



WASHING PLANT, HURN QUARRY, HURN COURT LANE

NOISE MANAGEMENT PLAN

Acoustics Report A1678 NMP

15th February 2022

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1 Introduction

Ion Acoustics is appointed by New Milton Sand and Ballast (NMSB) to prepare a noise management plan as part of the environmental permit application for the processing of inert waste materials at the existing quarry off Hurn Court Lane, Hurn, near Bournemouth.

This document has been prepared in support of the permit application for the facility and has been informed by the assessment presented within Ion Acoustics report reference A1678 R02 dated 11th February 2022. This Noise Management Plan (NMP) details the following:

- The nearest noise sensitive receptor locations including the measured background sound level in the vicinity and the predicted specific noise level;
- Noise source information for all significant sources of noise associated with the operation;
- Best Available Techniques (BAT) to address / abate noise emissions; and,
- An example complaints log to inform an appropriate complaints procedure.

2 Site Description

The washing plant is located in an existing, consented quarry located on land off Hurn Court Lane to the south of Bournemouth Airport. The land in the immediate vicinity of the site includes the former, original quarry workings (to the south and east) which have largely been restored. To the west is the latest, western extension of the quarry which is currently, actively extracting primary material. To the north, beyond Parley Lane is Bournemouth Airport.

The quarry was originally granted planning consent in March 2001. Part of the existing operation at the site is the processing of primary minerals which, in this instance includes running the aggregates through a washing plant. This operation is consented under planning reference 8/2001/0192 dated March 2001.

Activities would take place during the existing operational hours:

- 07:00 to 18:00 Monday to Friday;
- 07:00 to 13:00 Saturday;
- No activities on Sundays or Bank Holidays.

2.1 Maintenance and Review of the Noise Management Plan

The noise management plan is to be continually adapted to the working practices at the facility as a means to address any noise issues if and when they arise. The management plan will be updated by a competent and appropriately trained person at the Hurn site and will be stored in a location where it is easily accessible to relevant personnel.

3 Receptor Locations

The site is relatively removed from the nearest noise sensitive receptors, with the closest being Parkfield School which is approximately 130m to the north-west of the site boundary. The receptor locations and their proximity to the permit application boundary are detailed in Table 1 below.

Table 1: Receptor Locations

Assessment Location	Land Use	Ordnance Survey Grid Co-ordinates		Distance to site boundary (m)
		Easting	Northing	
AL01 – Parkfield School	School	411889	097285	130
AL 02 – 1 and 2 Dales House	Residential	411459	097041	390
AL03 – 1 Wallis Cottage	Residential	411657	096902	230
AL04 – Heronshaw House	Residential	411817	096732	280
AL05 – North Lodge	Residential	412132	096353	610
AL06 – Park Cottages	Residential	412608	096415	750
AL07 – Bridles	Residential	412591	096801	530
AL08 – New Cottages	Residential	412571	096936	490

The above receptor locations, the site boundary and noise monitoring locations shown on an aerial photograph in Figure 1 below.

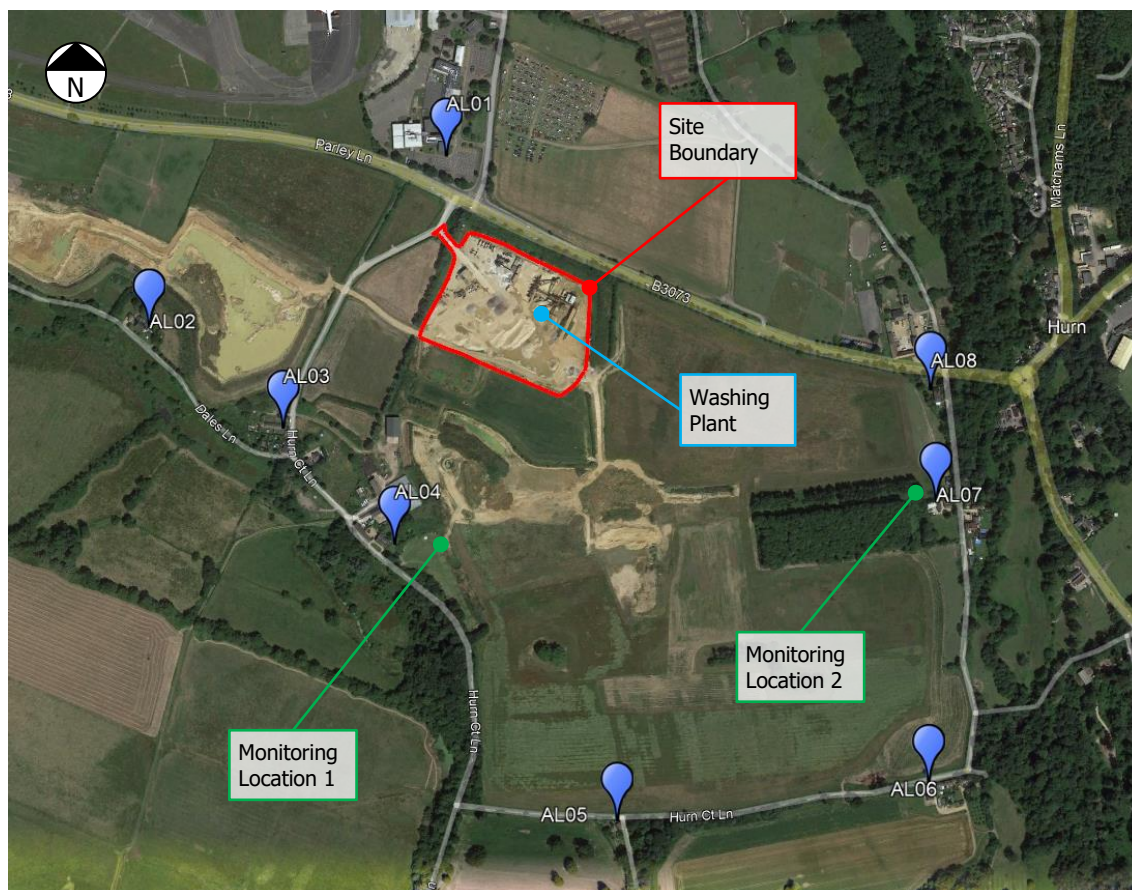


Figure 1 – Site plan showing site, noise monitoring and receptor locations © Google Earth

Note the permit application only pertains to the processing of inert waste materials and not to the processing of the aggregates or any other non-waste related use of the wider site. To that end, the permit application boundary only covers a limited portion of Hurn quarry area i.e. it omits the western extension.

4 Noise Source Information

The washing plant is a large, multi-stage machine which washes and sorts raw materials into sand and aggregates of various sizes. The washing activity broadly follows the process summarised below:

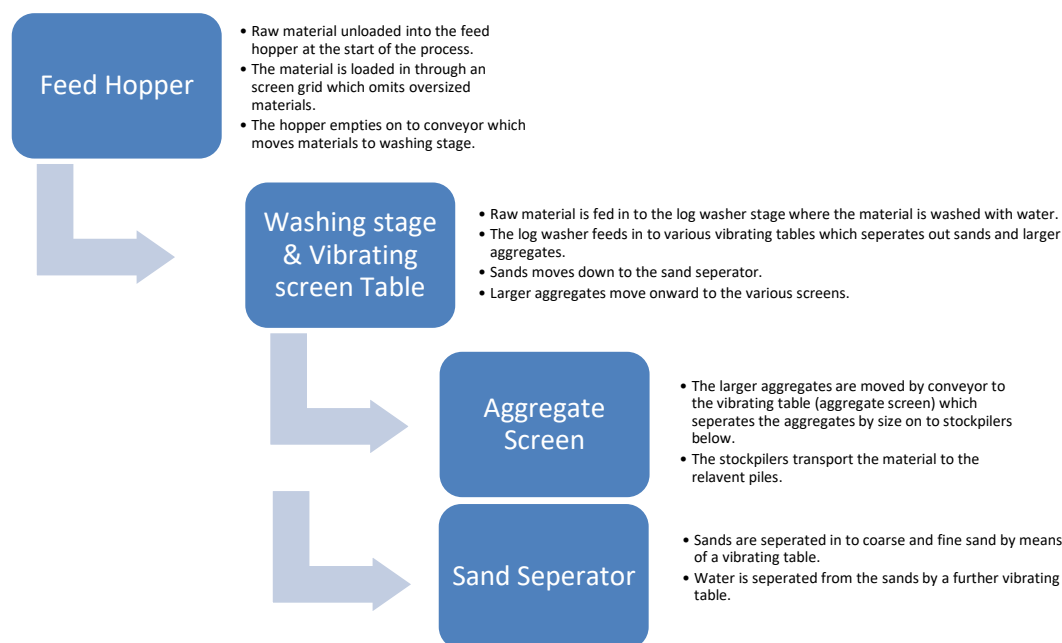


Figure 2 – Washing Plant Process Diagram

The process involves a number of stages which generate noise. As part of a previous assessment of a similar washing plant, noise measurements were made in close proximity to each stage of the existing machine as a means of quantifying noise from particular activities / source for use in the noise modelling assessment. These measurements are considered comparable to the washing plant at Hurn Quarry and have been used to inform the assessments within the permit application and are reported below as part of the NMP.

Table 2: Washing Plant Noise Levels

Noise Source	Sound Pressure Levels in Octave Bands, Hz dB							Overall L _{pA} , dB
	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	
Vibrating Hopper @5m	101.4	86.3	79.5	71.8	69.0	65.9	64.0	79.0
Washing Barrel @0.5m	90.3	79.2	77.3	76.7	75.2	72.0	72.3	80.4
Vibrating Screen @0.5m	86.6	85.1	81.6	79.4	81.7	81.5	82.4	87.9
Findor Screen @ 0.5m	82.4	82.1	85.0	88.2	90.5	95.5	87.3	98.4
Dewater Screen @ 0.5m	94.8	85.4	81.1	87.2	77.4	76.6	78.5	84.3

The operation of the machine and the practicalities of the measurements means isolating noise from other aspect of the washing plant was not entirely possible. As such, the measured noise levels detailed above include a degree of noise 'spill' from other aspects of the machine and noise from conveyors etc.

4.1 Vehicle Movements

The vehicle movements associated with the washing plant are common to the processing of both the primary minerals and the waste materials. The use of the washing plant to process waste will not result in any significant change in vehicle number or the introduction of new vehicles etc.

4.2 Noise Impact Assessment

The noise impact assessment presented in report reference A1678 R02 indicates that, noise from the operational washing plant would fall below the measured background sound level at all but one of the receptor locations. This would be considered by BS4142 to be a low (below adverse) noise impact. The exception to this assessment is receptor AL04 where the predicted rating noise level would exceed the background sound level by 1dB. This is again considered to be at a level which is below an adverse noise impact.

The context of the site is of an existing and operational quarry / mineral processing facility which has operated at the location for more than 20 years and has a proven track record of managing noise impacts in an appropriate and timely manner. The proximity of the international airport and the roads etc would indicate the area is not particularly tranquil.

5 Control Measures and Process Monitoring

The assessment undertaken within the permit application demonstrate that noise from the processing of inert materials at the Hurn site would be of a low noise impact in accordance with BS4142:2014.

Nevertheless, in accordance with the requirements of any permit, the following measures will be put in place before the facility begins processing waste materials and will remain in place for the duration of the permit.

5.1 Demonstration of Best Available Techniques (BAT)

The applicable Best Available Techniques for reducing noise for the washing plant are summarised in the Table below.

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Table 3: BAT Summary Table

Source Reference	Are abatement and actions taken to prevent or minimise emissions BAT?	Actions to be taken to meet BAT and timescales
All	Noise from the processing of inert waste during unsociable / sensitive hours.	<ul style="list-style-type: none"> The plant will only operate during the hours 07:00 to 18:00 Monday to Friday. There is to be no operation during the evening, overnight or weekends: Timescales: Ongoing.
All	Earth bunds are in place to the north (4m high) and to the east (5m high) around the washing plant to aid in controlling noise propagation from the existing washing plant	N/A
All	Wear and tear or other damage could result in aspects of the washing plant generating additional noise including tonal elements (whine) and / or impulsive noise	<ul style="list-style-type: none"> Regular maintenance will be carried out on a continual basis and any issues will be rectified as soon as possible. Timescales: Ongoing
Vehicle movements	Noise from vehicle movements could include acceleration, braking, reversing alarms and loading / unloading of heavy materials in the vicinity of the washing plant. Existing shovel loaders etc in the vicinity would generate noise through the movement of materials etc.	<ul style="list-style-type: none"> Site speeds restriction to be in place around the permit site and observed at all times. Engines to be switched off after use i.e. no idling. All vehicle movements are to adhere to the prescribed routing plan Timescales: Ongoing

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5.1 Onsite Monitoring Procedures

The operations at the site will be continually monitored and checked to ensure all operations are conducted in accordance with BAT.

Table 4: Onsite Monitoring Requirements

Source Reference	Procedure	When will this be carried out?	Actions to be taken to meet BAT and timescales
Static Plant and Equipment	All equipment and plant at the facility shall be regularly inspected and maintained to ensure optimum operating effectiveness. The inspections will include any noise control measures i.e. silencers, enclosures and anti-vibration mounts.	Ongoing	Where inspections reveal work is required, this shall be carried out in an expedient manner and a log made to record the procedure.
Perimeter bunds	A visual inspection of the perimeter bunds surrounding the plant shall be undertaken on a frequent basis to ensure the bunds are correctly maintained and appropriate for the task.	Frequent	Where remedial work is required this shall be carried out in an expedient manner and a log made to record the procedure.
	Regular maintenance work including grounds keeping etc.	Annually	Annual work shall be undertake to address the growth of plants etc on the bunds to ensure these do not have a detrimental effect on the stability / structure of the bund i.e. root growth undermining the stability of the landform.
Internal access roads and tracks	All access roads and haul roads within the site shall be maintained and kept free from pot holes etc	Ongoing	Any pot holes or defects in the access road and / or haul roads shall be addressed to maintain safety and minimise and noise generated by impacts etc.

5.2 Off Site Noise Monitoring

The noise impact assessment has demonstrated that noise from the washing plant would largely be at or below the existing background sound level in the area therefore no control measures in addition to the BAT detailed above, are required for the facility. That said, on receipt of a valid complaint, it may be useful to undertake a noise monitoring survey in the vicinity to assist in identifying and quantifying any noise impacts. It is noted that the survey is not required as a regular, ongoing compliance matter and should only be undertaken on receipt of a valid complaint to assist in addressing the highlighted issue.

The noise monitoring survey should be undertaken in line with the methodology detailed in section 6 of BS4142.

The noise monitoring locations identified at the site, used in the noise impact assessment, are detailed in figure 1 above and table 5 below for reference.

Table 5: Noise Monitoring Locations

Measurement Location (OS Grid Ref)	Minimum Duration	Measurement Period	Operational site Condition	Expected Specific Noise Level, dB
M01 (411881, 096725)	1 hour	During Operational Hours	Operational	43
	30 mins		Shut Down	
M02 (412569, 096806)	1 hour	During Operational Hours	Operational	39
	30 mins		Shut Down	

6 Noise Complaint Log

Should the processing of inert waste receive noise complaints, the following form should be completed and kept on record until the complaint has been resolved.

It is reiterated that the noise management plan relates solely to the processing of inert waste at the site. As such, there may be an initial stage of investigation to determine if the source of the noise was active during the processing of waste material or from aggregate extraction.

In all instances, the complaint will be investigated by the site manager and where possible, any measures to address the source of the complaint mitigated as soon as possible. Within 48 hours of the complaint log being completed the site manager should contact the complainant to update them of the progress of the investigation and / or any actions taken to address the source of the noise.

If necessary, additional noise monitoring shall be undertaken to assist in identifying the source of the complaint.

All noise complaints shall be notified to the Environment Agency within 14 days from receipt and shall include details including actions taken / to be taken to address the noise source and complaint.

ENVIRONMENTAL COMPLAINTS

Site	Operating Company	Responsible Manager	
Date of Complaint	Time of Complaint	Name of Complainant	
Contact Details for Authority (if involved)			
Short Summary Description of Complaint			
Details of Complaint		Type of Complaint (please tick)	
		Excessive Noise	
		Excessive Dust	
		Water Pollution	
		Air Pollution- smoke	
		Light Pollution	
		Mud on road	
		Fuel or Oil Spill	
		Silo dust blow out	
		Powder spillage	
		Failure of bund	
		Other	
		Other	
Improvement Plan			
Action to be Taken	Individual	Completion Date	Signed Off
1.			
2.			
3.			
4.			
5.			
Person Completing This Form		Contact Details	