and outgoing wastes. Mandalay keeps a record of the following information:

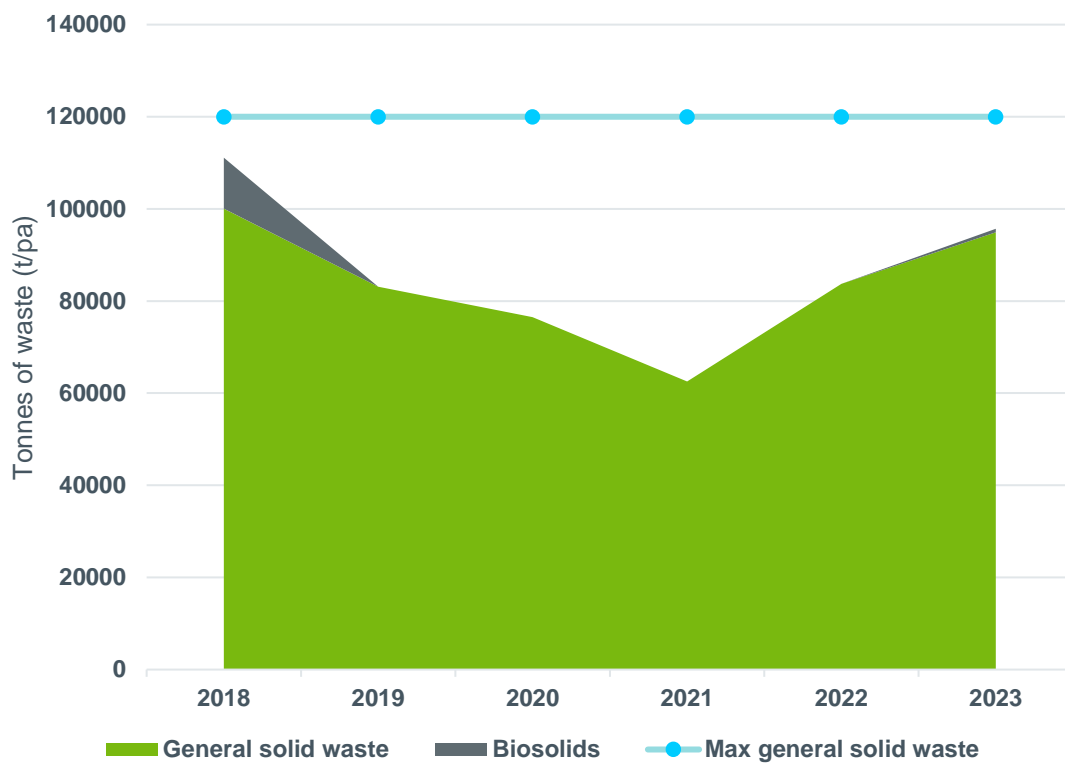
- source of waste;
- incoming/outgoing;
- date and time;
- customer number and name;
- delivery vehicle details;
- waste type; and
- quantity of waste.

In the previous reporting period, no biosolids were received. However, the facility received 754 tonnes of biosolids in the current reporting period. An examination of the information from Mandalay for this reporting period indicates that the facility has not accepted any unapproved waste types. Additionally, the facility received 94,900 tonnes of general solid waste, remaining below the annual tonnage limits (refer Table 3-1)

**Table 3-1 Incoming quantity over time**

Waste Type	General Solid Waste	Biosolids	Total Waste
<b>Limit (t)</b>	<b>120,000</b>	<b>14,400</b>	<b>134,400</b>
29/07/2018 - 28/07/2019	100,041	11,069	111,110
29/07/2019 - 28/07/2020	83,113	0	83,113
29/07/2020 - 14/04/2021	76,487	0	76,487
21/12/2021 - 14/04/2022	62,516	0	62,516
15/04/2022- 14/04/2023	83,715	0	83,715
<b>24/06/2023- 24/06/2024</b>	<b>94,900</b>	<b>754</b>	<b>95,654</b>

As an EPL regulates the facility, all information pertaining to incoming and outgoing waste quantities is reported via the NSW EPA Waste and Resource Reporting Portal (WARRP) and only the non-compliances are raised during the Annual return.). It is important to note that the tonnage reflected in the annual return may vary from the tonnage outlined in this report given the difference in reporting periods.



**Figure 3-1 Waste received at the ARRT**

The outgoing waste can be classified into seven waste types (refer to Table 3-2). A review of information from Mandalay for this reporting period shows the facility's total amount of waste leaving the site was 89,724.8 tpa. Composts MSW (36,758.63 tpa) and residual waste MSW (34,389.93 tpa) contributed the most to the outgoing waste quantities during 2023-24.

**Table 3-2 Outgoing waste quantity over time**

Waste type	Quantity (T/pa)
Aluminium	100.1
Composts MSW	36,758.6
Food and garden organics	0.04
Food waste	15.9
Leachate	18,257.3
Residual waste MSW	34,389.9
Steel cans	202.9
<b>Total</b>	<b>89,724.8</b>

### 3.3 Odour

Odour is managed under the odour management plan (OMP). The purpose of odour management is to prevent the degradation of local amenity from potential odour emissions or odorous activities associated with Organics Facility operations. No offensive odours will be emitted from the site under S129 of the *Protection of the Environment Operations Act 1997* (POEO Act). The POEO

Act includes provisions to provide a mechanism to provide a framework for managing potential odour impacts and any breaches of the odour criteria. The OMP is not a requirement for any approvals, licences, or permits but has been developed to ensure compliance with the odour performance criteria.

Potential odour sources are summarised in Table 3-3.

**Table 3-3 Summary of odour management**

Source of odour	Odour Management Strategies	Monitoring
Leachate Dams	Leachate dams must be maintained to minimise odours, including the use of Bio-wish. In-process problems and how they are rectified are documented in Appendix 8 - Leachate Process Rectification in the OEMP.	<ul style="list-style-type: none"> <li>▪ Daily site inspections include visual checks of odour controls to ensure they are in place and operating and checks for any odours present on the site.</li> <li>▪ These checks are undertaken by the site supervisor (or delegate).</li> </ul>
Pooled leachate and inadequate tunnel treatment	<p>A regular maintenance and cleaning schedule will be in place to avoid blockage or damage to the tunnel tubes resulting in pooling of leachate outside the tunnels contributing to the odour. The following control measures should be included in the tunnel maintenance schedule:</p> <ul style="list-style-type: none"> <li>▪ Schedule to replace damaged tunnel tubes as soon as identified.</li> <li>▪ Cleaning of the tunnel tubes and drains using a suction trucks as required.</li> <li>▪ Scrape and clean the tunnels after being emptied.</li> <li>▪ Pressure clean the air locks and tunnel tubes.</li> <li>▪ The mesh at the back of the tunnels to be cleaned regularly to ensure adequate suction to the biofilters.</li> <li>▪ Tunnel doors to be cleaned monthly and maintained according to the manufacturer's maintenance specifications.</li> <li>▪ Any damage to the doors or structural damage to the facility building to be reported immediately and to be rectified as a priority to avoid release of odour from the facility.</li> <li>▪ The bunded area in the fan room to be maintained clean and the scrubbers to be cleaned at least every 3 months.</li> </ul>	

A process of continuous improvement in odour emission management is implemented at the facility. Outputs from this continuous improvement process has resulted in the following additional odour emission controls throughout previous reporting periods:

- Remote control doors – to minimise opening times and prevent site vehicles and equipment from falsely triggering sensors, all rapid roller doors have been upgraded with remote controls.
- Leachate dam levels – to maintain low water levels in the leachate dams, excess leachate is disposed offsite to an external licensed treatment facility. This ensures the leachate dams have sufficient capacity for typical rain events and reduces the risk of the leachate dams becoming an odour source.

### 3.3.1 Odour impact assessment criteria

*The Approved Methods and Guidance: for the Modelling and Assessment of Air Pollutants in New South Wales* (Guideline for Air Pollutants) (Department of Environment and Climate Change,



2005) were referenced in the EA when setting the impact assessment criteria. Based on the recommended odour performance criterion in the Guideline for Air Pollutants, the EA determined an odour criterion of 4 odour units (OU) or less was sufficient for the facility, given the cumulative impacts from EDL.

The EA concluded that the closest residences to the east are predicted to experience 4 odour units or less due to the cumulative effect of both the ARRT and the EDL. Residences to the west would also experience around 4 odour units or less. The EA found the level of odour impact to be acceptable based on applying the DECC odour criteria. The model found that the Twin Creeks development to the north of the site may experience 7 odour units up to 500 m from the site and 2 odour units up to 2 km from the site.

### 3.3.2 Odour monitoring

There is no requirement in EPL 12889 or the Project Approval to quantitatively monitor odour emissions. However, the facility must not cause or permit the emission of any offensive odour.

Key odour monitoring is:

- Daily and weekly check of controls on potential odour sources.
- Weekly odour tours of surrounding areas to verify if odour emissions are leaving the site (*Weekly Odour Checklist*).

A selection of completed records (daily odour checklists and weekly checklists) from the reporting period were reviewed to verify compliance with the environmental performance criteria. Odour monitoring reports are available from 15 April 2023 to 14 April 2024. The odour monitoring information for this period is provided in Table 3-4.

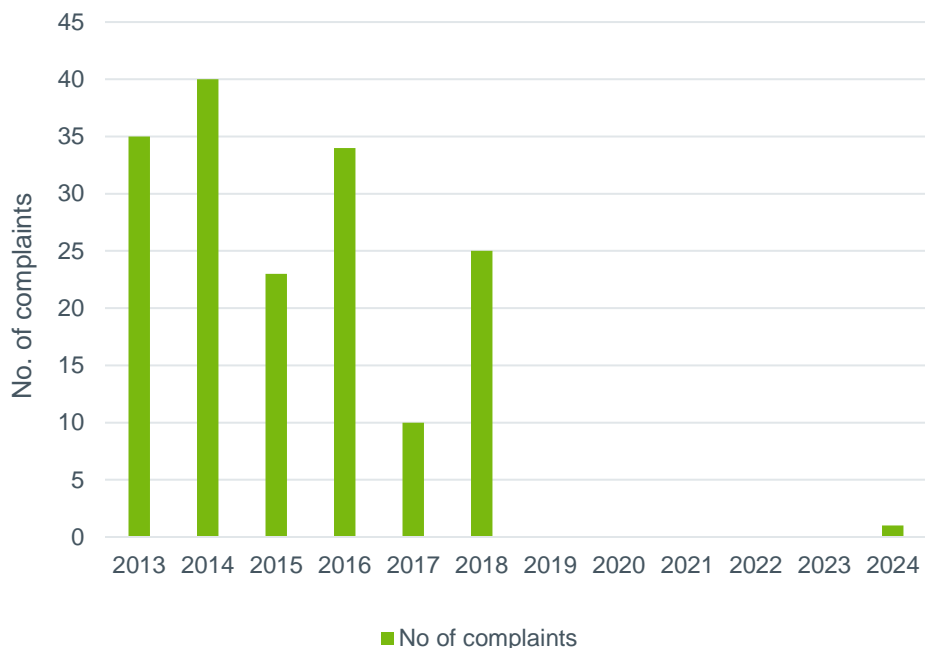
The source of detected odours in the area has been ascertained based on the site's operating conditions, wind direction and other odour sources in the area. The site's sampled records indicate that odours were detected during the reporting period. Even though the odours were detected, they were not emitted from the site and have been attributed to surrounding landscapes such as the chicken farm, livestock nearby, and fruit farm. This information correlates with the current operating conditions, with no composted material stored on the external maturation pads and is supported by no odour complaints during the reporting period.

**Table 3-4 Odour monitoring during the reporting period**

Date	Reported by	Additional Comments and Observations	Odour detected	Attributable to the facility
17/04/2023	David Dezso	On site slight smell of gas at Western Road.	No	No
21/04/2023	David Dezso	Smell of mowed grass on site near 22 Farmingdale Court.	No	No
9/05/2023	David Dezso	Some smell from horses nearby Halmstad Boulevard.	No	No
9/05/20223	David Dezso	Cut grass smell near Elizabeth Drive.	No	No
19/05/2023	David Dezso	Smell of natural gas on site but no further near Elizabeth Drive.	No	No
8/09/2023	David Dezso	Smell of livestock near Western Road.	No	No
5/01/20234	David Dezso	Smoke and manure smell from fruit farm near Elizabeth Drive.	No	No
5/01/20234	David Dezso	Mild smell three trucks parked however on return no odour near Western Road.	Yes	No
7/01/2024	B.Newman	Strong smell of green waste near Elizabeth Drive.	Yes	No
14/01/2024	B.Newman	Small odour of green waste near Western Road.	Yes	No
22/01/2024	David Dezso	Manure smell at fruit farm and fuel odour from chicken farm at the corner of Elizabeth Drive and Mamre Rd.	Yes	No
22/01/2024	David Dezso	Mild with trucks parked up and no odour on return at Western Road.	Yes	No
25/01/2024	Louise Saunders	Odour manure detected on Elizabeth Drive but not on access road on site.	Yes	No
2/02/2024	David Dezso	Strong GO XXX landfill and animal shelter, mild manure smell from fruit farm.	Yes	No
2/02/2024	David Dezso	Mild odour organics smell at Western Road.	Yes	No
22/03/2024	David Dezso	Turned right onto Elizabeth Drive to follow wind direction.	No	No
26/03/2024	David Dezso	Slight waft of smoke coming from the work area.	No	No

### 3.3.3 Odour complaints

Between 2013 and 2018 there was a downward trend in odour complaints, with an average of 29 complaints per year for the 5 year period. There have been no reported complaints since between 2019 and 2023, however, there was one recorded odour complaint in January 2024, within the reporting timeframe (refer **Figure 3-2**). Following an investigation it was discovered that the source of the odour complaint was not from the site.



**Figure 3-2 Odour complaints over time**

## 3.4 Water quality

The site manages water quality by separating clean stormwater runoff from contaminated leachate.

The leachate management system collects leachate from the composting systems and maturation pads and directs it to the four leachate ponds (in total). Each pond is inspected weekly to ensure sufficient capacity to hold any additional runoff from typical rain events.

Leachate can be transferred between ponds as required to maintain the appropriate freeboard. Overflow from the leachate ponds is directed to a leachate overflow pond, which is maintained empty wherever possible. Leachate in the overflow pond cannot be discharged from the site and is collected and disposed of offsite as liquid waste at a suitably licensed facility.

The stormwater management system collects clean water from roof runoff, clean hardstand areas, access roads, and grass areas and directs it to the stormwater pond. Water from the stormwater pond is reused for dust suppression and other site operations.

Overflow from the stormwater pond (EPL monitoring point 5) discharges to Badgerys Creek via EPL monitoring point 1, the facilities only licensed discharge point.

These areas are inspected daily, weekly and monthly to ensure:

- leachate ponds have sufficient freeboard;
- the leachate overflow pond is empty;
- aerators and other odour source controls are operational; and
- hardstand areas, access roads and grassed areas are free of litter, debris or other fluids or materials that could contaminate stormwater runoff.

### 3.4.1 Water quality impact assessment

The EA did not establish any formal water quality impact assessment criteria and predicted:

- no impact on the naturally occurring saline groundwater southwest of the site.
- the facility would generate leachate, which is likely to contain concentrations of pollutants that make the liquid unsuitable for discharge to waterways.

### 3.4.2 Water quality monitoring

EPL 12889 requires that water quality be monitored annually at monitoring points 1, 2, 3, and 6 and four times a year during discharge at monitoring point 1 to ensure the site complies with its environmental performance and monitoring requirements.

During the reporting period, samples were collected from leachate monitoring at points 1, 2, 3, and 6. All samples were collected and reviewed. The leachate monitoring point samples met the EPA limit requirements; however, only one discharge event was recorded at Monitoring Point 1 during the year. The water monitoring points have been included in Table 3-5.

**Table 3-5 Water Monitoring points**

Water monitoring point	Limits exceedance	Environmental incidents
Point 1 – Stormwater Monitoring	No	Yes, 18 March 2024
Point 2 – Leachate Monitoring	No	No
Point 3 – Leachate Monitoring	No	No
Point 6 – Leachate Monitoring	No	No

There was one discharge via EPL monitoring point 1 during the reporting period on 18 March 2024. In this instance, the water sample reported met EPL 12889 concentration limits (refer Table 3-6).

**Table 3-6 Water quality analysis results for the reporting period**

Sample ID	Record	Ammonia (mg/L)	pH	TSS (mg/L)
	<b>EPL Concentration limit</b>	<b>0.9</b>	<b>6.5-8.5</b>	<b>50</b>
<b>240318-WWD-SWD-EPA-SWD</b>	Sampled 18/03/2024	0.28	7.48	14

The background to this discharge is:

- On 18 March 2024, a discharge event at monitoring point 1 (stormwater discharge) occurred.
- Analysis results recorded on 18 March 2024 from monitoring point 1 show that the pH, ammonia and TSS of water at this point were all within the EPL concentration limits.

### 3.4.3 Water quality complaints

The facility has not received water quality complaints during the reporting period.

## 3.5 Noise

Operational noise is monitored per the approved OEMP (Version 7, dated 8 May 2024), which stipulates a minimum operational noise monitoring frequency of five years at the specified locations or upon significant change in operations (e.g., operating hours, equipment or machinery). Operations at the site are managed so that the noise limits provided in condition L4.1 of EPL 12889 are not exceeded.

### 3.5.1 Noise impact assessment criteria

The intrusiveness and amenity criteria from the *Industrial Noise Policy* (INP) (EPA, 2000) were referenced in the EA when setting the operational noise impact assessment criteria.

The EA predicted that noise impacts from the facility on the area surrounding were acceptable, as the noise levels were low enough to ensure future land use conflicts were unlikely.

### 3.5.2 Noise monitoring

Attended operational noise monitoring was not carried out during this reporting period. Noise monitoring was last conducted on 2 and 3 December 2021 at 1669A Elizabeth Drive, Caretakers Residence and 1745 Elizabeth Drive and was found to be in compliance with EPL noise limits. Noise monitoring at the site excludes all noise associated with the EDL as the ARRT operates under a separate approval and licence. No noise exceedances have been identified at the site since 2018.

The Project Approval stipulates that a Noise Monitoring Program must be implemented for the project to the satisfaction of the EPA and the Director-General. The Noise Monitoring Program is outlined in the approved EMP, which states that operational noise monitoring must be conducted on a five-yearly basis. Given that noise monitoring was last carried out during December 2021, the project is compliant with the Project Approval.

### 3.5.3 Noise complaints

The facility has not received noise complaints during the reporting period.

## 3.6 Dust

The facility has largely eliminated the generation of dust by sealing all external maturation areas. There is one area, referred to as the re-graded area (~2,700 m<sup>2</sup>), which is not sealed. This area is mostly used for the storage of equipment and does not receive a significant volume of traffic. This area has a low-risk for emitting dust due to its small size, infrequent usage and position.

The facility has been inspected each month during the report period, with the exception of December 2022. There were no recorded instances where the site has emitted dust.

### 3.6.1 Dust impact assessment criteria

The Guideline for Air Pollutants were referenced in the EA when setting the impact assessment criteria. The Guideline for Air Pollutants criterion for dust deposition is 4 g/m<sup>2</sup>/month, which is an annual average of the monthly dust deposition rates.

The EA concluded the facility was unlikely to result in exceedances of the air quality criteria for dust concentration and deposition.

### 3.6.2 Dust monitoring

There is no dust monitoring required within EPL 12889 or the Project Approval.

However, dust samples are collected from dust gauges associated with the EDL nearest the facility each quarter for analysis. Dust sampling results are included in Table 3-7 and the locations of dust gauges is shown in Figure 2-1.

It should be noted that given these dust samples are collected from dust gauges within the EDL, these results are not representative of the facility's activities alone. The facility itself does not generate dust in significant quantities as the majority of the site is sealed. Dust deposition gauges by design capture all particulate matter and are more appropriately representative of locality. The locality around the facility is currently undergoing significant development which would be contributing to dust deposition (e.g. Western Sydney Airport, M12 Motorway, Mamre Road developments).

**Table 3-7 Dust deposition monitoring (g/m<sup>2</sup>/month)**

Date	Location		
	D5	D6	D21
May 2021	4	52.2	0.7
Aug 2021	3.8	0.9	2.1
Sep 2021	5.3	4.5	2.1
Oct 2021	8.8	9.3	3.9
Nov 2021	7.4	10	2.6
Jan 2022	2.5	22.5	3.9
Mar 2022	3.2	8.9	3.7
May 2022	2.4	3.4	0.6
Aug 2022	3.2	0.7	1.6
Nov 2022	1.2	2.1	2.6
Mar 2023	3.1	3.5	4.4
May 2023	1.4	1.8	2.00
Jul 2023	1.1	0.9	0.9
Nov 2023	4.1	2.1	1.3
Feb 2024	1.1	1.3	0.50

### 3.6.3 Dust complaints

The facility has not received dust complaints during the reporting period.

## 3.7 Environmental incidents

The facility recorded all environmental incidents (e.g. verified odour incidents, water discharge incidents, dust etc) during the reporting period. During the reporting period one environmental incident occurred. The incident register from the reporting period was reviewed to provide further details on the incident included in Table 3-3.

**Table 3-8 Environmental incidents for the reporting period**

Date	Record type	Environmental Incident details	Outcome
18/03/2024	Stormwater discharge – stormwater discharge dam from the fire water tanks.	The diesel fire pump started, causing the release valve to open and release water from the fire water tanks. Due to the large amount of water released, the water then drained to the stormwater pond. As a result, the stormwater dam overflowed and discharged to Badgery's Creek.	Reported to regulators (EPA) and water sample taken. No further action was needed.

In response to the environmental incident, Cleanaway pumped water out of the dam and notified the EPA and DPHI. Water samples were taken and sent to an external laboratory. The incident caused no environmental harm; however, an investigation was carried out. The findings identified that the sweeper trucks used a tap on the fire hydrant to fill the vehicle, which triggered the diesel fire pump to pump water from the water tanks. Once the tap was closed, the water had nowhere to go, so the release valve opened, and water runoff discharged to the stormwater pond, which overflowed.

Cleanaway have instructed site personnel not to use a fire hydrant to fill vehicles. Signs were also installed. The EPA and DPHI were notified of the incident, and no follow-up or issues were raised from regulators.

## 3.8 Regulatory Correspondence

During the reporting period, Cleanaway consulted with the Department of Planning, Housing and Infrastructure (DPHI) and other regulatory authorities about the facility's environmental performance (refer to **Table 3-9**).

The site must also undertake annual environmental audits during the reporting period.

**Table 3-9 Regulatory Correspondence (2023-24)**

Date of visit	Details of notice	Correspondence
<b>2023</b>		
01/06/2023	CWY Kemps Creek AWT Continuous Odour Improvement Report submission for 2023	CWY and Department of Planning
23/06/2023	Regulatory site visit – Five yearly Environmental Risk Assessment review	CWY and NSW EPA
11/08/2023	RFI regarding PH exceedance report from July 2022 in the AEMR.	CWY and Department of Planning
12/11/2023	DPHI provided advice on all future incidents or non-compliances to be reported to NSW planning via Major Projects Planning Portal including a written report detailing the limit and performance criteria provided by NSW planning	Department of Planning
15/11/2023	Submission of independent Audit team request to DPHI for Kemps Creek ARRT	Independent auditor

Date of visit	Details of notice	Correspondence
27/11/2023	IEA extension request for Kemps Creek ARRT until the end of April 2024	DPHI
31/11/2023	DPHI acceptance of the 2022 AEMR for Kemps Creek ARRT.	Department of Planning
20/12/2023	Resubmission of proposed IEA audit team for Kemps Creek ARRT following DPHI/WSP/CWY following meeting 20 December 2023	DPHI, WSP & CWY
<b>2024</b>		
22/03/2024	Submission of updated site boundary map for the Kemps Creek ARRT facility to the NSW EPA.	NSW EPA
22/04/2024	Submission of the Continuous Odour Improvement Report for the Kemps Creek ARRT facility to the Department of Planning and the NSW EPA.	Department of Planning & NSW EPA



# CHAPTER 4

## COMPLIANCE STATUS



## 4 COMPLIANCE STATUS

The AEMR identified the following non-compliances in this reporting period:

**Table 4-1 AEMR non-compliances**

Condition	Requirement	Findings	Recommendations
EPL 12889  Condition M2.3	For each monitoring/discharge point or utilisation area specified in the table(s) below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant (refer Table 2-3).	There was one discharge during the reporting period on 18 March 2024 from monitoring point 1. One water sample was collected during discharge and analysed for compliance. The water sample did meet EPL 12889 concentration limits.	<p>Condition M2.3 in EPL 12889 states the special monitoring frequency for point 1 requires at least 1 annual sample from point 1 and in addition 4 more samples to be collected during the year if a discharge occurs. Monitoring point 1 can only be sampled when a discharge occurs. Therefore, it is considered non-compliant because of the sample frequency that occurred within the current reporting period (i.e. one sample in the 2023-2024 period).</p> <p>It is recommended to consult with the EPA to modify the wording of M2.3 to the following:</p> <p><b>“For the purposes of the table(s) above, Special Frequency 1 means the collection of samples annually and during each discharge event.”</b></p> <p>The proposed rewording of Condition M2.3 would remove ambiguity, would lessen the potential of administrative non-compliances and ensure all parties were well aware of the sampling requirements at Monitoring point 1.</p>



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