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London Borough of Camden
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21/05/2021

Dear Sir/Madam

Re: Planning Application - 2021/1293/P, 13 A Pond Street, London NW3 2PN

I am engaged by the residents of 2 Connaught Mews, 17 Pond street and 31 Hampstead Hill gardens to provide acoustic advice in respect of the proposed installation of an Air Source Heat Pump (ASHP) at 13 A Pond Street, London.

An acoustic assessment has been carried out on behalf of the applicant by KP Acoustics entitled Planning Compliance Review Report, 20075.PCR.01 Rev. B. There are a number of aspects regarding the KP assessment that require further clarification, as below.

Details of the survey to quantify background sound levels are given in Section 2.0 et seqq., of the KP report, including the measurement location. A limitation of the method adopted is that only a single measurement location was used, KP Figure 2.3 illustrates, with the background sound levels obtained at this position being used for subsequent analysis of potential noise impacts associated with the proposed ASHP at all noise sensitive receptor location.

The KP report states at Table 21 that the closest outdoor amenity space to be the garden shared by 29, 32 and 33 Hampstead Hill. The closest outdoor amenities are that of 2 Connaught Mews, 17 Pond street and 31 Hampstead Hill Gardens whose boundary wall meets with the rear eastern wall where the location of the proposed plant is.

The final paragraph of KP Section 2.2 notes that:

> ‘the background noise profile at the monitoring location was typical of an urban cityscape environment, with the dominant source being noise from existing neighbouring plant units, road traffic noise from the surrounding roads and noise from an existing rear pub garden area’.

A description of existing plant units isn’t given in the KP report, however as they are described as being ‘neighbouring’ it is reasonable to assume that they were in the proximity of the measurement location. BS 4142:2104+A1:2019 sets out procedures on how to measure the background sound level and the commentary to Clause 8.1 notes that:

> ‘Since the intention is to determine a background sound level in the absence of the specific sound that is under consideration, it is necessary

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> to understand that the background sound level can in some circumstances legitimately include industrial and/or commercial sounds that are present..'.

However, an important distinction to make is that any extant industrial/commercial sources such as neighbouring plant that are included in the measurement of the background sound level measurements would be 'legitimate' sources, i.e., operating in accordance with relevant Local Authority policy requirements and/or other restrictions. This distinction is not made in the report, and where doubt exists as to the 'legitimacy' of extant sources, it would be prudent to measure at an existing, representative, alternative location free from such effects.

However if it is taken that the existing 'neighbouring' sources are 'legitimate' in use, that still does not mean that a single measurement location could yield data measurement data that is sufficiently representative of the sound climate at more distant receptors, as noise emissions from mechanical plant attenuate with distance. It would therefore be expected that the background sound level at 2 Connaught Mews would be lower than that to the rear of 13A Pond Street.

To illustrate this point further, the typical night time background sound level used in the KP report is 41 dB L_{AF90}, with the lowest measured night time background being 37 dB L_{AF90}. Legacy data that we have from measurements at 3 Connaught Mews/21 Pond Street showed a night time background sound level of 34 dB L_{AF90}. Whilst this sound level was obtained in the early 2000s it is nonetheless 7 dB lower than the value used for the KP assessment.

The KP report states that the background noise surveys were carried out from the 13th November to 14th November 2019, i.e., on a Wednesday and a Thursday. The commentary to subclause 8.1 of BS 4142 notes that:

> 'Among other considerations, diurnal patterns can have a major influence on background sound levels'

It goes on to say that:

> 'Furthermore, in this general context it can also be necessary to separately assess weekends and weekday periods'

It can reasonably be taken that the ASHP will operate over weekends. To allow an informed assessment of any potential impacts to be made, comparison of the ASHP operational sound levels would therefore need to be made against background sound levels quantifying weekends.

Furthermore, the noise criteria set out in the Camden Local Plan 2017, referred to at Section 4.2 of the KP report, clearly identifies gardens used for amenity as being an 'Assessment location'. A full and proper assessment would therefore require determination of rating levels and background sound levels at outdoor amenity areas; see also comments made above regarding the outdoor amenity areas that will be closest to the proposed plant location.

In summary, more comprehensive background sound level measurements will need to be undertaken at appropriate positions and over suitably representative periods to properly assess any impacts that may arise from the application.

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There is ambiguity between the KP report and the Gianni Botsford Architect Ground Floor Plan (drawing 201 202 Rev P08) regarding the precise location of the proposed ASHP. The former shows the ASHP to be located along the east boundary of the site, whereas the latter shows it to be on the north boundary of the site. The significance here is that the distance attenuation value used by KP in Appendix B2 calculating plant noise emissions at the garden shared by 29, 32 and 33 Hampstead Hill Gardens may be in error.

There is also ambiguity about the form of acoustic mitigation to the ASHP that is being proposed. For example, Section 6.1 of the KP report refers to a 'rooftop plant enclosure' whereas the plant location shown on drawing 201 202 Rev P08 is at ground floor level. On this point, the applicant should be required to demonstrate that the proposed plant location is the most appropriate available, given that Policy 7.15, B, g of the London plan requires that development proposals should seek to manage noise by using practices:

> '... to reduce noise at source, and on the transmission path from source to receiver'

Further, Section 6.1 of the KP report and the subsequent calculations given in Appendices B1 to B3 refer to attenuation provided by an acoustic enclosure with louvres. Conversely, as part of the documents uploaded in support of the application (18/03/2021 at 14:02) details are provided for a unity acoustic enclosure from Environ Group. This will provide a substantially greater level of attenuation than the louvered enclosure.

(http://camdocs.camden.gov.uk/HPRMWebDrawer/PlanRec?q=recContainer:%222021/1293/P%22)

There are a number of further queries regarding the acoustic calculations in Appendices B1 to B3 that require explanation, as follows:

1. An on-time correction of 50% has been used for calculations, resulting in a -3 dB correction. This appears to have been applied to both the day and the night assessment periods. If so, it would follow that the AHSP would only be in use for 7 1/2 minutes within any 15 minute night reference time interval, which seems unduly optimistic on the part of applicant. In periods of warm weather it is highly likely that the plant could run continuously over the reference time interval specified in BS 4142, particularly at night.

2. The distance attenuation used to calculate the plant noise emissions at the garden shared by 29, 32 and 33 Hampstead Hill Gardens could be in error due to the ambiguity of the plant location as discussed above. If the location is to be as per drawing 201 202 Rev P08, then the distance attenuation could be over-estimated in favour of the applicant.

3. Attenuation of sound due to proposed screening has been taken in Appendix B2. It is unclear why this has been taken in addition to the attenuation from the acoustic enclosure, as the screening shown on drawing FFLO 136.14B appears to show horizontal, open slatted fencing. If so, this may not provide any meaningful attenuation of sound, as the construction of an acoustic screen must, by definition, be imperforate and of sufficient mass to prevent any significant sound transmission through its construction.

In summary of the above, it is considered that the noise assessment is incomplete and is inconsistent with the architectural drawings submitted in support of the application. On this basis it

is requested that the application should be rejected until such times as it can be demonstrated that no significant adverse impacts will occur at all applicable noise sensitive receptors as a result of the proposed plant installation.

Yours Sincerely

[redacted]

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