

8.0 **Acoustic Report**

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Retail facade update

Sandy Brown is the appointed acoustic consultant for the design and construction of the KGX1 project. A review has been undertaken in relation to the KGX1 ground floor retail facade update and associated reserved matters planning application amendment. Based on a review of the proposed changes to the original design, Sandy Brown can confirm the following:

- The changes do not affect the required facade sound insulation performance, as such document *KXC-A-001-U-SBA-31-SP001 T01 Cladding specification* remains valid.
- Similarly, the facade performance requirements in Table 2 and louvre noise limit in Table 17 of document *KXC-A-001-U-SBA-XX-RP005 T01 Stage 4 acoustic report – Employer's Requirements*, remain valid.
- Our response to Condition 60 (Amenity – Plant Noise) as included in the original Reserved Matters application is also unaffected by the facade changes and remains valid.

Condition 60 (Amenity – Plant Noise)

32.1 The condition and its reason state:

“Applications for approval of Reserved Matters shall include full particulars of the noise impact of any plant or equipment included in that application which shall meet the following standards unless otherwise agreed in writing by the local planning authority:

(a) Noise levels at a point 1 metre external to sensitive facades to be at least 5dB(A) less than the existing background measurement (LA90) expressed in dB(A) when all plant/equipment are in operation;

(b) Where it is anticipated that any plant/equipment will have a noise that has a distinguishable, discrete continuous note (whine, hiss, screech, hum) and/or if there are distinct impulses (bangs, clicks, clatters, thumps) special attention to be given to reducing the noise levels from the piece of plant/equipment at any sensitive façade to at least 10dB(A) below the LA90, expressed in dB(A).

Reason: To ensure a sustainable development and to safeguard the amenities of the development and adjoining premises and the area generally and to ensure that the development is carried out in accordance with the Environmental Impact Assessment in accordance with policies SD1, SD6, SD7 and KC8 of the London Borough of Camden Replacement Unitary Development Plan 2006.”

Response to Condition 60

- 32.2 A baseline noise monitoring survey by The English Cogger LLP (dated June 2007) was previously submitted to and approved by LB Camden in order to discharge the requirements of Condition 59. A further survey was subsequently carried out between December 2007 and March 2008 to include the ‘Triangle site’, resulting in a revised report dated April 2008. Those reports, referred to collectively as the ‘Baseline Noise Survey’ were undertaken to determine the pre-existing ambient noise levels across the King’s Cross Central site, prior to the commencement of any construction works.
- 32.3 In conformity with Condition 60, all noise generating building services plant/equipment will be specified and installed to achieve an acoustic performance at neighbouring sensitive facades (i.e. housing, schools, hospitals, offices and workshops), of at least 5 dBA below the prevailing baseline, as defined by the above report in relation to Condition 59. Further, plant will, where possible, be selected to avoid any tonal or impulsive characteristics described in part (b) of Condition 60. Where selected plant does have such characteristics, the noise from the plant will be designed to a limit of 10 dBA below the baseline measurement.
- 32.4 The nearest properties to the Zone A Building will be Buildings B2, B4 and B6, which sit on the west side of King’s Boulevard, the northern end of the Great Northern Hotel, and the residential buildings on York Way, specifically F1 and J which form part of the King’s Cross Central development, and existing residential properties on the east side of York Way. From the Baseline Noise Survey locations available, the nearest equivalent are the ‘GNH North’, ‘Fish and Coal’ and ‘York Central’ (residences along York Way). These locations are subject to the same road and rail noise sources as the nearest receptor properties referred to above.

32.5 For the purposes of assessing the Zone A Building, the GNH North noise levels have been used as representative for the Great Northern Hotel; Fish and Coal has been used for the Zone B; and York Central has been used for the residential buildings along York Way (including F1 and J).

32.6 The lowest background noise levels measured at different times of the day during the Baseline monitoring were as shown in Table 32.1 below.

Receptor	Minimum background noise level (LA90,15 min)		
	Day (0700-1900 hours)	Evening (1900-2300 hours)	Night (2300-0700 hours)
GNH	60	56	54
Fish & Coal	57	53	46
York Central	57	52	45

Table 32.1: Lowest Measure Noise Levels During Baseline Monitoring

32.7 The resulting noise limits for Zone A plant and equipment, measured at 1 m from the façade of the nearest noise sensitive neighbours are given in Table 32.2 below.

Receptor	Minimum background noise level (LA90,15 min)		
	Day (0700-1900 hours)	Evening (1900-2300 hours)	Night (2300-0700 hours)
GNH	55	51	49
Buildings in Zone B	52	48	41
Residences along York Way (F1 and J)	52	47	40

Table 32.2: Design Noise Limits at Sensitive Facades for Plant and Equipment

32.8 The preliminary plant selections and acoustic design works to date indicate that compliance with the specified criteria set out in the Table 32.2 can and would be achieved. The criteria have been derived having regard to the requirements of Condition 60 and in the context of the prevailing noise climate established in relation to Condition 59. They have been applied to the appropriate assessment, assuming that all non-emergency plant is operating simultaneously.

32.9 With regard to emergency plant, previous discussions with LBC Environmental Health Department have established that this may have a 5 dB relaxation from the relevant criteria for normally operating plant.

32.10 Commercial receptors, such as the Zone B buildings, will be occupied during normal working hours and therefore the preliminary plant selections and acoustic design works undertaken to date have been based on the daytime noise limits set out in the Table 32.2 for commercial buildings. During the evening, fewer items of Zone A plant will operate and at reduced duty, thus resulting in lower noise emission levels. At night, the majority of Zone A plant will not be operational.

32.11 For residential receptors, including the Great Northern Hotel, noise limits will be applicable during day, evening and night.

32.12 The design standards described above will be applied to any alternative plant selections made as a result of further design development.