



Anderson
Acoustics

INITIAL PLANNING ASSESSMENT

4 ST PANCRAS SQUARE

OPERA

AUGUST 2017

INITIAL PLANNING ASSESSMENT 4 ST PANCRAS SQUARE

Our Ref: 3348_002R_2-0_JB



Client: **Opera**
24/25 The Shard
32 London Bridge Street
London
SE1 9SG


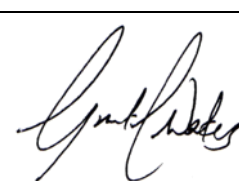
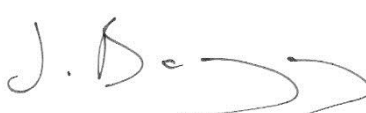
Report by: **Anderson Acoustics Limited**
Unit 9 Baden Place
Crosby Row
London
SE1 1YW

www.andersonacoustics.co.uk

T: 0203 1767909

Date: **3 August 2017**

Project No: **3348**
Status: **ISSUED**

Author	Joe Baggaley Principal Consultant MSc BSc (Hons)MIOA		3 August 2017
Reviewed	Grant Waters Consultant BSc (Hons) AMIOA		3 August 2017
Approved	Joe Baggaley Principal Consultant MSc BSc (Hons)MIOA		3 August 2017

This document has been prepared using all reasonable skill and care. Anderson Acoustics Ltd accepts no responsibility or liability for any third party data presented in this report, or used for the basis of drawing any conclusions. This document is confidential to the named client above and Anderson Acoustics Ltd accepts no responsibility or liability resulting from third party use of this document or for a purpose other than for which it was commissioned.

REVISION HISTORY

Version	Comments	Changes made by	Approved by
1.0	First issued version	JB/GW	JB
2.0	Second issued version	JB/GW	JB

PAGELEFT INTENTIONALLY BLANK

CONTENTS

1	INTRODUCTION	6
2	SITE DETAILS	7
3	CAMDEN COUNCIL REQUIREMENTS	9
4	CONTROL OF AMPLIFIED MUSIC	10
5	CONTROL OF NOISE EMISSIONS FROM BUILDING SERVICES	12
6	PATRON NOISE	13
7	SUMMARY	14

1 INTRODUCTION

Anderson Acoustics Ltd has been appointed by Opera to advise on acoustics and noise control for a proposed new bar / restaurant and music venue situated at ground and basement levels of 4 St Pancras Square, Kings Cross, London.

The application seeks consent for the proposed use of the building with use classes A3/A4/D2 Use and minor external alterations to access doors. The proposed use will comprise a restaurant and bar area within Use Classes A3/A4, and a live music venue (Use Class D2) in the basement. The proposal also includes the insertion of a mezzanine floor in the basement level which will be used for seating and dining as well as mezzanine space for storage of plant and goods (the mezzanine space does not require planning permission therefore does not form part of the planning application but is included for completeness).

The purpose of this report is to support this application for the proposed fit-out. It provides an initial review of the scheme as currently proposed with regard to noise break-out to the surrounding environment and neighbouring noise sensitive properties, in line with the requirements of Camden Council.

Due to time-constraints, a full detailed planning assessment will follow this initial review. This two staged approach has been agreed with Camden Council's noise officer Edward Davis.

2 SITE DETAILS

2.1 Location

A wider location plan and closer site layout are shown in Figures 2.1 and 2.2 respectively.

Figure 2.1: Wider location plan

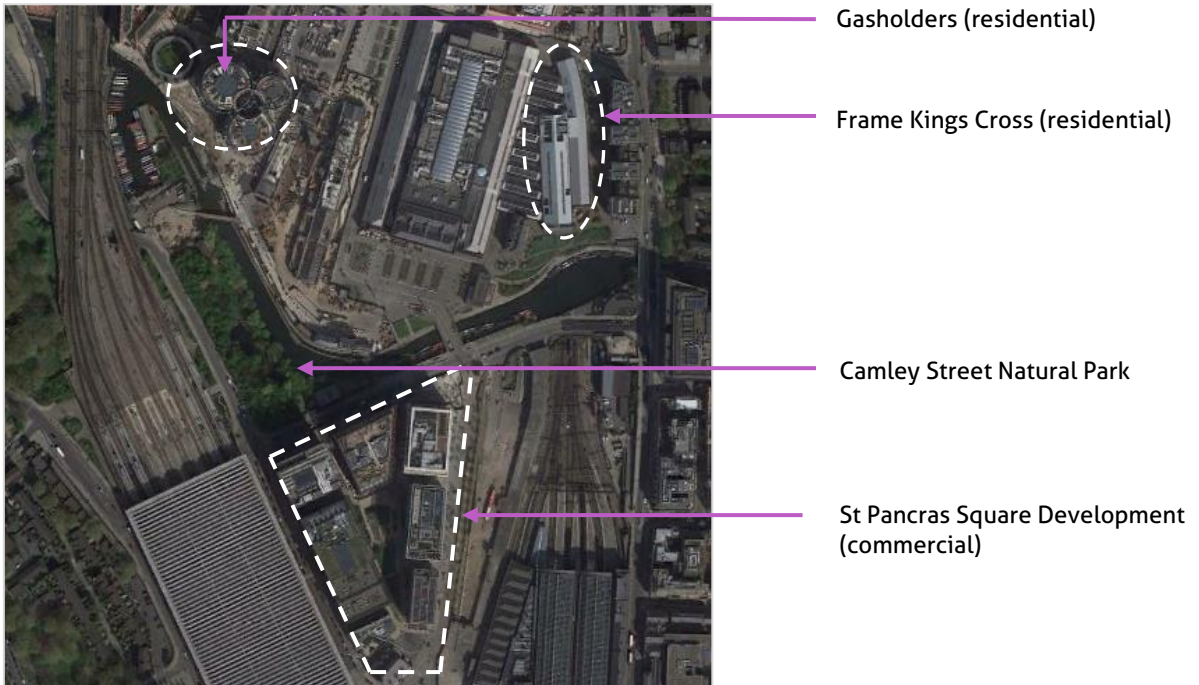
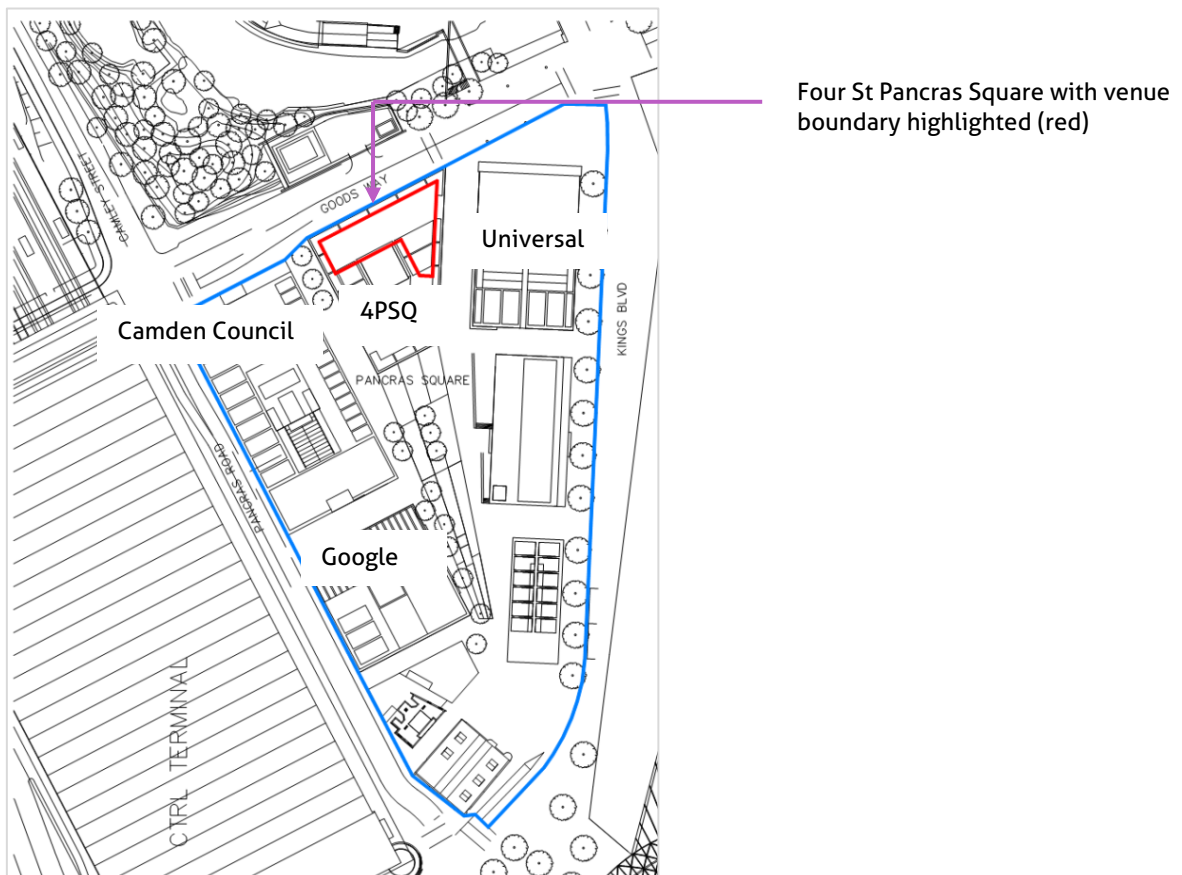


Figure 2.2: Location Plan (site boundary shown in red)



The development will occupy the basement and ground floor area on the northern eastern boundary of the 4 St Pancras Square building, adjacent to Goods Way.

The building itself is located within a dense commercial area, bound to the south, west and east by other similar multi-storey office buildings housing Camden Council, Google and Universal. To the north is the entrance to Camley Street Natural Park along Regents Canal with Central St Martins beyond.

The proposed music venue will share the building with office use at 1st floor and above, to be occupied by Universal Music.

The nearest residential use, with line of sight to the development site, is assumed to be the Gasholders development to the north-west and the Frame Kings Cross building to the north-east, both at a distance of over 250 m.

2.2 The Existing Building

The building is formed of an in-situ concrete frame with a two-storey basement.

The ground floor slab separating the basement and the ground floor is 350 mm concrete with the upper floors separated by post-tension concrete slabs of varying thickness, approx. 250 to 280 mm.

Structurally, the slabs form part of concrete frame which is supported by external columns acting as an exo-skeleton, constructed out of weathering steel (Cor-Ten). Structural concrete columns also run internally within the building from basement level upwards.

The building is fronted on all sides with glazed cladding which is supported at each floor level off the external columns.

2.3 Proposed Use

It is understood the bar/restaurant and basement venue will operate simultaneously with proposed licensing hours.

The basement venue will typically operate during the evening and night time period hosting live amplified music events with overall capacity of 865 persons, inclusive of the proposed mezzanine.

The ground floor bar/restaurant will operate throughout the full licensing period serving food and drink with a capacity of 500 persons. The space will typically play background music within the bar and also host live DJ performances on occasion.

3 CAMDEN COUNCIL REQUIREMENTS

Camden's latest guidance on licensed premises relevant to the proposed bar /restaurant and music venue, is provided in the draft document 'Camden Statement of Licensing Policy 2017-2022' in accordance with the Licensing Act 2003.

This document supersedes the 'Camden Statement of Licensing Policy 2011'.

With regards to noise the relevant points can be found under the heading 'Premises providing music, dance and similar entertainment', Sections 7.32 to 7.36 inclusive.

In summary, the section states its understanding of the cultural importance of premises that provide live music, dance and similar entertainment. At the same time, it recognises that such venues, if not properly designed and managed can give rise to nuisance for people who live near such premises.

Under Section 7.36 item 7 it states *'No noise generated on the premises or by its plant or equipment, shall emanate from the premises nor vibration be transmitted through the structure of the premises which gives rise to a nuisance'*

Under Section 7.36 item 14 it states *'The licensee shall appoint a noise consultant registered with the Institute of Acoustics or Association of Noise Consultants to prepare a scheme of sound insulation and noise control measures, which may include the installation of a noise limiting device, to prevent persons in the neighbourhood from being unreasonably disturbed by noise of music from the premises. The scheme shall be submitted for approval by the Council, and the approved scheme fully implemented to the satisfaction of the Council and the licensee notified in writing accordingly, prior to the premises being used for regulated entertainment'*

Anderson Acoustics is a member of both the Institute of Acoustics and the Association of Noise Consultants and form part of the design team on this project with the responsibility of ensuring that the proposed venue, when in operation, does not cause unreasonable disturbance to existing persons in the surrounding neighbourhood.

To achieve this we have adopted the following criteria taken from the superseded 'Camden Statement of Licensing Policy 2011'.

"Before 2300 hours, the noise climate of the surrounding area shall be protected such that the A-weighted equivalent continuous noise level (L_{Aeq}) emanating from the application site, as measured one metre from any façade of any noise sensitive premises over any five minute period with entertainment taking place, shall not increase by more than 5dB as compared to the same measure, from the same position, and over a comparable period, with no entertainment taking place; and the unweighted equivalent noise level (L_{eq}) in the 63Hz Octave band, measured using the "fast" time constant, inside any living room of any noise sensitive premises, with the windows open or closed, over any five minute period with entertainment taking place, should show no increase as compared to the same measure, from the same location(s), and over a comparable period, with no entertainment taking place."

"After 2300 hours, the noise climate of the surrounding area shall be protected such that the A-weighted equivalent continuous noise level (L_{Aeq}) emanating from the application site, as measured one metre from any façade of any noise sensitive premises over any five minute period with entertainment taking place shall not increase by more than 3dB as compared to the same measure, from the same position, and over a comparable period, with no entertainment taking place and the unweighted equivalent noise level (L_{eq}) in the 63Hz Octave band, measured using the "fast" time constant, inside any living room of any noise sensitive premises, with the windows open or closed, over any five minute period with entertainment taking place, should show no increase as compared to the same measure, from the same location(s), and over a comparable period, with no entertainment taking place."

Following discussions with Noise Officer Ed Davis of Camden Council, it was agreed the criteria set out above is acceptable for this development.

4 CONTROL OF AMPLIFIED MUSIC

4.1 General

The following key sound transfer paths need to be assessed to ensure amplified music played within the venue does not cause unreasonable disturbance to persons in the surrounding neighbourhood.

- Transfer of amplified music from basement music venue and ground floor bar/restaurant via the building to office spaces inside Four St Pancras Square;
- Transfer of amplified music from basement music venue to external façade via the building envelope to neighbouring noise sensitive properties;

4.2 Assessment Methodology

To assess the above sound transfer paths a series of onsite sound and vibration tests will be conducted to establish the sound insulation performance provided by existing constructions.

4.2.1 Airborne sound transfer

To assess airborne sound transfer, a sound source will be used to generate a pink noise signal in the basement and ground floor venue areas. The source will generate decibel levels commensurate with that expected during typical operation. The source will be positioned for an even distribution of sound within the room.

Using precision sound level meters, simultaneous noise levels will then be recorded within the source room and receiver position over the one-third octave band frequency range 50 to 5000 Hz.

The following scenarios will be tested:

- › Basement music venue to 1st floor office space
- › Basement music venue to 1 m outside the ground floor glazed façade
- › Ground floor bar/restaurant to 1st floor office space
- › Ground floor bar/restaurant to 1 m outside the ground floor glazed façade

The tests will be undertaken during an evening/night time period when background noise levels in the receiving positions are low and thus do not impact upon the measured sound insulation performances.

During the site visit we would also carry out attended baseline noise measurements at positions representative of nearby noise sensitive buildings, as well as leave an unattended noise monitor overnight inside a typical office space. This data will act as our benchmark and underpin our assessment against the design criteria set out in Section 3 of this report.

4.2.2 Vibration / Structural sound transfer

To establish the transfer of low frequency sound through the structure and address disturbance caused by re-radiated noise and human perception of vibration, the methodology as previously mentioned will be adopted to generate a sound source in the basement and ground floor venue areas.

Using highly sensitive vibration accelerometers we would then capture one-third octave band acceleration measurements on structural points within the office areas above with the sound source both on and off.

Using the data captured we can then investigate any contribution from structure-borne noise transfer and whether the vibration levels are likely to give rise to any adverse comment with regards to sensation of vibration.

4.3 Mitigation

Following the outcome of our testing, we will use the data to assess, in detail, the likely noise impact on persons in the building and the surrounding neighbourhood, in accordance with the criteria set out in Section 3 of this report.

Where noise levels exceed the criteria we will provide detailed mitigation advice to enable compliance. Typical mitigation could include one or more of the following:

- Internal acoustic linings to the basement venue to improve sound insulation
- Heavy internal acoustic doors to improve sound insulation
- Acoustic lobbied entrances
- Sound limiting device specification
- Acoustically isolated basement floor layer
- Acoustically isolated speaker stack mounting systems
- Acoustically isolated stage
- Basement level structural column independent or semi-independent linings.

5 CONTROL OF NOISE EMISSIONS FROM BUILDING SERVICES

The proposed venue will be ventilated mechanically such that all windows and external doors can remain closed.

From conversations with the mechanical services engineers Sweco, the following externally linked plant is proposed:

- › WC and kitchen extract fans via existing riser to terminate at roof level
- › Heat rejection units located at basement level loading bay area
- › Fresh air to be provided with exhaust air to basement and general intake through perimeter grilles mounted in the underside of the colonnade at ground floor high level.

Following discussions with Ed Davis, noise officer for Camden Council, it is understood noise emissions from any new mechanical plant serving 4 St Pancras Square may be covered under an existing reserved matter condition with a pre-established design noise limit.

It is understood that the services engineers Sweco will design to this noise limit as required. This will be achieved through careful selection and location of plant as well as through atmosphere side attenuators to all air handling plant.

6 PATRON NOISE

For venues of this nature, there is an inherent noise nuisance risk associated with patron activity. This nuisance can be caused by patrons arriving and leaving the premises, and smoking and drinking in outdoor areas within the vicinity of the venue.

Proposals indicate the provision of a designated outdoor seating area along the north and east facades, serving the bar/restaurant. It is assumed part of this area will serve as the smoking area to the basement venue during the night-time hours.

Given the nature of the location it is our opinion that noise nuisance from patron activity is low risk.

This is due to the following;

- › Amplified music will be restricted to internal areas only and will not be used in the designated external spaces;
- › The nearest noise sensitive buildings are commercial office use with whole building ventilation and closed windows, thus noise from patrons is unlikely to be audible;
- › The nearest residential properties are over 250 m away from the designated external areas and therefore unlikely to be influenced by activity in the designated outdoor areas;
- › The area already contains numerous outdoor drinking and eating areas serving the other buildings within St Pancras Square and along Stable Street to the north;

Further to the above, strategies will likely be required to manage the behaviour of patrons, which will inherently reduce the risk of noise nuisance further.

7 SUMMARY

Anderson Acoustics Ltd has been appointed by Opera to advise on acoustics and noise control for a proposed new bar / restaurant and music venue situated at ground and basement levels of 4 St Pancras Square, Kings Cross, London.

The application seeks consent for the proposed use of the building with use classes A3/A4/D2 Use and minor external alterations to access doors. The proposed use will comprise a restaurant and bar area within Use Classes A3/A4, and a live music venue (Use Class D2) in the basement. The proposal also includes the insertion of a mezzanine floor in the basement level which will be used for seating and dining as well as mezzanine space for storage of plant and goods (the mezzanine space does not require planning permission therefore does not form part of the planning application but is included for completeness).

The key sound transfer paths have been highlighted with regard to noise breakout to the environment and neighbouring noise sensitive properties and draws out relevant local authority noise criteria.

The report provides an initial review of the scheme as proposed with regard to these transfer paths, and sets out detailed assessment approach to address each noise issue with initial advice on mitigation that may be required.

Following issue of this report, the detailed assessment approach will be implemented and a subsequent detailed report will be provided in due course.

In conclusion, the location of the venue is favourable in terms of noise and should be granted planning on noise grounds, subject to appropriate pre-commencement conditions.