

Reciprocating Gas Engines Compliance Study

Graphite Way, Glossop

Survey Date: 17th February 2021

This document has been produced at the request of Mercia Power Response (MPR) to consider the noise levels associated with the reciprocating gas engines at the Graphite Way, Glossop site.

SIS Acoustic has been commissioned to undertake off site compliance surveys relating to the following planning condition from the High Peak Borough Council planning permission for the site ref: HPK/2017/0424 dated 18th December 2017.

7. The level of noise emitted from the site shall not exceed:
- (a) 70dB LAeq as measured or predicted on the public highway, not less than 10m from the compound boundary
 - i) predictions shall be made assuming free field conditions
 - ii) the compound boundary as defined in Dwg No16-2620-203 Rev I Proposed Site Plan
 - (b) A rating level of 39dB when measured or predicted 3.5m from the façade of any existing residential premises.

All measurements and determinations shall be made in accordance with BS4142: 2014 and any noise reduction measures incorporated into the installation shall be maintained for the life of the development.

Reason:- To protect the amenities of the occupants of neighbouring properties and to comply with policy EQ6 of the Local Plan and the NPPF.

1.1 Survey Equipment and Personnel

Monitoring at the site was undertaken using the following fully calibrated Class 1 data logging sound level meter (SLM) equipment. The calibration certification for the equipment used can be supplied upon request.

- 01dB Black Solo serial number 65396 appropriately calibrated until 05th February 2022.
- 01dB Black Solo serial number 65445 appropriately calibrated until 23rd March 2022.
 - The SLM equipment was set to:
 - Fast time weighting (response);
 - “A” weighted Frequency response; and,
 - Set to monitor L_{Aeq}, L_{Amax}, L_{Amin} and L_{A90} levels.
- Cirrus acoustic calibrator serial number 59522 appropriately calibrated until 05th February 2021.

The survey was undertaken on Wednesday 17th February 2021 by Mr Craig Williams, Principal Consultant at SIS Acoustic.

1.2 Weather Conditions

The weather conditions prevalent at the time of the survey are as noted below, and were considered to be conducive to the monitoring of noise.

	17 th February 2021
Temperature:	9°C
Precipitation:	Zero, all road surfaces in the area dry
Wind speed and direction:	<5ms ⁻¹ South Westerly Direction
Cloud Cover:	100%

1.3 Operational Noise Measurements

In order to consider the noise generation of the reciprocating gas engine units, noise levels were monitored off-site with the units operational under typical full load.

At the request of MPR, surveys were limited to the consideration of the following free field positions:

- All sites operational, with 11 units operating at typical load;

Representatives of MPR were present during the survey periods to ensure that the units were operational under the required conditions.



Figure 1: Noise monitoring positions

1.3.1 Measurement Data

As a result of the ambiguity as to where the “Public Highway” is, monitoring was undertaken at two positions as detailed on Figure 1. The ambiguity arises were ML1 is on Graphite Way which is not considered technically to be a public highway, and is an un-adopted private road relating to the industrial estate.

As such, ML2 was also identified and monitored, as this marks the end of the adopted public highway.

Survey Location	Start Time	Survey Duration (hh:mm:ss)	Statistical Parameters “T”			
			L _{Aeq}	L _{Amin,F}	L _{Amax,F}	L _{A90}
ML1	12:55	01:00:00	62.1	60.1	73.2	61.1
ML2	12:55	01:00:00	59.3	45.0	81.1	48.0

Table 3: Operational Noise Levels as measured; 17th February 2021

Regarding monitoring position ML1, it was noted that the main noise source at the location was that of the operational engine units making up the Graphite Way site, this was coupled with infrequent passing vehicles and a prevailing baseline of distant road traffic noise.

With regard to monitoring position ML2, it was noted that the operational engine units making up the Graphite Way site were not audible at any level, with the main noise source being that of passing vehicles and a prevailing baseline of distant road traffic noise, natural noises (bird song) and other commercial premises within much closer proximity to the measurement position within the industrial estate.

1.4 Conclusions

Based upon the information presented within this report, the following can be concluded relating to the noise generation of the operational facility at Graphite Way, Glossop.

- **Monitoring Position ML1:** North Eastern end of Graphite Way adjacent to the operational facility (10m from the site boundary)
 - This is to be confirmed if it constitutes a “Public Highway” as it is an un-adopted road at this point used purely for access to the industrial estate.
 - The Graphite Way engine units were clearly audible at this position.
 - The noise was measured to be below the planning permission limit of 70dB(A) as defined under condition 7 part a.
- **Monitoring Position ML2:** South Western end of Graphite Way where the road becomes defined as a public highway
 - This position marks the changeover from adopted to un-adopted road on Graphite Way.
 - The Graphite Way engine units were not audible at this position.

- The noise was measured to be below the planning permission limit of 70dB(A) as defined under condition 7 part a.

As such, it is demonstrated through measurement that the Graphite Way site is operating in accordance with Condition 7 part a of High Peak Borough Council planning permission ref: HPK/2017/0424 dated 18th December 2017.