AB acoustics

4 Cumbrian Close
High Crompton
Shaw
Oldham
OL2 7RH

T : 07771 567 624
e-mail : leachabacoustics@aol.com

Inspire Planning Solutions
Europa Business Park
Building 67
Bird Hall Lane
Stockport
SK3 0XA

07 December 2017.

Dear Farooq

Reference : 55 Beardwood Blackburn.

The following should be read in conjunction with ouvr earlier report dated May 2017.

The following e mail has been received from Blackburn with Darwen LPA :

Planning Application No: 10-17-1173
Address: 55 Beardwood Brow, Blackburn
Description: Change of use from dwelling to local prayer facility

Predetermination – Noise Impact
With reference to the above application, I will require the following additional information before I can make my recommendations.

The acoustics report ('Environmental Noise Assessment – Prayer Facility 55 Beardwood Brow, Blackburn' dated May, 2017) submitted in respect of this application provides some helpful information but further details are required. I note that the proposed hours of use extend into the night-time (23:00 to 07:00hrs) each night. I will need an assessment of noise impact during this period and further consideration will need to be given to the predictive calculations.
I would recommend that the acoustic consultant contact me to discuss the required details.

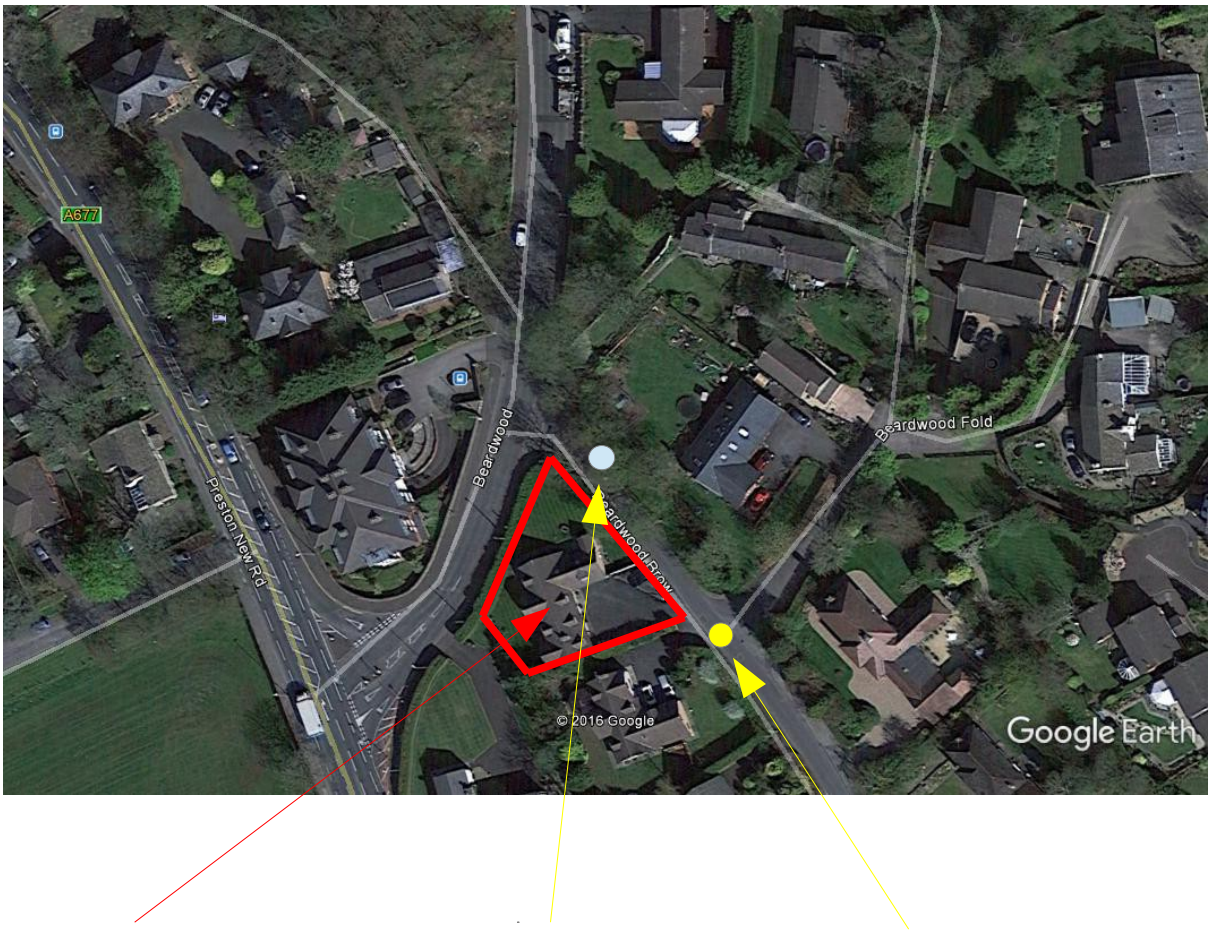
Contact was made with Mr A White and it was agreed that further noise level measurements would be required.

Two points were raised – firstly that facility needed to be open for the early and late prayer times – this means opening from 05.00 to 07.00 and from 23.00 to 00.00 hrs. - obviously these times are not applicable throughout the whole of the year due to changes in sun rise and sun set.

Secondly a question was raised about the distance between the adjacent property and the car parking spaces at Beardwood.

The following hopes to address the above.

Below is copied the plan of the site used in the earlier report :



Approximate Site Location Measurement Location 1 Measurement Location 2.

The main concern appears to be the potential for noise from the cars that could arrive and depart from the facility during the extend hours of use.

Below is a plan of the Car Parking facilities.

As can be seen there are 6 car parking bays in the area adjacent to Balmoral and 5 to the front of the building adjacent to Beardwood road. - these being near to both The Bungalow and Newlands / Park Lodge Flats.

Below is copied the Section on noise from the use of the Car Park from the May 2017 report :

Traffic arriving at the Facility

The noise level from this source to some extent is determined by the number of vehicles accessing the site – there are effectively 2 different car parks available – both of which are on site.

A number of assumptions have been made with regard to the traffic noise - these are based on previous prayer activities at other Mosques surveyed - that they will all arrive and leave within a very short time period – usually around 15 minutes.

Also it is worth noting that the additional noise generated by the traffic movement on the car park is of a similar character to the existing noise environment and therefore may be regarded as not as obtrusive as introducing a new type of noise into the area.

From previous measurements undertaken on car movement of a car park the following levels were recorded - the following includes the car driving up – stopping – driver getting out and closing the car door – driver opening door getting back in and then closing door – starting engine and driving off.

Vehicle Type	*LAeq*	*LA max*
Rover 75	*63.8*	*68.5*
Transit Van	*64.9*	*79.3*
Volvo	*63.8*	*71.4*
Mercedes	*66.1*	*78.7*
BMW	*67.8*	*78.7*

All the above measurements were carried out at a height of 1.5m and at a distance of 2.0m from the source.

If it is assumed that one of the noisiest cars arrive / depart then the LA eq could be of the order of ***68 dBA.***

The distance between the 'new northern' Car Park and the nearest residential property (The Bungalow) is scaled at 20.0 m this results in a calculated level of 68 – 20 log 20 / 2 = ***48 dBA***

As the car movements will not take place continuously within a the 20 minute measurement period then above calculated LA eq can be regarded as the 'worst case' situation – the actual time of the above car noise could be of the order of 2 minutes in any 20 minute period - if this is related to the 20 minute measurement period then the calculated noise level reduces to ***38 dBA –*** *however this is for 1 movement – each person arriving by car will also leave therefore the calculated level increases to* ***41 dBA*** *– below the measured LA eq at the site.*

This is for only 1 car but if all 5 car park spaces are used at the simultaneously (very unlikely) then the following levels are calculated :

Number of Cars	Calculated LA eq
1	41
2	44
3	46
4	47
5	48

It is very unlikely that the above noise events will occur simultaniously - as calculated - if the number of cars are increased – therefore the noise level generated will be as calculated for a single car – at 41 dBA but will occur more frequently.

Whilst the above can only be regarded as an estimate it is worth noting that the actions detailed above are entirely in keeping with the existing noise environment – and there is no control over the cars on the nearby roads.

The actual car movement during and after parking will generate noise of the same character as the existing noise envinonment.

This 'new' parking location is screened from Balmoral by the property itself and therefore any activity on this 'new ' car park will not be audible at Balmoral due the attenuation due to the increased distance and the effects of the screening.

With respect to Balmoral then repeating the above the following levels are calculated – assuming that the distance between the existing car park and Balmoral is of the order of 8.0m

Number of Cars	Calculated LA eq
1	49
2	52
3	54
4	55
5	56
6	57

It is very unlikely that the above noise events will occur simultaniously -as calculated - if the number of cars are increased – therefore the noise level generated will be as calculated for a single car – at 49 dBA but will occur more frequently.

Whilst the above can only be regarded as an estimate it is worth noting that the actions detailed above are entirely in keeping with the existing noise environment – and there is no control over the cars on the nearby roads.

This location equates to measurememt position 2 in the above results – as the calculated noise level is in excess of the measured Laeq for this location then it would be advisable that this car park is not used for early morning and late evening prayers.

Therefore from the calculations in the original report (May 2017) it is seen that at Balmoral which is principally affected by noise from the 'front – Northern Car Park' the calculated noise level at The Bungalow can vary between 41 and 48 dBA as detailed below :

This is for only 1 car but if all 5 car park spaces are used at the simultaneously (very unlikely) then the following levels are calculated :

Number of Cars	*Calculated LA eq*
1	*41*
2	*44*
3	*46*
4	*47*
5	*48*

With respect to the existing car park which will be expanded to take 6 cars the calculated noise levels are :

With respect to Balmoral then repeating the above the following levels are calculated – assuming that the distance between the existing car park and Balmoral is of the order of 8.0m

Number of Cars	*Calculated LA eq*
1	*49*
2	*52*
3	*54*
4	*55*
5	*56*
6	*57*

During the site visit of 30 November 2017 the use and location of the Car Parks was discussed in detail and it was suggesgted that it would be an advantage if the use of the Car Park could be restricted to only the 'front' car park – ie. Only using the designated bays numbers 1 to 5.

Therefore though it was originally intended that the additional noise measurements should be undertaken adjacent to Balmoral to determine the noise level at the revised times it was decided to measure at the facade that overlooks the 'front' car park in order to gain more detailed information regarding the noise level at this location.

As can be seen from the Table reproduced from the original report the levels at Location 2 were measured at :

Location / Time	*LA eq*	*LA 90*
2 / 21.00 – 21.20	*51.2*	*37.7*
1 / 21.50 – 22.10	*58.1*	*40.9*

And

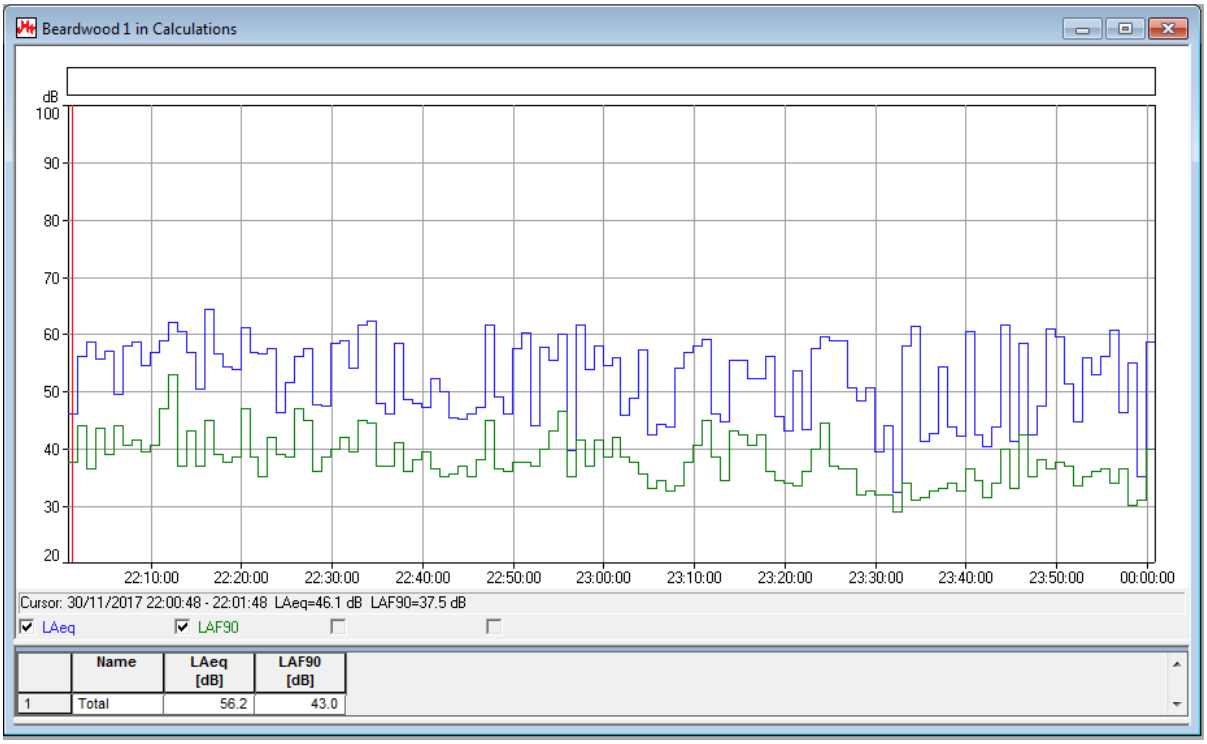
Location / Time	*LA eq*	*LA 90*
2 / 06.55 – 07.15	*41.7*	*36.6*
1 / 07.20 – 07.40	*47.2*	*38.2*

Whilst it is still unlikely that all the parking bays will be used during the early morning / late evening prayers it can be seen that the calculated level – if they were – of 57 dBA exceeds the existing measured noise level (it is likely that the actual noise level at this location will fall further between the hours 05.00 and 07.00).

Below are the results of the noise level measurements undertaken on 30 / 11 /2017 and 01.12 / 2017 – the microphone was located as shown below and we consider the levels measured representative of the noise level experienced at both Newlands and The Bungalow.

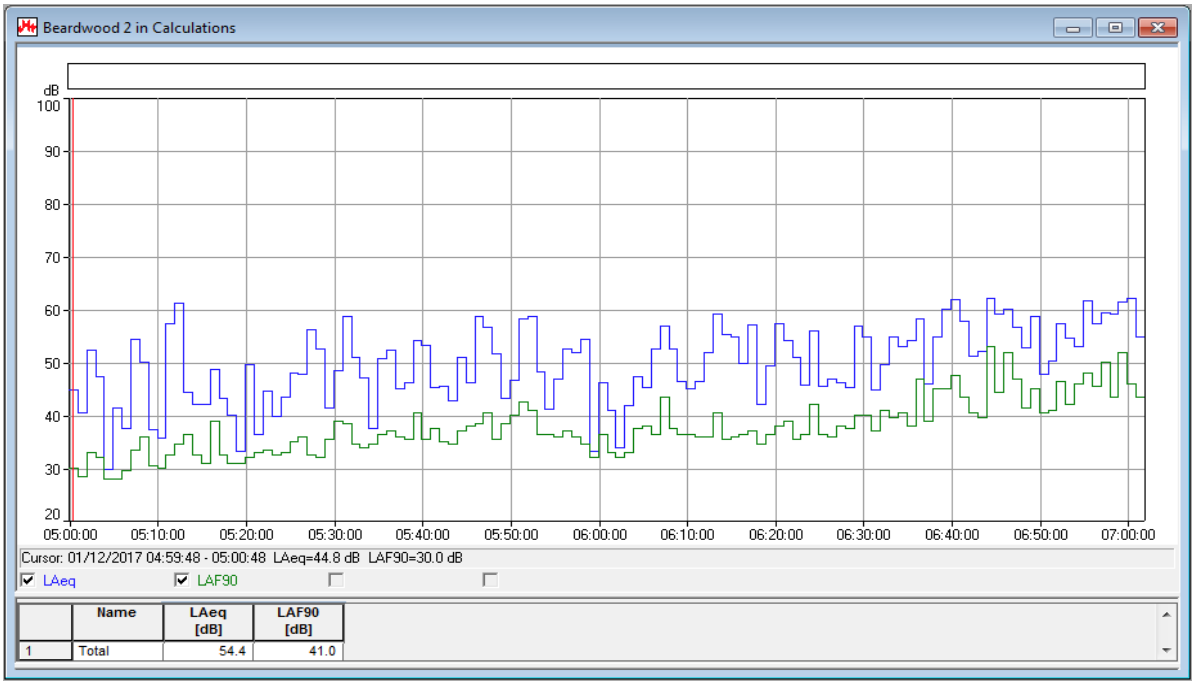
Microphone Location

Measured Results :



As can be seen the measured LA eq between 22.00 and 00.00 was 56.2 dBA (T = 1 minute) - the peaks on the graph representing the passage of car / cars passed the measurement location.

The level generated by an actual car passage being of the order of 55 / 57 dBA – it is also shown that there is a reasonable level of traffic movement up to 00.00 hrs.



As can be seen the measured LA eq between 05.00 and 07.00 was 54.4 dBA (T = 1 minute) - the peaks on the graph representing the passage of car / cars passed the measurement location.

The level generated by an actual car passage being of the order of 55 / 57 dBA – it is also shown that there is a reasonable level of traffic movement between 05.00 – 06.00 and 06.00 – 07.00 hrs.

From the above the calculated noise level of the use of the 'front' car park is calculated to be between 41 / 48 dBA which is below the existing measured level.

Therefore as the movement of cars on the car park will generate a noise of a similar character to that already existing then the use of the car park should not cause disturbance as would possibly occur if a noise with a differenr character had been introduced.

Conclusions

From the above it is evident that the use of the 'original' car park to its maximum capacity of 6 parking bays is very likely to cause disturbance to the adjoining property.

However the use of the 'front' car park – again to its maximum capacity - generates levels below the measured existing noise levels at that location and therefore its use should not cause disturbance to the occupiers of the two adjoining properties.

We would therefore recommend that at both early and late prayer times only the 'front' car park is used and the use of the car park adjacent to Balmoral is prohibited.

It would be an advantage if the bays on the 'front' car park were used at all times in preference to those adjacent to Balmotal.

Roger Leach AMIOA

Dated : December 2017