

2018 ANNUAL ENVIRONMENT PERFORMANCE REVIEW

2018 ANNUAL ENVIRONMENTAL PERFORMANCE REVIEW
GENESIS XERO WASTE RECYCLING & LANDFILLING FACILITY

KEY DETAILS

Environment Review and Response prepared by:	Genesis Xero Waste Recycling & Landfill Facility
Head Office Address:	84-88 Burrows Road, Alexandria, NSW 2015
Licensee (Proponent):	Dial A Dump (EC) Pty Ltd (previously ThaQuarry Pty Ltd & ACN 114 842 453 Pty Ltd)
In respect of:	Project Approval 06_0139 (as modified)
Project site & location:	Genesis Xero Waste Recycling and Landfill Facility (1 Kangaroo Avenue, Eastern Creek, NSW 2766)
Lot & DP:	Lot 1 in DP 1145808 and Pt 8 in DP 1200048
EPA licence details	Recycling Licence EPL 20121 Landfill Licence EPL 13426

For and on behalf of Dial A Dump (EC) Pty Ltd, the undersigned certifies that the information contained within this report is neither false nor misleading.

Approved: **Rodney Johnson**

Signed:



Date: **14 February, 2019**

TABLE OF CONTENTS

KEY DETAILS	2
TABLE OF CONTENTS	3
Report Scope.....	4
Condition 3 of Schedule 5 -Annual review	4
Environmental Performance – 2018 annual review	6
Site Security & Signage.....	6
Odour Management	7
Amenity Berms.....	9
Operating Hours & Noise	10
Air Quality	12
Stormwater Quality.....	14
Landfill and Chute	15
Waste Management Procedures.	19
Cultural Heritage.....	21
Other Compliance Matters – condition 7 of schedule 5	22
(June 2015-June 2017)	22
Relevant Statutory Monitoring Requirements	22
Environmental Protection Licence –PotentialNon-compliances raised by EPA.....	22
Incidents and Complaints.....	22
Additional Commitments	23
Initiatives for the Next 12 Months - 2019	24
Strategic and Commercial Review.....	25
Summary	26

REPORT SCOPE

This consolidated Annual Environmental Review (**AER**) has been prepared to satisfy the Project Approval Condition 3 of MP 06_0139 (as modified) granted by the NSW Minister for Planning on 22 November 2009.

THIS WILL BE THE **FIFTH** ANNUAL ENVIRONMENTAL REVIEW PREPARED FOR THE GENESIS FACILITY.

Information provided in the AER can relate to the requirements of both Condition 3 as set out below.

CONDITION 3 OF SCHEDULE 5 -ANNUAL REVIEW

By the end of December 2010, and annually thereafter, the Proponent shall review the environmental performance of the project to the satisfaction of the Director-General. This review must:

- a) *Describe the works that were carried out in the past year, and the works that are proposed to be carried out over the next year;*
- b) *Include a comprehensive review of the monitoring results and complaints records of the project over the past year, which includes a comparison of these results against the:*
 - *the relevant statutory requirements, limits or performance measures/criteria;*
 - *the monitoring results of previous years; and*
 - *the relevant prediction in the EA;*
- c) *Identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;*
- d) *Identify any trends in the monitoring data over the life of the project;*
- e) *Identify any discrepancies between the predicted and actual impacts of the project, and analyse the potential cause of any significant discrepancies; and*
- f) *Describe what measure will be implemented over the next year to improve the environmental performance of the project.*

This review is conducted by reference to each subject matter and the criteria required by Planning Condition 3. In summary, the following activities were approved under Part 3A of the *Environmental Planning and Assessment Act 1979 (EP&A Act)*:

- capacity to receive up to two million tonnes of waste per annum, including inert and solid wastes from construction and demolition (C&D), commercial and industrial (C&I) waste streams complying with acceptable waste for general solid waste (non-putrescible) facilities, green waste clean ups, and metallurgical furnace slag and ash.
- on-site waste processing including sorting, screening, sieving, crushing, grinding, shredding and/or chipping, and composting of green waste;
- testing and on-site storage/stockpiling of finished recycled products prior to resale predominantly to the building, construction and landscaping sectors and potentially the domestic market;
- quarantine and transfer of unacceptable wastes to an appropriate off-site facility for disposal; By way of example under EPL 20121 this quarantine and transfer would refer to asbestos, hazardous & putrescible wastes etc., received within the recycling facilities (MPC or Crushing) requiring all but asbestos waste to be transferred to an appropriate licenced facility. The asbestos waste could be disposed of in our landfill which is licenced to dispose of asbestos waste.
- Segregated hardfill materials such as rock, sand soil, brick or concrete are also received at the Segregated Materials Area (SMA) within the Facility. These materials are crushed and screened for testing and sale for beneficial re-use;

- construction and operation of associated infrastructure, plant and equipment, including upgrade of the internal road network and reshaping of earthen amenity berms; and
- retention and conservation of a significant area on adjacent land beyond the north-west corner of the site, incorporating a remnant endangered ecological community (EEC) of Cumberland Plain Woodland (CPW).

ENVIRONMENTAL PERFORMANCE – 2018 ANNUAL REVIEW


Senior management conduct regular environmental inspections of the Facility. On an annual basis in accordance with Schedule 5 Section 3, management reviews the prior 12 months environmental performance of site to prepare this annual review.

These regular inspections are needed to determine, in conjunction with the routine environmental monitoring and incident/complaint reporting procedures, whether there is on-site compliance with the approved Environmental Management System (EMS). Any non-conformances are recorded on inspection forms and the cause of any non-conformances are investigated by the site operations manager.

SITE SECURITY & SIGNAGE


Salient Matters		Nil
Works that were carried out in the past year		The new portion of Precinct road opened in March 2018. Along with the new road, there is a continual maintenance and repair of the site’s fencing for security and public safety.
Works that are proposed to be carried out over the next year		There is a continual maintenance and repair of the site fencing for security and public safety.
Review of the monitoring results and complaints records of the project over the past year, which includes a comparison of these results against the relevant statutory requirements, limits or performance measures/criteria;	The monitoring results of previous years;	No Monitoring Applicable.
	the relevant predictions in the EA;	Complaints Records: Nil
Any non-compliance over the last year		Nil
Describe what actions were (or are being) taken to ensure compliance;		Continuation of active inspection, maintenance and upkeep.
Identify any trends in the monitoring data over the life of the project;		Not Applicable
Any discrepancies between the predicted and actual impacts of the project, and analyse the potential cause of any significant discrepancies;		Not Applicable
Describe what measure will be implemented over the next year to improve the environmental performance of the project.		Not Applicable

ODOUR MANAGEMENT

Salient Matters	Leachate Management. Green Waste Management.
Works that were carried out in the past year	Ongoing maintenance and repair (as required) of the leachate tanks, to minimise odour generation. Implementation and update of the landfill gas management plan.
Works that are proposed to be carried out over the next year,	Continued maintenance and repair of the leachate tanks to minimise odour generation.
<p>Review of the monitoring results and complaints records of the project over the past year, which includes a comparison of these results against the relevant statutory requirements, limits or performance measures/criteria;</p> <ul style="list-style-type: none"> • the monitoring results of previous years; • the relevant predictions in the EA; 	<p>Monitoring Results</p> <p>Pitt&Sherry conducted a boundary field odour assessment Survey at the Genesis Facility on 16 and 17 February 2018, Pitt&Sherry concluded that based on the results of the odour assessment, the site was compliant with the EPA NSW Impact Assessment Criteria for boundary odour. The report confirmed that it is unlikely that odour levels measured at the boundary of the site would be detectable outside the perimeter of the facility, in particular, in the nearest residential developments.</p> <p>The aerial photograph below shows various monitoring locations for the odour assessment conducted by Pitt&Sherry</p> 

	<p>Complaints</p> <p>On 25 May 2018 a fire was reported to NSW Fire department via 000. The fire brigade attended site. The fire was located in a tipping face cell of non-putrescible waste. After the fire was contained and made safe by the fire brigade, the area on fire and surrounding areas were covered with soil and compacted. The licensee monitored the section where the fire occurred for further 10 hours to ensure no spot fires were present.</p> <p>A detailed register of complaints and subsequent investigation and action taken is maintained on the website.</p>
Any non-compliance over the last year	Nil.
Describe what actions were (or are being) taken to ensure compliance;	Continuation of existing work practices within the site, including daily covering of the active tipping face. The licensee has engaged with NSW Fire to facilitate review of the site procedures and management of fire events by both parties.
Identify any trends in the monitoring data over the life of the project;	Nil.
Any discrepancies between the predicted and actual impacts of the project, and analyse the potential cause of any significant discrepancies;	Nil.
Describe what measure will be implemented over the next year to improve the environmental performance of the project.	Continuation of all existing systems.

AMENITY BERMS

Salient Matters	Nil.
Works that were carried out in the past year	<p>Ongoing, inspections, maintenance and reshaping of the amenity berms has been required to maintain the required height of the berms, ensure stability of the berms and prevent damage from erosion.</p>  <p><i>Aerial photo identifying amenity berms</i></p>
Works that are proposed to be carried out over the next year,	<p>Continuing maintenance of amenity berms, with particular emphasis on reducing weeds and allowing native grasses and plants to grow, reducing erosion and increasing the stability of the berms, in line with the Landscape and Vegetation Management Plan.</p> <p>MOD 7 will see a repositioning of the Berm once approved. As such those works may be carried out in 2019.</p>
Review of the monitoring results and complaints records of the project over the past year, which	No Monitoring Applicable.

includes a comparison of these results against the relevant statutory requirements, limits or performance measures/criteria; • the monitoring results of previous years; • the relevant predictions in the EA;	Complaints Records- Nil.
Any non-compliance over the last year	Nil.
Describe what actions were (or are being) taken to ensure compliance;	Continuation of active inspection maintenance and upkeep of the berms ensuring height, shape and appropriate vegetation.
Identify any trends in the monitoring data over the life of the project;	Amenity berms continue to be effective in providing a visual screen around the site, noise attenuation and a shield against airborne particulate generation.
Any discrepancies between the predicted and actual impacts of the project, and analyse the potential cause of any significant discrepancies;	Nil.
Describe what measure will be implemented over the next year to improve the environmental performance of the project.	To improve the environmental performance of the project, particular emphasis will be placed on increasing weeding activities and where applicable planting on amenity berms, in line with Landscaping and Vegetation and Amenity Berms Management Plans.

OPERATING HOURS & NOISE

Salient Matters	Nil.
Works that were carried out in the past year	Continued implementation of the Noise Monitoring Program, repair and maintenance of plant and equipment and amenity berms onsite to minimise noise generation.
Works that are proposed to be carried out over the next year.	Continued implementation of the Noise Monitoring Program and maintenance and report of plant and equipment and amenity berms. A proposed MOD 6 has been submitted to the DOP to extend operating hours as follows: MPC- hours extended to 24 hours (Monday-Sunday) for receipt of materials, maintenance and operations. SMA- hours extended to 24 hours (Monday to Sunday) for receipt of materials and 6.00am to 6.00pm (Monday to Sunday) for crushing and screening. Landfill- hours extended to 24 hours for maintenance 5am to 9pm Monday to Sunday) for receipt of materials (excluding the chute), and 5am to midnight (Monday to Sunday) for operations.

	SEARs have been issued for this proposed modification and the proponent has engaged Consulting Earth Scientists Pty Ltd to undertake the requisite environmental testing/modelling. Proposed MODs 6 & 7 may also require some additional noise monitoring.
Review of the monitoring results and complaints records of the project over the past year, which includes a comparison of these results against the relevant statutory requirements, limits or performance measures/criteria; • the monitoring results of previous years; • the relevant predictions in the EA;	Monitoring Results Consulting Earth Scientists Pty Ltd (CES) conducted noise compliance assessments for the Genesis Facility in both February and August 2018 the results of the noise monitoring investigation at monitoring locations A1 and A2 indicated that background noise environment in the vicinity of the facility was dominated by road traffic noise from the M4, with no audible noise being generated from the Genesis Landfill and Recycling Centre. Complaints Records - Nil.
Any non-compliance over the last year.	Nil.
Describe what actions were (or are being) taken to ensure compliance;	Continuation of existing work practices including Noise Monitoring Programs carried out by a qualified Environmental Consultant. All on-site operating plant machinery is well maintained and noise muffled; no rock breaking to occur except at lower levels on the site or behind earthen bunds to act as noise baffles, monitoring and mitigating noisy behaviours of trucks entering the premises.
Identify any trends in the monitoring data over the life of the project;	The continued review of noise monitoring results over the life of the project, and the lack of noise complaints since construction of the project concluded and partial operations commenced in 2012, show that the Genesis Facility continues to comply with statutory requirements and EPL noise limits.
Any discrepancies between the predicted and actual impacts of the project, and analyse the potential cause of any significant discrepancies;	The predicted noise modelling undertaken in the Environmental Assessment by ERM showed that the cumulative industrial noise impacts were predicted to be negligible, with noise levels remaining below the amenity noise goals during all modelled weather conditions. The NSW Department of Planning approved extended operating hours for the MPC in December 2013 and there have been no identified additional noise impacts from this change.
Describe what measure will be implemented over the next year to improve the environmental performance of the project.	Continuation of all existing systems.

AIR QUALITY

Salient Matters	Dust deposition Landfill gas
Works that were carried out in the past year	<p>Dust Deposition Dust deposition monitoring gauges maintained at the positions shown in the Air Quality Management Plan. A Dustrak live real time monitor is located at 93 Minchin Drive, Minchinbury. Both of these systems are monitored by qualified, independent environmental consultants with remote warning systems in the case of exceedance recorded by the Dustrak monitor.</p> <p>Ongoing maintenance and repair to paved and asphalt roads to ensure good quality surfaces which minimise airborne particulates, along with use, maintenance and repair of water sprays and sprinklers throughout the facility and on facility paved roads to minimise airborne particulates.</p> <p>One additional watercart with road washing capabilities was introduced into the site fleet in August 2018</p> <p>Landfill Gas Update and continued operation of the landfill gas monitoring program with monthly monitoring of surface and accumulated gas and quarterly sub-surface landfill gas monitoring undertaken by qualified consultants. Regularly update the relevant greenhouse gas emission inventory for the site.</p>
Works that are proposed to be carried out over the next year,	<p>Continuous review of Dustrak monitoring technology to ensure optimum monitoring and compliance with relevant standards of air quality.</p> <p>Continued implementation of the Landfill Gas Monitoring program and regular updating of gas emissions data.</p>
<p>Review of the monitoring results and complaints records of the project over the past year, which includes a comparison of these results against the relevant statutory requirements, limits or performance measures/criteria;</p> <ul style="list-style-type: none"> • the monitoring results of previous years; • the relevant predictions in the EA; 	<p>Dust Deposition Dust monitoring was undertaken monthly by Thomson Environmental Systems. Despite Genesis recording high deposited dust levels for one month in 2018 (December) the EPL annual average limit of 4 g/m²/month was not exceeded, as mitigation measures were put in place and have continued to be effective.</p> <p>There were no occasions where the 24-hour average PM₁₀ concentration was above the impact assessment criteria of 50 µg/m³.</p> <p>Landfill Gas Continued engagement of environmental monitoring experts to conduct regular landfill gas monitoring.</p> <p>Except as otherwise set out in the following paragraph in 2018 all landfill gas concentrations were below the target thresholds described in the Landfill Gas Management Plan for the surface, and accumulation LFG monitoring.</p> <p>During the Quarterly subsurface gas monitoring performed in December 2018, borehole BH14s reported anomalous concentrations of methane greater than the threshold specified in the landfill gas monitoring plan. Genesis informed the</p>

	<p>EPA of the exceedance and proposed a monthly monitoring of the monitoring bore until the concentrations of methane return to background levels, this monitoring is ongoing as the exceedance was only recorded in December 2018.</p> <p>Complaint Records - Nil.</p>
<p>Any non-compliance over the last year</p>	<p>See reference above to Landfill Gas exceed and below reference relating to notification to the EPA.</p>
<p>Describe what actions were (or are being) taken to ensure compliance;</p>	<p>Maintenance of stockpile heights within the SMA to remain below the height of the amenity berms.</p> <p>Continuous enhancement of automated water sprays and sprinklers in the SMA and on facility paved roads to minimise airborne particulates.</p> <p>Continuation of dust suppression measures including wetting down stock piles, ensuring trucks cover their loads, limiting the speed of vehicles on site and requiring all trucks leaving the site to pass through a truck wheel wash before returning to sealed roads within the Facility.</p> <p>Within the MPC there has been a continuous improvement program to enhance air quality within the building. This is a necessary requirement for optimum workplace health and safety. It has involved the identification of individual and specific dust generating points from the recycling plant with enclosure of same and extraction points before the airborne particulates become unmanageable within the building.</p> <p>Continued compliance with all air quality monitoring requirements.</p>
<p>Identify any trends in the monitoring data over the life of the project;</p>	<p>Dust Deposition 24-hour averaging and annual averaging PM10 deposition monitored at a nearby residential receptor generally decreased in 2014 and have consistently remained under the threshold during the following years.</p> <p>Dust deposition monitored at the gauges along the site boundary have also been relatively stable below the 4 g/m2/month limit across the life of the project, with the two spikes in 2015, one spike in 2017 and one spike in 2018 not having a significant impact on the annual average.</p> <p>Landfill Gas Other than the anomalous spike noted above, landfill gas monitoring completed in 2018 found that methane concentration was below the target thresholds described in the Landfill Management Plan, for surface gas and gas accumulation.</p>
<p>Any discrepancies between the predicted and actual impacts of the project, and analyse the potential cause of any significant discrepancies;</p>	<p>The use of a chute from the MPC to the landfill has reduced the number of trucks using the partially unpaved road down to and up from the landfill, and continues to reduce predicted dust generation levels on site.</p>
<p>Describe what measure will be implemented over the next year to improve the environmental performance of the project.</p>	<p>Continuation of all existing systems on site and air quality monitoring.</p>

STORMWATER QUALITY

Salient Matters	Landfill fill rate
Works that were carried out in the past year	<p>Inspection, maintenance and repair of draining system, hardstand areas, GPT's roads and detention dams, to ensure continued segregation of 'clean' and 'dirty' water, sediment control and water quality.</p> <p>Landfilling is continuing to take place in accordance with the Landfill Environment Management Plan. Because of the inverted conical shape of the quarry, progressively the same incoming quantity of landfill material could be expected to spread and filled over a larger and larger surface area. The result is that the vertical fill rate per year slows for the same given quantity of waste. In turn this prolongs the useable life of the stormwater collection pond and the time required before each replacement becomes longer.</p> <p>A site water balance was carried out by Consulting Earth Scientists Pty Ltd, this is discussed in the leachate section below.</p>
Works that are proposed to be carried out over the next year,	<p>Continued inspection, maintenance and repair of drainage system, hardstand areas, roads and detention dams.</p> <p>A proposed MOD 7 is being prepared which will include a revised Stormwater Management Plan which will be developed in conjunction with Blacktown City Council.</p>
<p>Review of the monitoring results and complaints records of the project over the past year, which includes a comparison of these results against the relevant statutory requirements, limits or performance measures/criteria;</p> <ul style="list-style-type: none"> • the monitoring results of previous years; • the relevant predictions in the EA; 	<p>Monitoring Results</p> <p>Water quality monitoring at the two stormwater retention dams on site (EPA monitoring points 2 & 3) was conducted quarterly by EnvironConsulting Services in the first two quarters of 2018 and by Consulting Earth Scientist for the last two rounds of 2018. A review of the monitoring results found that:</p> <ul style="list-style-type: none"> • Ammonia monitoring during 2018 has presented low or no concentration detections, • pH levels have remained stable in comparison to previous years during 2018. • Total suspended solids results have presented concentrations below the threshold established by NSW EPA at 50mg/l. • Heavy metal concentrations have remained with low concentrations in 2018. <p>The northwest dam discharged on two separated occasions in the same month (October 2018). Southwest dam also discharged once during the month of October 2018, the discharged events are attributed to torrential rain in that month. Laboratory analysis of contaminants of potential concern as set out by the EPA on license 13426 returned concentrations below the threshold criteria for the set contaminants.</p> <p>Complaints records - Nil.</p>
Any non-compliance over the last year	Nil.
Describe what actions were (or are being) taken to ensure compliance;	<p>Site area separation and gradation to separate 'clean' and 'dirty' water. Regular inspection and maintenance of site drainage gross pollutant sumps and traps to reduce sediment levels and pollution of stormwater. Maintenance of roads to reduce erosion and sedimentation and protection of stormwater drains along with daily litter collection and sweeping of paved roads. Regular inspection of surface water infrastructure, including before and after storm events (if known).</p>

Identify any trends in the monitoring data over the life of the project;	Water quality of stormwater in the retention dams has remained at a high enough level over the life of the project to be reused onsite.
Any discrepancies between the predicted and actual impacts of the project, and analyse the potential cause of any significant discrepancies;	Increasing levels of water reuse onsite for dust suppression and other activities has reduced dam overflow events to 2 in 2018, minimising any potential impact on surrounding waterways.
Describe what measure will be implemented over the next year to improve the environmental performance of the project.	Continuation of all existing monitoring and safety systems.

LANDFILL AND CHUTE

Salient Matters:

- Northern Slip stability works
- Groundwater monitoring
- Leachate Collection
- Chute Maintenance and reduction

Salient Matter	Northern Slip stability works
Works that were carried out in the past year	<p>Landslip and erosion inspection was conducted by Pells Sullivan Meynink (PSM Engineering) in July 2018 , the results of the inspection reported the following; <i>“Based on our observations we assess the existing erosion control measures are satisfactory”</i> and <i>“The inspection, coupled with the monitoring and the location of the slip relative to where backfilling will proceed in future indicate that the risk evident during the quarry operations has been largely mitigated, however, PSM Recommend that protocols also be established for all personnel who enter the quarry and utilising rules that are commonly in place in the quarry and mining industry and specifically:</i></p> <ul style="list-style-type: none"> • <i>No personnel or vehicles to park, or approach, closer than 10m to the slope face without an appropriate risk assessment.</i> • <i>Where parked-up near slope and outside 10m zone, preferably parked either front-on or with entrance to cabin away from the slope.</i> • <i>Where works are to be carried out near the slope face, and under auspices of a risk management, it is preferable that machinery operate “front-on” to allow ready evacuation if so required rather than “side on”.</i>
Works that are proposed to be carried out over the next year,	Continuation of daily inspections to identify the potential for any slippages. As vertical landfilling height increase, earthen benches will be “pushed up” at the base of the slip to ensure ongoing stability.
Review of the monitoring results and complaints records of the project over the past year, which includes a comparison of these results against the relevant statutory requirements, limits or performance measures/criteria; • the monitoring results of previous years;	<p>No further slippages have so far been identified.</p> <p>Complaints Register - Nil.</p>

• the relevant predictions in the EA;	
Any non-compliance over the last year	Nil.
Describe what actions were (or are being) taken to ensure compliance;	Continuation of daily inspections and training of quarry staff to ensure safety awareness of potential slip area.
Identify any trends in the monitoring data over the life of the project;	No further slippages have so far been identified since stabilisation works were completed in 2013.
Any discrepancies between the predicted and actual impacts of the project, and analyse the potential cause of any significant discrepancies;	Not Applicable.
Describe what measure will be implemented over the next year to improve the environmental performance of the project.	Continuation of all existing monitoring systems.
Salient Matter	Groundwater monitoring
Works that were carried out in the past year	Continuous groundwater monitoring using the existing monitoring well network, regular maintenance to the dedicated pumps installed on a number of wells.
Works that are proposed to be carried out over the next year,	Continuous groundwater monitoring using the existing and approved new monitoring well network as part of license variation for EPL 13426 dated 22 August 2018, regular maintenance to the dedicated pumps installed on a number of wells.
review of the monitoring results and complaints records of the project over the past year, which includes a comparison of these results against the relevant statutory requirements, limits or performance measures/criteria;	Monitoring Results Groundwater quality monitoring was conducted quarterly by EnvironConsulting Services in the first two quarters of 2018 and by Consulting Earth Scientists in the last two quarters of 2018 at EPA monitoring points 7-31. Groundwater quality has been maintained in 2018, when comparing monitoring results to previous years.
• the monitoring results of previous years; • the relevant predictions in the EA;	Complaints Records - Nil.
Any non-compliance over the last year	Nil.
Describe what actions were (or are being) taken to ensure compliance;	Stage 2 Groundwater monitoring network comprising of 7 new monitoring wells were installed early 2017 and are continuously monitored to assess if leachate is leaving the site regardless of the inwards flow of groundwater towards the quarry, this monitoring network has being included in the EPA license 13426 as of 22 August 2018.
Identify any trends in the monitoring data over the life of the project;	Ammonia concentration is the primary leachate indicating parameter and for the purposes of assessment of leachate contamination of groundwater wells on site. The concentration of ammonia measured in the monitoring wells during 2018 monitoring period are within the range encountered in the monitoring well network before landfilling activities commenced and indicate that groundwater on the site is not being impacted by leachate.
Any discrepancies between the predicted and actual impacts of the project, and analyse the potential cause of any significant discrepancies;	Measured levels of contaminants of concern suggest that the leachate is not impacting the groundwater quality of the site.

Describe what measure will be implemented over the next year to improve the environmental performance of the project.	Continuation of all existing monitoring systems.
Salient Matter	Leachate Collection
Works that were carried out in the past year	<p>Installation of submersible pump and sump in the bunded area, to allow quick transfer of overflow stormwater from timber yard to polyethylene tanks on green waste area during heavy rain events.</p> <p>The Licensee continues treating leachate and discharging effluent to the sewer under trade waste agreement with Sydney Water.</p>
Works that are proposed to be carried out over the next year,	Works will continue to regularly increase the height of the main leachate sump riser (Monitoring Point 32) as the level of filled waste rises.
<p>Review of the monitoring results and complaints records of the project over the past year, which includes a comparison of these results against the relevant statutory requirements, limits or performance measures/criteria;</p> <ul style="list-style-type: none"> • the monitoring results of previous years; • the relevant predictions in the EA; 	<p>Monitoring Results</p> <p>Leachate quality monitoring was conducted quarterly by EnvironConsulting Services during the first two quarters of 2018 and by Consulting Earth Scientists for the last two quarters of 2018 at EPA monitoring point 32. Leachate levels were also monitored Monitoring Point 32.</p> <p>Chemicals monitored as part of the leachate quality monitoring program, have reported concentrations similar to those found on previous years with the exception of ammonia, which has increased its concentration levels. The concentrations of ammonia are expected to continue increasing as the landfill ages and the degradation process takes part within the waste mass.</p> <p>The leachate treatment plant operated by the licensee, has successfully managed the increased concentrations of ammonia during the year 2018 to levels below the trade waste agreement criteria that the licensee currently holds with Sydney Water.</p> <p>Complaints Records - Nil.</p>
Any non-compliance over the last year	Nil.
Describe what actions were (or are being) taken to ensure compliance;	Continuation of active inspection maintenance and upkeep of the leachate sequence batch reactor and nitrifying bacteria.
identify any trends in the monitoring data over the life of the project;	<p>There have been no long term changes in leachate quality with the exception of ammonia concentrations which have increased during 2018. The concentrations of ammonia are expected to continue increasing as the landfill ages and the degradation process takes part within the waste mass.</p> <p>Trade waste conditions continue to be satisfactorily met.</p>
any discrepancies between the predicted and actual impacts of the project, and analyse the potential cause of any significant discrepancies;	<p>It had been speculated that in the initial stages of landfilling there may be insufficient material upon which the nitrifying bacteria of the SBR could operate.</p> <p>Currently, there is always enough suitable material present in the waste mass which is evidenced in the ammonia content of the leachate for the nitrifying bacteria of the SBR to operate.</p>

describe what measure will be implemented over the next year to improve the environmental performance of the project.	Leachate piping system will be maintained to ensure leachate tanks are filled at an optimum rate.
Salient Matter	Chute Maintenance and Reduction
Works that were carried out in the past year	Reduction in chute length when required as the filled level of waste rises. No further chute reduction was required in 2018. The footings and structural integrity of the chute are inspected and monitored in the manner set out in the Chute Management and Maintenance Plan approved by the Department.
Works that are proposed to be carried out over the next year,	Continued reduction in chute length as required. Continued inspection, maintenance and repair of the chute and conveyor system.
Review of the monitoring results and complaints records of the project over the past year, which includes a comparison of these results against the relevant statutory requirements, limits or performance measures/criteria; • the monitoring results of previous years; • the relevant predictions in the EA;	No observations to suggest the occurrence of any adverse developments in the footing and structural integrity of the chute. Complaints Records - Nil.
Any non-compliance over the last year	Nil.
Describe what actions were (or are being) taken to ensure compliance;	Regular maintenance of chute and the internal misting system. Visual inspections by appropriately trained staff.
Identify any trends in the monitoring data over the life of the project;	There have been no occurrences of any adverse developments in the footing and structural integrity of the chute since its construction.
Any discrepancies between the predicted and actual impacts of the project, and analyse the potential cause of any significant discrepancies.	Nil.
Describe what measure will be implemented over the next year to improve the environmental performance of the project.	Continued maintenance and inspection of chute.

WASTE MANAGEMENT PROCEDURES.

<p>Salient Matters</p>	<p>Material types accepted at the premises. Rejection of Loads Potential Asbestos Contaminated Loads</p>
<p>Works that were carried out in the past year</p>	<p>General operations.</p>
<p>Works that are proposed to be carried out over the next year,</p>	<p>A modification to the Project Approval (Mod 5) has been approved in 2016 and as such a licence variation will be sought to increase tonnes and variety of waste streams acceptable at the premises. The development will allow for a “pre-sort enclosure” installed on the premises which will increase the optimum recycling output of the Project.</p>
<p>Review of the monitoring results and complaints records of the project over the past year, which includes a comparison of these results against the relevant statutory requirements, limits or performance measures/criteria; • the monitoring results of previous years; • the relevant predictions in the EA;</p>	<p>No Monitoring Applicable Complaints: Nil from Public A detailed register of complaints and subsequent investigation and action taken is maintained on the website.</p>
<p>Any non-compliance over the last year</p>	<p>On the evening of 25 May 2018 a fire started spontaneously on a tipping face cell of non-putrescible waste area in the Landfill. Fire & Rescue attended, and the fire was successfully extinguished very early following morning. The matter was reported to the EPA hotline, R3 report requested and complied with. No further action has been taken by the EPA.</p> <p>On 23 November 2018 The DoP requested further information and subsequently issued a show cause notice about the failure to notify the DoP of the incident in breach of the Licensees consent conditions. The Licensee’s has responded and awaits further correspondence from the DoP on this issue.</p> <p>On 22 August, 2018 3 loads of autoclaved but unshredded medical waste was disposed of at the Landfill. After significant efforts and continuous work with the EPA, the waste was disposed of within the landfill as prescribed by the EPA. Subsequently the EPA on 3 December 2018 issued a Formal Warning with regards to the incident.</p> <p>On 23 November 2018 The DoP requested further information and subsequently issued a show cause notice about the failure to notify the DoP of the incident in breach of the Licensees consent conditions. The Licensee’s has responded and awaits further correspondence from the DoP on this issue.</p>
<p>Describe what actions were (or are being) taken to ensure compliance;</p>	<p>Initial weighing and visual screening of waste entering site. Refresher tool box discussions regarding incoming waste identification. New procedures to ensure prior approval of incoming waste (similar to that we have in place for contaminated soils). Review of our procedures by SafeWork (with no required changes).</p> <p>MPC spotters employed and trained to ensure recyclable waste is sorted correctly and waste that is not permitted is rejected and notation made on the rejected loads register.</p>

	<p>3 x MicroPhazer asbestos analyser devices are operated, which allows on the spot testing of suspect material for asbestos content.</p> <p>Tipping Face Spotter employed on site to ensure that vehicles are directed to the correct location to tip their waste and waste that is not permitted is not tipped or that the waste is tipped in the correct cell..</p> <p>Rejected loads register is being continuously maintained by DADI.</p>
<p>Identify any trends in the monitoring data over the life of the project;</p>	<p>N/A</p>
<p>Any discrepancies between the predicted and actual impacts of the project, and analyse the potential cause of any significant discrepancies;</p>	<p>Nil.</p>
<p>Describe what measure will be implemented over the next year to improve the environmental performance of the project.</p>	<p>Modification to the Project Approval will see proposed changes to opening hours, location of the PSE, location and number of weighbridges, increased tonnages and ability to accept C&I waste which will increase the optimum recycling output of the Project.</p>

CULTURAL HERITAGE

Salient Matters	Salvage of Aboriginal Cultural Material Integrity of archeologically sensitive areas
Works that were carried out in the past year	Inspection, maintenance and repair of fencing around the Conservation area to control access to classified archaeological sensitive land (Zone 1). Continued monitoring of Conservation Area.
Works that are proposed to be carried out over the next year,	Continued maintenance of fencing around the Conservation area.
Review of the monitoring results and complaints records of the project over the past year, which includes a comparison of these results against the relevant statutory requirements, limits or performance measures/criteria; • the monitoring results of previous years; • the relevant predictions in the EA;	Since construction there has been no further discovery of any Aboriginal cultural materials. Cultural monitoring results are consistent with previous years and this is predicted to continue. Complaints records - Nil.
Any non-compliance over the last year	Nil.
Describe what actions were (or are being) taken to ensure compliance;	Fencing and regular surveillance of site to control access to sensitive areas.
Identify any trends in the monitoring data over the life of the project;	There has been little change to site since initial construction, as such the project approval requirements which apply to these issues should be removed.
Any discrepancies between the predicted and actual impacts of the project, and analyse the potential cause of any significant discrepancies;	N/A
Describe what measure will be implemented over the next year to improve the environmental performance of the project.	N/A

OTHER COMPLIANCE MATTERS – CONDITION 7 OF SCHEDULE 5 (JUNE 2015-JUNE 2017)

RELEVANT STATUTORY MONITORING REQUIREMENTS

The monitoring requirements for dust and surface water are as set out in EPL 20121 conditions P1 and M1 to M7 inclusive. The monitoring requirements for groundwater, surface water and leachate are set out in EPL 13426 P1 and M1 to M7. These reports and results can be found by following the attached link: <http://www.dadi.com.au/policies-reports/genesis-reporting>.

Additionally, odour, landfill gas and noise assessments are regularly completed in line with the site's Air Quality, Odour and Greenhouse Gas Management Plan and Landfill Gas and Noise Monitoring Programs. The noise limits are set out in EPL 20121 condition L4 and EPL 13426 condition L4.

ENVIRONMENTAL PROTECTION LICENCE –POTENTIALNON-COMPLIANCES RAISED BY EPA

Under EPL 13426 (Landfill Operations) the following compliance concerns have been raised by the EPA specifically in relation to the Licensee's landfill operations. Again, the Licensee has promptly replied to any request or invitation to provide additional information.

On 22 August, 2018 3 loads of autoclaved but unshredded medical waste was disposed of at the Landfill. After significant efforts and continuous work with the EPA, the waste was disposed of within the landfill as prescribed by the EPA. Subsequently the EPA on 3 December 2018 issued a Formal Warning with regards to the incident.

20 December 2018 correspondence was received from the EPA regarding the use of concover in the landfill and the Licensee has lodged a variation request to update EPL to include concover as an approved alternative daily cover following a successful trial.

The Licensee takes very seriously all investigations and suggestions of potential breaches of either the Act, the waste regulations or the applicable licence conditions. The Licensee is constantly reviewing its methods and practices in relation to the activities that it carries out under both its licences to ensure that it maintains one of the highest standards of any similar facility in New South Wales. The Licensee also acknowledges that all notices issued to it by the EPA are available to the public by following the attached link <http://www.epa.nsw.gov.au/licensing-and-regulation/public-registers>

INCIDENTS AND COMPLAINTS

COMPLAINTS RECORDS

A detailed register of complaints and subsequent investigation and action taken is maintained on the website and available for the public viewing at: <http://www.dadi.com.au/policies-reports/genesis-reporting>.

Information about how to make a complaint is available on the Genesis website at: <http://www.dadi.com.au/landfills-and-recycling-centres.html>.

REPORTABLE INCIDENTS

There was one incident reported to the EPA hotline during the reporting period 2018 related to a fire in the tipping face of the landfill on 25th May 2018 as described above.

For completeness the Licensee does note that it notified the EPA of an anomalous exceedance of methane gas in December 2018 and has proposed continuous monitoring in the monitoring bore affected. This exceedance is still under investigation.

ADDITIONAL COMMITMENTS

PUBLIC SAFETY

Since the Facility opened in mid-2012 a number of measures have been implemented to minimise the risks to the public and to ensure public safety. These measures are regularly reviewed for applicability and customers are regularly reminded of their need to consider the safety of others on site with flyers regarding driving behaviour whilst on site.

- the site is fenced;
- speed signs and speed bumps erected at the end of DADI Drive entrance (approaching the Workshop);
- access points to the site are gated and locked after hours (with security patrols after hours);
- access points to the site have security and warning signs;
- all visitors (including consultants) must sign in & out of the visitors register located at the Administration Office;
- the site is under video surveillance; and
- restricted general access to potentially hazardous zones (e.g. inside the chute).

CHANGES TO DEVELOPMENT APPROVAL AND/OR ENVIRONMENTAL PROTECTION LICENCES

13426 LICENSE VARIATION 22 AUGUST 2018

The following variations have been made to the license:

- Amend Condition P1.2 updating water monitoring table with additional stage 2 Groundwater Monitoring Bores;
- Amend condition P1.2 to remove monitoring point 33;
- Amend condition O5.13 to maintain leachate levels at least 5m below the minimum elevation of the waste surface;
- Remove condition O5.14 requirement to provide plans for the mid floor liner specification;
- Remove condition O5.15 as waste has moved above the -10m AHD level;
- Amend condition O5.18 (now O5.16) to remove reference to mid floor liner;
- Amend condition O5.19 (now O5.17) to refer to the EPA's Environmental Guidelines: Solid Waste Landfills (2016);
- Add conditions O5.20, O5.21, O5.22, O5.23 and O5.24 relating to the installation of the leachate management contingency system, being the replacement of the mid floor liner with a drainage layer;
- Amend condition M2.2 with updated stage 2 Groundwater Monitoring Bore information;
- Amend condition M4.4 to refer to EPA's the Environmental Guidelines: Solid Waste Landfills (2016);
- Amend condition M7.3 to refer to EPA's the Environmental Guidelines: Solid Waste Landfills (2016);
- Remove condition E5.1 for requirements to install Stage 2 Groundwater Monitoring Network;
- Remove condition E5.2 for notification of Stage 2 Groundwater Monitoring Network;
- Remove condition E5.3 in relation to EPA approval for Stage 2 Groundwater Monitoring Network;
- Remove Condition E6.1 relating to an alternative daily cover trial;
- Remove condition E6.2 relating to an alternative daily cover trial;
- Remove condition E7.1 relating to structural pipe loading drawings to be submitted and odour assessment (if submitted); and
- Remove condition E7.2 requiring design specifications for a leachate monitoring well.

MOD 6

Mod 6 relates to the modification to the conditions for MP06_139. No approval has yet been received. In particular the following conditions of consent are sought to be amended:

- Condition 39, Table 5 that sets out the hours of operation; and
- Schedule 3; Condition 1(a) the limits landfill capacity to 700,000 tonnes per annum.
- The modification seeks to extend the hours of operation and remove the annual landfill cap to promote flexibility in the site operations.
- This MOD is still with the Department after further submissions were made on the landfill cap. We understand that the DoP are waiting on comment from the EPA.

MOD 7

- The proposal involves modification to the entry point and layout of the site operations area to facilitate the delivery of the Precinct Road required by the conditions of MP06_139 and generally improve the operation of the site.
- The modification does not seek to alter or extend the operations already approved on the site. Accordingly, the conditions as imposed should generally not be affected by the modification with the minor exception of plan reference conditions.

INITIATIVES FOR THE NEXT 12 MONTHS - 2019

The following initiatives both carried over from 2018 and new endeavours for 2019.

- Modification (MOD 5) of the Genesis Facility conditions of approval enabling it to process and remove part of the existing earthen berm. The purpose of this activity was to clear an area for the construction of the pre-sort enclosure (PSE).
 - The PSE will separately house an automated mechanical sorting plant similar to the existing plant in the main MPC.
 - The PSE will optimise recycling on the facility and potentially increase the waste streams able to be recycled on the premises by increasing recyclable recovery rates through front end segregation (pre shredding).
 - It will also reduce WHS risks relating to personnel, trucks & machinery operating within the same workspace as the sorting plant.
- Environmental initiatives for the Facility in 2018 – 2019 will also include a review of all strategies, plans and programs relating to the project approval and to the requirements and commitments from the Genesis Recycling & Landfill Environmental Monitoring Plan and Programs in order to bring them in to line with the current operations as it moves from the construction phase. In particular, DADI will be looking to engage both Independent consultants, as well as take advantage of its current inhouse experience to ensure that all revisions are best in class, and the Licensee will seek all necessary approvals during this process.
- 2019 will also see the undertaking and completion of our Bi-annual Independent Environmental Audit, by an approved DoP Environmental Auditor.
- Enclosing the timber yard, which will
 - Reduce risks associated with dust generation, resulting from the shredding of timber products, as this process will then be conducted in a controlled environment, unaffected by weather conditions.
 - Increase the shelf life of the finished product resulting from non-exposure to UVL and inclement weather.
 - Reduce volumes of leachate being generated, treated and discharged through the trade waste / sewer system.
- Construction of a Commercial and Industrial (C&I) Recycling Plant, which will
 - Improve recovery rates of paper / plastic / cardboards, through a dedicated automated separation and recovery system.

- Improve the performance of the Construction and Demolition recycling plant by diverting the C&I waste streams away from the plant, allowing it to become finer tuned to the recovery of fines, timbers, metals, rubble and aggregates.

STRATEGIC AND COMMERCIAL REVIEW

In concert with this operational environmental review the Corporate Group of the Licence holders has carried out a review against the commercial and policy imperatives which have occurred during the past twelve month period.

- 1 In 2018 the NSW Upper House conducted a Parliamentary review of the Waste Industry in Sydney and concluded by making a number of recommendations for reform, most of which had been proposed by the DADI Group.
- 2 The DADI Group proposed to the NSW EPA, to the Premier and the Queensland inquiry into the interstate transportation of Waste a regime under which the transporter of transported waste would remain liable for s88 rates of levy regardless of where the waste was transported.
- 3 ABC 4 Corners also examined the issue and the Chinese Government announced restrictions on that country's willingness to accept C & I waste.
- 4 Queensland State Government announced the reintroduction of the landfill levy in that state.
- 5 These developments are expected to increase the quantities of waste presenting to Genesis requiring treatment or disposal.
- 6 DADI Group progressed its applications pursuant to s75W of the EPAA to modify the Development Consent for the Genesis site to enable site reorganisation, additional roads and buildings weighbridges and access ways in readiness for the importation of additional processing equipment designed for C & I waste streams.
- 7 It was also noted that extensive infrastructure works had resulted in higher than previously experienced volumes in asbestos contaminated soils to landfill.
- 8 The Development Application for the construction and subsequent operation of a Waste to Energy Facility on adjacent land was refused by the DPE and subsequently also by the Independent Planning Commission.
- 9 On 21st August 2018 the shareholders of the DADI Group entered into an agreement to sell their shares to Bingo Industries. This transaction is subject to ACCC approval.
- 10 Additional waste previously transported by Bingo to Queensland began to be delivered to DADI Group at Eastern Creek and this necessitated additional resources to be brought on line.
- 11 Agreement terms entered into between the parties envisaged the subdivision and separation of DADI landholdings surrounding Genesis and the construction of a precinct road connecting Archbold road to Honeycomb drive. Planning for this commenced during the period.

SUMMARY

SCHEDULE 5 TO CONSENT (06_0139 MOD 4)	
ENVIRONMENTAL MANAGEMENT, REPORTING & AUDITING	
ENVIRONMENTAL MANAGEMENT	
Environmental Management Strategy	
The Proponent shall prepare and implement an Environmental Management Strategy for the project to the satisfaction of the Director-General. The Strategy must:	
a) be submitted to the Director-General for approval prior to the commencement of construction;	Complies.
b) provide the strategic framework for environmental management of the project;	Complies.
c) identify the statutory approvals that apply to the project;	Complies.
d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the project;	Complies – Key Contact Personnel: CEO – Executive Management Group Operations Manager –Management, responsible for the oversight of all Sites, Site Managers – management – responsible for the day to day operations on site. Simon Sherwood (Site Manager) - 0429 293 909
e) describe the procedures that would be implemented to:	
<ul style="list-style-type: none"> keep the local community and relevant agencies informed about the operation and environmental performance of the project; 	Complies. DADI’s website contains links to up to date environmental performance of the project with monitoring results. DADI also has a community consultation plan.
<ul style="list-style-type: none"> receive, handle, respond to, and record complaints; 	Complies.
<ul style="list-style-type: none"> resolve any disputes that may arise during the course of the project; 	Complies.
<ul style="list-style-type: none"> respond to any non-compliance; and 	Complies.
<ul style="list-style-type: none"> respond to emergencies; 	Complies.
f) include:	
<ul style="list-style-type: none"> copies of the various strategies, plans and programs that are required under the conditions of this approval once they have been approved; and 	Complies.
<ul style="list-style-type: none"> a clear plan depicting all the monitoring currently being carried out within the project area. 	Complies.
Annual Review	
3. By the end of December 2010, and annually thereafter, the Proponent shall review the environmental performance of the project to the satisfaction of the Director-General. This review must:	According to the definitions of the Project Consent, the “project” is the development described in the EA. The EA describes the project as a resource recovery facility and landfill facility. The Recycling Environment Protection Licence commenced in June 2012 and the Landfill Environment Protection Licence commenced in December 2012. As such, the first annual review of the environmental performance of the project was undertaken in December 2013, being the anniversary of when the landfill

	operations commenced in accordance with the Environmental Protection Licences. The Licensee is current with all required Annual Reviews
a) describe the works that were carried out in the past year, and the works that are proposed to be carried out over the next year;	Noted.
b) include a comprehensive review of the monitoring results and complaints records of the project over the past year, which includes a comparison of these results against the	
<ul style="list-style-type: none"> the relevant statutory requirements, limits or performance measures/criteria; 	Noted.
<ul style="list-style-type: none"> the monitoring results of previous years; and 	Noted.
<ul style="list-style-type: none"> the relevant predictions in the EA; 	Noted.
c) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;	Noted.
d) identify any trends in the monitoring data over the life of the project;	Noted.
e) identify any discrepancies between the predicted and actual impacts of the project, and analyse the potential cause of any significant discrepancies; and	Noted.
f) describe what measure will be implemented over the next year to improve the environmental performance of the project.	Noted.
Revision of Strategies, Plans & Programs	
annual review under condition 3 of schedule 5, the Proponent shall review, and if necessary revise, the strategies, plans, and programs required under this approval to the satisfaction of the Director-General.	Noted
<i>Note: This is to ensure the strategies, plans and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the project.</i>	
REPORTING	
Incident	
5. The Proponent shall notify the Director-General and any other relevant agencies of any incident associated with the project as soon as practicable after the Proponent becomes aware of the incident. Within 7 days of the date of the incident, the proponent shall provide the Director General and any relevant agencies with a detailed report on the incident.	Noted
Regular	
6. The Proponent shall provide regular reporting on the environmental performance of the project on its website, in accordance with the reporting arrangements in any plans or programs approved under the conditions of this approval, and to the satisfaction of the Director-General.	Complies

ACCESS TO INFORMATION	
9.	From the end of 2009, the Proponent shall make the following information publicly available on its website:
a)	a copy of all current statutory approvals; Complies
b)	a copy of the current environmental management strategy and associated plans and programs; Complies
c)	a summary of the monitoring results of the project, which have been reported in accordance with the various plans and programs approved under the conditions of this approval; Complies
d)	complaints register, which is to be updated on a monthly basis; Complies
e)	a copy of any Annual Reviews (over the last 5 years); Complies
f)	a copy of any Independent Environmental Audit, and the Proponent’s response to the recommendations in any audit; and Complies
g)	any other matter required by the Director-General. Noted