GeoShield Verification Report 01

PROJECT REFERENCE: GEO104603 R01

PROJECT: Phase 2, Fleet Road, Holbeach

PROJECT ADDRESS:

50 Fleet Road, Holbeach

PE12 8LA

SPECIFICATION: Verified in accordance CIRIA 735.

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

Substrate prepared in-accordance with manufacturers instructions.

Juta GP1 Gas Membrane

Juta GP SAM

GeoShield Verification Report

NAME OF SURVEYOR:	Lee Adams
VERIFICATION COMPANY:	GeoShield Limited
	Icon Business Centre
	4100 Park Approach
	Thorpe Park
	Leeds
CONTACT NUMBER:	07795 994 117
EMAIL ADDRESS:	ladams@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:	
MOBILE PHONE:	
EMAIL ADDRESS:	ricky.c@omega.is.co.uk

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

GeoShield Verification Plan

APPLICATOR'S DETAILS

APPLICATOR NAME:	Shane
COMPANY:	Omega Lining Solutions
APPLICATOR TEL:	
APPLICATOR EMAIL:	

APPLICATOR NAME:	Tom
COMPANY:	Omega Lining Solutions
APPLICATOR TEL:	
APPLICATOR EMAIL:	

NOTES: The name of the installers are unknown at this point so the installers will either be identified at the pre-verification meeting or the first site visit.

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

GeoShield Verification Report

AREA SURVEYED:

Plots 7, 8, 9, 10, 11, 12 & 13

SITE CONDITIONS:

WEATHER:

Sunny

TEMPERATURE:

26ºc

RELATIVE HUMIDITY:

N/A

MEMBRANE TEMPERATURE:

N/A

TIME: 11:00 - 12:30

DATE: 26.06.2024

REPORT NUMBER: 001

ACCOMPANIED BY:

GeoShield Verification Report

Verification Layout



The photograph above shows a plan layout of the site. The area highlighted in blue shows where the verification inspection took place on site today.

GeoShield Verification Report

OVERVIEW



The photograph above displays an overview of plots 7, 8 & 9 where today's verification inspection took place on site.

GeoShield Verification Report

OVERVIEW



The photograph above displays an overview of plots 10 & 11 where today's verification inspection took place on site.

GeoShield Verification Report

OVERVIEW



The photograph above displays an overview of plots 12 & 13 where today's verification inspection took place on site.

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LIMITATIONS

SURVEYED AREA: Plots 7, 8, 9, 10, 11, 12 & 13

RESTRICTIONS AND LIMITATIONS:

Air Lance testing could not be carried out due to restricted vehicle access to the area requiring verification today. To mitigate this issue, thorough visual inspections supported by mechanical point stress testing were conducted.



GeoShield Verification Report

VERIFICATION ITEM ONE

LOCATION/GRID LINE: Plots 7, 8, 9, 10, 11, 12 & 13

Installation of Juta GP1 Gas Membrane



NOTES:

A complete line out of the Juta GP1 Gas Membrane has been installed across the footprint of all referenced plots. The Juta GP1 Gas Membrane has been lined across the entirety of the plots, including the internal party walls and external cavities to ensure continuity throughout.



NOTES:

All lap joints between the adjacent sheets of Juta GP1 Gas Membrane have been overlapped a minimum of 100mm and heat welded using a hot air leister and a silicone roller with adequate pressure applied to ensure a continuous weld is achieved. Installed in accordance with manufacturer's specifications.

GeoShield Verification Report

VERIFICATION ITEM ONE



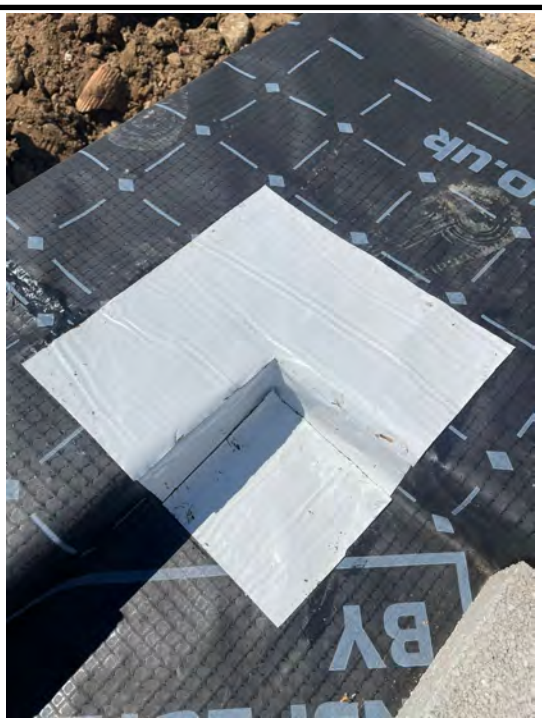
The above photograph displays a mechanical point stress test, also known as a pick and probe test, being conducted upon a welded lap joint of the Juta GP1 Gas Membrane. All lap joints were subjected to thorough mechanical point stress testing throughout the installation. A number of miswelded lap joints were identified at the time of the inspection, these were successfully remediated in the presence of GeoShield.

GeoShield Verification Report

VERIFICATION ITEM TWO

LOCATION/GRID LINE: Plots 7, 8, 9, 10, 11, 12 & 13

Sealed Corners and Thresholds





NOTES:

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

NOTES:

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

GeoShield Verification Report

VERIFICATION ITEM TWO



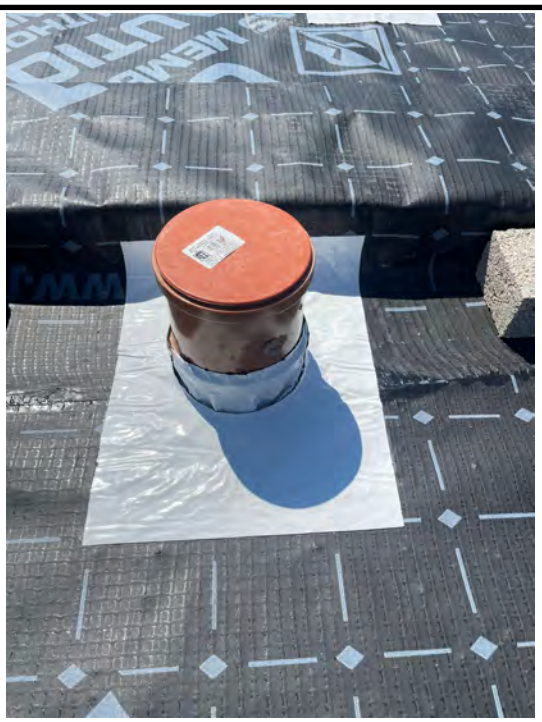
A pick and probe test was conducted upon all edges of Juta GP SAM to validate that a gas tight seal had been achieved between the Juta GP SAM and the Juta GP1 Gas Membrane. A number of faults were identified during today's visit, these were remediated in the presence of GeoShield.

GeoShield Verification Report

VERIFICATION ITEM THREE

LOCATION/GRID LINE: Plots 7, 8, 9, 10, 11, 12 & 13

Pipe Penetrations and Periscopic Vents



NOTES:

A number of pipe penetrations and periscopic vents throughout the referenced plots have also been sealed as per manufacturer's specifications and design guidelines. This has been achieved using Juta GP SAM. The Juta GP1 Gas Membrane has been cut to minimise voided areas and gaps across



NOTES:

the footprint of the area. Each pipe penetration has been reinforced by heating strips of Juta GP SAM. The strips of Juta GP SAM are then placed intricately in a top hat formation around the pipe penetration and onto the Juta GP1 Gas Membrane. Heat and rolled pressure are applied to activate the bitumen backing

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VERIFICATION ITEM THREE



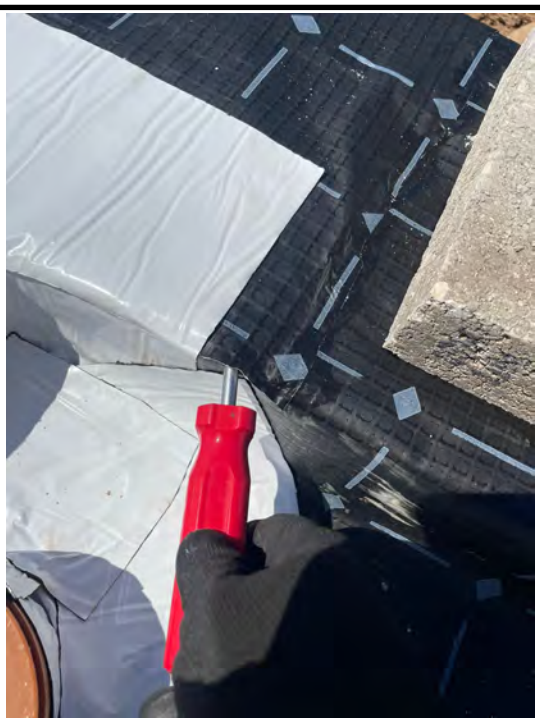
creating a secure bond between the pipe penetration and the Juta GP1 Gas Membrane. All pipe penetrations and periscopic vents throughout the referenced plots were subjected to thorough mechanical point stress testing. This was passed and verified in accordance with CIRIA 735.

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VERIFICATION ITEM FOUR

LOCATION/GRID LINE: Plots 7, 8, 9, 10, 11, 12 & 13

Faults and Remediations



NOTES:

During today's visit there was a total of four faults which were identified with the pick and probe test. These were brought to the attention of the installers. The installers decided to use patches of Juta GP SAM to fix all four faults.



NOTES:

The patches of Juta GP SAM were heat welded using a hot air leister and silicone roller with adequate pressure applied to aid in the adherence ensuring a gas tight seal is achieved.

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VERIFICATION ITEM FOUR



A pick and probe test was then conducted upon all edges of the Juta GP SAM patch repairs to ensure a gas tight seal was achieved. This was passed and verified in accordance with CIRIA 735.

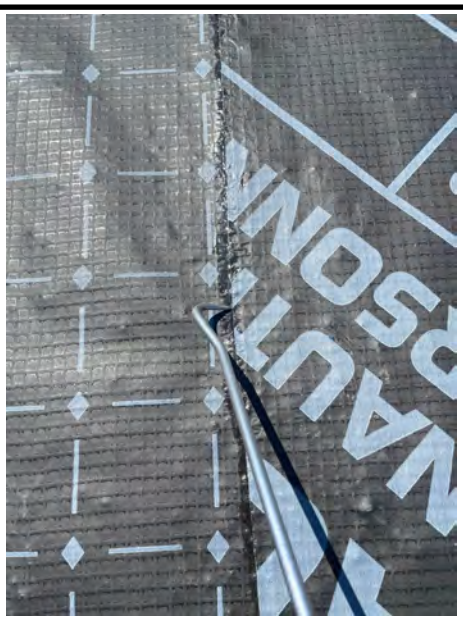
ADDITIONAL PHOTOGRAPHS



An installer sealing the welded lap joints with a hot air leister and silicone roller.



An overview of the Juta GP1 Gas Membrane.



A pick and probe test being conducted upon a welded lap joint.



A sealed pipe penetration.

ADDITIONAL PHOTOGRAPHS



Corners sealed using Juta GP SAM.



A pick and probe test being conducted upon a sealed periscopic vent.



A sealed pipe penetration.



A fault identified within the Juta GP1 Gas Membrane.

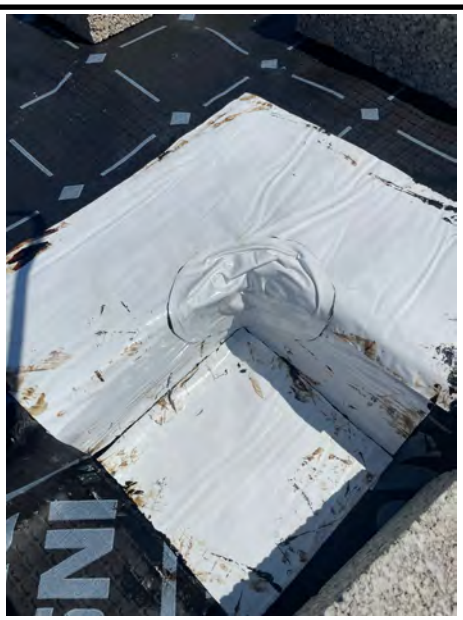
ADDITIONAL PHOTOGRAPHS



A patch of Juta GP SAM was used to seal any faults identified.



A pick and probe test was then conducted upon all of the edges of the Juta GP SAM patch repair.



An overview of a sealed corner with a patch repair.



A pick and probe test being conducted upon a welded lap joint.

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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		
Gridline/Plot Sign off		
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GEOSHIELD Verification Report

REMEDIATION LOG

Date	Nr	Remediation Description	Y/N
26/06/2024	001	Four faults were identified and remediated on site.	✔

GeoShield Verification Report

VERIFICATION SUMMARY

This was the first visit to the site where verification was required for the complete line out installation of Juta GP1 Gas Membrane to Plots 7, 8, 9, 10, 11, 12 & 13.
All overlaps between the adjacent sheets of Juta GP1 Gas Membrane have been successfully welded using a hot air leister and silicone roller creating continuous welded joints throughout.
All details throughout the installation, such as pipe penetrations, periscopic vents, corners and thresholds have been successfully sealed using Juta GP SAM, heated down to aid in the adherence.
Thorough mechanical point stress testing, as well as visual inspections were conducted throughout the visit today.

A total of four miswelded lap joints were identified, all of which were successfully remediated on site in the presence of GeoShield
Limitations - Due to restricted vehicle access to the area requiring verification today, air lance integrity test could not be conducted.

The installation has been conducted to a good NVQ 2 standard and in accordance with manufacturer's specifications.

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

GEOSHIELD SIGNATURE:



DATE: 26-Jun-2024