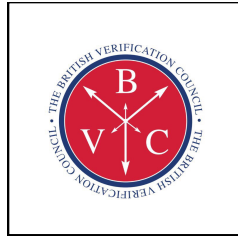




GEOSHIELD Verification Report



PROJECT REFERENCE:

GEO101325

REPORT NUMBER:

004

REPORT DATE:

19th Nov 20

PROJECT:

New Warehouse Building

PROJECT ADDRESS:

Land adjacent Fulflood Road

Havant

Hampshire

MEMBRANE SPECIFICATION:

Gas membrane to specification BS8485 2015

Verified in accordance with CIRIA 735.

VISQUEEN Gas Resistant DPC

VISQUEEN Gas Resistant Self Adhesive Membrane

VISQUEEN Gas Barrier

Protection Fleece



GEOSHIELD Verification Report



VERIFICATION OFFICER: Ross Edwards

VERIFICATION COMPANY: GeoShield Limited

Icon Business Park, 4100 Park Approach

Thorpe Park, LEEDS

West Yorkshire

LS15 8GB

CONTACT NUMBER: 07393626664

EMAIL ADDRESS: Redwards@geoshield.co.uk

ORDER NUMBER: N/A.

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



GEOSHIELD

Verification Report



CLIENT DETAILS

CLIENT CONTACT:	Hannah Hayward
CONTACTS ROLE:	Client
MOBILE PHONE:	01202 051765
EMAIL ADDRESS:	hannah@gmi-ltd.co.uk

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



GEOSHIELD Verification Report



APPLICATION TEAM LEADERS

APPLICATOR NAME: Ashley Warner

COMPANY: GMI

APPLICATOR TEL: 07903041416

APPLICATOR EMAIL:

APPLICATOR NAME:

COMPANY:

APPLICATOR TEL:

APPLICATOR EMAIL:

NOTES: Installer is NVQ level 2 qualified in the installation of ground gas systems.

NOTES:

NOTES:

NOTES:



GEOSHIELD Verification Report



AREA SURVEYED: Installation to - Pour 2.

SITE CONDITIONS:

WEATHER: Sunny

TEMPERATURE: 14c.

MEMBRANE TEMPERATURE: N/A

RELATIVE HUMIDITY: 74

TIME: 07:30-09:30

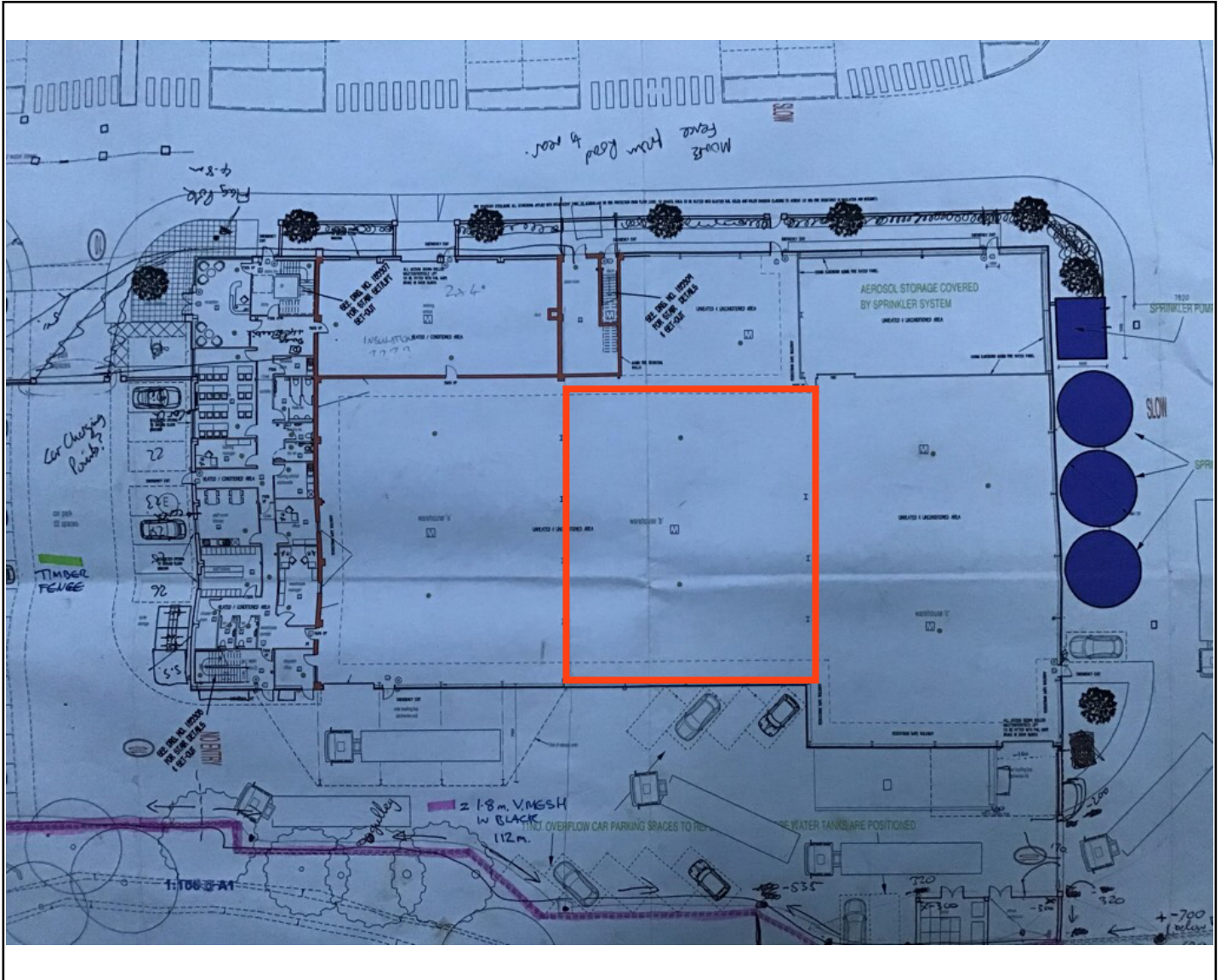
REPORT NUMBER: 004

DATE: 19th November 2020

ACCOMPANIED BY: Site manager

GEOSHIELD Verification Report

VERIFICATION LAYOUT



The above photo shows the highlighted area to Block A & D where

verification took place.

Installation to Pour 3 of building.



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OVERVIEW PHOTOGRAPHS



Overview photograph showing installation completed to Pour 3.

Visqueen standard gas barrier installed.



GEOSHIELD Verification Report



OVERVIEW PHOTOGRAPHS



Alternative overview photograph showing general installation to Pour 3.

Visqueen standard gas barrier installed.



GEOSHIELD Verification Report

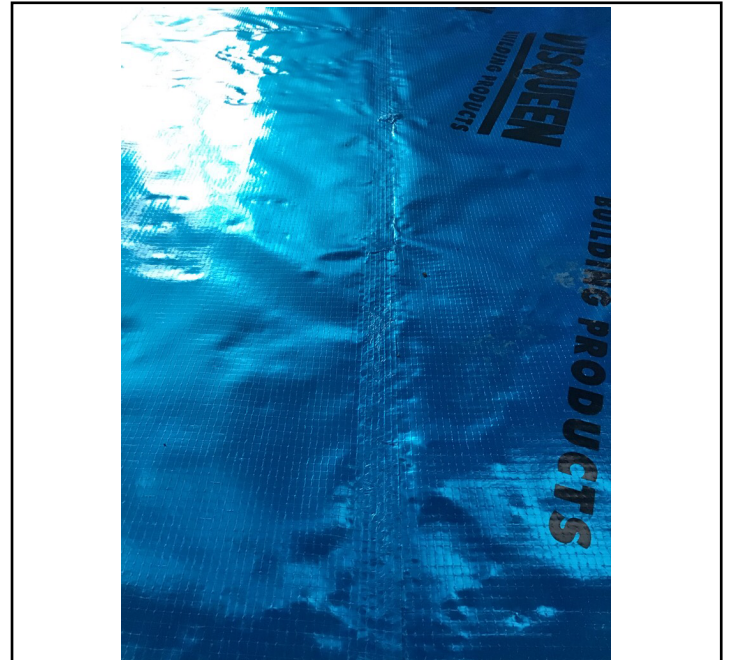
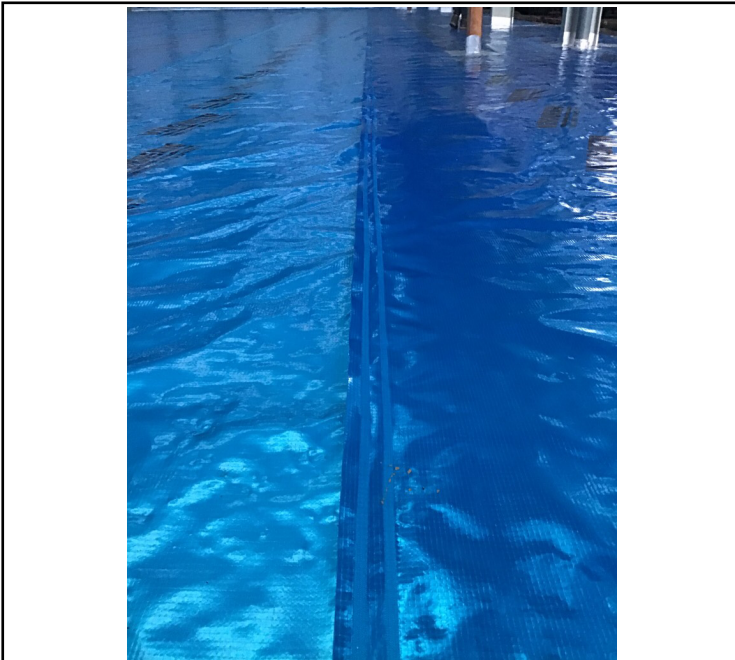


VERIFICATION ITEM ONE

LOCATION/GRID LINE: Pour 3.

NOTES: Welded lap joints.

Picture one: is an over view photo looking down a welded sealed joint, this installers has completed this by sealing with the twinny welder, a good strong seal has been achieved.



Picture two: is another overview photo but the installers have hand welded the lap joint with the leister gun.

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VERIFICATION ITEM ONE



The above photo is demonstrating where pick probe and air lance testing was

carried out,, all areas have been verified in accordance with CIRIA 735 and

installed to BS8485 2019.



GEOSHIELD Verification Report

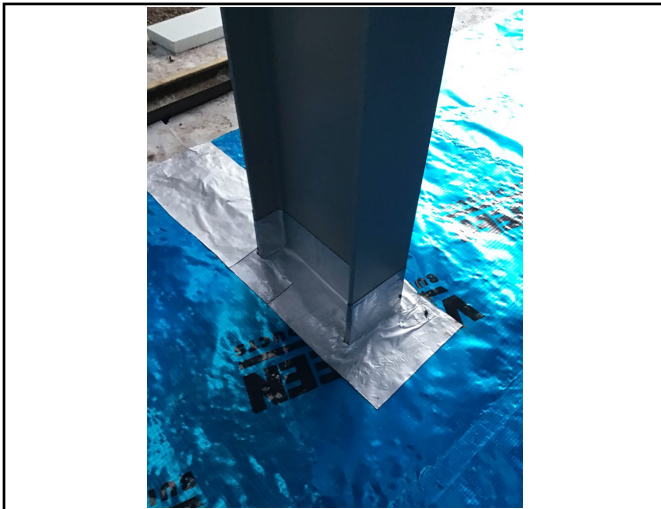


VERIFICATION ITEM TWO

LOCATION/GRID LINE: Pour 3.

NOTES: Details sealed using Visqueen GRSAM

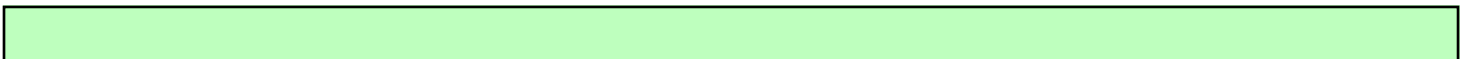
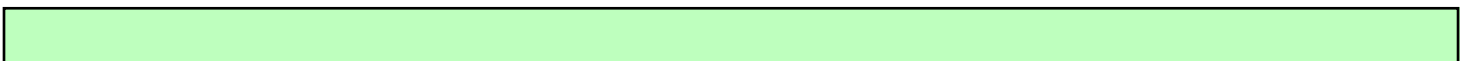
Picture one: is showing a completed steel stanchion detail, the installers have applied Visqueen HP Primer prior to the Visqueen GRSAM, All areas have tightly fitted meaning no voids have been created.



Picture two: is showing as well as air lance testing, pick probe

Testing was also carried out, no faults were detected during these

tests, all areas were heated down to gain a good bond.



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VERIFICATION ITEM TWO



The photograph above shows the perimeter detail, as well as some steel columns

that have been sealed within pour 3. The Visqueen gas barrier has been welded to

the previously installed Visqueen gas resistant DPC membrane, along the perimeter

of the building. The steel columns have then been sealed using Visqueen GRSAM.

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VERIFICATION ITEM THREE



The above photo is showing a completed pipe penetration detail,

The installers have applied sections of tape around the neck and base of the detail to gain a gas tight seal, then finished with make shift top hat all completed

as per manufactures specification.

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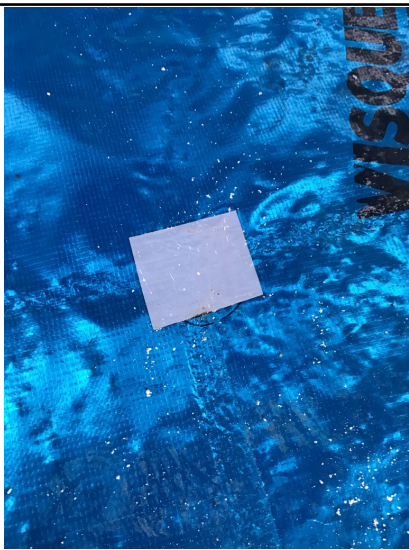
ADDITIONAL PHOTOGRAPHS



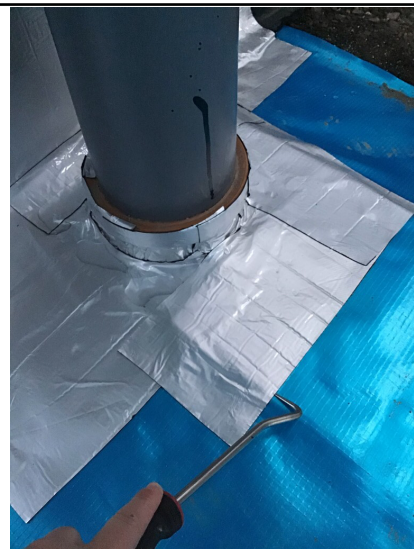
Protective fleece applied under the
membrane.



Fault found within the T-section
of the membrane.



Patch work carried out to one of the
fault areas.



Pick probe testing carried out to a
Pipe penetration detail.



GEOSHIELD LTD
TANKING, GAS AND HYDROCARBON BARRIER SYSTEMS
QUALITY ASSURANCE PROGRAMS AND INSPECTION SERVICES



INTEGRITY TESTING RECORD

AIR LANCE INTEGRITY TESTING (cont)

Detail of the Gas Membrane	Visqueen Standard Gas Barrier.
Detail of Tapes	Visqueen Gas Resistant Self Adhesive.
Joints and lap design	Welded using a hot air Leister + Twinny S machine.

TEST NUMBER:	FAILED OR PASSED	DETAIL, COMMENT AND RECOMMENDATIONS
1	Passed	Consistent 40mm weld present throughout the joint.
2	Passed	Consistent 40mm weld present throughout the joint.
3	Passed	Consistent 40mm weld present throughout the joint.
4	Failed	Miss-weld identified - patched and respired during visit.
5	Passed	SAGR tape adhered to membrane.
6	Passed	SAGR tape adhered to membrane.
7	Failed.	Miss-weld identified - patched and respired during visit.

NOTES:

Application of Membrane to specification and conforming to manufacturing technical data.

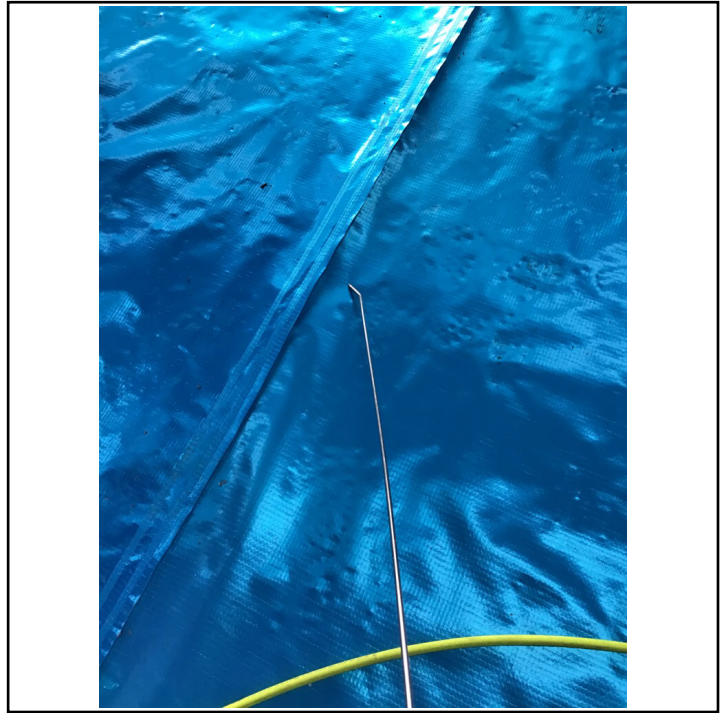
All failed weld joints have been repaired during the visit, and re-verified to ensure sealed.

AIR LANCE INTEGRITY TESTING

AIR LANCE TEST: ASTM D4437-08:2013 Inspects all seams for unbonded areas using a 4.8mm air nozzle held not more than 51mm away from the seam. 50 Psi is the minimum requirement. The air nozzle is directed on the upper edge seam, ripples indicate a unbonded seam. Each seam is numbered and failure marked with a F/1 F/2 classification and a description given



Air lance integrity test being carried out to welds.



Air lance test again being carried out.



Air lance integrity test carried out to pipe detail.



Air testing to steel stanchion.



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VERIFICATION SUMMARY

This was the fourth visit to site met with site management who showed me over to the area ready for verification.

Carried out a visual, pick probe test before an air lance test.

21 faults were detected, mainly where the membrane crossed (T-Section).

These were patched and retested.

All GRSAM has been correctly applied and sealed where no faults were detected.