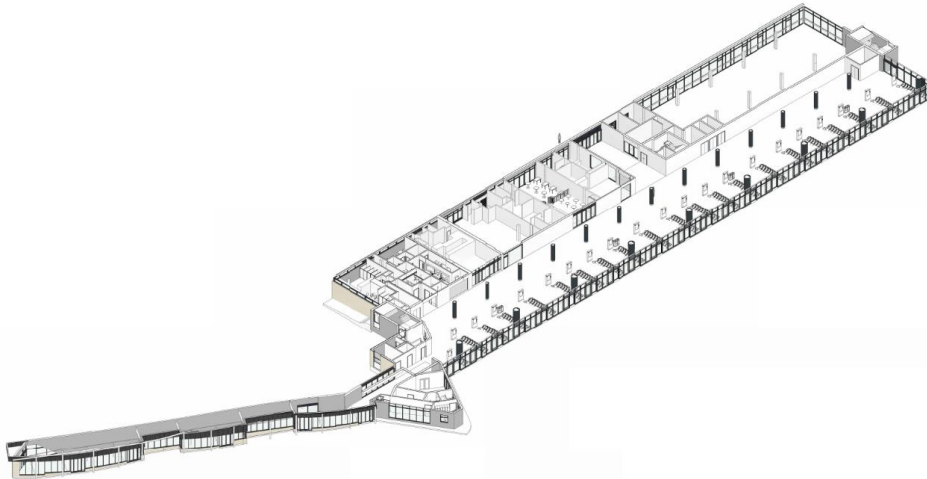




Huddersfield Bus Station

Intrusive Survey Findings
HDS-ROS-ZZ-XX-R-S-00500

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- **Trial Pit to Upperhead Row**

Required to determine existing slab edge and foundations, to inform detail where new drainage to the travel centre passes under the existing external wall, and how new stone cladding will be supported. Locate local to cracking in existing brickwork to determine potential for inadequate footings influencing the brickwork defects.

Location is not within the Network Rail easement zone.



Figure 2: Location of Trial Pit on Upperhead Row

2.0 Survey Findings

2.1 Trial Pit to Main Concourse

The intrusive investigation has verified the presence of an external slab with a thickness of 300mm, overlaid by approximately 80mm of finishes comprising beading and pavement planks. The slab extends beyond the building's footprint by 400mm along Market Street and 600mm along the Bus DIRO elevation.

The foundations of the primary structural frame were not encountered during the investigation, as initially anticipated. However, it is presumed that these foundations bearing on "firm to stiff brown, light grey, and orange-brown mottled, slightly sandy clay" located approximately 1 meter below the ground surface.

The material identified beneath the slab is classified as "light brown made ground, containing angular gravel-sized fragments with sand."



2.2 Trial Pit to Upperhead Row

Trial pit excavation confirmed that the brickwork elevation extends to a minimum depth of 1 meter. It is anticipated that the brickwork is supported on a strip foundation bearing on firm to stiff clay, characterized as "firm to stiff brown, light grey, and orange-brown mottled, slightly sandy clay," encountered at approximately 1 meter below ground level.

According to BS 8004:1986, the expected bearing capacity of firm to stiff clay ranges between 100–300 kN/m². Based on these findings and the applied load, the external wall foundation is not considered inadequate.

However, it is noted that no expansion or movement joints are present within 6 meters of the building corner. This does not align with the recommendations outlined in Eurocode 6 or the Brick Development Association (BDA) guide on the design for movement in brickwork.

