

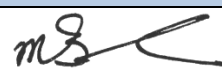


Health Impact Assessment (Stage 3- Version 2)

Proposed Resource Recovery Facility Block 11, Section 21, Hume

January 2020

Certificate of approval for issue of documents

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Desktop Review & Report Preparation	Reviewed	Approved	
 Marcus Brooks MAIOH COH BSc. MSc Occ. Hyg. Senior Occupational Hygienist Robson Environmental Pty. Ltd.	 Hamish Rae BAppSc Occupational Hygiene Technician Robson Environmental Pty. Ltd.	 Marcus Brooks MAIOH COH BSc. MSc Occ. Hyg. Senior Occupational Hygienist Robson Environmental Pty. Ltd.	

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Table of Contents

1. Introduction	3
2. Background	3
3. Review of Air quality – CEC Report	3
3.1. Construction – Air Quality.....	4
3.1.1. Odour	4
3.1.2. Particulate Matter.....	4
3.2. Operational – Air Quality	4
4. Review of Noise Assessment – CDENVIRO Report.....	5
5. Review of Noise Assessment – SLR Report	5
5.1. Operational Noise	5
5.2. Construction Noise.....	6
6. Conclusion and Recommendations	7
6.1. Recommendations	7
7. Limitations	7
8. References	7

1. Introduction

Robson Environmental Pty Ltd (Robson) was engaged by Flexible Australia to undertake a Health Impact Assessment for the Proposed Resource Recovery Facility at Block 11, Section 21 in Hume.

The purpose of this Health Impact Assessment is to inform the Environmental Impact Statement for the development of the Proposed Resource Recovery Facility, as per Section 8.1.8 of the Scoping document to provide a Health Impact Assessment describing risks to staff and neighbours including from hazardous materials (based on the Robson Environmental Exposure Risk Assessment – 1090501 May 2019, 1090502 December 2019), Air Quality (based on the supplied Capital Environmental Consulting (CEC) assessment – Hume RRF Draft AQ assessment Rev 2, 2019) and Noise (based on the supplied SLR assessment- 670.11038-R01, 2019 and CDENVIRO Road sweepings & Gully Waste Recycling Plant Noise Test Report, 2018).

2. Background

The proposed resource recovery facility is designed to separate largely waste products from a variety of sources into fit for purpose products for beneficial reuse in commercial markets.

The facility will accept the following supplied waste products:

- Street sweeping activities;
- Stormwater maintenance activities (GPT's);
- Golf course bunkers (bunker sand); and
- Hydro excavation activities (hydro excavation and hydro drilling mud).

Robson was commissioned to undertake a desktop review of the three provided reports on noise (SLR & CDENVIRO) and air quality (CEC) and provide advice as to whether all risk and controls have been identified to satisfy section 8.1.8 of the scoping document

3. Review of Air quality – CEC Report

The desktop review of the Hume RRF Draft Air Quality Assessment Rev 2, by CEC covered both expected construction and operational air quality and odour.

The reviewed main air pollutants that are likely to be generated during construction works include:

- Total Suspended Particulate (TSP) matter;
- PM₁₀; and
- PM_{2.5}.

Other pollutants emitted during construction, such as oxides of nitrogen (NO_x), carbon monoxide (CO), sulphur dioxide (SO₂), volatile organic compounds (VOC's) and PAH's were not assessed as part of the report due to the expectation that construction and plant would be operated as per manufacturer's maintenance specifications. Only dust was assessed.

The report reviewed the main expected operational pollutants of the Facility:

- Odour;

- TSP; and
- PM₁₀.

3.1. Construction – Air Quality

There is no current Australian Capital Territory (ACT) legislation or policies that specifically govern air quality standards during construction. The Environment Protection Guidelines for Construction and Land Development in the ACT released by the Environment Protection Authority in March 2011 would be applicable for construction of the Project.

3.1.1. Odour

Due to the proximity to the Mugga Landfill (a source of potential odour emissions), it is expected that the odour from the Facility would be insignificant compared to the Mugga Landfill.

3.1.2. Particulate Matter

Based on the finding of the CEC report, activities that may generate particulate matter (i.e. dust) include wind erosion of exposed surfaces, movement of topsoil during excavations, disturbance of stockpiles, movement of vehicles and general site preparation works.

The dispersion of particulate matter is also dependant on meteorological conditions at the time of constructions. Recommendations to manage dust levels via water spray and dust suppression, are outlined in section 6 of the CEC report. Abiding by the conditions outlined in the Construction Environmental Management Plan (CEMP) would identify triggers and procedures for dealing with these conditions (refer to CEC report Section 6.1).

3.2. Operational – Air Quality

The report findings determined that emissions to air from the facility following incorporation of emission controls (most activities occur within an enclosed building) are anticipated to be low. Based on this, no qualitative air investigations is necessary.

Based on the findings of the levels of inherited and residual risk conducted by Robson, this is supported by the CEC report on the operation of the Facility.

Large amounts of leaf litter was identified as a potential source of odour from GTP waste, however based on the direct transfer to the treatment plant and not stockpiling material, this would pose minimal potential for odour impact.

The dust levels at the site will be controlled due to the site being paved, and all treatment occurring within the enclosed structure.

The CEC report concluded that Facilities emission controls are anticipated to be low. Based on these emission assumptions, a quantitative air quality investigation is not considered necessary, as it would not provide any further useful information. Construction works are likely to generate particulate matter of varying size fractions (TSP, PM₁₀ and PM_{2.5}). Following best management practices (refer section 6.1 of the CEC report) to be implemented, any potential impacts on the receiving environment and nearest sensitive receptors are minimised.

During operation of the facility, the CEC report and the Robson residual risk assessment report, determined that particulate matter (TSP and PM₁₀) and odour may be generated. The proposed

resource recovery plant has been designed to minimise the likelihood for impacts to air by fully enclosing the recovery process and ensuring the time materials are stored is minimised.

The facility is designed to use 'low technology' to reclaim fit for purpose materials in a fully bunded and enclosed building, using wet processing techniques and as a consequence the emission of particulate matter and odour are considered unlikely.

4. Review of Noise Assessment – CDEVIRO Report

The desktop review of the provided CDEVIRO report on the noise assessment conducted by Noise Air on behalf of CDEnviro, for the facility in West Sussex, UK dated November 15, 2018, provides a good comparison of what the proposed resource recovery facility could be expected to produce during operational conditions.

The monitored noise levels were based on an operator working on an average of 1.5 hours within an excavator and the remaining shift time spent between the control room and various other activities.

The reported noise dose values were 82 $dBL_{Aeq,1.5h}$, and a calculated value for an 8-hour shift of 80 $dBL_{Aeq,8h}$, which is below the 8-hour time-weighted average value required by Australian Standard 1269.1 of 85 $dBL_{Aeq,8h}$.

The report was compared to the UK Noise at Work Regulations (2005) which has a low eight-hour exposure limit and therefore recommended further Personal Protective Equipment and monitoring to be undertaken.

5. Review of Noise Assessment – SLR Report

The desktop review of the Noise Assessment report by SLR of the Proposed Hume Waste Recovery Centre, conducted in September 2019, considers both potential construction noise and operational noise of the facility. The report, 670.11038-R01-v1.0, considers noise emissions associated with the facility with regard to zone noise standards determined in accordance with the *ACT Environment Protection Regulation 2005*.

5.1. Operational Noise

In relation to the operational noise, there are no requirements relating to noise contained within the *ACT Hume Precinct Map and Code* or the objectives of the IZ1 *General Industrial Zone*. The report considers what noise could impact neighbours by adopting the ACT land zonings as shown in Table 1.

Predetermined assessment points were selected around the boundary of the proposed facility to demonstrate compliance with the *ACT Environmental Protection Regulation 2005* (EPR) which provides criteria based on ACT land zonings.

Table 1: ACT Zone Noise Standards (Ref?)

Noise Zone	ACT Land	Zone Noise Standard, dBA LA _{10,T}			
		Monday - Saturday 7 am – 10 pm	Sunday and public holiday 8 am – 10 pm	Monday-Saturday 10 pm – 7 am	Sunday and public holiday 10 pm – 8 am
A	land in an industrial zone (IZ1)	65	55	65	55
F	land (other than land in the city centre, town centres and group centres) in — a leisure and accommodation zone (ie, CZ6)	Same as the noise standard for the adjoining noise zone with the loudest noise standard for the time period, ie			
		65	55	65	55
G	all other NSW land	45	35	45	35

Based on the noise modelling of the proposed operations at the Facility that was undertaken by SLR to predict noise at the assessment locations, as determined in accordance with the ACT EPR 2005, the report concludes that at all assessment locations except the boundary with 30 Couranga Crescent (Block 10 Section 21), which is nearest to the weighbridge and loading/unloading areas, the modelling complies with the zone noise standards.

The reports modelling highlights the operational noise would exceed the daytime zone noise standard by 2 dBA at the nearest part of that location to the Facility. Options to reduce noise from the weighbridge and loading/unloading areas have been proposed in section 6.4 of the report.

5.2. Construction Noise

The assessment of construction noise in the ACT can be found in the *Environment Protection Guidelines for Construction and Land Development in the ACT*, issued by the EPA in 2011. The document refers to the requirements of the EPR which in Section 29 states:

Noise—other exceptions

Under section 25 (1), noise is not taken to cause environmental harm in an affected place if it is noise mentioned in schedule 2, table 2.3, column 2 and the conditions (if any) mentioned in column 3 for the noise are met.

Despite the exempt status of construction noise associated with the project, the SLR report undertook an assessment of construction noise to assist in determining the effects of the development. This assessment provides a ‘realistic worst case’ noise assessment for construction scenarios based on proposed works within a 15-minute period.

Construction noise is exempt from complying with the zone noise standards provided works occur between 6:00 am and 8:00 pm, and due to the separation distance from the main construction to the nearest sensitive receptor, compliance with the zone noise standards would occur.

6. Conclusion and Recommendations

Based on the SLR report for construction and operational noise, it is reasonable to conclude that, the proposed waste recycling Facility would comply with all requirements of the *Environmental Protection Regulation 2005* in relation to noise, assuming recommendations are taken into account regarding the weighbridge areas, and thus would not be expected to result in adverse noise effects at any and all nearby receptors.

Based on the CEC report for Air Quality, the findings from the comprehensive qualitative assessment of the Facility, it is expected that there would be a low risk of exceeding the adopted assessment criteria during construction works and operation of the Facility. Best management practices and measures outlined in the CEC report (Section 6.2) should be implemented to ensure potential impacts on the receiving environment and nearest sensitive receptors are minimised.

Based on the findings and conclusion of the review reports and the intrinsic and residual risk assessment undertaken by Robson Environmental, there is a low risk of the construction and operation of the Facility to impact the health of neighbouring businesses, workers or visitors to the Facility.

6.1. Recommendations

No further recommendations.

7. Limitations

While Robson has taken all care to ensure that this report includes the most accurate information available, samples were taken at certain times on the day or days indicated within the report and Robson is unable to comment on conditions at other times. Any statement of expected conditions at other times should be taken as possible conditions only.

The report, including any risk assessment presented, is based on the information obtained by Robson at the time of sampling. Any variation in the environment, activities, methods, practices, products, or equipment used may change exposures to hazards, invalidating the presented risk assessment. Robson recommends that risks be re-assessed prior to making any changes to the aforementioned factors.

The findings contained within this report are developed from the interpretation of the results of specific sampling methods used in accordance with generally accepted practices and standards, based on the current state of knowledge. To the best of Robson's knowledge, our assessment of the data represents a reasonable interpretation of the general conditions, and subsequent risk at the time of sampling. Should you have any questions or require further information please contact Robson Environmental.

8. References

- Capital Environmental Consulting (CEC) ,(2019,) *Hume RRF Draft Air Qualitative Quality Assessment*, Hume, ACT.

- CDENVIRO, 2018, *Road sweepings & Gully Waste Recycling Plant Noise Test Report*, Cookestown, N. Ireland.
- Environment Protection Authority, 2011, *Environment Protection Guidelines for Construction and Land Development in the ACT*, ACT Government, ACT.
- *Environment Protection Regulation 2005* (ACT)
- Noise Assessment – Hume Waste Recovery Centre – SLR Report 670.11038-Ro1, September 2019.
- South Australia Government, Environment Protection Authority. ,(2016,). *Ambient Air Quality Assessment*, South Australia.
- Standards Australia, 2005, *Australian Standard Occupational noise management Part 1: Measurement and assessment of noise immision and exposure* , AS 1269.1, Sydney.
- Todoroski Air Sciences ,(2017,) *Air Quality Impact Assessment, Waste Plastic to Fuel Facility*, Hume, ACT.