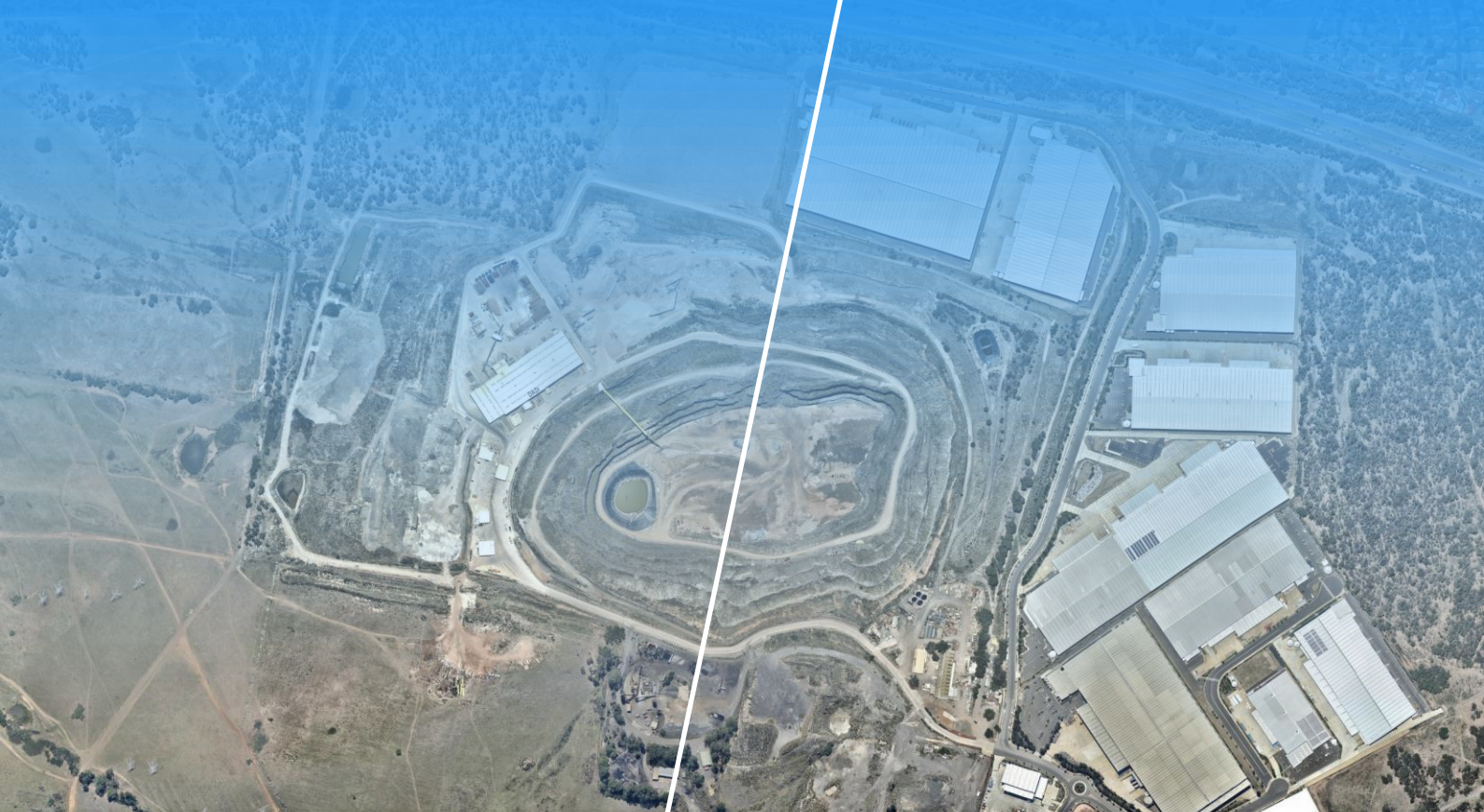
NSW GOVERNMENT

Genesis Waste Management Facility

Former Section 75W Modification Assessment (06_0139 MOD 6)



February 2020

Cover photo

Aerial photograph of the Genesis Waste Management Facility and surrounds (Source: Nearmap)

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Glossary

Abbreviation	Definition
Approval	Project Approval
BC Act	*Biodiversity Conservation Act 2016*
BCC	Blacktown City Council
C&D	Construction and Demolition
C&I	Commercial and Industrial
Day	7 am – 6 pm Monday – Saturday; 8 am – 6 pm Sundays and public holidays
Department	Department of Planning, Industry and Environment
DPI	Department of Primary Industries
EA	Environmental Assessment
EES	Environment, Energy and Science Group (formerly the Office of Environment and Heritage)
EPA	Environment Protection Authority
EP&A Act	*Environmental Planning and Assessment Act 1979*
EP&A Regulation	Environmental Planning and Assessment Regulation 2000
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
EPI	Environmental Planning Instrument
EPL	Environment Protection Licence
Evening	6 pm – 10 pm
FRNSW	Fire and Rescue NSW
ha	hectare
INP	NSW Industrial Noise Policy (EPA 2000)
km	kilometre
LEP	Local Environmental Plan
L	litre
m	metre
Minister	Minister for Planning and Public Spaces
Morning shoulder	6 am – 7 am Monday – Saturday; 6 am – 8 am Sundays and public holidays
MPC	Materials Processing Centre
MSW	Municipal solid waste
Night	10 pm – 7 am Monday – Saturday; 10 pm – 8 am Sundays and public holidays
NPI	NSW Noise Policy for Industry (EPA 2017)
PCC	Penrith City Council
Planning Secretary	Planning Secretary of the Department of Planning, Industry and Environment

PM	Particulate matter
PSE	Pre-Sort Enclosure
RBL	Rating background noise level
RMS	Roads and Maritime Services
RTS	Response to Submissions
SEARs	Planning Secretary's Environmental Assessment Requirements
Sensitive receiver	A location where people are likely to work or reside, this may include a dwelling, school, hospital, office or public recreational area
SEPP	State Environmental Planning Policy
SRD SEPP	State Environmental Planning Policy (State and Regional Development) 2011
SMA	Segregated Materials Area
TfNSW	Transport for NSW
t	tonne
tpa	tonnes per annum
TSP	Total suspended particulate matter
VPA	Voluntary Planning Agreement
WARR Strategy	NSW Waste Avoidance and Resource Recovery Strategy 2014-2021
WSEA	Western Sydney Employment Area
WSEA SEPP	State Environmental Planning Policy (Western Sydney Employment Area) 2009
WMF	Waste management facility

Executive Summary

Introduction

This report details the Department of Planning, Industry and Environment's (the Department) assessment of a modification request by Dial-A-Dump Industries (EC) Pty Ltd (acquired by Bingo Industries in February 2019) (the Proponent) for the Genesis Waste Management Facility (WMF) at Eastern Creek.

The site is located approximately 300 metres (m) south of the M4 Motorway, 2 kilometres (km) west of the M7 Motorway and 36 km west of the Sydney central business district. The closest residential area is in Minchinbury approximately 400 m to the north, just north of the M4 Motorway. Residences in Erskine Park are approximately 1.25 km to the west of the site.

Background

The site previously operated as a quarry between the 1950s and 2005. On 22 November 2009, the Genesis WMF was granted Project Approval under the former Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act) by the then Minister for Planning. The Genesis WMF is a resource recovery and non-putrescible landfill facility permitted to accept up to 2,000,000 tonnes per annum (tpa) of solid (non-putrescible) and asbestos waste. The landfill component of the project utilises the quarry void for the emplacement of waste material and is currently limited to 700,000 tpa (of the 2,000,000 tpa site waste receival limit).

The site falls within land identified as the Western Sydney Employment Area (WSEA) under the State Environmental Planning Policy (Western Sydney Employment Area) 2009 (WSEA SEPP). Since the project was approved in 2009, the land within the WSEA has experienced significant change with an increase in employment and industrial uses.

Modification request

The modification request seeks to increase the proportion of the annual waste receival limit that can be landfilled, the hours of operation of certain activities and the noise limits set out in the Project Approval. The modification request does not seek to increase the permitted volume of waste that can be accepted at the site per annum and does not involve any construction works or the installation of new equipment.

The Proponent anticipates growth in the market for both resource recovery and landfill disposal, citing large-scale infrastructure projects and major development in Western Sydney. The Proponent operates several resource recovery facilities in NSW and the residual waste from these facilities that are unable to be recycled would require landfill disposal. The Proponent advises this growth also includes

contaminated material, such as asbestos and soils contaminated with heavy metals which are unable to be recycled and are required to be landfilled.

Moreover, the Proponent argues a number of landfills in the Greater Sydney Area have recently closed or are reaching capacity. The Proponent also suggests this decline in landfill capacity is likely to be compounded by the introduction of the Queensland waste levy. This levy applies to waste that originates outside of Queensland to reduce the amount of waste crossing state borders.

The proposed extension to the operational hours would allow the acceptance of waste from night time roadworks and other large-scale infrastructure projects. The amended noise limits are proposed to more accurately reflect the contemporary noise environment, which has changed significantly since the project's approval in 2009.

The request has been made pursuant to the former section 75W of the EP&A Act. The project is a transitional Part 3A project under Schedule 2 to the EP&A (Savings, Transitional and Other Provisions) Regulation 2017. As such, this report has been prepared in accordance with the requirements of Part 3A and associated regulations, and the Minister (or his delegate) may approve or disapprove the carrying out of the project under section 75W of the EP&A Act.

Engagement

The Department exhibited the request from 3 October 2018 until 17 October 2018. A total of 70 submissions were received, including nine from public authorities and councils, one from a special interest group, one from an adjacent business and 59 from the public. Of the 70 submissions received, 62 objected to the modification and eight provided comments.

Key issues raised by objectors related to increased noise, air quality and odour emissions, increased traffic, potential human health risk and the suitability of the site. Objectors also voiced concerns relating to the Proponent, the quality of the documents lodged to support the modification and the development assessment process.

In May 2019, the Proponent provided a Response to Submissions (RTS) report to address the issues raised during the exhibition. The RTS provided additional data on leachate generation and truck movements as well as a revised Noise Impact Assessment (NIA) and Air Quality Impact Assessment (AQIA) reports.

Upon review of the RTS and in acknowledgement of the concerns raised in the submissions, the Department and the Environment Protection Authority (EPA) requested further information on numerous occasions to address outstanding issues relating to air quality and noise. Notably, an adjacent business provided several submissions that included advice from experts engaged to peer review the impact assessments provided by the Proponent. In November 2019, the Proponent provided a final RTS to consolidate the information provided between the submission of the first and final iterations of the RTS.

The Department and the EPA have carefully considered these submissions, in conjunction with the Proponent's RTS.

Assessment

The Department's assessment has considered the requirements of the EP&A Act, including the objects of the EP&A Act. The key issues for the modification request are air quality and noise impacts.

Since the project was granted approval in 2009, there has been an increase in industrial and commercial development around the site. Over the past decade, this has changed the environment in which the project operates, including increased dust generation and background noise levels in the area.

Air quality

The modification request was supported with an AQIA which looked at the potential air quality and odour impacts at nearby receivers. The Proponent was requested to update the AQIA to provide justification for the modelling inputs used and to include an assessment of peak daily throughputs to the landfill.

The AQIA found the proposed modification would result in minor increases in particulate matter. However, the AQIA indicated that background levels are already elevated due to a number of reasons, including nearby industrial uses and the proximity to the M4 Motorway. The use of the haul roads within the landfill void was identified as the largest generator of dust emissions from the site.

To manage potential impacts, the Proponent proposed to implement additional mitigation measures such as using additional water sprays and positioning of a real-time dust monitor closer to its nearest neighbour to assist with implementing reactive mitigation.

The Applicant also indicates the use of the landfill chute is an important proactive measure to minimise truck movements, given the haul road was identified as a key dust source. The Department notes the Project Approval currently requires the implementation of a Chute Maintenance and Management Plan to ensure its use is maximised.

The Department has also recommended conditions requiring the Proponent to conduct a site-wide air quality audit and an update to the existing Air Quality Management Plan (AQMP). The air quality audit is required to be prepared by an independent expert who will review the site's entire operations and identify appropriate measures and strategies to reduce dust emissions from the site.

The Department considers that through the recommended additional conditions and with the existing conditions that include requirements to implement detailed AQMPs, periodic independent auditing and requirements to meet air quality limits, appropriate mitigation measures will be in place to manage any potential impacts.

Noise

The modification request was supported with a NIA which considered the potential noise emissions from the modification. The NIA was updated to include results of a noise audit and low frequency noise assessment, as requested by the Department and the EPA.

The NIA found the facility is currently exceeding its noise limits, however the background noise levels are already exceeding this limit. This increase in background noise has resulted from the growth in

industrial development within the WSEA over the last decade and noise generated by the nearby M4 and M7 Motorways. The modification request therefore provided an opportunity to re-assess and determine appropriate noise limits for the site. Based on the estimated noise levels provided in the NIA, the EPA recommended more contemporary noise limits. These limits were based on the highest predicted noise levels at residential receivers in the Proponent's NIA. The Department has included the EPA's noise limits in the recommended instrument.

At the request of Blacktown City Council (BCC), the Department has also recommended a condition requiring the Proponent to conduct a post commissioning noise report to validate the predictions of the NIA. The Proponent would be required to demonstrate any recommendations of validation report have been implemented.

Conclusion

The Department's assessment concludes that with both the existing conditions and further proactive and reactive measures in place, the potential for adverse impacts on surrounding receivers would be minimised. Consequently, the Department considers the modification request should be approved, subject to the recommended conditions.

Contents

1. Introduction

1.1.1 This report assesses a modification request by Dial-A-Dump Industries (EC) Pty Ltd (the Proponent) for the Genesis Waste Management Facility (WMF) in Eastern Creek. The request has been lodged pursuant to the former section 75W of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

1.1.2 The project was originally approved under Part 3A of the EP&A Act. The project is a transitional Part 3A project under Schedule 2 to the Environmental Planning and Assessment (Savings, Transitional and Other Provisions) Regulation 2017 (EP&A (STOP) Regulation). The power to modify transitional Part 3A projects under the former section 75W of the EP&A Act as in force immediately before its repeal on 1 October 2011 is being wound up – but as the request for this modification was made before the 'cut-off date' of 1 March 2018, the provisions of Schedule 2 (clause 3) continue to apply. Consequently, this report has been prepared in accordance with the requirements of Part 3A and associated regulations, and the Minister (or his delegate) may approve or disapprove the modification of the project under the former section 75W of the EP&A Act.

1.2 Background

1.2.1 The Proponent operates the Genesis WMF (formerly known as the Eastern Creek Waste Project) in Eastern Creek, within the Blacktown local government area. The site location is shown in **Figure 1**.

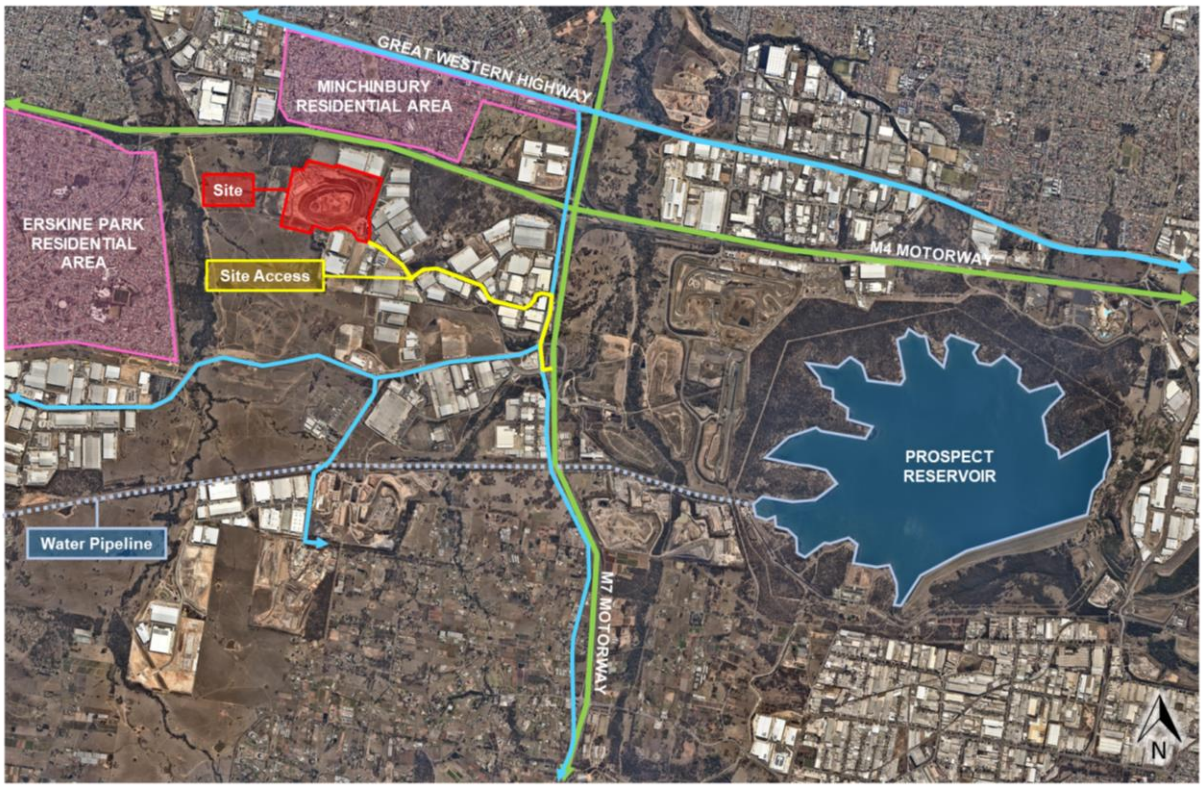

Figure 1 | Site Location

1.2.2 The site was known as the Pioneer Quarry between the 1950s and 2005 when it operated as a hard rock (breccia) quarry by Hanson Construction Materials Pty Ltd. Following the cessation of extractive operations, the site was sold to ThaQuarry Pty Ltd (now Dial-A-Dump Industries). The Dial-A-Dump Industries Group was acquired by Bingo Industries (Bingo) in February 2019.

1.2.3 The site is now occupied by the Genesis WMF which is a resource recovery and non-putrescible landfill facility permitted to accept up to 2,000,000 tonnes per annum (tpa) of solid (non-putrescible) and asbestos waste. The resource recovery arm of the WMF comprises a Materials Processing Centre (MPC), a Segregated Materials Area (SMA) and a Pre-Sort Enclosure (PSE).

1.2.4 The site covers an area of approximately 120 hectares (ha), however the operational components of the WMF are contained within an area of 52 ha. The operational components consist of the landfill (quarry void), the resource recovery facilities and associated infrastructure. Several minor components outside of the operational area include the stormwater detention basins, parts of the north-west amenity screen and the sewer line.

1.2.5 The local context is shown in **Figure 2**.

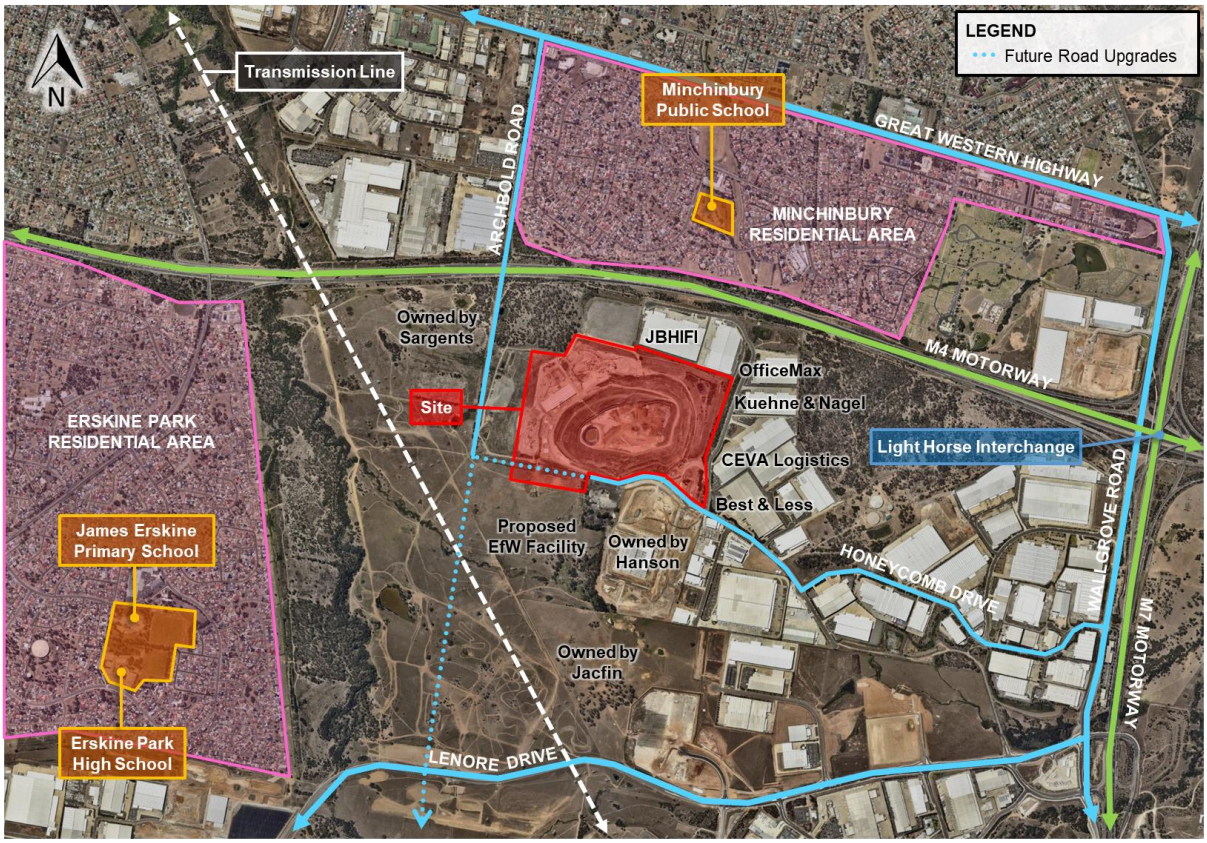

Figure 2 | Local Context

1.2.6 The site falls within the land identified as the Western Sydney Employment Area (WSEA) under State Environmental Planning Policy (Western Sydney Employment Area) 2009 (WSEA SEPP). The WSEA SEPP aims to promote economic development and employment, provide for the orderly and coordinated development of land, rezone land for employment or conservation purposes, ensure development occurs in a logical, cost-effective and environmentally sensitive manner and conserve and rehabilitate areas with high biodiversity, heritage or cultural value within the WSEA. The WSEA SEPP also makes a specific provision (Schedule 1, Clause 1) for a non-putrescible landfill on the site.

1.2.7 The site is located near major transportation infrastructure, including the M4 Motorway 300 metres (m) to the north and the M7 Motorway two kilometres (km) to the east. The site is also located 36 km west of the Sydney central business district.

1.2.8 The closest residential area is in Minchinbury approximately 400 m north of the site, just north of the M4 Motorway. Residences in Erskine Park are approximately 1.25 km to the west of the site. Vacant industrial land owned by Jacfin and Sargents is located to the west and south and is identified for industrial and employment uses. A 132 kilovolt (kV) electricity transmission line traverses land approximately 300 m to the west of the site.

1.3 The Proponent

1.3.1 The Dial-A-Dump Industries Group provides waste removal, transfer and disposal services in New South Wales, primarily in the construction and demolition sector. Dial-A-Dump Industries owns and operates the Genesis WMF. The resources recovered at the Genesis WMF are then

sold under the name Dial-A-Product and include woodchip, mulch, road base, aggregates, soil and sand.

1.3.2 Previously affiliated with the Dial-A-Dump Industries Group is The Next Generation. The Next Generation lodged a State significant development (SSD) application for an energy from waste (EfW) facility (SSD 6236) to the south of the Genesis WMF. This proposal (SSD 6236) was refused by the Independent Planning Commission (the Commission) on 19 July 2018. The matter is now before the Land and Environment Court following an appeal by The Next Generation against the refusal.

1.3.3 The Dial-A-Dump Industries Group was acquired by Bingo in February 2019. Bingo is not affiliated with The Next Generation or the EfW proposal (SSD 6236).

1.4 Approval History

1.4.1 Both the resource recovery arm and the landfill operate under a single Ministerial approval (06_0139) granted on 22 November 2009 under the former Part 3A of the EP&A Act. In summary, the Project Approval permits:

- a throughput capacity of 2,000,000 tpa of non-putrescible waste for the site
- of the 2,000,000 tpa accepted at the site, landfilling in the quarry void up to 700,000 tpa of non-putrescible waste (including asbestos and other non-recyclable waste)
- a MPC which recovers recyclable material from comingled commercial and industrial (C&I) and construction and demolition (C&D) waste
- crushing, grinding and separating works to process waste masonry material
- stockpiles for 50 tonnes (t) of tyres and 20,000 t of green-waste (stockpiles for all other material cannot exceed the height of the berms, impervious barriers or visual screens).

1.4.2 The Project Approval has been modified on five occasions, and a summary is provided in **Table 1**.

Table 1 | Summary of Section 75W Modifications

Mod No.	Summary of Modifications	Approval Date
MOD 1	• installation of conveyor and chute. • permit two-way traffic on Fourth Avenue. • construction of concrete bay walls within the Greenwaste Processing Area. • relocation of the wheelwash.	30 September 2010
MOD 2	• administrative amendment to correct the land (lot and DP) to which the project applies.	9 November 2010
MOD 3	• amendments to final landform level of the fill pad at Area D. • revision of operational landform levels and the site's stormwater design. • revision of the Voluntary Planning Agreement (VPA). • retrospective approval of various buildings/structures, including: - additional internal office and external amenities at the weighbridge - new administration and amenities buildings - relocation of the vehicle turning bay.	5 December 2011
MOD 4	• extension of the operational hours for the MPC.	14 December 2013
MOD 5	• construction of an additional pre-sort enclosure (PSE) adjacent to the MPC.	17 March 2016
MOD 7	• modifications to the site entry point and the site layout.	Withdrawn on 12 July 2019

1.4.3 The facility also operates under two Environment Protection Licences (EPL) issued by the EPA:

- EPL 13426 relates to the landfilling component of the operation and permits the facility to undertake landfilling and waste storage activities
- EPL 20121 relates to the recycling and resource recovery component of the operation and permits the facility to undertake composting, resource recovery and waste storage activities.

1.4.4 The site layout, as currently approved, is depicted in **Figure 3**.

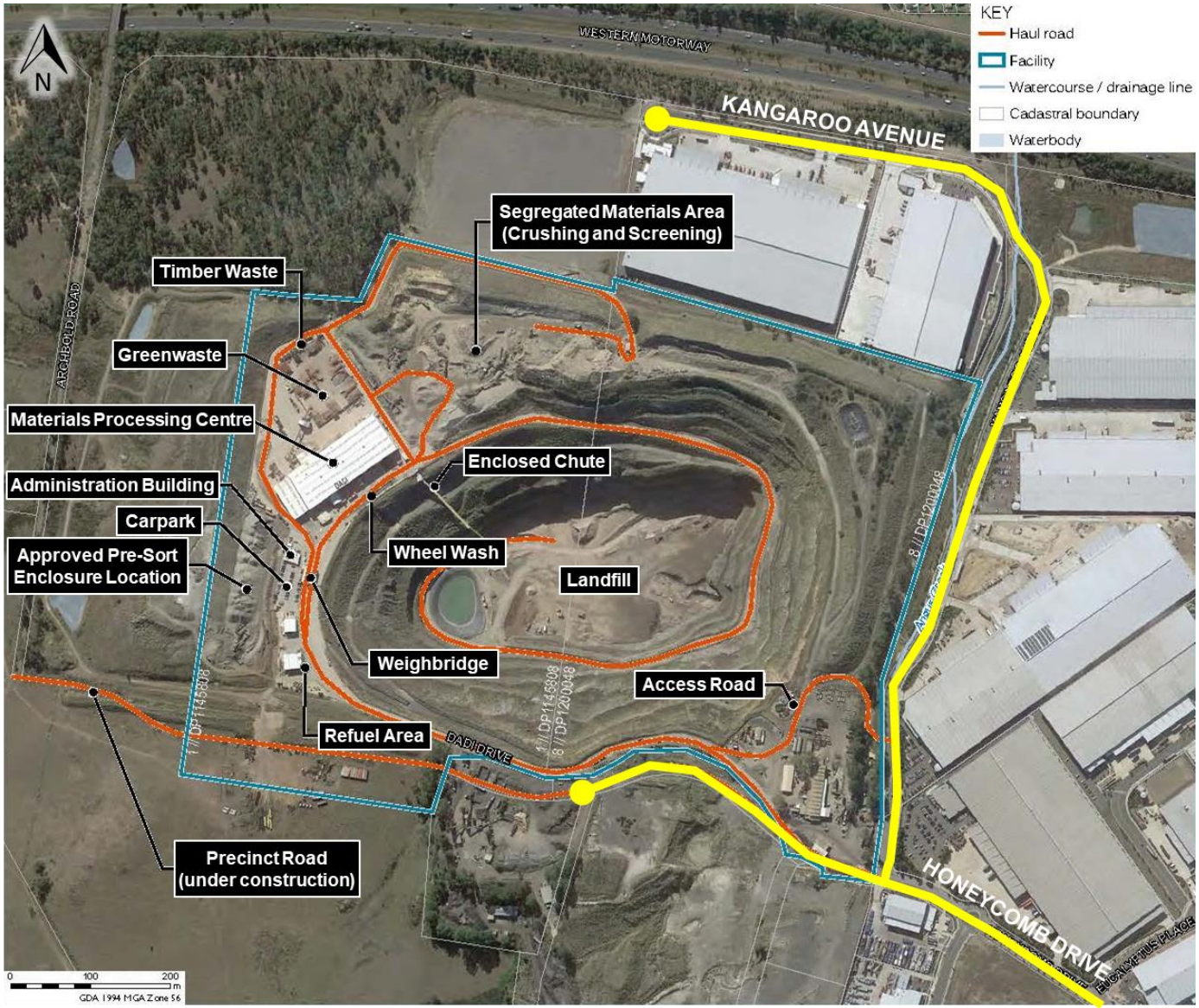

Figure 3 | Site Layout

2. Modification request

2.1.1 The Proponent has lodged a modification request under the former section 75W of the EP&A Act to modify the Genesis WMF Project Approval (06_0139). The request seeks to:

- increase the proportion of the annual waste receival limit that can be landfilled from 700,000 to 1,000,000 tpa
- extend the hours of operation of certain activities
- increase the noise limits set out in the Project Approval.

2.1.2 The request does not seek to increase the total permitted volume of waste that can be accepted at the site per annum (2,000,000 tpa). The request also does not involve any construction works or the installation of new equipment.

2.1.3 The modification request is described in full in the Environmental Assessment (EA) included in **Appendix A** and is summarised below.

2.2 Landfill Limit

2.2.1 The Project Approval permits the site to accept 1,000,000 tpa of waste, of which 700,000 tpa is permitted to be landfilled. The modification request seeks to increase the landfill limit so that 1,000,000 tpa could be sent 'direct-to-landfill' (i.e. an increase of 300,000 tpa), in addition to residual waste from resource recovery operations (MPC and PSE) which will also be landfilled via the chute. The overall limit of 2,000,000 tpa of waste the site can currently receive would not be changed.

2.2.2 The Proponent advises the current recovery rate of the resource recovery operations is approximately 80 percent. Consequently, approximately 20 percent of the material that is accepted for resource recovery becomes residual waste that must be landfilled.

Proponent's Justification

2.2.3 The Proponent operates several resource recovery facilities in NSW, including facilities in Alexandria, Mortdale, Artarmon, Kembla Grange, Revesby and Tomago. The Proponent anticipates general growth in the market and consequently an increase in the residual waste from these resource recovery facilities. Once the PSE (as approved by MOD 5) is constructed and operational, the residual waste from this facility would also require landfill disposal. The Proponent estimates the PSE will process 80,000 to 100,000 tpa with an 80 percent recovery rate. Therefore, an additional 16,000 to 20,000 tpa would be disposed to landfill via the chute from the PSE.

2.2.4 In addition to the increased residual waste from the Genesis WMF and other Bingo operated facilities, the Proponent anticipates an increase in demand for the disposal of asbestos and contaminated soil. These materials cannot be processed further or recycled, and therefore

must be disposed to landfill. This additional material would come from large infrastructure projects and major developments in Western Sydney, some of which has been identified as being contaminated with heavy metals from historic industrial activities or due to containing naturally high levels of metals.

2.2.5 In addition, the Proponent argues there is a decline in the number and capacity of landfills in the Greater Sydney Area, which are likely to experience increased activities due to the introduction of a waste levy in Queensland. The Queensland waste levy commenced on 1 July 2019 and applies to waste that originates outside of Queensland. An investigation into the transport of waste into Queensland (2017) found that almost all the waste being transported from other States into Queensland originated from NSW. Prior to the Queensland waste levy, the cost of disposing waste in Queensland was lower than the cost of disposing waste in NSW.

2.2.6 Lastly, the modification request would increase the flexibility of the operations at the site without increasing the overall amount of material that can be accepted per annum. The Proponent argues permitting residual waste to be landfilled without impacting the landfill limit would remove constraints on the volume of material accepted for resource recovery. The modification would distinguish the waste that is accepted at the site for the sole purpose of being landfilled (direct-to-landfill waste) from by-products of the recycling process (residual waste).

2.3 Operational Hours

2.3.1 The Proponent proposes to extend the hours of operations for certain activities, which can be categorised as enclosed processing works, landfilling and ancillary works. The processing works include the operation of the MPC and PSE, but not crushing and sorting in the SMA. Ancillary works include maintenance of plant and facility cleaning.

2.3.2 The approved and proposed operation hours are summarised in **Table 2** and **Table 3**, respectively.

Table 2 | Approved Operation Hours

Activity	Day	Approved Hours
Operation – including waste deliveries and chute use	Monday to Friday	7 am – 6 pm
	Saturday, Sunday & Public Holidays	8 am – 4 pm
MPC	Monday to Friday	6 am – 10 pm
	Saturday, Sunday & Public Holidays	6 am – 4 pm

Table 3 | Proposed Operation Hours

Activity	Day	Proposed Hours
MPC and PSE – waste deliveries, chute use, maintenance	Monday to Sunday	24 hours
SMA – crushing and screening	Monday to Friday	6 am – 6 pm
	Saturday, Sunday & Public Holidays	8 am – 4 pm
SMA – receive material	Monday to Friday	24 hours
	Saturday, Sunday & Public Holidays	8 am – 4 pm
Landfill – receive material via truck	Monday to Friday	5 am – 9 pm
	Saturday, Sunday & Public Holidays	5 am – 9 pm
Landfill – receive material via chute	Monday to Friday	24 hours
	Saturday, Sunday & Public Holidays	24 hours

Proponent's Justification

2.3.3 The Proponent argues the increased operational hours for these activities are required due to the nature of the waste received at the facility. A large portion of waste accepted at the site is construction and demolition (C&D) waste from infrastructure projects across Sydney. Night time infrastructure works are common to minimise traffic impacts and disruptions to day time traffic, particularly during the weekday commute. As such, the Proponent has requested an extension to the operational hours to allow the acceptance of waste from night time roadworks and other large-scale infrastructure projects.

2.4 Noise Limits

2.4.1 The Project Approval currently sets noise limits for all receivers during the day, evening and morning shoulder periods.

2.4.2 The approved and proposed noise limits are provided in **Table 4**.

Table 4 | Existing and Proposed Noise Limits

Location	Period	Existing $LA_{eq\ (15\ min)}$ dB	Proposed $LA_{eq\ (15\ min)}$ dB
Minchinbury residential receivers	Day	37	48
	Evening	36	47
	Night	-	44
	Morning Shoulder	36	47
Erskine Park residential receivers	Day	37	39
	Evening	36	40
	Night	-	37
	Morning Shoulder	36	40

Proponent's Justification

2.4.3 The Proponent advises the background noise levels alone at the closest sensitive receptor locations in both Minchinbury and Erskine Park exceed the current noise limits by 10 dB due to road traffic noise and nearby commercial and industrial development. The Proponent argues the main contributors to the elevated background noise levels are the nearby major arterial roads (M4 Motorway, M7 Motorway, Great Western Highway and Wallgrove Road). The Proponent has proposed amended noise limits to better reflect the contemporary noise environment.

3. Strategic Context

3.1 A Metropolis of Three Cities

3.1.1 *A Metropolis of Three Cities* is the plan for the Greater Sydney Region to 2056 and is built on a vision of three cities: the Western Parkland City, the Central River City and the Eastern Harbour City. The Genesis WMF is located within the Central River City. The modification request is consistent with the directions and objectives outlined in *A Metropolis of Three Cities*, as it would continue to assist in ensuring more waste is re-used and recycled to support the development of a circular economy (Objective 35).

3.2 Central City District Plan

3.2.1 The Greater Sydney Commission has released five district plans encompassing Greater Sydney, which will guide the delivery of *A Metropolis of Three Cities*. These districts include the Western City District, Central City District, Eastern City District, North District and South District.

3.2.2 The Genesis WMF is located in the Central City District, which is identified as the major component of the Central River City. The proposed development would assist in meeting Actions 77 and 78 of the district plan as it would:

- allow for the continued use of an existing location for waste recycling and management (Action 77)
- reduce the volume of waste via resource recovery and reduce the transport of waste via on site operations such as concrete batching (Action 78).

3.3 Waste Avoidance and Resource Recovery Strategy

3.3.1 Reducing waste and keeping materials circulating within the economy are priorities for the NSW government. To meet this challenge, the government has prepared a state-wide Waste Avoidance and Resource Recovery (WARR) Strategy. The WARR strategy sets waste recovery targets to be achieved by 2021–22, comprising:

- C&I from 57% (in 2010–11) to 70%
- C&D from 75% (in 2010-11) to 80%
- Municipal Solid Waste (MSW) from 52% (in 2010–11) to 70%
- increase the waste diverted from landfill from 63% (in 2010-11) to 75%.

3.3.2 The site currently contributes to the waste recovery targets set out in the WARR Strategy through the resource recovery arm of the operation. The modification request would increase the flexibility of the operations by removing the resource recovery residual waste from the landfill limit. This change would allow more material to be processed through the MPC that

may have otherwise been limited due to the annual landfill limit. Neither the amount of material accepted at the site per annum or the total volume of the landfill void would increase. However, the lifespan of the landfill could decrease by up to seven years. The adjoining landfill also provides disposal facilities for problem materials. Problem materials, such as asbestos and contaminated soil, cannot be recovered and must be disposed of at an appropriately licenced landfill.

3.3.3 In short, the project rehabilitates a former quarry site while supporting resource recovery services and providing disposal services for problem materials.

4. Statutory Context

4.1 Section 75W and modification of a Minister's Approval

4.1.1 The project is a transitional Part 3A project under Schedule 2 to the EP&A (Savings, Transitional and Other Provisions) Regulation 2017.

4.1.2 The power to modify transitional Part 3A projects under section 75W of the Act (as in force immediately before its repeal on 1 October 2011) ended on 1 March 2018. As the modification request was made prior to 1 March 2018, however, the provisions of Schedule 2 (clause 3) continue to apply. Consequently, this report has been prepared in accordance with the requirements of Part 3A and associated regulations, and the Minister (or his delegate) may approve or disapprove the carrying out of the project under section 75W of the EP&A Act.

4.1.3 The Department notes that:

- the primary function and purpose of the approved project would not change as a result of the modification request
- the modification is of a scale that warrants the use of section 75W of the EP&A Act
- any potential environmental impacts would be appropriately managed through the existing or modified conditions of approval.

4.1.4 Therefore, the Department is satisfied the modification request is within the scope of section 75W of the EP&A Act and does not constitute a new development application. Accordingly, the Department considers that the request should be assessed and determined under section 75W of the EP&A Act, rather than requiring a new development application to be lodged.

4.2 Approval Authority

4.2.1 The Commission is the approval authority for the request for the purposes of section 75W of the EP&A Act and in accordance with the Minister's Instrument of Delegation, dated 14 September 2011, as:

- the relevant local council made an objection
- the Proponent has made political donations
- over 25 public objections were received.

5. Engagement

5.1 Consultation by the Department

5.1.1 Under former section 75W of the EP&A Act, the Department is not required to notify or exhibit the modification request. However, due to the potential for public interest in the request, the Department exhibited the request from 3 October 2018 to 17 October 2018:

- on the Department's website
- at the Department's Sydney office (Pitt Street, Sydney)
- at all Service NSW Centres
- at Blacktown City Council's office (Flushcombe Road, Blacktown).

5.1.2 State government authorities, local councils, previous submitters and nearby landowners were notified by letter and invited to make a submission. Further, the exhibition was advertised in the Blacktown Advocate.

5.1.3 A total of 70 submissions were received during the exhibition period, including nine from public authorities and councils, one from a special interest group, one from a private business and 59 from the public. Of the 70 submissions received, 62 objected to the modification and eight provided comments. A summary of the issues raised in submissions is provided below, with a copy of each submission included in **Appendix A**.

5.2 Submissions

5.2.1 Public Authorities

5.2.1.1 **Blacktown City Council** (BCC) objected to the modification request and advised it required details on the final landfill form and lifespan. BCC voiced concerns with the noise impact assessment, noting that it should be based on current noise levels from the existing operations. BCC also requested further information on the traffic impacts and waste streams accepted at the facility.

5.2.1.2 **Penrith City Council** (PCC) did not object to the modification request, however noted the concerns raised by the community. PCC requested the Department ensure compliance with all applicable guidelines and consult with the EPA as the regulatory authority.

5.2.1.3 The **Environment Protection Authority** (EPA) advised both the Noise Impact Assessment (NIA) and Air Quality Impact Assessment (AQIA) were not adequate and provided a detailed list of issues. The EPA also requested the Leachate Generation Model Report be revised with current volumes of leachate being treated and disposed of to Trade Waste. Potential light pollution from the proposed extended operational hours was also raised.

5.2.1.4 **Roads and Maritime Services** (RMS) provided comments regarding the design of the car parking areas and compliance with the applicable Australian Standard.

5.2.1.5 **TransGrid** identified it owns two transmission lines in proximity to the site. TransGrid advised that the modification request is acceptable subject to recommended conditions relating to fencing around, access to and maintenance of TransGrid infrastructure.

5.2.1.6 **Endeavour Energy** advised of its North Eastern Creek Zone Substation on Wonderland Drive, Eastern Creek (Lot 219 DP 1076826), located approximated 750 m southeast of the site. While Endeavour Energy did not object to the modification request, it raised concerns regarding cumulative dust emissions and the potential impact on the electrical equipment and operation of its asset.

5.2.1.7 The **Environment, Energy and Science Group** (formerly the Office of Environment and Heritage) (EES), **Transport for NSW** (TfNSW) and **Sydney Water** advised they did not have any comments on the modification request.

5.2.2 Special Interest Groups

5.2.2.1 The **Federal Member of Parliament**, Chris Bowen MP, representing the Federal electorate of McMahon, objected to the modification request due to the potential for increased noise and odour impacts on the surrounding community. The objection also referred to the previously refused energy from waste application which was proposed to the south of the Genesis WMF site.

5.2.3 Businesses

5.2.3.1 **Jacfin Pty Ltd**, an adjoining landowner, objected to the modification request. Jacfin engaged Allens to review the application on their behalf. Allens objected on the basis the proposed development would result in unacceptable impacts on air quality as well as increase odour and noise emissions. Allens also argued the modification request would be out of character with the locality and would be inconsistent with State recycling policies by increasing the proportion of landfilling done at the facility.

5.2.4 Public Submissions

5.2.4.1 The Department received 59 submissions from the public, all of which were objections. Key concerns raised in the public submissions objecting to the modification request include:

- **noise**, including increased road traffic noise, night time noise, sleep disturbance and adequacy of mitigation measures
- **the Proponent's management of the site to date**, including references to previous compliance issues and to the Energy from Waste proposal (refused by the Commission)
- **traffic**, including complaints of already congested roadways and infrastructure in need of maintenance
- **air quality impacts**, including dust, air pollution, ozone depletion and adequacy of mitigation measures
- **odour**, including existing odour issues in the locality
- **human health risk**, including the impact of pollutants on human health (particularly children's health) and potential exposure to asbestos

- **quality of the documents lodged to support the modification request**, including comments around difficulty understanding documents, contradictory statements and the accuracy of the technical reports.
- **site suitability**, including proximity to residential areas and suggestion of an alternative site outside of Sydney
- general concerns regarding the **development assessment process**, including the length of the exhibition period, the area of notification and difficulty accessing a hardcopy of the EA.

5.2.4.2 A breakdown of the percentage of public objections that raised these issues is shown in **Figure 4**.

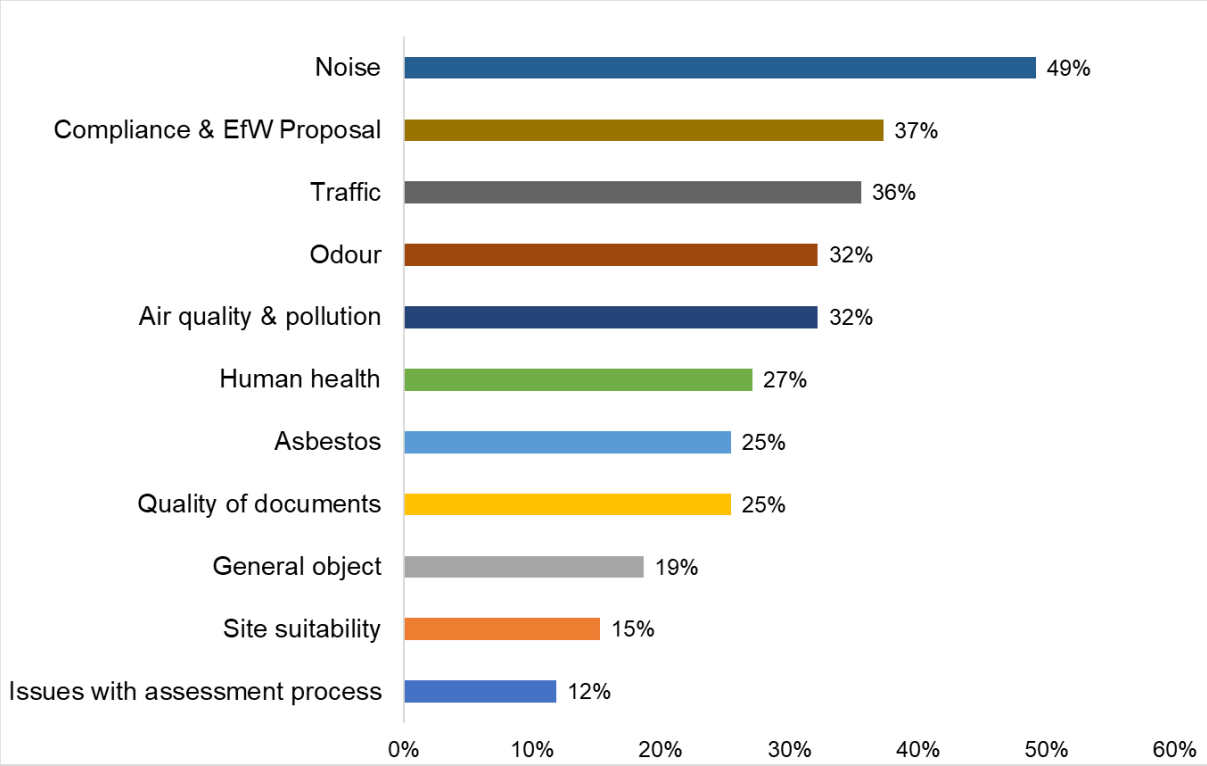

Figure 4 | Summary of Issues Raised in Public Submissions

5.2.4.3 The Department also received an additional six submissions from the public outside the formal exhibition period. These submissions objected to the request and raised similar issues to those submissions received during exhibition. These submissions have been considered during the Department's assessment of the modification request.

5.3 Response to Submissions

5.3.1 On 29 May 2019, the Proponent provided a Response to Submission (RTS) report to address the issues raised during the exhibition of the modification request. The RTS expanded on the information provided in the EA to clarify matters raised in the submissions. Further justification for the modification request was provided, including an analysis of the existing landfill capacity against the anticipated demand in the Sydney region. In addition, the RTS estimated the

lifespan of the landfill would be reduced by seven years (from 2035 to 2028) as a result of the modification. The landfill form would not change.

5.3.2 The RTS also provided the following additional information:

- recent leachate generation information, including daily leachate discharge data and a leachate generation report
- truck movement data, including the type and number of trucks which both tip waste and pick up materials
- a revised NIA and AQIA.

5.3.3 The RTS was made publicly available on the Department's website. The Department notified public submitters via email or letter, inviting them to review the RTS and provide further comments on the modification request, if desired.

5.3.4 The RTS was also provided to key government authorities to consider whether it adequately addressed the issues raised. A summary of their responses is provided below:

- **BCC** advised they maintained their objection to the proposed extended hours of operation to protect the amenity of properties in the vicinity of the site
- **EPA** required further information in the NIA and AQIA
- **Endeavour Energy** reiterated that it did not object to the modification request, however the Proponent must take all practical measures to ensure its operations do not impact upon Endeavour Energy's network, particularly the North Eastern Creek Zone Substation
- **RMS** and **TransGrid** had no further comments.

5.3.5 Jacfin engaged Allens to review the RTS and considered there were several erroneous assumptions, deficiencies and inconsistencies that had not been resolved. In addition, verbal comments were made by a public submitter who re-iterated concerns regarding odour and traffic.

5.3.6 Acknowledging the concerns raised by the community and in the submissions, the Department and the EPA requested additional information to address outstanding issues relating to noise and dust emissions. The Proponent was requested to conduct a noise audit and low frequency noise assessment and update the NIA accordingly. Further, the Proponent was requested to update the AQIA to provide justification on the modelling inputs used (e.g. control efficiency, location on receptor locations, metrological inputs). Moreover, the Proponent was asked to include an assessment of peak daily throughputs to the landfill in the AQIA.

5.3.7 On 20 November 2019, the Proponent provided a final RTS to consolidate several iterations which resulted during the resolution of key issues (see **Appendix A**). Following this, Jacfin engaged HWL Ebsworth to review the final RTS. The Department and the EPA have carefully considered Jacfin's submissions, in conjunction with the Proponent's RTS. The Department's assessment is provided in section 6 of this report.

6. Assessment

6.1.1 The Department has assessed the merits of the modification request. During this assessment, the Department has considered the:

- Environmental Assessment (EA) and assessment report for the original application
- existing conditions of approval (as modified)
- documentation supporting the modification request (**Appendix A**)
- submissions from State government authorities, Council and the public (**Appendix A**)
- relevant environmental planning instruments, policies and guidelines
- requirements of the EP&A Act, including the objects of the EP&A Act.

6.1.2 The Department considers the key assessment issue to be air quality and noise.

6.1.3 The Department's assessment of other issues is provided in **Table 9**.

6.2 Air Quality

6.2.1 The proposed increase in operational hours has the potential to generate increased air emissions by extending the time that waste is processed, additional material being landfilled and trucks manoeuvring on site. Any increase in air emissions from the site could potentially impact on local residents within Eastern Creek, Erskine Park and Minchinbury (see **Figure 2**).

6.2.2 Background

6.2.2.1 The area has been zoned for industrial use as part of the WSEA since 2009. Progressive development of the WSEA has provided a range of employment generating uses including warehousing, freight and distribution centres. Undeveloped portions of the WSEA include rural land that has historically been used for grazing, market gardens and some industrial uses such as quarries.

6.2.2.2 Since the project was approved in 2009, the land within the WSEA has been changing from rural land uses to employment and industrial uses. These land uses changes, along with infrastructure such as the M4 and M7 Motorways, have altered the general air quality in the area. The Department has assessed the potential air quality impacts of the modification request on nearby receptors, particularly on the residential areas of Erskine Park and Minchinbury.

6.2.3 Proponent's Air Quality Assessment

6.2.3.1 The modification request was supported by an AQIA prepared by Ramboll Australia Pty Ltd in accordance with the EPA's *Approved Methods for Modelling and Assessment of Air Pollutants in New South Wales* (Approved Methods). The AQIA looked at the potential air quality, dust and odour impacts at nearby receivers as a result of the modification request.

6.2.3.2 The AQIA identified the key pollutant to be dust and estimated emissions for all dust generating activities. Emission sources for particulate matter and dust include waste handling, processing and product dispatch as well as diesel fuel combustion from trucks and other equipment. Using a Level 2 approach (i.e. a refined dispersion modelling technique using site-representative input data), the potential ground level concentrations at nearby receptors was predicted. The emissions from the modification were combined with the existing baseline air quality to assess the cumulative impact. The cumulative impacts were then compared to the impact assessment criteria identified under the Approved Methods for total suspended particulate matter (TSP), PM_{10}, $PM_{2.5}$ and deposited dust. The baseline conditions were sourced using data from Bureau of Meteorology (BoM) automatic weather stations and EES (formerly OEH) monitoring sites.

6.2.3.3 The baseline (existing) annual mean PM_{10} concentrations were found to range from 19.2 to 23.8 micrograms per cubic metre ($\mu g/m^3$) (PM_{10} impact assessment criteria is 25 $\mu g/m^3$). The baseline annual mean $PM_{2.5}$ concentrations were found to range from 8.7 to 9.7 $\mu g/m^3$ ($PM_{2.5}$ impact assessment criteria is 8 $\mu g/m^3$). The AQIA attributed the high levels of $PM_{2.5}$ to vehicle emissions given the proximity of major motorways as well as wood heaters during the winter. Periods of elevated concentrations were also said to be caused by bushfire, hazard reduction and dust storms in Western Sydney.

6.2.3.4 To predict the impact of the modification request, the AQIA modelled a scenario where 1,000,000 tpa of the incoming waste was sent directly to landfill, while the remaining 1,000,000 tpa (comingled and segregated waste) was diverted for further processing. The 1,000,000 tpa for further processing was then split between waste to be sorted via the MPC (80 percent) and segregated waste to be directed to the yard (20 percent). Within the model, the Proponent assumed 30 percent of the waste processed through the MPC would be residual waste deposited in the landfill via the chute. A flowchart of the modelled scenario is shown in **Figure 5**.

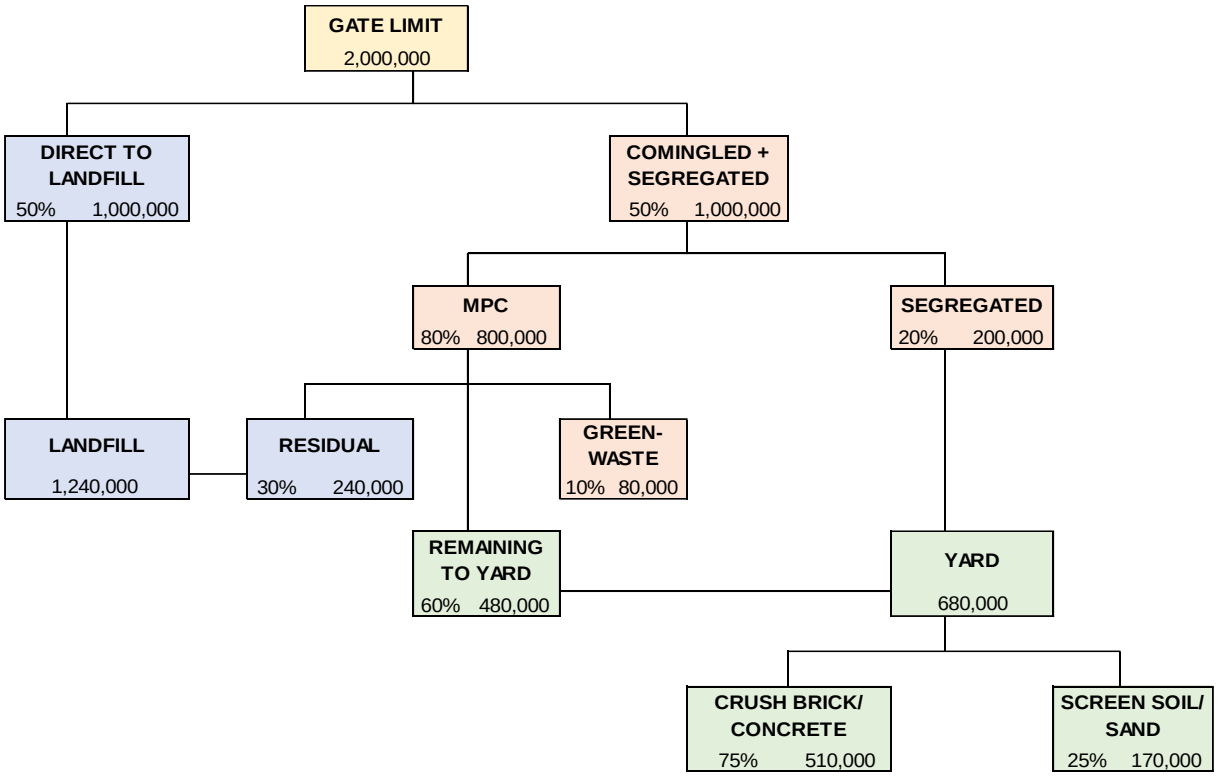

Figure 5 | Incoming waste for emission inventory

6.2.3.5 Under this scenario, the total volume of waste landfilled per annum would be 1,240,000 t (direct plus chute waste). This total comprises the maximum direct-to-landfill volume (1,000,000 tpa) and 30 percent residual waste from the resource recovery operations. Under current operations, approximately 20 percent of the waste processed through the MPC is residual waste. To be conservative in the modelling, the Proponent assumed 30 percent of the waste received at the MPC would be residual waste. This scenario also included the storage, processing and composting of greenwaste at the MPC.

6.2.3.6 The Proponent argues the modelled scenario is conservative because it assumes that 1,000,000 tpa of waste is being sent direct-to-landfill. Direct-to-landfill waste is transported to the landfill via the haul roads within the landfill void which was identified as the largest source of dust emissions. Conversely, residual waste from the resource recovery operations are transported to the landfill via the chute and does not generate dust from the haul road. The Department accepts this argument, however acknowledges it does not account for potential chute issues. The Department reviewed the most recent annual audit for the project which did not identify any issues with the chute. The Proponent would continue to implement the Chute Management and Maintenance Plan, as required in the Project Approval, which aims to ensure the chute maintains continuity in its operation at the site.

6.2.3.7 The results of the modelling for $PM_{2.5}$ are presented in **Table 5**. The table shows the increment from the modification and the resulting cumulative concentrations of $PM_{2.5}$ (i.e. mod increment plus the background levels).

Table 5 | Average peak day 24-hour and annual $PM_{2.5}$ modelling predictions for the modification

Receptor	Receptor Type	$PM_{2.5}$ Mod Increment	$PM_{2.5}$ Cumulative	$PM_{2.5}$ Mod Increment	$PM_{2.5}$ Cumulative
Criterion		24 hour (25µg/m^3)		Annual (8µg/m^3)	
R01	Residential	2.1	24.8	0.4	**9.0**
R02		2.4	24.8	0.5	**9.1**
R03		2.6	**25.1**	0.5	**9.1**
R04		2.8	**25.3**	0.6	**9.2**
R05		3.0	**25.4**	0.6	**9.2**
R06		2.6	**25.2**	0.5	**9.1**
R07		2.9	**25.3**	0.6	**9.2**
R08		2.9	**25.3**	0.6	**9.2**
R09		0.5	24.4	0.1	**8.7**
R10		0.6	24.4	0.1	**8.7**
R11		0.7	24.4	0.1	**8.7**
R12	Commercial/ industrial	4.8	**26.5**	1.2	**9.8**
R13		4.1	**26.9**	1.1	**9.7**
R14		2.7	**26.2**	0.7	**9.3**
R15		3.3	**26.4**	0.9	**9.5**
R16		4.2	**26.8**	1.1	**9.7**
R17		3.8	**25.5**	0.7	**9.3**

Note: micrograms per cubic metre = µg/m^3

6.2.3.8 The receptor locations and $PM_{2.5}$ contour plots of the modification increment are presented in **Figure 6** and **Figure 7**.

Figure 6 | Modification Increment 24 Hour Average $PM_{2.5}$ Concentration (µg/m^3) (AQIA 2018)

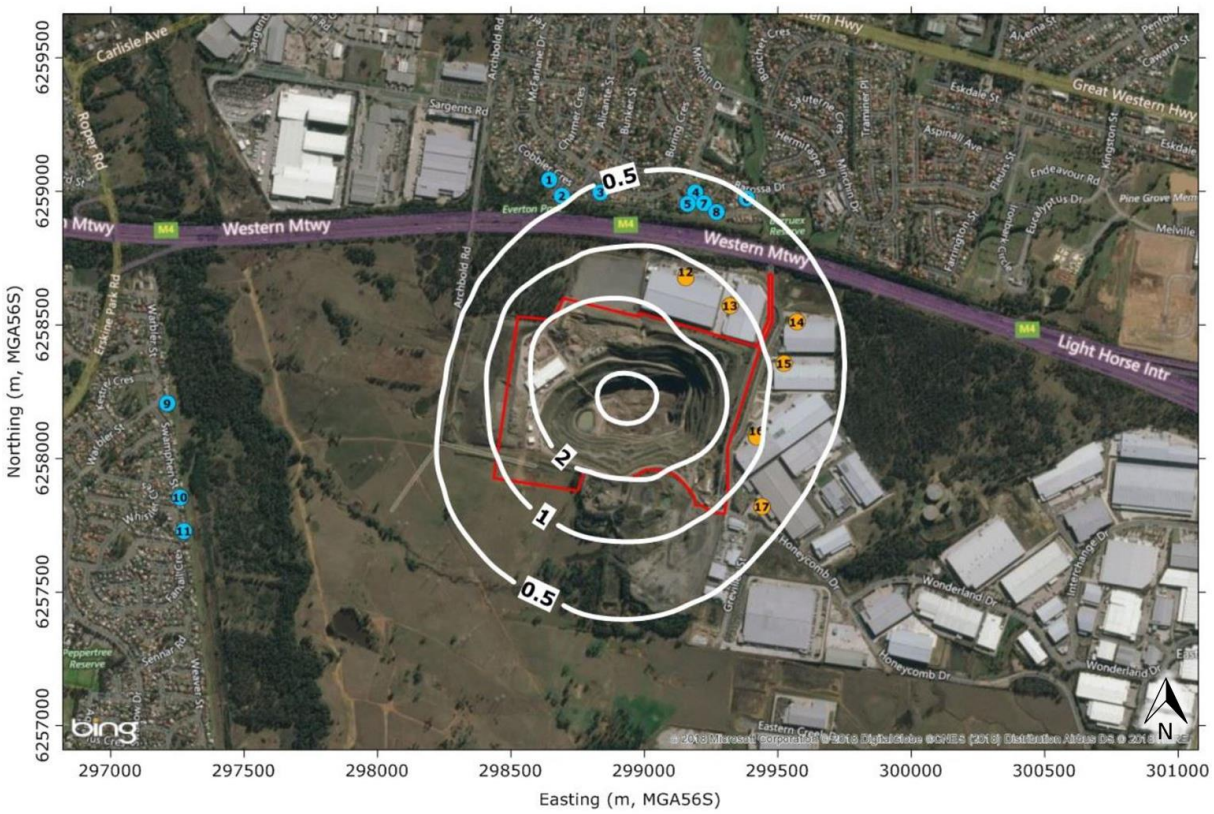

Figure 7 | Modification Increment Annual Average $PM_{2.5}$ Concentration (µg/m^3) (AQIA 2018)

6.2.3.9 The predicted cumulative average TSP and PM_{10} concentrations and dust deposition levels were predicted to comply with the impact assessment criteria at all receptors. However, the AQIA predicted the cumulative 24 hour and annual average $PM_{2.5}$ concentrations would be exceeded (as shown in **Table 5**). The Proponent argued the annual average background concentrations of $PM_{2.5}$ already exceed the criterion and the contribution of the modification would be minimal. Regarding the predicted 24-hour concentration, the Proponent argued this was modelled on a day when the background levels were elevated and already in excess of the impact assessment criterion.

6.2.3.10 As the predicted $PM_{2.5}$ concentrations exceeded the criteria, the Proponent committed to relocating the real-time air quality monitoring device to a boundary location where the highest concentration was identified. Real-time monitoring would allow the Proponent to implement reactive management measures to minimise adverse impacts from the operations. Reactive measures may include temporarily increasing the use of existing dust controls (e.g. reduce vehicle speed, increase use of water sprays), installing additional dust controls (e.g. water sprays) and temporarily pausing or decreasing the intensity of certain activities.

6.2.3.11 Real-time monitoring and reactive management measures were supported by the EPA. The EPA noted the largest PM emission source associated with the request are the haul roads. The Proponent advised the emission controls in place for the haul roads are able to reduce dust generation by 90 percent. As such, the EPA acknowledged it is unlikely additional measures for the current haul road can be applied, in the absence of sealing the haul roads. The EPA recommended the Proponent investigate additional proactive emission control measures such as sealing the haul roads within the quarry void. The EPA recommended a

condition requiring the preparation and implementation of an Air Quality Management Plan (AQMP). The AQMP should provide details of real-time boundary monitoring, performance indicators/trigger levels and response mechanisms/mitigation measures.

6.2.4 Issues Raised in Submissions

6.2.4.1 During the exhibition of the modification request, several submissions raised air quality as a key concern. The EPA required further information to address technical issues with the modelling, including justification of the worst-case scenario used. Numerous submissions from the local community expressed concern regarding decreased air quality from an increase in waste processing and truck emissions. Allens, on behalf of Jacfin, argued there were deficiencies in the AQIA, notably that it did not model an accurate worst-case scenario, contained insufficient information on haul roads (length assumed, silt content and emission control rates) and no site-specific odour measurements were provided. As discussed in section 5.3 of this report, the Proponent provided a revised AQIA in the RTS to address these issues.

6.2.5 Department's Consideration

6.2.5.1 The Department and the EPA have carefully considered the AQIA and the RTS, as well as the matters raised in the submissions. The Department notes the overall amount of waste accepted per annum would not increase nor would the volume of the landfill void. Rather, the rate at which material is being landfilled would increase and consequently the lifespan of the landfill would decrease.

6.2.5.2 The AQIA modelled a scenario where 1,000,000 tpa of material are sent direct-to-landfill and an additional 240,000 t of material landfilled as residual waste from the resource recovery operations. The residual waste would be transported to the landfill via chute rather than by truck along the haul road. The Department is satisfied with modelling approach as the unpaved haul roads were identified as the largest source of dust emissions and the AQIA modelled a scenario where the maximum proposed volume of direct-to-landfill waste is being accepted at the site.

6.2.5.3 The AQIA indicated the cumulative emissions from the modification would result in the impact assessment criteria for $PM_{2.5}$ being exceeded. However, the Department acknowledges conservative nature of the model and that background $PM_{2.5}$ levels are already elevated due to the proximity of major motorways and industrial properties immediately to the north, east and south of the site. The incremental increase of $PM_{2.5}$ from the modification would be minor in the context of the elevated background levels. For example, the maximum increase of $PM_{2.5}$ due to the modification for the peak day 24 hour average was shown to be 4.8 $\mu g/m^3$ at the adjacent commercial/industrial development to the north of the site (receptor R12) compared to 21.7 $\mu g/m^3$ currently experienced at this location.

6.2.5.4 While the incremental impact of the modification request is minor in the context of the existing environment, the Department acknowledges the project as a whole is a contributor to air quality emissions in the locality. As such, the Department considers the modification request provides an opportunity to ensure that all reasonable and feasible measures are taken at the

site to ensure emissions are controlled. The Department has recommended a condition requiring the Proponent to conduct a site-wide air quality audit of all operations, management practices and condition of the site. The audit would confirm the predictions of the AQIA in the modification request, identify all dust generating activities and consider the need for additional specific mitigation strategies or changes in site management practices for reducing emissions across the site. The recommendations of the audit would need to be implemented to the satisfaction of the Department and EPA.

6.2.5.5 To further ensure appropriate air quality management measures are implemented and performance is monitored, the Department has required the Proponent to update the AQMP as a condition of approval. The updated AQMP would incorporate real-time boundary monitoring and trigger levels for when remedial action is required.

6.2.5.6 The site is currently regulated by the Department through the existing Project Approval and by the EPA through its two EPLs. The most recent annual review of the project found the site is currently performing in accordance with the limits outlined in the Project Approval and its EPLs.

6.2.5.7 The existing Project Approval includes a Chute Maintenance and Management Plan (required under Condition 16b of Schedule 3) which details contingency measures in the event the system breaks down. Given the largest PM emission source associated with the site is the haul roads, the maintenance and management of the chute is important as a proactive measure to minimise the need for additional truck movements within the landfill void.

6.2.5.8 Other environmental management and reporting conditions in the existing Project Approval include an annual audit of the environmental performance of the project and a bi-annual independent environmental audit. Both audits must be submitted to the Department for approval.

6.2.5.9 All strategies, plans and programs required under the Project Approval must be reviewed and revised (if necessary) by the Proponent following a modification, incident report, audit or annual review. Therefore, the Proponent must review and revise both the Chute Maintenance and Management Plan and the AQMP following determination of the modification request. The effectiveness would be reviewed (and plans revised, if necessary) again following the annual review of the project.

6.2.5.10 The Department's assessment concludes that through both the existing conditions and additional recommendations made which include real-time monitoring and reactive mitigation, site wide auditing of dust generation and updated AQMP, any increase in impacts can be mitigated.

6.3 Noise

6.3.1 The modification request seeks to increase the operational hours for certain activities, which has the potential to impact the amenity of the residents of Minchinbury and Erskine Park. The activities proposed for extended hours include enclosed processing works, landfilling and ancillary works (i.e. plant maintenance, facility cleaning and vehicle relocation). The Proponent does not propose to increase the hours of crushing or sorting activities in non-enclosed areas.

6.3.2 The Proponent also proposes to align its noise limits consistent with current noise policies for managing the amenity of noise catchments surrounding developing industrial estates. These policies allow for incremental increases until the overall objective of the land use is met. The noise limits set out in the Project Approval are mirrored in its two EPLs. The approved and proposed noise limits are provided in **Table 4**.

6.3.3 Background

6.3.3.1 As discussed in section 6.1.1 of this report, the land within the WSEA has been progressively developed for employment and industrial uses since 2009. The noise limits under the Project Approval were based on the noise assessment for the original proposal and would have considered the existing background noise levels at the time. However, the rapid development within the WSEA over the past ten years combined with the nearby M7 and M4 Motorway's have significantly altered the surrounding noise environment. These changes are evident in the lands immediately surrounding the site, as shown in **Figure 8**. Consequently, the background noise levels have increased thereby exceeding the noise limits set in the Project Approval.

6.3.3.2 The site is also screened by ten metre high vegetated bunds, the M4 Motorway to the north and vegetation to the west. The Proponent argues the site operations are largely inaudible at residential receivers because of these acoustic barriers.

Figure 8 | Development Surrounding Site

6.3.4 Proponent's Noise Impact Assessment

6.3.4.1 The modification request included a NIA prepared by EMM. The NIA considered a 'worst-case' model of noise emissions from the site and the assessment was undertaken in accordance with the *NSW Industrial Noise Policy* (INP).

6.3.4.2 The existing noise criteria for the site are set out under the Project Approval. However, noise criteria are also identified in the *Eastern Creek Precinct Plan (Stage 3)* (the Precinct Plan). BCC adopted the Precinct Plan under the former State Environmental Planning Policy No 59—

Central Western Sydney Regional Open Space and Residential (SEPP 59). The Precinct Plan sets 'optimum noise level goals' for the Genesis WMF site, which is identified as 'Zone 1'. SEPP 59 was repealed in 2016, however Clause 19, Part 4 of the WSEA SEPP specifies that the consent authority must consider existing precinct plans under SEPP 59.

6.3.4.3 The existing noise impact criteria are summarised in **Table 6**.

Table 6 | Existing Noise Impact Criteria

Monitoring Location	Period	Project Approval $LA_{eq\ (15\ min)}$ (dBA)	Precinct Plan (dBA)
BG1 (Minchinbury – Urban Residential)	Day	37	57
	Evening	36	47
	Night	-	42
	Morning Shoulder	36	-
BG2 (Erskine Park – Suburban Residential)	Day	37	57
	Evening	36	47
	Night	-	42
	Morning Shoulder	36	-

6.3.4.4 The NIA established the existing noise environment by measuring the rating background noise level (RBL) and the ambient noise level. The RBL is the overall, single-figure background level representing each assessment period (day/evening/night) over the whole monitoring period (as opposed to over each 24-hour period used for the assessment of background level). Ambient noise is the all-encompassing noise associated within a given environment.

6.3.4.5 The NIA originally derived background noise levels from noise measurements taken in 2014. As such, the Department and the EPA requested the Proponent undertake a noise audit to confirm that these background levels were representative of the current environment. The Proponent carried out additional noise monitoring in August and September of 2019.

6.3.4.6 The existing noise environment provided in the NIA is summarised in **Table 7**.

Table 7 | Existing and Ambient Background Noise Levels

Monitoring Location	Period	RBL (2014 / 2019) (dBA)	Ambient (2014 / 2019) $LA_{eq\ (period)}$ (dBA)
BG1 (Minchinbury)	Day	43 / 46	55 / 55
	Evening	43* / 44	54 / 50
	Night	41 / 40	51 / 50
BG2 (Erskine Park)	Day	37 / 37	53 / 51
	Evening	37* / 37*	57 / 46
	Night	35 / 37*	46 / 48

**The RBL measured for the day has been adopted for the evening period in accordance with the INP Application Notes procedures*.

6.3.4.7 The residential areas of Minchinbury and Erskine Park, as well as the assessment locations used in the NIA (BG1 and BG2), are shown in **Figure 9**.

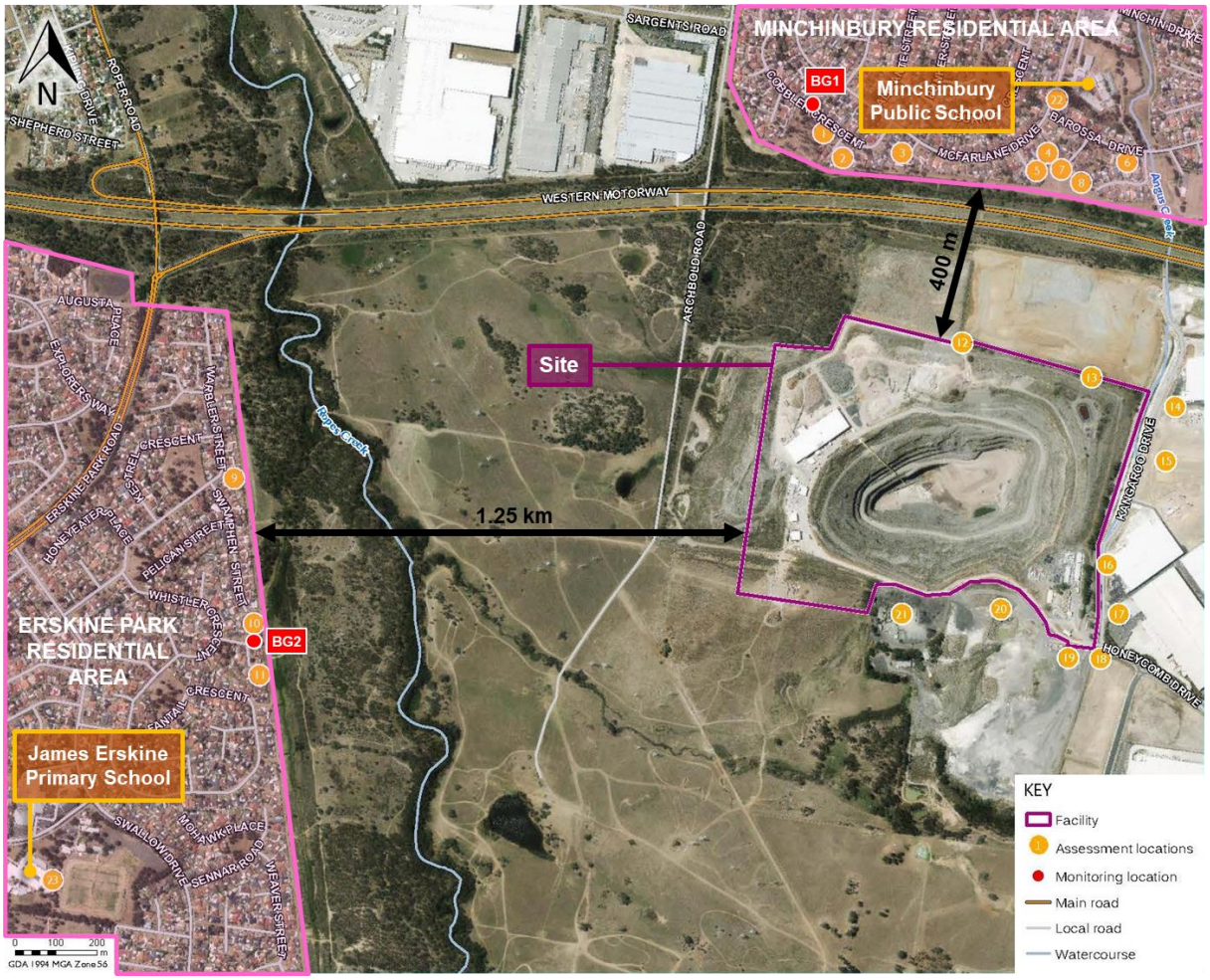

Figure 9 | Noise Assessment and Monitoring Locations (NIA 2018)

6.3.4.8 The NIA suggests the existing noise limits under the Project Approval are unachievable because the background noise levels already exceed the criteria by up to 10 dB. As such, the NIA proposes Project Specific Noise Levels (PSNLs), in accordance with the INP. The INP sets out both 'intrusiveness' (the equivalent continuous noise should not be 5 decibels (dB) above the background level) and 'amenity' (a specific noise criteria for the land use and associated activities) criteria. The INP also contemplates that developing industrial estates such as those in the WSEA will undergo change, and these changes can accommodate changing industrial noise levels without exceeding acceptable cumulative levels.

6.3.4.9 The noise impact criteria calculated under the INP for the modification request are summarised in **Table 8**.

Table 8 | Criteria under the Industrial Noise Policy

Monitoring Location	Period	Intrusive (2014 / 2019) $LA_{eq\ (15\ min)}$ (dBA)	Amenity $LA_{eq\ (Period)}$ (dBA)
BG1 (Minchinbury – Urban Residential)	Day	48 / 51	65
	Evening	48 / 49	55
	Night	46 / 45	50
	Morning Shoulder*	47 / 48	-
BG2 (Erskine Park – Suburban Residential)	Day	42 / 42	60
	Evening	42 / 42	50
	Night	40 / 42	45
	Morning Shoulder*	41 / 42	-

**The intrusive criteria for the morning shoulder period is based on the midpoint RBL of the day and night time periods in accordance with the INP Application Notes.*

6.3.4.10 The INP states that the more stringent of the amenity and the intrusive noise criteria shall form the PSNL. The NIA took into consideration the intrusiveness criteria, amenity criteria and the Precinct Plan optimum noise level goals and identified the intrusiveness criteria to be the most stringent and therefore the PSNLs.

6.3.4.11 To model the potential noise generated from the modification request, the NIA assumed all equipment would be operating continuously, vehicles would travel at 20 km/h and all trucks would idle ten percent of the time. Equipment assumed to be operating was estimated in line with the proposed operating hours for each activity. The NIA concluded that the predicted site emissions under the proposed operations would meet the PSNLs at all assessment locations.

6.3.5 Issues Raised in Submissions

6.3.5.1 Jacfin objected to the modification request and engaged an acoustic expert to undertake a peer review of the NIA. The EPA agreed with several of the concerns raised in the peer review, and requested that the Proponent provide further information to address the following matters:

- justification for why the facility is currently exceeding its noise limits
- an assessment of low frequency noise impacts at residential receivers
- sound power levels of equipment and plant should not have been taken from a database as it is an existing operation
- background noise data was outdated (collected for the EfW proposal (SSD 6236) in 2014) and potentially impacted by extraneous noise.

6.3.5.2 BCC objected to the modification request on the grounds that it would result in unacceptable night time noise for the residents in Erskine Park and Minchinbury.

6.3.5.3 Concerns about the potential noise impacts were also raised in almost half of the public submissions received during the exhibition period.

6.3.5.4 In response to the issues raised, the NIA was revised as part of the RTS to:

- include a noise audit (at the request of the Department) to confirm the background noise levels
- measure the sound power levels of the actual equipment on site
- include an assessment of low frequency noise impacts.

6.3.6 Department's Consideration

6.3.6.1 The Department has reviewed the EA, NIA and noise audit as well as the submissions from the EPA, BCC, Jacfin and the public. The Department acknowledges the modification request has the potential to impact upon the residents of Minchinbury and Erskine Park. As such, an important consideration for the Department was ensuring noise impacts on nearby sensitive receivers were minimised.

6.3.6.2 The modification request seeks to adjust the noise limits for the project as the background noise levels are already in excess of these limits. The existing noise limits were previously imposed during the Department's assessment of the original project to protect the amenity of the residential areas. However, the land immediately surrounding the site and within the broader WSEA has been progressively developed with employment and industrial uses over the past decade. These changes have significantly altered the noise environment of the area.

6.3.6.3 The NIA proposed PSNLs which were based on noise monitoring surveys conducted in 2014. At the request of the Department and the EPA, the Proponent carried out additional noise monitoring and modelling in 2019. This noise audit confirmed the background levels in the NIA, which were used to derive the PSNLs, were representative of the contemporary noise environment.

6.3.6.4 The EPA recommended its own noise limits based on the predicted noise levels set out in the NIA. The EPA's recommended noise limits took the highest predicted noise levels within Minchinbury and Erskine Park. Where applicable, these limits were amended to ensure the day time limit was set no lower than the evening level, and the evening limit was set no lower than the night time level. Both the Department and the EPA are satisfied these noise limits are appropriate. The Department has incorporated the EPA's noise limits in the recommended instrument.

6.3.6.5 The Department notes that increasing the noise limits in the Project Approval does not mean the noise levels currently experienced at nearby receptors will become unacceptable. Rather it follows the process set out in current policies to manage cumulative noise impacts in a developing industrial noise catchment to acceptable levels. These revised noise limits will now more accurately reflect the contemporary noise environment and the project's impact on nearby receivers.

6.3.6.6 The project has been in operation for over a decade and the site had previously been a quarry. The current modification has been assessed against the *Industrial Noise Policy (2000)* which is the same document that existed when the 2009 approval was granted. Since the present modification assessment process began, the EPA has released its revised *Noise Policy for Industry* (2017) (NPI). It should be noted that under this current document which is

underpinned by more contemporary science, it is likely that less stringent noise criteria would be applicable to the project.

6.3.6.7 The existing Project Approval has conditions in place to manage the potential noise impacts of the facility. The Proponent must review and, if necessary, revise the strategies, plans and programs required in the Project Approval to the satisfaction of the Planning Secretary following a modification (Condition 4b of Schedule 5). As such, the Proponent would be required to review and update the existing Environmental Management Strategy (Condition 1 of Schedule 5) and Noise Monitoring Program (Condition 40 of Schedule 3).

6.3.6.8 BCC noted the modification request would shorten the lifespan of the landfill while improving the flexibility of the daily operations, however its key concern was night time noise impacts. As part of the noise audit, the Proponent provided a low frequency noise assessment. The assessment concluded that due to increased transportation and industrial ambient noise in the noise catchment, noise from the site would be mostly inaudible at nearby residential receptors and therefore unlikely to cause nuisance. The Department and the EPA were generally satisfied with the conclusions of the low frequency noise assessment. However, BCC requested a condition requiring the Proponent to prepare a post commissioning report to validate the noise predictions submitted in support of the modification request. The Department agrees with this request and has included the requirement in the recommended conditions. Should the post commissioning report demonstrate the noise impacts of the modification request exceed the predictions set out in the NIA, the Proponent would be required to prepare an action plan to mitigate these impacts. The action plan would need to be implemented to the satisfaction of the Department.

6.3.6.9 The Department's assessment concludes the Proponent can manage the potential noise impacts through the implementation of both the existing and recommended conditions of approval.

6.4 Other Issues

6.4.1 The Department's assessment of other issues is provided in **Table 9**.

Table 9 | Summary of other issues raised

Findings	Recommendation
Traffic	
• Operational traffic includes deliveries of waste, dispatch of recycled products, general site deliveries and light vehicle movements of staff, contractors and the public. • The modification request has the potential to generate additional truck movements as a result of the increased operational hours and increased proportion of material permitted to be landfilled.	No additional conditions are recommended.

Findings	Recommendation
• The EA included a Traffic Impact Assessment (TIA), prepared by EMM, in accordance with the *Guide to Traffic Generating Developments* (RMS 2002) and relevant Australian Standards. • In its submission, BCC objected to the modification request on the basis that detailed consideration of the changes to traffic movements and volumes was needed. These traffic concerns were later addressed in the RTS. • Several public submissions also raised concerns regarding the potential increase of traffic on the already congested motorways. • RMS did not object to the modification, however provided comments relating to the design of the car parking areas and compliance with Australian Standards. • Based on weighbridge data, the TIA found the site currently generates a maximum daily average of 792 truck movements (including inbound and outbound movements). • The TIA predicted an additional 492 truck movements during the evening and night time periods on a weekday for the modified operations, for a daily total of 1,284 movements. • The TIA advised the additional traffic would most likely occur during the extended evening and night time periods rather than during the peak times. Therefore, all assessed intersections were shown to operate at their current Levels of Service (Level of Service A) during the AM and PM peak hours. • The Department notes the TIA predicted the modification would increase truck movements generated from the facility, however the Proponent demonstrated the existing infrastructure could accommodate the additional movements. • The Department considers the traffic impacts of the modification would be adequately addressed through the existing Project Approval, which contains conditions governing site access, vehicle movements and parking. • The site is located within the WSEA which was developed to accommodate large volumes of traffic. The WSEA is being developed to increase jobs in Western Sydney while taking advantage of the strategic road network for the efficient transport of goods. The site is well situated near the junction of the M4 and M7 Motorways. In the context of the surrounding industrial and commercial developments, the modification would be a relatively minor traffic generator. • Further, the predicted increase in traffic would be spread out over the extended operational hours. • The Department's assessment concludes the modification request would not result in adverse traffic impacts.	
Leachate	
• Leachate is generated on site mainly from the waste in the landfill cell and the outdoor green waste area. Leachate is currently collected and pumped into a pre-treatment plant on site, where it is treated to an acceptable level before it is disposed to sewer via a Trade Waste Agreement with Sydney Water. The base of the landfill is lined and	No additional conditions are recommended.

Findings	Recommendation
the active tipping area is covered daily with 150 millimetres of virgin excavated natural material. • The modification request could potentially increase the generation of leachate by changing the surface area of waste exposed to rain at a given time by increasing the landfilling rate. The modification may also increase the generation of leachate through the additional use of water for dust suppression. • The EA included a Leachate Generation Model Report, prepared by Consulting Earth Scientists Pty Ltd. • In its submission, the EPA noted that the Leachate Generation Model Report did not use the actual volumes of leachate that are currently treated and disposed of to Trade Waste. • In the RTS, the Leachate Generation Model Report was revised to include actual daily volume of leachate disposed to Trade Waste from 20 March 2018 to 30 April 2019. The annual volume of leachate discharge during this period was 29,017.27 m^3. • The revised Leachate Generation Model Report concluded the modification would increase leachate generation by nine to 15 percent. That is, the predicted leachate generation rate was 192 m^3 per day (70,080 m^3 per annum) which would increase to 505 m^3 per day (185,000 m^3 per annum) at the completion of landfilling. • The capacity of the leachate treatment system is 324,850 m^3 per annum and the maximum discharge of treated leachate permitted under the Trade Waste Agreement is 237,250 m^3 per annum. As such, the leachate management system in place has sufficient capacity for the additional leachate predicted as a result of the modification. • The EPA advised they were satisfied with the Proponent's response and provided no further comments in relation to leachate. • The Department considers the existing leachate management system has enough capacity to treat any additional leachate generated as a result of the modification. • The existing Project Approval requires a Soil, Water and Leachate Management Plan (Condition 21 of Schedule 3) comprising a monitoring program and response plan. • The Department's assessment concludes the potential impacts from leachate can be suitably mitigated through the existing leachate management system and conditions of approval.	
Odour	
• Several public submissions objected to the modification on the basis it would increase existing odour issues in the locality. • The site does not accept putrescible waste for processing or landfilling, which typically has a high potential for odour emissions. The Project Approval explicitly prohibits the receipt or disposal of putrescible waste (Condition 1 of Schedule 3). • The active tipping and capped areas, leachate in the pit, composting of green waste on site and small volumes of biodegradable materials that may enter the landfill could potentially cause odour. However, the modification does not introduce new waste streams or operational activities on the site. As such, the modification would not result	No additional conditions are recommended.

Findings	Recommendation
in additional odour emissions outside of what has already been assessed and approved as part of the original project. • The Project Approval has conditions relating to emissions criteria and the requirement for an Air Quality, Odour and Greenhouse Gas Management Plan. • The Department's assessment concludes the existing Air Quality, Odour and Greenhouse Gas Management Plan includes appropriate measures to manage odour emissions from the site. As mentioned in section 6.1, the Air Quality, Odour and Greenhouse Gas Management Plan must also be reviewed and updated following a modification.	
Light pollution	
• Currently the facility has lighting around the MPC, administration building and adjoining car park, along DADI Drive (internal roadway) and the site access. • The modification request would likely require additional lighting installations to enable workers to perform tasks safely at night. Night operations would also involve vehicles accessing the site. • In its submission, the EPA noted the Proponent did not assess potential light pollution impacts on nearby receptors. • In the RTS, the Proponent clarified that any additional night lighting would be of a low intensity. High intensity lighting would not be included as it could cause glare and therefore be dangerous for operators and drivers. Further, the Proponent noted there would be a low likelihood of impacts on residents as the void is approximately 70 m below the surrounding site topography. As the void is filled, there are also 10 m high berms along the northern and western boundaries of the site. • The Department agrees that residents in Erskine Park and Minchinbury are screened from light pollution due to the site topography and amenity berms, as well as the M4 Western Motorway and vegetation along Ropes Creek. • The Department's assessment concludes the modification request would not result in adverse light impacts on nearby residential receptors. • The Project Approval (Condition 52 of Schedule 3) requires the Proponent to ensure lighting is mounted, screened and directed in such a manner than it does not create a nuisance to surrounding properties or the public road network. Therefore, the Department finds the existing conditions of approval adequately address nuisance light impacts.	No additional conditions are recommended.
Biodiversity	
• Section 7.17 of the BC Act specifies that if the determining authority is satisfied a modification will not increase the impact on biodiversity values, a biodiversity development assessment report (BDAR) is not required. • The removal of approximately 2.8 ha of Cumberland Plain Woodland was approved as part of the original project. The EA for the original project concluded the clearing of vegetation would not have significant impacts on threatened flora or fauna species.	No additional conditions are recommended.

Findings	Recommendation
• The Department considers the modification request would not impact vegetation integrity and abundance, habitat suitability and connectivity, threatened species abundance and movement, flight path integrity or water sustainability. • The Genesis WMF is located on a disturbed site as it operated as a hard rock quarry for over 50 years prior to becoming a WMF. The modification request would not increase the footprint of the facility, or the overall site processing capacity. Further, no additional vegetation would be removed as a result of the modification. • In its submission, EES confirmed the modification request did not contain biodiversity issues. • The Department's assessment concludes a BDAR is not necessary for the modification request.	
WARR Strategy	
• Jacfin objected to the modification request on the grounds it is inconsistent with the WARR Strategy. • The Department acknowledges the request seeks to increase the amount of material that can be landfilled per annum. However, the total amount of material accepted at the site per annum would not increase and the total volume of the landfill void would increase. Consequently, the lifespan of the landfill could be completed up to seven years sooner than currently predicted. • The Department also considers the resource recovery arm of the operation currently contributes to the waste recovery targets set out in the WARR Strategy. Removing the residual waste from resource recovery from the annual landfill limit would increase the flexibility of the operations at the site. • The Department also acknowledges the adjoining landfill provides disposal facilities for problem materials, such as asbestos contaminated waste, which must be disposed of at appropriately licenced facilities and cannot be recycled. • Further, the Department notes a consideration when approving the original project was utilising and rehabilitating a former quarry site while supporting resource recovery initiatives and generating jobs within the WSEA. This is not changing as a result of the modification.	No additional conditions are recommended.

7. Evaluation

7.1.1 The Department's assessment of the request has considered the requirements of the EP&A Act, including the objects of the EP&A Act. The Department has also considered the submissions received from the relevant public authorities, local councils and the public.

7.1.2 The Department's assessment notes that while the AQIA predicted the concentrations of certain particulate matter to exceed the criteria, the background levels are already elevated due to the nearby industrial uses and proximity to the M4 and M7 Motorways. The Department has recommended conditions requiring the Proponent to conduct an air quality audit and update the AQMP. These combined with existing requirements under the approval would ensure appropriate air quality management measures are implemented and performance is monitored. The updated AQMP would incorporate real-time boundary monitoring and trigger levels for remedial action, as recommended by the EPA.

7.1.3 The NIA found the facility is currently exceeding its noise limits, however the background noise levels are already exceeding this limit. The modification request therefore provided an opportunity to re-assess and determine appropriate noise limits for the site. The Proponent proposed PSNLs for the project and demonstrated the modified project would meet these PSNLs. However, the EPA recommended its own noise limits based on the highest predicted noise levels in the NIA. The Department has included the EPA's noise limits in the recommended instrument. The Department has also recommended a condition requiring the Proponent to conduct a post commissioning noise report to validate the predictions of the NIA, as requested by BCC. This would also identify whether additional noise mitigation works are required in order to achieve compliance with the noise limits in the approval.

7.1.4 The Department's assessment concludes that with both the existing conditions and with further proactive and reactive measures in place, the potential for adverse impacts on surrounding receivers would be managed.

7.1.5 Further, the Department considers the modification to be acceptable as it:

- would accommodate anticipated additional landfill demand resulting from large infrastructure projects and major developments in Western Sydney, a decline in the number and capacity of landfills and the introduction of the Queensland waste levy
- would allow the acceptance of waste from night time works, such as roadworks and other large-scale infrastructure projects
- is generally consistent with the objectives of the strategic planning framework, including *A Metropolis of Three Cities*, the Central City District Plan and the WARR Strategy
- would not result in adverse environmental or amenity impacts.

7.1.6 Following on from its assessment, the Department considers the modification request is approvable, subject to the modification conditions outlined in **Appendix B**. This assessment report is hereby presented to the Commission for determination.

Chris Ritchie
Director
Industry Assessments

Anthea Sargeant
Executive Director
Regions, Industry and Key Sites

Appendices

Appendix A – List of Documents

The Department has considered the:

- Environmental Assessment (Report Number J17117RP1), prepared by EMM Consulting Pty Ltd, dated 30 August 2018
- Genesis Waste Management Facility, Eastern Creek, Modification 6 – Response to Submissions (Report Number J17117 RTS1), prepared by EMM Consulting Pty Ltd, dated 20 November 2019
- submissions received from public authorities, local councils, special interest groups and the public.

These documents may be viewed on the Department's website at:
http://www.majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=8243

The Department has also considered the:

- existing conditions of approval
- documents supporting the original Project and subsequent modification requests
- relevant environmental planning instruments, policies and guidelines
- relevant requirements of the EP&A Act.

Appendix B – Recommended Modifying Instrument

The recommended modifying instrument may be found on the Department's website at: http://www.majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=8243