Appendix 3

Supporting documents

Noise Assessment

Biodiversity officer correspondence

Northern Welsh Recycling Ltd

Proposed Waste Transfer Station

at

Llechwedd Quarry, Blaenau Ffestiniog

BS4142 Noise Assessment

Contents

1. Introduction

The purpose of this report is to demonstrate that due consideration for noise affecting the neighboring residential properties has been made and to assess the significance of any noise impact from the operation of the site.

2. Assessment Methodology

As the proposed operation has industrial noise characteristics the assessment method will therefore be in line with BS4142:1997.

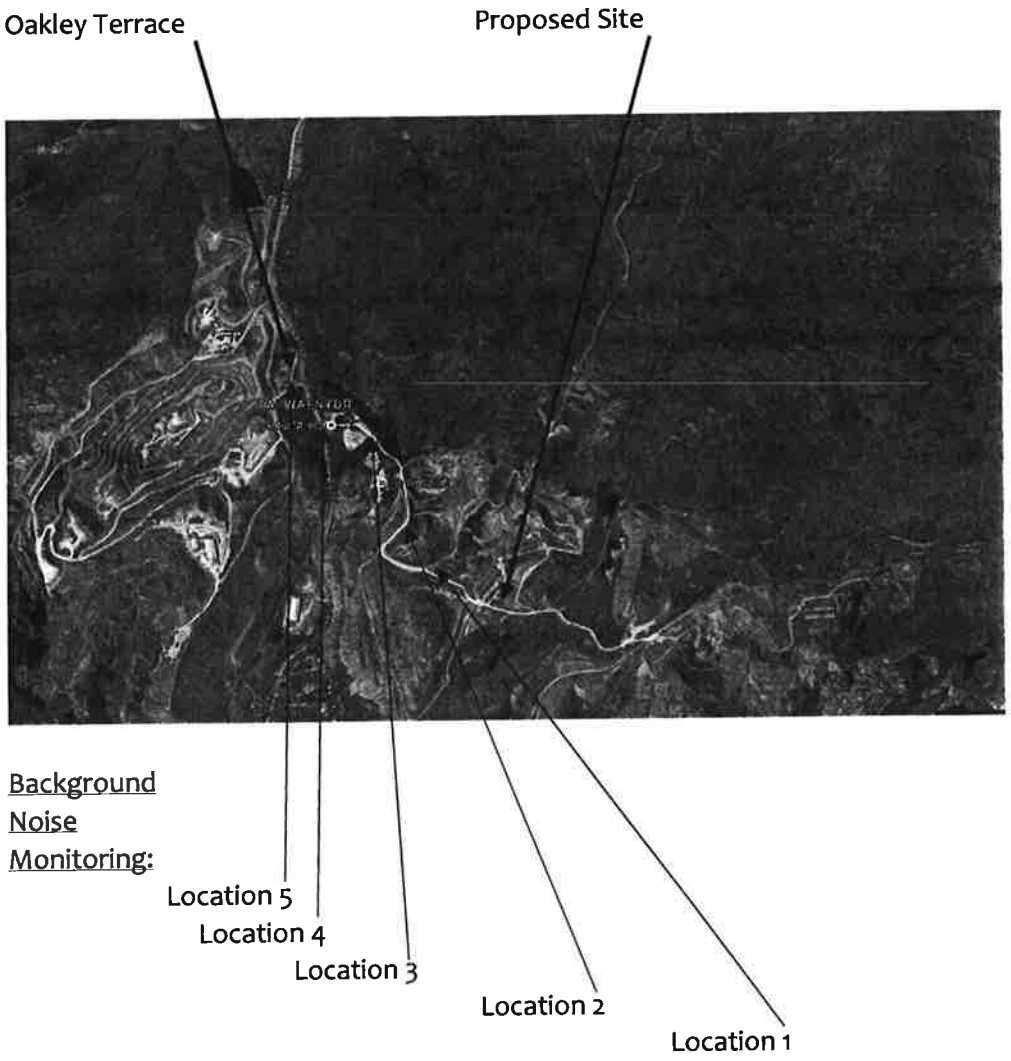
BS4142:1997 Method for rating industrial noise affecting mixed residential and industrial areas.

BS4142 gives a method for rating noise from industrial sources affecting residential properties. The rating level (this is the specific noise level of the source with any corrections or penalties for distinctive acoustic events) of the noise source is compared to the existing background noise level at the property. The greater the difference between the two, the greater the likelihood for complaints.

- A difference of +10dB indicates that complaints are likely;
- A difference of +5dB is of marginal significance;
- If the rating level is more than 10dB below the measured background noise level, this is a positive indication that complaints are unlikely.

3. Site Description

The site is a large industrial slate quarry located off the A470 trunk road on the outskirts of Blaenau Ffestiniog, Gwynedd. The background noise is a mixture of other site uses, the quarry visitor attractions, Zipworld - Quarry Tours - Antur Stiniog Mountain Biking - and other industrial processes from a variety of businesses within the area, notably Oakley Slate Quarry together with road traffic noise from the A470. The nearest sensitive receiver is identified as a row of cottages on Oakley Terrace some **1200 meters** away from the proposed site.



4. Survey Methodology

1 hour monitoring was undertaken at a location representative of the nearest sensitive receivers to provide background noise (dB L_{A90}) for this assessment. Specifically this was used to capture background data from the evening period where the facility is not in operation. The monitoring period selected was Tuesday 12th September 2016. Attended monitoring took place at the facility on Friday 15th July 2016 and these results are presented in section 5 of this report.

The measurement instrumentation used on the survey was as follows:

Equipment Description	Manufacturer & Type	Serial Number
Sound Level Meter	Bogen SPLM	EK1652078

Meteorology

During the survey visit the weather was dry with no discernible wind speed.

Position of Monitoring Equipment

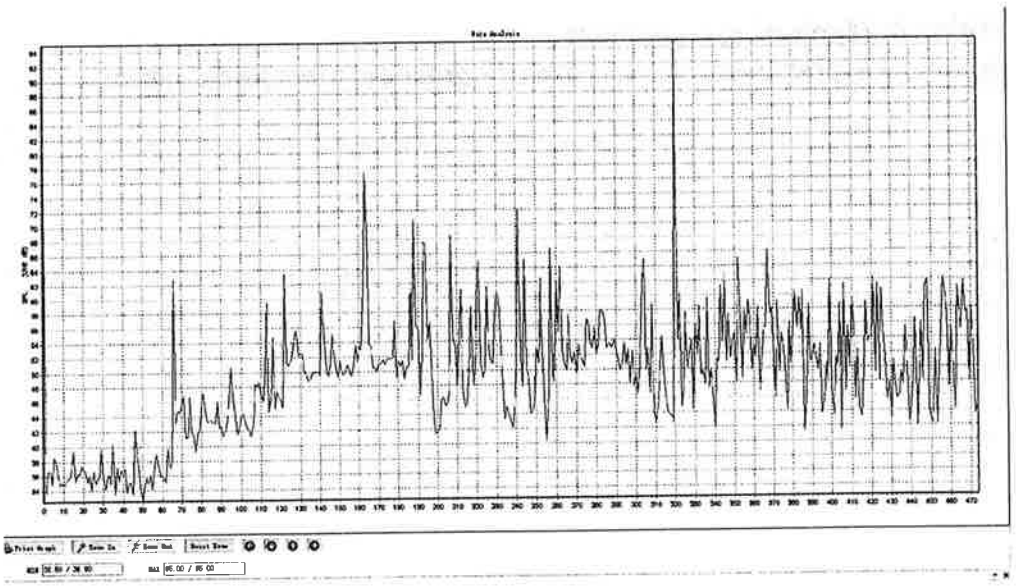
The meter was positioned 1.5meters from the ground in a free field condition.

5. Results

Background Noise Summary

The following table show a summary of the 1-hour background monitoring period.

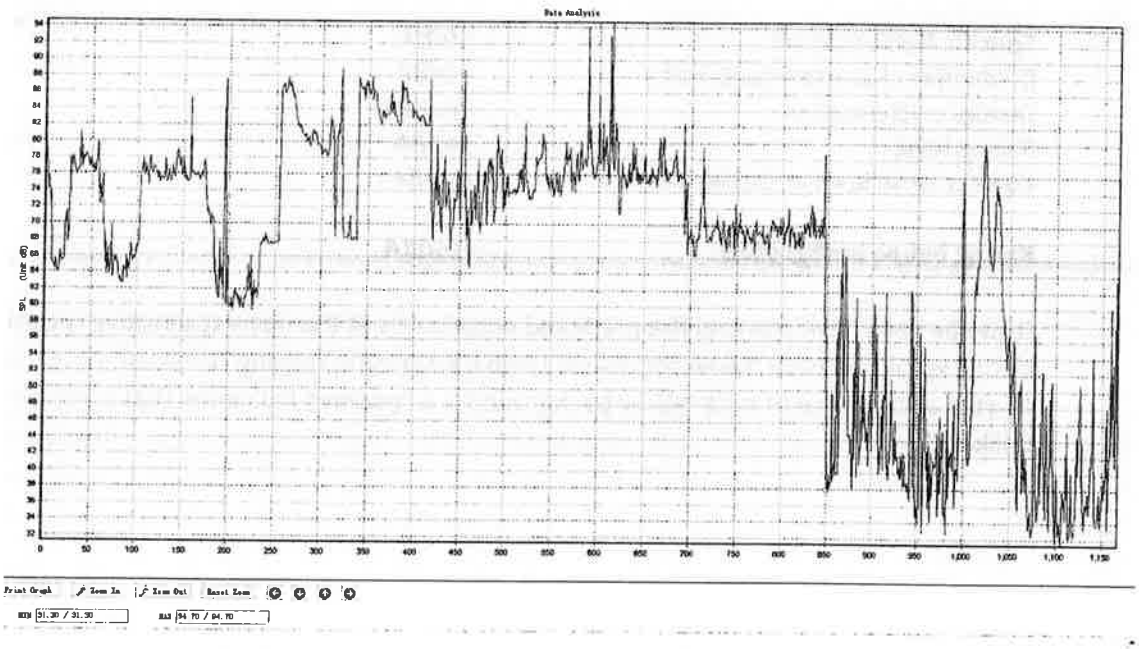
Location	Maximum dB LAeq	Minimum dB LAeq	Mean Average dB LAeq
Location 1 - Zip World upper car park	69.7	32.5	36.16
Location 2 - Zip World zebra crossing	62.8	39	45.19
Location 3 - Quarry Tours Car park entrance	77.5	48.8	52.48
Location 4 - Site boundary main entrance off A470	71.9	41.3	52.03
Location 5 - Nearest residential receptor Oakley Terrace	95	40.3	52.39



Attended Noise Monitoring Summary

The following table show a summary of the noise measurements taken while the loading and crushing machinery was operational

Location	Maximum dB LAeq	Minimum dB LAeq	Mean Average dB LAeq
Distances from Crusher, Screen, Tracked Excavator and Wheeled loader			
25meters	94.7	75.93	64.8
50 meters	82.4	61.1	69.37
150 meters	80.2	31.3	46.23



6. Assessment

BS4142:1997 Method for Rating industrial noise affecting mixed residential and industrial areas.

As it is likely the operation of the facility will have distinctive acoustic characteristics a +5dB acoustic correction should be applied giving a specific noise level of 51dB. The sound level falls with increasing distance from the source, the principal reason is the wave front spreading and for a point source the "inverse square law" applies — doubling the distance from a point source produces a reduction in sound level of 6dB. As the nearest sensitive residential receptor is in the order of 1200 meters away, using the data gathered at 150meters from the processing plant, the estimated drop in noise will likely be -36dB at Oakley Terrace.

The lowest case background $L_{A90,5min}$ recorded was 40dB and this will be taken as a "worst case" figure. It can be seen from this that the predicted noise levels at the nearest sensitive receiver would be 20dB below *the lowest* LA90 background reading recorded. According to BS4142 a difference of 10dB below background is a "positive indication that complaints are unlikely".

Specific Noise Source:	51dBA
Distinctive characteristic penalty	+5dBA
Distance attenuation	-36dBA
Rating level	20dBA
Lowest LA90 level at Oakley Terrace	40dBA
Rating below background	**-20dBA**

It can be seen from this that the predicted noise levels at the nearest sensitive receiver during would be 20dB below *the lowest* LA90 background reading recorded. According to BS4142 a difference of 10dB below background is a "positive indication that complaints are unlikely".

7. Conclusions

An assessment has been made in accordance with BS4142 which has rated the likely noise impact of the proposed development to be -20dB below existing background levels. According to BS4142 this is a "positive indication that complaints are unlikely".

The noise climate at the most sensitive receiver is dominated by noise from the A470 trunk road and notably the nearest industrial site namely Oakley Quarry. In our view the operation of the proposed Waste Transfer Station is unlikely to have an effect on the nearest residential properties, with levels calculated to be well below existing background levels.

8. Appendix

Raw data available upon request.

ADRAN RHEOLEIDDIO

GWASANAETH AMGYLCHEDDOL

Oddi wrth:	Emily Meilleur, Uwch Swyddog Bioamrywiaeth	**At:**	Gareth Dafydd Jones, Swyddog Mwynau, Cyngor Gwynedd
Ein Cyf:	:	**Eich Cyf:**	
Dyddiad:	1st April 2015	**Dyddiad:**	

Deddf Cynllunio Gwlad a Thref 1990
Ymholiad am Gyngor cyn Gwneud Cais Cynllunio
Safle Trosglwyddo Gwastraff Anadweithiol

Chwarel Llechwedd, Blaenau Ffestiniog

Town and Country Planning Act 1990
Enquiry for Pre-application Advice
Inert Waste Transfer Facility

Llechwedd Mines, Blaenau Ffestiniog

OS Grid ref: SH702466

Annwyl Gareth,

Mae'r lluniau awyr o'r safle yma yn dangos fod y safle ar gyfer gwastraff, yn ardal actif yn y chwarel ac nid oes yna lystyfiant. Er hynny, cyfagos i'r safle mae yna gynefin sydd yn werth uchel i fioamrywiaeth.

Oes ydy'r safle trosglwyddo ddim yn amhau'r ar y cynefin cyfagos nid oes gennyf bryderon bioamrywiaeth.

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