

24 October 2018

Department of Planning and Environment
Level 22, 320 Pitt Street
Sydney NSW 2000

Attention: Chris Ritchie / Bianca Thornton

Dear Chris and Bianca

**Genesis Waste Management Facility Modification 6 (MP 06_0139 MOD 6)
Submission on behalf of Jacfin Pty Ltd – Hours of Operation and Landfill Cap**

We act for Jacfin Pty Ltd (**Jacfin**), the owner of Lot 512 in DP 1235869, being land situated to the south of the existing Genesis Waste Management Facility (**Facility**) and comprising the Eastern Creek Business Park.

This submission is made on behalf of Jacfin in relation to the application by Dial a Dump Industries (EC) Pty Limited to modify the hours of operation and landfill cap applicable to the Facility (MP 06_0139 MOD 6) (**Modification Application**). We note that a preliminary submission on behalf of our client was provided on Wednesday, 17 October 2018. The Department confirmed by email on 16 October 2018 that Jacfin was granted an extension of time to make a further detailed submission until 24 October 2018.

Jacfin has commissioned independent peer reviews of the air quality, odour and noise impact assessments exhibited with the Modification Application. Copies of these independent peer reviews undertaken by Wilkinson Murray (noise) and Katestone (air quality and odour) are **attached** to this submission.

1 Summary of Submission

Jacfin submits that the extension of the hours of operation and landfill capacity of the Facility will have unacceptable impacts on the surrounding area, including Jacfin's land, and is inconsistent with the future desired character of the Eastern Creek Precinct. On that basis, Jacfin submits that the Modification Application should be refused.

In particular, Jacfin considers that the following issues justify the refusal of the Modification Application:

- (a) the expansion of the landfill will have unacceptable impacts on air quality, including exceedances of the impact assessment criterion at residential and commercial receptors for cumulative 2 hour average PM_{2.5} concentrations and 24 hour average ground-level concentrations of PM₁₀;
- (b) odour emissions that will result from the expansion of the landfill capacity will have unacceptable negative impacts on the locality and may stifle employment generating development on adjoining land;

Our Ref QNMS:NJSS:120533997

njss A0144483667v1 120533997 24.10.2018

- (c) the proposed increase in noise levels of up to 11 dBA above currently approved levels will have significant impacts on residents within the vicinity of the Facility and adjoining land users;
- (d) the expansion of the landfill is entirely out of character with the current and envisaged future character and context of the locality; and
- (e) the Modification Application is inconsistent with the State's recycling policies as it will effectively increase the amount of waste going to landfill and reduce the extent of recycling at the Facility.

In addition to the above merit issues, the accompanying technical studies submitted with the Modification Application are deficient in a number of respects which are noted in this submission and in the reviews conducted by Wilkinson Murry and Katestone. Given the deficiencies in the accompanying technical studies, Jacfin submits that they should not be considered as sufficient to enable the Department to properly assess the impacts of the Modification Application.

2 Air Quality and Odour

The Modification Application, if approved, would allow the Proponent to increase the volume of landfill waste received at the Facility per annum by over 40%. The Proponent's own assessment acknowledges that hauling along the unsealed access road to the landfill pit is the largest potential emissions source from the Facility. Accordingly, the proposed increase in landfill capacity will result in significant increases in the Facility's impacts to air quality and odour emissions.

The Proponent relies on an Air Quality Impact Assessment prepared by Rambol Australia Pty Ltd dated August 2018 (**Air Quality Assessment**). A peer review of the Air Quality Assessment has been undertaken by Katestone on behalf of Jacfin. Katestone has identified a significant of issues for concern in the Air Quality Assessment.

The most fundamental concern raised by Katestone is the fact that the Air Quality Assessment, contrary to what is asserted by the Proponent, does not assess a realistic 'worst case scenario' for odour and air quality if the expansion of the landfill is approved. This is of significant concern because it means that the impacts identified by Katestone as already being unacceptable, as set out below, will in fact be worse than assessed in the Air Quality Assessment.

The Air Quality Assessment assumes a 'worst case scenario' of a 50/50 split between waste going to landfill and being recycled. However, the proportion of waste going to landfill is likely to be greater than 50% of the total waste received by the Facility if the Modification Application is approved.

The Modification Application is seeking to increase the landfill capacity from 700,000 tonnes per annum (**tpa**) to 1,000,000 tpa and to exclude waste generated by recycling processes within the Materials Processing Centre (**MPC**) and the Pre-Sort Building from the landfill capacity. The impact of this amendment, if approved, would be that 1,000,000 tpa plus however much additional waste is left over from recycling processes (from the additional 1,000,000 tpa passing through the MPC and Pre-Sort Building) can be deposited to the landfill.

Accordingly, a 50/50 split between waste going to recycling operations and landfill is not the worst-case scenario that could result from the modification and the proportion of waste going to landfill could potentially be much greater than 50% of the total 2,000,000 tpa of waste permitted to be received at the Facility. In Jacfin's submission, this is a significant oversight in the Air Quality Assessment and has the consequence that the worst case air and odour emissions resulting from the Modification Application could be significantly worse than represented in the Air Quality Assessment.

Katestone has identified the following issues as being of particular concern from its review of the Air Quality Assessment:

- (a) An incomplete analysis of background levels of air pollutants has been provided in the Air Quality Assessment. The analysis has been conducted having regard only to data collected by the Proponent at the Facility and by the NSW Office of Environment and Heritage at locations at St Marys and Prospect. There has been no consideration given to the impact of dust generated by the proposed Hanson Concrete and Asphalt Facility at Lot 1, Kangaroo Avenue Eastern Creek (**Hanson Facility**), such that cumulative dust impacts have not been properly assessed.
- (b) The Air Quality Assessment identifies particular commercial and industrial receptors as points of reference for dispersion modelling. The discrete points identified within those receptor locations are not the points of greatest potential odour and air quality impact on those receptors. The selection of these points means that the dust and odour impact figures do not represent the actual levels of impact on those receptors and are underestimated.
- (c) The Air Quality Assessment does not provide tabulated predictions of ground-level concentrations of dust and odour at the Jacfin site. As such, the Air Quality Assessment does not properly assess air quality and odour impacts on the Jacfin site. This is a significant oversight in circumstances where the Jacfin land is in close proximity to the Facility and is being developed for employment uses, such that workers employed in facilities on the Jacfin land are one of the groups of people most likely to be impacted by the proposal.
- (d) In the absence of ground-level dust and odour predictions, Katestone has undertaken its own predictions at the Jacfin land inferred from contour plots included in the Air Quality Assessment. The results show a likelihood that the impact assessment criterion for the 24 hour average and annual average criteria for PM_{2.5} concentrations will be exceeded at the Jacfin land, as well as other residential and commercial receptors. Katestone also identifies a likely exceedance of the criterion for 24 hour average ground-level concentrations of PM₁₀ at one or more existing commercial and industrial receptors. Katestone notes that these exceedances suggest that the proposed development has an unacceptable risk of causing adverse impacts on human health.
- (e) The Air Quality Assessment appears to underestimate the dust and odour emissions that will be caused by an expansion of the Facility. Specifically, it appears that emissions of dust and odour have been underestimated in the Air Quality Assessment for the following reasons:
 - (i) haul route lengths on unpaved roads assumed do not represent the likely lengths of haulage given the proposed scope of operations if approval is given to the Modification Application;
 - (ii) silt content for paved and unpaved roads are unrealistically low;
 - (iii) unrealistically high emission control benefits have been assumed.These underestimations mean that the dust and odour emissions that will result from the Modification Application are likely to be higher than predicted in the Air Quality Assessment and the impacts on human health and adjoining land users will be worse than assessed by the Proponent.
- (f) There appear to be inaccuracies in the dust deposition rate contour plot at Figure A5-6 of the Air Quality Assessment and these figures are not representative of the potential impact of the Modification Application.

- (g) There is very limited information provided in relation to the odour assessment in the Air Quality Assessment. Katestone has indicated that the amount of information provided makes it difficult to confirm the adequacy of the assessment.
- (h) Predicted ground-level concentrations of odour at the Jacfin land are close to and, in Katestone's view based on the data presented by the Proponent, probably exceed the criterion for populated areas of 2 OU. The Air Quality Assessment has suggested a criterion of 7 OU applies to commercial activities, however this level is incorrect having regard to the nature of the surrounding development.

Jacfin submits that the above issues raise serious doubts as to the reliability of the conclusions presented in the Air Quality Assessment, such that a reasonable decision-maker could not have confidence based on the assessment that air quality impacts of the Modification Application will not present unacceptable risks to human health and amenity. Jacfin further submits that even if the underestimated air quality and odour impacts predicted in the Air Quality Assessment are adopted, the impacts are not acceptable for a Facility in such close proximity to commercial and residential uses.

The exceedances of the PM_{2.5} and PM₁₀ criterion and odour criterion for populated areas identified by Katestone raise serious concerns regarding the impacts of an expansion of the Facility. Given the serious health implications of exposure to PM_{2.5} and PM₁₀ including asthma, respiratory inflammation and even potential links to cancer, these exceedances are extremely concerning.

Jacfin has for many years been developing a high quality employment precinct on its land. Consistent with the objectives of *State Environmental Planning Policy (Western Sydney Employment Area) 2009 (WSEA SEPP)*, Jacfin's developments contribute to the creation of employment in the Western Sydney area. Increases in emissions of particulate matter from the Facility present a serious risk to workers at Jacfin's facilities, while increases in odour have the potential to stifle development on Jacfin's land, making it unattractive for future employment generating uses.

Jacfin submits that the unacceptable odour and air quality impacts associated with an expansion of the Facility and the consequential risks to human should lead the Department to refuse the Modification Application.

3 Noise

The Modification Application proposes substantial amendments to the maximum noise levels permitted for the Facility and to revise the location of the receivers to which the noise levels apply. The Proponent also seeks to significantly increase hours of operation which will extend the periods during which surrounding residences are exposed to noise from the Facility.

The maximum noise levels proposed will have negative impacts on residents within the vicinity of the Facility and adjoining land users. Jacfin submits that the proposed maximum noise levels are in excess of what is reasonable particularly in relation to the neighbouring residential areas. The proposed noise levels are up to 11dB(A) higher than the noise levels currently approved under the development consent and Environment Protection Licence for the Facility. The Proponent has not justified why the noise levels, which were considered appropriate to protect the amenity of nearby residential areas at the time the Facility was originally approved, are no longer appropriate and that it should now be allowed to significantly exceed these noise levels.

The Proponent relies on a Noise and Vibration Impact Assessment prepared by EMM Consulting Pty Ltd dated 13 September 2017 (**Noise Impact Assessment**). A peer review of the Noise Impact Assessment has been undertaken by Wilkinson Murray on behalf of Jacfin. Areas of deficiency in the Noise Impact Assessment as identified by Wilkinson Murray are outlined below:

- (a) The Noise Impact Assessment asserts that the proposed increases to maximum noise levels have been developed consistent with the INP. Under the INP, maximum noise levels are established having regard to background noise in the area. The background noise data that has been relied upon in the Noise Impact Assessment is unreliable for the following reasons:
 - (i) The background noise data was obtained from testing conducted in March 2014. A substantial period of time has passed since this testing was conducted and therefore the data is no longer reliable or relevant. Wilkinson Murray has confirmed that contemporaneous noise monitoring should be conducted to ensure that the developed noise criteria are robust and correct and that it would be inappropriate for the Modification Application to be determined on the basis of outdated data.
 - (ii) The Noise Impact Assessment acknowledges that the background noise data for the Erskine Park residential location was affected by extraneous noise in the form of insect and frog noise. This data is therefore not an accurate representation of background noise levels at that location.
- (b) The Noise Impact Assessment has failed to have regard to the characteristics of noise being produced such as whether the noise is a low frequency content noise. Wilkinson Murray has indicated that the low frequency noise criterion has been found to be an issue for this type of development and recommends that an assessment should be undertaken to consider a modifying factor to allow for the additional annoyance caused by low frequency noise.
- (c) The noise levels for "approved operations" in the Noise Impact Assessment significantly exceed the levels approved under the existing development consent and Environment Protection Licence for the Facility. Wilkinson Murray notes that the reason for this exceedance has not been explained and that, consistent with best practice, the modelling of existing operations should be validated with current noise measurements.
- (d) The Eastern Creek Precinct Plan (Stage 3) (**Precinct Plan**) sets noise level goals for land within the Eastern Creek Precinct to ensure the amenity of surrounding residential areas is protected. The Noise Impact Assessment does not include any consideration of these noise goals.

We note that, pursuant to clause 19 of the WSEA SEPP, the Precinct Plan is a relevant consideration that must be taken into account by the Minister's delegate in determining the Modification Application.

Having regard to the above issues identified by Wilkinson Murray, there is a significant risk that the projected noise levels presented in the Noise Impact Assessment are unreliable and potentially underestimated. The failure of the Noise Impact Assessment to adequately assess the current background noise levels in the area and estimate future noise impacts, taking into account factors such as low frequency noise, means that it is not an adequate analysis to be relied upon in the assessment of the Modification Application.

Jacfin is also concerned that the Noise Impact Assessment is potentially misleading in its representation of the "approved operation" noise levels and the extent to which the new proposed noise levels exceed the current approved noise levels. As noted by Wilkinson Murray, Table 5.2 of the Noise Impact Assessment refers to noise levels for the "approved operation" however these noise levels significantly exceed those that are approved under the existing development consent and Environment Protection Licence for the Facility. It appears that the "approved operations" data is actually the estimated noise levels of current operations. This gives rise to the following concerns:

- (a) if the "approved operations" do represent the current noise levels emanating from the Facility, it is not clear why are they represented as predictions when actual data could be

gathered. This leads to doubt over whether these figures are accurate or relevant. On that basis, Jacfin submits that little or no weight should be given to those figures;

- (b) in the event that the "approved operations" figures are accurate representations of current noise levels, the Facility is operating significantly above the currently approved noise levels, in breach of the existing development consent. This in turn raises concerns regarding the fitness of the Proponent to be operating this type of facility and holding an Environment Protection Licence, and concerns regarding whether the Proponent is likely to comply with any new maximum noise levels that may be imposed;
- (c) the reference to "approved operations" is misleading as the Facility is not approved to operate at these noise levels. The whole of Table 5.2 is therefore potentially misleading as it suggests that only a very small increase in noise levels above the existing level of "approved operations" is being sought under the Modification Application, when in fact a very significant increase to approve noise levels of 11 dBA is being sought.

In circumstances where there are significant areas of industrially zoned land yet to be developed in the vicinity of the Facility, an increase in permissible noise emissions from the Facility of up to 11dBA above existing approved levels may compromise the opportunity for further industrial development to be carried out in the area while preserving the amenity of nearby residential areas. This would be directly contrary to the objectives of the WSEA SEPP to promote the economic development and creation of employment in the Western Sydney Employment Area.

Jacfin submits that the significant increase in noise levels sought by the Modification Application is unacceptable and unjustified and, on that basis, the Modification Application should be refused.

4 Character and Context

The existing Facility is out of character with the nature of the development that is envisaged in the Precinct Plan as well as the development that has in fact occurred throughout the Eastern Creek Business Hub. Given this, Jacfin submits that any further expansion of the Facility should not be approved.

The Eastern Creek Business Hub has developed as a premier location for logistics and distribution related facilities, that contain significant commercial components. Developers within the Business Hub are creating a well-landscaped, attractive and interesting locality which appeals to prominent and high quality end-users and tenants. Under this development model the Business Hub is generating a significant number of new jobs for Western Sydney, including a large proportion of higher paid jobs, in accordance with the objectives of the WSEA SEPP.

The existing Facility is characterised as a Waste Management Facility and is consistent in size, scale and potential impacts with a heavy industry. The Facility is not consistent with the future urban design goals for this area, being a desired location for logistics and distribution related facilities. The Modification Application is inconsistent with a number of key objectives under the Precinct Plan and WSEA SEPP, including:

- (a) ensuring the best possible urban design outcomes are achieved;
- (b) promoting economic growth and the creation of employment in the Western Sydney Employment Area; and
- (c) providing for the co-ordinated planning and development of land in the Western Sydney Employment Area.

The expansion of a Facility that is not in keeping with the emerging and future desired character of the Eastern Creek Precinct does not represent orderly and proper planning. Increasing the landfill

capacity of the Facility will only increase the noise, air quality and odour impacts of the Facility, as outlined above, and will significantly decrease the attractiveness of surrounding land for employment generating uses. At worst, this could result in surrounding land not being utilised for its highest and best use and opportunities to increase employment in Western Sydney being stifled.

Jacfin submits that approval should not be granted for the expansion of the Facility in circumstances where this would clearly be incongruous with the further desired character of the area, the objectives of the Precinct Plan and WSEA SEPP and could compromise the development of adjoining land for employment purposes.

5 Increased Landfill and Reduced Recycling

While the increase in the landfill cap sought in the Modification Application has been presented by the Proponent as being necessary to increase recycling at the Facility, the actual effect of the Modification Application is in fact likely to be a reduction in recycling. In circumstances where the Proponent is not seeking to increase the overall receiving limit for the Facility of 2,000,000 tpa, any increase in the amount of waste that can be disposed of to landfill at the Facility will necessarily reduce the proportion of waste that is being recycled.

If the Facility were to increase its 'direct-to-landfill' waste to the new proposed 1,000,000 tpa limit, this would leave only 1,000,000 tpa (of the 2,000,000 tpa overall limit) that can be received through the MPC, in contrast to the current scenario whereby the MPC can receive and recycle up to 1,300,000 tpa, and potentially more where part of the 700,000 tpa landfill limit is being used for landfill waste left over from the recycling process.

Jacfin submits that the proposed increase to the landfill capacity of the Facility as outlined in the Modification Application is completely inconsistent with State government policy relating to recycling. In 2014, the Environment Protection Authority implemented the 'NSW Waste Avoidance and Resource Recovery Strategy 2014-21' (**WARR Strategy**). The WARR Strategy was implemented under the *Waste Avoidance and Resource Recovery Act 2001* (NSW) (**WARR Act**) which prescribes that the EPA is to develop a waste strategy for the State which:

- (a) is to be based on continuous improvement and benchmarked against international best practice, and
- (b) is to include targets for waste reduction, resource recovery and the diversion of waste from landfill disposal, developed by an expert reference group appointed by the EPA.

In accordance with the WARR Act, the WARR Strategy includes objectives and targets for recycling and landfilling which are as follows:

- (a) Increase recycling:

By 2021-22, increase recycling rates for:

- municipal solid waste from 52% (in 2010-11) to 70%;
- commercial and industrial waste from 57% (in 2010-11) to 70%; and
- construction and demolition waste from 75% (in 2010-11) to 80%.

- (b) Divert more waste from landfill:

By 2021-22, increase the waste diverted from landfill from 63% (in 2010-11) to 75%.

By increasing the landfill capacity at the Facility, the Modification Application will work against the objectives and targets outlined by the EPA under the WARR Strategy in two ways. Firstly, it increases the overall amount of landfill that can be deposited at the Facility, therefore increasing the

diversion of materials into landfill. By increasing the capacity of landfill facilities across New South Wales, it discourages industry from innovating and developing plans to implement recycling measures and reusing materials.

Secondly, given that the overall receiving limit is to remain at 2,000,000 tpa, more waste going to landfill means less waste being recycled at the Facility. The benefits of recycling have been identified by the NSW Government as of critical importance to the economy, environment and society as a whole. The WARR Strategy identifies the following benefits of recycling:

- (a) Recycling is good for the economy – the economy depends on the environment to provide raw materials and absorb the waste and emissions we produce. Reusing, recovering and recycling these valuable materials keep them in the productive economy for longer. This has the dual benefits of lowering demand for new resources and reducing the need to absorb waste. Waste going to landfill is not only a loss of valuable resources, it reduces landfill space.
- (b) Recycling generates jobs – there are 9.2 full-time equivalent employees directly involved in recycling for every 10,000 tonnes of material processed, compared with only 2.8 jobs for an equivalent amount of waste sent to landfill.
- (c) Recycling saves money
- (d) Recycling avoids the negative impacts that waste has on the environment – managing and disposing of waste presents risks to the environment. Impacts include odour, noise, dust, litter, dumping, greenhouse gas emissions, potential contamination of land and groundwater, and harm to flora and fauna. The risks to the environment rise as more waste is generated and are reduced by increasing recycling.
- (e) Society benefits from recycling – litter and illegal dumping can reduce the amenity of public spaces and are anti-social behaviours. Landfills remove space from the community and may compromise the use of land into the future.

Increasing the landfill capacity at the Facility and effectively reducing the proportion of waste recycled at the Facility is directly inconsistent with the objectives and goals WARR Strategy and represents a bad outcome for the environment and the community. Jacfin submits that this is an important consideration that the Department should take into account in assessing the Modification Application and a further reason that the Modification Application ought to be refused.

6 Energy for Waste Facility

Development consent for a separate proposal to construct an Energy from Waste Facility (**EfW Facility**) on land adjoining the Facility at Eastern Creek was refused by the Independent Planning Commission in July 2018. Notwithstanding this, Figure 1.2 of the Environmental Assessment for the Modification Request shows the proposed 'Next Generation Facility' as forming part of the local context.

The availability of sufficient waste to supply the proposed EfW Facility was one of a multitude of issues raised by submitters by way of objection to that proposal. The Facility was identified as the primary source of waste fuel for the proposed EfW Facility. An increase in landfill waste at the Facility could therefore be regarded as paving the way for a renewed application for a EfW Facility, in circumstances where this form of development has already been assessed and determined to be inappropriate by the Independent Planning Commission.

In addition to the issues raised above, Jacfin considers that the previous proposal for an EfW Facility adjacent to the Facility and the proposed interaction between the two facilities is a matter that should be kept in mind in terms of the broader context of the Modification Application.

7 Submission

For the reasons set out above, Jacfin submits that the Modification Application should be refused.

The expansion of the landfill capacity at the Facility will result in unacceptable noise and odour impacts and impacts to air quality. Further, the extension of operating hours will mean that impacts such as noise and odour are experienced for longer periods of time by the community, thereby increasing the loss of amenity resulting from operations at the Facility. The character of the Facility is inconsistent with existing and planned development in the vicinity of the Facility and any expansion of the landfill capacity is directly inconsistent with State government recycling goals.

Furthermore, Jacfin submits that on the basis of the information provided in the Modification Application, which has been identified by Katestone and Wilkinson Murray as:

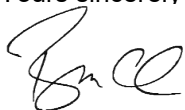
- (a) insufficient;
- (b) based on inaccurate or unrealistic assumptions;
- (c) containing significant errors and/or inconsistencies; and
- (d) failing to take into consideration relevant information,

no reasonable decision-maker could properly assess the impacts of the Modification Application or have any confidence that the conclusions presented in relation to the impacts of the proposed expanded operations are reliable.

It is submitted that any doubt as to the reliability of the assessments undertaken by the Proponent and the impacts of the Modification Application, in circumstances where those impacts include emissions of particulate matter which present a significant risk to human health and emissions of noise and odour which directly threaten amenity for surrounding land users, must cause the consent authority to conclude that the expansion of the landfill is manifestly inappropriate and refuse consent for the Modification Application.

Should you require any clarification of our client's concerns identified above, please contact us at the numbers below.

Yours sincerely



Bill McCredie
Partner
Allens
Bill.McCredie@allens.com.au
T +61 7 3334 3049

Naomi Bergman
Managing Associate
Allens
Naomi.Bergman@allens.com.au
T +61 2 9230 5646

Attach:

1. Katestone, 'Genesis Waste Management Facility Modification 6 (MP 06_0139 MOD 6) – review of the Air Quality Assessment', 24 October 2018
2. Wilkinson Murray, 'Genesis Waste Management Facility – Modification 6 (MP06_0139 MOD6) – Noise Peer review on behalf of Jacfin', 23 October 2018

24 October 2018

Attn: Bill McCredie

Jacfin
c/o Allens
Deutsche Bank Place
Corner of Hunter & Phillip Streets
Sydney NSW 2000

Email: Bill.McCredie@allens.com.au

Re: Genesis Waste Management Facility Modification 6 (MP 06_0139 MOD 6) – review of Air Quality Assessment

Dear Mr McCredie,

I have completed an independent peer review of the air quality assessment of the Genesis Waste Management Facility Modification 6 (MP 06_0139 MOD 6) (AQA). The Genesis Facility is licensed to receive up to 2 million tonnes per annum (Mtpa) of waste and has a cap on landfilling of 700,000 tpa. The proponent is seeking to increase the landfilling cap to 1Mtpa and to exclude from the cap waste generated by the recycling processes within the Materials Processing Centre (MPC).

I have focused my review on the results of the air quality assessment and methodology used to estimate dust and odour emissions, which in my experience are critical aspects of the assessment. Based on my review, I have the following comments:

- Worst-case operating scenario: the AQA asserts that a worst-case emissions scenario has been modelled that is based on a 50/50 split of the 2Mtpa licensed capacity between the MPC and the landfill. However, in my opinion this scenario does not represent the worst-case because additional materials from the MPC would be allowed to be landfilled under the condition proposed by the proponent. The AQA has assumed that none of the recyclable materials would be landfilled. As a consequence, emissions of dust associated with hauling and landfilling of waste materials are likely to have been underestimated. The extent of underestimation is difficult to determine without a reliable estimate of the quantity of materials from the MPC that would be landfilled. The AQA estimated that hauling materials to the landfill accounts for 39% of total site emissions of PM₁₀. If 50% of the materials from the MPC were landfilled, the PM₁₀ emission rate from the site would increase by 20%.
- Background levels of air pollutants: have been estimated based on data collected by the proponent at the Genesis Facility and by NSW Office of Environment and Heritage (OEH) at St Marys and Prospect. The AQA has not accounted for the influence on air quality of the proposed Hanson Concrete & Asphalt Facility at Lot 1, Kangaroo Avenue, Eastern Creek. Such a facility will emit dust, and consequently, the AQA should consider the potential cumulative impacts of the proposed development in conjunction with the Hanson Facility.
- Receptor locations: The existing commercial and industrial receptors, such as Australand, have been identified as discrete points in the dispersion modelling. The discrete points are shown on the contour plots at Appendix 5 of the AQA. These discrete points are not representative of the points of greatest potential impact of the proposed development on those commercial and industrial receptors. This is

illustrated in Figure 1, which shows that the nearest point of Australand is the southwest corner of the Australand building, but the location of the discrete point in the dispersion modelling is on the northern side of the building close to the Western Motorway. In terms of PM₁₀, the degree of underprediction of the maximum 24-hour concentration at receptor R12 (Australand) due to the location of the receptor in the model is more than 28µg/m³, which is 56% of the criterion (50µg/m³). Figure 1 shows that the proposed development alone will cause the concentration of PM₁₀ to be exceeded at Australand.

- Figure 1 shows that predicted concentrations of all air pollutants for all of the existing commercial and industrial receptors will be underestimated for a similar reason. It is likely that predicted maximum 24-hour average ground-level concentrations of PM₁₀ would exceed the criterion at one or more of the existing commercial and industrial receptors. The AQA does not address the potential for these exceedances. The exceedances suggest that the proposed development has an unacceptable risk of causing adverse impacts on human health. Under the Approved Methods for Modelling, if the criteria are predicted to be exceeded "...the dispersion modelling must be revised to include various pollution control strategies until compliance is achieved."

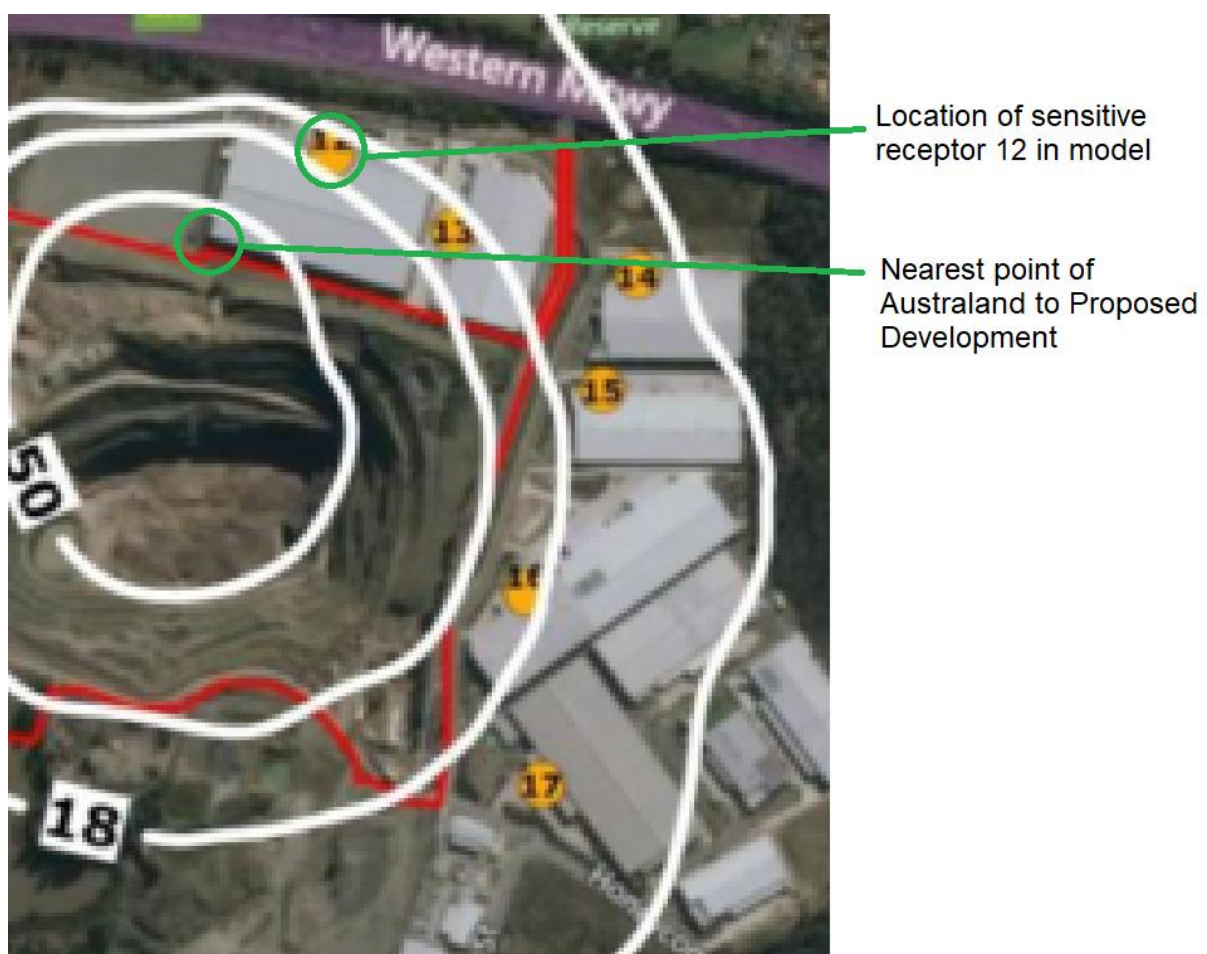


Figure 1 **Zoomed view of AQA Figure A5-1 - predicted maximum 24-hour average concentrations of PM₁₀ due to the proposed development only – highlighting the location of most affected point of Australand compared with location of discrete receptor in dispersion model**

- Predictions of dust: The AQA has not provided tabulated predictions of ground-level concentrations of dust and odour at the Jacfin land. To address this, I have estimated the concentrations from the contour plots at Appendix 5 of the AQA. My estimates are summarised in Table 1.

Table 1 Genesis Waste Management Facility Modification 6, predicted ground-level concentrations of air pollutants at the Jacfin land inferred from contour plots except where noted

Pollutant	Averaging period	Project in isolation	Background	Cumulative	Criteria
PM ₁₀ (µg/m ³)	24-hour	10	Variable	44.3 ²	50
	Annual	2.5	18.9	21.4	25
PM _{2.5} (µg/m ³)	24-hour	2.5 – 5.0 ¹	Variable	25.5	25
	Annual	0.5 - 1 ¹	8.6	9.1 – 9.6	8
TSP (µg/m ³)	Annual	5	47.2	52.2	90
Dust deposition (g/m ² /month)	Annual	0.3 ³	2	2.3 ³	2 or 4
Odour	Nose response time	2	-	-	2 to 7

Note

¹ Actual value difficult to estimate from contour plot so range of values included.

² Cumulative value cannot be estimated at Jacfin land. Tabulated data for nearest receptor (R17) has been used.

³ Figure A5-6 of AQA appears to be incorrect. Tabulated data for nearest receptor (R17) has been used.

- The results show a likelihood of exceedance of the 24-hour average and annual average criteria for PM_{2.5} at the Jacfin land and also at other residential and commercial locations in the vicinity of the proposal. This conclusion for the Jacfin land is based on consideration of the predictions at R17 for 24-hour average PM₁₀, because there are no tabulated predictions in the AQA for the Jacfin land. The AQA does not adequately address this potential for exceedances. The exceedances suggest that the proposed development has an unacceptable risk of causing adverse impacts on human health. Under the Approved Methods for Modelling, if the criteria are predicted to be exceeded “...the dispersion modelling must be revised to include various pollution control strategies until compliance is achieved.”
- The dust deposition rate contour plot, Figure A5-6 of the AQA, appears to be identical to Figure A5-5 of the AQA (predictions of TSP). The results in Figure A5-6 do not correspond to the tabulated results in the AQA. Therefore, it is likely that Figure A5-6 of the AQA is incorrect and is not representative of the potential impact of the project.
- Emissions of dust from the proposed development appear to be underestimated for the following reasons:
 - The AQA has assumed that none of the MCP materials will be landfilled, whereas, under the proposed condition of approval, up to 1Mtpa of additional waste could be landfilled if it passes through the MCP.
 - Haul route lengths on unpaved roads that have been assumed in the study do not represent the likely lengths of haulage given the scale of the site and location of activities. The AQA does not provide maps or plans of haul routes to support its assumptions.
 - The silt content assumed in the AQA for paved roads and unpaved roads appear to be unrealistically low and have not been justified. No control measures targeting silt content of paved and unpaved roads have been identified in the AQA.
 - The AQA assumes that emission controls capable of achieving 70% efficiency on paved roads and 90% on unpaved roads will be applied. These control efficiencies are very high in my experience and have not been adequately justified or demonstrated to be achievable in practice. For control of dust from unpaved roads, the AQA assumes that wind breaks will reduce emissions by 30%; however, dust generation on unpaved roads is not induced by wind but by wheel action on the surface of the road. The 30% control factor not valid.

- Odour assessment: Predicted ground-level concentrations of odour at the Jacfin land are close to, and probably exceed, the criterion for urban areas of 2 ou. Predicted ground-level concentrations of odour exceed 2 ou at each of the commercial and industrial receptors that are identified in the AQA, namely: R12-R17 and also at three additional commercial receptors at the northern end of Grevillia Street. Consequently, the proposed development may cause odour nuisance at commercial and industrial premises in its vicinity.
- The AQA suggests that a criterion of 7 ou applies to the commercial activities. However, in my opinion, this is an incorrect interpretation. The Approved Methods for Modelling (NSW EPA, 2017), requires an assessment to be made at existing and possible future sensitive receptor¹ locations, which includes places where people are likely to work – such as an office. The Approved Methods for Modelling applies a criterion of 7 ou to a “Single rural residence”. Whereas, it applies a criterion of 2 ou to “Urban (>~2000) and/or schools and hospitals”. To ensure that the Jacfin and surrounding vacant land may adopt the broadest range of uses, a criterion of 2 ou should be adopted.
- The AQA contains very limited information in relation to the odour assessment. For example, emission areas and total odour emission rates from activities are not reported. It is therefore difficult to determine the adequacy of the assessment. Additionally, it is difficult to determine the potential consequences of additional materials from the MCP being landfilled.
- The AQA has not used site-specific measurements of odour. Instead the AQA estimated odour emission rates from the average specific odour emissions rate from four putrescible waste landfills, namely: Whytes Gully, Spring Farm, Woodlawn and Lucas Heights. The adoption of an average rate from the putrescible waste landfills is an arbitrary decision. It is relevant to note that emissions from the four putrescible landfills are quite variable and, consequently, adoption of the average of the four will potentially underestimate the potential impact of the proposal. For example, the peak odour emission rate for intermediate cover² amongst the four putrescible waste landfills is 3 times higher than the average odour emission rate.
- The AQA provides no plan or data that describes the locations and extents of odour emitting sources associated with the proposal. Such data should be provided in this type of study and its absence means that the adequacy of the assessment cannot be verified.
- The AQA does not provide input or output files for the dispersion model and meteorological models. Consequently, I cannot check whether the models have been configured in accordance with the assertions made in the AQA.

Please call me if you would like to discuss.

Regards,



Simon Welchman - Director

¹ The Approved Methods for Modelling defines a **sensitive receptor** as: A location where people are likely to work or reside; this may include a dwelling, school, hospital, office or public recreational area. An air quality impact assessment should also consider the location of known or likely future sensitive receptors.

² Intermediate cover is a layer of cover material that is approximately 0.5 metres thick that is placed over waste at a landfill.

23 October 2018

WM Project Number: 17084-B
Our Ref: A17084-Bltr22102018
Email: adam.hutchings@allens.com.au

Bill McCredie
Allens Linklaters
Corner of Hunter & Phillip Streets
SYDNEY NSW 2000

Dear Bill

**Re: Genesis Waste Management Facility - Modification 6 (MP06_0139 MOD6)
Noise Peer Review on behalf of Jacfin**

Wilkinson Murray has been engaged by Allens Linklaters, on behalf of Jacfin Pty Ltd, to conduct a peer review of the noise assessment relating to the Genesis Waste Management Facility, a material recovery and landfill facility at Honeycomb Drive, Eastern Creek.

Jacfin is the owner of land to the south-east of the site, being Lot 512 in DP1235869. Jacfin is concerned that the noise impacts to its site and neighbouring land has not been considered adequately.

This review has been conducted referencing the following documentation:

- Noise and Vibration Impact Assessment, Modification 6 Prepared for Dial A Dump Industries Pty Limited, EMM, 13 September 2017 (referred to as Modification 6);
- Noise Impact Assessment, Light Horse Business Centre, ERM, August 2008 (referred to as the original noise assessment); and
- Next Generation Energy from Waste Facility (SSD 6236) – Noise Impact Assessment, Pacific Environment Limited (referred to as Energy from Waste Facility).

The noise assessment for Modification 6 conducted by EMM has been reviewed by Wilkinson Murray. The modification proposes to:

- Increase the direct-to-landfill waste volumes;
- Extend the hours of operation to include night; and
- Substantially revise noise limits.

The following comments are provided:

1.0 Noise Criteria

The current Approval and Environment Protection Licence has the following noise limits:

Location	Day – dB(A) ($L_{Aeq}(15 \text{ minutes})$)	Evening dB(A) ($L_{Aeq}(15 \text{ minutes})$)	Morning Shoulder - dB(A) ($L_{Aeq}(15 \text{ minutes})$)
Any receiver	37	36	36

It is unclear how the original noise limits have been derived from the original noise assessment. The Department of Planning in its Environmental Assessment Report (dated October 2009) recommends lower limits than the Industrial Noise Policy's project specific noise levels.

The criteria proposed in the modification are based on project specific noise levels derived from procedures in the Industrial Noise Policy, primarily background +5dB and are presented below:

Location	Day – dB(A) ($L_{Aeq}(15 \text{ minutes})$)	Evening – dB(A) ($L_{Aeq}(15 \text{ minutes})$)	Night – dB(A) ($L_{Aeq}(15 \text{ minutes})$)	Morning Shoulder ($L_{Aeq}(15 \text{ minutes})$)
Minchinbury residential receivers	48	47	44	47
Erskine Park residential receivers	39	40	37	40

It is recommended that the Department of Planning & Environment and EPA review the prior reasoning for the lower noise limits and conduct their contemporary review based on the original assessment.

2.0 Noise Monitoring

Background noise levels are an essential part of a noise assessment. Under the NSW Industrial Noise Policy (INP) they are the basis for establishing the intrusive noise criteria. Therefore, it is very important that the correct background noise levels be identified during noise monitoring surveys.

The noise assessment is using the same noise data used for the Energy from Waste Facility (SSD 6236) which was conducted in March 2014. It is considered that for a substantial modification, that may result in higher noise criteria, more comprehensive and contemporary noise monitoring should be used to establish the noise criteria. Additionally, the Energy from Waste Facility (SSD 6236) noise assessment monitoring results at Erskine Park were questionable as it was identified as having been affected by extraneous noise in the form of insect and frog noise.

It is recommended that contemporaneous noise monitoring be conducted to ensure the developed noise criteria are both robust and appropriate and therefore it would be inappropriate for the modification request to be determined on the outdated data.

3.0 Predicted Noise Levels

The noise assessment appears to provide noise predictions for the existing operations and the proposed operations.

Table 5.2 of the Modification 6 noise assessment refers to noise levels for the "approved operation" however these noise levels significantly exceed those that are approved under the existing development consent and Environment Protection Licence for the Facility. It appears that the "approved operations" noise predictions are actually the estimated noise levels of current operations.

The existing operational noise predictions are well above the current licence/consent conditions. The reason for this breach in the licence/consent conditions have not been explained. In my opinion, the main reasons for such an exceedance is:

- the original EIS under predicted the noise impacts; or
- the existing operations are above the approved operating throughput.

Wilkinson Murray considers the reason for the breach of the licence/consent conditions needs to be explained thoroughly and consistent with best practise, the modelling of the existing operations should be validated with current noise measurements.

4.0 Low Frequency Noise

Where a noise source contains certain characteristics, such as dominant low-frequency content, there is evidence to suggest that it can cause greater annoyance than other noise at the same noise level. The INP outlines correction factors to be applied to the predicted noise levels at the receiver before comparison with the noise criteria to account for the additional annoyance caused by these modifying factors. For low frequency noise the INP states that a +5dB correction be added to the predicted noise level if the assessed C and A weighted difference over the same time period is greater than 15dB.

The low frequency correction, which has been found to be an issue for this type of development has not been considered in the Modification 6 noise assessment. It is recommended that an assessment to consider such a modifying factor be undertaken.

5.0 Cumulative/ Precinct Plan Noise Goal / Amenity Criteria

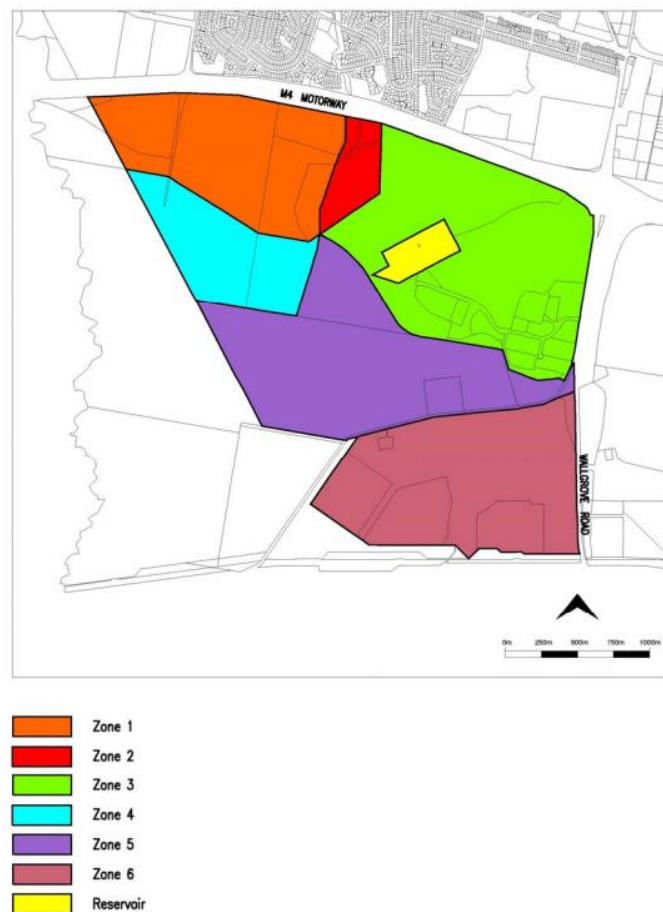
The Eastern Creek Precinct Plan (Stage 3) (**Precinct Plan**) sets noise level goals for land within the Eastern Creek Precinct to ensure the amenity of surrounding residential areas is protected. The Noise Impact Assessment does not include any consideration of these noise goals.

The noise level goals and the location of the Precinct are outlined in Table 1 and Figure 1, respectively.

Table 1 Optimum Noise Level Goals

Period	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6
Day	57 dBA	54 dBA	56 dBA	54 dBA	49 dBA	52 dBA
Evening	47 dBA	44 dBA	46 dBA	44 dBA	39 dBA	42 dBA
Night	42 dBA	40 dBA	40dBA	39 dBA	34 dBA	37 dBA

Figure 1 Noise Emission Zones



The subject site is located in Zone 1 and therefore has a noise goal of 57dBA during the day, 47dBA during the evening and 42dBA at night.

It is recommended the Modification 6 noise assessment consider the Precinct Plan to ensure that future ambient noise levels are consistent with noise expectations of the area.

I trust this information is sufficient. Please contact us if you have any further queries.

Yours faithfully

WILKINSON MURRAY

John Wassermann

Director