GENESIS XERO WASTE

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By email: emma.barnet@planning.nsw.gov.au

Ms Emma Barnet
Department of Planning & Environment
GPO Box 39
SYDNEY NSW 2001

Dear Ms Barnet,

Genesis Xero Waste Facility –Proposed Modification to Project Approval 06_0139 (MOD 6)

Further to our earlier correspondence in relation to this matter, the proponent is seeking to modify the existing project approval for the Genesis Xero Waste Facility. We provide further detail on the project, proposed changes and potential impacts as follows:

1 Background to the Project

This chapter provides a brief introduction to the current Project and details the current activities as carried out by the Proponent.

1.1 Overview

The Project includes the operation of a Resource Recovery facility (**RRF**) and a general solid waste (non-putrescible) landfill. The RRF includes a Materials Processing Centre (**MPC**) and a Waste Transfer Station. The Project is commonly known and referred to as the 'Genesis Xero Waste Facility' or 'Genesis'.

In summary, the following activities have been 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

and green waste clean ups;

- on-site waste processing including sorting, screening, sieving, crushing, grinding, shredding and/or chipping, and composting of green waste;
- recycling of an estimated 65-80% of incoming waste (1.3 to 1.6 million tonnes per annum (mtpa), based on maximum capacity intake) e.g. to produce road base, aggregate, landscaping soil, bedding sand, mulch, wood chip, green waste compost and asphalt derived products for land application;
- testing and on-site storage/stockpiling of finished products prior to resale from stockpiles, predominantly to the building, construction and landscaping sectors and potentially the domestic market;
- transport of an estimated 20-35% of incoming waste (0.4 to 0.7 mtpa, based on a maximum capacity intake) to the landfill proposed within the quarry void, comprising incoming materials which are unsuitable or uneconomical for recovery and recycling (for example contaminated soils, asbestos waste and loads that cannot physically be sorted);
- quarantine and transfer of unacceptable wastes to an appropriate off-site facility for disposal; and
- construction and operation of associated infrastructure, plant and equipment, including upgrade of the internal road network and reshaping of earthen amenity berms.

1.3 The Proponent

The landowner, ThaQuarry Pty Ltd and ACN 114 843 453 Pty Ltd own Lot 1 in DP 1145808 and Pt 8 in DP 1200048 (Eastern Creek in the Blacktown local government area) being the subject land of the project.

Dial A Dump (EC) Pty Ltd, the license holder of EPL 20121 and 13426, operates a major recycling facility and general solid waste (non-putrescible) landfill facility known as the **'Genesis Recycling and Landfill Facility'** at Honeycomb Drive, Eastern Creek. EPL 20121 specifically regulates the MPC operations and related materials.

The site includes the surface area of the quarry is 52.4Ha and comprises of two land parcels, identified as own Lot 1 in DP 1145808 and Pt 8 in DP 1200048.

1.4 The original Project Approval

The current Project Approval (06_0139) provides for:

- a waste recovery facility including a MPC and greenwaste area (not yet operating greenwaste activities);
- rehabilitation of the quarry void via a Class 2 (non-putrescible) landfill;
- a total throughput of up to 2 million tonnes of materials at the site per calendar year;
- landfilling of up to 700,000 tonnes of non-putrescible waste (including asbestos);
- stockpiling of up to 50 tonnes of tyres on site at any one time; and
- stockpiling of up to 20,000 tonnes of greenwaste on site at any one time.

1.5 Consent history

The following consent and modifications are of relevance to this application:

- Original Project Approval – Minister's Approval (06_0139) for construction and operation of a resource recovery and non-putrescible landfill facility;

- Modification (Mod 1 granted by the Minister on 30 September 2010) for the following components:
  - Electrically powered conveyor and chute;
  - Postponed commencement of construction;
  - Two way traffic on Fourth Avenue;
  - Concrete bay walls within the greenwaste processing area; and
  - Relocation of the wheelwash.

- Modification (Mod 2 granted by the Minister on 9 November 2010) for correction to the land description details of the project Approval. The corrected reference to the land being Lots 1, 2, 3 and 4 in DP 1145808.

- Modification (Mod 3 granted by the Minister on 5 December 2011) for the following components:
  - Revised final landform level of the fill pad at Area D;

- Operational landform levels and site stormwater design;
- Internal office and external amenities to the Weighbridge;
- New amenities building;
- New amenities building associated with the spotter stations;
- New administrative/office building;
- New amenities at the tarp stand area;
- Approval for the use and relocation of the vehicle turning bay which works have already been carried out; and
- Voluntary planning agreement.

- Modification (Mod 4 granted by the Minister on 14 December 2013) for the following components:

- Extended operating hours for the MPC allowing it be operated during the hours of 6am to 10pm Monday to Friday, and 6am to 4pm Weekends and Public Holidays; and
- Modifications to the noise levels in Table 4, which provided that the Proponent would not exceed 36 LAeq(15 minute) dB(A) during the day and 35 LAeq(15 minute) dB(A) during the evening and Morning Shoulder.

- Modification (Mod 5 granted by the Minister on 17 March 2016 for the following components:
- Allow construction of a Pre-Sort Enclosure in accordance with the plans submitted with the modification application.

1.6 Planning regime

The Project was declared a Major Project to which (the former) Part 3A of the EP&A Act applies and for which approval of the Minister for Planning was required.

Ministerial Project Approval (06_0139) was granted on 22 November 2009.

2 Need for the modification

This chapter provides a discussion on the need for and justification for additional operating hours for the Facility. A summary of the MPC operations is provided.

2.1 Project description

The Proponent currently operates as follows:

Activity	Day	Time
Construction	Monday – Friday	7:00am to 6:00pm
	Saturday	8:00am to 4:00pm
	Sunday and Public Holidays	Nil
Operation	Monday – Friday	7:00am to 6:00pm
	Saturday, Sunday and Public Holidays	8:00am to 4:00pm
MPC	Monday – Friday	6:00am to 10:00pm
	Saturday, Sunday and Public Holidays	6:00am to 4:00pm

Note

39a Operating hours of the conveyor and chute system are to be restricted to the facility's operational hours (and not times governing the Operation of the MPC as above) and as defined in condition 39 of Schedule 3.

2.2 Proposed modification no. 6

The proponent proposes to amend the Existing Table 5 of Condition 39 (as set out above and amended by Modification 4).

Proposed modification to Table 5 of Condition 39

Area	Activity	Day	Time
MPC	Receive Materials	Monday – Sunday	24 hours
	Maintenance Works	Monday – Sunday	24 hours
	Operations	Monday – Sunday	24 hours
SMA	Receive Materials	Monday – Sunday	24 hours
SMA	Crushing and Screening	Monday – Sunday	6:00am to 6:00pm
Landfill	Receive Materials (excluding chute)	Monday – Sunday	5am to 9pm
	Maintenance Works	Monday – Sunday	24 hours
	Operations including covering waste and chute maintenance/clearing	Monday – Sunday	5am to midnight

FIGURE 1 – Depicts the Segregated Materials Area (SMA), Materials Processing Centre (MPC) and Landfill Areas.

2.3 Background to current operations

The recycling / waste transfer facility opened 8 June 2012 and operates pursuant to EPL 20121. Mixed or comingled building and demolition waste is transported by truck to the facility where it is unloaded within the MPC. The MPC is a large building of cast concrete slab, steel and color-bond construction typical of the surrounding industrial buildings within the Precinct.

FIGURE 2 (Front of MPC building, front main doors visible)

In accordance with approved environmental management strategies for the facility, preliminary sorting of materials for processing takes place within the MPC.

The facility operates to strict waste classification management standards including the screening loads by weighbridge camera and then spotters at various positions throughout the facility. This will not change under this proposal.

2.4 Site particulars

The Genesis facility has an ability to accept up to two million tonnes of waste per annum.

Waste loads received at the facility are classified into the following categories:

Categories	
Segregated hard-fill materials	this is material capable of being recovered or recycled by a series of processes. Carried on externally to the MPC, in what is known as the Segregated Materials Area (SMA). After reprocessing and/or recovery, recycled hard-fill materials [brick concrete, sand soil stone bitumen] are stored on-site within the SMA until sold.
Co-mingled construction and demolition waste and commercial and industrial waste	consisting of metals, brick, concrete, plasterboard, soil, aggregates, plastics and a range of building and demolition wastes. These materials are delivered to the Materials Processing Centre [MPC] for classification and processing.
Land-filling	the remainder of incoming waste materials is directed straight to landfill for disposal. This is due to its chemical composition and waste classification which requires that it be disposed of by landfilling.

2.5 The MPC Plant

Waste which is received within the MPC is subject to processing by the Fixed Plant contained inside the MPC.

FIGURE 3: (Photo of inside the MPC from the southern end)

The Plant as shown in the photos, is a large and complex piece of fixed machinery involving up to 52 interconnected electrically driven conveyors and a range of magnets, graders, screens sieves and hand sorting stations.

The Plant operates throughout the working day and inevitably there are breakdowns and periods in which routine maintenance is required. Whilst sections of the Plant are isolated from operation for safety purposes during routine maintenance, the times taken for this have a consequential effect on the overall productivity of the Plant.

The extension of hours is partly sought to accommodate the maintenance, repair and cleaning schedules which are necessary to ensure that the Plant operates to maximum capacity and in an environment conducive to workplace safety.

2.6 SMA

Materials received within the SMA are sorted into relevant categories (ie brick concrete, sand, soil, stone and bitumen) for reprocessing into a variety of products for sale.

FIGURE 4: Stockpiles of finished products within the SMA

FIGURE 5: Stockpiles of finished products within the SMA

Materials received within the SMA come from both pre-sorted loads, transferred from the MPC and also from direct loads of material deposited directly within the area.

The SMA is principally used for the receipt, dispatch and stockpiling of inert construction and demolition materials, such as sand dirt concrete, brick tiles, asphalt.

From these primary materials, all different kinds of aggregates and road base can be produced. The following products are the most commonly produced and sold on site:

Product	Product Description
	**10mm Aggregate** A versatile, double screened recycled brick aggregate with multiple applications. Ideal for use around pipes, wet areas and decorative pathways.
	**20mm Aggregate** Double screened recycled aggregate sourced from concrete, asphalt and construction rubble. Perfect for drainage material, retaining wall backfill and decorative pathways.
	**40/70 Aggregate** Crushed recycled concrete between 40mm - 70mm. This larger-sized product is ideal for temporary site access roads (to minimise clay carryout by vehicles) and retaining wall backfill.
	**Bedding Sand** Suitable for pipe bedding, trench filling, slab levelling and sub-course for paving. A low-plasticity, economical and environmentally friendly alternative to virgin sands.

All products produced on site are routinely tested by independent third parties to ensure compliance with any relevant resource recovery exemptions and to ensure consistent quality products are produced.

All stockpiles heights are limited to within the height of the Amenity Berms as required by the project approval and are maintained in accordance with all current legislative and regulatory requirements.

The product is produced by a variety of machinery that is currently used as required within the area and generally consists of 2 mobile crushers plus auxiliary equipment (such as screens, stock-pilers and re-claimers). Mobile equipment (such as loaders and excavators) used to relocate materials and product are also used within the area on an "as required" basis.

Currently, the proponent of the project plans to invest $8mill to replace two current mobile crushers with a static plant designed to produce road base and aggregate more efficiently. The proponent is currently investigating its options in this respect and will in due course examine whether any planning approval is required.

2.7 Landfill

Any waste which cannot be recycled or re-processed through the MPC or the SMA, is sent to the Landfill Area.

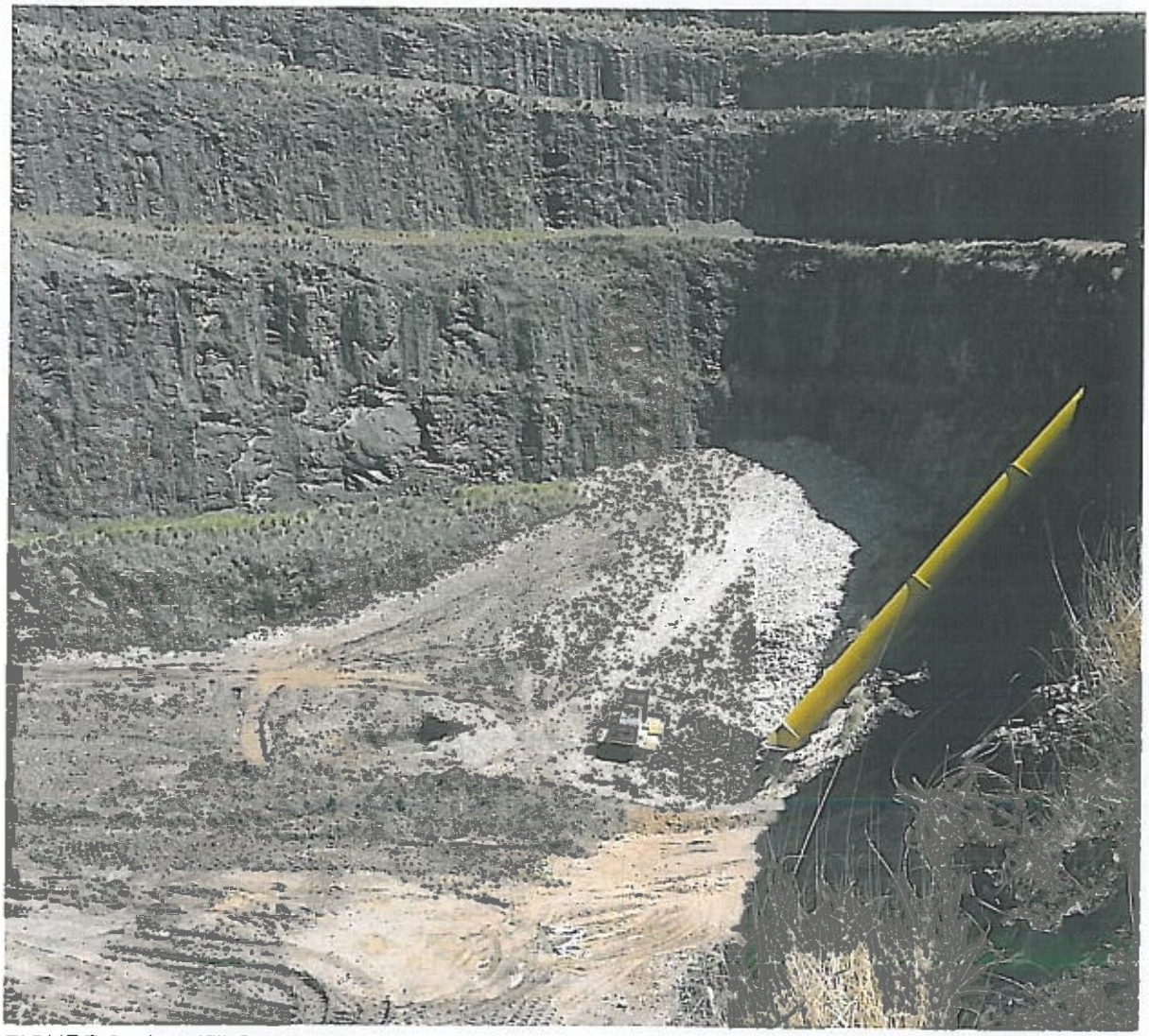

FIGURE 6 – Landfill Operations

The proposed licence change would see the landfill open for receiving of materials for landfilling from 5am-9pm.

The landfill receives waste directly from the MPC, via the yellow chute depicted above in Figure 6. Waste may also be accepted directly from waste loads which have been classified as General Solid Waste (Non-putrescible).

FIGURE 7- Landfill Operations

Under normal conditions, on an average operating day there are 2 compactors, 2 loaders and one excavator operating in the landfill (while the chute is also still operating).

The proponent is also seeking to extend general operations (including covering waste and chute maintenance and cleaning) from 5am to midnight. During these times, there would be the same amount of machines in the landfill, either towing the Concover machine to cover waste or compacting and/or covering materials deposited in the landfill.

The proponent is seeking approval to operate for the purposes of conducting Maintenance Works in the landfill 24 hours a day. Such works will involve the repair and maintenance of machines utilised in the landfill operations during the day.

2.8 Project need and planning justification

The Project need and justification for proposed extended operating hours is three-fold.

Firstly, to accommodate loss in production time arising from the operator's commitment to ensuring a safe and efficient workplace environment.

The plant and machinery is complex and it is necessary to ensure that all components are at all time working effectively and harmoniously in order to ensure an effective production result.

Secondly, to facilitate acceptance of loads of waste received from night projects (ie roadworks).The extended operating hours would allow receipt of material from night projects (ie roadworks), which presents a much more viable option than storing the waste on the side of the road until a facility opens the next day.

Thirdly, to facilitate acceptance of loads of waste during the operation of large projects. The extended operating hours provide a greater window for receipt of waste and sale of product when large projects are underway and either producing large volumes of waste or consuming large volumes of recovered materials.

Fourthly, to help streamline and facilitate the proper removal and disposal of asbestos and contaminated soils, by providing a facility which can receive such materials with longer operating hours. Most existing facilities, which are licensed to accept such wastes will only accept asbestos loads before 4pm (usually due to opening hours constraints and daily cover requirements). The extended operating hours may also have a positive effect in the community by decreasing illegal dumping of such substances, given the facility provides a suitable venue for receipt and proper disposal of such substances for a longer period of time each day.

The environmental management procedures have been developed in accordance with best practice to maximise resource recovery and minimise biodegradable material from being land-filled in accordance with relevant legislative requirements.

The MPC site also benefits from the construction of impervious barriers at various positions around the facility being a requirement under the Project Approval.

The processed materials (from the MPC plant) leaving the conveyor at the rear of the MPC facility are dry materials with no odour. Previous odour testing at the facility has demonstrated that the materials being produced in the MPC and SMA are very low odour producing in any event.

Under this proposed modification, there may be additional tonnage of processing materials over and above the current Project Approval (as modified) limits.

Moreover, there will be no additional impact from the proposed extension of MPC operating hours as the facility will generally maintain its current operational and management procedures.

The proposed extension of operating hours may include:

- any additional truck movements in or out of the site;
- any land-filling activities;
- the use of any heavy plant or equipment externally; and
- crushing, grinding or separating works.

3 Potential environmental impacts

This chapter discussed the potential environmental **impacts resulting from the modification and** also identifies any potential consequential impacts resulting from the extended operating hours. **The Proponent identifies the risks** involved **and outlines the mitigation** / management for **each consequential impact.**

3.1 Potential impacts

The Proponent has identified and examined the following potential environmental impacts of this modification which it is seeking.

These include, in order of potential adverse impacts:

1 Noise;
2 Traffic;
3 Air Quality; and
4 Odour.

Table 1 - Proponent's environmental risk assessment

Environmental risk assessment	
Noise	Minimal noise impacts, further technical assessment may need to be provided to determine the effects on the nearest residential receiver and whether the noise limits might be exceeded.
Traffic	There is likely to be increased traffic movements, although to a large extent, the traffic movements may be more spaced out across the extended operating hours. In any event the facility is located within an entirely industrial area (which already operates 24 hours a day) and therefore any increased traffic movements are highly unlikely to have an effect on the nearest residences.
Air Quality	In full operation negligible particulate emissions leave the facility. A network of sprinklers already surround the MPC and SMA to wet down sealed roads and to ensure that any materials deposited on site remain wet. Air Quality Assessment and Compliance testing previously undertaken by Pacific Environmental Limited and submitted to the NSW Department of Planning and Infrastructure indicates that the Facility when operating at full capacity, [indoor and outdoor activities] including crushing screening grinding and land-filling meets all environmental goals and standards for the Facility. There have been no complaints about the facility having any impact on air quality to date.

Environmental risk assessment	
Odour	There will be no odour impacts resulting from this proposed modification, no putrescible material is authorised and no composting of garden waste is being carried out. Odour is never an issue observed during MPC operations. The modification does not involve the processing composting storing managing or otherwise dealing with greenwaste or biodegradeable materials liable to generate odour. Small dry (less than 300mm length) timber pieces recovered from co-mingled demolition wastes are recovered and stored in the bunded stockpile area to the west of the MPC.

The Proponent has assessed the key potential environmental impacts above and formed the view that there are no adverse environmental impacts resulting from the proposed modification.

If you wish to discuss, please contact the writer on 02 8596 6304.

Yours sincerely,

ALICIA MARIX-EVANS
SOLICITOR