

Report Title: Biocatalysts External Noise Impact Assessment.

Date: 02/03/2022

Author: Barry Thomas

Introduction

As part of the environmental permit application Biocatalysts has been requested to perform an external noise impact assessment. Biocatalyst's site is located in an industrial area, on a business park. As per Figure 1, Biocatalysts has the A470 on its east side which a tree line between the building and the road and a cinema car park on its North side, which is separated by trees. There are office buildings situated on the west and south sides.

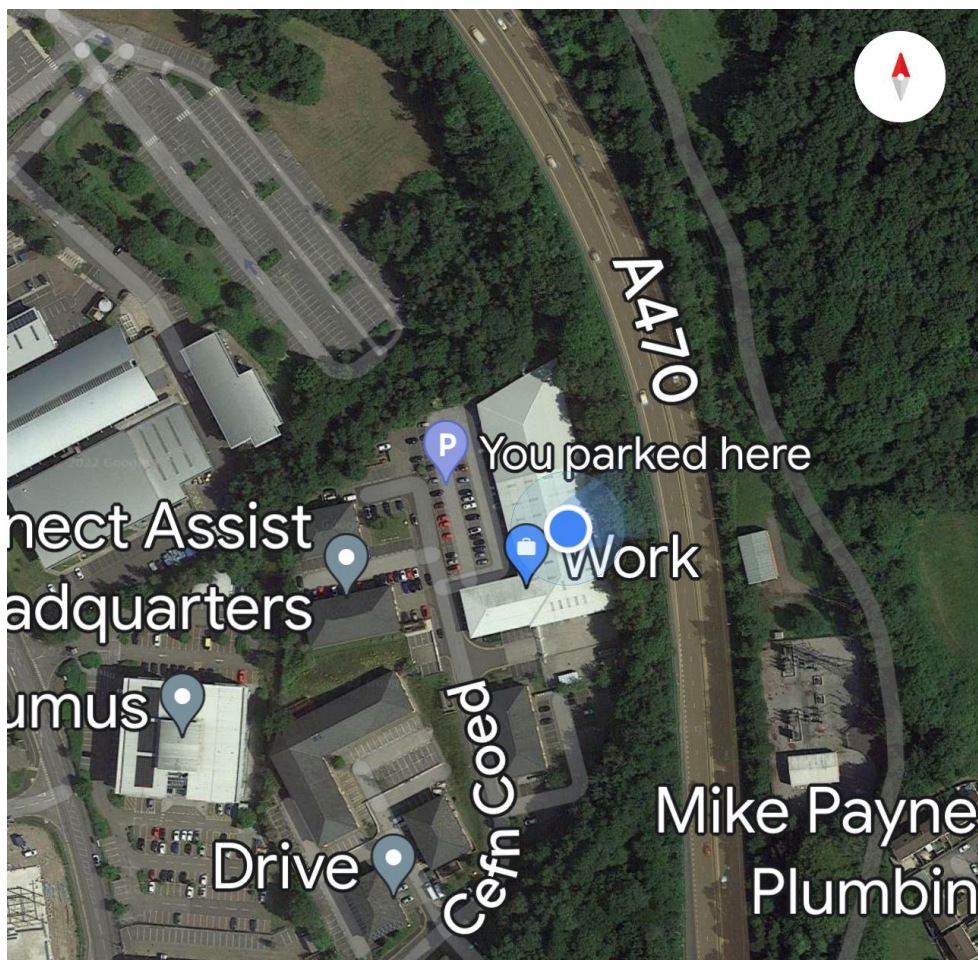


Figure 1: Biocatalysts' overview 1.

Biocatalysts has reviewed the sound created by equipment within the facility. It has highlighted that centrifuge equipment requires the use of hearing protection when they are operated within the internal walls. The sound level created is not seen as having an off-site

impact. There is additionally air-extraction and air-conditioning equipment at the rear of the building, but this is not seen as a risk due to the location next to the A470.

The readings were taken at the positions highlighted in Figure 2. The readings were taken with the sound meter (Monacor SM-2), set to detect noise level between 35-100dB. The sound meter was facing Biocatalysts when readings were taken. The rationale for these positions is based on the most risk to workers in the office buildings surrounding Biocatalysts, from sound created by Biocatalysts. Typical working days were chosen for the readings to be taken; 3 distinct reading were taken at a set time. Test point 6 was added to attempt to set a background sound level.

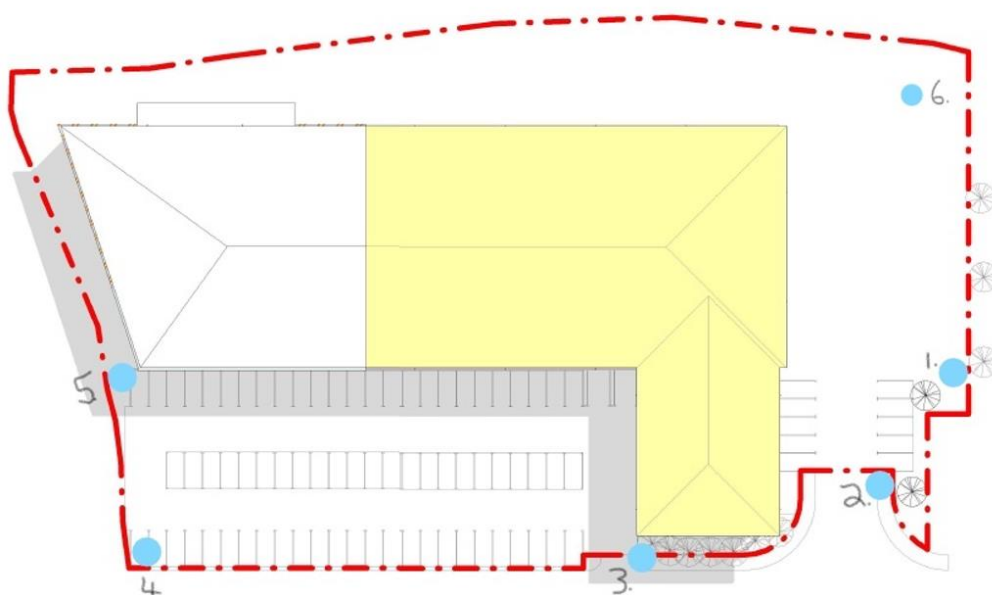


Figure 2: Biocatalysts site overview 2.

Results

Location Reference	Sound Reading take at 11:00 on the 23/02/2022 (dB)				Comments
	1	2	3	Average	
1	63.0	68.1	65.2	65.4	Noise of cars from A470 can be clearly heard.
2	79.2	75.4	70.1	74.9	Noise of cars from A470 can be clearly heard.
3	67.2	71.6	74.8	71.2	Noise of cars from A470 can be clearly heard.

4	62.3	63.0	62.5	62.6	No comment
5	78.3	77.2	73.4	76.3	Noise of cars from A470 can be clearly heard.
6	N/A	N/A	N/A	N/A	Reading was not taken on this day.

Location Reference	Sound Reading take at 10:00 on the 01/03/2022 (dB)				Comments
	1	2	3	Average	
1	64.6	68.7	69.2	67.5	Noise of cars from A470 can be clearly heard.
2	63.2	65	63.7	64.0	Noise of cars from A470 can be clearly heard.
3	63.9	64.1	62.3	63.4	Noise of cars from A470 can be clearly heard.
4	62.2	63.1	63.6	63.0	No comment
5	67.4	70.2	68.3	68.6	Noise of cars from A470 can be clearly heard.
6	73.2	78.1	74.2	75.2	Noise of cars from A470 can be clearly heard.

Location Reference	Sound Reading take at 16:00 on the 01/03/2022 (dB)				Comments
	1	2	3	Average	
1	68.1	70.2	67.3	68.5	Noise of cars from A470 can be clearly heard.
2	66.5	65.2	64.1	65.3	Noise of cars from A470 can be clearly heard.
3	65.1	65.9	63.2	64.7	Noise of cars from A470 can be clearly heard.
4	66.3	65.4	65.2	65.6	No comment
5	67.8	71.2	68.3	69.1	Noise of cars from A470 can be clearly heard.
6	70.7	72.8	74.4	72.6	Noise of cars from A470 can be clearly heard.

Location Reference	Sound Reading take at 9:00 on the 02/03/2022 (dB)				Comments
	1	2	3	Average	
1	67	66.4	64.8	66.1	Noise of cars from A470 can be clearly heard.

2	64.3	65.9	67.1	65.8	Noise of cars from A470 can be clearly heard.
3	61.9	62.1	21.3	48.4	Noise of cars from A470 can be clearly heard.
4	68	65.7	66	66.6	No comment
5	67.5	71.9	68.3	69.2	Noise of cars from A470 can be clearly heard.
6	67.1	67.5	70.1	68.2	Noise of cars from A470 can be clearly heard.

Location Reference	Sound Reading take at 12:00 on the 02/03/2022 (dB)				Comments
	1	2	3	Average	
1	67.2	69.8	68.2	68.4	Noise of cars from A470 can be clearly heard.
2	65.7	67.2	67	66.6	Noise of cars from A470 can be clearly heard.
3	63.9	63.7	64.8	64.1	Noise of cars from A470 can be clearly heard.
4	64.7	65.8	65.2	65.2	No comment
5	64.9	66.5	68.7	66.7	Noise of cars from A470 can be clearly heard.
6	73.3	71.2	71.8	72.1	Noise of cars from A470 can be clearly heard.

Location Reference	Sound Reading take at 16:00 on the 02/03/2022 (dB)				Comments
	1	2	3	Average	
1	66.8	65.6	67.9	66.8	Noise of cars from A470 can be clearly heard.
2	64.5	65.4	65	65.0	Noise of cars from A470 can be clearly heard.
3	65.1	63.2	64.8	64.4	Noise of cars from A470 can be clearly heard.
4	62.5	64.2	66.8	64.5	No comment
5	69.1	70.2	68.3	69.2	Noise of cars from A470 can be clearly heard.
6	71.7	72.8	89	77.8	Noise of cars from A470 can be clearly heard. Very load car heard during last reading.



Conclusion

The average background noise measured at point 6 is 71.1 dB.

The average of the sound testing performed (points 1-5) was 66.3 dB, this could be mostly attributed to the noise coming from the A470.

Biocatalysts has not received any complaint from its neighbours relating to noise.