GeoShield Verification Report 18

PROJECT REFERENCE:	GEO102862 R018
PROJECT:	Persimmon Homes Site
PROJECT ADDRESS:	150-158 High Road

Weston, Spalding

PE12 6WA

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

Visqueen Standard Gas Barrier

Visqueen GRSAM

Visqueen Preformed Top Hats.

GEOSHIELD Verification Report

VERIFICATION OFFICER: Michael Dodd

VERIFICATION COMPANY: GeoShield Limited

Icon Business Park, 4100 Park Approach

Thorpe Park, LEEDS

West Yorkshire

LS15 8GB

CONTACT NUMBER: 07555 214679

EMAIL ADDRESS: mdodd@geoshield.co.uk

ORDER NUMBER:

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

GEOSHIELD Verification Report

CLIENT DETAILS

CLIENT CONTACT:	Andy Collins
CONTACTS ROLE:	Prestige Air Director
MOBILE PHONE:	07780 223 116
EMAIL ADDRESS:	Andy@prestigeair.com

CLIENT CONTACT:	
CONTACTS ROLE:	
MOBILE PHONE:	
EMAIL ADDRESS	
NOTES:	
NOTES:	
NOTES:	

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APPLICATOR'S DETAILS

APPLICATOR NAME:	Ben Barbian
COMPANY:	Prestige Air Technology Ltd
APPLICATOR TEL:	07785 355438
APPLICATOR EMAIL:	

APPLICATOR NAME:	Josh Rolph
COMPANY:	Prestige Air Technology Ltd
APPLICATOR TEL:	
APPLICATOR EMAIL:	

NOTES: The installers from Prestige Air are competent & experienced installers in the installation of ground gas and waterproofing systems. At least 1 person holds the NVQ level 2 qualifications in the installation of gas membranes.

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AREA SURVEYED:

Plots 84, 85, 86 & 87 inclusive - Full Line Out

SITE CONDITIONS:

WEATHER:

Overcast

TEMPERATURE:

9c

RELATIVE HUMIDITY:

N/A

MEMBRANE TEMPERATURE:

N/A

TIME: 13:15 to 14:30

DATE: 04.03.2024

REPORT NUMBER: 018

ACCOMPANIED BY:

Ben Barbian of Prestige Air Technology Ltd

GeoShield Verification Report

Verification Layout



The image above shows the proposed overall site layout for the project.

GeoShield Verification Report

Verification Layout



The image above shows a closer view of Plots 84, 85, 86 & 87 where the verification inspection took place on site today.

GeoShield Verification Report

OVERVIEW



The photograph above displays an overview of the area where today's verification inspection took place on site.
Plot 84

GeoShield Verification Report

OVERVIEW



An alternate overview photograph of where the verification inspection took place on site today.
Plot 85

GeoShield Verification Report

OVERVIEW



An alternate overview photograph of where the verification inspection took place on site today.
Plot 86

GeoShield Verification Report

OVERVIEW



An alternate overview photograph of where the verification inspection took place on site today.
Plot 87

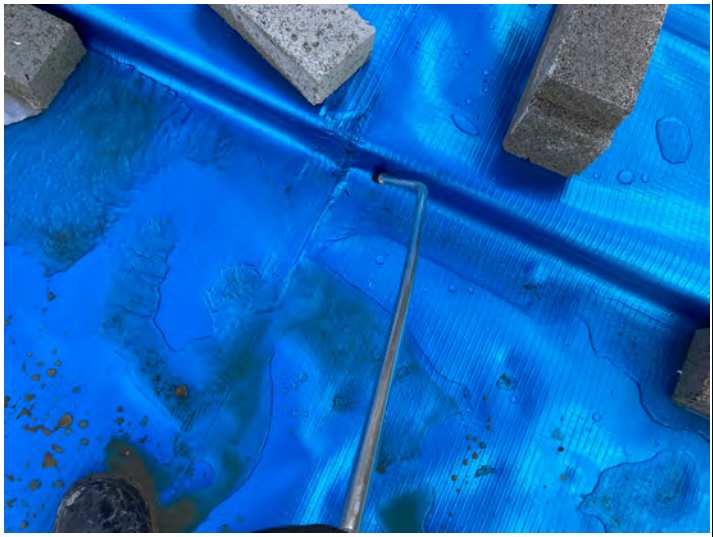
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VERIFICATION ITEM ONE

LOCATION/GRID LINE: Plots 84, 85, 86 & 87 inclusive

Visqueen Gas Barrier Installation-Lap Joints





NOTES:

The Visqueen Gas Barrier had been installed upon an insulated block & beam which provided a suitable soft but protective and low risk substrate against potential punctures. The Visqueen Gas Barrier sections had been welded together ensuring the minimum lap of 100mm was maintained throughout. The images show

NOTES:

the Air Lance Integrity Test being undertaken along the edges of the Visqueen Gas Barrier. The left image shows the Lance being directed along the edge of the lap joints along the party wall and the right image shows testing a vertical lap. There was only one mis-welded lap joint identified throughout.

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VERIFICATION ITEM ONE



The overview image shows the Air Lance Integrity being undertaken along one of the various Visqueen Gas Barrier pre-formed tophat lap joints. The test involved directing compressed air set at 50psi along the edges of each and every available lap joint at no more than 51mm away. There was one mis-welded lap joint identified but this was remediated during the verification process this report.

GeoShield Verification Report

VERIFICATION ITEM TWO

LOCATION/GRID LINE: Plots 84, 85, 86 & 87 inclusive

Pipe Penetration Detailing



NOTES:

The pipe penetrations were all sealed combining a Visqueen Gas Barrier tophats and strips of Visqueen GRSAM. The initial inspection noted that Visqueen GRSAM had been fully bonded to the both the tophat and the pipe itself. The left image shows the Mechanical Point Stress Test being undertaken along the edge of the

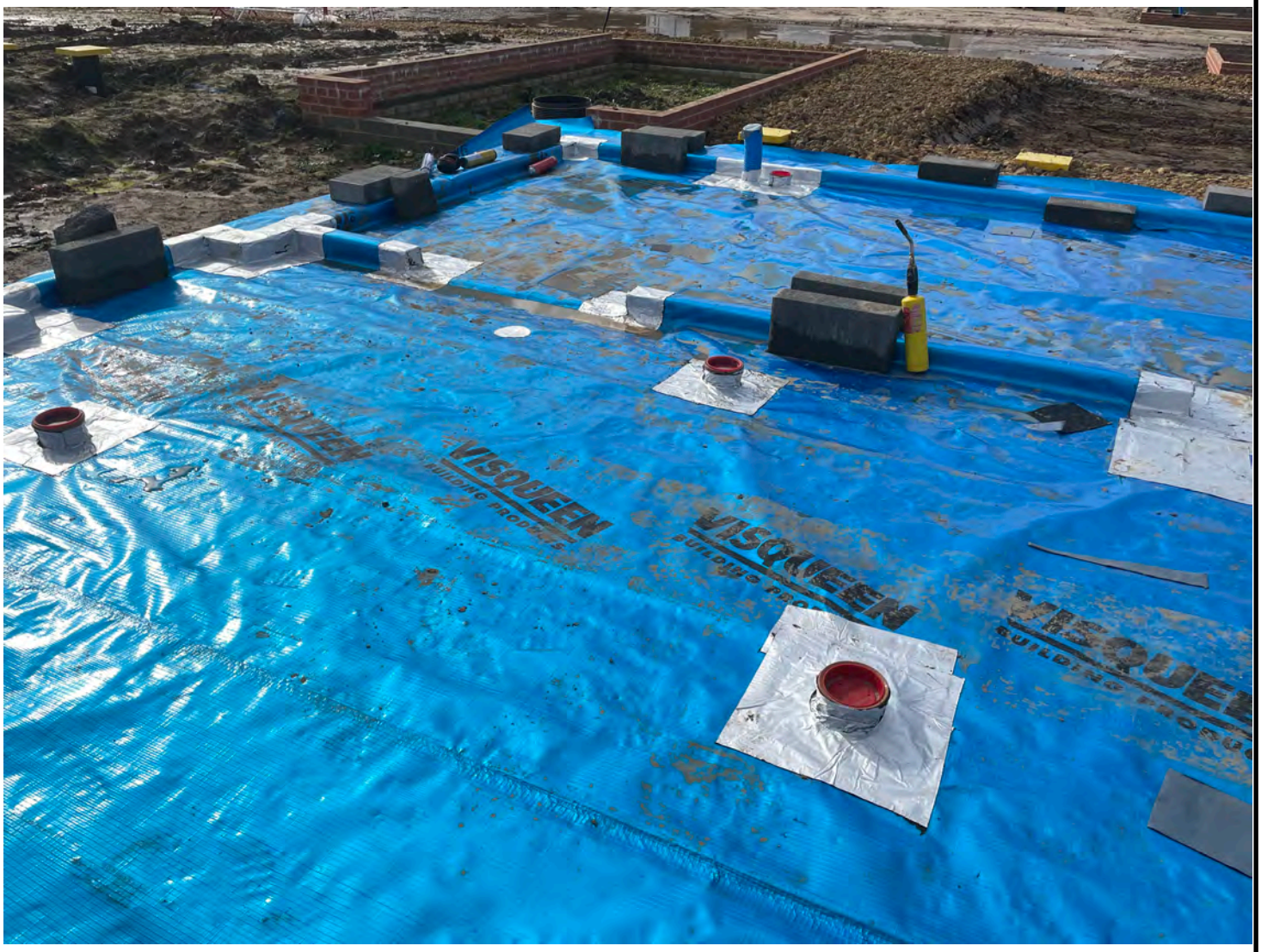


NOTES:

Visqueen GRSAM whereas the right image shows the Air Lance Integrity Test being undertaken along the lap joint with the Visqueen Gas Barrier. Both types of testing revealed no issues with the installation where all pipe penetrations were fully sealed and therefore no potential capillary leaks.

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VERIFICATION ITEM TWO



The overview image shows the various pipe penetrations which were all subjected to both a visual and physical inspection. It was evident that heat was used to activate the bitumen backing and combined with pressure enabled a secure bond with both the pipe penetration and the Visqueen Gas Barrier identifying no issues.

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VERIFICATION ITEM THREE

LOCATION/GRID LINE: Plots 84, 85, 86 & 87 inclusive

Internal/External Corner Detailing





NOTES:

The various internal and external corners had all been initially formed using sections of Visqueen Gas Barrier. These corners were then reinforced and sealed using strips of Visqueen GRSAM. The initial inspection included checking generally for any loose Visquee GRSAM where it was noted that all aspects of installation

NOTES:

had been subjected to both heat and pressure so as to activate the bitumen backing improving the bond with the Visqueen Gas Barrier. The bond was confirmed via the Mechanical Point Stress Test as seen in the images.

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VERIFICATION ITEM THREE



The overview image shows various internal and external corners which had been subjected to verification. The visual and physical testing identified no issues and all corners proved to have been securely bonded with the Visqueen Gas Barrier. There also was very little creasing and no capillary leak risks identified.

ADDITIONAL PHOTOGRAPHS



View showing a typical Visqueen Gas Barrier lap joint lapped a minimum of 100mm.



View showing an internal corner with integral pipe penetration sealed with strips of Visqueen GRSAM



View of multiple internal and external corners sealed with strips of Visqueen Gas Resistant Self Adhesive Membrane



View showing a party wall/junction with integral pipe penetration sealed with strips of Visqueen GRSAM

ADDITIONAL PHOTOGRAPHS



Air Lance Integrity Test to pre-formed Visqueen‘tophat’ lap joints



View showing the identified mis-welded Visqueen Gas Barrier lap joint which was remediated during the verification.



View showing twin pipe penetrations sealed with strips of Visqueen Gas Resistant Self Adhesive Membrane



View of multiple internal and external corners sealed with strips of Visqueen Gas Resistant Self Adhesive Membrane

GEOSHIELD Verification Report

REMEDIATION LOG

Date	Nr	Remediation Description	Y/N
23/07/2022	001	No faults or defects identified during today's verification inspection.	✔
03/08/2022	002	Two punctures to plot 12 - remediated during verification visit.	✔
		One small mis-weld to lap joint at plot 9 - remediated during	✔
		verification visit	✔
02/09/2022	003	No faults or defects identified	✔
21/09/2022	004	No faults or defects identified during today's verification inspection.	✔
04/10/2022	005	Several holes identified. Remediated on-site.	✔
26/10/2922	006	No faults identified during this verification visit.	✔
01/11/2022	007	No faults identified during this verification visit.	✔
12/12/2022	008	One fault located to a welded lap, this was remediated on site.	✔
07/02/2023	009	X3 faults identified. Remediated on-site.	✔
24/04/2023	010	Two punctures/damage identified and remediated during the	✔
		verification visit.	✔
		Two mis-welded Lap Joints identified but remediated during the	✔
		verification visit.	✔

GEOSHIELD Verification Report

REMEDIATION LOG

Date	Nr	Remediation Description	Y/N
17/05/2023	011	No faults were identified during the verification process.	✔
15/09/2023	012	Seven miswelded lap joints identified and remediated on-site	✔
05/10/2023	013	No faults or defects identified during this visit.	✔
17/10/2023	014	A total of nine miswelded lap joints were identified, all were	✔
		successfully remediated on site.	✔
29/11/2023	015	There were no issues identified during the verification process	✔
12/12/2023	016	One small misweld identified which was remediated on site.	✔
25/01/2024	017	There were no issues identified during the verification process	✔
04/03/2023	018	There was one mis-welded Visqueen Gas Barrier lap joint which	
		was remediated during the verification process.	✔

GEOSHIELD Verification Report

GAS MEMBRANE TESTING

VISUAL:	YES	✔	NO		SMOKE TEST:	YES		NO	✔
COMPRESSED AIR:	YES	✔	NO	✔	DILECTIC	YES		NO	✔
DESTRUCTIVE:	YES		NO	✔	OTHER:	YES	✔	NO	

Testing checklist attached: YES ✔ NO

Gridline/Plot Sign off

Gridline/Plot Sign off	Full line outs to Plots: 2-3-4-5-6.	✔
Gridline/Plot Sign off	Plots 7,8,9,10,11,12 &13	✔
Gridline/Plot Sign off	Full line outs to Plots: 14,15,16 and 17.	✔
Gridline/Plot Sign off	Full line outs to Plots: 18-19-20-21-22-23.	✔
Gridline/Plot Sign off	Full line out to Plot 24	✔
Gridline/Plot Sign off	Plot 24 integral garage	✔
Gridline/Plot Sign off	Plots 25, 26, 27, 28 & 29.	✔
Gridline/Plot Sign off	Plots 30 &. 31	✔
Gridline/Plot Sign off	Plots 48, 49, 50, 51, 52 & 53.	✔
Gridline/Plot Sign off	Full line outs to Plots: 32,33,42,43,44 & 45.	✔
Gridline/Plot Sign off	Plots: 34,35,36,37,38 & 39 full line outs	✔
Gridline/Plot Sign off	Plots: 40, 41, 46 & 47 full line outs	✔

GeoShield Verification Report

GAS MEMBRANE TESTING

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

Testing checklist attached: YES ✔ NO

Gridline/Plot Sign off

Gridline/Plot Sign off	Plots 125, 126, 127, 128, 129 & 130 Full Line Out	✔
Gridline/Plot Sign off	Plots 89, 90, 91, 92, 99, 100, 101 & 102 Full Line Out	✔
Gridline/Plot Sign off	Plots 103, 104, 105 & 106 Full Line Out	✔
Gridline/Plot Sign off	Plots - 95,96,97 & 98 Full Line Out	✔
Gridline/Plot Sign off	Plots 93 & 94 Full Line Out	✔
Gridline/Plot Sign off	Plots 88, 107 & 108 Full Line Out	✔
Gridline/Plot Sign off	Plots 84, 85, 86 & 87 Full Line Out	✔
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GeoShield Verification Report

VERIFICATION SUMMARY

This was the eighteenth site visit where four housing plots were fully lined out using the Visqueen Gas Barrier where the following verification was completed as follows:-

>. Air Lance Integrity Test to all welded Visqueen Gas Barrier lap joints where one mis-welded lap joint was identified but remediated during the verification process.

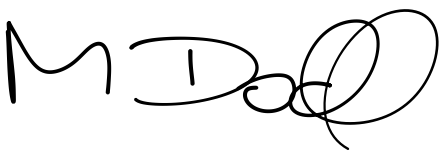
>. Mechanical Point Stress Test and Air Lance Integrity Testing to both the detailing and pre-formed tophats used to seal the pipe penetrations - no issues were identified throughout.

>. Mechanical Point Stress Test to the various detailed corners - no issues were identified throughout.

>. Visual inspection noted these were no signs of any punctures and/or damage this report.

This was passed and verified in accordance with CIRIA 735 and installed to BS8485:2015+2019.

GEOSHIELD SIGNATURE:



DATE: 04-Mar-2024