GeoShield Verification Report

PROJECT REFERENCE: GEO103300

PROJECT: Leeds Road, Mirfield

PROJECT ADDRESS: Leeds Road

Mirfield, Wakefield

WF14 0JE

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

Rhinoplast Total Gas Barrier

Gas Resistant Detail Strip

Rhinoplast LT Joint Strip (Double Sided Butyl Tape)

Rhinoplast High Tack Girth Tape

GeoShield Verification Report

NAME OF SURVEYOR: Michael Dodd

VERIFICATION COMPANY: GeoShield Limited

Icon Business Centre

4100 Park Approach

Thorpe Park

Leeds

CONTACT NUMBER:

EMAIL ADDRESS:

ORDER NUMBER: To be confirmed

PER VISIT: YES: ☐ NO: ☐ PROJECT: YES: ☐ NO: ☐

GeoShield Verification Report

CLIENT DETAILS

CLIENT CONTACT:	Andy Butterworth
CONTACTS ROLE:	Director - ABM Developments (Yorkshire) Limited
MOBILE PHONE:	
EMAIL ADDRESS:	

CLIENT CONTACT:	Aiden McCrystal
CONTACTS ROLE:	Director
MOBILE PHONE:	
EMAIL ADDRESS	
NOTES:	

GeoShield Verification Report

APPLICATOR'S DETAILS

APPLICATOR NAME: Lee Dyson

COMPANY: AM Groundworks

APPLICATOR TEL: Call Aiden McCrystal

APPLICATOR EMAIL:

APPLICATOR NAME: Frankie McCrystal

COMPANY: AM Groundworks

APPLICATOR TEL: Call Aiden McCrystal

APPLICATOR EMAIL:

NOTES: The installers have no experience in the installation of Ground Gas Membrane systems. The installers have had a tool box talk this report and helped them understand the variety of installation process.

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AREA SURVEYED: Plots 1,2,3,4,5 & 6 (infill).

SITE CONDITIONS:

WEATHER: Overcast with occasional rain

TEMPERATURE: 11.5C

MEMBRANE TEMPERATURE: N/A

RELATIVE HUMIDITY: N/A

TIME: 14:00 to 16:00 REPORT NUMBER: 008

DATE: 06/11/2023

ACCOMPANIED Andy Butterworth

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VERIFICATION LAYOUT

Overview of proposed Site Layout

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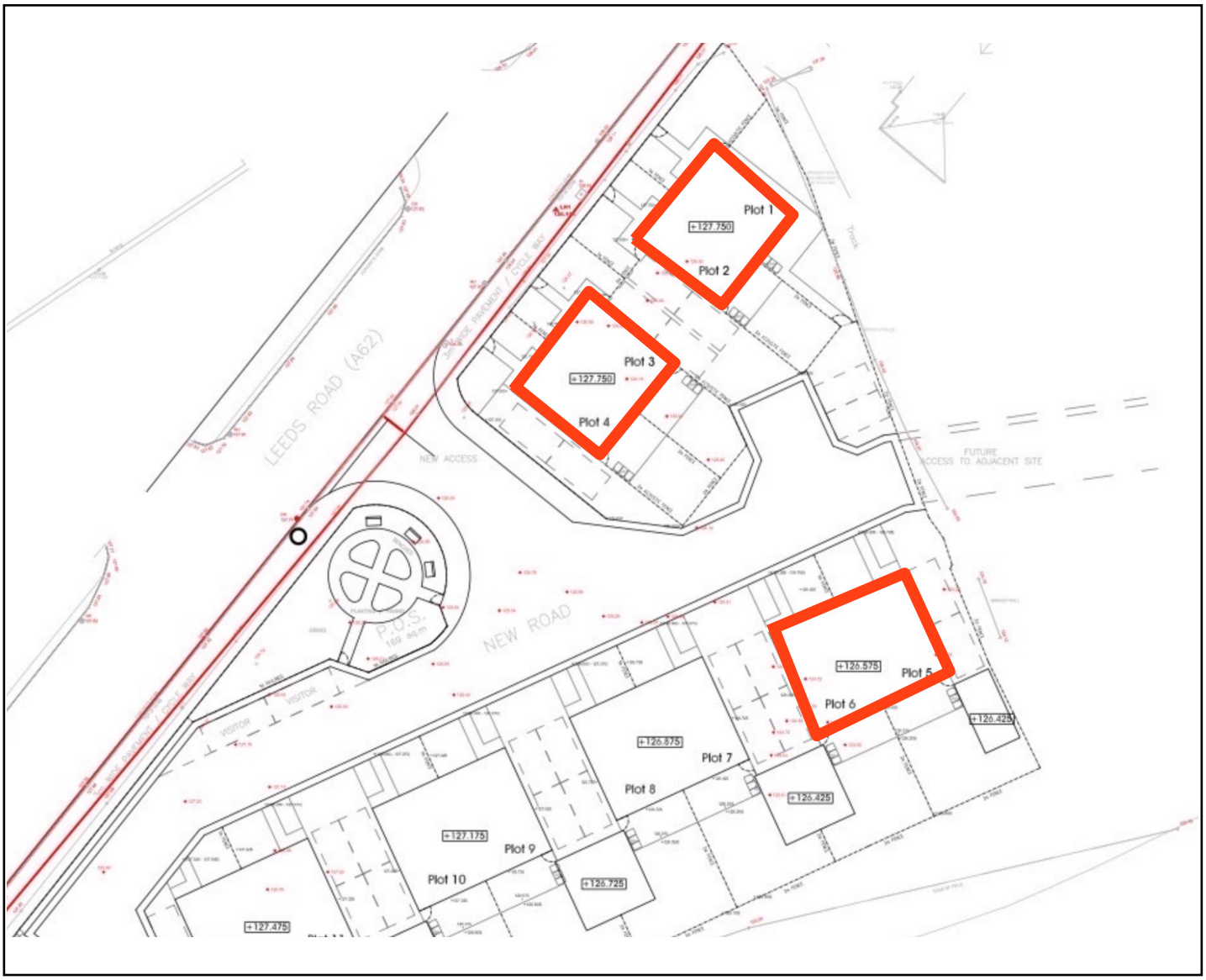
VERIFICATION LAYOUT



Overview of verified Plots

Plots 1,2,3,4,5 & 6 infill outlined in red

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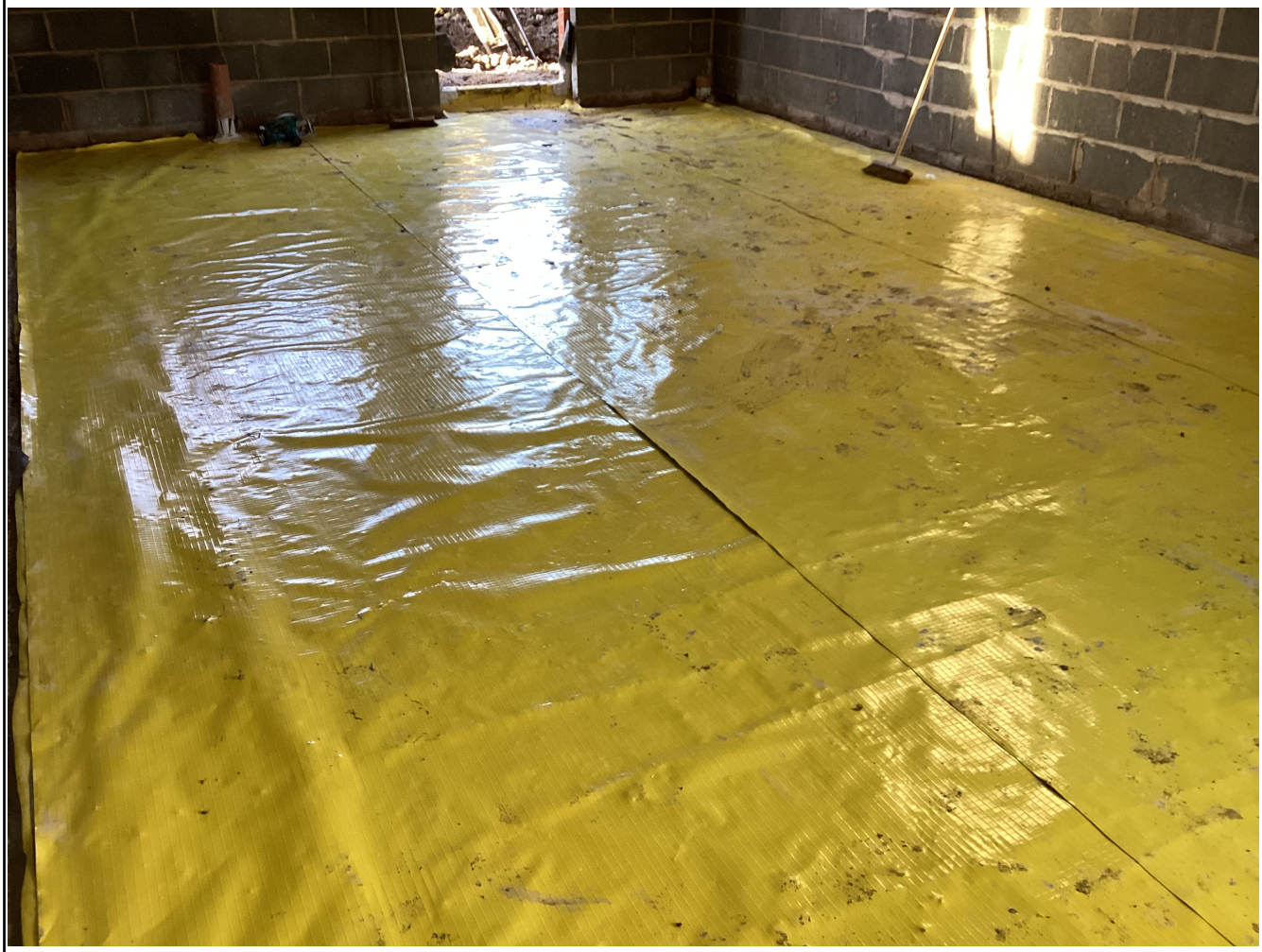
OVERVIEW PHOTOGRAPHS



Alternative overview of verification area

Plot 1

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OVERVIEW PHOTOGRAPHS

Alternative overview of verification area

Plot 2

GEOSHIELD Verification Report

OVERVIEW PHOTOGRAPHS

Outside view of verification area.

Plot 3

GEOSHIELD Verification Report

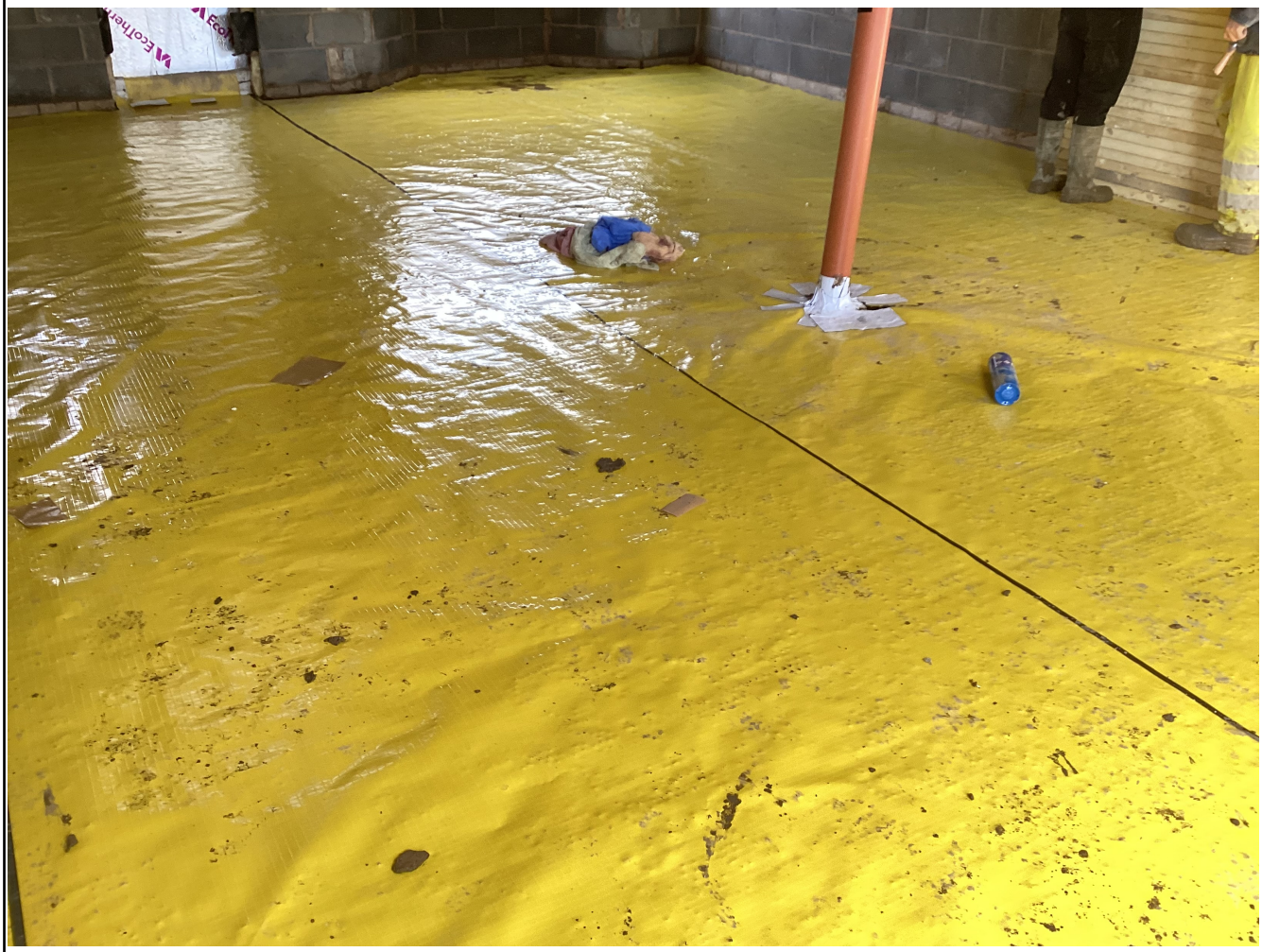
OVERVIEW PHOTOGRAPHS

Alternative overview of verification area

Plot 4

GEOSHIELD Verification Report

OVERVIEW PHOTOGRAPHS



Outside view of verification area.

Plot 5

GEOSHIELD Verification Report

OVERVIEW PHOTOGRAPHS

Outside view of verification area.

Plot 6

GEOSHIELD Verification Report

VERIFICATION ITEM ONE

LOCATION/GRID LINE: Plots 1,2,3,4,5 & 6 inclusive (infill)

NOTES: Rhinoplast Total Gas Barrier Installation-Lap Joints

The Rhinoplast Total Gas Barrier had been installed, lapped and dual sealed with the previously installed Rhinoplast Total Gas Barrier and included ‘infill lap joints’. The left image shows a close up of the probe being used to offer pressure along the LT Joint Strip

where no issues were identified. The right image shows the LT Joint Strip being exposed so as show that this was typically used to provide a full seal within all the lap joints.

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VERIFICATION ITEM ONE

The overview image shows one of the various exposed Rhinoplast Total Gas Barrier lap joints where the Rhinoplast LT Joint Strip is being subjected to the Mechanical Point Stress Test. The various lap joints all proved to be correctly sealed and therefore no potential capillary leaks were identified.

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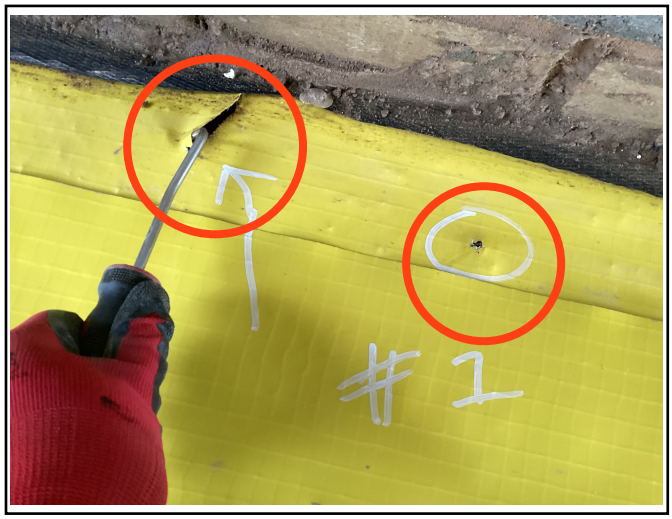
VERIFICATION ITEM TWO

LOCATION/GRID LINE: Plot 5

NOTES: Rhinoplast Total Gas Barrier - Damage

The six plots were all visually verified so as to determine whether there was any damage and/or punctures. The only plot which had been affected by a series of damage and/or punctures was within Plot 5 where follow on trades had caused



damage which most wanted to be caused by blocks during the construction of the superstructure. This particular area must not of been protected by a layer of damp proof membrane hence the damage. The images identified with red circles show examples of punctures/cuts to the Rhinoplast Total Gas Barrier which all required remediating before concluding the verification visit this report.

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VERIFICATION ITEM TWO

The overview image shows a stretch of the Rhinoplast Total Gas Barrier where there were multiple small punctures along this section identified with a red arrow. These punctures along with evidence of further areas of damage can be seen within additional photos this report.

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VERIFICATION ITEM THREE

LOCATION/GRID LINE: Plots 5 & 6 inclusive.

NOTES: Pipe Penetration Detailing

The various pipe penetrations were all sealed using strips of Gas Resistant Detail Strip to ensure a complete seal. The initial inspection noted that the Gas Resistant Detail Strip had been securely adhered to the Rhinoplast TGB and the use of sufficient

heat applied activated the bitumen backing which in turn improved the adhesion properties especially when pressure applied during the installation. The images show the Mechanical Point Stress Test being undertaken along one of various edges of the Gas Resistant Detail Strip where no capillary leaks were identified

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VERIFICATION ITEM THREE

The overview image shows the typical perimeter installation of the Rhinoplast

Total Gas Barrier where the various pipe penetrations proved to be correctly sealed.

The strips of Gas Resistant Detail Strip had been fully bonded and it was evident

that both heat and pressure had been used to help activate the bitumen backing

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ADDITIONAL PHOTOGRAPHS

Plot 5 - punctures/damage identified at (1) required remediation

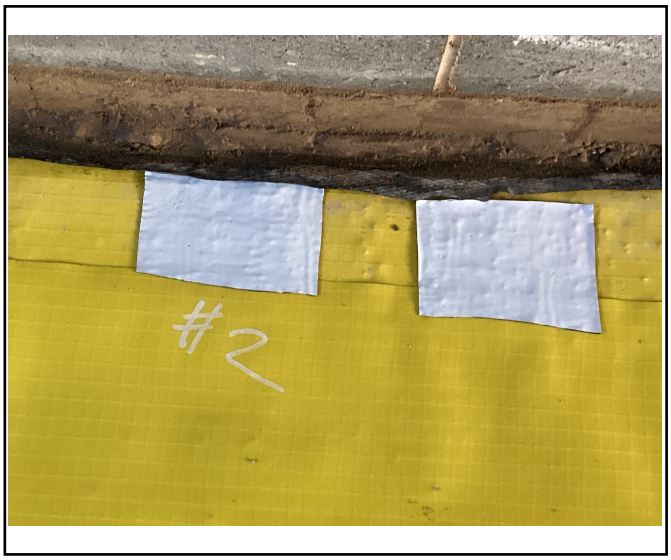
The punctures/damage (1) were all remediated using a strip of GRD

Plot 5 - punctures/damage identified at (2) required remediation

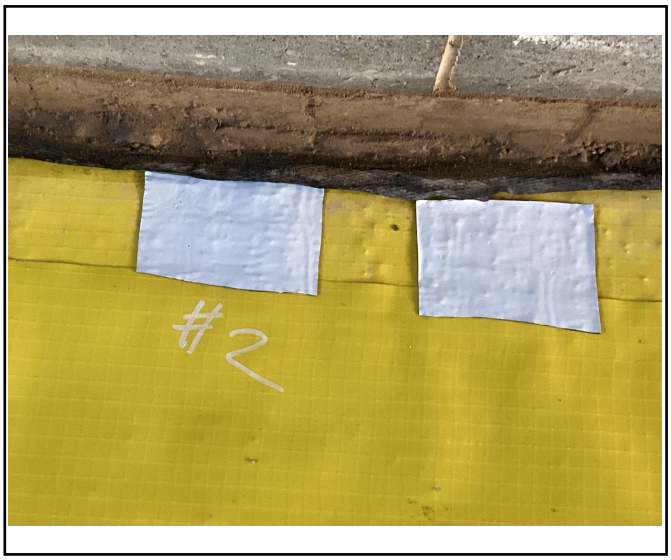
The punctures/damage (2) were all remediated using a strip of GRD

GEOSHIELD Verification Report

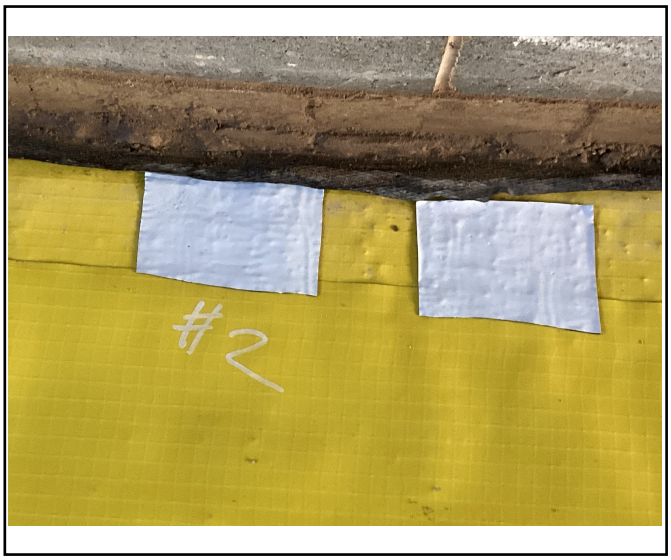
ADDITIONAL PHOTOGRAPHS



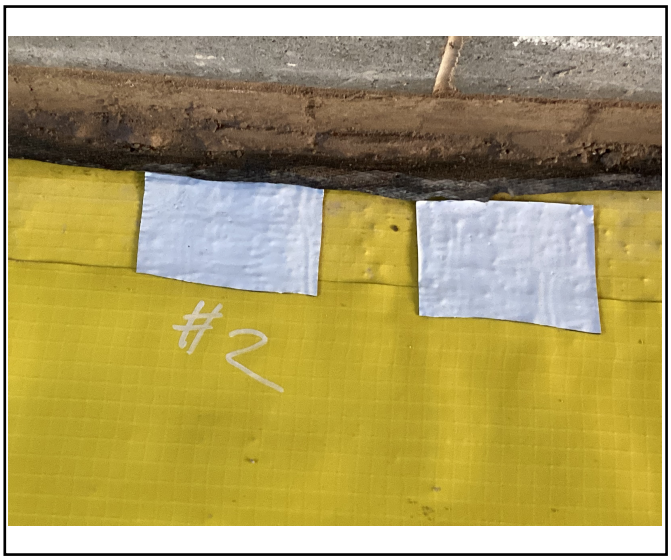
Plot 5 - punctures/damage identified at (3) required remediation



The punctures/damage (3) were all remediated using a strip of GRD



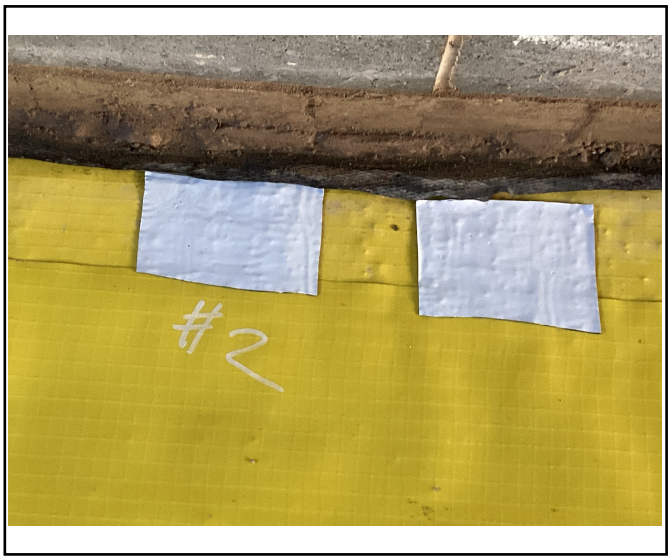
Plot 5 - punctures/damage identified at (4) required remediation



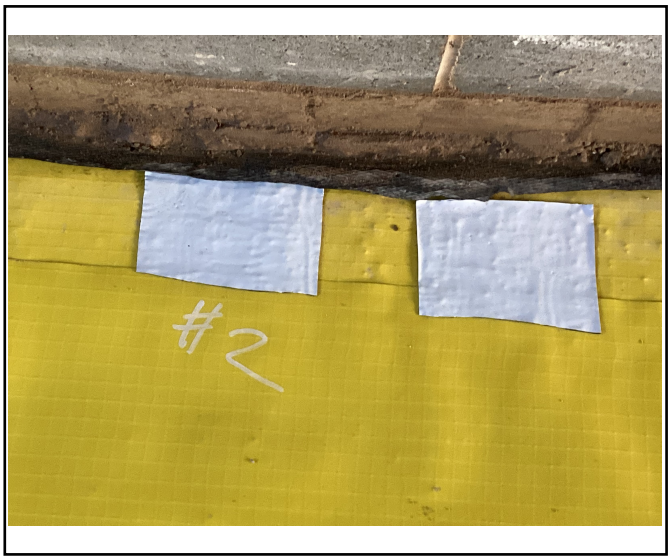
The punctures/damage (4) were all remediated using a strip of GRD

GEOSHIELD Verification Report

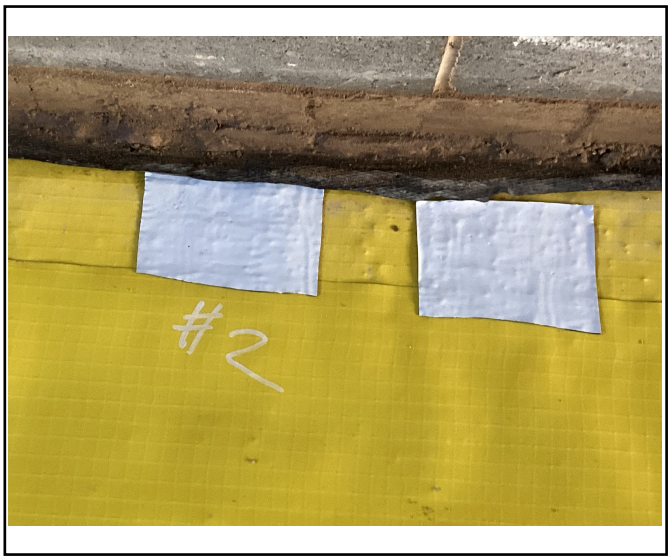
ADDITIONAL PHOTOGRAPHS



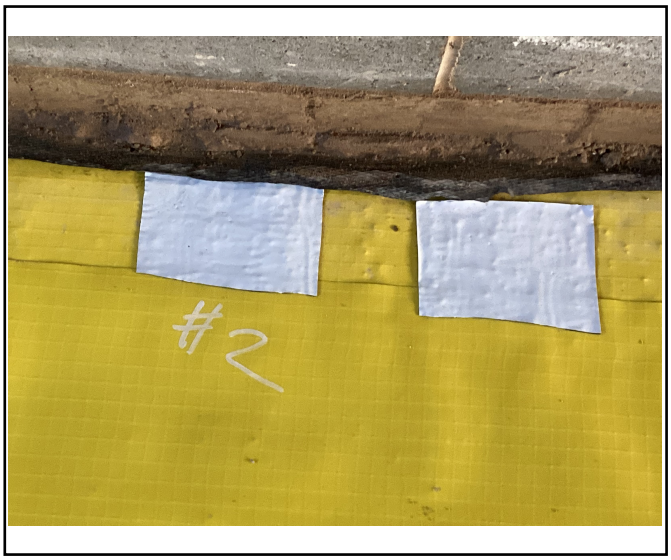
Plot 5 - punctures/damage identified at (5) required remediation



The punctures/damage (5) were all remediated using a strip of GRD



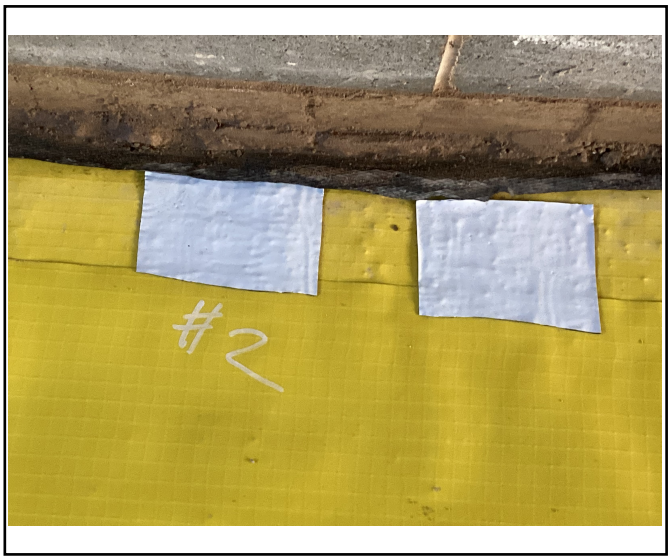
Plot 5 - punctures/damage identified at (6) required remediation



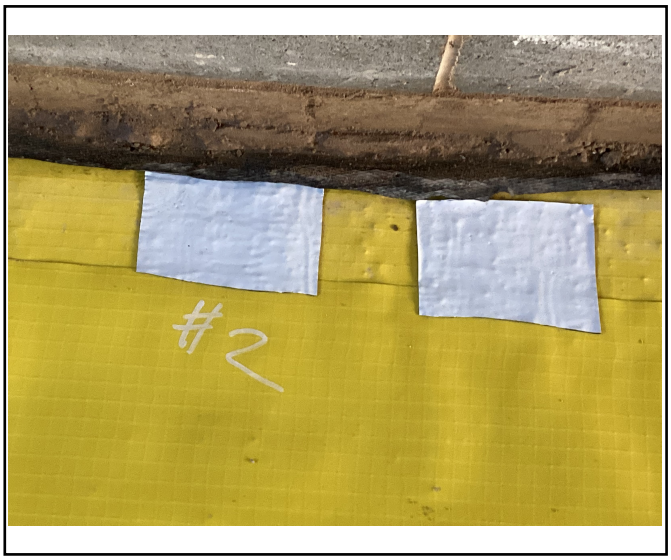
The punctures/damage (6) were all remediated using a strip of GRD

GEOSHIELD Verification Report

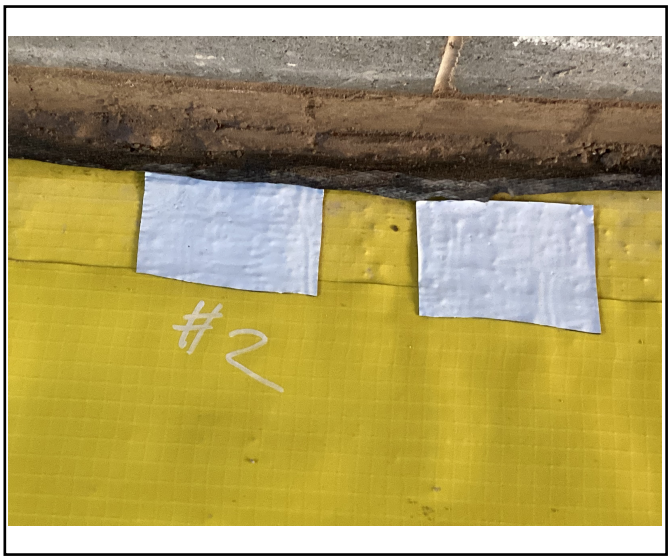
ADDITIONAL PHOTOGRAPHS



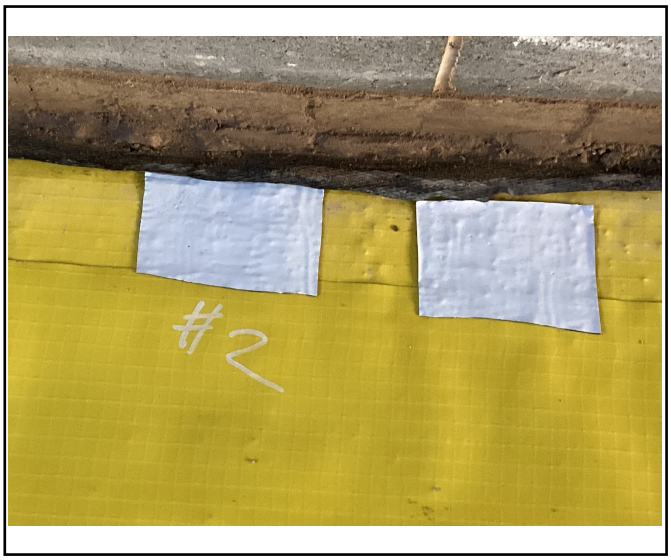
Plot 5 - punctures/damage identified at (7) required remediation



The punctures/damage (7) were all remediated using a strip of GRD



Mechanical Point Stress Test to Rhinoplast Total Gas Barrier lap joint



LT Joint Strip being identified as forming a lap joint seal

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GAS MEMBRANE TESTING

VISUAL /PICK & PROBE:	✔	SMOKE TEST:	
AIR LANCING:		DIELECTRIC:	
DESTRUCTIVE:		OTHER:	✔
INERT GAS TEST:		SPECIFY:	
		Mechanical Point Stress Test	
Testing checklist attached:		YES ✔	NO

Gridline/Plot Sign off

Gridline/Plot Sign off	Plot 7 - side and rear elevation	✔
Gridline/Plot Sign off	Plot 8 - side and rear elevation	✔
Gridline/Plot Sign off	Plots 7 & 8 - front elevation including Party Wall	✔
Gridline/Plot Sign off	Plots 9 & 10 - perimeter elevations including party wall	✔
Gridline/Plot Sign off	Plots 11 12 - perimeter and party wall	✔
Gridline/Plot Sign off	Plots 7 & 8 infill	✔
Gridline/Plot Sign off	Plots 13 & 14 Full Line Out	✔
Gridline/Plot Sign off	Plots 9 & 10 infill	✔
Gridline/Plot Sign off	Plots 5 & 6 - perimeter and party wall.	✔
Gridline/Plot Sign off	Plots 11 & 12 infill	✔
Gridline/Plot Sign off	Plots 1, 2, 3 & 4 perimeter and party wall.	✔

GeoShield Verification Report

GAS MEMBRANE TESTING

VISUAL /PICK & PROBE:	✔	SMOKE TEST:	
AIR LANCING:		DIELECTRIC:	
DESTRUCTIVE:		OTHER:	
INERT GAS TEST:		SPECIFY:	

Testing checklist attached: YES ✔ NO

Gridline/Plot Sign off

Gridline/Plot Sign off	Plots 1,2,3,4,5 & 6 infill	✔
Gridline/Plot Sign off		
Gridline/Plot Sign off	The project is now complete and can be handed over to	
Gridline/Plot Sign off	the client.	✔
Gridline/Plot Sign off		
Gridline/Plot Sign off		
Gridline/Plot Sign off		
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Gridline/Plot Sign off		
Gridline/Plot Sign off		
Gridline/Plot Sign off		

GEOSHIELD Verification Report

REMEDIATION LOG

Date	Nr	Remediation Description	Y/N
20/12/2022	001	The substrate was not prepared sufficiently to be able to install	
		the proposed Rhinoplast TGB upon.	✔
19/01/2023	002	No faults were identified during the verification process.	✔
25/01/2023	003	No faults were identified during the verification process.	✔
13/02/2023	004	Fourteen punctures to Rhinoplast TGB around perimeter all of	
		which were remediated during the verification visit	✔
04/05/2023	005	Four punctures through Rhinoplast Total Gas Barrier identified but	
		remediated during the verification visit.	✔
16/05/2023	006	No faults were identified during the verification visit	✔
04/07/2023	007	There were thirty-six punctures/ holes through the Rhinoplast	
		Total Gas Barrier all of which were remediated during this visit.	✔
06/11/2023	008	There were multiple punctures and/or damage to seven areas	
		within Plot 5. These were remediated during the verification visit	✔
		The project can now be handed over to the client.	✔

GEOSHIELD Verification Report

VERIFICATION SUMMARY

This was the eighth visit to site where the installation of the Rhinoplast Total Gas Barrier to Plots 1 to 6 (Infill) where the verification is summarised as follows:-

>. Mechanical Point Stress Test to sampled Rhinoplast TGB lap joints where no issues were identified throughout.

>. Visual inspection of the whole installation where there were seven areas of damage and/or punctures within Plot 5 all of which were remediated.

>. Mechanical Point Stress Test to sampled pipe penetrations-no issues

The project is now complete and be handed over to the client.

Verification was in accordance with CIRIA 735.

GEOSHIELD SIGNATURE:

DATE: 06/11/2023