



**Jackson's Corner
Reading**

Planning Condition 17 Report

20 July 2017

For
1-9 Kings Road LLP
11 Golden Square
London
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EXECUTIVE SUMMARY

New items of building services plant are proposed as part of the Jackson's Corner redevelopment in Reading, which will be subject to a noise limit specified by planning condition 17.

An assessment has been undertaken to predict noise emissions associated with the proposed plant at the nearest noise sensitive properties.

The predicted noise levels comply with the planning condition 17 requirements.

1.0 Introduction

New items of building services plant are proposed as part of the new development at Jackson's Corner in Reading.

Planning condition 17 for the development specifies a noise limit for the proposed building services plant.

This report presents an assessment of the proposed plant in relation to the planning condition requirements.

2.0 Description of Site and Proposals

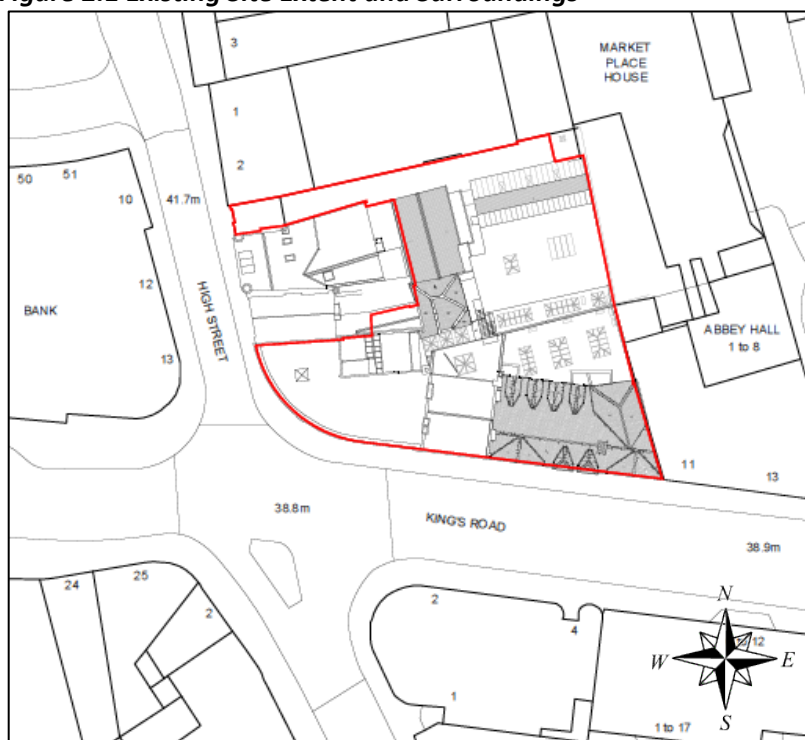
The proposed development site is at a location known as Jackson's Corner at 1-9 King's Road in the centre of Reading. The site is bounded by King's Road to the south and High Street to the west.

The majority of the site is currently occupied by a vacant retail property, with a small number of vacant residential units on the uppermost floors.

The area surrounding the site is made up of predominantly commercial uses (retail and office properties), although a residential dwelling was noted adjacent to the site within 11 King's Road to the east.

Figure 2.1 shows the existing site extent in red and the surrounding properties.

Figure 2.1 Existing Site Extent and Surroundings



It is proposed to refurbish the main southern corner building fronting onto King's Road to provide 18 apartments at first, second and third floor levels, with commercial units (food & beverage) at ground floor level.

A new building is to be constructed to the north/rear of the site, involving 15 apartments arranged from ground to sixth floor level. A communal courtyard will occupy the centre of the site and the newly-built apartments will be equipped with balconies.

The proposed tenants for the commercial units are understood to be as follows:

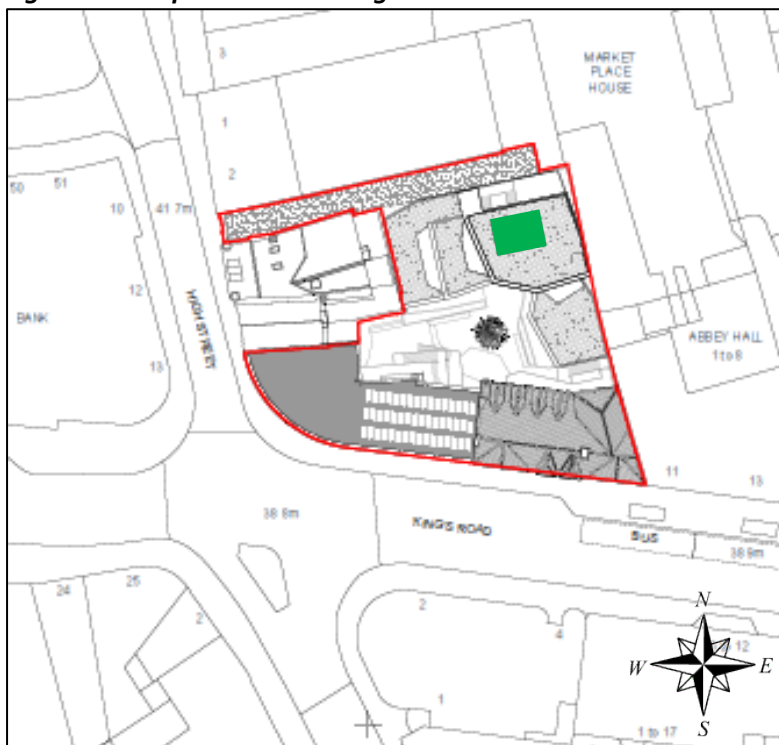
- Byron (burger restaurant)
- Busaba (modern Thai restaurant)
- Franco Manca (pizza restaurant)

Each unit will include extract fans and air handling units, which will be located within each unit and within a dedicated internal plantroom. Noise break-out from the casing of the extract fans and air handling units will be contained within the plantrooms, resulting in negligible noise emissions to external areas. Supply and extract air connections from the extract fans and air handling units to external grilles will be fitted with suitable in-duct acoustic attenuators and located in the central courtyard of the site and in the alleyway along the northern site boundary.

Condenser units associated with the commercial units are proposed within a dedicated screened plant enclosure on the roof of the new building at the rear/north-east corner of the site. The screen surrounding the enclosure will provide acoustic attenuation and visual screening of the plant.

Figure 2.2 shows the proposed site arrangement in **red** and the approximate location of the roof plant enclosure in **green**.

Figure 2.2 Proposed Site Arrangement



3.0 Planning Condition 17 Requirements

Condition 17 of the planning permission for the development (application number 160849) states:

"17. No mechanical plant shall be installed until a noise assessment of the proposed mechanical plant has been submitted and approved by the Council. The assessment shall be carried out in accordance

with BS 4142: 2014 methodology. The predicted rating level, L_{Ar,Tr} (specific sound level plus any adjustment for the characteristic features of the sound) as measured at a point 1 metre external to sensitive façades shall be no greater than 30 dBA, when all plant/equipment (or any part of it) is in operation. The plant shall thereafter only be installed in accordance with the assessment."

4.0 Plant Noise Assessment

This section presents our assessment and calculations of noise emissions from the proposed plant, in relation to the planning condition requirements.

4.1 Proposed Plant

Plant items are proposed in the dedicated screened plant enclosure on the roof of the new building at the rear/north-east corner of the site, as indicated in Figure 2.2.

The proposed plant items are as follows:

Byron	4 x condenser units with acoustic treatment, 43 dBA at 1m each
	2 x condenser units with acoustic treatment, 41 dBA at 1m each
Busaba	1 x condenser unit with acoustic treatment, 47 dBA at 1m
Franco Manca	1 x condenser unit with acoustic treatment, 47 dBA at 1m

The units will operate only during daytime/typical opening hours i.e. 07:00 – 23:00 hours.

4.2 Nearest Noise Sensitive Properties

We have considered the nearest noise sensitive properties to be the proposed residential apartments beneath the plant enclosure at sixth floor level, with the nearest windows being in the northern façade of the building.

4.3 Plant Noise Assessment

Our calculations to predict the plant noise level at the nearest proposed noise sensitive façade are presented in Table 6.1.

Table 6.1 Plant Noise Emission Calculations

Element	Byron		Busaba	Franco Manca
Single Unit Sound Pressure Level at 1m	43	41	47	47
Distance Attenuation to 4m	-7	-10	-6	-6
Screening Attenuation	-17	-17	-17	-17
Quantity Correction	+6	+3	0	0
Predicted Noise Level	25	17	24	24
Total Predicted Plant Noise Level	29			
Planning Condition 17 Noise Limit	30			

Note: the plant is not expected to be tonal, intermittent or impulsive therefore no feature corrections are deemed appropriate.

It can therefore be seen that the total predicted noise level associated with the proposed plant complies with the planning condition 17 requirements at the nearest proposed noise sensitive properties during the proposed operating period.

Appendix A – Acoustic Terminology

Parameter	Description
Decibel (dB)	A logarithmic scale representing the sound pressure or power level relative to the threshold of hearing (20×10^{-6} Pascals).
Sound Pressure Level (L_p)	The sound pressure level is the sound pressure fluctuation caused by vibrating objects relative to the threshold of hearing.
A-weighting (L_A or dBA)	The sound level in dB with a filter applied to increase certain frequencies and decrease others to correspond with the average human response to sound.
$L_{Aeq,T}$	The A-weighted equivalent continuous noise level over the time period T. This is the sound level that is equivalent to the average energy of noise recorded over a given period.
L_{A90} (15 min)	The noise level exceeded for 90% of the time (also referred to as the background noise level), measured over a 15 minute period