Addendum Noise Assessment – Proposed Retail Development at New St, Barnsley

Barnsley Retail Partnership

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EXECUTIVE SUMMARY

An addendum noise report has been produced to address issues of adverse noise impacts predicted for residential properties on Wood Street and Heelis Street.

The design and alignment of the service yard and its access road were amended following the prediction of adverse noise effects, such that access to the service yard would now be from New Street. In addition, a 4 metre-high noise barrier was included along the embankment adjacent to Wood Street and a 3 metre-high barrier along the top of the wall/cutting adjacent to the edge of Heelis Street overlooking the service yard.

The addendum report presents the re-calculated (residual) noise impacts following implementation of these measures.

Previous adverse noise impacts for properties at the southern end of Heelis Street adjacent to the service yard have been removed. Adverse impacts for properties at the western end of Wood Street have been reduced to +1 dB for the arrival of an HGV.

Noise impacts for properties towards the eastern end of Wood Street were predicted to reduce from +37 dB to +13 dB; this is a significant reduction although, quantitatively, remains an apparently significant adverse noise impact. However, the assessment was very conservative in using the lowest measured L_{A90} noise level as the limit value. It is our assertion, that in the context of the current environment, where the low background noise level is sporadically disturbed by the movement of noisy vehicles on Wood Street, the movement of a few HGVs to and from the service yard along the screened access road, would be unlikely to be a cause of disturbance to local residents already habituated to sporadic excess nose events. The prevention of noise disturbance would be further assisted by the implementation of a night time delivery noise management plan, as is common practice with such food stores these days.

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1. INTRODUCTION

1.1. This report, prepared by Echo Acoustics Ltd, is an Addendum to the previous full noise assessment report prepared in relation to the proposed retail development at New Street, Barnsley.

1.2. It addresses specific noise impacts predicted for properties on Wood Street and at the southern end of Heelis Street which the previous assessment indicated would be subject to significant adverse noise due to the operation of the food store's service yard, particularly at night.

1.3. In response to the findings of that report, the access for the service yard and the service yard itself, were re-designed and re-aligned such that access is no longer from Wood Street, but is from New Street. The new alignment is shown in Figure 1.

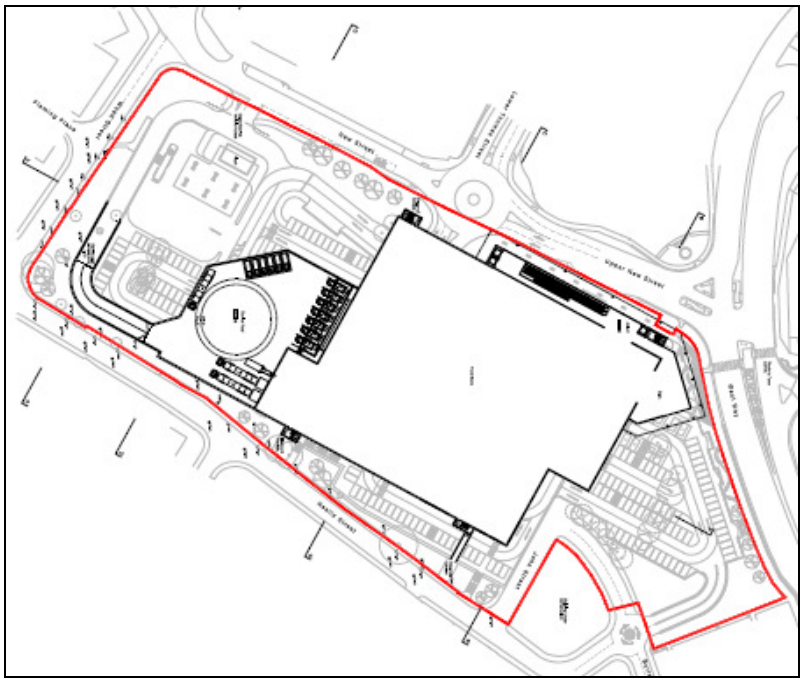
1.4. In addition to the re-alignment, further noise mitigation measures were applied to the proposed design.

1.5. The Addendum report also clarifies an error in respect of predicted noise from night time movement of heavy goods vehicles, potentially affecting residential properties at the western end of Wood Street.

2. DESIGN AMENDMENTS AND RECALCULATED NOISE IMPACTS

2.1. The re-alignment of the service yard and the access road is shown in Figure 1.

Figure 1: realigned service yard and access road



2.2. The re-alignment has moved the petrol filling station (PFS) slightly north with the access road now passing around the rear (south side) of the PFS. This means that delivery vehicles are no arriving and departing via Wood Street. In addition, a 4 metre-high noise barrier was included in the design, running along the top of the embankment adjacent to Wood Street.

2.3. The realignment of the access also required re-alignment of the service yard itself such that operational activities would be closer to the steep wall/cutting at the eastern side of the service yard. A 3 metre-high barrier was included in the re-design, running along the top of the wall/cutting adjacent to the edge of Heelis Street.

2.4. The results of these changes are demonstrated in the following Tables, reproduced from Tables 6 and 7 of the original report. The Tables have been 'reduced' to show the salient points, namely the operational aspects which previously led to significant adverse noise impacts. The results of the re-alignment and re-design can be seen in the final column, this being the 'residual' noise impact following re-design/re-alignment.

Table 1: reproduced Table 6 - Wood Street adjacent to service yard access

Activity	Un-mitigated operational receptor noise	Existing measured noise	Impact	
	Event L_{Aeq}	dB L_{A90}	Measured L_{A90} v predicted L_{Aeq} - previous	Measured L_{A90} v predicted L_{Aeq} - re-aligned
day time				
HGV arriving	64	51	23	-1
HGV leaving	63		22	-2
LGV arriving	46		5	-19
LGV arriving	44		3	-21
Night time				
HGV arriving	64	37	37	**13**
HGV leaving	63		36	**12**
LGV arriving	46		19	-5
LGV arriving	44		17	-7

Table 2: reproduced Table 7 - Heelis Street south adjacent to service yard

Activity	Un-mitigated operational receptor noise	Existing measured noise	Impact	
	Event L_{Aeq}	dB L_{A90}	Measured L_{A90} v predicted L_{Aeq} - previous	Measured L_{A90} v predicted L_{Aeq} - re-aligned
day time				
HGV arriving	50	43	7	-8
HGV Unloading	47		4	-11
HGV leaving	49		6	-9
Night time				
HGV arriving	50	37	13	-2
HGV Unloading	47		10	-5
HGV leaving	49		12	-3

2.5. With respect to properties at the western end of Wood Street, the previous noise assessment indicated significant adverse noise effects due to the movement of HGVs at night on the PFS forecourt. This was an error as there is no intention to allow HGVs to refuel at the PFS at any time of the day of the night; the HGV shown on plans was a fuel delivery vehicle. The results of placing the service yard access road around the rear of the PFS with a 4 metre-high barrier along the embankment at the edge of Wood Street, results in a noise impact of +1 dB for an HGV arriving and moving along the access road closest to properties at the western end of Wood Street. Table 3 presents the previous (incorrectly) predicted impact and current impact for HGV movements affecting properties at the western end of Wood Street.

Table 3: reproduced Table 5 - Wood Street adjacent to PFS

Activity	Un-mitigated operational receptor noise	Existing measured noise	Impact	
	Event L_{Aeq}	dB L_{A90}	Measured L_{A90} v predicted L_{Aeq} - previous	Measured L_{A90} v predicted L_{Aeq} - re-aligned
Night time				
HGV arriving	50	37	13	1
HGV leaving	49		12	0

3. DISCUSSION

3.1. The results of the re-design/re-alignment indicate a significant reduction in noise levels affecting properties on Heelis Street and Wood Street, such that no significant impact was predicted for properties on Heelis or at the western end of Wood Street.

3.2. The previous impact on properties on Wood Street adjacent to the service yard, for an HGV arriving, was **37 dB**. This was predicted to be significantly reduced but there was still a potentially significant calculated quantitative adverse impact of 12 and 13 dB.

3.3. However, the assessment undertaken was very conservative in using the lowest measured L_{A90} noise level as the limit value. The situation on Wood Street is such that this very low noise is frequently disturbed, at all times of the night, by the movement of vehicles on Wood Street, some due to hard acceleration up the incline and others due to very loud music or noisy exhausts. In this context, it is our opinion that the relatively few movements of heavy goods vehicles to and from the service yard during the night are unlikely to lead to significant adverse noise effects for local residents who are presumably already habituated to sporadic excess night time noise events. This situation can also be significantly assisted by the implementation of a delivery vehicle/service yard night time noise management plan, as is common practice for large food store operations these days.

3.4. It is our submission that the food store can operate, with night time deliveries, with little likelihood of adverse disturbance to day or night time amenity of local residents.