



Kemps Creek Advanced Resource Recovery Technology Facility | Part 3A

ANNUAL ENVIRONMENTAL MANAGEMENT REPORT 2022-2023

Prepared for Cleanaway Pty Ltd | 29 June 2023





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29 June 2023

PR287

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Date	29 June 2023	29 June 2023

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1 INTRODUCTION

1.1 Background

The Kemps Creek Advanced Resource Recovery Technology (ARRT) facility (the facility) is in the north-west corner of the Elizabeth Drive Landfill (EDL) at 1725 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.

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The facility received Project Approval MP06_0185 (PA) on 15 April 2008 under the now repealed Part 3A of the NSW *Environment Planning and Assessment Act 1979* (EP&A Act), and has been operational since 25 March 2009.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MOD 1 was determined on 20 September 2010, MOD 2 was withdrawn prior to determination, and MOD 3 was determined on 24 January 2014.

Cleanaway has owned and operated the facility since its acquisition on 18 December 2021.

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 2022 to 14 April 2023.

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: <ul style="list-style-type: none">▪ impact assessment criteria;▪ monitoring results from previous years; and▪ predictions in the EA.	Section 3
(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 succinctly document the environmental performance and compliance of the facility for the period of 15 April 2022 to 14 April 2023 and describe any corrective actions.

CHAPTER 2

PROJECT OVERVIEW

the 1990s, the number of people in the world who are under 15 years of age is expected to increase from 1.1 billion to 1.5 billion.

As the world's population grows, the demand for food and other resources will increase. This will put pressure on the environment and on the world's resources.

One of the ways to meet this demand is to increase the efficiency of food production. This can be done by using better farming techniques and by using more resources.

Another way to meet this demand is to reduce the amount of food that is wasted. This can be done by using food more efficiently and by reducing the amount of food that is thrown away.

There are many other ways to meet this demand, and it is important to find the best way to do so. This will help to ensure that everyone has enough to eat and that the environment is protected.

One of the most important things we can do is to make sure that we are using resources in a sustainable way. This means that we are using resources in a way that does not harm the environment and that we are leaving enough for future generations.

There are many other things we can do to help meet the world's growing demand for food and other resources. We can all play a part in making sure that everyone has enough to eat and that the environment is protected.

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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 ² 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 ² and is enclosed under negative pressure. Mixed waste and source separated organics are processed separately using: <ul style="list-style-type: none"> trommels; manual sorting; magnetic and eddy current separators to remove metals; and 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	<i>MSW is not allowed to be kept outside as per licence conditions</i>
Refining Building	The refining building is enclosed, ~10.5 m high, with a floor area of 1,020 m ² . 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"> 30,000-35,000 tpa of compost 15,000-20,000 tpa of leachate 400-500 tpa of recyclables including steel and aluminium 20,000-25,000 tpa of residual non-putrescible waste for disposal at EDL or another suitably licensed facility landfill.
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"> Monday-Friday, 6 am-6 pm.

Aspect	Description
	<ul style="list-style-type: none"> ▪ Saturday, 8 am-5 pm; and ▪ Sunday, 8 am-4 pm. Outdoor operations: <ul style="list-style-type: none"> ▪ Monday-Friday, 6 pm-10 pm; and ▪ Public holidays, 7 am-4 pm. 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.

Compost has been produced in the composting tunnels, however, due to the EPA's ban on the use of mixed waste organic material (MWO), 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 <i>NSW Protection of the Environment Operations Act 1997</i> (POEO Act).

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"> ▪ general solid waste (putrescible); ▪ general solid waste (non-putrescible); and ▪ biosolids categorised as unrestricted use, or as restricted use 1, 2 or 3, in accordance with the criteria set out in the biosolids guidelines.
	MP06_0185; EPL 12889	Limit on input	The site must not receive more than: <ul style="list-style-type: none"> ▪ 120,000 t of general solid waste; and ▪ 14,400 t of biosolids.

Aspect	Source	Criteria	Requirement																																			
	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><tr><th>Location</th><th>Day L_{Aeq} (15 min)</th><th>Evening L_{Aeq} (15 min)</th><th>Night L_{Aeq} (15 min)</th><th>Night L_{Amax}</th></tr><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></table> <table><tr><th>Location</th><th>6am to 7am, Monday to Friday L_{Aeq} (15 minute)</th></tr><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></table>	Location	Day L _{Aeq} (15 min)	Evening L _{Aeq} (15 min)	Night L _{Aeq} (15 min)	Night L _{Amax}	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 _{Aeq} (15 minute)	McGarvie Smith Farm	39	1745 Elizabeth Drive	40	1669A Elizabeth Drive	38	Caretakers Residence 1669A Elizabeth Drive	42
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McGarvie Smith Farm	39																																					
1745 Elizabeth Drive	40																																					
1669A Elizabeth Drive	38																																					
Caretakers Residence 1669A Elizabeth Drive	42																																					
Water quality	MP06_0185; EPL 12889	Pollution of water	<p>The site must not cause or permit any waters to be polluted.</p> <p>“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 (b) any water stored in artificial works, any water in water mains, water pipes or water channels, or any underground or artesian water.</p>																																			
	EPL 12889	Discharge water quality limit	<p>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:</p> <table><tr><th>Pollutant</th><th>UoM</th><th>Limit</th></tr><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></table>	Pollutant	UoM	Limit	Ammonia	Mg/L	0.9	pH	pH	6.5-8.5																										
Pollutant	UoM	Limit																																				
Ammonia	Mg/L	0.9																																				
pH	pH	6.5-8.5																																				

Aspect	Source	Criteria	Requirement
			Total suspended solids (TSS) Mg/L 50

2.5 Environmental monitoring requirements

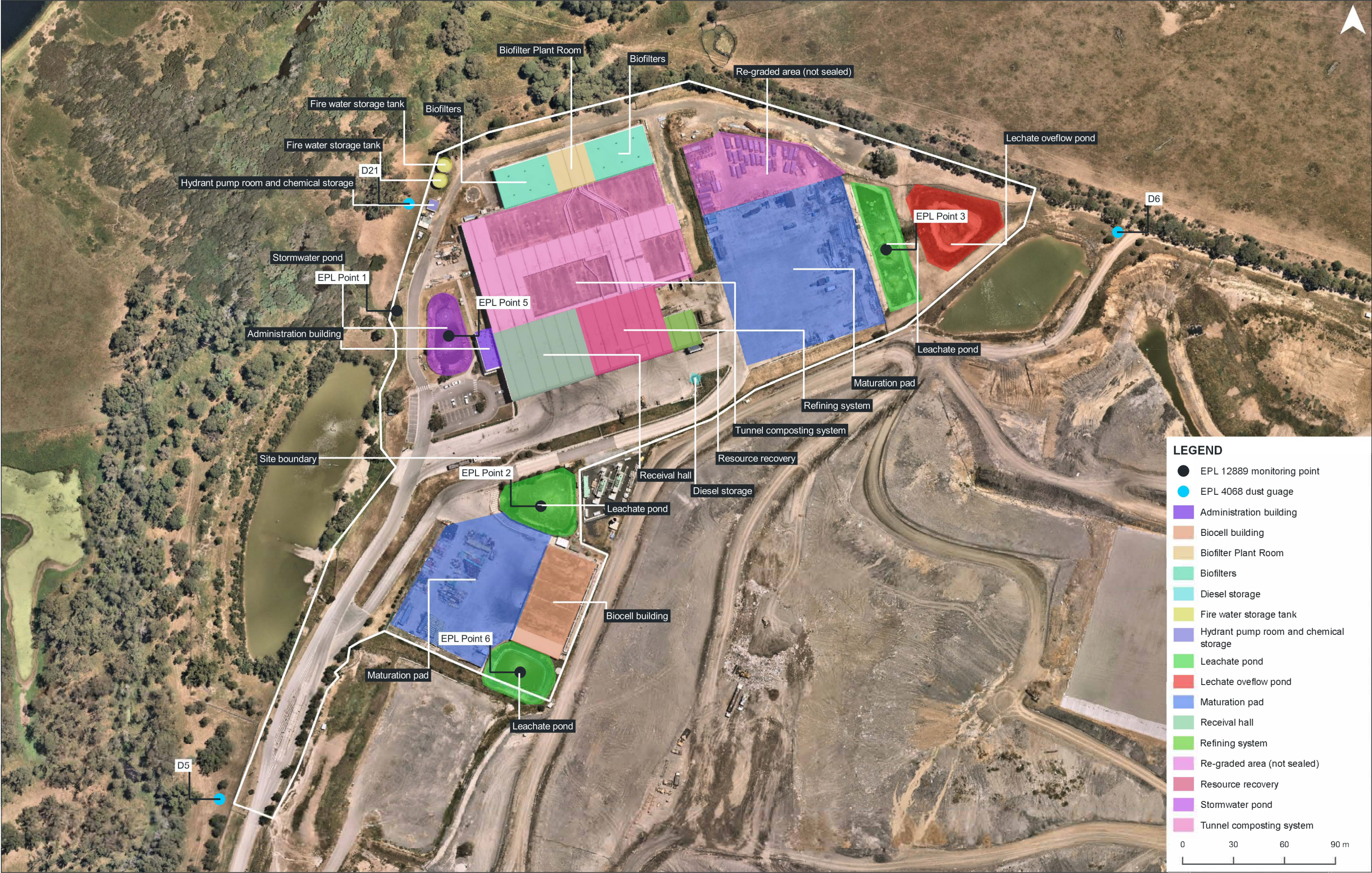
Environmental monitoring requirements in Table 2-4 have been sourced from the facility's approvals, licences and permits listed in Table 2-2.

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"> quantity; type; and source of waste.
		Waste outputs	The site must monitor the following outgoing requirements of waste: <ul style="list-style-type: none"> quantity; type; destination and quality of the outputs.
Noise	MP06_0185	Operational noise monitoring	Monitor operational noise in accordance with the Noise Monitoring Program, as defined in the environmental management plan (EMP), which stipulates a five yearly monitoring frequency. Operational noise monitoring was last conducted during December 2021.
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.

Figure 2-1
Site location plan

KEMPS CREEK ADVANCED RESOURCE RECOVERY TECHNOLOGY FACILITY
ANNUAL ENVIRONMENTAL MANAGEMENT REPORT



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CHAPTER 3

ENVIRONMENTAL PERFORMANCE

the 1990s, the number of people in the world who are under 15 years of age is expected to increase from 1.1 billion to 1.5 billion.

As the world's population grows, the demand for food and other resources will increase. This will put pressure on the environment and on the world's food supply.

One way to meet this demand is to increase the amount of food that is produced. This can be done by using more land for agriculture, by using more fertilizers and pesticides, and by using more water.

Another way to meet this demand is to reduce the amount of food that is wasted. This can be done by using less food, by using food more efficiently, and by reducing food losses.

There are many other ways to meet this demand, and it is important to find the best way to do so. This will require the cooperation of all people in the world.

The world's population is growing, and the demand for food and other resources is increasing. This is a challenge that we must all face.

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3 ENVIRONMENTAL PERFORMANCE

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

3.1 Cleanaway 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 14001:2001 Environmental Management Systems, and
- ISO 9001:2000 Quality Management System.

Schedule 4 of the Project Approval requires the preparation and implementation of an Environmental Management Plan for the project. The current approved version of the Environmental Management Plan was prepared by SUEZ on 9/08/2021 and has been adopted by Cleanaway since its acquisition of the site on 18 December 2021. The purpose of the EMP is to describe the environmental management of operational activities at the ARRT that have, or are likely to have, an impact on the environment. In particular, the EMP:

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

- Traffic Management Plan
- Operational Environmental Management Plan
- Emergency Response Plan

Standard Operating Procedures (SOPs) are also developed to manage and control high-risk activities that have the potential to adversely impact the environment.

3.2 Waste management

Prior to 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 reception 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 on site. There is currently no stockpiling of waste on site.

3.2.1 Waste monitoring

A tracking system called 'Mandalay' is used to track all incoming and outgoing wastes. Mandalay keeps 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.

Biosolids were not received in the previous reporting period and the facility received 62,516 t of general solid waste. A review of information from Mandalay for this reporting period shows the facility has not accepted biosolids or any unapproved waste types and received 83,715 t of general solid waste, remaining below annual tonnage limits (refer Table 3-1 and Figure 3-1).

Table 3-1 Incoming quantity over time

Waste type	Limit (t)	29/07/2018 - 28/07/2019	29/07/2019 - 28/07/2020	29/07/2020 - 14/04/2021	21/12/2021 - 14/04/2022	15/04/2022 - 14/04/2023
General solid waste	120,000	100,041	83,113	76,487	62,516	83,715
Biosolids	14,400	11,069	0	0	0	0

As the facility is regulated by an EPL, all information pertaining to incoming and outgoing waste quantities is reported in an annual return submitted to the EPA after the EPL anniversary date (29 July). 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.

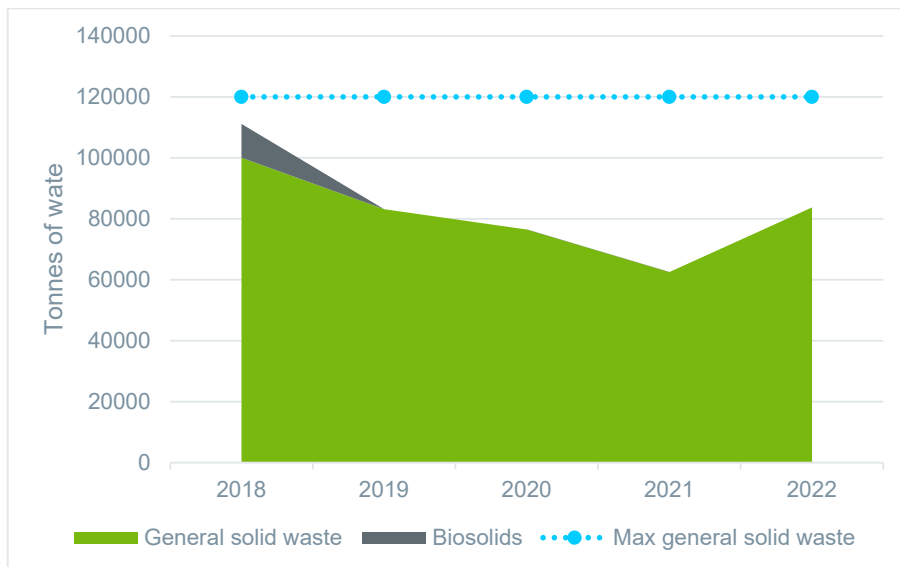


Figure 3-1 Waste received at the ARRT

3.3 Odour

Odour is managed in accordance with the odour management plan (OMP). The OMP is not a requirement of any approvals, licences or permits, but has been developed to ensure compliance with the odour performance criteria.

Potential odour sources, ranked in order of inherent risk, are:

1. Maturation pads – notably, these maturation pads have not been used to store compost material since the EPA gave direction to enclose all MSW, however FOGO may occasionally be stored on maturation pads.
2. Bio-filters.
3. Waste receipt and storage in the facility.
4. Leachate and stormwater dam.
5. Refining.
6. Drying tunnels.

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 the application of 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 19 April 2022 – 6 April 2023. Odour monitoring information for this period is provided in Table 3-2.

The source of the facilities detected odours in the area has been ascertained based on the site's operating conditions, wind direction and other odour sources in the area. Notably, most of the sampled records indicate no odours have been emitted from this site. 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 in the reporting period.

Table 3-2 Odour events during the reporting period

Date	Reported by	Additional Comments and Observations	Attributable to the facility
21/03/2023	David Dezso	Some smell from horses nearby	No
31/03/2022	David Dezso	Cut grass smell	No

3.3.3 Odour complaints

There were no recorded odour complaints within the reported timeframe. Between 2013 and 2018 there was a downward trend to odour complaints, with an average of 29 complaints per year for the 5 period; there have however been no reported complaints since 2019 (refer Figure 3-2).

Based on the monitoring records there have been no offensive odours recorded during the reporting period and there have been no offensive odours notified by the EPA.

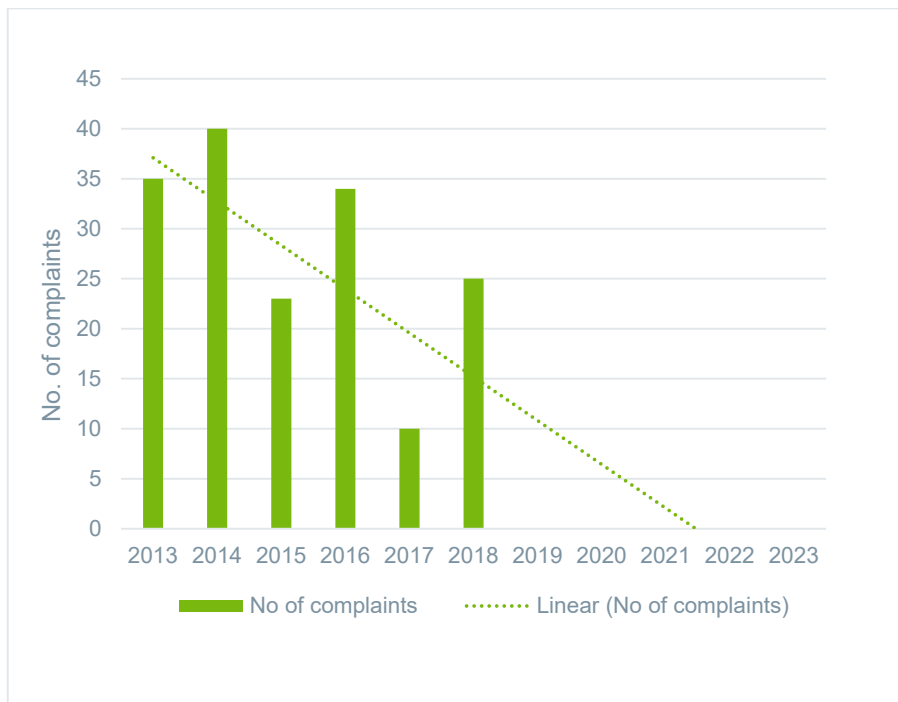


Figure 3-2 Odour complaints over time

3.4 Water quality

The site manages its 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 this to the leachate ponds (four in total). Each leachate ponds is inspected weekly to ensure there is 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 site and is collected and disposed 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 this water to the stormwater pond. Water from the stormwater pond is re-used for dust suppression and other site operations.

Overflow from the stormwater pond (EPL monitoring point 5) is directed into EDL's north-western sedimentation dam, which discharges into Badgerys Creek. The point where overflow from the stormwater pond meets EDL's north-western sedimentation dam is EPL monitoring point 1, the facility's 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 at the 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

It is a requirement of EPL 12889 that water quality is 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 is compliant with its environmental performance and monitoring requirements. There was one discharge via EPL monitoring point 1 during the reporting period on 4 July 2022. In this instance the water sample reported a concentration of pH below the limits approved in EPL 12889 (refer Table 3-3).

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

Sample ID	Record	Ammonia (mg/L)	pH	TSS (mg/L)
	EPL Concentration limit	0.9	6.5-8.5	50
20220704-SWD	Sampled 04/07/2022	0.29	6.24	32

The background to this discharge is:

- On 4 July 2022, a discharge event at the stormwater discharge dam occurred.
- Analysis results recorded on the 4 July 2022 from discharge point 1 show that the pH of water at this point was below the pH limits.
- The discharge event occurred during a period of heavy rainfall, with 299.2 mm of rain recorded between 3 July 2022 and 5 July 2022 (Figure 3-3).

It is worth noting that the discharge event occurred during a time of above average rainfall, with the Bureau of meteorology (BOM) reporting July 2022 as having the highest rainfall of any July on record at the Badgerys Creek AWS weather station, situated approximately 6.4 km away with 59.5 years of rainfall data.

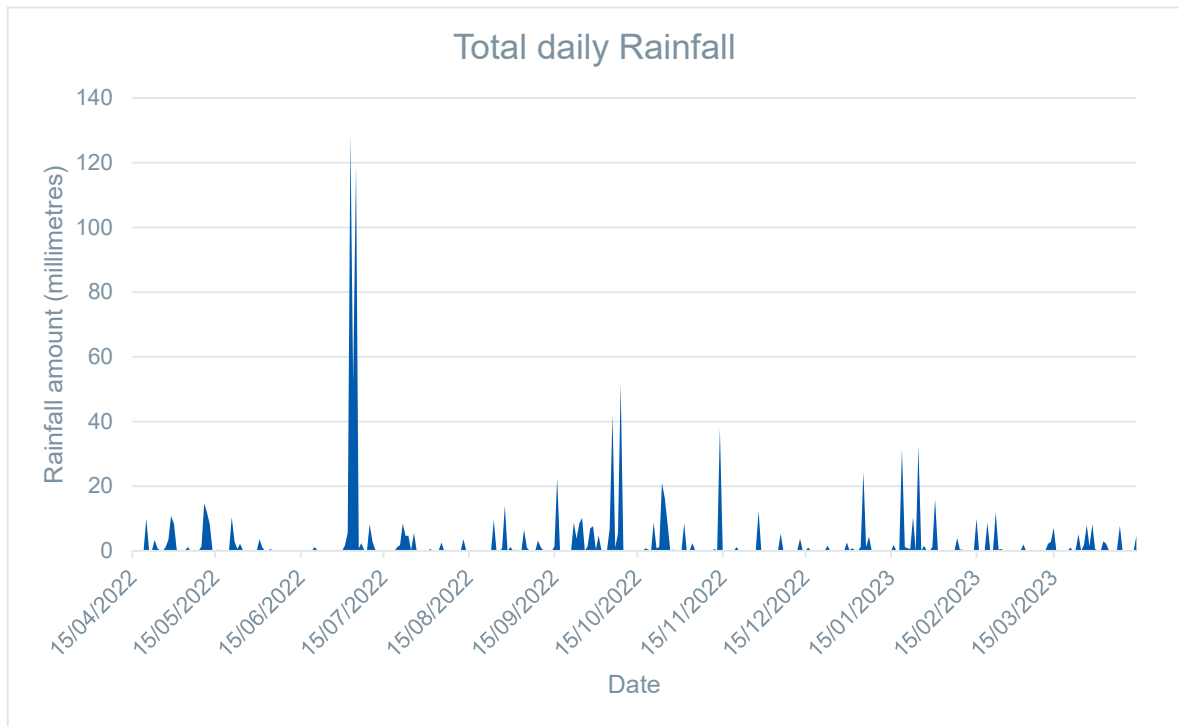


Figure 3-3 Rainfall

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 in accordance with the approved EMP (Version 5, dated 9 August 2021), which stipulates a minimum operational noise monitoring frequency of five years.

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.

Element understands the EMP is in the process of being revised by Cleanaway following its acquisition of the site on 18 December 2021, Element notes that once this new version of the EMP has been finalised, Cleanaway should ensure it is provided to and approved by DPE prior to its implementation to ensure the project remains 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 m²), 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/m²/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 requirement in EPL 12889 or the Project Approval to quantitatively monitor dust deposition and there are no emission limitations.

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 3-4, 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 3-4 Dust deposition monitoring (g/m²/month)

Location	May 2021	Aug 2021	Sep 2021	Oct 2021	Nov 2021	Jan 2022	Mar 2022	May 2022	Aug 2022	Nov 2022	Mar 2023
D5	4	3.8	5.3	8.8	7.4	2.5	3.2	2.4	3.2	1.2	3.1
D6	52.2	0.9	4.5	9.3	10	22.5	8.9	3.4	0.7	2.1	3.5

Location	May 2021	Aug 2021	Sep 2021	Oct 2021	Nov 2021	Jan 2022	Mar 2022	May 2022	Aug 2022	Nov 2022	Mar 2023
D21	0.7	2.1	2.1	3.9	2.6	3.9	3.7	0.6	1.6	2.6	4.4

3.6.3 Dust complaints

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

CHAPTER 4

COMPLIANCE STATUS

the 1990s, the number of people in the world who are under 15 years of age is expected to increase from 1.2 billion to 1.5 billion.

As the world's population grows, the demand for food and other resources will increase. This will put pressure on the environment and on the world's food supply.

One way to meet this demand is to increase the amount of food that is produced. This can be done by using more land for agriculture, or by using more efficient farming methods.

Another way to meet this demand is to reduce the amount of food that is wasted. This can be done by using food more efficiently, or by reducing the amount of food that is thrown away.

There are many ways to meet the world's growing demand for food and other resources. It is up to us to decide which way is best.

One of the most important things we can do is to make sure that we are using resources in a sustainable way. This means that we are using resources in a way that will not harm the environment or the future generations.

There are many things we can do to make sure that we are using resources in a sustainable way. We can use less energy, we can recycle, and we can eat less meat.

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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 L2.1	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 4 July 2022 from monitoring point 1. A water sample was collected during discharge and analysed for compliance. The water sample was found to have a pH of 6.24, below the minimum pH range specified in EPL 12889.	The discharge occurred during an extreme rain event, resulting in the highest recorded rainfall for the month of July at the nearby Badgerys Creek AWS weather station. Given the magnitude of the rainfall event, it is unlikely that any environmental controls could have mitigated the discharge event. However Cleanaway should continue to ensure dam levels remain low, and continue to monitor water quality prior to, and during potential discharge events.



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