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Katharine Morgan
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23 Park Square South
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Our ref: P20-524-L01v1
12 January 2021

By email only: katharine.morgan@cushwake.com

Dear Katharine,

Re: Wellington House, Barnsley - Proposed Job Centre
Noise Assessment

Further to your recent instruction, I am writing with the results of the findings of our noise assessment in connection with the proposed job centre at Wellington House in Barnsley. This assessment focusses solely on the suitability of the office in respect to break-in of noise from external sources.

Introduction

We understand that the proposals are for the currently vacant ground floor space to be converted for use as a Job Centre. The space was formerly occupied by Barnsley Central Library.

Wellington House is a large three storey building that fronts onto Pall Mall, Wellington Street and the pedestrianised Market Street in Barnsley town centre. The use of the majority of the building will remain unchanged and will continue to be tenanted by various other local government services.

At this stage there are no drawings available of the proposed layout of the job centre, however, we understand the proposed job centre will be primarily open plan but with several private meeting rooms and managerial offices.

Inspection & Noise Measurements

An inspection of the proposed office space was made by Hepworth Acoustics on Wednesday 6th January 2021. The existing windows, which are double glazed, appear to be in good condition and it is understood there are no plans to replace any glazing.

A series of brief noise measurements were carried out during our visit, simultaneously inside the offices and externally at a location close to the junction of Pall Mall and Wellington Street as shown in Figure 1 which we consider to be the elevation exposed to the highest level of noise.

The instrumentation used comprised Rion NA-27 and Brüel & Kjær 2250 sound level meters both of which have independent calibration certification, and which were mounted on to tripods. The calibration level of both meters was checked before and after the noise measurements with a field calibrator with no significant variation in calibration level occurring.

The noise levels were measured in consecutive five minute periods for a sample 90 minute duration between approximately 10:00 and 11:30. The measured noise levels were primarily due to traffic passing on the nearby

A628 (West Way) and to a lesser extent traffic on Pall Mall and Wellington Street. The full results of the noise survey are shown in Appendix I and are summarised below in Table 1:

Table 1: Summary of noise levels measured (dB)

Location	$L_{Aeq\ 5min}$ Range	$L_{Aeq,90min}$
Noise Levels measured outside building	59 - 66	62
Noise Levels measured inside building	36 - 40	38

For available published guidance on appropriate acoustic design criteria for offices we have referred to the relevant parts of two different documents. Firstly, there is a short section on acoustics in the *British Council for Offices Guide to Specification 2019*. Secondly, there is useful advice in *British Standard 8233:2014 'Guidance on sound insulation and noise reduction for buildings'* which includes a section on offices.

British Standard 8233 recommends that for design purposes the ambient noise levels in 'executive offices' should not normally exceed the range of 35 – 40 dB L_{Aeq}. For open plan offices, the British Council for Offices recommends a design criterion not exceeding NR 40 for break-in of external noise.

The noise levels that we measured inside the building were within the range of 36 – 40 dB L_{Aeq}. From further analysis of the L_{eq} data we have found that the 'Noise Rating' values were NR 33 – 38 in the space. Thus, in the absence of layout drawings to be able to carry out more detailed calculations, the overall noise levels measured inside the building (in L_{Aeq} and NR) are within the acoustic design criteria that are recommended in relevant guidance for offices. Therefore, we conclude that break-in of environmental noise to the proposed space is sufficiently low that the ground floor area is suitable for the proposed use as a job centre.

If you have any questions, please do not hesitate to contact me.

Yours sincerely,
For Hepworth Acoustics Ltd



James Shaw BSc AMIOA
Consultant



Key:

Not to scale

X Noise Survey Measurement Position

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Title: Figure 1: Location and Noise Survey Measurement Position

Project: P20-524

Figure 1: Location and Noise Survey Measurement Position

Appendix I: Noise Survey Results

Equipment:	Brüel & Kjær 2250 'Type 1' sound analyser (serial no. 3011706) with calibrator, tripod and windshield Rion NA27 'Class 1' sound analyser (serial no. 10632001) with calibrator, tripod and windshield
Weather:	Dry, cold and calm (<2 m/s)

All levels in dB(A)

Measured Internal Noise Levels

Time		Measured Noise Levels (dB)			Comments
Start	End	L_{Amax}	L_{Aeq}	L_{A90}	
10:10	10:15	64.7	40.2	33.4	
10:15	10:20	48.5	35.7	31.9	
10:20	10:25	46.1	36	32.8	
10:25	10:30	47.7	36.9	33.4	
10:30	10:35	51.4	37.5	32.6	
10:35	10:40	56	37.6	31.6	
10:40	10:45	41.4	36	31.9	
10:45	10:50	49.1	37.7	33.1	Road traffic, passing pedestrians
10:50	10:55	47.2	38	32.9	
10:55	11:00	52.5	36.9	31.8	
11:00	11:05	50.8	38.9	33	
11:05	11:10	46.5	37.1	32.7	
11:10	11:15	58.3	40.2	33.4	
11:15	11:20	57.1	39.6	34.1	
11:20	11:25	46.3	36.4	31.5	
11:25	11:30	48.9	37.3	32	

Measured External Noise Levels

Time		Measured Noise Levels (dB)			Comments
Start	End	L_{Amax}	L_{Aeq}	L_{A90}	
10:15	10:20	73.7	62.0	53.8	
10:20	10:25	69.0	59.2	52.8	
10:25	10:30	70.1	59.4	53.7	
10:30	10:35	81.0	60.3	55.0	
10:35	10:40	72.9	62.1	54.4	
10:40	10:45	66.0	61.8	52.8	
10:45	10:50	76.8	59.2	52.9	
10:50	10:55	73.5	62.3	55.2	Road traffic, passing pedestrians
10:55	11:00	76.1	62.4	54.8	
11:00	11:05	72.8	60.9	52.4	
11:05	11:10	71.4	62.0	53.7	
11:10	11:15	85.4	60.9	53.5	
11:15	11:20	84.2	65.5	54.5	
11:20	11:25	72.4	65.6	55.8	
11:25	11:30	68.6	60.0	51.1	