



GEOSHIELD Verification Report



PROJECT REFERENCE: GEO100718

REPORT NUMBER: 002 REPORT DATE: 09/12/2019

PROJECT: Godfrey Ltd - Kilburn High Road

PROJECT ADDRESS: 254 Kilburn High Road

London

NW6 2BS

MEMBRANE SPECIFICATION: Verified in accordance CIRIA 735.

Design in accordance with BS8485 2015 + 2019 for Methane and Carbon Dioxide.

Substrate prepared in-accordance with manufactures instructions and BS8485

Cordek Tori-Gas Membrane - Taped System

Cordek Cellcore

Cordek Cellvent HX

Telescopic Vents



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MEMBRANE SPECIFICATION:

DESIGN DETAILS:

3630 - 200F Drainage Layout

3630 - 201 D

3630 - 001 Piling Layout Rev A

3630 - 002 Pile Cap Layout Rev B

3630 - 004 Core Layout Rev A

3630 - 005 Ground Floor Layout Rev E

22_446 - Separation Wall Detail 08 Rev 01

3144_420 External Wall Details Rev 04

3144_421 External Wall Details Rev 03

Issued on 09/12/2019 - 3144 420 External Wall Details Sht 1 Rev 04



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VERIFICATION OFFICER: Chris Ingham

VERIFICATION COMPANY: GeoShield Limited

Icon Business Park, 4100 Park Approach

Thorpe Park, LEEDS

West Yorkshire

LS15 8GB

CONTACT NUMBER: 07555214679

EMAIL ADDRESS: CIngham@geoshield.co.uk

ORDER NUMBER:

PER VISIT: YES:



NO:



PROJECT: YES:



NO:





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CLIENT DETAILS

CLIENT CONTACT: Aleem Hassoo

CONTACTS ROLE: Godfrey Ltd

MOBILE PHONE: 02082093048

EMAIL ADDRESS: Aleem@godfreylondon.co.uk

CLIENT CONTACT: Robert Lewis

CONTACTS ROLE: Site Manager

MOBILE PHONE: 07866 464872

EMAIL ADDRESS: Robert.lewis@godfreylondon.co.uk

NOTES:

NOTES:

NOTES:



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APPLICATION TEAM LEADERS

APPLICATOR NAME:

COMPANY:

APPLICATOR TEL:

APPLICATOR EMAIL:

APPLICATOR NAME:

COMPANY:

APPLICATOR TEL:

APPLICATOR EMAIL:

NOTES:

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AREA SURVEYED: A-J/1-21

SITE CONDITIONS:

WEATHER: Clear

TEMPERATURE: 7C

MEMBRANE TEMPERATURE: Not Applicable - Membrane covered with screed

RELATIVE HUMIDITY: 68

TIME: 10:00 - 12:00 REPORT NUMBER: 002

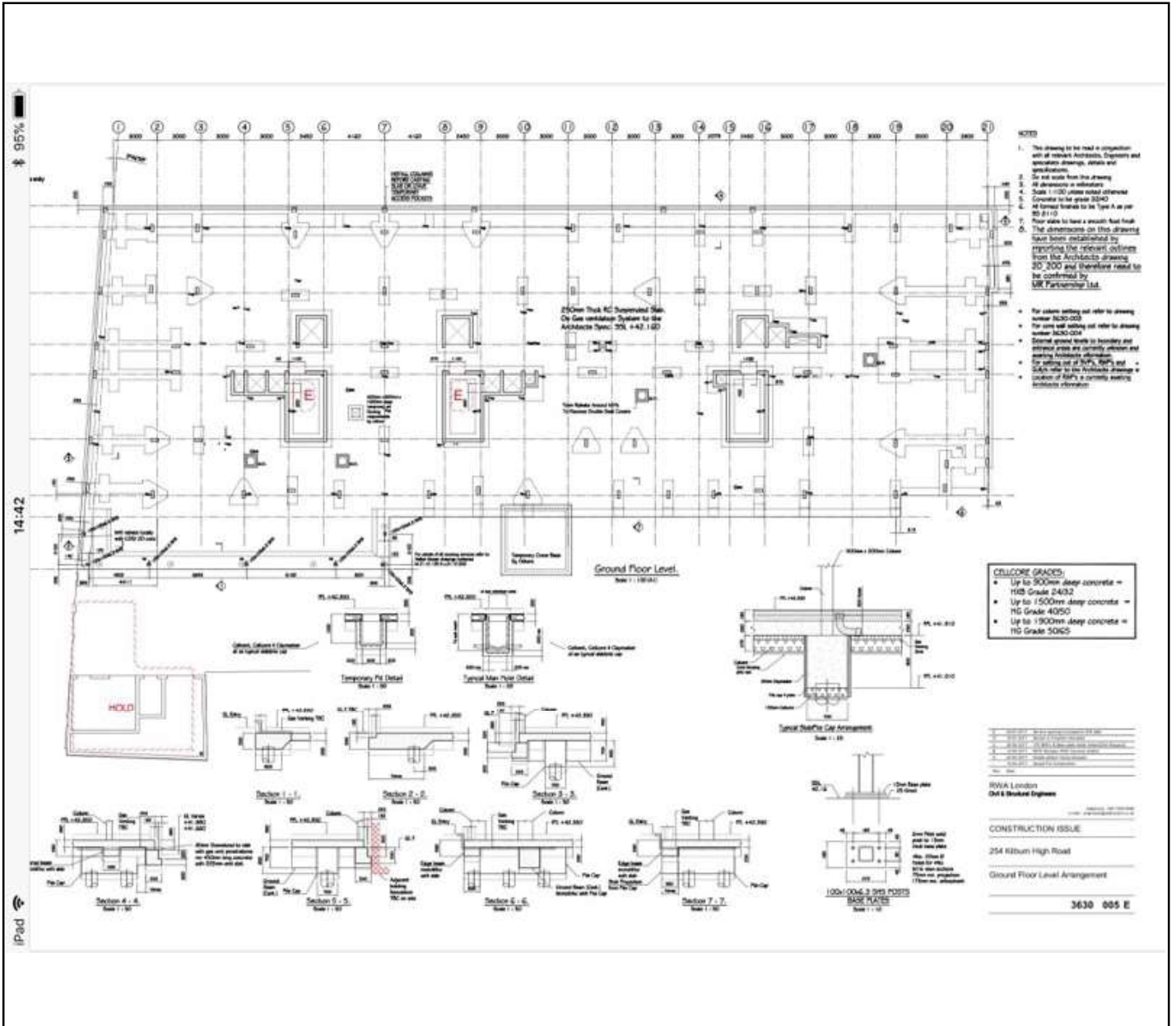
DATE: 9th December 2019

ACCOMPANIED Eoghan McHugh - Godfrey Construction

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VERIFICATION LAYOUT



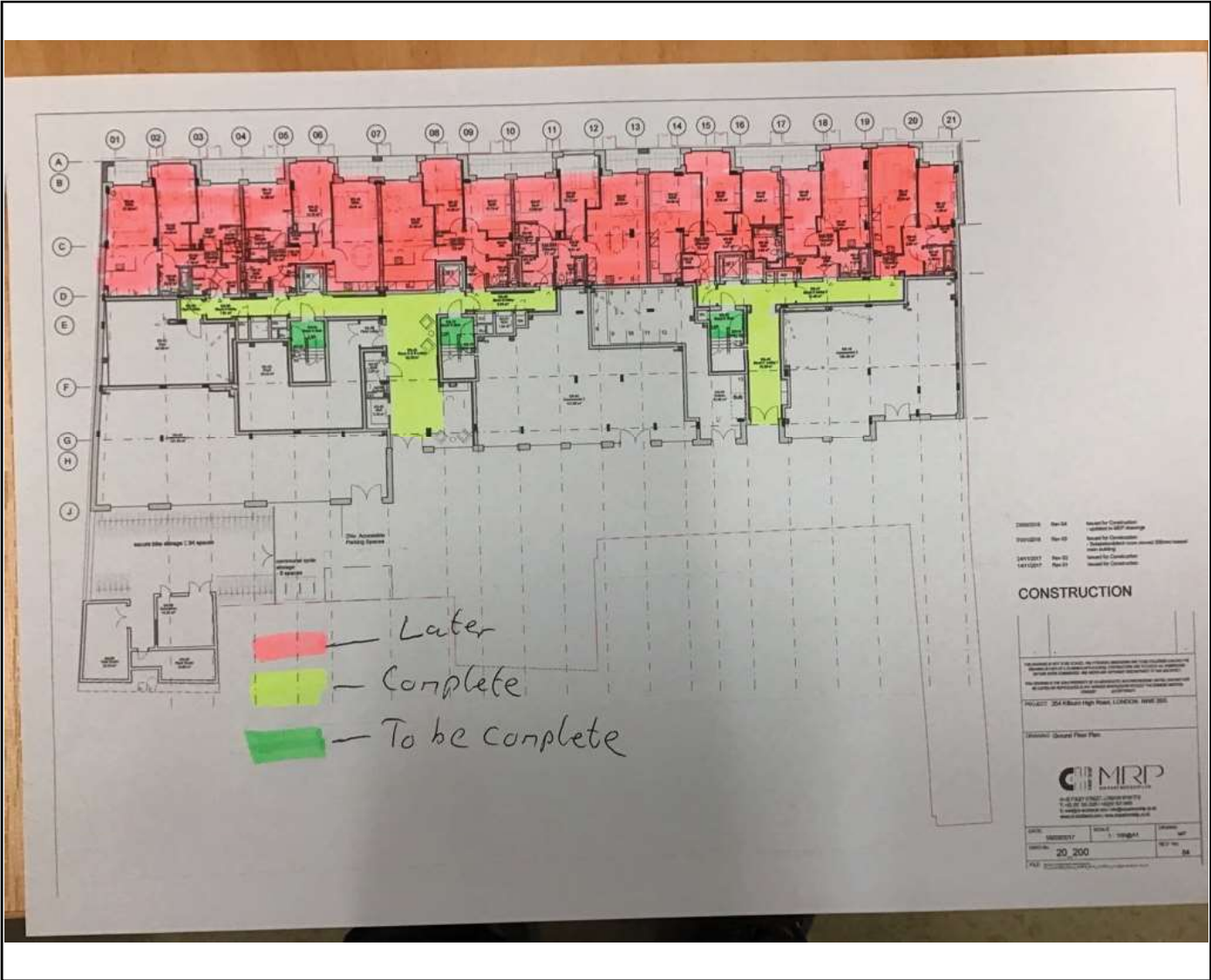
Floor Plan



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VERIFICATION LAYOUT



Floor Plan. Yellow areas show where the DPC has been covered with screed.

Green areas show where the DPC is still to be installed (stairwells).

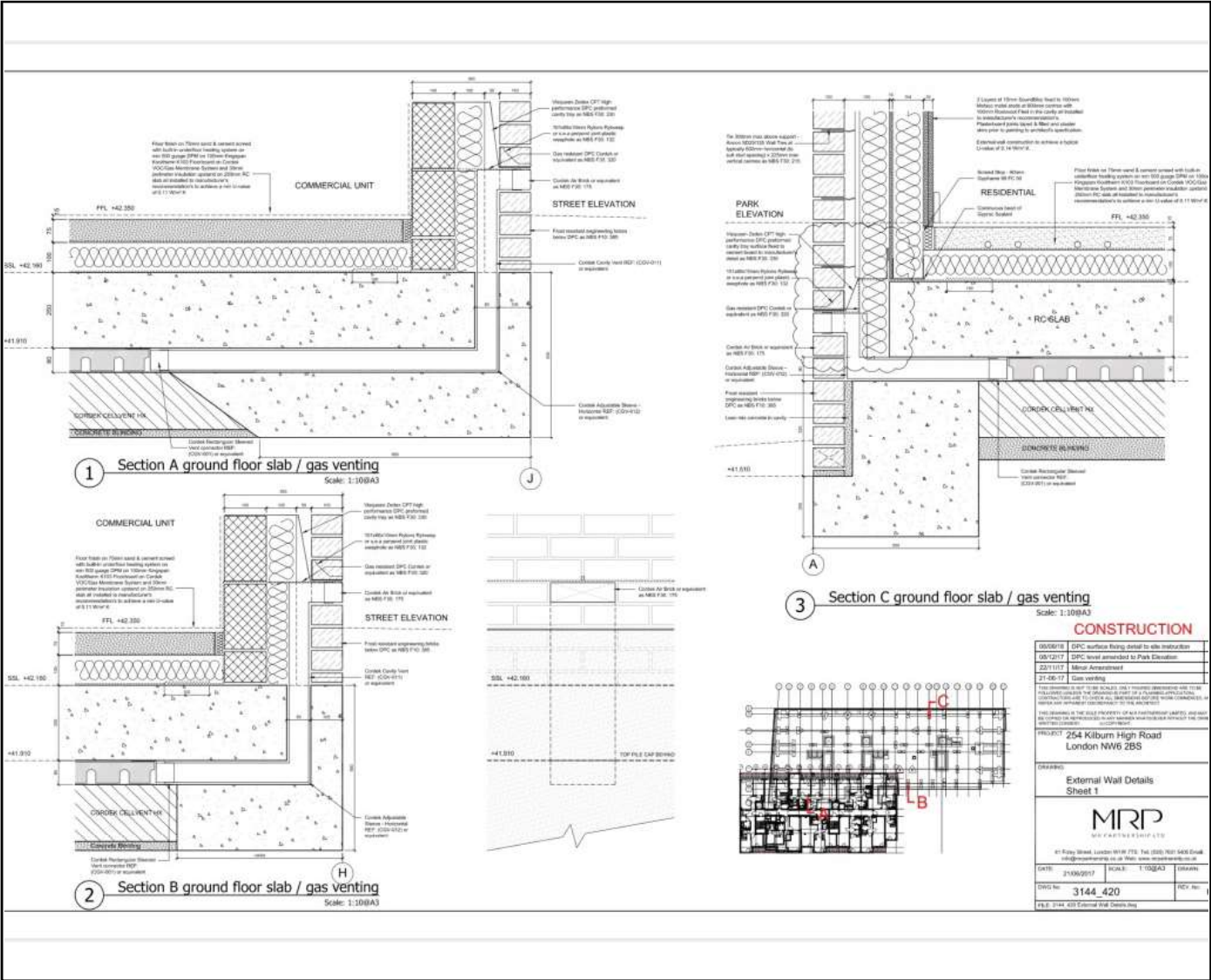
Pink area is to be completed but no contract of works has yet been agreed.



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VERIFICATION LAYOUT



Drawing issued confirming the design detail for ventilating beneath the raft

slab. Note: entire building is built on a suspended raft foundation with

ventilation beneath the raft.



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VERIFICATION LAYOUT

“7.2.9 The results of the calculation (carbon dioxide and methane) would indicate that the site may be classified as Characteristic Situation 2, where basic gas protection measures are required.

7.2.10 The basic gas protection measures may comprise

- a) Reinforced concrete cast *in situ* floor slab (suspended, non-suspended or raft) with at least 1200 g damp proof membrane and underfloor venting; or
- b) Beam and block or pre-cast concrete and 2000 g DPM/reinforced gas membrane and underfloor venting.

All joints and penetrations must be sealed.”

Basic gas protection provided to underside of building was Cordek Cellvent which provides gas venting and allows for ground heave. Thorough ventilation has also been provided from front to back.

Soft Landscaping

There is very little soft landscaping on this development. Jomas executive summary suggests:

“Where the site is to be overlain by either proposed building footprint or areas of hardstanding, these concentrations are not considered to pose a significant risk to human health, as the building / surfacing will provide a suitable barrier to potential receptors. Where areas of soft landscaping are proposed, the risks to end users will be controlled by use of a capping layer. This should comprise of a minimum 300mm thickness of imported clean topsoil.”

Also described in:

“8.1.1 Following quantitative risk assessments, the following is noted:

- It is understood that the proposed development comprises demolition of the existing building and construction of a new mixed use development, with commercial ground floor units and residential apartments on upper floors. No private gardens or significant areas of soft landscaping are anticipated.
- Following generic risk assessments and statistical analysis, the upper ninety fifth percentile values of Lead, Mercury and Naphthalene were found to exceed their respective criteria, with a presence of statistical outliers or isolated hotspots of contamination indicated in the case of Mercury and Naphthalene. Individual exceedances of Benzo(a)pyrene and Arsenic were reported, although the upper ninety fifth percentile value for these contaminants did not exceed the respective criteria.
- No other contaminants were reported above their respective criteria and no asbestos fibres were detected.”

Conclusion

300 clean topsoil will be used in all areas of soft landscaping.

Approved remediation statement states the ground gas protection system is to
comprise of a suspended raft foundation with underfloor venting with a DPC installed
on top of the raft.

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VERIFICATION ITEM ONE

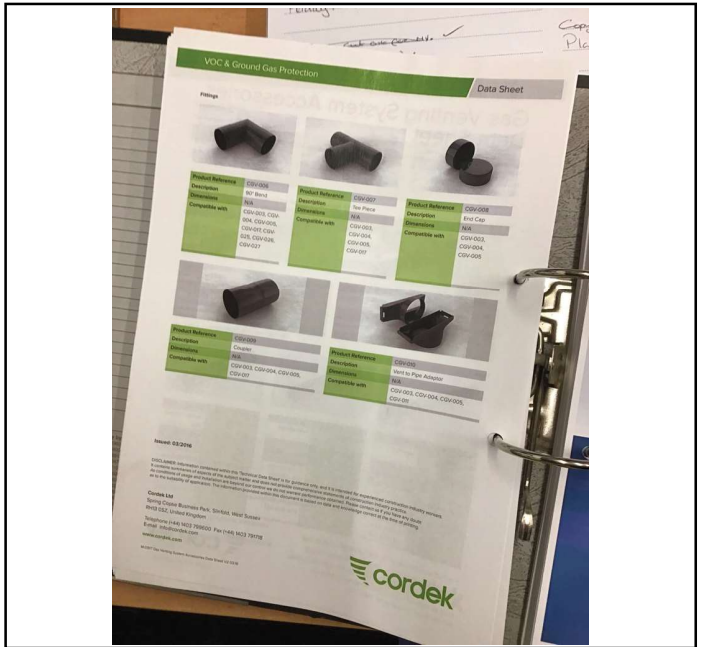
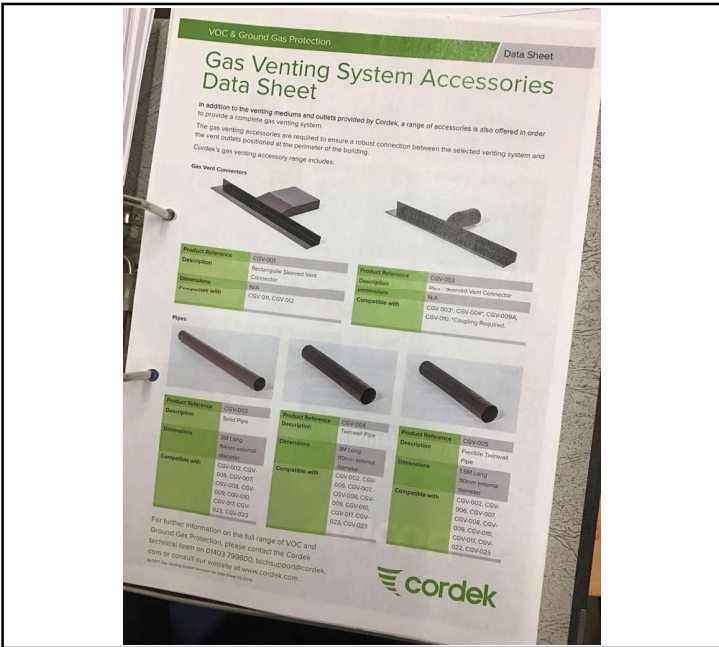
LOCATION/GRID LINE: A-J/1-21

NOTES: O&M Manual produced by Toureen (previous contractor

who built the up to floor level before handover to Godfreys) confirms Cordek Cellvent

HX has been installed beneath the suspended raft slab. Photos have been submitted

to provide evidence that these works were carried out (included in Additional Photos),

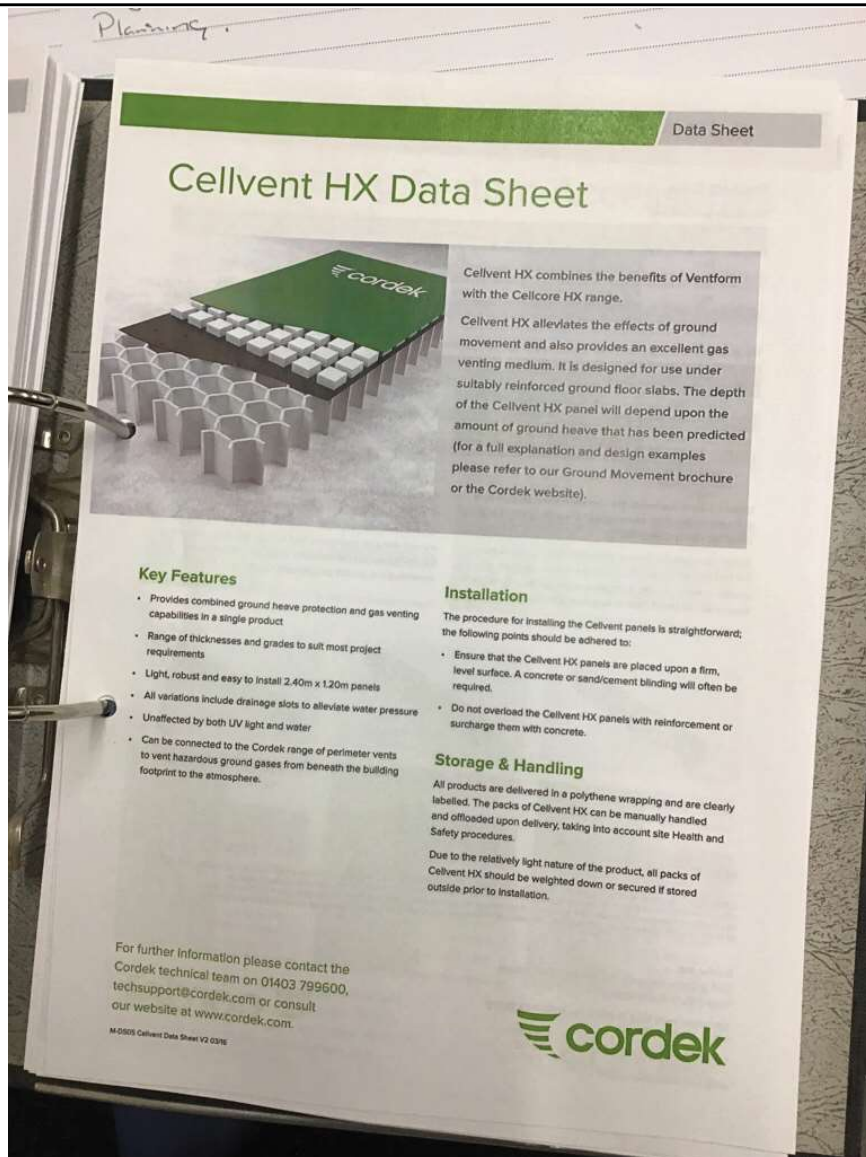


1. Cellvent HX Data Sheet in O&M manual

2. Cellvent HX Data Sheet in O&M manual

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VERIFICATION ITEM ONE



3. Cellvent HX Data Sheet in O&M manual. The number of points gained under

BS8485:2019 for this type of ventilation is determined by the number of telescopic

vents installed around the perimeter walls.



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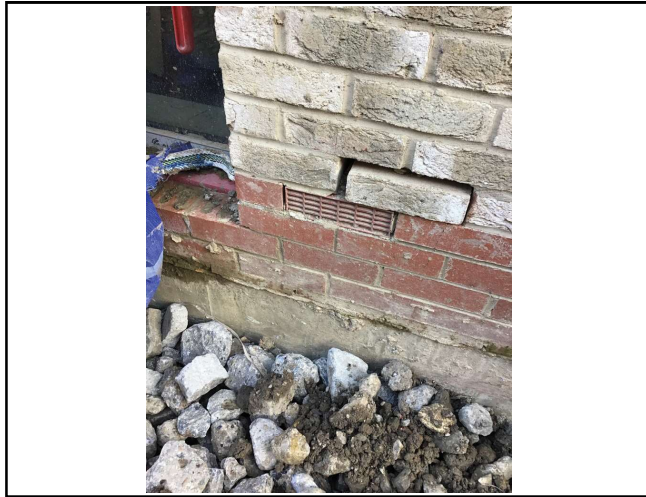
VERIFICATION ITEM TWO

LOCATION/GRID LINE: A-J/1-21

NOTES: The entire perimeter of the building was surveyed to

determine the number of telescopic vents installed to vent through the Cellvent HX.

Good number of vents installed to score 1.5 points under BS8485:2019.



1. Telescopic vents installed beneath DPC Level.

2. Telescopic vents installed beneath DPC Level.



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VERIFICATION ITEM TWO



3. Good number of telescopic vents installed around entire perimeter.

Vents circled above. Spacings given allow for point score of 1.5 under BS8485:2019.

Contractor confirmed suspended raft foundation has been poured with waterproofed

concrete. This gives a point score of 2 points for structural Barrier under BS8485:2019



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VERIFICATION ITEM THREE

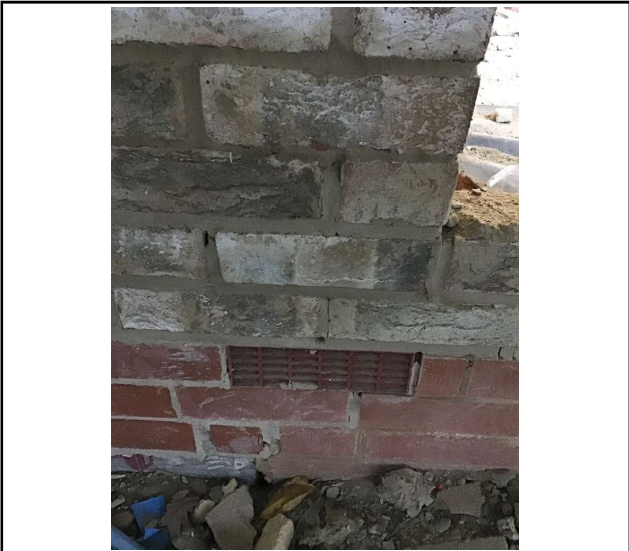
LOCATION/GRID LINE: A-J/1-21

NOTES: Entire perimeter of the building checked to ensure

high number of telescopic vents installed throughout. Vents installed in between

all window and door thresholds and the rear of the property spacings at an average

of 1.5M.



1. Photo evidence of vents

2. Photo evidence of vents



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VERIFICATION ITEM THREE



3. Photo evidence of vents



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ADDITIONAL PHOTOGRAPHS



Photo evidence of vents

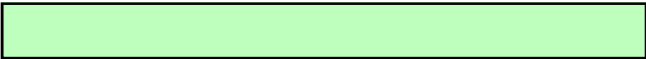


Photo evidence of vents

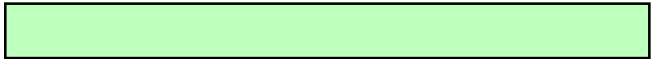


Photo evidence of vents

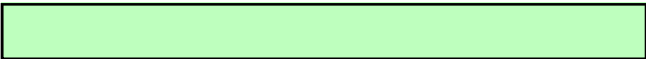
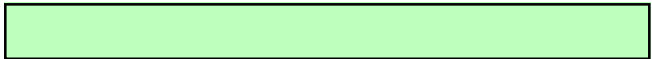


Photo evidence of vents





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ADDITIONAL PHOTOGRAPHS



Photo evidence of vents

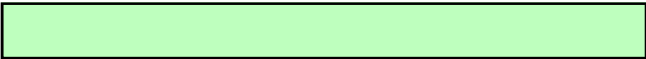


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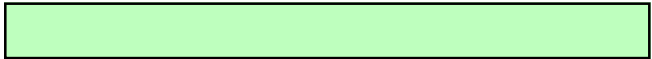
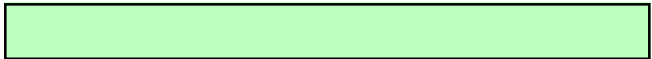


Photo evidence of vents



Photo evidence of vents





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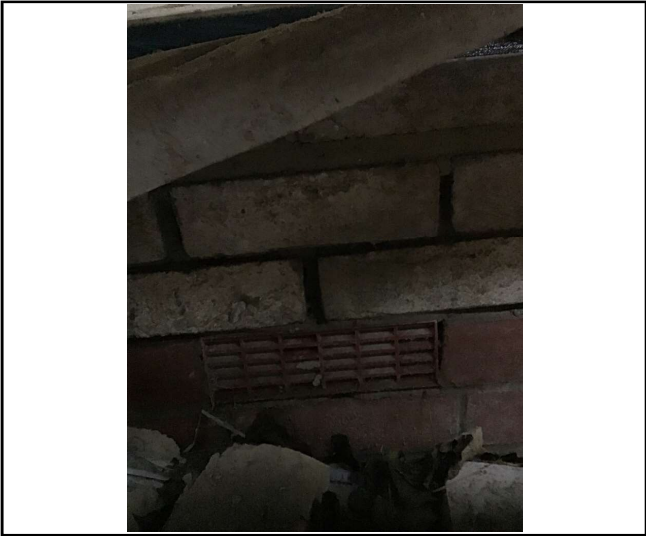


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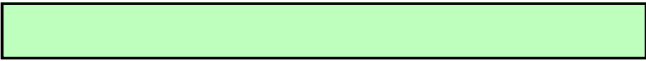


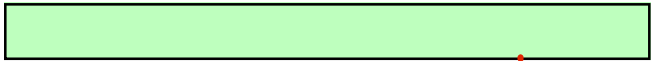
Photo evidence of vents



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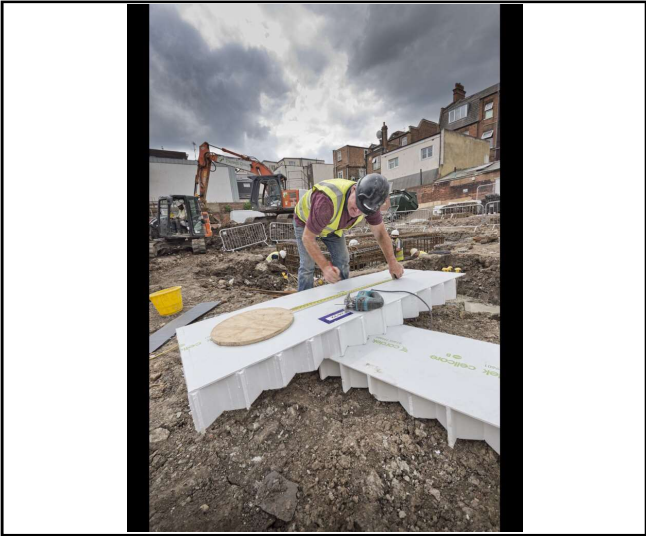


Photo evidence of Cellvent HX

installation



Photo evidence of Cellvent HX

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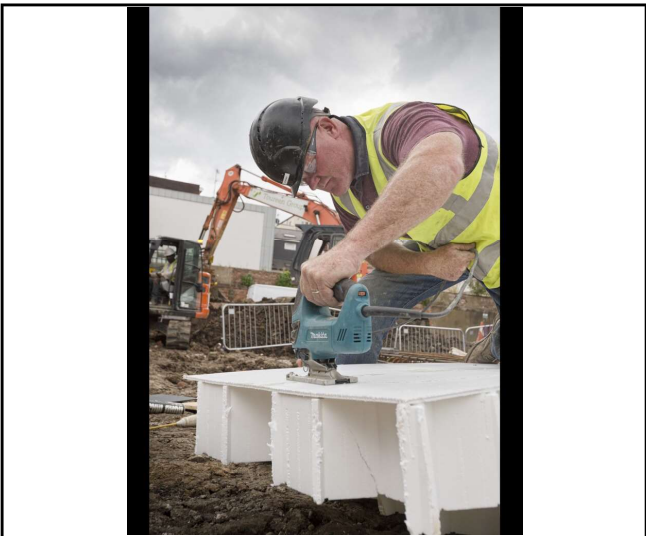


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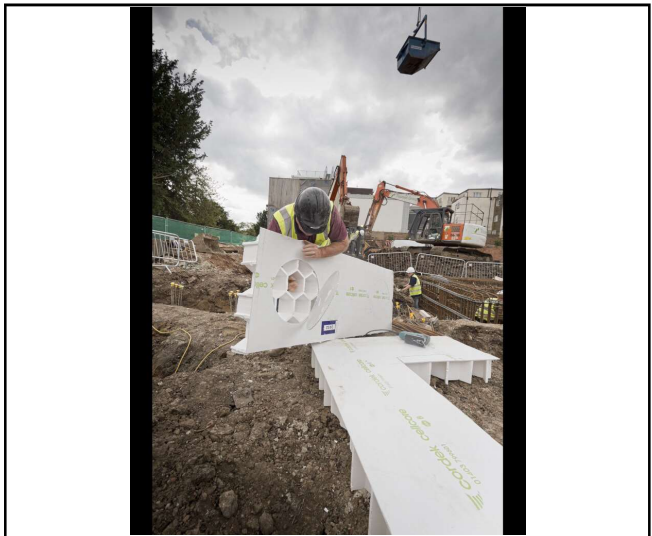


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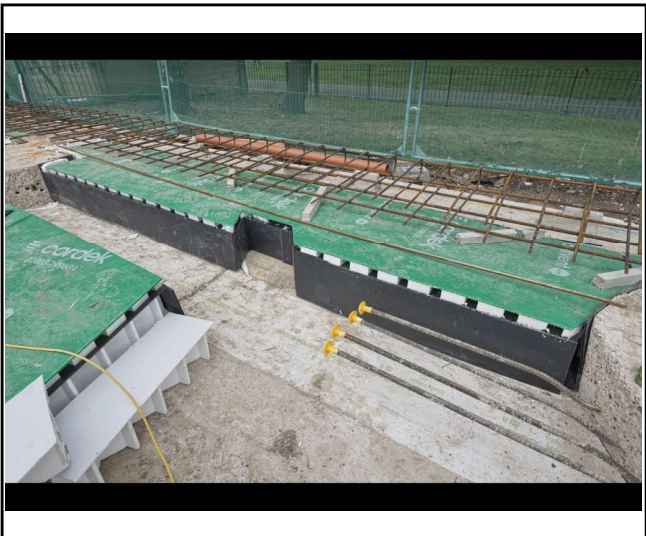


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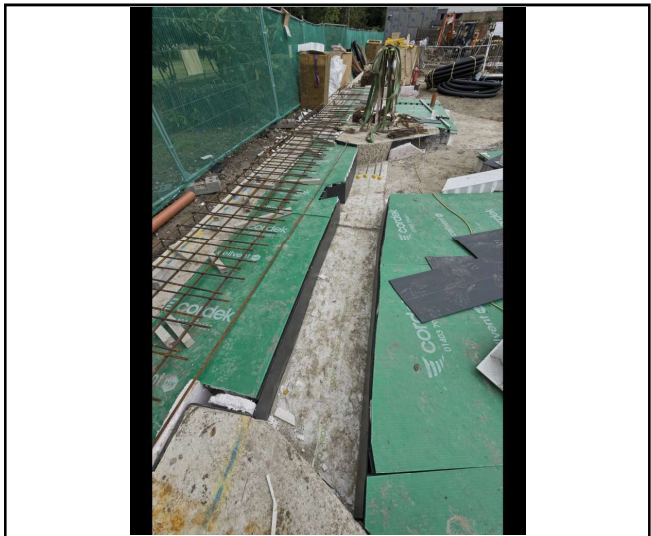


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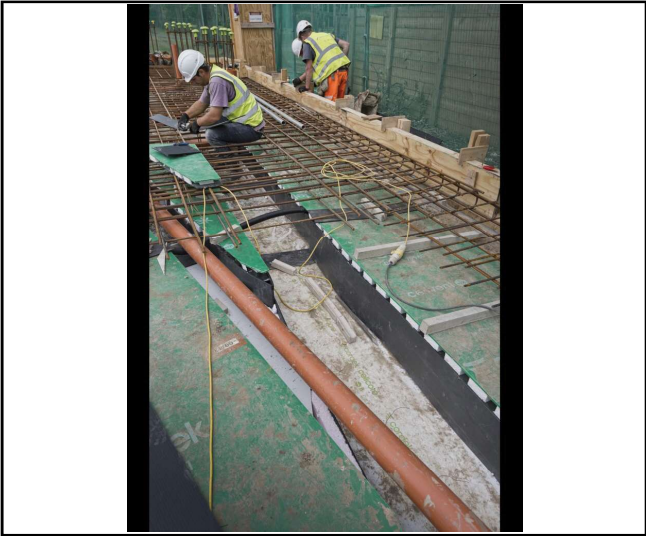


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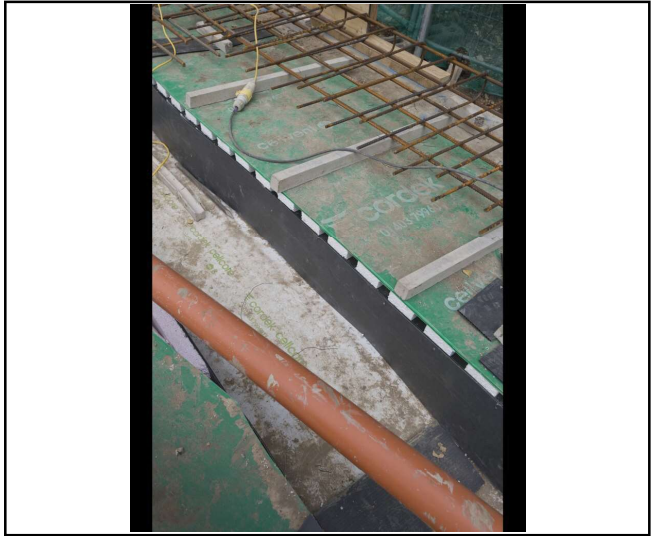


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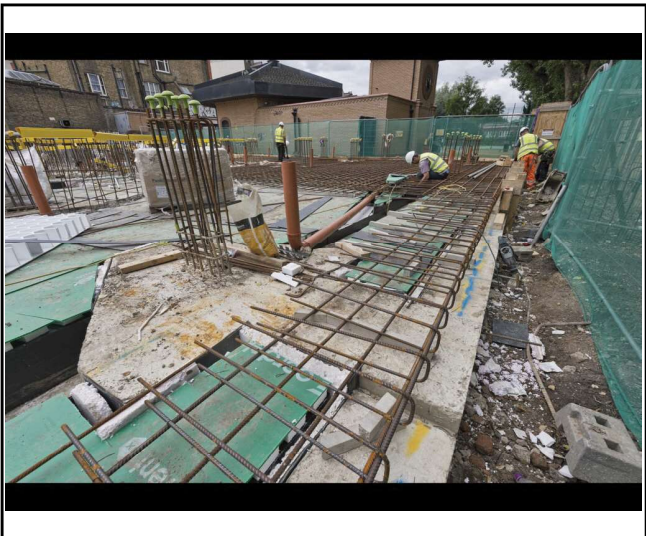


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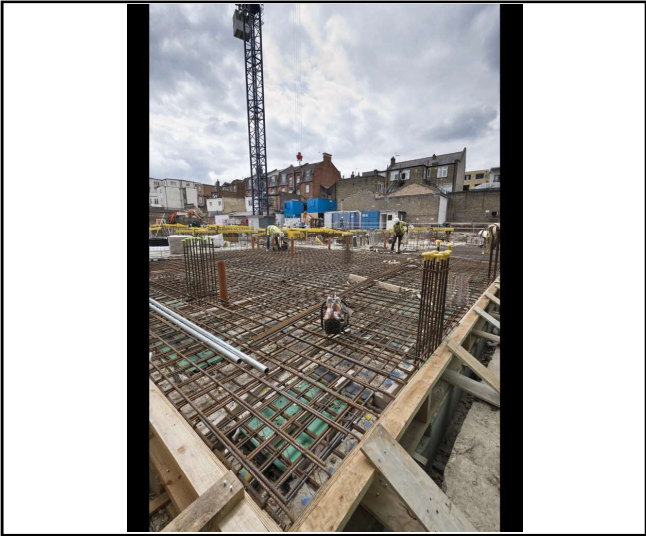


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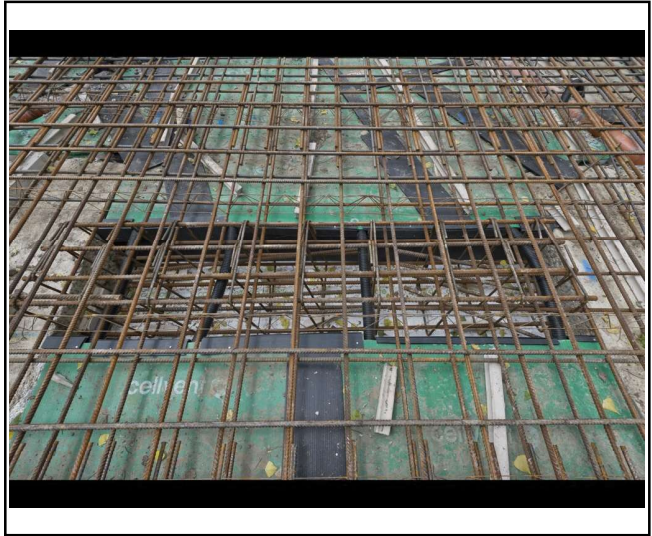


Photo evidence of Cellvent HX

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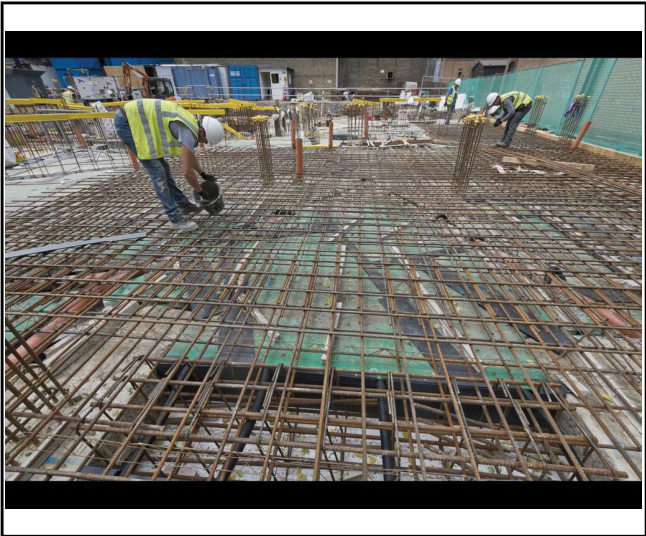


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Photo evidence of Cellvent HX

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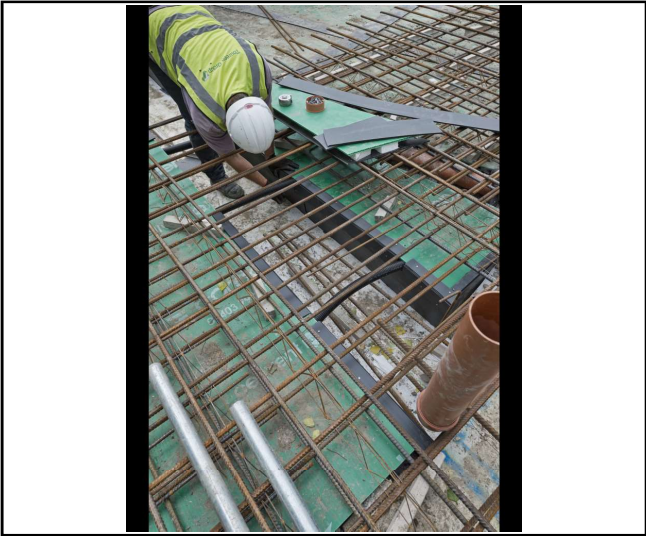


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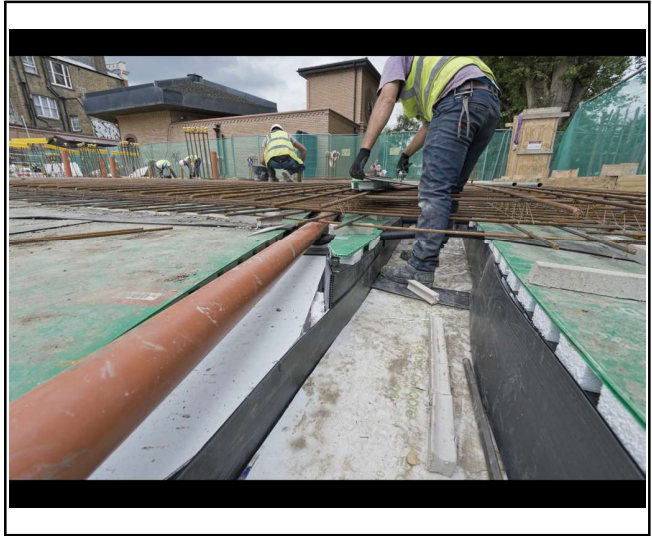


Photo evidence of Cellvent HX

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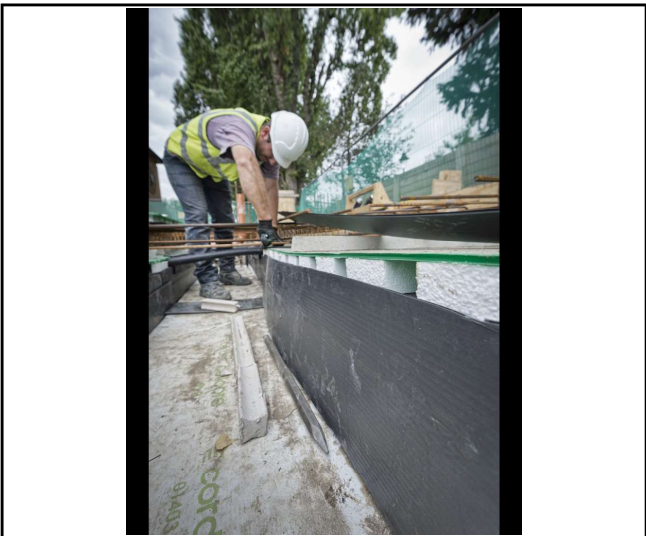


Photo evidence of Cellvent HX

installation



Photo evidence of Cellvent HX

installation



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VERIFICATION SUMMARY

Report 002 is for the entire development - Gridline A-J/1-21.

The Approved Remediation Strategy was reviewed on arrival to site to

establish what the planners have authorised with regards the ground gas

protection system. This comprises suspended waterproofed raft with venting

beneath and a DPC on top of the raft. Under BS8485:2019 the system achieves

1.5 for venting and 2 for a suspended waterproofed Barrier as the entire

building sits on the raft with minimal penetrations through the slab. Due to the

number of telescopic vents installed and the construction method of the raft we

are able to revise the initial Pre Verification Plan to suit.

The works have been verified in accordance with BS8485:2019.

GEOSHIELD SIGNATURE:

DATE: 9th December 2019