Appendix I

Noise

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Our ref: 12524108

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Nancy Zheng
Plasrefine Recycling Pty Ltd

Moss Vale Recycling and Reprocessing Facility – Summary of noise findings following change to access route

Dear Nancy

1. Introduction

Plasrefine Recycling Pty Ltd (Plasrefine Recycling) is seeking approval under Part 4 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) to construct and operate a plastics recycling and reprocessing facility in Moss Vale ('the proposal').

The proposal involves the construction and operation of a plastics recycling and reprocessing facility with capacity to receive up to 120,000 tonnes per year of mixed plastics. The proposal also includes construction of a new north-south public access road comprising part of Braddon Road (paper road, currently unformed) and a new connection to Collins Road (via an unnamed paper road, also currently unformed).

An extensive community and stakeholder engagement program was implemented during the preparation of the Environment Impact Statement (EIS) including proactive engagement with the community and stakeholders. During this process, key issues related to land use, traffic, transport and access, air quality, water, noise and vibration, visual, socio-economic, human health, biodiversity, waste, hazard, contamination and utilities and heritage were raised in public submissions.

Further design development and additional studies have been undertaken to address the key issues raised. This includes changes to the preferred access road and associated new access road design. This has potential to change the previously assessed noise impacts. The revised access road and haulage route are shown in Figure 1.

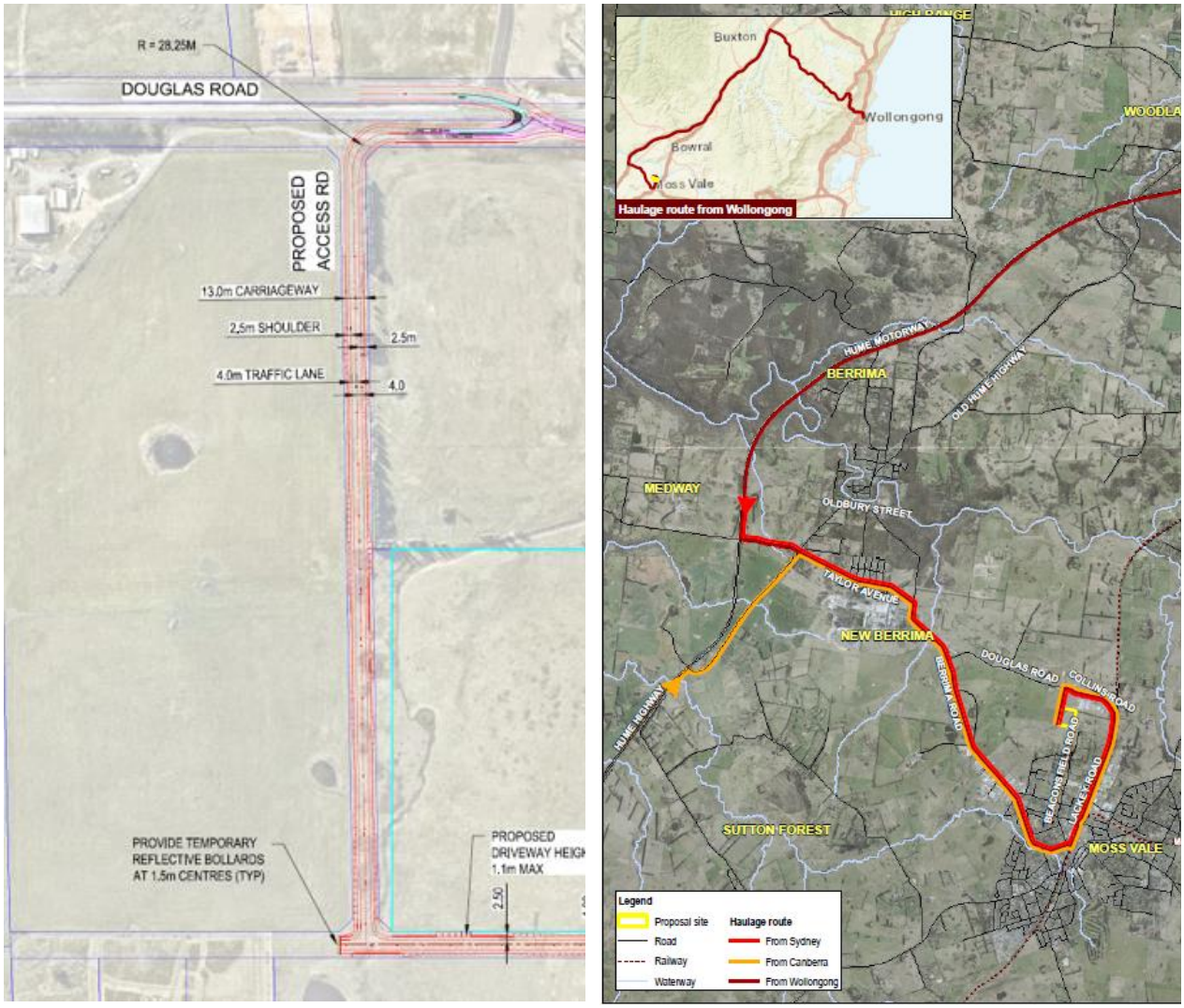

Figure 1 *Revised access road and haulage route*

2. Purpose of this letter

This letter has been prepared to support the Response to Submissions (RTS). It provides information on the noise assessment that has been undertaken in consideration of the design updates described in Section 1, and should be read in conjunction with the *Moss Vale Plastics Recycling and Reprocessing Facility – Environmental Impact Statement Technical Report 6 - Transport and Traffic Assessment Report (GHD, January 2022*) ('the TIA').

This letter should also be read in conjunction with *Moss Vale Plastics Recycling and Reprocessing Facility – Environmental Impact Statement Technical Report 2 – Noise and Vibration Impact Assessment (GHD, January 2022*) ('the NVIA') that includes an assessment of road traffic noise levels associated with the proposal.

3. Analysis of proposed haulage route noise impacts (public roads)

3.1 During operation

Updated road traffic noise modelling results are presented in Table 1 and have been assessed against the local road noise criteria (1 hour period) in the Road Noise Policy (RNP) (DECCW 2010) using the CoRTN prediction method.

The changes in road traffic noise levels at residences along the haulage route are based on the following assumptions:

– Existing traffic volumes are based on AM/PM peak hour volumes counted on 23rd Nov 2022
– All HVs would use Innes Road/Garret Street rather than Waite Street/Illawarra Highway/Lackey Road (south of Innes)
– All LVs would use Waite Street/Illawarra Highway/Lackey Road (south of Innes).

Table 1 Increase in road traffic noise levels – Ultimate phase or 10 heavy vehicle movements an hour (Innes/Garret), 102 LVs (Waite Street/Illawarra Hwy/Lackey Road)

Road	Existing traffic - Day (1 hour)[2]		Additional operations traffic - Day (1 hour)		Distance to receiver, m	Difference in noise level[2]	Level at receiver (existing)	Level at receiver (operation)	If >2.0 dBA, >55 LAeq(1hr) dBA at nearest receiver?	Exceedance of RNP criteria? (Mitigation consideration)[1]
	LV	HV	LV	HV		LAeq(1hr), dBA				
Berrima Road AM	778	76	102	10	10	+0.5	71	71	-	No
Innes Road AM	96	3	0	10	10	+2.7	59	61	Yes. Note: Existing road traffic noise levels >55 dBA	Yes
Garret Street AM	243	6	0	10	5	+1.8	65	67	-	No
Lackey Road north AM	180	25	102	10	7	+1.7	67	69	-	No
Collins Road AM	56	7	102	10	200	+4.2	43	47	No	No
Lackey Road south AM	393	29	102	0	6	+0.6	70	71	-	No
Waite Street AM	812	79	102	0	10	+0.3	71	71	-	No
Berrima Road PM	707	36	102	10	10	+0.7	69	70	-	No
Innes Road PM	55	1	0	10	10	+4.3	56	60	Yes. Note: Existing road traffic noise levels >55 dBA	Yes
Garret Street PM	196	3	0	10	5	+2.3	63	66		
Lackey Road north PM	321	13	102	10	7	+1.6	67	69	-	No
Collins Road PM	69	4	102	10	200	+4.5	43	47	No	No
Lackey Road south PM	459	14	102	0	6	+0.7	69	71	-	No
Waite Street AM	746	37	102	0	10	+0.4	69	70	-	No

Notes:
1. An exceedance of the RNP criteria (consider mitigation) is based on >2.0 dBA increase in noise levels from existing and >LAeq(1hr) 55 dBA at the nearest sensitive receiver.
2. Existing traffic volumes are based on AM/PM peak intersection traffic counts undertaken by Matrix in Nov 2022. The increase in road traffic noise levels may be higher during non-peak hourly periods.
3. Red shaded cells refer to an exceedance of the relevant trigger level. Where the increase in noise level is greater than 2.0 dBA, however the controlling noise criteria is not exceeded, the cell has been shaded in green (i.e. complies with the requirements of the RNP)

The analysis undertaken above is based on an assumption that all heavy vehicles are equally spaced throughout the day. Note should be made that the increase in road traffic noise due to additional traffic generated by a development is normally the lowest during AM/PM peak hour periods as the existing traffic volumes are the highest.

During non-peak hour periods, there is greater potential for the increase in road traffic noise levels to be greater than 2 dBA as the existing volumes would be lower. However, during non-peak hourly periods, the potential to exceed the RNP controlling noise criteria at receivers is lower as overall traffic volumes are lower (when compared to peak hour periods).

The various scenarios modelled above indicate that the acoustic requirements of the Road Noise Policy at sensitive receivers can be met for the majority of sections of the haulage route.

Based on the modelling undertaken, the Road Noise Policy criteria is only predicted to be exceeded at residences fronting Innes Road (AM and PM peak) and Garret Street (PM peak only) at the ultimate predicted heavy vehicle volume of 10 heavy vehicle movements per hour. It should be noted that the existing road traffic noise levels at the nearest residences to Innes Road and Garret Street are already predicted to exceed the $L_{Aeq\ (1\ hour)}$ noise level criteria of 55 dBA. The proposed increase in heavy vehicle movements would increase noise levels by between 2.3 and 4.3 dBA during PM peak periods. It is expected that heavy vehicle movements initially would be much lower than 10 heavy vehicle movements per hour, and build up as the facility reaches full capacity. The timing for this is not known, as it depends on market conditions, and level of utilisation of the facility.

Where exceedances of the Road Noise Policy criteria are predicted (i.e. at Innes Road and Garret Street), mitigation options are possible to reduce the increase in road traffic noise level for adjacent residential receivers. These include:

– Distributing HV movements between the Innes Road/Garret St route and the Waite Street/Lackey Road route; and
– Reducing HV speeds along Innes Road and Garret Street to 40 km/hr and 30 km/hr, respectively.

As Waite Street and Lackey Road route is apparently not an approved HV route, further investigation would be required to utilise this route for heavy vehicles.

To mitigate potential noise impacts at residences along Innes Road and Garret Street, it is recommended that the following measures be incorporated into the operational management plan:

– Road traffic noise monitoring be undertaken (pre-operation and within 6 months of operation) to determine the following:
    - Existing road traffic noise levels at residences
    - The frequency of operational delivery trucks during peak periods of operation
    - The increase in road traffic noise level during peak periods of operation
    - The noise level of delivery trucks (range and average) to inform predictions for higher throughput volumes
– Consideration of diverting HV movements to alternate haulage routes where road traffic noise impacts would be reduced (i.e. Waite Street, Illawarra Highway and Lackey Road)
– Induction and training provided to relevant staff and haulage vehicle drivers outlining their responsibilities with regards to:
    - The designated haulage routes
    - The location of sensitive receivers along haulage routes
    - Driver behaviour practices and avoidance of the use of engine compression brakes
    - Acceptable delivery hours.

Noise mitigation options such as quieter road pavements and noise barriers are not considered feasible options and at-property treatments are not considered reasonable at this stage as other mitigation options can be explored to reduce the potential for noise impacts.

Use of the revised haulage route during operation **would not** result in a better noise outcome than previously modelled because Douglas Road would have been utilised (no residences directly adjacent). The revised haulage route has residences along Berrima Road and Innes Road.

It is noted that Council has proposed a number of new roads to service the MVEC/SHIP, and that if the proposed Enterprise Zone is built, this would potentially eliminate the need for heavy vehicles travelling to and from the Hume Highway to use the routes discussed above. In addition, the Moss Vale Bypass, which is due to have its detail design completed in late 2023, would enable heavy vehicles to access Lackey Road without utilising the routes discussed above. Timing for construction of this road is not known, however it may be in operation before the facility reaches full capacity and the impacts outlined above occur in practice.

3.2 During construction

The proposed use of the preferred access road (Option 3 – via a new north-south road connecting with Douglas Road) would result in better noise outcomes than the original access road as the new construction haulage route utilises roads with higher traffic volumes (Berrima Road and Lackey/Collins/Douglas Road) to a greater extent than the original haulage route. This would reduce the increase in road traffic noise levels at sensitive receivers along the haulage route during the construction phase.

4. Analysis of proposed access road noise impacts (internal access road)

The proposed use of the preferred access road (Option 3 – via a new north-south road connecting with Douglas Road) would result in better noise outcomes than the original access road for the following reasons:

– During the construction of the new access road, the nearest residences are now >200 metres away compared to ~100 metres away from the original access road. Given this, construction noise levels at the nearest residences would be less than what was originally predicted.
– During the operational phase of the project, the new access road is now further away from the nearest residences to the east and the south of the proposal. This would result in a slight reduction in operational noise levels to these receivers (R010 and R019). For the nearest residences to the southwest (R160), the proximity of the new access road is consistent with the original access road. As such, the predicted noise levels are anticipated to be unchanged and compliance is still expected.

Regards

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