

Cambridge Street, Manchester

Complete	Area	Client	Architect
2016	UK England	Renaker Build Limited	Hodder and Partners

Cambridge Street is a residential development that provides high quality accommodation in Manchester city centre. It is a worthy addition to the city's skyline and is the next phase in the ongoing regeneration of the area.

The development contains 282 apartments with 1,700 square feet of commercial space and a split level car park on the ground floor. Situated between Whitworth Street West and the Mancunian Way, residences are split into two blocks – one of 28 storeys and another of 21 storeys.

Near to Oxford Road station, the site is within close proximity to busy rail lines with passenger and freight traffic, a busy inner ring road and a major bus corridor.



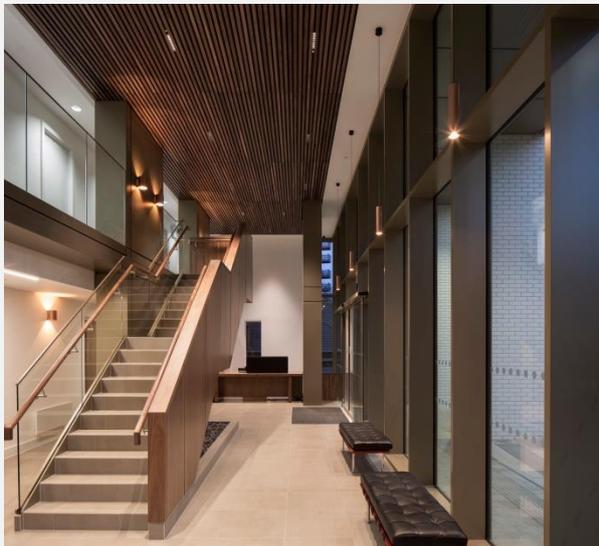
Images courtesy of Renaker www.renakerbuild.com

Services provided

Sandy Brown has conducted a series of design reviews to provide advice on the proposed development. Acoustic advice from these reviews included:

- external façade performance and sound insulation
- conformity with Part E building regulation requirements
- guidance on separating walls
- acoustic finishes
- room acoustics
- ventilation strategy.

Guidance on planning conditions and building control regulations was also provided to ensure that the development complied with local authority statutory requirements.



Special acoustic features

The site for the proposed development was on a derelict plot in the heart of Manchester city centre, adjacent to a rail line and just 400 metres from Oxford Road station. This is a main rail interchange that provides frequent services through the day and into the evening. The rail line also handles freight trains during the day and night, so it was important to establish the degree to which the property would be affected by tactile vibration and re-radiated noise from train movements.

Due to its central location, the external façade performance was essential to ensure noise ingress to new apartments was suitably controlled. Reviews of the proposals for external wall constructions, glazing configurations and ventilation strategy were conducted and findings assessed alongside the results from noise and vibration surveys in the area. Working closely with the architects and developers, a façade performance capable of achieving internal noise level criteria was incorporated into the construction guidelines.

Establishing the glazing types also allowed for a ventilation strategy to be devised for the building. Each apartment was designed with an efficient Mechanical Ventilation with Heat Recovery (MVHR) system to ensure that occupants are provided with ventilation without reliance on opening façade ventilators. By ensuring an equal contribution from noise ingress via the façade and from building services, we were able to identify scope for reducing the sound insulation performance in some areas, allowing for cost savings to our client.