

Ref: DP702/21262

Date: 28 July 2021



Clive Llewellyn  
Pinemace Ltd  
69 Carter Lane  
London  
EC4V 5EQ

Dear Clive,

**PERMITTED DEVELOPMENT - CLASS O  
IMPACT OF NOISE FROM COMMERCIAL PREMISES  
2-4 KINGS ROAD, READING, RG1 3AA**

I understand you are submitting an application to convert part of the above office (formerly Class B1 now E(g)(ii)) building to residential (Class C3), under Schedule 2, Part 3, Class O of the Town and Country Planning (General Permitted Development) (England) Order (as amended).

Statutory Instrument, no. 332, requires that applicants apply to the Local Planning Authority (LPA) for determination as to whether the prior approval of the LPA will be required as to "*impacts of noise from commercial premises on the intended occupiers of the development*".

*Commercial Premises* is a tightly defined term in the Regulations. It means "*any premises normally used for the purpose of any commercial or industrial undertaking, which existed on the date of application...and includes any premises under the Licensing Act 2003(a) or any other place of public entertainment*".

Therefore, this means that if a site is affected by industrial noise, noise from air conditioning plant relating to a commercial or industrial undertaking, or music from a venue for example, that the LPA could expect an acoustic assessment as part of the Permitted Development determination process. It is significant that the Regulations do not always require an assessment, as many sites would not be affected by commercial noise. It is also significant that if the noise sources affecting a site are not from commercial premises, as defined, then they need not be considered. This means that noise from transportation sources (road, rail, air etc) do not need to be assessed.

Spectrum have conducted a site visit on Thursday 22<sup>nd</sup> of July 2021. The comments below relate to the site as observed during that visit.

**1. SITE DESCRIPTION**

The application is for the creation of new dwellings in existing office accommodation at 2-4 Kings Road, Reading, RG1 3AA. The building has 4 storeys and is currently used as offices. The proposals involve retaining the ground floor office space and converting the first, second and third floors to residential use.

The site is located at the corner of Kings Road and Duke St in Reading. The site is bounded to the east and south by buildings with commercial units at ground floor and office space or residential properties directly above.

Directly opposite on King's Road is Jackson's Corner, comprising commercial units at ground floor and residential properties on 3 floors directly above. To the north-west of the site, at the corner of King St and High St is a 4-storey building with commercial units at ground floor and office space directly above.

**HEAD OFFICE:**  
27-29 High Street  
Biggleswade  
Beds. SG18 0JE  
United Kingdom  
t. +44 (0)1767 318871  
f. +44 (0)1767 317704

**WIGAN OFFICE:**  
The Standish Centre  
Cross Street, Standish  
Wigan. WN6 0HQ  
United Kingdom

t. +44 (0)1257 473242  
f. +44 (0)1257 473243

**WEB:**  
[www.spectrumacoustic.com](http://www.spectrumacoustic.com)  
Spectrum Acoustic Consultants Ltd  
Registered in England No. 2378475

Opposite the site on Duke St is a 4-storey building, comprising Royal Tandoori Restaurant at ground floor and Ibis Hotel directly above. Further south on Duke St there are buildings with commercial units on ground floor and office space or residential properties directly above. King's Walk and The Oracle shopping centres are located approximately 60m to the south-west of the site.

There are a number of mechanical plant units on the roof of the existing building, serving the office spaces. The proposals involve removing the mechanical plant associated with the first to third floors but retaining two condensers serving the ground floor offices.

From the roof of the subject building, a number of mechanical plant units are visible on the roofs of the office buildings on Duke St, as well as on the roofs of the commercial units at King's Walk and The Oracle.

Photographs of the site and surrounding properties are shown in Figures 1 to 6 below:



**Fig 1:** Site from Kings Road



**Fig 2:** Aerial view towards site



**Fig 3:** Commercial units with residential properties directly above at Jacksons Corner, opposite the site on Kings Road



**Fig 4:** Royal Tandoori at ground floor with Ibis hotel directly above, opposite the site on Duke St.



**Fig 5:** Roof of commercial properties at King's Walk and The Oracle, to the south-west of the site



**Fig 6:** Office buildings to the south of the site, on Duke St



**Fig 7:** Residential properties, to the north of the site



**Fig 8:** Existing condensers on the roof of the subject building, all to be removed except one (see Figure 9)



**Fig 9:** Wall mounted condenser to be retained, serving the ground floor offices



**Fig 10:** Floor mounted condenser to be retained, serving the ground floor offices

## 2. ASSESSMENT

Potential commercial noise sources affecting future occupiers are as follows:

### 2.1 Noise from mechanical plant to be retained on the roof of the building

As detailed above, the ground floor would be retained as office space. Although most of the existing mechanical plant on the roof of the building would be removed, two condenser units would be retained to serve the ground floor offices. The mechanical plant units to be retained are detailed below:

Condenser 1: Mitsubishi Electric MUZ-SF35VE, shown in Figure 9 above.

Condenser 2: Mitsubishi Electric City Multi VRF PURY-P200YLM-A1, shown in Figure 10 above.

Therefore, it is considered appropriate that the impact of noise from these condensers is assessed in accordance with BS 4142:2014+A1:2019 *Methods for rating and assessing industrial and commercial sound*.

Spot measurements close to each of the two condensers have been carried out during the site visit on Thursday 22<sup>nd</sup> of July 2021. The results of the measurements are shown in Table 1 below, altogether with the calculated sound power levels. The measurements consisted of a spatial average at 10cm from the front side of each condenser. The sound power levels are calculated in accordance with BS EN ISO 3746:2010 *Acoustics – Determination of sound power levels and sound energy levels of noise sources using sound pressure – Survey method using an enveloping measurement surface over a reflecting plane*.

| Plant Item                                        | Measured Sound Pressure Level (dB) | Calculated Sound Power Level $L_w$ (dB) |
|---------------------------------------------------|------------------------------------|-----------------------------------------|
| Condenser 1 – Mitsubishi Electric MUZ-SF35VE      | 49                                 | 52                                      |
| Condenser 2 – Mitsubishi Electric PURY-P200YLM-A1 | 64                                 | 73                                      |

**Table 1:** Summary of the measured condensers noise levels and the calculated sound power levels

The background sound level was also measured at the nearest window of the proposed residential properties, with all the mechanical plant units on the roof of the subject building switched off. At this location, no other mechanical plant was audible. The measured background sound level was  $L_{A90,15min}$  51 dB.

The calculation of noise propagation from the two condensers at the nearest window is included in Attachment 1. The calculation indicates that the specific sound level at the nearest window is  $L_S$  34 dB.

In accordance with BS4142, the character of the sources is considered. Noise from these condensers was observed to be broadband and continuous and would not stand out against the residual acoustic environment at the nearest window of the proposed residential properties. Therefore, no feature correction is applied to the specific level

Table 2 below details the BS 4142 assessment at the nearest window to the condenser units.

| Receptor                          | Specific Level (dB) | Character Correction (dB) | Rating Level (dB) | Background $L_{A90}$ Level (dB) | Rating minus Background Level (dB) |
|-----------------------------------|---------------------|---------------------------|-------------------|---------------------------------|------------------------------------|
| Nearest window on the third floor | 34                  | -                         | 34                | 51                              | -17                                |

**Table 2:** BS 4142:2014 assessment – Calculated rating level from the two condensers, compared to the background sound level ( $L_{A90}$ )

As indicated in Table 2, the rating level is 17 dB below the background sound level at the nearest window of the proposed residences. This is an indication of a low impact from the condenser units on the proposed residential properties and therefore acceptable.

## 2.2 Noise from mechanical plant on the roofs of the surrounding buildings

Mechanical plant noise from the nearby buildings was audible at the roof level on the south-western corner of the building. A sample measurement was taken at this location during a lull in local road traffic, however distant traffic was still audible. The measured  $L_{Aeq}$  level was 51 dB. The contribution from mechanical plant at this location is estimated to be up to  $L_{Aeq}$  50dB. The third floor windows of the subject building are partially screened from mechanical plant on the roofs of nearby buildings. The expected attenuation from screening is at least 5 dB. This would reduce the incident noise level from mechanical plant on the third floor windows to  $L_{Aeq}$  45 dB, which is considered to be the specific level in terms of a BS 4142 assessment.

Noise from mechanical plant is broadband and continuous and would not stand out against the residual acoustic environment at receptor locations. Therefore, no correction to the specific sound level need be applied and the rating level is, therefore,  $L_{Ar,Tr}$  45dB. This is 6dB below the background sound level, which is considered to be a low impact, in accordance with BS 4142.

It is therefore our opinion that the likely *impacts of noise from commercial premises on the intended occupiers of the development* are not sufficient to constitute a material factor on the proposals. Therefore, I conclude that there is no technical noise reason under the General Permitted Development Order to refuse this application and that, I recommend that the LPA can approve the application accordingly.

Please do not hesitate to get in touch if you have any questions.

Yours sincerely



David Pauliuc  
Consultant