GeoShield Verification Report 3

PROJECT REFERENCE: GEO104603

PROJECT: Phase 2, Fleet Road, Holbeach

PROJECT ADDRESS:

50 Fleet Road, Holbeach

PE12 8LA

SPECIFICATION: Verified in with accordance CIRIA 735.

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

Substrate prepared in accordance with manufacturer's instructions.

Juta GP1 Gas Membrane

Juta GP SAM

GeoShield Verification Report

NAME OF SURVEYOR:	Niall Hogan
VERIFICATION COMPANY:	GeoShield Limited
	Icon Business Centre
	4100 Park Approach
	Thorpe Park
	Leeds
CONTACT NUMBER:	07423 116951
EMAIL ADDRESS:	nhogan@geoshield.co.uk
ORDER NUMBER:	To be confirmed

PER VISIT:	YES:	✔	NO:		PROJECT:	YES:	✔	NO:	

GeoShield Verification Report

CLIENT DETAILS

CLIENT CONTACT:	Ricky Cooper
CONTACTS ROLE:	Director - Omega Lining Solutions
MOBILE PHONE:	07817 634284
EMAIL ADDRESS:	ricky.c@omega-ls.co.uk

CLIENT CONTACT:	Rhys Wilkins
CONTACTS ROLE:	Omega Lining Solutions
MOBILE PHONE:	07392 084685
EMAIL ADDRESS	rhys.w@omega-ls.co.uk
NOTES:	

GeoShield Verification Plan

APPLICATOR'S DETAILS

APPLICATOR NAME:	Ian Greene
COMPANY:	Omega Lining Solutions
APPLICATOR TEL:	07455 228803
APPLICATOR EMAIL:	

APPLICATOR NAME:	Fab Gomes
COMPANY:	Omega Lining Solutions
APPLICATOR TEL:	07557 403819
APPLICATOR EMAIL:	

NOTES: At least one member of each team group will have a NVQ Level 2 qualification in the gas membrane installation.

All installers are competent and skilled to complete gas membrane installation.

GeoShield Verification Report

AREA SURVEYED:

Plots 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24 & 25 - Full Line Out

SITE CONDITIONS:

WEATHER:

Sunny

TEMPERATURE:

24ºc

RELATIVE HUMIDITY:

N/A

MEMBRANE TEMPERATURE:

N/A

TIME: 11:30 - 15:30

DATE: 24.07.2024

REPORT NUMBER: 003

ACCOMPANIED BY:

Ian & Fab - Omega Lining Solutions

GeoShield Verification Report

Verification Layout



The photograph above shows a plan layout of the site. The area highlighted in blue shows Plots 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24 & 25 where the verification inspection took place on site today.

GeoShield Verification Report

OVERVIEW



The photograph above displays an overview of Plots 14 & 15 where today's verification inspection took place on site.

GeoShield Verification Report

OVERVIEW



The photograph above displays an overview of Plots 16 & 17 where today's verification inspection took place on site.

GeoShield Verification Report

OVERVIEW



The photograph above displays an overview of Plots 18 & 19 where today's verification inspection took place on site.

GeoShield Verification Report

OVERVIEW



The photograph above displays an overview of Plots 20 & 21 where today's verification inspection took place on site.

GeoShield Verification Report

OVERVIEW



The photograph above displays an overview of Plots 22 & 23 where today's verification inspection took place on site.

GeoShield Verification Report

OVERVIEW



The photograph above displays an overview of Plots 24 & 25 where today's verification inspection took place on site.

GeoShield Verification Report

VERIFICATION ITEM ONE

LOCATION/GRID LINE: Plots 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24 & 25

Installation of Juta GP1 Gas Barrier - Lap Joints





NOTES:

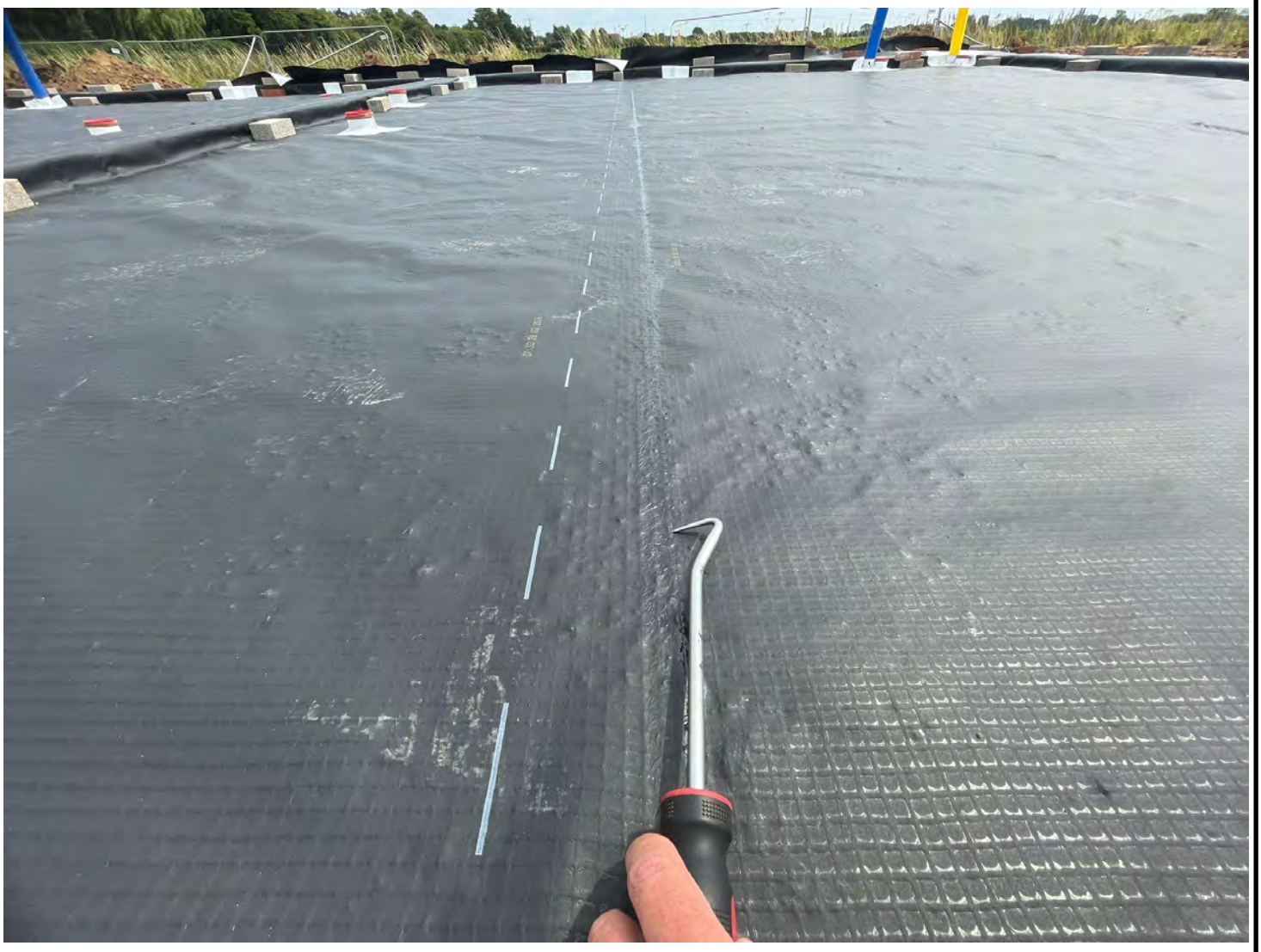
A complete line out of the Juta GP1 Gas Barrier has been installed across the footprint of Plots 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24 & 25. The Juta GP1 Gas Barrier has been lined across the entirety of the plots, including all internal party walls ensuring it overlaps the external cavity to the outer leaf brickwork. The

NOTES:

majority of the lap joints between the adjacent sheets of Juta GP1 Gas Barrier have been overlapped a minimum of 100mm, conforming to manufacturer's specifications as shown in the first photograph above. Adequate heat and rolled pressure using a hot air leister and silicone roller are applied to ensure a

GeoShield Verification Report

VERIFICATION ITEM ONE



continuous weld is achieved. The above photograph displays a mechanical point stress test, also known as a pick and probe test, being conducted upon a welded lap joint of the Juta GP1 Gas Barrier. All lap joints were subjected to thorough pick and probe testing where a number of lap joints were identified where the minimum 100mm overlap had not been achieved. A total of five punctures to the membrane were also identified.

VERIFICATION ITEM ONE

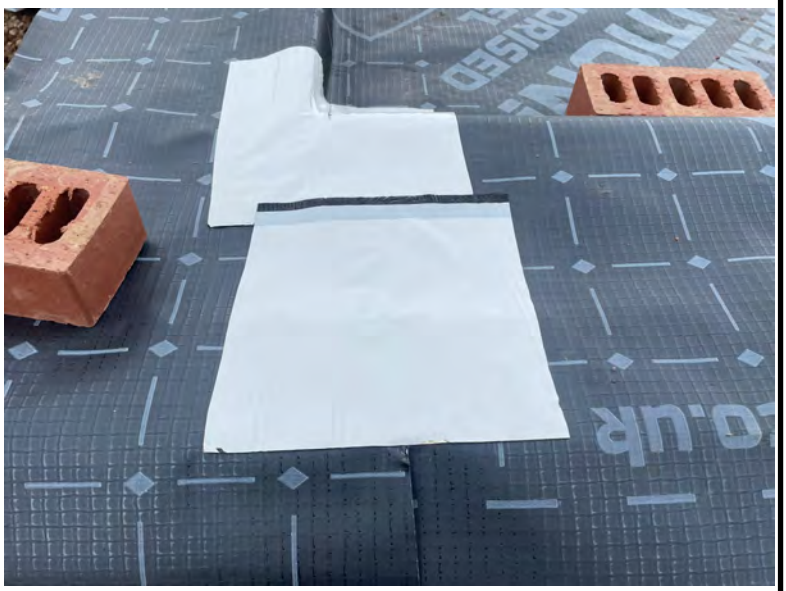
REMEDIATIONS:

Remediations - Lap Joints



NOTES:

As mentioned, a number of lap joints of the Juta GP1 Gas Barrier did not achieve the minimum overlap of 100mm, as shown in the photograph above. All lap joints were remediated on site in the presence of GeoShield using 300mm strips of



NOTES:

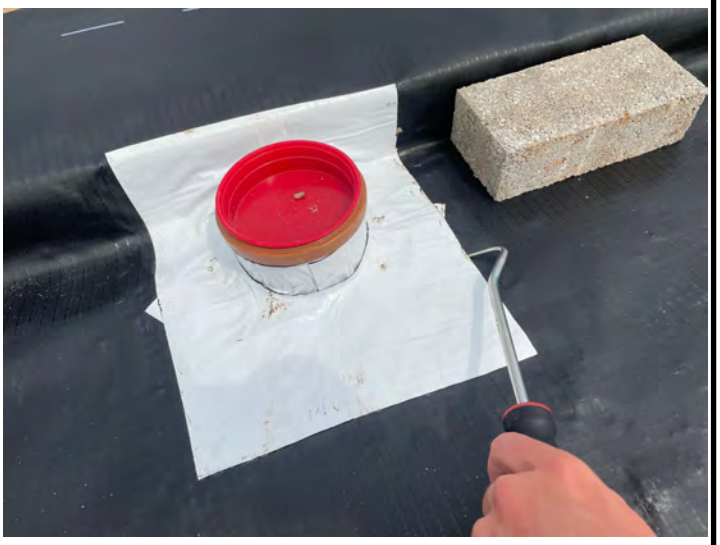
Juta GP SAM, a gas resistant self adhesive membrane which were lapped a sufficient amount either side of the lap joint, reinforcing the area and achieving a continuous gas tight seal throughout the installation.

GeoShield Verification Report

VERIFICATION ITEM TWO

LOCATION/GRID LINE: Plots 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24 & 25

Pipe Penetrations





NOTES:

Throughout the complete line out installation of the Juta GP1 Gas Barrier to the referenced plots, there were a number of pipe penetrations that have been sealed in accordance with manufacturer's specifications and design guidelines. This has been achieved using Juta GP SAM, which is a gas resistant self adhesive

NOTES:

membrane. The installers have first cut the Juta GP1 Gas Barrier tight around the base of each pipe penetration to minimise voided areas. Next, patches of Juta GP SAM are placed intricately in a petal formation around the pipe penetration and onto the Juta GP1 Gas Barrier, with a 300mm square of Juta GP SAM placed

GeoShield Verification Report

VERIFICATION ITEM TWO



over the top to form a top hat detail. Heat and rolled pressure is applied to activate the bitumen backing, creating a secure bond between the pipe penetration and the Juta GP1 Gas Barrier. All pipe penetrations throughout the referenced plots were subjected to thorough mechanical point stress testing where a probe was run along all edges of the Juta GP SAM detailing. No faults or defects were identified.

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VERIFICATION ITEM THREE

LOCATION/GRID LINE: Plots 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24 & 25

Corner & Threshold Detailing





NOTES:

A number of corners and thresholds throughout the referenced plots have also been sealed as per manufacturer's specifications and design guidelines. This has been achieved using Juta GP SAM. Where the Juta GP1 Gas Barrier has been cut to minimise voided areas and gaps across the footprint of the plots, each

NOTES:

corner and threshold junction has been reinforced by heating strips of Juta GP SAM and placing into position around each corner and threshold, onto the Juta GP1 Gas Barrier. Firm rolled pressure is applied with a silicone roller to aid in the adhesion ensuring the Juta GP SAM has fully bonded.

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VERIFICATION ITEM THREE



As with the pipe penetrations, a probe was run along all edges of the Juta GP SAM within the corner & threshold detailing to validate that a gas tight seal had been achieved throughout. No faults or defects were identified with the corners and thresholds during the testing procedures.
Tested and verified in accordance with CIRIA 735.

ADDITIONAL PHOTOGRAPHS



A total of five punctures to the membrane were identified, one of which is shown above.



All punctures were remediated using patches of Juta GP SAM, as shown above.



The installer in the process of sealing a corner detail.



The concrete substrate upon which the Juta GP1 Gas Barrier has been installed.

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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 7, 8, 9, 10, 11, 12 & 13	✔
Gridline/Plot Sign off	Plots 1, 2, 3, 4, 5 & 6	✔
Gridline/Plot Sign off	Plots 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24 & 25	✔
Gridline/Plot Sign off		
Gridline/Plot Sign off		
Gridline/Plot Sign off		
Gridline/Plot Sign off		
Gridline/Plot Sign off		
Gridline/Plot Sign off		
Gridline/Plot Sign off		

GEOSHIELD Verification Report

REMEDIATION LOG

Date	Nr	Remediation Description	Y/N
26/06/2024	001	Four faults were identified and remediated on site.	✔
21/07/2024	002	No faults or defects were identified during today's visit.	✔
24/07/2024	003	1. Five punctures were identified, all were remediated.	✔
		2. A number of overlaps did not achieve the minimum 100mm	✔
		required. These were reinforced with 300mm strips of Juta GP	✔
		SAM (150mm either side of the lap).	✔

GeoShield Verification Report

VERIFICATION SUMMARY

This was the third visit to the site where verification was required for the complete line out installation of the Juta GP1 Gas Barrier to Plots 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24 & 25, which was carried out by Omega Lining Solutions.

The majority of overlaps between the adjacent sheets of Juta GP1 Gas Barrier have been overlapped a sufficient 100mm and successfully welded using a hot air leister and silicone roller creating continuous welded joints throughout. A number of overlaps did not achieve the minimum 100mm and therefore, were reinforced with 300mm strips of Juta GP SAM.

All details throughout the installation, such as pipe penetrations, thresholds and corners have been successfully sealed using Juta GP SAM, a self adhesive membrane which have been heated down to aid in the adherence.

Thorough visual inspections, supported by mechanical point stress testing conducted throughout the inspection today identified a total of five punctures to the membrane. All punctures were remediated on site in the presence of GeoShield using 150mm patches of Juta GP SAM to reinstate the continuous seal across the footprint of the plots.

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

GEOSHIELD SIGNATURE:



DATE: 24-Jul-2024