



8th February 2022

Mr William Hodgkinson
Team Leader, Industry Assessments
NSW Department of Planning and Environment
12 Darcy Street
Parramatta NSW 2150

By email to: William.Hodgkinson@planning.nsw.gov.au

Dear Mr Hodgkinson,

Re: Eastern Creek Recycling Ecology Park MOD10 (MP06_0139-Mod-10) – Response to request for additional information

Introduction

Dial-A-Dump Industries (EC) Pty Ltd (a fully owned subsidiary of Bingo Industries Ltd) (DADEC) is the operator of the Eastern Creek Recycling Ecology Park (REP) (the Facility), located at 1 Kangaroo Ave, Eastern Creek NSW. The original project approval for the Eastern Creek REP was granted by the Minister for Planning in 2009 (MP 06_0139) under Section 75J of the *Environmental Planning and Assessment Act 1979* (EP&A Act). Operations at the Facility commenced in 2012 and the project approval has since been modified eight times, most recently in March 2021 (Mod 8).

On 6 December 2021 DADEC submitted a modification application to the Department of Planning and Environment (DPE) (Mod 10) to enable the construction and operation of permanent landfill gas flares to support the operations of the Eastern Creek Recycling Ecology Park. On the 28 January 2022 DPE provided a response to the application requesting further information on construction impacts for components of the Modification Proposal deemed by the Proponent to be within the scope of the existing Project Approval. In addition, submissions have been provided by government agencies in support of the Modification Proposal, including the NSW Environment Protection Authority (EPA) and Blacktown City Council (BCC).

This response has been prepared by Jackson Environment and Planning Pty Ltd with specialist technical input from Northstar (air quality) and RWDI (noise).

Purpose

This memorandum has been prepared to respond to the request for further information from DPE and respond to proposed conditions of consent within the provided feedback from government agencies to support a timely approval of the Modification Application.

NSW Department of Planning and Environment Comments

The NSW Department of Planning and Environment correspondence dated 28 January 2022 requested further information be provided on the following:

Infrastructure covered under scope of existing approval

The Department notes the modification application requires certain works which the Applicant deems to be already approved within the scope of the original approval under MP06_0139. These works include:

- *Installation of 12 additional gas collection wells*
- *Replacement of a portion of the existing 160mm header line with a new 355mm header line*
- *Extension of the LFG network through the installation of additional 355mm header line*
- *Construction of in-line barometric condensate traps to remove any condensate build up*
- *Remedial works required to compact the clay liner back to its previous state.*

Given the scale of the works required within the landfill void and the limited details provided in the original (2009) application, the Department requires further information which considers the potential construction impacts of the above works.

As described in Section 1 of the Statement of Environmental Effects supporting the Modification Proposal, the construction of the landfill gas (LFG) collection system is subject to a separate approval (the Original Application - MP 06_0139) and has not been assessed within the Modification Application.

In addition, on 7 May 2021 the Environment Protection Authority issued Licence Variation Notice No. 1608782 to EPL 13426 to include a Special Condition in order to impose additional Licence requirements to prevent the emission of potentially offensive odours from the Premises. The installation of the temporary infrastructure for the extraction of LFG at the Facility commenced on 15 May 2021, with an LFG pumping trial commencing on 17 May 2021 at the Eastern Creek landfill.

The pumping trial required the progressive installation and operation of a LFG extraction system, initially with 15 landfill gas extraction wells and a single flare (500 m³/hr). A second flare (800 m³/hr) was commissioned on 26 May 2021 with an additional 6 landfill gas wells in operation plus a connection to the leachate riser. The pumping trial LFG extraction system was expanded with the installation of another 6 landfill gas wells and a horizontal well at the leachate riser. This was completed on 29 May 2021. A third flare (500 m³/hr) was commissioned on 11 June 2021. A fourth flare (500 m³/hr) became operational in October 2021 with an additional 4 wells (31 in total). At the time of writing a fifth flare was in the process of being commissioned on the site.

The location/distribution of the temporary gas collection system and LFG flares are shown in Figure 3.2 of the Statement of Environmental Effects supporting the Modification Proposal. Importantly, the impacts associated with the construction of this infrastructure are similar to those associated with the landfill gas collection infrastructure for which the DPE has requested further information, specifically with regard to construction impacts.

Notwithstanding the above, to assist with assessment and determination of the Modification Application further details on the potential construction impacts of these activities has been provided in Table 1. Given the minor nature of the works and the location within the landfill void, the assessment has been limited to key environmental aspects where there is potential for impacts. Namely, air quality, noise and vibration and soil and water. A summary of the construction works relevant to the environmental assessment in Table 1 is provided in Section 3.3 of the Statement of Environmental Effects (SEE). Importantly, any construction related impacts will occur over short time periods (construction activities would be undertaken over a period of approximately two months) and progressively in accordance with the EPA approved landfill filling plan. A construction program is provided as Section 3.3.5 of the SEE.

Air Quality

During construction of the LFG collection (as described in DPE correspondence reproduced above) several activities have the potential to result in air quality impacts including installation of the header and leachate return lines, and installation of the gas collection wells. Potential air quality impacts from these activities could include:

- Generation of dust / particulate emissions from ground disturbance and use of heavy machinery; and
- Temporary odour impacts from disturbance of the landfill cap and drilling into landfilled materials.

Dust / particulates

Construction for the LFG collection infrastructure would occur within the landfill void at a distance of ~590m or more from the nearest sensitive receivers in Minchinbury.

Construction of the header and leachate return lines is a linear process whereby the active area of excavation is limited to a small area at the leading end of the trench. Construction of the landfill gas wells would be undertaken using a drill rig with a relatively small area of disturbance. Potential impacts from construction may occur from handling / stockpiling of fill materials and emissions from construction equipment.

Given the small scale of the works, short timeframes and the distance from sensitive receivers, impacts from localised engine-exhaust emissions from construction machinery and vehicles are anticipated to be negligible.

Modelling of dust from construction activities is generally not considered appropriate, as there is a lack of reliable emission factors from construction activities upon which to make predictive assessments, and the rates would vary significantly, depending upon local conditions. In lieu of a modelling assessment, the construction-phase impacts associated with the Modification Proposal can be assessed using a risk-based assessment procedure.

The UK based Institute of Air Quality Management (IAQM) provide the '*Guidance on the Assessment of Dust from Demolition and Construction*' which is often adopted in Australia for the assessment of

construction dust. That method provides screening criteria, which indicate whether any further assessment of impacts is required.

The screening criteria applied to the identified sensitive receptors, are whether they are located in excess of:

- 50 m from the route used by construction vehicles on public roads;
- 350 m from the boundary of the site;
- 500 m from the site entrance; and
- Track-out is assumed to affect roads up to 100 m from the site entrance

As the nearest sensitive receivers are located in excess of 590 m from the construction site boundary and entrance, the risk of potential impacts is considered low, and no further assessment or mitigation is required. Standard construction mitigation measures would be implemented during construction to manage potential dust and particulate emissions. Odour emissions during drilling of gas collection wells to date have been very minor and are there were no off-site impacts. It is expected that the current drilling program will also result in no adverse impacts associated with odour.

Odour

Excavation of the landfill cap for the installation of header and leachate lines and drilling into landfilled materials for installation of gas wells may result in the release of odours with the potential to impact on nearby sensitive receivers.

Excavation of the landfill cap and the subsequent remedial works to restore the liner would be undertaken progressively to minimise the size of the area exposed at any one time and limit the potential for odour emissions. Additionally, the current landfill gas collection system and temporary flares would continue to operate during the construction period (with the exception of when shutdowns are required for connections or safety purposes).

Drilling for the installation of gas collection wells has the potential to generate odour from exposed landfilled waste within the well and from landfilled waste that is extracted during the drilling process. Where feasible, drilling activities would be timed to align with favourable climatic conditions to minimise potential impacts to surrounding receivers. Wells would also be drilled, and a wellhead installed as quickly as possible to reduce exposure time.

Given the progressive nature and small area of exposure, the limited construction time (less than two months for excavation and drilling activities) and the ongoing operation of the existing LFG collection system and temporary flares, potential odour impacts during construction are anticipated to be minor and short term. Odour emissions during drilling of existing landfill gas collection infrastructure on site to date have been very minor and are there were no off-site impacts. It is expected that the current drilling program will also result in no adverse impacts associated with odour.

Installation of the leachate return lines and main header lines will be undertaken in accordance with the *Environmental Guidelines – Solid Waste Landfills* (NSW EPA, 2016, 2nd Edition). The following international guidelines will also be referred to:

- UK Environment Agency *Guidance on Pumping Trials to Determine Whether Installation of Gas Flaring Systems at Landfill Sites Can Be Justified* (2005);
- UK Environmental Agency *Guidance on Landfill Gas Management* (2004);
- UK Environmental Agency *Guidance on Landfill Gas Flaring* (2002);
- Waste Management Industry *Drilling into landfill waste, Industry Code of Practice* (2006); and
- *Industry Guidance Code Practice Perimeter Soil Gas Emission Criteria and Associated Management* (2011).

Construction works would be undertaken in accordance with the construction contractors Health Safety Environment and Quality system and the sites existing management system (Including the Environmental Management Strategy, the Soil, Water and Leachate Plan and the Landfill Gas Management Plan) to minimise impacts on the surrounding environment.

Noise

The noise assessment for the Modification Proposal included an assessment of potential construction noise impacts from the installation of the permanent flare and associated collection infrastructure within the landfill. The assessment was undertaken in accordance with the *Interim Construction Noise Guideline* (ICNG) (Department of Environment and Climate Change, 2009).

Various types of plant and equipment would be required for the various construction activities of the Modification Proposal. A summary of the plant and equipment that are likely to be used during the construction of the Modification Proposal and the construction scenarios are summarised in Table 7.5 of the SEE.

The predicted construction noise levels associated with the construction shows compliance with the operational approval noise limits for both standard meteorological conditions (“calm”) and noise enhancing (“NE”) meteorological conditions for all scenarios.

It is noted that Scenario 3 presented in the SEE did not include consideration of the use of excavators or drill rigs during construction which would result in a higher activity sound power level for that scenario. However, Scenario 1 includes similar equipment (excavators, compactors) to what would be expected during the construction of the gas wells and header / leachate lines and would be in compliance with the operational approval noise limits. As such, these activities would also be anticipated to be in compliance with these limits.

Soil and Water

As described in Section 7.4.2 of the SEE, minor excavations works are required to install the header / leachate lines and LFG collection wells. Given the minor and progressive nature of the works limiting the area of disturbance at any one time, there would be no significant changes to stormwater runoff quantity or quality and no changes or impacts are expected to the leachate generation at the Site. Surface water at the facility will continue to be managed in accordance with the Site's existing Soil, Water and Leachate Management Plan.

Waste

As described in Section 7.4.2 of the SEE, minor excavations works are required to install the header / leachate lines and LFG collection wells. These excavation works have the potential to uncover and exhume waste within the existing landfill. Given the minor nature of excavation works and that excavation would largely occur within the landfill capping, the quantities of waste are expected to be negligible. Excavated waste would be re-landfilled at the active landfill face in accordance with the sites existing operational procedures.

Mitigation Measures

The following mitigation measures will be implemented to ensure that there are no adverse impacts from the proposed construction program:

- Drilling works will only be carried out during favourable weather conditions that will avoid off-site odour movement;
- Drilling works are to be completed in the shortest period of time possible;
- Wells are to be capped as soon as installation is complete to avoid release of odours;
- The works are to be managed in accordance with existing management plans for the site including the *environmental management strategy*, the *soil, water and leachate plan* and the *landfill gas management plan*; and
- Any waste removed during the drilling process and deposited next to the well is immediately covered by VENM to suppress any odour. Waste removed during the drilling process is to be landfilled at the end of the day and covered by daily cover in accordance with the Landfill Management Plan in place.

Conclusion

Impacts from approved works are anticipated to be low to negligible as:

- The works would be minor in nature;
- Impacts of construction are consistent with those for the temporary gas collection work already in place on site as required under EPL13426;
- The works would be undertaken progressively, limiting the area of impact at any one time;
- The works would generally occur within the landfill void at a distance of greater than 590 metres from the nearest identified sensitive receivers;
- The works would be managed in accordance with existing management plans for the site and the proposed mitigation measures provided above; and
- The works would be short term in nature (less than two months).

NSW Environment Protection Authority (EPA) Comments

The NSW EPA provided feedback on the Modification Application Proposal to DPE on 14 January 2022. The EPA response did not object to the proposed modification and provided a number of recommendations. These recommendations are detailed and responded to in Table 1 below.

Table 1. NSW EPA comments and responses.

Recommendation	Response
<p>Statement of Environmental Effects (SEE)</p> <p>The EPA recommends the Licensee ensure the design, installation and operation of the Gas Collection System and Landfill Gas Flare at the Premises complies with all relevant guidelines and legislations, including but not limited to:</p> <ul style="list-style-type: none"> • <i>Protection of the Environment Operations (Clean Air) Regulation 2021 (Clean Air Reg).</i> • <i>Environmental Guidelines – Solid Waste Landfills, Second edition, 2016.</i> 	<p>Noted.</p> <p>The design, installation and operation of the Gas Collection System and Landfill Gas Flare at the site has been designed to comply with all relevant guidelines and legislations, including but not limited to:</p> <ul style="list-style-type: none"> • <i>Protection of the Environment Operations (Clean Air) Regulation 2021 (Clean Air Reg).</i> • <i>Environmental Guidelines – Solid Waste Landfills, Second edition, 2016.</i>
<p>Air quality</p> <p>1. Should the modification be approved; the following conditions of approval be included:</p> <ul style="list-style-type: none"> • The flare/s must be designed and operated to achieve a minimum combustion temperature of 760 deg C, and a minimum residence time of 0.6 seconds. • The flare must be operated in such a way that a flame is present at all times while air impurities are required to be treated. <p>2. Within three months from the commissioning of the permanent flares, the licensee must undertake an Evaluation study. The study must be completed by a suitable qualified and experienced consultant/s and include, as a minimum:</p> <ol style="list-style-type: none"> The evaluation of the effectiveness of the permanent flares and gas extraction system at minimising surface landfill gas emissions from the premises Quantification of H₂S emission rates (surface flux) from landfill surfaces. 	<p>DADEC notes the EPA's recommendations on air quality and do not object to their inclusion as conditions of approval.</p>
<p>Noise</p> <p>For future applications, the EPA recommends that the Licensee consider additional noise monitoring points in Minchinbury.</p>	<p>Noted.</p>

Blacktown City Council (BCC) Comments

BCC provide feedback on the Modification Application to DPE on 29 December 2021. BCC noted that they had no objection to the proposed modification subject to advisory notes and the conditions listed in their submission being included as conditions of approval.

Table 2. BCC Responses and recommendations.

Recommendation	Response
Advisory Notes:	
The proposal should be referred to the NSW Environment Protection Authority as an integrated development for its General Terms of Approval including a License under the Protection of the Environment Operations Act prior to the issue of Construction Certificate.	DPE's review of the Modification Proposal included referral to the NSW EPA. As discussed above, the NSW EPA has reviewed the application and provided recommended conditions of approval.
The proposal should be referred for Clause 29 of the State Environmental Planning Policy (Western Sydney Employment Area) 2009 for any infrastructure levy.	Noted.
The proposal is recommended to be notified to the residents in Minchinbury, Eastern Creek and Erskine Park (which lies in the Penrith Local Government Area) and invited to comment as already requested by Council in an earlier email dated 13 December 2021.	<p>DADEC strongly objects to the Modification Proposal being notified and believe that it would be unwarranted, specifically because:</p> <p>Notification of the Modification Proposal would further delay the installation of this item of critical infrastructure that is intended to manage potential impacts on the communities that would be notified.</p> <p>Modification proposals prepared under Section 4.55 1(a) are not typically notified given their minor nature and the low to negligible risk of potential environmental impacts.</p> <p>DADEC has already undertaken a substantial program of community consultation where the community from the aforementioned suburbs have had the opportunity to provide feedback. Consultation included but was not limited to – five community webinars, two community newsletters distributed to more than 5000 residences each, establishment of a Proposal feedback email address, direct consultation with interested community members, targeted Facebook advertising to nearby community members seeking feedback, newspaper ads, taking steps to establish a community</p>

Recommendation	Response
	working group and direct contact with government representatives for the area.
Recommended conditions:	
General conditions	-
1. The development shall take place in accordance with: <ul style="list-style-type: none"> the Statement of Environmental Effects prepared by Jackson Environment and Planning Pty Ltd dated 30 November 2021, and the manufacturers guarantee, and the Noise Impact Assessment as prepared by Wilkinson Murray and dated 27 November 2021, and the Air Quality Impact Assessment and Greenhouse Gas Assessment as prepared by North Star Air Quality Pty Ltd and dated 30 November 2021. 	DADEC has no objection to the inclusion of this condition within the conditions of approval.
2. The EPA General Terms of Approval DO NOT constitute a license, or license variation, under the Protection of the Environment Operations (POEO) Act 1997. The applicant is required to obtain a license from the EPA for the approved development pursuant to the POEO Act 1997, prior to the commencement of any construction works, or any works or processes associated with the proposed development.	DADEC has no objection to the inclusion of this condition within the conditions of approval noting that we would be not required to obtain a new license but a variation to EPL 13426.
During construction conditions	
1. During construction, the site shall be managed so as to minimise impacts associated with dust to protect the amenity of surrounding residents. Initiatives for dust suppression may include, but not be limited to boundary treatments; the containment of stockpiled material and exposed areas, including sprinkler systems.	DADEC has no objection to the inclusion of this condition within the conditions of approval.
2. Sediment and erosion controls shall be implemented and maintained during all stages of construction. To ensure that construction activities have minimal impact on the environment it is recommended that all sediment and erosion controls are constructed in accordance with Council's Engineering Guide. Maintenance of sediment and erosion controls shall form part of their ongoing management and operation.	DADEC has no objection to the inclusion of this condition within the conditions of approval.

Recommendation	Response
<p>Accordingly, the site manager should assess all sediment and erosion controls each day and initiate repair or maintenance as required. Furthermore, specific measures can be taken to mitigate pollution such as: containing stockpiled materials with a sediment fence and covering materials with plastic sheeting or geosynthetic materials to reduce the impact of wind and water.</p>	
<p>Operational Conditions</p>	
<p>1. Unless expressly permitted by an Environment Protection Licence administered by the Environment Protection Authority any activity carried out in accordance with this approval shall not give rise to offensive odour, offensive noise or pollution of land and/or water as defined by the Protection of the Environment Operations Act 1997.</p>	<p>DADEC has no objection to the inclusion of this condition within the conditions of approval.</p>
<p>2. Council's Environmental Health Unit is to be informed of any pollution incident that occurs in the course of carrying out the approved activity where material harm to the environment is caused or threatened.</p>	<p>DADEC has no objection to the inclusion of this condition within the conditions of approval.</p>
<p>3. A post commissioning report produced by an acoustic consultant with suitable technical qualifications and experience, consistent with the technical eligibility criteria for membership to the Association of Australian Acoustical Consultants (AAAC) or the Australian Acoustical Society (AAS) within 3 – 6 months of the flare operating to validate the Acoustic reports findings.</p>	<p>DADEC object to this proposed condition as it is unreasonable in the context of the Modification Proposal and should not be included within the Conditions of Approval.</p> <p>The environmental assessment found that the predicted operational noise levels for the Site with the flare operating would comply with operational approval noise limits established under MP06_0139 and that the flares noise contribution is marginal to the extent that it does not contribute to the overall site noise level. Additionally, a recent noise audit of the site (prepared by RWDI) found that operations complied with the established noise limits at all sensitive receivers. Given the Modification Proposal is anticipated to have negligible impact on noise levels from the site and the site was recently found to be in compliance with the established noise criteria, the inclusion of conditions around noise monitoring in particular the preparation of a post commissioning noise report is considered to be unreasonable and unwarranted.</p>
<p>4. Within 3 – 6 months of operating a post commissioning report is to be prepared by a National Association of Testing Authorities (NATA) accredited</p>	<p>DADEC has no objection to the inclusion of this condition within the conditions of approval.</p>

Recommendation	Response
Contractor to undertake compliance emission monitoring of the Gas Collection System.	
<p>5. Upon receipt of a justified complaint in relation to noise pollution emanating from the premises, an acoustical assessment is to be carried out in accordance with the requirements of the NSW Environment Protection Authority's Noise Policy for Industry (2017) and provide recommendations to mitigate the emission of offensive noise from the premises. The report shall be prepared by an appropriately qualified acoustic consultant with suitable technical qualifications and experience, consistent with the technical eligibility criteria for membership to the Association of Australian Acoustical Consultants (AAAC) or the Australian Acoustical Society (AAS) and shall be submitted to Council for consideration.</p>	<p>DADEC object to this proposed condition as it is unreasonable in the context of the Modification Proposal and should not be included within the Conditions of Approval.</p> <p>The environmental assessment found that the predicted operational noise levels for the Site with the flare operating would comply with operational approval noise limits established under MP06_0139 and that the flares noise contribution is marginal to the extent that it does not contribute to the overall site noise level. Additionally, a recent noise audit of the site (prepared by RWDI) found that operations complied with the established noise limits at all sensitive receivers. Given the Modification Proposal is anticipated to have negligible impact on noise levels from the site and the site was recently found to be in compliance with the established noise criteria, the inclusion of conditions around noise monitoring is considered to be unreasonable and unwarranted.</p>
<p>6. In the event of a noise or vibration problem arising at the time, the person in charge of the premises shall carry out, an acoustic investigation by an appropriate acoustical consultant and submit the results to DPIE and Council. The person in charge of the premises shall implement any or all of the recommendations of the consultant and any additional requirements of Council and DPIE to Council's satisfaction.</p>	<p>DADEC object to this proposed condition as it is unreasonable in the context of the Modification Proposal and should not be included within the Conditions of Approval.</p> <p>The environmental assessment found that the predicted operational noise levels for the Site with the flare operating would comply with operational approval noise limits established under MP06_0139 and that the flares noise contribution is marginal to the extent that it does not contribute to the overall site noise level. Additionally, a recent noise audit of the site (prepared by RWDI) found that operations complied with the established noise limits at all sensitive receivers. Given the Modification Proposal is anticipated to have negligible impact on noise levels from the site and the site was recently found to be in compliance with the established noise criteria, the inclusion of conditions around noise monitoring is considered to be unreasonable and unwarranted.</p>
<p>7. Any activity carried out in accordance with this approval shall not give rise to air pollution (including odour), offensive noise or pollution of land and/or</p>	<p>DADEC has no objection to the inclusion of this condition within the conditions of approval.</p>

Recommendation	Response
water as defined by the <i>Protection of the Environment Operations Act 1997</i> .	
8. All waste generated on the site is to be stored, handled and disposed of in such a manner as to not create air pollution (including odour), offensive noise or pollution of land and/or water as defined by the <i>Protection of the Environment Operations Act 1997</i> .	DADEC has no objection to the inclusion of this condition within the conditions of approval.
9. In accordance with the requirements of Part 5.7 <i>Protection of the Environment Operations Act 1997</i> , DPIE, Council and the EPA are to be informed of any pollution incident that occurs in the course of carrying out the approved activity where material harm to the environment is caused or threatened.	DADEC has no objection to the inclusion of this condition within the conditions of approval.

Please contact Mr Rylan Loemker, Senior Consultant, Jackson Environment and Planning Pty Ltd on 0427 835 607 or me if you have any questions.

Yours sincerely,



Dr Mark Jackson B.Sc. (Hons), PhD, Grad. Cert. Mgmt., Exec. Masters Public Admin. (USYD)

Director

Jackson Environment and Planning Pty Ltd

Suite 102, Level 1, 25-29 Berry St, North Sydney NSW 2060

T: 02 8056 1849 or M: 0411 060 478

E: mark@jacksonenvironment.com.au

W: www.jacksonenvironment.com.au