



GeoShield Verification Report



PROJECT REFERENCE: GEO103990

PROJECT: Aldi Bardon

PROJECT ADDRESS: Aldi Distribution Centre

Interlink South, Bardon

LE67 1GY

SPECIFICATION: Verified in accordance with CIRIA 735.

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

Substrate prepared in accordance with manufacturer's instructions

Visqueen Low Permeability Membrane

Visqueen Double Sided Butyl Tape

Visqueen ProDetailing Tape



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NAME OF SURVEYOR:

Michael Dodd

VERIFICATION COMPANY:

GeoShield Limited

Icon Business Centre

4100 Park Approach

Thorpe Park

Leeds

CONTACT NUMBER:

[Redacted]

EMAIL ADDRESS:

[Redacted]

ORDER NUMBER:

[Redacted]

PER VISIT: YES: ☐ NO: ☐

PROJECT: YES: ☐ NO: ☐



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CLIENT DETAILS

CLIENT CONTACT:

CONTACTS ROLE:

MOBILE PHONE:

EMAIL ADDRESS:

CLIENT CONTACT:

CONTACTS ROLE:

MOBILE PHONE:

EMAIL ADDRESS

NOTES:



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APPLICATOR'S DETAILS

APPLICATOR NAME: John Whyton

COMPANY: Moortown Group

APPLICATOR TEL: [REDACTED]

APPLICATOR EMAIL: [REDACTED]

APPLICATOR NAME: Damon Byrne

COMPANY: Moortown Group

APPLICATOR TEL: [REDACTED]

APPLICATOR EMAIL: [REDACTED]

NOTES:



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AREA SURVEYED: Gridlines: Goods In Office (S-V/5-6). Welfare Area (E-G/11-12)

SITE CONDITIONS:

WEATHER: Overcast

TEMPERATURE: 20.0C

MEMBRANE TEMPERATURE: N/A

RELATIVE HUMIDITY: N/A

TIME: 10:30 to 12:00

REPORT NUMBER: 001

DATE: 08/08/2023

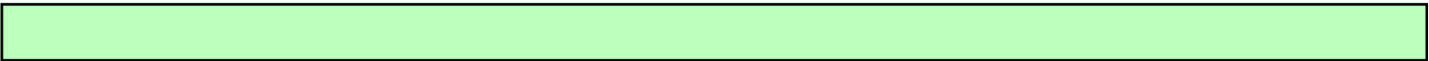
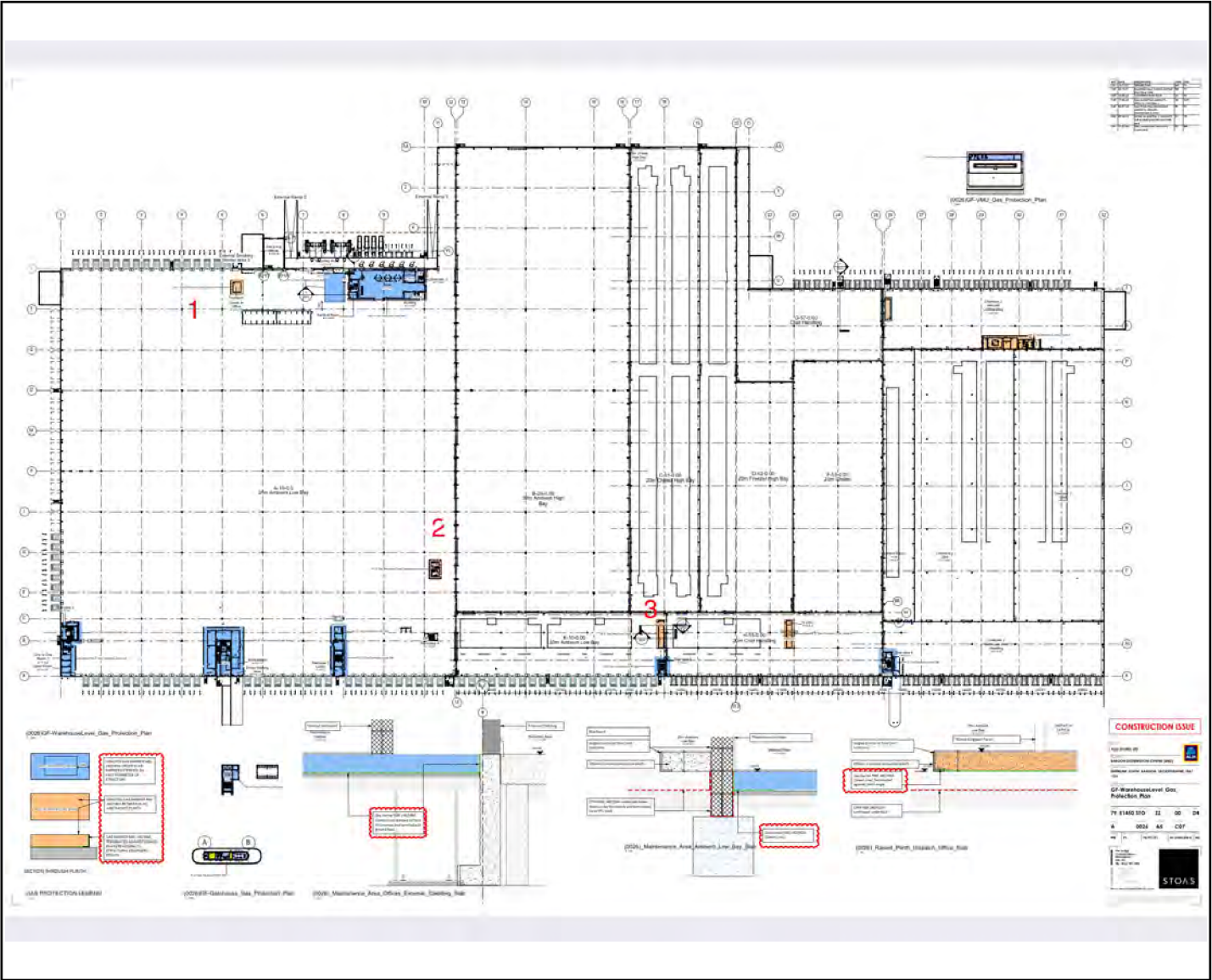
ACCOMPANIED BY: John Whyton



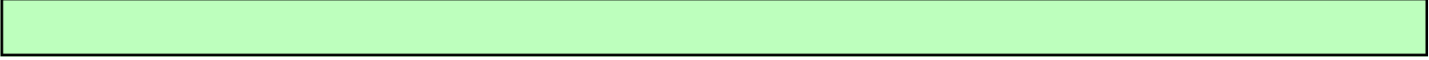
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VERIFICATION LAYOUT



This is an overview of the proposed site layout

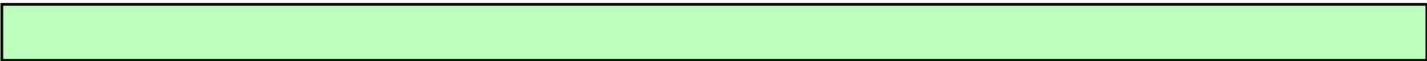
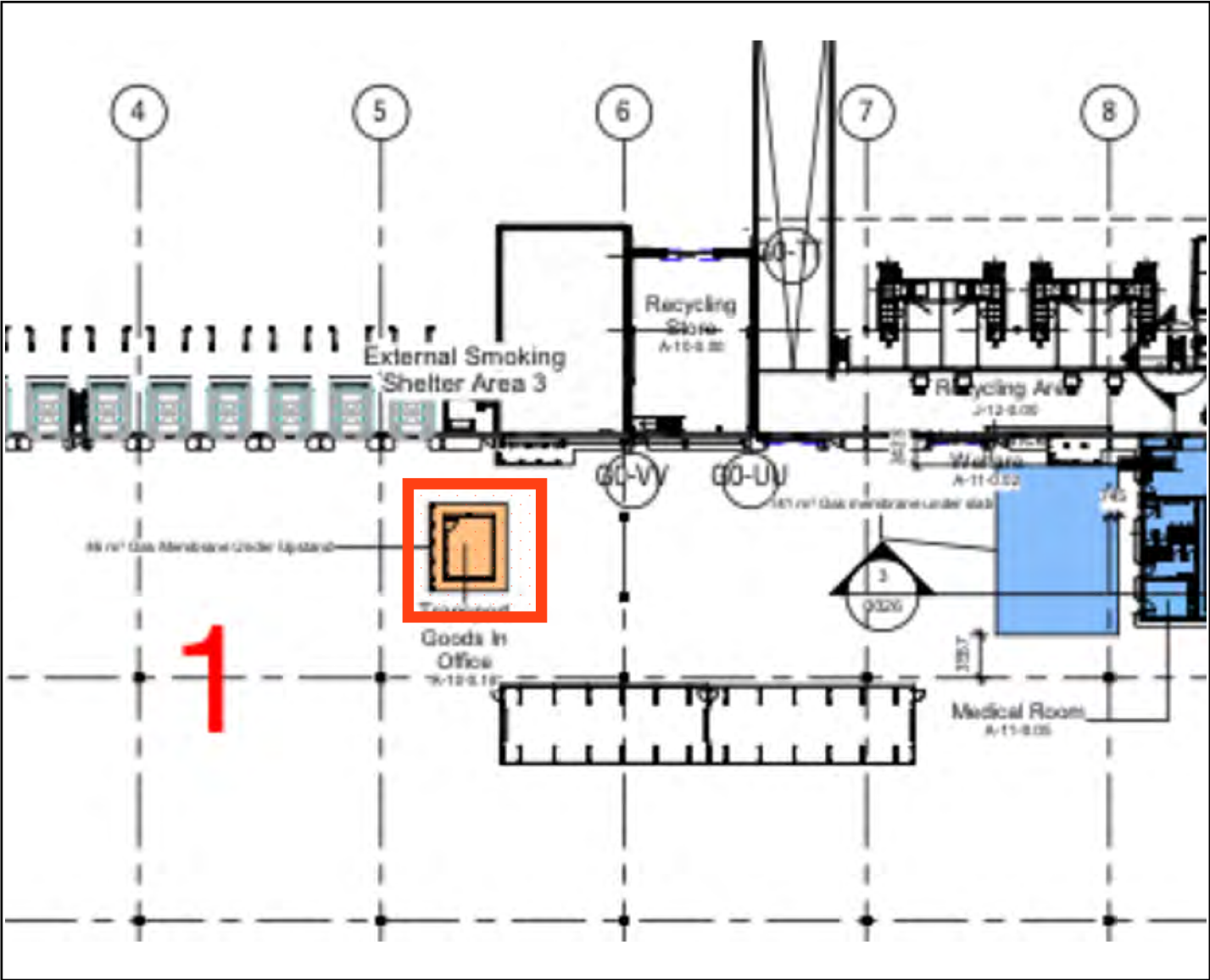




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VERIFICATION LAYOUT



This is an image showing the first of two areas verified this report.

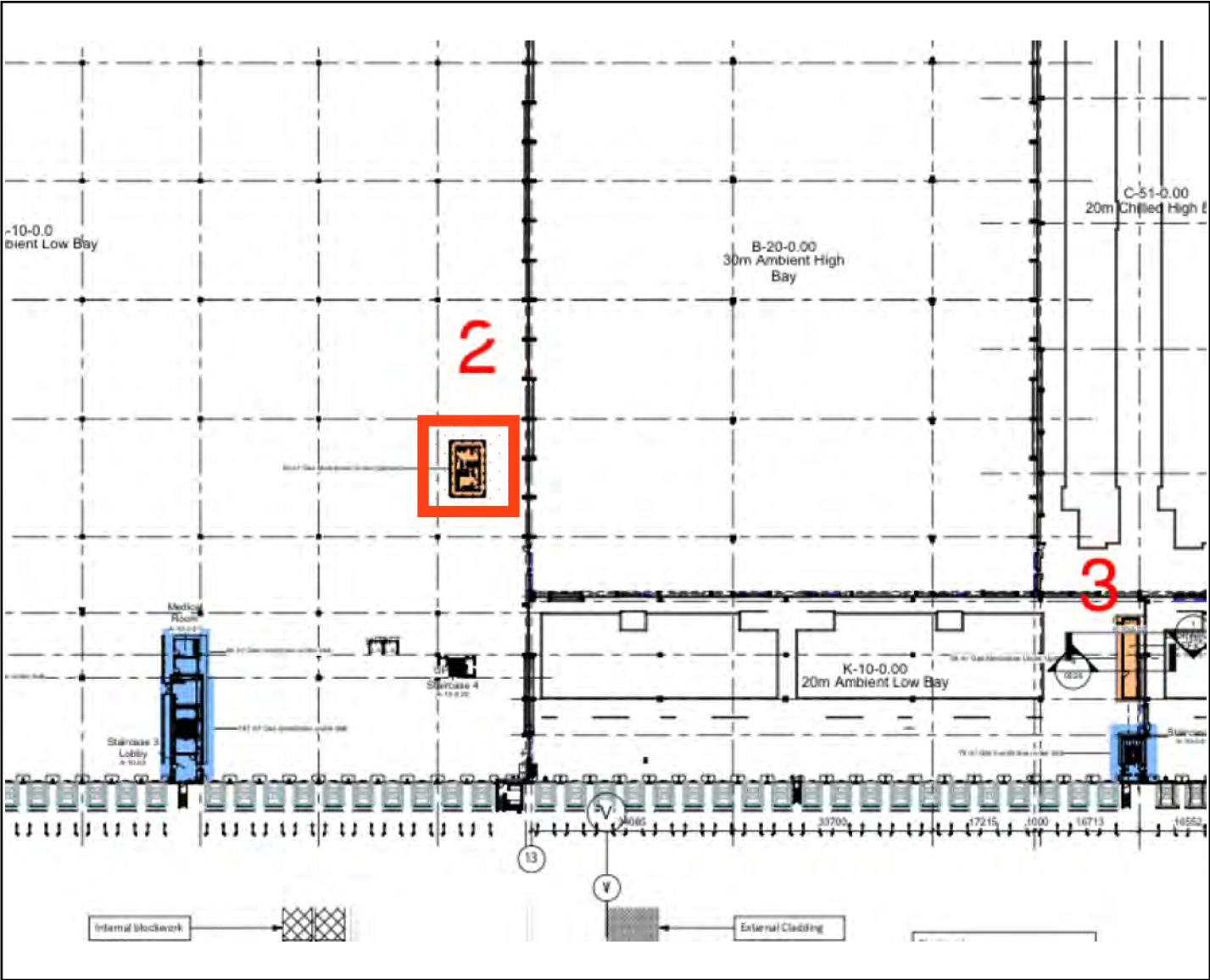
View of the 'Goods In Office' outlined in red



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VERIFICATION LAYOUT



This is an image showing the first of two areas verified this report.

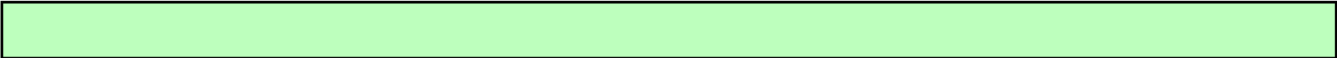
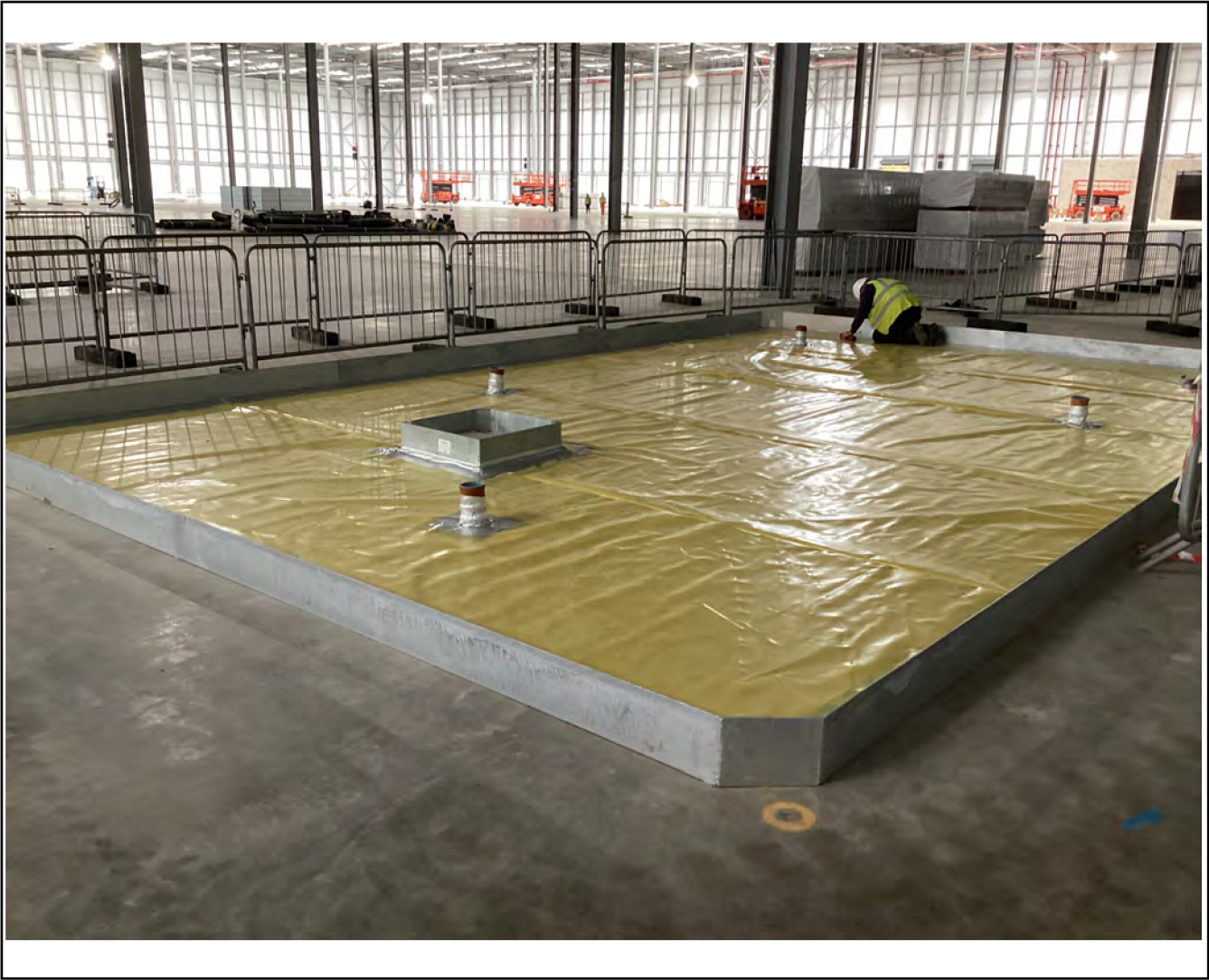
View of the Welfare Area outlined in red.



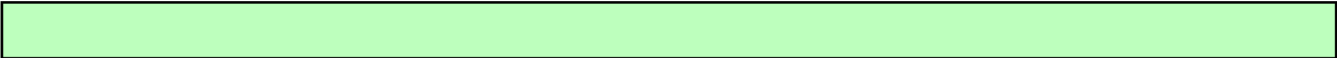
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OVERVIEW PHOTOGRAPHS



This is an overview of the 'Welfare Area' verified this report

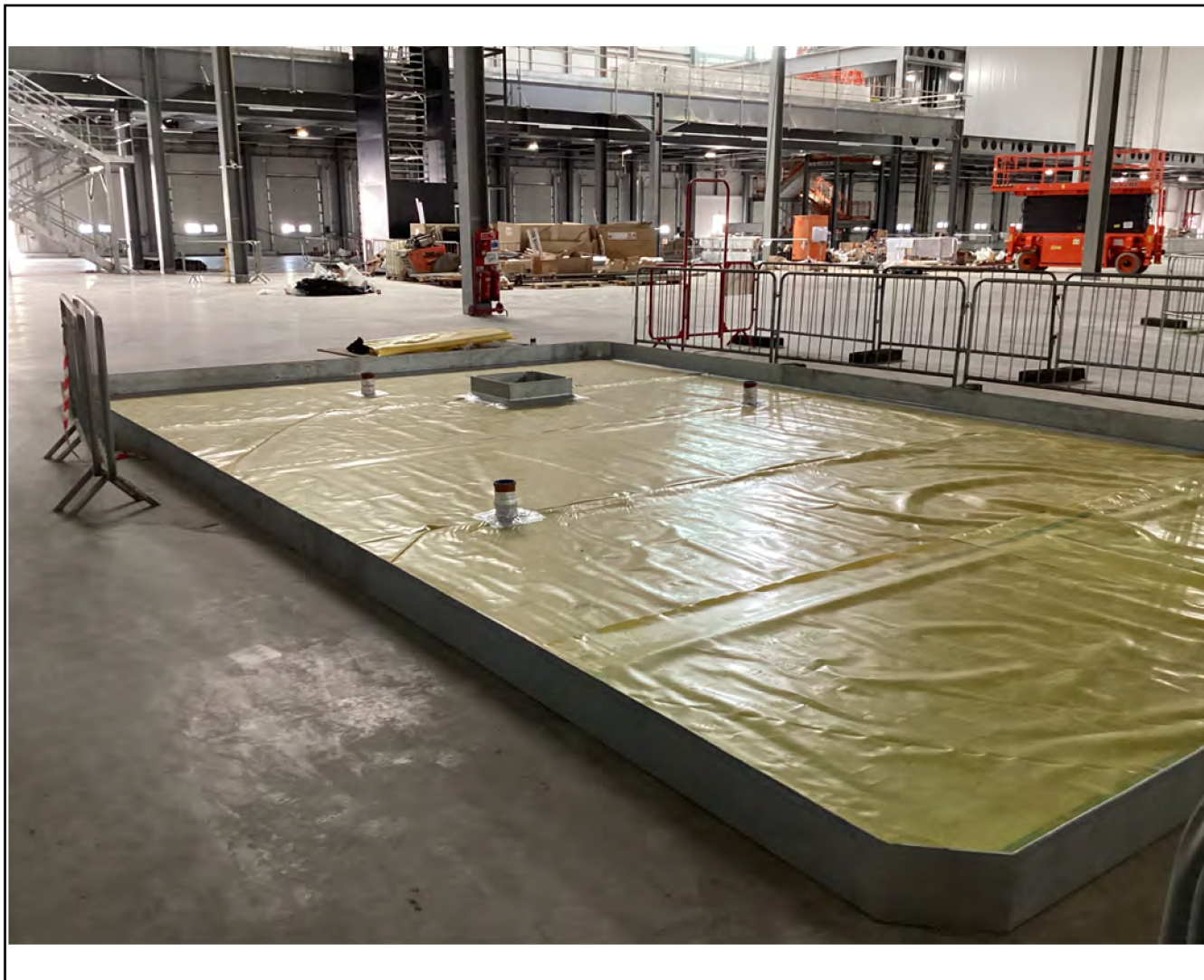




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OVERVIEW PHOTOGRAPHS



This is an alternative overview of the 'Welfare Area' verified this report



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OVERVIEW PHOTOGRAPHS



This is an overview of the 'Goods In Office' verified this report



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OVERVIEW PHOTOGRAPHS



This is an alternative overview of the 'Goods In Office' verified this report

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BGA
British Geomembrane Association



VERIFICATION ITEM ONE

LOCATION/GRID LINE: Goods In Office (S-V/5-6). Welfare Area (E-G/11-12)

NOTES: Pipe Penetration Detailing

The various pipe penetrations had all been detailed using strips of Visqueen ProDetailing

Tape providing a full seal with both the pipe and the Visqueen Low Permeability

Membrane. The initial inspection noted that there were minimal creasing along the width

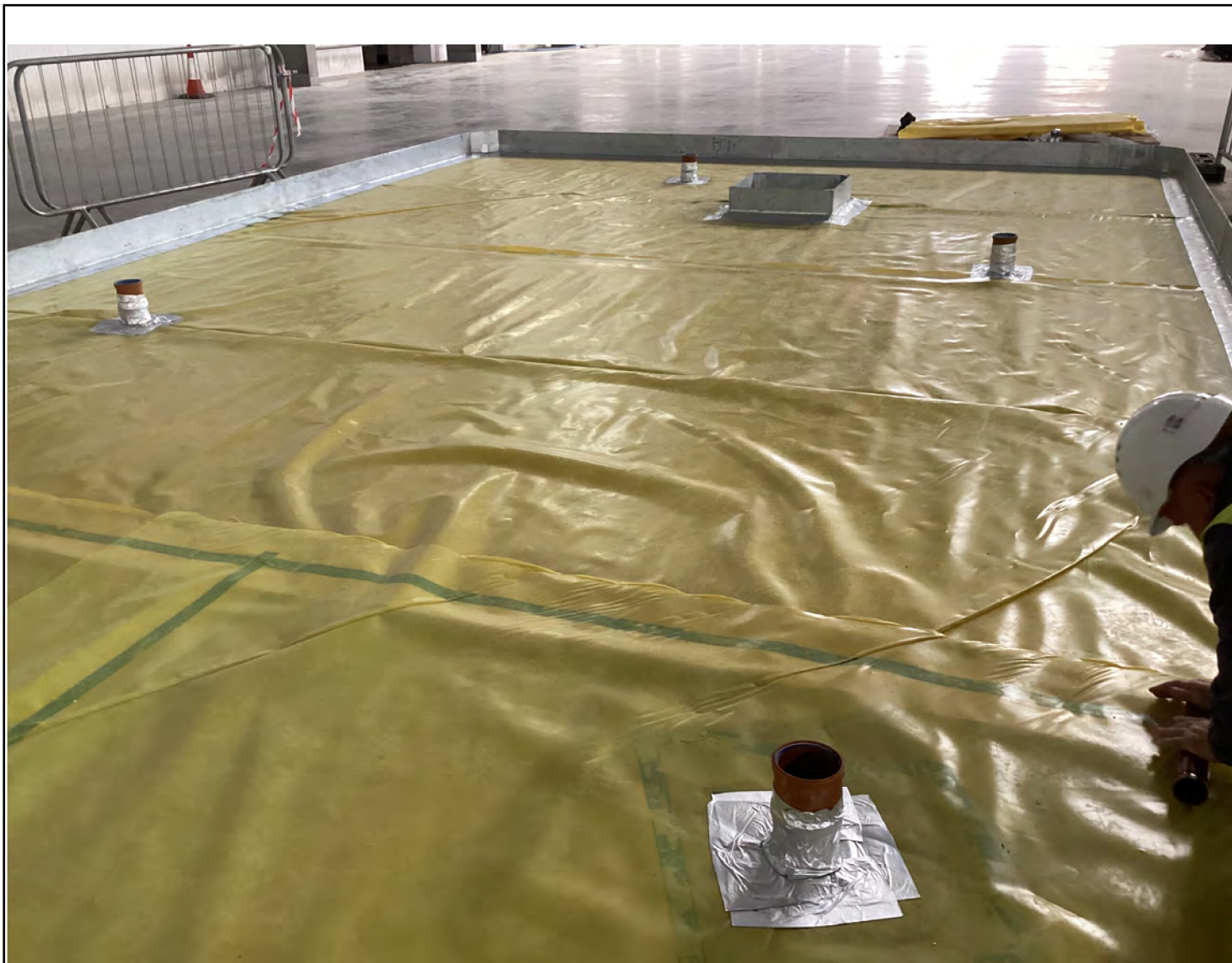


of the detailing and therefore no potential capillary leak risks throughout. The Mechanical

Point Stress Test was undertaken along the edges proving a full bond.

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VERIFICATION ITEM ONE



The overview image shows typical pipe penetrations sealed with the Visqueen Low Permeability Membrane and subjected to both a visual inspection along with the Mechanical Point Stress Test. The application of both heat and sufficient pressure ensured the Visqueen ProDetailing Tape had been fully bonded and sealed.



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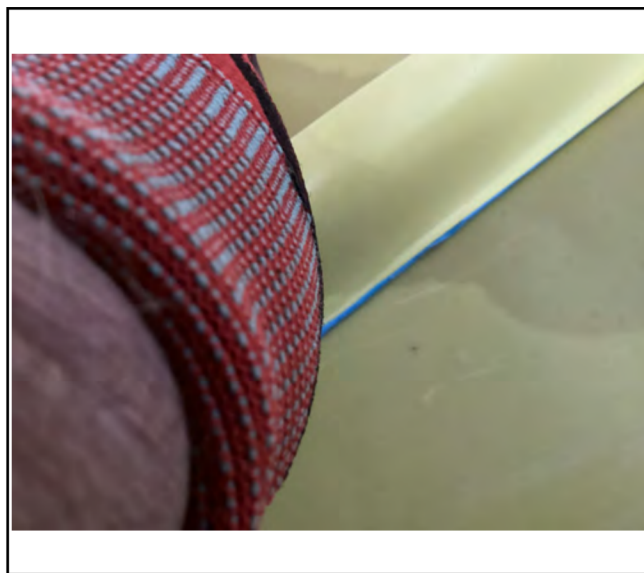
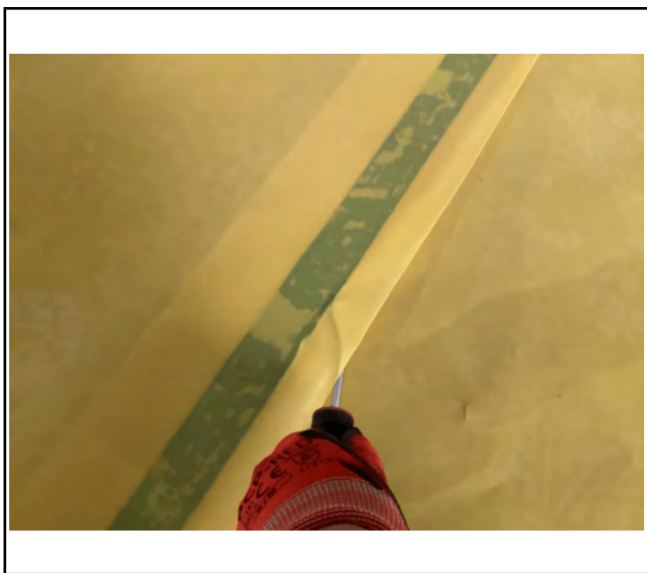


VERIFICATION ITEM TWO

LOCATION/GRID LINE: Goods In Office (S-V/5-6). Welfare Area (E-G/11-12)

NOTES: Visqueen Low Permeability Membrane - Lap Joints

The Visqueen Low Permeability Membrane had been dual taped combining both the Visqueen Double Sided Butyl Tape (the initial seal) and a second seal using the Visqueen ProDetailing Tape. The left image shows the Mechanical Point Stress Test



being undertaken along the edge of the Visqueen Double Sided Butyl Tape so as to ensure a complete seal. There were some areas of the inspected lap joints which can be seen in 'Verification Item Three' this report. The right image shows the Visqueen Double Sided Butyl Tape in position within the lap joint.

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VERIFICATION ITEM TWO



This is an overview image showing typical Visqueen Low Permeability

Membrane lap joints where the Visqueen Double Sided Butyl Tape is visible through

the membrane. In addition, there was also sufficient lap between each sheet of

Visqueen Low Permeability Membrane which was typically more than 150mm.



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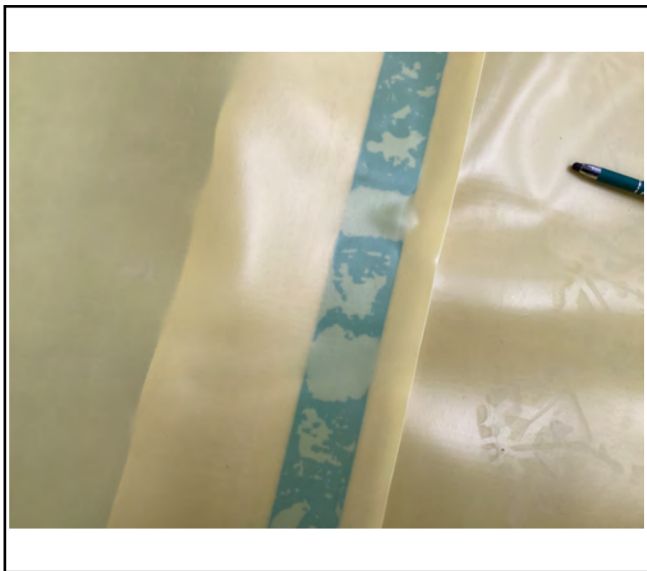


VERIFICATION ITEM THREE

LOCATION/GRID LINE: Goods In Office (S-V/5-6). Welfare Area (E-G/11-12)

NOTES: Visqueen Low Permeability Membrane - Lap Joints

Further to 'Verification Item Two' the Mechanical Point Stress was continued along the various Visqueen Low Permeability Membrane lap joints. The left image gives an initial view of one of the Visqueen Low Permeability Membrane lap joints where it was



noted that the Visqueen Double Sided Butyl Tape appeared not to have fully

sealed the two sections of the Visqueen Low Permeability Membrane. The

Mechanical Point Stress Test seen being completed in the right image identified a

mis-taped lap joint and therefore a capillary leak risk.

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VERIFICATION ITEM THREE



The overview image shows further mis-taped lap joints and are indicated with

with white arrows. These areas required further attention and the installers

proceeded to apply further pressure ensuring the Visqueen Double Sided

Butyl Tape provided a full robust seal as seen in additional photos.



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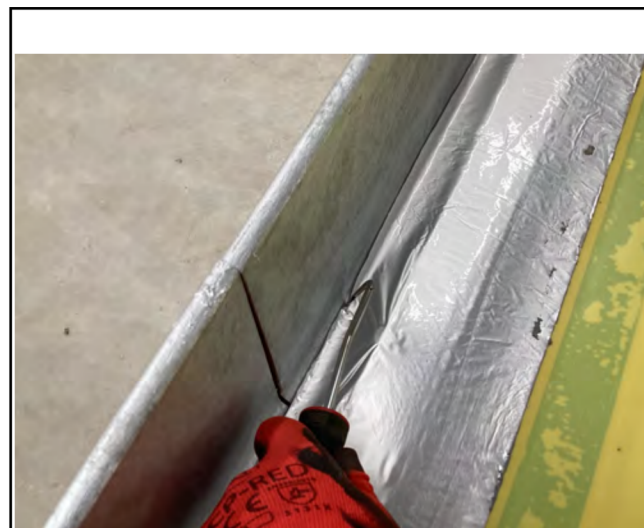
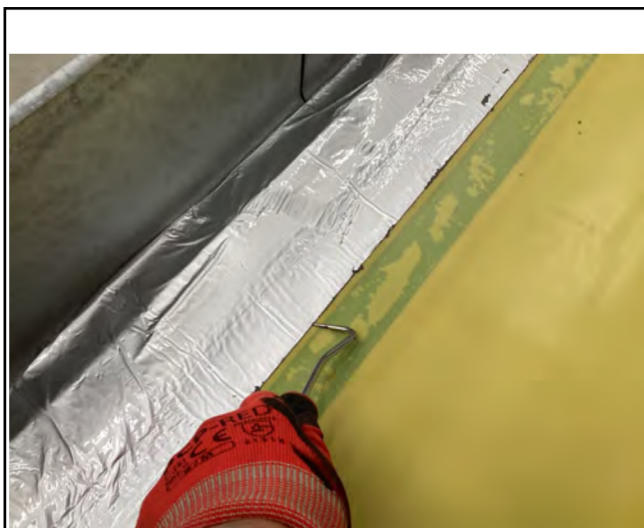


VERIFICATION ITEM FOUR

LOCATION/GRID LINE: Goods In Office (S-V/5-6). Welfare Area (E-G/11-12)

NOTES: Perimeter Retrospective Installation

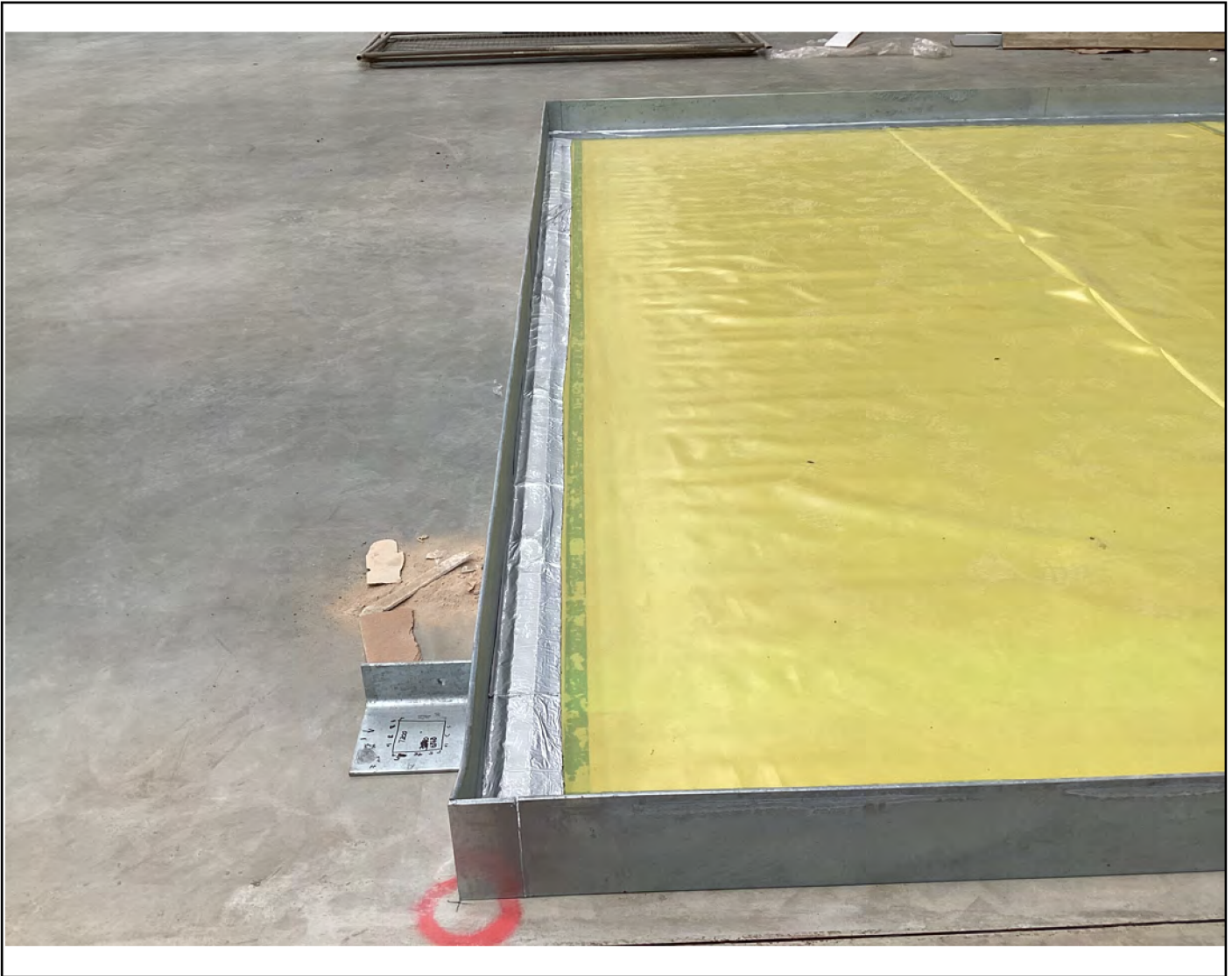
The two areas of installation were installed within an enclosure where a steel angle had been used to line the perimeter edges. The Visqueen Low Permeability Membrane terminated with the steel angle before a being sealed with a strip of the



Visqueen ProDetailing Tape. The installation was initially checked for any obvious bonding issues where it appeared that there was a sufficient bond and no evidence of any excessive creasing. The images show the Mechanical Point Stress Test being undertaken along the edges which confirmed a robust bond had been completed.

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VERIFICATION ITEM FOUR



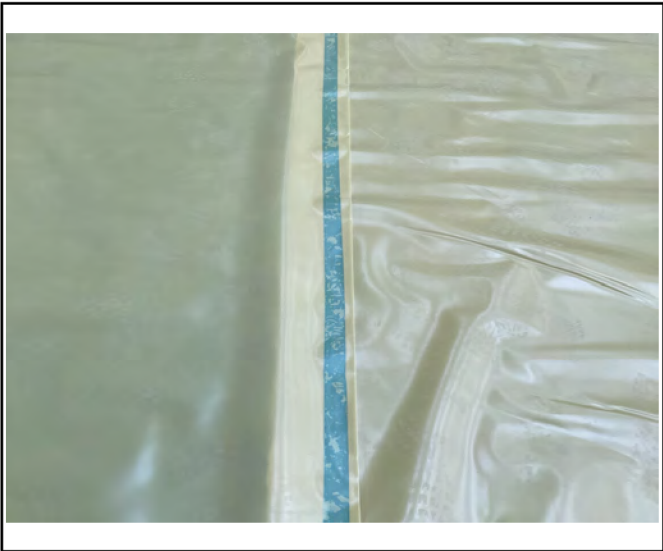
The overview image shows a typical perimeter where the Visqueen ProDetailing Tape had been used to seal the steel angle with the Visqueen Low Permeability Membrane. The verification noted the Visqueen ProDetailing had been lapped and fully bonded and therefore no capillary leak risks identified.



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ADDITIONAL PHOTOGRAPHS



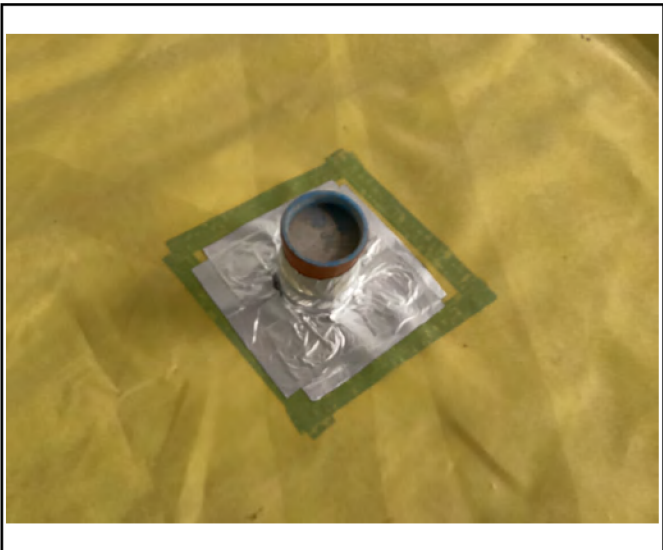
View along a typically sealed Low

Permeability Membrane lap joint



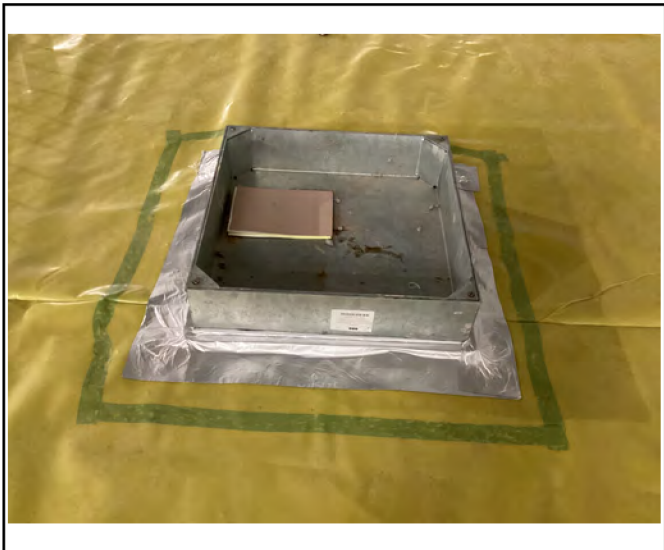
View of a typically sealed pipe

penetration sealed with ProDetailing



View of a typically sealed pipe

penetration sealed with ProDetailing



View of an inspection chamber

penetration sealed with ProDetailing



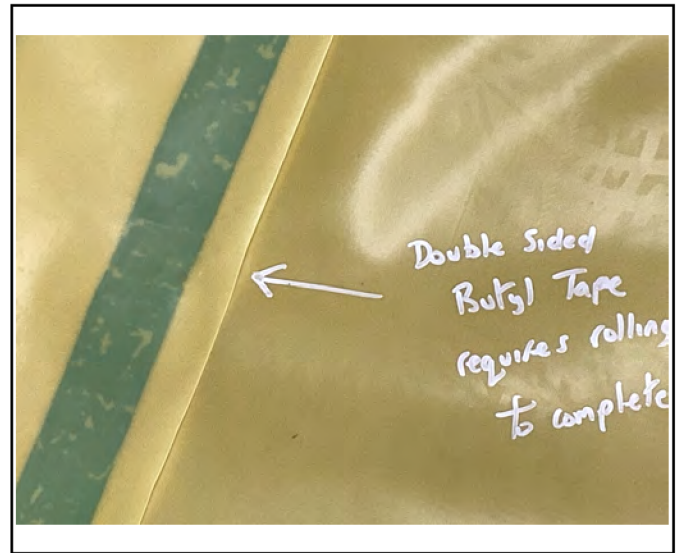
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ADDITIONAL PHOTOGRAPHS



View of un-sealed lap joint requiring
further pressure to complete seal (1)



Un-sealed lap joint (1) remediated
following further pressure application



View of un-sealed lap joint requiring
further pressure to complete seal (2)



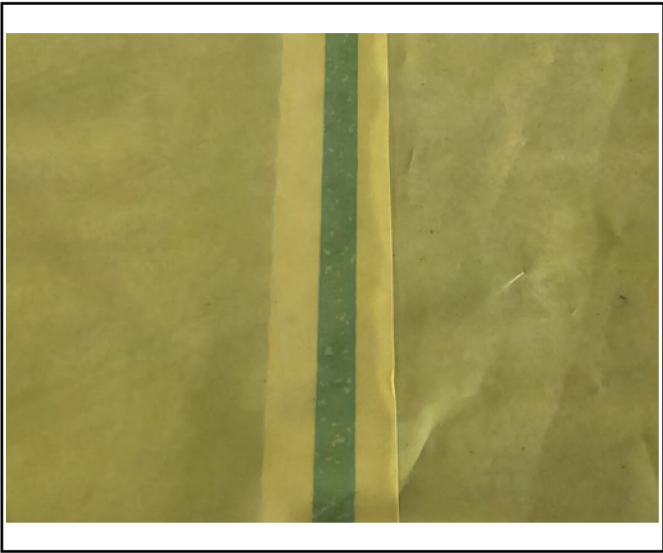
Un-sealed lap joint (2) remediated
following further pressure application



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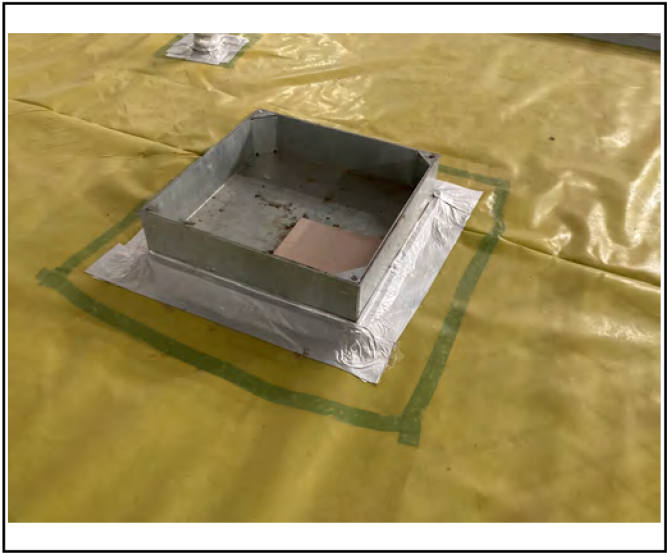


ADDITIONAL PHOTOGRAPHS



View along a typically sealed Low

Permeability Membrane lap joint



Alternative view View of an inspection

chamber sealed with ProDetailing



Mechanical Point Stress Test to

retrospective ProDetailing seals



Mechanical Point Stress Test to

retrospective ProDetailing seals



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ADDITIONAL PHOTOGRAPHS



Product - Visqueen Double Sided

Butyl Tape used to seal lap joints



Product - Visqueen ProDetailing

Tape used to provide various seals



Product - Visqueen Low Permeability

Membrane used to line the two areas



View of a potential lap joint fail

due to creased membrane



GEOSHIELD Verification Report



VERIFICATION SUMMARY

This was the first visit to site where various small areas within the existing floor slab required a Visqueen Low Permeability Membrane installing. The two areas this report were completed using a dual taped system and retrospective perimeter seals. The verification process is summarised as follows:-

>. Mechanical Point Stress Test to all Visqueen Low Permeability Membrane lap joints where various required further pressure.

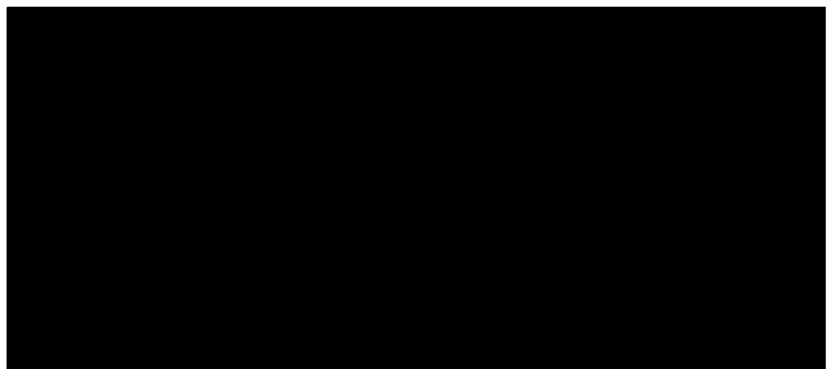
>. Mechanical Point Stress Test to all perimeter retrospectively detailing-no issues

>. Mechanical Point Stress Test to pipe penetration detailing-no issues.

>. Visual inspection of completed areas where there was no evidence of damage

Passed and verified in accordance with CIRIA 735 and installed to BS8485:2019.

GEOSHIELD SIGNATURE:



DATE: 08/08/2023