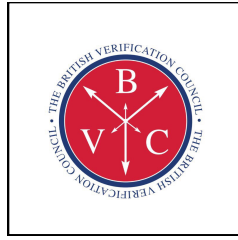




GEOSHIELD Verification Report



PROJECT REFERENCE:

GEO101325

REPORT NUMBER:

003

REPORT DATE:

10/11/2020

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:

Jake Purdie

VERIFICATION COMPANY:

GeoShield Limited

Icon Business Park, 4100 Park Approach

Thorpe Park, LEEDS

West Yorkshire

LS15 8GB

CONTACT NUMBER:

07393712648

EMAIL ADDRESS:

Jpurdie@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: Jack

COMPANY: GMI

APPLICATOR TEL: 07908738620

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: Overcast

TEMPERATURE: 14c.

MEMBRANE TEMPERATURE: N/A

RELATIVE HUMIDITY: 74

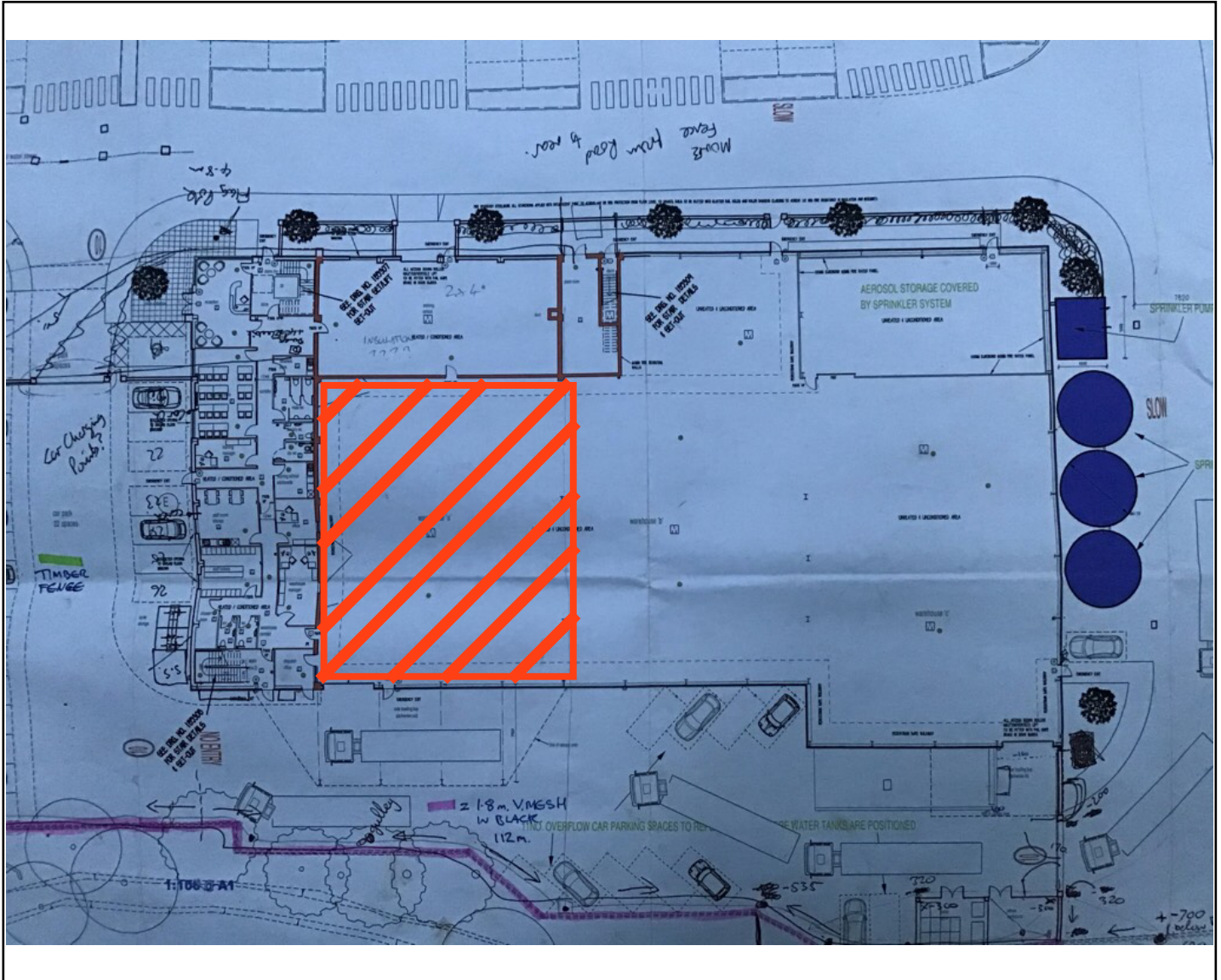
TIME: 15:30 - 17:00.

REPORT NUMBER: 003

DATE: 10/11/2020

ACCOMPANIED BY: Jack - GMI

VERIFICATION LAYOUT



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

verification took place.

Installation to Pour 2 of building.



GEOSHIELD Verification Report



OVERVIEW PHOTOGRAPHS

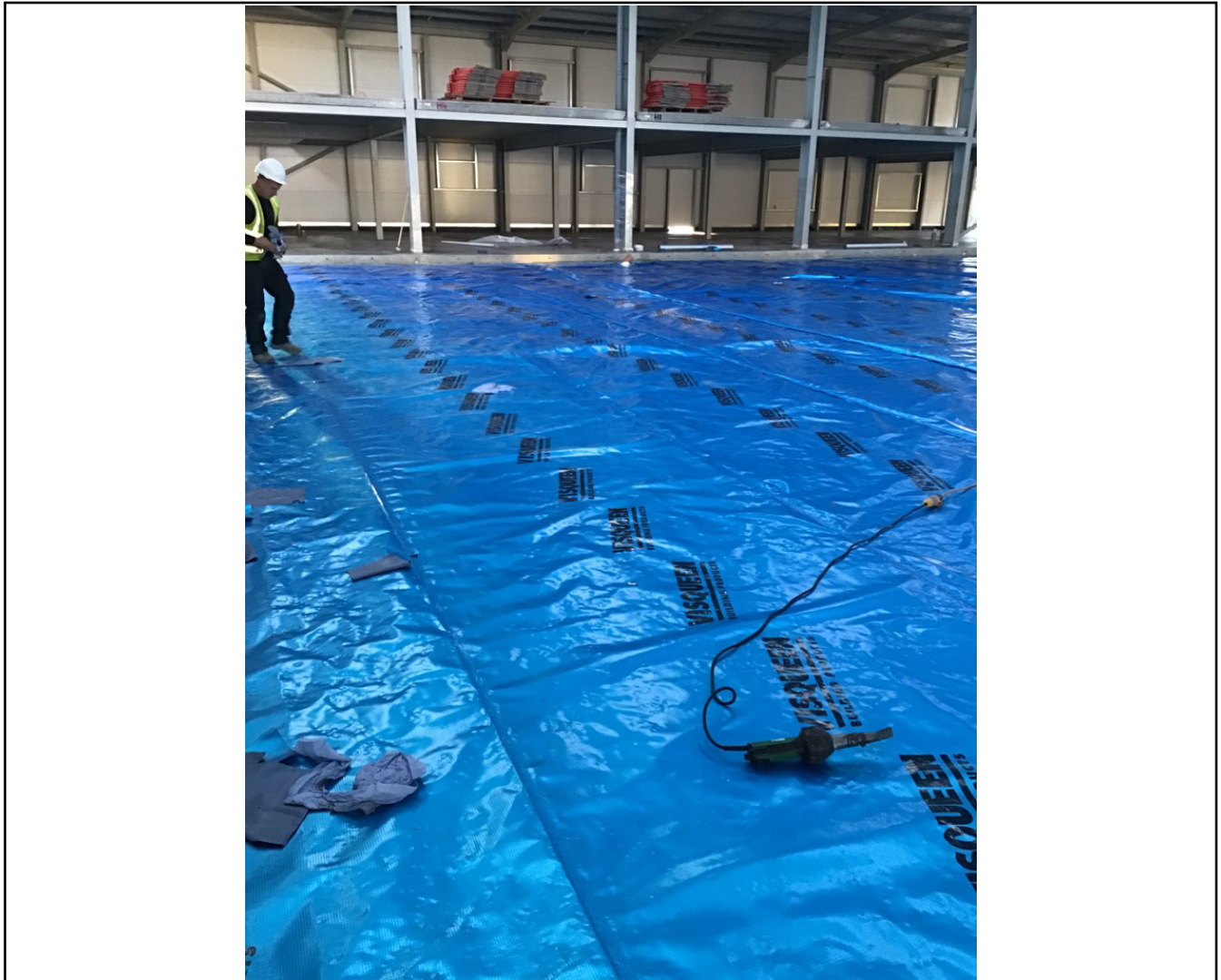


Overview photograph showing installation completed to Pour 2.

Visqueen standard gas barrier installed.

GEOSHIELD Verification Report

OVERVIEW PHOTOGRAPHS



Alternative overview photograph showing general installation to Pour 2.

Visqueen standard gas barrier installed.

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BGA
British Geomembrane Association



VERIFICATION ITEM ONE

LOCATION/GRID LINE: Pour 2.

NOTES: Installation of Visqueen standard gas barrier.

All joints and laps between the Visqueen Blue Gas Membrane have been welded by either using the Twinny S Leister machine, or a hot air Leister. Either a 40mm consistent weld, or a double weld as shown below, is present on all weldlines within this verified area.



First photo above shows an overview of the installation completed to pour 2.

Second photo shows a complete weld line, installed using the Twinny S Leister machine.

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VERIFICATION ITEM ONE



The photograph above demonstrates a pick and probe test being carried out to a welded joint in the Visqueen standard gas barrier.

All joints and laps have been tested using the aforementioned method or air lance integrity tested. Verified in accordance with CIRIA 735.



GEOSHIELD Verification Report

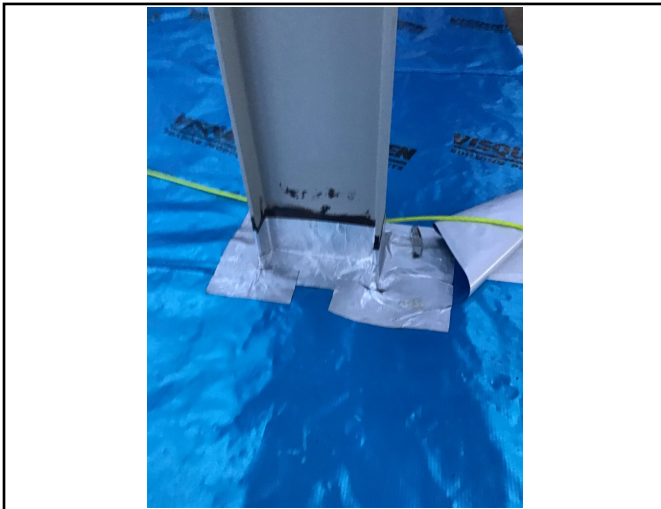


VERIFICATION ITEM TWO

LOCATION/GRID LINE: Pour 2.

NOTES: Details sealed using Visqueen GRSAM

All details within Pour 2, such as pipe penetrations, steel columns and corners have been sealed to manufacturers specification, using visqueen gas resistant self adhesive tape.



All visqueen gas Resistant Self Adhesive Tape has been heated using a hot air Leister prior to installation, to aid with adherence. The first photo above shows a steel column sealed to manufacturers specification.

The second photograph above shows a pick and probe test being carried out to a sealed steel column.

GEOSHIELD Verification Report

VERIFICATION ITEM TWO



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

that have been sealed within pour 2. 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 photograph above shows the Geotextile protection fleece that has been installed on top of the stone substrate, and below the gas membrane.

The protection fleece will minimise the damage that can occur from the stone substrate piercing the material.

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ADDITIONAL PHOTOGRAPHS



Large pipe penetration sealed to

BS8485:2015.



Pick and probe test to steel column

detail.



Concrete Mars bars wrapped in

protection fleece.



Air lance test being carried out.



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.

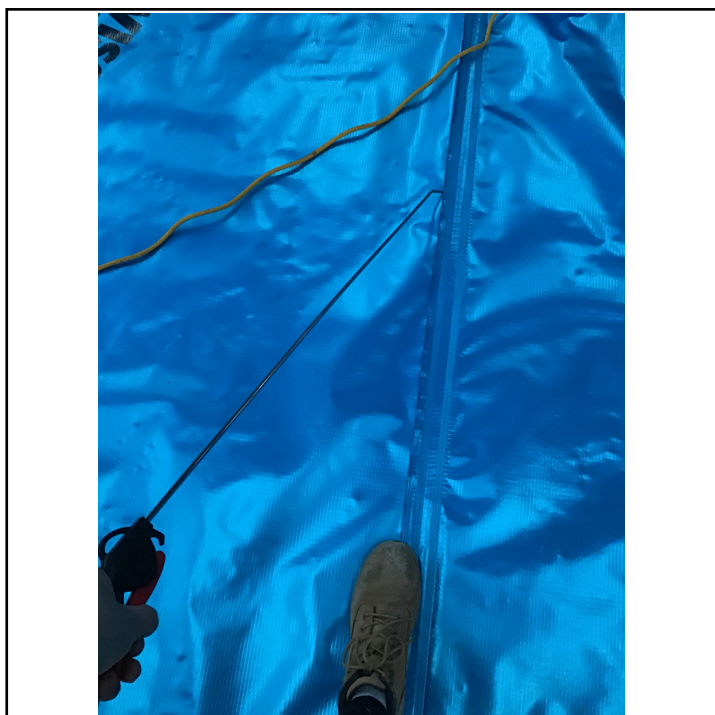
The air nozzle is directed on the upper edge seam, ripples indicate a unbonded seam. Each seam is numbered and failure marked with a F/1 F/2 classification and a description given



Air lance integrity test being carried out to welds.



Air lance test again being carried out.



Air lance integrity test carried out to weld.



Example of miss-weld fault identified.



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VERIFICATION SUMMARY

This was the third visit to site, where verification took place for Pour 2.

Visqueen Blue Gas membrane had been installed to the area, and all details

had been sealed using Visqueen gas Resistant Detailing Tape.

All joints and laps were sealed using a hot air leister or Twinny S welder.

All steel columns had been primed using Visqueen HP tanking primer, prior to the adherence of Visqueen detailing tape.

Geotextile protection fleece was installed beneath the membrane.

All installation works to manufacturers specification and to BS8485:2019.

All works verified in accordance with CIRIA 735.

GEOSHIELD SIGNATURE:

DATE: 10/11/2020.