

Acoustic Mitigation Measures

The construction of a solid, close-boarded hoarding (2.4 metres high) around the majority of the Site is proposed, as detailed further in Chapter 4 – Construction Management, of this report. This can be expected to reduce noise levels at local receptors by 0dB(A) to 5dB(A), depending upon the location of the noise source on Site and the height of the receptor.

In addition, the following recommendations must be followed to achieve appropriate reductions of construction noise.

- Noisy plant should be located so as to maximise the distances between the plant and the sensitive receptors.
- The works should be carried out in as timely a manner as possible in order to minimise the duration of any disturbance.
- Via communication between the Contractor and the Council, local residents should be kept informed of general construction activities, including working hours.
- Wherever possible, working hours should be restricted in line with Manchester City Council's typical requirements.
- Excavations in hard materials should use silenced and sensitively located compressors in conjunction with shrouded breakers.
- The drop height of materials into wagons shall be minimised.
- Any materials hoists used on the Site should be enclosed by hoarding at ground level and operated by mains electricity or via a silenced generator.
- Rubbish skips should be housed within enclosed areas that encompass the chute terminations. The materials unloading point should be enclosed.
- All reasonable steps should be taken to limit the number of vehicles waiting to deliver to the Site.
- All plant and equipment should be properly maintained.
- All plant and equipment should be operated in their minimum-noise modes with any manufacturer's silencers and covers properly in place.
- With the exception of enhanced generators, pumps and electric plant, all plant and equipment should be shut down when not in use.
- Vehicle movements should be arranged so as to minimise noise from reversing warning indicators.
- The Contractor should generally comply with the guidance and procedures given in BS5228: 2014.

Building Services noise

Overall building services noise limits have been established to achieve compliance with published guidelines. To ensure compliance with the criteria, individual items of building services plant and any associated noise control hardware will need to be selected such that the cumulative noise levels from all plant items do not exceed the overall building services noise limits.

Noise from Commercial Operations

Environmental noise limits relating to activity noise egress from the proposed commercial units have been established to ensure compliance with published guidelines. Tenants of the commercial must carry out an assessment to determine the allowable internal levels of noise to avoid assess their To achieve compliance with the criteria, the façade elements of the commercial units must achieve the performance criteria stated herein and activity noise levels within the commercial units must not exceed the advised limits.

In relation to the previous noise and vibration assessment prepared for the consented scheme, the conclusions are qualitatively broadly similar in terms of anticipated impact and mitigation measures.

Construction

There is expected to be an overlap of construction works at the Site and at other buildings on the St Johns Masterplan site. However, the other buildings will be at a much later stage in their build programmes such that the noisier construction activities such as excavation and frame construction will have ceased at the time that these activities commence at the Site. It is therefore expected that the cumulative construction noise levels at the nearby noise-sensitive buildings will be determined by the construction activities at the proposed Site

Operation

Operational noise due to the Proposed Development and the committed developments in the surrounding area would include mechanical services noise, noise egress due to leisure activities and changes in road traffic noise levels due to changes in traffic flows.

Operational noise limits due to mechanical services at the Proposed Development have been derived using the methodology and assessment criteria given in BS4142: 2014. Operational noise limits for any mechanical services systems at the buildings of the committed developments in the surrounding area would also be derived using the methodology and assessment criteria given in BS4142: 2014. The Planning Conditions for the committed developments in the surrounding area include a requirement for the building and any externally mounted ancillary equipment to be acoustically insulated in accordance with a scheme submitted to and approved in writing by the City Council in order to secure a reduction in the level of noise emanating from the equipment. The applicable noise limits will tend to be governed by the need to minimise noise levels at the buildings within the Proposed Development, as these are the closest sensitive receptors in the majority of cases.

Noise limits for permanent stationary plant serving the Proposed Development have been established. Compliance with these noise limits should ensure that the environmental noise impact from the Proposed Development is negligible during the operational phase of the Proposed Development.

Noise limits for the proposed commercial units within the Proposed Development have been established. Compliance with these noise limits should ensure that the environmental noise impact from the commercial units of the Proposed Development is negligible during the operational phase of the Proposed Development.