

Technical design note

Project name	Dunsbury Park, Havant, Hampshire - Plots 500 - 502		
Design note title	Noise Impact Assessment Response Noise		
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1. INTRODUCTION & BACKGROUND

This note has been prepared with reference to Dunsbury Park - Plots 500-502.

Consent has recently been granted for the Reserved Matter Application. The Environmental Health Officer (EHO) for Havant Borough Council (HBC) provided the following comments / attached noise condition:

I have reviewed the details that have been provided including the acoustic report produced by Hydrock. This forms an outline noise assessment based on assumptions about the future use of the site in the absence of further information being available at this time on the end users of the proposed units. Using the traffic data available it suggests that noise from vehicle movements (deliveries and collections) are unlikely to harm residential amenity, but this conclusion relies on final vehicle movements not being significantly greater than predicted. Acceptable external plant noise limits are also set which the applicant must use in the final design of the site once further details of the plant to be installed are known to protect residents from harm from noise.

In view of the limited information available on the end user of the proposed units at this time, I recommend that the following condition be attached to safeguard the amenities of nearby residents from noise:

Condition 6

The development shall not be occupied until a scheme has been submitted to and approved in writing by the Local Planning Authority for the control of noise emanating from the buildings, associated plant and equipment and vehicle movements. The measures included in the approved scheme shall be implemented prior to the first occupation of the building(s) that they relate to and thereafter the measures shall be operated in accordance with the approved scheme unless otherwise agreed in writing by the Local Planning Authority. Reason: In the interests of local amenity having due regard to Havant Borough Local Plan (Core Strategy) 2011 Policies CS16 and DM10 and the National Planning Policy Framework

Following a telephone conversation between HBC's EHO, and Jim Beavan of Savills, the following points were noted:

- » No major concerns in respect to the proposed operational noise for B8 use. It was acknowledged that the Noise Impact Assessment Report concluded that operational noise levels would be 10 dB below the existing background sound levels; and
- » Principal concern remains with the uncertainty surrounding the external plant.

This technical note seeks to resolve the uncertainty concerning noise from external plant and relax the recommended Condition 6 prior to occupancy of plots 500 – 502.

Supporting external plant noise calculations and discussion are provided in **Section 2**.

2. EXTERNAL PLANT NOISE CALCULATIONS & DISCUSSION

2.1 Noise Calculations

Table 1: External plant noise calculations – properties off Calshot Road

Receptor Area	Period	Specific Noise Level, dB $L_{Aeq,T}$ (At Source)	Distance	Adjustments (dB)			Noise Level, dB $L_{Aeq,T}$ (At Receptor)	BS 4142 Corrections dB	BS 4142 Rating Level (L_{Ar}) dB	Background Noise Levels (L_{A90} , dB)	Excess of Rating Level over Background Sound level (dB)
				Distance Corr.	Screening Corr.	Façade Corr.					
Properties off Calshot Road	Day	83.9	350	-58.9	-5 ^[1]	3	23.0	5	28.0	38	-10.0
	Night	74.9	350	-58.9	-5 ^[1]	3	14.0	5	19.0	29	-10.0

Notes:

-5dB screening assumed as a worst-case scenario. Greater screening (+10dB) benefit from plot 4a is likely to be achieved.

2.2 Discussion

The following points from the Noise Impact Assessment Report¹ should be noted:

3.1.1 para 3 & 4 states

For fixed plant and building services associated with the operation of the proposed plots, noise limits should be in accordance with BS 4142:2014. Havant Borough Council have advised the rating level ($L_{Ar,Tr}$) should be 5dB below the background ($L_{A90,T}$).

Section 4.2 states:

Road Traffic: Road Traffic noise from A3(M) and M3 was the dominant source of noise on-site during the environmental noise surveys.

Section 5.5 provided an assessment of External Plant noise limits. In the absence of detailed information relating to any proposed fixed plant and/or building service information, the proposed plant limits were provided:

Table 2: Proposed plant limits

Parameter	Period	Noise Level, dB
$L_{Ar,1hour}$	Daytime (0700hrs to 2300hrs)	33
$L_{Ar,15mins}$	Night-time (2300hrs to 0700hrs)	24

Notes:

External noise limits presented are 'free-field' levels at any height above ground and 1.0m from the nearest noise sensitive property façade. It applies to the overall combined operation of building services plant without any specific tone or character.

The additional noise calculations presented in **Section 2.1** of this note, indicates specific external plant noise levels of 74.9 dB $L_{Aeq,T}$ (at source) would equate to noise levels being 10 dB below the background dB $L_{A90,T}$ sound level at properties off Calshot Road. This would satisfy the requirements of Havant Borough Council by more than 5 dB.

External plant noise levels would need to be approximately 81 dB $L_{Aeq,T}$ in order to fail the requirements of HBC, i.e. rating level ($L_{Ar,Tr}$) 5dB below background $L_{A90,T}$ – calculated at properties off Calshot Road.

To give some content, examples of typical plant noise emission data for externally located building services plant is provided in **Table 4**.

Table 3: Typical plant noise emissions

Plant	Manufacturer	Noise Level, dB(A)
AHU	Flaktwoods	60
Roof Fan	Vent Axia in-Line Duct Fan	69
AHU	Mitsubishi	66

Based on the additional calculations provided in **Table 1**, and the examples of typical plant noise emissions presented in **Table 3** of this Technical Note, Condition 6 should be discharged.

¹ Dunsbury Park, Havant, Hampshire. Noise Impact Assessment - Plots 500 - 502. Hydrock. 20th September 2021