Parrys Quarry Noise and Vibration Management Plan
Version 1.1 – 10 August 2020

1.0 Introduction

1.1 Owing to the nature of the operations carried out at the installation, there will be emissions of noise arising from infilling operations. A planning permission was approved for the quarry which covered the continuation of extraction, infilling and restoration of the quarry.

1.2 Calculations of the likely worst case noise levels associated with the infilling and inert waste treatment operations undertaken by Wardell Armstrong indicate that the noise levels remain below the current planning condition limits and therefore acceptable.

1.3 Figure 1 gives the location of the residential properties, which are considered likely to be potentially impacted by noise from the operations.

1.4 The risk assessment has concluded that the generation of vibration as a result of operations at the site will not be significant due to the distances from residential properties and is therefore given no further consideration.

1.5 This procedure outlines the management techniques that will be used at the site to minimise emissions of noise and vibration.

2.0 Risk Assessment

2.1 The measures necessary to control noise have been considered in the context of the site, the proximity of sensitive receptors and the proposed operations that will be carried out.

2.2 At present, there is no requirement to carry out any regular monitoring of noise levels associated with the operations within the quarry, as the assessments carried out to support the planning, which included excavation and restoration operations indicated acceptable noise levels.

2.3 Mitigation measures have already been implemented within the quarry to ensure that the excavation and restoration operations do not adversely impact on the occupants of surrounding properties. Measures adopted include the provision of boundary bunding and the provision of appropriate buffer zones between working areas and the neighbouring properties.

2.4 An assessment of the current mitigation measures, which would be retained during the infilling phase, would ensure that noise levels are controlled.

2.5 Should the controls identified be considered inadequate once the infilling operations commence (e.g. due to a change in phasing), then an action plan will be drawn up by site management detailing the actions to be taken, responsibilities and timescales.

3.0 Operational Management

3.1 Management Responsibility

3.3.1 The site manager will have responsibility for ensuring that nuisances and hazards arising from the operation of the site due to noise and vibration are minimised.

3.2 Liaison with Neighbours

3.2.1 Regular liaison will be maintained with neighbours to ensure they are notified in advance of activities, which may give rise to increased noise levels (e.g. the construction of bunding).

3.3 Training

3.3.1 All installation personnel will be trained in the need to minimise installation noise and will be responsible for monitoring and reporting excessive noise when carrying out their everyday roles.

3.4 Operational Hours

3.4.1 Except in an emergency, in order to minimise disturbance to neighbours, waste disposal operations involving the use of mobile plant and equipment and the importation of waste will not be carried on outside the permitted operational hours of 07:00 – 19:00 hours Mondays to Fridays and 07:00 – 13:00 hours on Saturdays.

3.5 Noise Suppression Equipment

3.5.1 "White noise" reversing alarms or intelligent alarms will be fitted on all mobile plant.

3.6 Selection of Plant and Equipment

3.6.1 During the selection process for new plant and equipment, consideration will be given to the need to meet all legislation and statutory guidance on noise levels and to minimise levels of noise from selected equipment.

3.6.2 If older items of plant are found to give rise to unacceptable noise levels, consideration will be given to their replacement with quieter designs.

3.7 Positioning of Plant and Equipment

3.7.1 When positioning noisy equipment, consideration will be given to the proximity of receptors and the prevailing wind direction.

3.8 Maintenance of Plant and Equipment

3.8.1 All plant and equipment in use at the installation will be regularly maintained to minimise noise resulting from their operation.

3.9 Modification to Plant and Equipment

3.9.1 If an item of plant is found to generate unacceptable noise levels, consideration will be given to modifying the equipment to incorporate noise suppression equipment.

3.10 Reversing Alarms

3.10.1 White noise warning signals will be utilised on vehicles on site to minimise the impact on local receptors.

3.11 Sound Barriers

3.11.1 Whilst the assessment did not indicate any adverse noise impacts with appropriate controls and mitigation measures implemented, should noise levels be identified to be unacceptable in the vicinity of receptors, additional sound bunds and barriers may be constructed around operational areas and acoustic screening erected around fixed plant.

3.11.2 For temporary plant, portable acoustic screens or straw bale enclosures will be considered if necessary.

3.12 Speed Limits

3.12.1 The imposition of a speed limit for vehicles on site will reduce noise associated with high engine speeds and excessive braking.

3.13 Road Maintenance

3.13.1 The regular maintenance of the access road to prevent the development of potholes will significantly reduce the noise generated particularly by empty vehicles exiting the site.

4.0 Noise Monitoring

4.1 Regular Inspection/Monitoring

4.1.1 The site manager will ensure that regular inspections are made of the installation and its perimeter in order to identify any unacceptable or unexpected sources of noise and to establish whether noise is apparent at the perimeter of the site. Particular attention will be paid to the active landfilling area, and the perimeter of the site, which is close to sensitive receptors.

4.2 Quantitative Noise Monitoring

4.2.1 Quantitative noise monitoring will be carried out if it is identified that problems are being caused, following receipt of a justified complaint and to demonstrate conformance with any noise levels imposed by the planning consent.

4.2.2 Noise monitoring would normally be carried out during normal working hours on a weekday between 07:00 – 19:00 hours.

4.2.3 Noise measurements would normally be made at the following five locations identified within the noise assessment:

Property Reference or Name	Direction from site	Approximate Distance from Boundary
Parrys Cottages	SE	20m
Pottery Cottages	SE	200m
Properties off Smithy Lane	SE	400m
Properties off A494	SE	550m
Unnamed property accessed via the service station	E	55m
The Box	N	80m
Ewloe House	N	120m
Pinfold House	NW	130m
Old Farm Cottages	N	360m
Penfold Cottage	NW	400m
Gell Farm	N	300m
Oak Farm	S	350m
Ewloe Green Farm	E	750m
Brook Park Farm	N	500m

4.2.4 The monitoring positions used would be at publicly accessible locations as close to each property as possible, where the noise levels monitored were representative of those at the adjacent dwellings.

4.2.5 At each location, two non-concurrent 15 minute attended noise measurements would be

made, whilst the site was operational.

4.2.6 The measurements would be made at a freefield location (at least 3.5 metres from the property facade) and a height of 1.2 - 1.5 metres above ground level. Where it was necessary to make measurements adjacent to a property façade or other reflecting surface (i.e. at a distance of 1 metre from the façade or fence), a correction of -3dB(A) would be made to the measured values to convert between façade and equivalent freefield levels.

4.2.7 The measurements would be made using a Sound Level Meter designed to a minimum Class 2 specification in accordance with BS-EN 61672, which would be field calibrated before and after each exercise using a suitable acoustic calibrator. Should the two calibration levels drift by more than 0.5 dB, the measurements would be discarded and the exercise repeated.

4.2.8 The surveys would normally be carried out during dry conditions and when wind speeds averaged less than 5 m/s, to ensure any interference on the microphone was minimised.

4.2.9 Measurements would only be taken during periods of normal operation (e.g. excluding periods of plant maintenance and breakdowns) and when the site was fully operational.

4.2.10 For each measurement, the following parameters shall be recorded:

- measurement position;
- $L_{Aeq,\ 15\ minute}$ L_{A90} and $L_{Amax,F}$ noise levels;
- weather conditions, wind speeds and direction;
- activities being carried out on site; and
- other influences on noise levels.

4.2.11 Where the measurements obtained were clearly influenced by noise from other sources (e.g. road traffic), if possible, the extraneous noise would be paused out of the measurement using the pause function on the sound level meter (only possible if the events are isolated) and a note made, or a note made to the effect that the other sources of noise were identified to be the principal noise source. If the latter were the case, a note would be made regarding the audibility of operations within the quarry and professional judgement used to evaluate whether the noise levels measured attributable to the operation of the quarry were within the noise limits.

4.2.12 The measured noise levels would be assessed against the site noise limits specified in the planning permission.

4.2.13 Where the measurements indicate that the noise limits were exceeded from site operations, the source of the noise should be identified and the operator should seek to minimise noise from that source, using Best Practicable Means, to reduce noise levels below the limits specified above.

4.2.14 The mitigation, which could include reduction at source or by additional bunding for example, should be agreed in writing with the Natural Resources Wales and Minerals Planning Authority and implemented within a period of 8 weeks of the monitoring exercise. Following completion of the works, the measurement exercise would be repeated to ensure that the limits are achieved, and further works carried out if required.

4.2.15 Records of each noise monitoring exercise would be available for inspection within the site office within a period of 14 days from completion.

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5.0 Action Plan and Complaints Procedure

5.1 If a noise problem is noticed or a complaint received, it will be immediately reported to the site manager or the next level of management if they are unavailable.

5.2 The source of the problem will then be investigated, normally by a visit to the complainant's property within a period of 48 hours of the complaint being received. The manager would undertake a subjective assessment of the noise giving rise to the complaint and undertake remedial action where necessary to reduce the noise.

5.3 Should the quarry manager consider the complaint to be justified, the NRW would be informed of the complaint within a period of 7 days of the complaint having been received and a noise monitoring exercise carried out in accordance with the above scheme, within a period of 2 weeks of the complaint.

5.4 In the event that noise derived from the site giving rise to the complaint is justified and the noise levels found to be above the appropriate noise limits, action will be taken without delay. The remedial action will be related to the meteorological conditions and the high sensitivity receptors. The following remedial action may be appropriate: -

- Relocate landfilling operations pending change in wind direction;
- Relocate plant and equipment to less sensitive locations;
- Construct or erect acoustic bunds, barriers or screens;
- Replace noisy plant and equipment with quieter models;
- Undertake maintenance on equipment that will reduce noise levels; and
- Modify plant to incorporate noise suppression equipment.

5.5 Each complaint would be logged using the attached complaints form, which will include:

- The results of inspections and monitoring carried out by installation personnel;
- Wind speed and direction;
- Problems including date, time, duration, prevailing weather conditions and cause of the problem;
- Complaints received including address of complainant;
- Details on the corrective action taken, and any subsequent changes to operational procedures; and
- An evaluation of the effectiveness of the techniques used.

5.6 The complaints log will be held within the Managers Office and made available to the EA upon request.

Complaint Reporting Form

Noise complaint report form	Date:	Ref. No.
Name and address of complainant		
Tel no. of complainant		
Time and date of complaint		
Date, time and duration of offending noise		
Weather conditions (e.g., dry, rain, fog, snow)		
Wind strength and direction (e.g. light, steady, strong, gusting)		
Complainant's description of noise (e.g., hiss, hum, rumble, continuous, intermittent)		
Has complainant any other comments about the offending noise?		
Any other previous known complaints relating to installation (all aspects, not just noise)		
Any other relevant information		
Potential noise sources that could give rise to the complaint		
Operating conditions at the time offending noise occurred		
Action taken:		
Final outcome:		
Form completed by	Signed	