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Ground Contractors LTD

Acoustic Report at Jynx Bar, Witham Road, Skelmersdale

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1.0 Introduction

All Seasons Ground Contractors Ltd were contacted on the 20th February 2017 by Sarju Patel, with regards to erecting an acoustic barrier at Jynx Bar. I was informed that there was a noise abatement notice in place and that the acoustic barrier was needed as soon as possible.

2.0 The Site

Sarju and I (Gareth), met at Jynx Bar, Witham Road, Skelmersdale on the 24th February 2017 at 7.45am to discuss the implementation of an acoustic barrier.

It was a dry, bright morning, and in the 30 minutes we were there, approximately 10 cars passed the site. I believe that this scenario is representative of a night time environment due to the proximity of the 24 hour petrol station, shopping centre and other bars/pubs.

The front of the bar is located on the Witham Road side, with the smoking shelter located adjacent to the main entrance.

3.0

Design Criteria

Timber barriers are one of the most common barriers used against noise. Timber barriers can be generically classed as 'sound absorptive' or 'sound reflective'.

Sound absorptive barriers differ due to an acoustically absorptive material mounted on the source side of the barrier, eg rock wool or similar. The material is then protected from the weather by an impervious membrane.

A number of different woods can be used as a noise barrier. Generally the denser the material the increased sound reduction will occur. The quality of the seals between the panel and post are extremely important. The I section post will have a quality seal with the panels to further reduce sound leakage from the area.





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4.0 Environmental noise survey

Initially the general environmental noise was recorded from the footpath on the Hutton Road, side of the road.

At A height of 1.2m the environmental background noise was between 45-54db

At a height of 1.2m the maximum sound of a passing car was 85db

At a height of 1.2m of a car door slamming was 74db

At a height of 1.2m the maximum sound of a lorry passing was 89db

During the site visit I took a reading of 83db from a site radio as an average over 1 minute. This noise was located against the building 3 metres from the new acoustic barrier

At a height of 1.2m the average noise from 12 meters away (Hutton road, footpath) was 67db over the same period (20% reduction – due to environmental loss)

5.0

Recommendations

We recommend installing a 2.4 meter high sound absorbent fence to the smoking shelter side of the property.

We propose wooden posts at 150x125mm set 800mm in to the ground with 3mtr centers. This is our standard for 2.4 meter high fencing. This will be held in by postcrete concrete conforming to British standard. This is a permanent structure and will come with a 20 year guarantee on rot and subsidence.

I have attached a spec sheet from the fence suppliers based on steel posts, the wooden ones preform to a better standard.





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6.0 Anticipated Results

After the installation of the absorptive acoustic barrier we anticipate the following results from an 83db noise

A reduction in noise by the barrier between **15-20db**

A reduction due to environmental loss of **20%**

At a distance of 12 meters from the source of the noise, I would anticipate the following reduction
(83db – 15db/20db) – 20% = **50.4 to 54.4db**

Therefore the sound from the shelter should fall under the maximum noise from general environmental noise.

Thank you.

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