



Hopwood Hall College, Rochdale Building investigation Test Report

**Client: Willmott Dixon Construction Limited, Hollinwood Business
Centre, Albert Mill, Albert Street, Hollinwood, Oldham,
Lancashire, OL8 3QL**

**Site Address: Hopwood Hall College, St Mary's Gate,
Rochdale, OL12 6RY**

Report Ref: STR2829 Issue Number: 01 Issue Date: 28.01.25



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- 1.0 Introduction
- 2.0 Sampling/Testing Methods & Equipment
- 3.0 Test Results/Investigation Findings

Approval

Report No: STR2829		Issue No: 01
Client Address:	Willmott Dixon Construction Limited Hollinwood Business Centre Albert Mill Albert Street Hollinwood Oldham Lancashire OL8 3QL	Compiled by:  Claire Douglas – Report Administrator
		Approved by:  Acxit Babu – Business Unit Manager
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Issued for and on behalf of Construction Testing Solutions Ltd.		
Report Template Version 2.5		

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Distribution				
Date:	Name	Company	Issue	Reason for Issue
28.01.25	Simon Atkinson	Willmott Dixon Construction Limited	01	First issue
28.01.25	Marie Hughes-Jones	Willmott Dixon Construction Limited	01	First issue
The latest version of this report supersedes any previous versions issued				

1.0 Introduction

Following written instructions from Marie Hughes-Jones of Willmott Dixon Construction Limited, Hollinwood Business Centre, Albert Mill, Albert Street, Hollinwood, Oldham, Lancashire, OL8 3QL, under task reference “Hopwood Investigation Works” to carry out a building investigation. CTS attended Hopwood Hall College, St Mary’s Gate, Rochdale, OL12 6RY on 6th and 7th January 2025.

This contract included inspection and sampling of Hopwood Hall College, Rochdale.

Measurements of structural elements were carried out in the specified locations.

In five locations, a survey of steel reinforcement was carried out using a Hilti Ferroskan type PS 300 in accordance with the equipment manufacturer’s instructions. Scan node referencing is on a 150mm x 150mm grid.

Cover concrete was broken out to expose the reinforcement in one location to inspect the steel condition, depth of cover and diameter.

One 75mm nominal diameter concrete core sample was extracted for subsequent laboratory testing. The density and compressive strength of concrete cores was sub-contracted to Simtec, 116 The Burrows, East Goscote, Leicester, LE7 3XD. UKAS Number 10108.

2.0 Sampling/Testing Methods

Test covered under our current UKAS scope of accreditation.

- Drilling of Concrete Cores – In accordance with BS EN 12504-1:2019

Tests outside of our UKAS accreditation.

- Ferroskan Imaging – In-House Method TP87
- Exposure and inspections of reinforcement – In-House Method TP103

2.1 Equipment

Before use checks are carried out on all electronic test equipment in accordance with the relevant documented in-house procedure.

Equipment used:

- Ferroskan – Hilti PS300

2.2 Environment

Results from the Ferroskan (when used in Image Scan mode) should be confirmed where possible by direct measurements of the depth of cover and bar size.

Weather condition at the time of testing:

Date	Weather conditions	Temperature (°C)	Day/Night
6 th January 2025	Snow	1	Night
7 th January 2025	Frost	1	Night

Time of Testing:

The in-situ testing was carried out between 21:00hrs and 05:00hrs.

3.0 Test Results/Investigation Findings

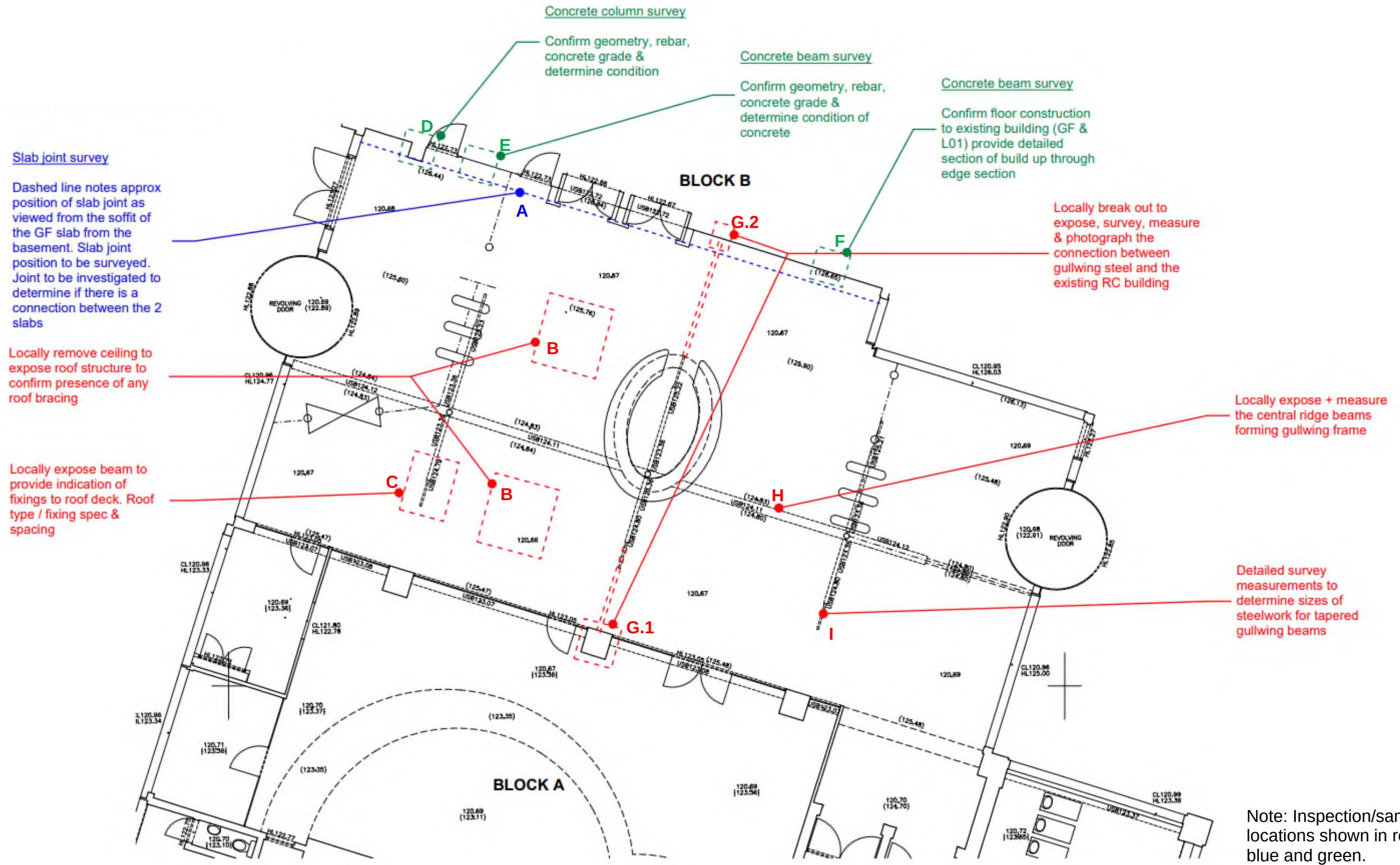
Test results can be found on the following pages:

- Appendix A – Inspection and sample locations
- Appendix B – In-situ inspections
- Appendix C – Sub-contracted testing – Compressive strength testing

APPENDIX A

INSPECTION AND SAMPLE LOCATIONS

**Indicative inspection locations – Gullwing, ground floor
(plan view)**



Indicative inspection locations – St Mary's Gate Wall



Core required through wall to determine build up, thickness and presence of rebar (if concrete)

Suitable repair / reinstatement detail required



Area of brickwork to be locally removed to expose detail at soldier course / movement joint. Is there a cavity or does concrete wall extend up?

Solider course is believed to be the head of the original wall before it was extended.

Brickwork reinstatement required.

Note: Inspection/sample locations shown in red.

Core location information



Core 1 – Location D – Column, west face
Offset 170mm from north edge; 1280mm from ground level

APPENDIX B

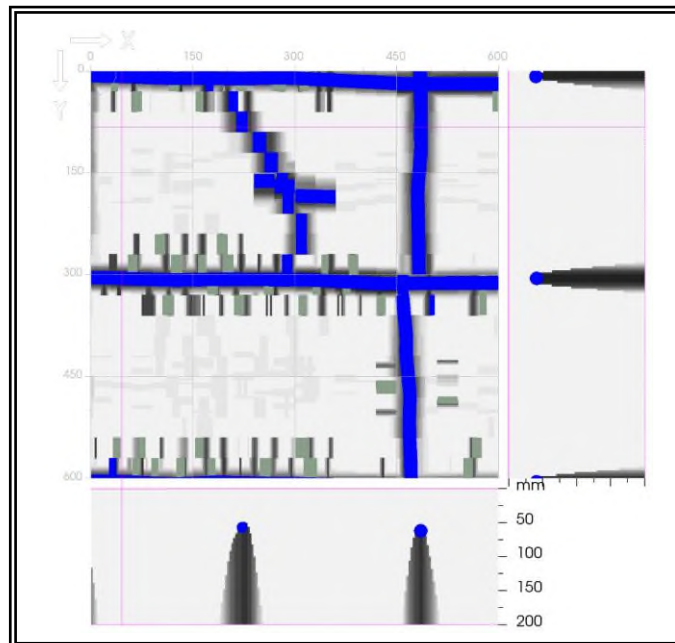
IN-SITU INSPECTIONS

Location A – Slab joint survey – Scan 824 – Slab, soffit
Top left of scan offset 4200mm from east wall; 930mm from north wall
(viewed from below)

↑
N



Note: Section of mastic removed to expose joint between slabs, no connection between slabs at this location. Scan shows reinforcement on both sides of the joints. Scan 820 (location F) shows reinforcement from top side of slab.



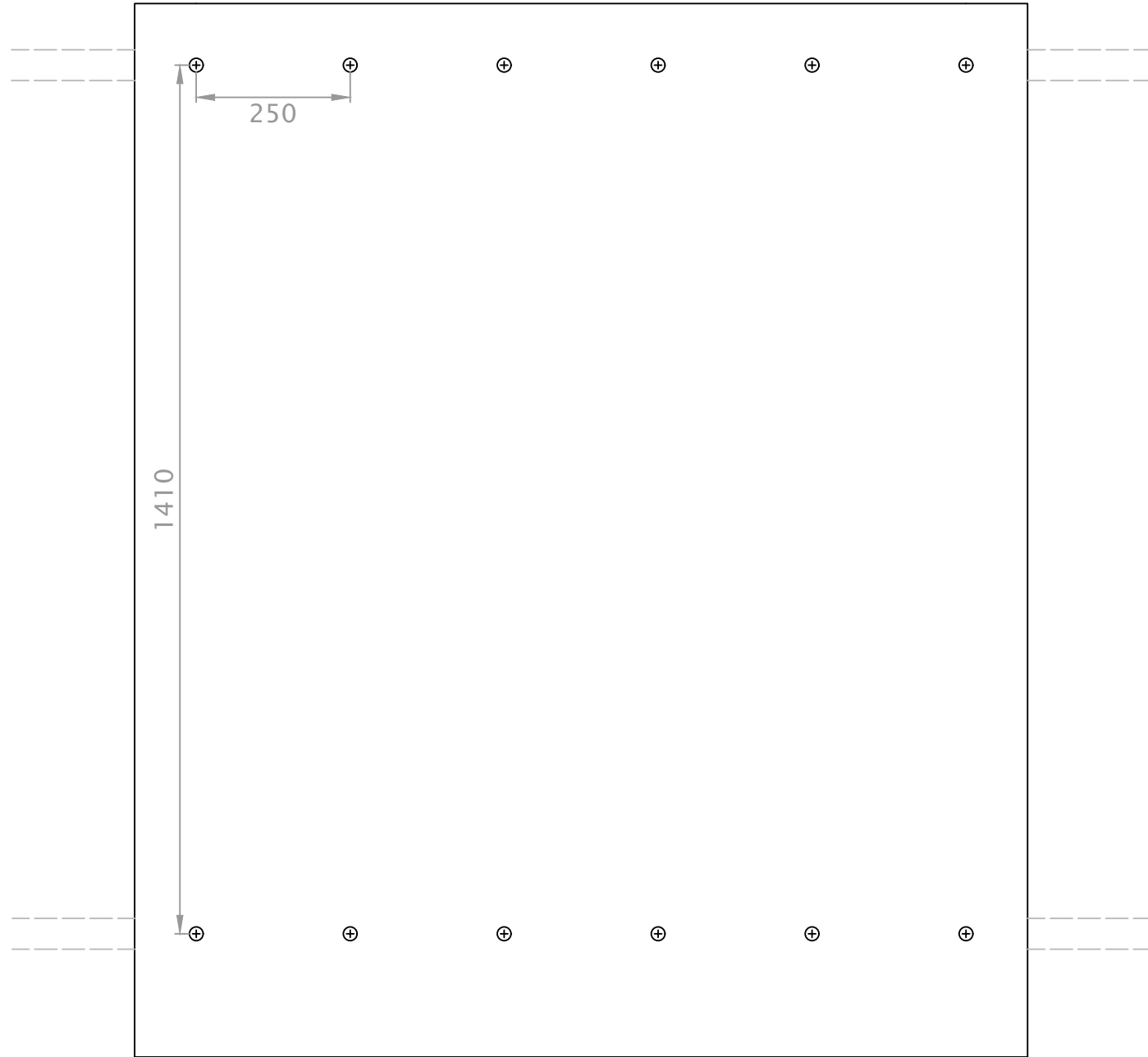
Scanned area is 600mm x 600mm			
North to south bars		East to west bars	
Mean spacing (mm)	237*	Mean spacing (mm)	295*
Mean cover (mm)	55*	Mean cover (mm)	34*

* Estimated using scan software.

Location A – Slab joint survey – Photographs

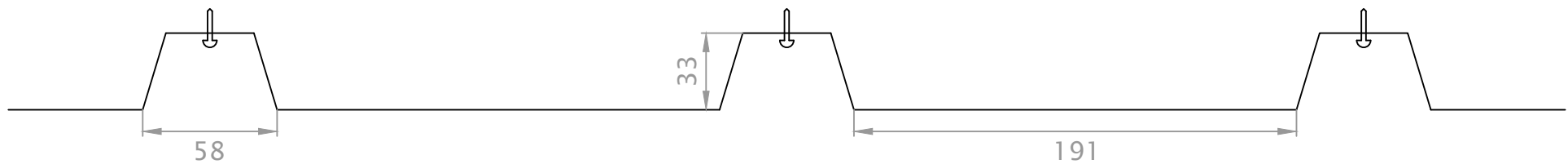


N



Assumed internal roof bracers running east to west

Location B – Roof structure – Corrugated steel
(viewed from below)



Location B – Roof structure – Corrugated steel
(cross section)

Notes:
1. All dimensions in millimetres.



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DATE: 22/01/25	DATE: 27/01/25	DATE: 27/01/25
DRAWING STATUS: Final	SCALE: NTS	

CLIENT:
Willmott Dixon Construction Limited
PROJECT TITLE:
Hopwood Hall College, Rochdale

DRAWING TITLE:
Location B – Roof structure

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DRAWING NUMBER:
STR2829/001

Location B – Roof structure – Photographs

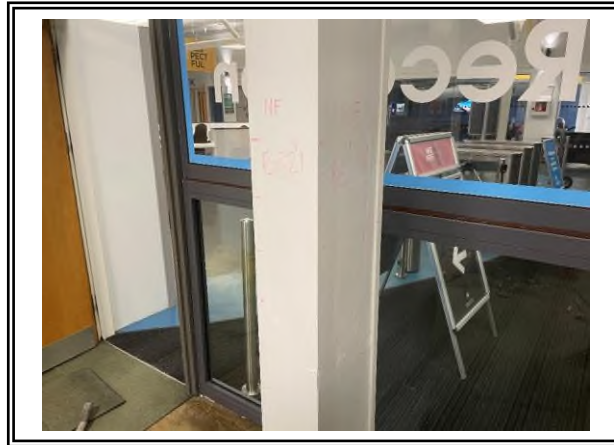


Location C – Roof fixing to beam – Photographs

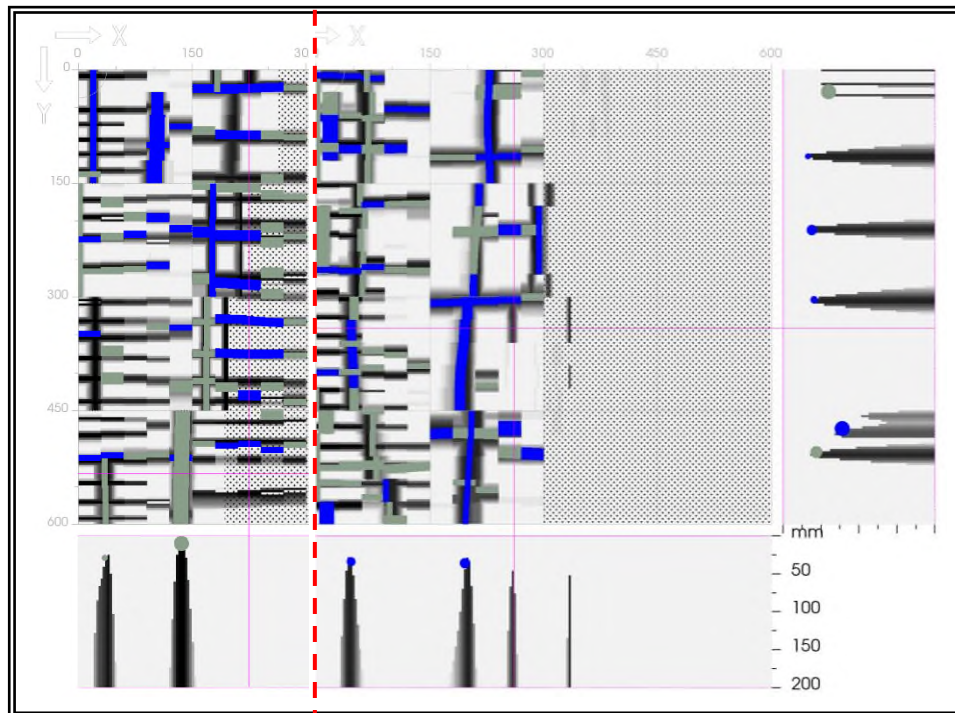
Corrugated steel roofing is riveted to top of tapered beam at intervals of 470mm.



Location D – Concrete column survey – Scans 821 and 822 – Column, north face and west face
Top left of scan offset 821 offset 0mm from east edge; 1460mm from ground level
(developed view)



Dimensions:
North face: 220mm
West face: 265mm



Scan 821 – North face

Scan 822 – West face

Scanned area is 600mm x 600mm			
Vertical bars		Horizontal bars	
Diameter (mm)	18**	Diameter (mm)	6**
Mean spacing (mm)	101 (north face)* 150 (west face)*	Mean spacing (mm)	58 (north face)* 149 (west face)*
Bar type	Square twisted**	Bar type	Smooth round**
Mean cover (mm)	7 (north face)* 22 (west face)*	Mean cover (mm)	22 (north face)* 28 (west face)*

* Estimated using scan software.

** Taken from breakout 1.

Location D – Concrete column survey – Breakout 1 – Column, west face
Offset 215mm from north edge; 1340mm from ground level



Bar 2

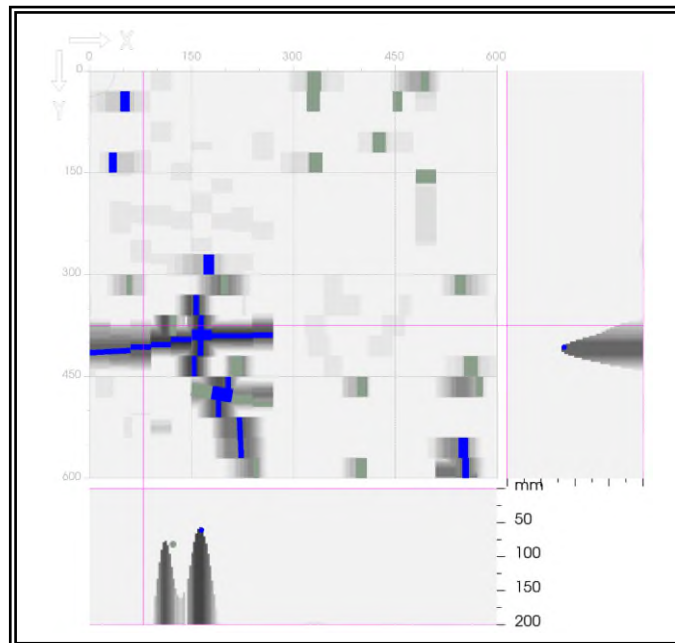


Bar 1

Bar reference	Bar 1	Bar 2
Orientation	Vertical	Horizontal
Type of bar	Square twisted	Smooth round
Diameter (mm)	18	6
Cover (mm)	31	25
Condition of reinforcement	Partial surface rust	Partial surface rust
Bar spacing (mm)	220 to next bar	200 to next bar

Location E – Concrete beam survey – Scan 823 – Slab, top face
Top left of scan offset 1770mm from west corridor wall; 820mm from south glass partition
(plan view)

↑
N

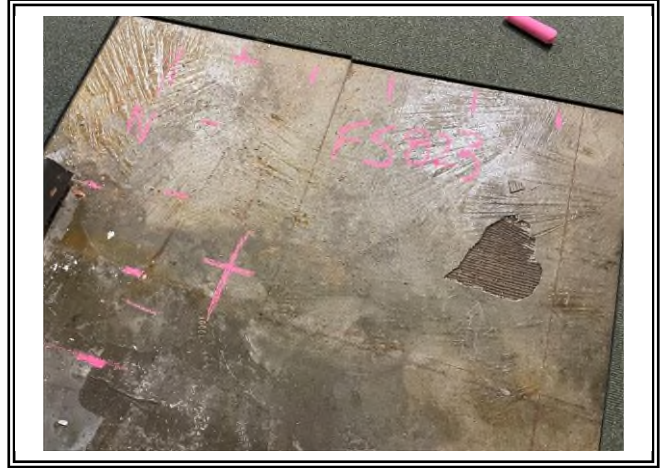


Scanned area is 600mm x 600mm

No discernible bars found

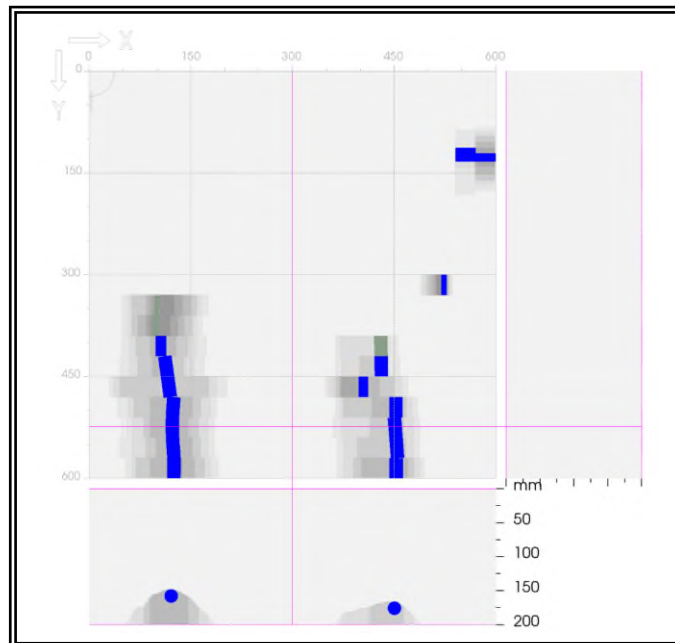
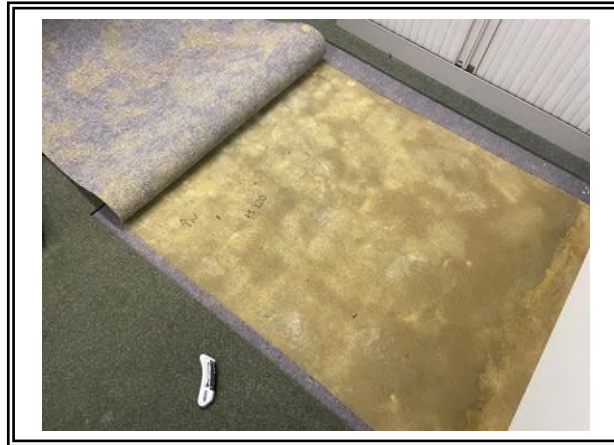
Location E – Concrete beam survey – Photographs

Unable to determine presence of reinforcement due to unclear scan image. Pilot hole drilled 500mm through slab on beam line then a further 300mm into load bearing masonry wall below slab.



Location F – Concrete beam survey – Scan 820 – Ground floor, slab, top face
Top left of scan offset 1640mm from east wall; 2110mm from north wall
(plan view)

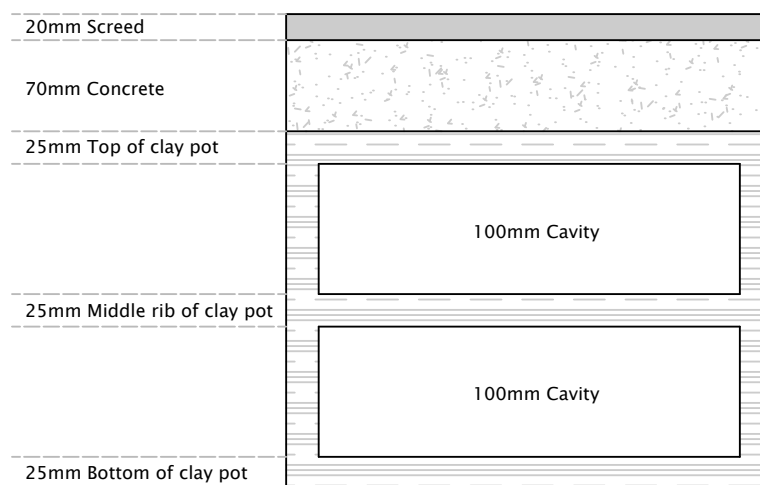
↑
N



Scanned area is 600mm x 600mm			
North to south bars		East to west bars	
Mean spacing (mm)	328*	No discernible bars found	
Mean cover (mm)	150*		

* Estimated using scan software.

1. All dimensions in millimetres.



Pilot hole drilled on level 1 to confirm same floor make-up as ground floor.

Location F – Ground floor – Floor construction
(cross section)



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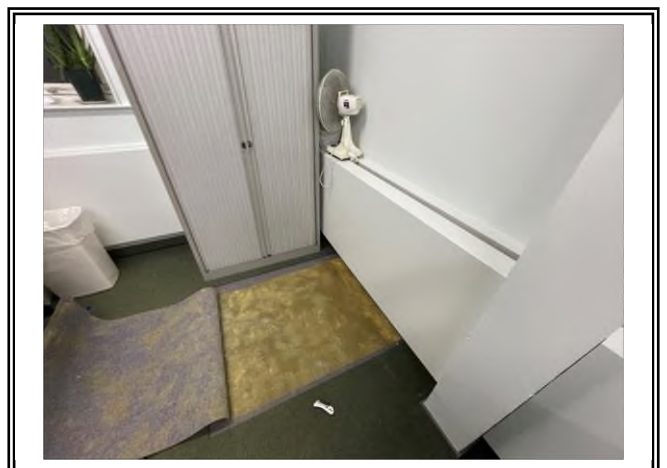
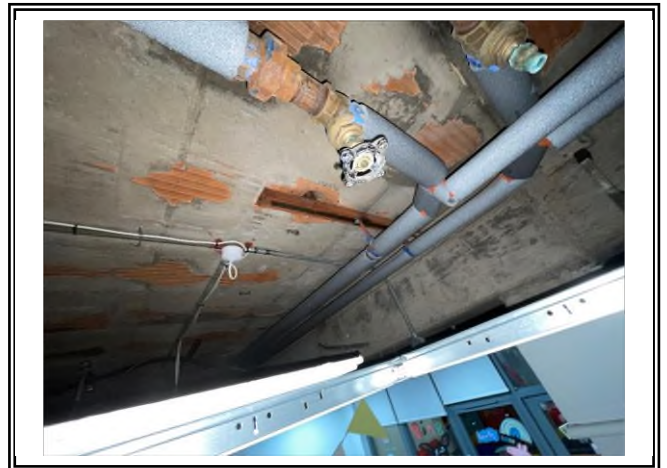
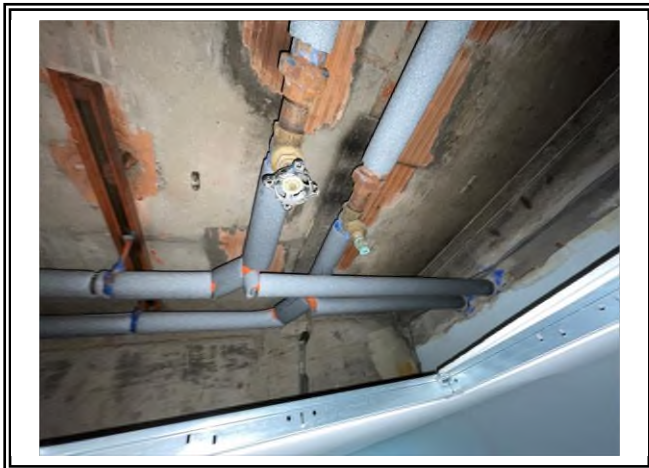
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DRAWING TITLE:
Location F – Ground floor – Floor construction

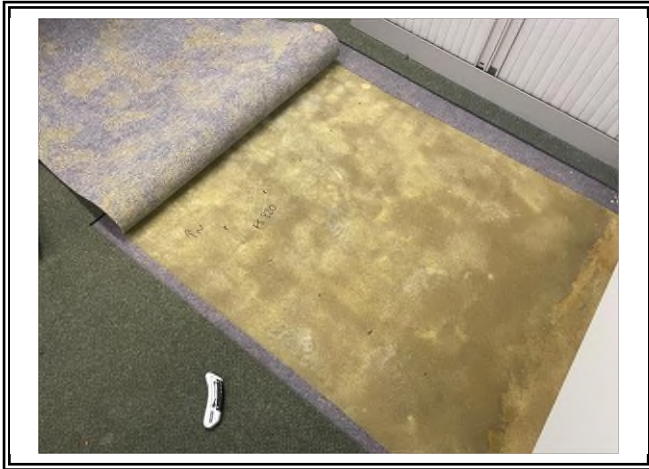
APPENDIX B

DRAWING NUMBER: STR2829/002

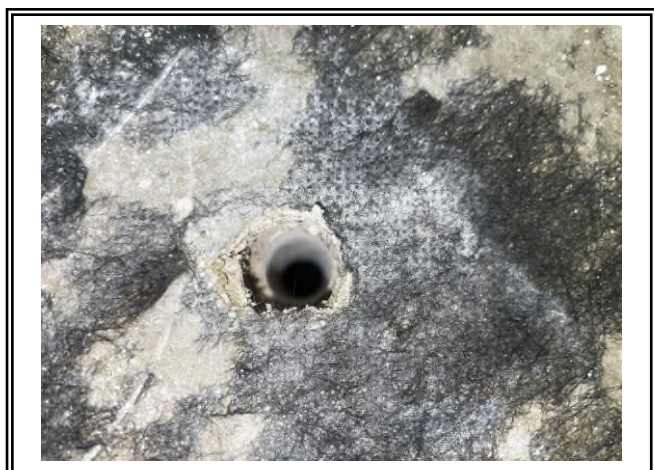
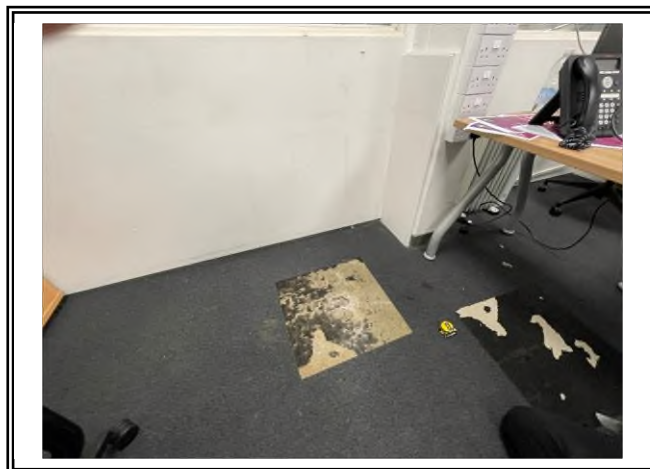
Location F – Ground floor – Floor construction – Photographs

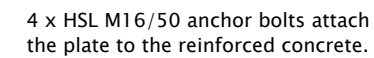


Location F – Ground floor – Floor construction – Photographs (continued)



Location F – Level 1 – Floor construction – Photographs





Location G2 is visually of similar construction to location G1, but unable to measure due to scaffolding.

Location G.1 – Top down view of plate build up

1. All dimensions in millimetres.



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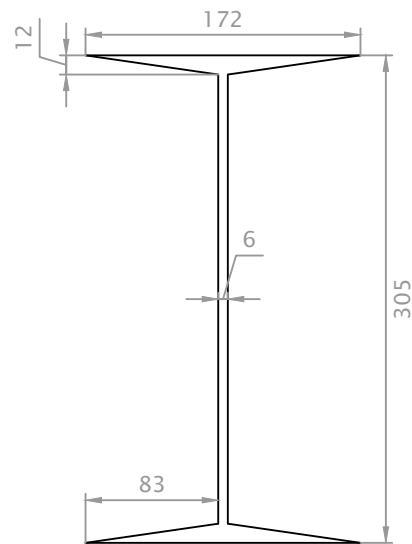
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DRAWING TITLE:
Location G – Plate build up

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Location G – Plate build up – Photographs





Location H – Central steel ridge beam
(cross section)

Notes:

1. All dimensions in millimetres.



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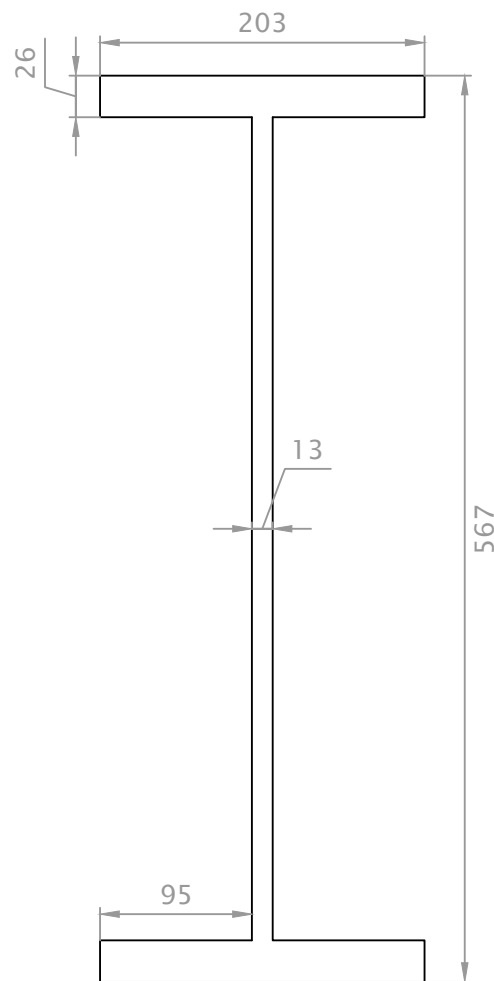
DRAWING TITLE:
Location H – Central steel ridge beam

APPENDIX B

DRAWING NUMBER:
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Location H – Central steel ridge beam – Photographs





Height measurement taken directly above bracing point.

Location I – Tapered steel beam
(cross section)

Notes:

1. All dimensions in millimetres.



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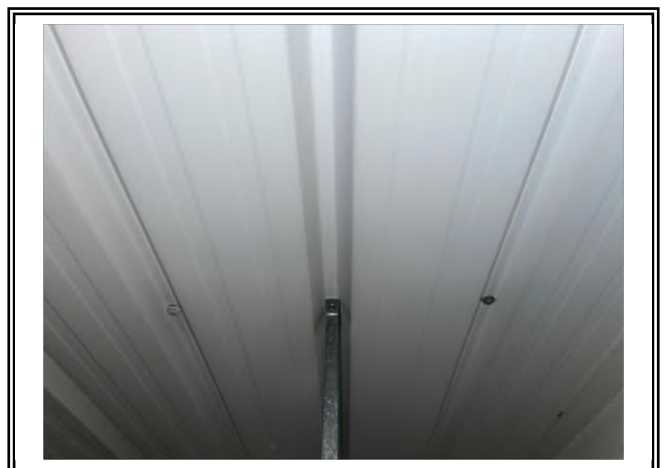
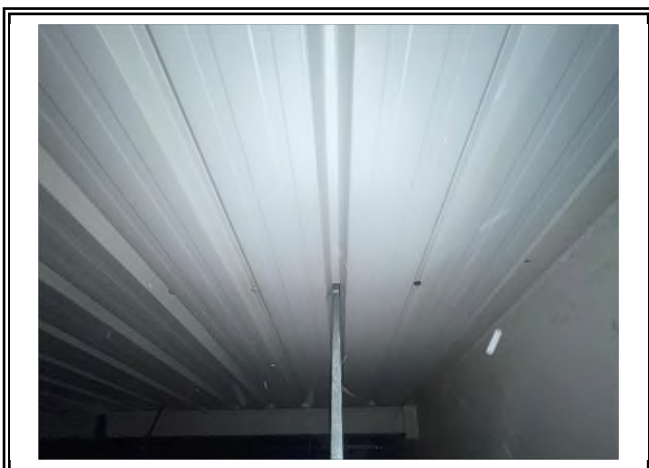
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PROJECT TITLE:
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DRAWING TITLE:
Location I – Tapered steel beam

APPENDIX B

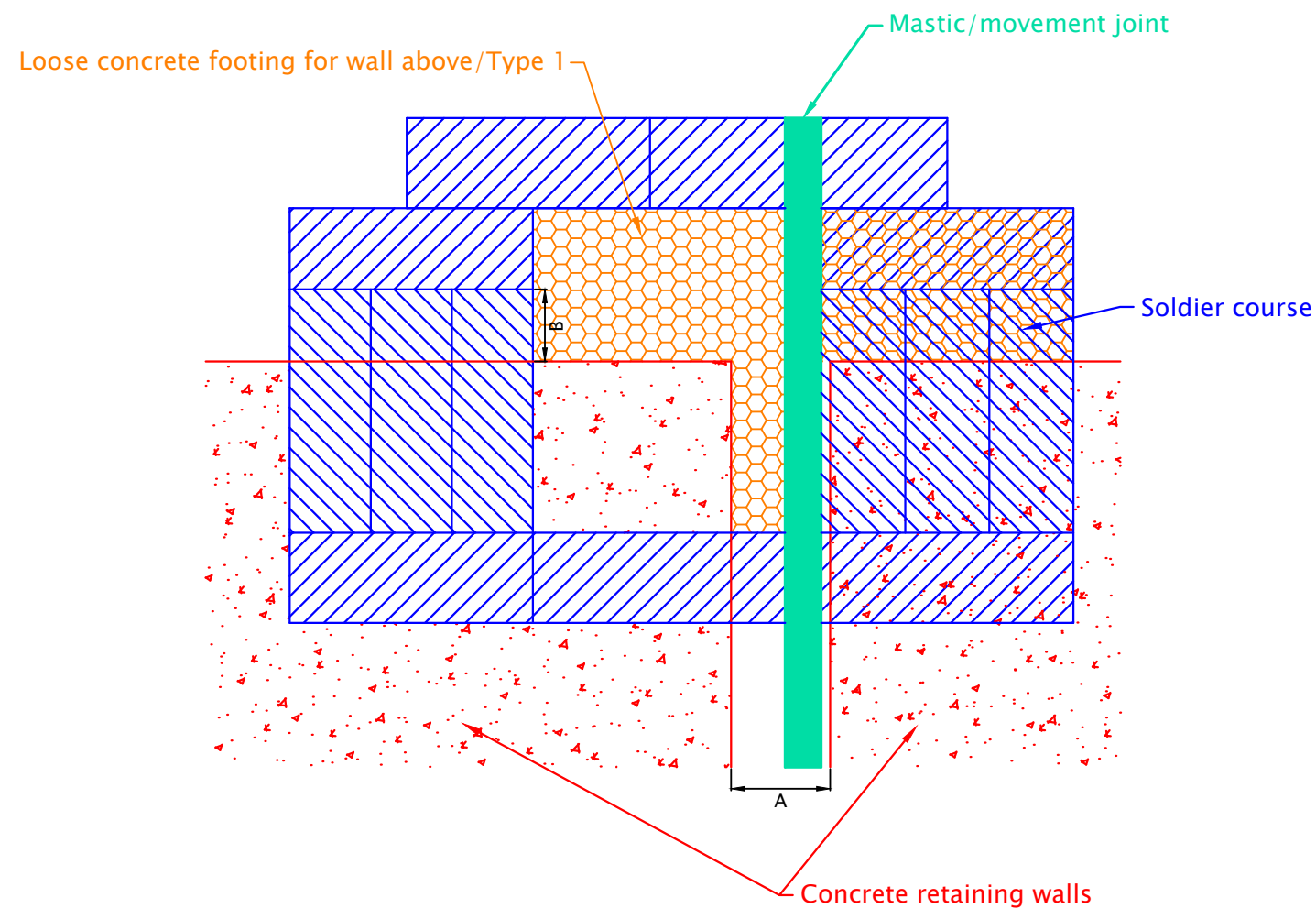
DRAWING NUMBER:
STR2829/005

Location I – Tapered steel beam – Photographs



Location I – Tapered steel beam – Photographs (continued)





Location K – Soldier course/movement joint

Location J – Masonry wall top

Pilot hole drilled through full wall of 330mm thickness, no presence of concrete or empty cavity.

Key:

-  Brickwork – Soldier course
-  Brickwork – Stretcher bond
-  Loose concrete footing
-  Concrete retaining walls
-  Joint

Notes:

A – Gap between retaining walls is 60mm

B – Height from top of retaining wall to top of soldier course is 50mm

Concrete retaining walls are behind brick wall.

Notes:

1. All dimensions in millimetres.



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CLIENT:
Willmott Dixon Construction Limited
PROJECT TITLE:
Hopwood Hall College, Rochdale

DRAWING TITLE:
Location J – Masonry wall top
Location K – Soldier course/movement joint

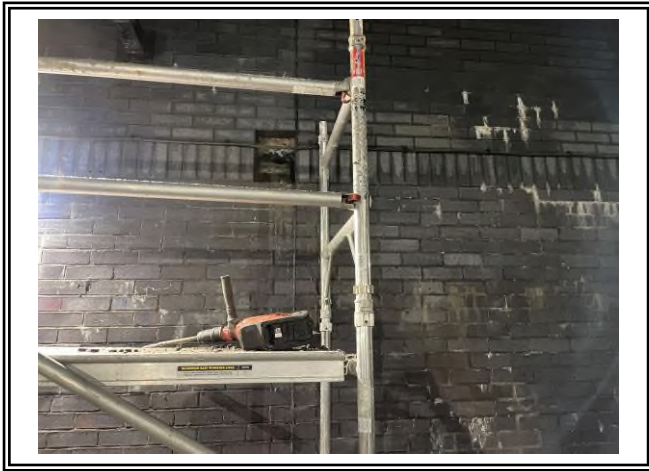
APPENDIX B

DRAWING NUMBER: STR2829/006

Location K – Soldier course/movement joint – Photographs



Location K – Soldier course/movement joint – Photographs (continued)



APPENDIX C
SUB-CONTRACTED TESTING
COMPRESSIVE STRENGTH TESTING

COMPRESSIVE STRENGTH OF CORE SPECIMEN

In Accordance with BS EN 12504-1:2019

REPORT NUMBER:	C4004942 / 23571.1.1.1		
SAMPLE NUMBER:	53253	CLIENT:	CTS Leicester LE3
CLIENT REF:	C1	ADDRESS:	4 Oak Spinney Park, Leicester Forest East, Leicester, Leicestershire, LE3 3AW
DATE RECEIVED:	21/01/2025	SITE:	STR2829 - Hopwood Hall, Rochdale
TESTED BY:	Peter Bridge	DATE TEST COMPLETED:	27/01/2025
CERTIFICATE OF SAMPLING:	No	METHOD OF SAMPLING:	Hydraulic rotary core cutting apparatus
MIX DESIGNATION:	Unknown	ENVIRONMENTAL CONDITIONS:	Unknown

SUMMARY OF RESULTS

Test Location: Simtec East Goscote

Sample Reference	Client Reference	Mix	Core Location	Measured Compressive Strength(N/mm ²)
53253	C1	Unknown		25.1

DRILLING / SAMPLING DETAILS

Date sampled / cast:	Unknown
Date of drilling:	07/01/2025
Storage conditions:	Water cured in tanks maintained @ 18-22°C
Required age at time of test (days):	Unknown

AS-RECEIVED DIMENSIONS

Average diameter (mm):	75
Minimum length (mm):	124
Maximum length (mm):	145
Diameter of reinforcement (mm):	None
Location of reinforcement from top (mm):	N/A

TRIMMING / CUTTING DETAILS

Method of end preparation:	Grinding
Length after end preparation (mm):	75
Location in relation to received length (top) (mm):	40
Location in relation to received length (bottom) (mm):	115

DENSITY DETAILS

Density of core specimen (kg/m ³):	2410
(Determined by measurement)	Saturated

EXAMINATION DETAILS

Honeycombing present:	No honeycombing
Cracks present:	No cracks
Average excess void assessment (%):	1.0
Size of excess voids:	Medium [3 - 6mm]
Material distribution:	Even dist' no seg'
Aggregate size/type:	20mm Gravel

CAPPING DETAILS

Length of prepared core (mm):	74
Length diameter ratio of ground specimen:	1:0.99

CURING DETAILS

Length of curing prior to testing (days):	6
Surface moisture condition at time of test:	Saturated

REINFORCEMENT LOCATION

Location from nearest cap (mm):	N/A
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COMPRESSION DETAILS

Date of test:	27/01/2025
Maximum load at failure (kN):	111.1
Measured compressive strength (N/mm ²):	25.1
Appearance at failure:	Normal
Deviation from Standard:	No

Remarks:

Test results reported relate only to the items tested.
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For and on behalf of Simtec
Peter Bridge - Laboratory Supervisor

Approved Signatory
Report date 27-Jan-25



10108

Report Format: ConcCore/TP31/Rep Issue 1 Rev 0

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END OF REPORT

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