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# KEARTON QUARRIES LTD


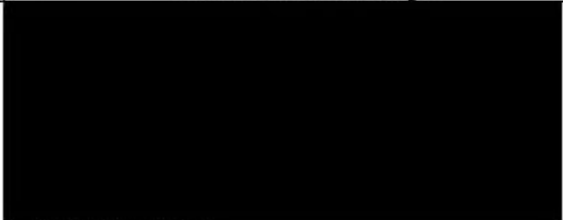
## Addendum to ES Chapter 6 Noise

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January 2021

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**REPORT  
ADDENDUM TO ES CHAPTER 6 NOISE**

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## 1.0 EXECUTIVE SUMMARY

Northern Environmental Monitoring Services (NEMS) has been requested by Kearton Farms Limited to prepare an addendum to an Environmental Statement (ES) Chapter 6 Noise; the original ES was carried out by **Hepworth Acoustics Ltd on the 9<sup>th</sup> and 10<sup>th</sup> of June 2015**. The addendum will support Section 73 applications for a variation to the permitted working hours at the existing Kilmondwood Quarry, 3km east of Bowes, County Durham.

Planning applications under Section 73 of the Town and Country Planning Act 1990 (as amended) have been submitted to vary working hours under Planning Condition 19 respectively on planning permissions referenced DM/17/04125/VOCMW and DM/17/04121/VOCMW in order to seek approval for the site operations, including extraction and haulage, to commence at 0600 hours rather than 0700 hours Monday to Saturday.

The NPPG Minerals states that night-time noise limits should not exceed 42 dB  $L_{Aeq,T}$  at noise sensitive dwellings. It can be seen from Table 4.1 that routine site operations are likely to exceed 42 dB(A) at East Roods by phase 3 of the extension scheme and exceed the limit throughout the phases of the extension, other than the restoration, which has not been considered.

Predictive noise levels from limiting operations commencing at 0600 to loading of vehicles demonstrates that the 42 dB(A) should not be exceeded at those noise sensitive dwellings.

## 2.0 INTRODUCTION

Northern Environmental Monitoring Services (NEMS) has been requested by Kearton Farms Limited to prepare an addendum to an Environmental Statement (ES) Chapter 6 Noise; the original ES was carried out by **Hepworth Acoustics Ltd on the 9<sup>th</sup> and 10<sup>th</sup> of June 2015**. The addendum will support Section 73 applications for a variation to the permitted working hours at the existing Kilmondwood Quarry, 3km east of Bowes, County Durham.

Planning permissions were granted for the Kilmondwood Quarry Extension Scheme referenced DM/16/01943/VOCMW and DM/16/01937/MIN, both of which were dated 6 December 2016. The planning application for the Kilmondwood Quarry Extension Scheme was accompanied by an Environmental Statement (ES) dated June 2016

Planning permissions referenced DM/17/04121/VOCMW and DM/17/04125/VOCMW were both granted on 1 June 2018 to vary Condition 3 of the planning permissions.

Condition 19 of the decision notices for both of the above permissions, sets out the approved working hours thus: All site operations including extraction and haulage authorised by this planning permission shall be restricted to the following periods: 0700hoursto1900hoursMondaytoFriday and 0700 hours to1700 hours Saturday

Planning applications under Section 73 of the Town and Country Planning Act 1990 (as amended) have been submitted to vary working hours under Planning Condition 19 respectively on planning permissions referenced DM/17/04125/VOCMW and DM/17/04121/VOCMW in order to seek approval for the site operations, including extraction and haulage, to commence at 0600 hours rather than 0700 hours Monday to Saturday.

This Addendum to Chapter 6 Noise of the Environmental Statement dated June 2016 has been prepared to accompany the applications for the revised working hours at Kilmondwood Quarry.

### **3.0 Methodology**

#### **3.1 Monitoring Strategy**

This addendum follows the principals already set out in the Hepworth Acoustic ES, but takes a narrow view, only concentrating on the night-time period between 0600 and 0700; the results of that ES for “Predicted worst case routine operations” have been used, as they have already been accepted, see Table 6.5 of original ES.

Further predicted noise levels at two of nearby sensitive receptors that have been identified in the Noise Action Plan, namely West Roods and East Roods, but assuming the operations are only loading of aggregate. Sound Power Levels (SWL) from Table 6.1 of the original ES

Additional noise monitoring was to carried out for night-time levels at Lamb Hill, which was considered to be equidistant from the current working face of the quarry to the final phase of the extension to East Roods, in order to establish data regarding the existing environment including both quarrying activities and the influence of the A66(T).

National Planning Policy Framework (NPPF and the accompanying “Noise Policy Statement for England”).

Planning policies and decisions should aim to:

- avoid noise from giving rise to significant adverse impacts on health and quality of life as a result of a new development;
- mitigate and reduce to a minimum other adverse impacts on health and quality of life arising from noise from new development, including through the use of conditions;
- recognise that development will often create some noise and existing businesses wanting to develop in continuance of their business should not have unreasonable restrictions put on them because of changes in nearby land use since they were established

New development schemes should fulfil the requirement of the Noise Policy Statement for England that:

Furthermore, the broad aim of noise management has been to separate noise sources from sensitive noise receivers and to “minimise” noise. Of course, taken in isolation and to a literal extreme, noise minimisation would mean no noise at all. In reality, although it has not always been stated, the aim has tended to be minimise noise “as far as reasonably practical”. This concept can be found in the Environmental Protection Act 1990, where, in some circumstances, there is a defence of “best practicable means” in summary statutory nuisance proceedings.

British Standard 7445:2003 “Description and measurement of environmental noise” to express all noises in terms of  $L_{Aeq,T}$  with recommended time periods of measurement being 07:00-23:00 and 23:00-07:00. Similarly, British Standard 6472 specifies 16hr daytime and 8hr night-time periods e.g. 07:00-23:00 and 23:00-07:00 respectively.

#### **3.2 Method of Measurements**

##### **Noise Monitoring**

For measurement of fluctuating noise, such as that from road and road traffic, BS7445:2003 specifies that the preferred instrument is the integrating-averaging sound level meter.

Measurements were made using a Mirus GA117 statistical integrating sound level meter conforming to real-time precision integrating sound level meter, conforming to IEC 61672:2002 Class 1, It logs the results in an internal memory, in the form of  $L_{A90}$ ,  $L_{Aeq}$ ,  $L_{max}$ ,  $L_{min}$  and duration for each measurement location. In addition a Casella CEL-621C(serial number 3491705) real-time precision integrating octave band sound level meter, conforming to IEC 61672:2002 Class 1 was used. All instruments were calibrated in accordance with the manufacturer's recommendations

### 3.3 Meteorological Conditions

Meteorological conditions during the survey at Lamb Hill are presented below:

Date	Temp °C	Windspeed (m/s) Direction	Pressure (mb)	RH %	Cloud Cover	Precipitation
4/11/20	8-12	1-2 SW	1020	54	5/8	Dry
5/11/20	9-11	3-5S	1023	56	6/8	Dry

## 4.0 RESULTS

### 4.1 Noise Prediction Results

Where necessary, the continuous equivalent noise level for the night-time period (23:00-07:00) was calculated from the monitoring results using the equation below (from BS 7445:1991):

$$L_{Aeq,T} = 10 \log \left[ \frac{1}{N} \sum_{i=1}^N 10^{0.1L_{pAi}} \right]$$

where

N is the total number of samples  $\left( N = \frac{t_2 - t_1}{\Delta t} \right)$ ;

$L_{pAi}$  is the sampled values of the sound pressure level, in decibels;

$\Delta t$  is the time interval between two adjacent samples taken by the instrument.

**Table 4.1**  
**Predicted Worst Case Noise Levels for Routine Operations**

Location	Predicted Worst Case Noise Level dB $L_{Aeq,T}$			
	Night-time Noise criterion	Phase 1	Phase 2	Phase 3
East Roods	42	39	42	51
West Roods	42	49	51	49

**Table 4.2**  
**Predicted Worst Case Noise Levels for Loading Operations**

Location	Predicted Worst Case Noise Level dB $L_{Aeq,T}$			
	Night-time Noise criterion	Phase 1	Phase 2	Phase 3
East Roods	42	30	32	40
West Roods	42	38	40	38

Assumptions made in the prediction for loading operations:

Two loading shovels combined SWL	110 dB(A)
Two HGVs at any one time combined SWL	111 dB(A)
<b>Total combined SWL</b>	<b>113.5 dB(A)</b>
Effective barrier height	13 m
Path Length Difference	3.2 m
Distance from loading area to East Roods	180 m
Distance from loading area to West Roods	330 m
All activity continuous	100% "on" time
No account has been allowed for soft ground	

## 5.0 DISCUSSION OF RESULTS

In order to assess the impacts of noise on the proposed change in working hours, the following guidance documents and standards have been considered:

National Planning Policy Framework and “Noise Policy Statement for England”

British Standard 5228:1: 2009- Code of practice for noise and vibration control on construction and open sites- Part 1: Noise

DCLG (2012); National Planning Policy Framework.

DCLG (2014); Planning Policy Practice: Minerals (NPPG)

The NPPG Minerals states that night-time noise limits should not exceed 42 dB  $L_{Aeq,T}$  at noise sensitive dwellings. It can be seen from Table 4.1 that routine site operations are likely to exceed 42 dB(A) at East Roods by phase 3 of the extension scheme and exceed the limit throughout the phases of the extension, other than the restoration, which has not been considered.

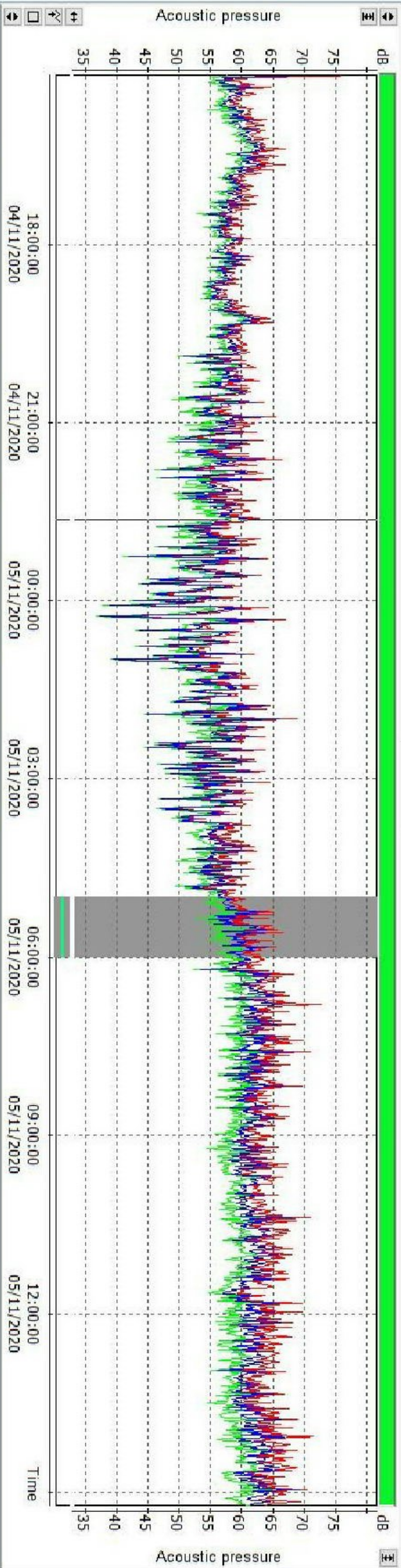
Predictive noise levels from limiting operations commencing at 0600 to loading of vehicles demonstrates that the 42 dB(A) should not be exceeded at those noise sensitive dwellings.

It should be noted that noise levels prior to 0600 can 50 dB(A), primarily from traffic on the A66(T), see Appendix I detailed results of a noise monitoring study undertaken at Lamb Hill on the 4<sup>th</sup> and 5<sup>th</sup> of November 2020.



## **APPENDIX I**

### **DETAILED NOISE MONITORING**



	Start	Duration	LAfmax (TH) [dB]	LAfmin (TH) [dB]	LAeq (TH) [dB]
Inside blocks	05/11/2020 04:58:56	00:59:37.000	56.6	33.4	43.8
Outside blocks	04/11/2020 15:09:10	23:05:27.000	77.7	30.6	54.6