

2. Noise

Noise modelling has been carried out using SoundPLAN 8.1 software, based on the sound power levels and assumptions stated in Appendix A. The sound power levels associated with each area of the proposed facility have been taken from the noise report compiled by CNIM (Document No. OH800702 02/64 I 0001) in July 2016. It is understood that no changes to the operations of the facility, which have the potential to affect noise emissions have changed since July 2016. In addition, it is also assumed that all noise sources operate 100% of the time, for the purposes of this assessment.

Since the July 2016 noise report, the layout of the proposed development has been revised. The noise model has been constructed based on the most recent Proposed Site Plan (548.02 (-) 500 Rev. E) and Proposed Elevations for the site, provided by Halliday Clarke Architects. Noise modelling figures are included in Appendix B, which provide an overview of the noise sources at the proposed facility and predicted noise emissions.

Noise levels have been predicted at the following 3 Existing Sensitive Receptors (ESRs):

- ESR1 – 6 The Croft, Thwaites, Keighley
- ESR2 – 3 Marley Cottages, Aire Valley Road, Keighley
- ESR3 – 224 Bradford Road, Riddleston, Keighley

Noise contours predicting noise levels associated with operations at the proposed facility are shown in Appendix B.

Tables 2.1 and 2.2 below provide a summary of predicted noise levels associated with the operations of the facility, compared to the existing daytime and night time background noise levels.

Receptor	Daytime Background Noise Level, L_{A90} dB	Predicted Plant Noise Level, L_{Aeq} dB	Level Difference, dB
ESR1	44	37	-7
ESR2	57	30	-27
ESR3	46	31	-15

Table 2.1 shows that the predicted noise level associated with the proposed facility will be below the existing daytime background noise level by at least 7dB at nearby ESRs. This provides a good indication that the operation of the proposed facility will cause a low impact at ESRs and that complaints are unlikely, depending on context, in accordance with BS4142.

Receptor	Night Time Background Noise Level, L_{A90} dB	Predicted Plant Noise Level, L_{Aeq} dB	Level Difference, dB
ESR1	38	37	-1
ESR2	45	30	-15
ESR3	37	31	-6

Table 2.2 shows that the predicted noise level associated with the proposed facility will be below the existing night time background noise level by at least 1dB at nearby ESRs. This provides a good indication that the operation of the proposed facility will cause a low impact at ESRs and that complaints are unlikely, depending on context, in accordance with BS4142.

2.1 Response

A .zip file including all SoundPLAN noise modelling files has been appended to this submission document.

2.2 Response

Attended noise monitoring was carried out by CNIM, in order to establish existing background noise levels at in the vicinity of nearby ESRs, over the following periods:

- Daytime – between 1224 and 1629, on Tuesday 20th August 2013; and,
- Night Time – between 0145 and 0344, on Wednesday 21st August 2013.

Attended noise monitoring allows observations to be made regarding prevailing noise sources at monitoring locations and that representative residual noise environments are captured.

Peak transportation periods generally take place between 0500 to 1000 (morning rush hour) and 1700 to 1900 (evening rush hour). ESRs are located within close proximity to the surrounding road network, in particular Airevalley Road (the A650), therefore the noise environment in the vicinity of ESRs is dominated by road traffic noise. So avoiding these peak transportation periods is required to establish a 'worst case' background noise.

The time periods selected for noise monitoring are considered to be representative of the quiet daytime and quiet night time periods, where ESRs are most likely to be affected by noise from the proposed facility. Furthermore, during these 'quiet' periods, noise levels are unlikely to vary significantly during weekends and weekdays.

The background noise levels used in the assessment were captured in 2013. Since this time, it is likely that the number of vehicles on the surrounding road network has increased, as generally the number of vehicles recorded on the UK road network increases every year. If the survey were to be repeated at the current time, it is likely that elevated noise levels would be recorded as a result of increased road traffic on the surrounding network. Therefore, the background noise levels used are considered to provide a robust assessment.

2.3 Response

Noise monitoring was undertaken by CNIM to support the assessment carried out in August 2016. Further details can be found appended to that report (Document No. OH800702 02/64 I 0001).