

Llandarcy Academy, Neath

SUBADRA

Environmental - Geotechnical - Laboratory - Foundations

13 Triangle Business Park, Stoke Mandeville, HP22 5BL

Tel: 01296 739400 Email: consultants@subadra.com

GROUND-GAS MEMBRANE VALIDATION REPORT



Report Prepared By:

A handwritten signature in black ink, appearing to read 'Alex Akeroyd'.

Alex Akeroyd

Report Reviewed By:

A handwritten signature in black ink, appearing to read 'James Edley'.

James Edley

Client: Portable Venues (Group)
Limited (Smart Space)

Subadra Consulting Ltd. Registered in
England No. 4586038
Registered Office 13 Triangle Business
Park, Stoke Mandeville, HP22 5BL

Report

IN21655 CL 003

Date

July 2023

Page

1

Contents

1 INTRODUCTION.....	3
1.1 Project Details and Contractual Arrangements.....	3
1.2 The Purpose of the Works.....	3
1.3 The Scope of Our Work.....	3
1.4 Previous Reports Relating to the Site.....	4
2 RECORD OF THE WORKS.....	4
3 CONCLUSIONS.....	6

List of Attachments

Attachment One:	Notice to Interested Parties
Attachment Two:	GeoShield Handover Package

Client: Portable Venues (Group) Limited (Smart Space)	Ground-Gas Membrane Validation Report	Report	IN21655 CL 003
		Date	July 2023
		Page	2

1 Introduction

1.1 Project Details and Contractual Arrangements

The site/pitch is to be redeveloped by erecting a new structure to cover the current sports pitch area. The structure bears directly onto a new heavy duty floor system, with a gas proof membrane installed beneath. The heavy duty flooring and gas proof membrane have been placed on-top of the current sports pitch. There are no below ground foundations. We note there is also an attenuation tank located directly beneath the current sports pitch, including an impermeable geo-membrane.

The building details are as follows: 15m x 30m x 5.2m side height (external), with a 7.678m roof height comprising twin layer insulated PVC, 40mm composite wall panels and two pedestrian doors.

A Remediation Strategy (Ref.3) completed by others was submitted to Neath Port Talbot County Borough Council with respect to planning application P2022/0887 for the site's redevelopment. The strategy was subsequently approved by the council and, in summary, said the following:

'There are no intrusive investigations required for this development due to the construction methods illustrated and described in the Phase 1 report prepared by Subadra. The building has a 'SIT ON' construction method and will not require excavation works to construct foundations. The solution provided to mitigate potential gas concerns is by installing a gas membrane 'PAG Standard Gas Barrier' to the manufacturer's instructions and recommendations. This gas membrane was used on a previous development on-site. To verify the installation of the gas membrane as mentioned previously the geotechnical specialist will carry out a test and provide a verification report to address the planning condition (4) accordingly.'

Client/Project Manager: Portable Venues (Group) Limited (Smart Space)

Qualified Membrane Installers (Contractor): PAGeoTechnical Ltd

Qualified Third-Party Membrane Verification: GeoShield Ltd

Geo-Environmental Consultant: Subadra Consulting Ltd

GeoShield Ltd was commissioned by Subadra Consulting Ltd on behalf of Portable Venues (Group) Limited (Smart Space) to undertake validation of the ground-gas membrane installation at the site. PAGeoTechnical Ltd were commissioned by Portable Venues (Group) Limited (Smart Space) to complete the installation works.

The ground-gas membrane validation works were carried over two site visits, on 7th June 2023 and 14th June 2023, by GeoShield Ltd.

1.2 The Purpose of the Works

The purpose of the work was to verify that the ground-gas membrane has been installed correctly and in-line with current best practise (CIRIA 735), therefore mitigating any potential risks to future site users, from any potential ground-gas present beneath the site,

1.3 The Scope of Our Work

The scope of our works was as follows:

- As the appointed geo-environmental consultant, we instructed GeoSheild to attend site on two occasions to inspect and verify the gas membrane installation completed by PAGeoTechnical Ltd;
- Provision of this factual report summarising the works carried out during the required installation.

Client: Portable Venues (Group) Limited (Smart Space)	Ground-Gas Membrane Validation Report	Report	IN21655 CL 003
		Date	July 2023
		Page	3

Llandarcy Academy, Neath

SUBADRA

Environmental - Geotechnical - Laboratory - Foundations

13 Triangle Business Park, Stoke Mandeville, HP22 5BL

Tel: 01296 739400 Email: consultants@subadra.com

All our activities were carried out in accordance with the procedures set out in our Quality Manual. Your attention is drawn to the Notice to Interested Parties included as Attachment One.

1.4 Previous Reports Relating to the Site

Our Ref.	Report Title	Prepared By	Prepared on Behalf of	Date of Issue	Report Reference
Ref.1	Revised Phase I Geo-Environmental Report	Subadra Consulting Ltd	Portable Venues Limited	March 2022	IN21655 CL 001a
Ref.2	Revised Coal Mining Risk Assessment				IN21655 CL 002a
Ref.3	Remediation Strategy	Unknown		October 2022	-

Table One: Previous Environmental Reports Relating to the Site

2 Record of the Works

GeoShield Ltd visited the site on two occasions. The site visits are summarised in tables below. GeoShield Certificates and handover notes are included as Attachment Two.

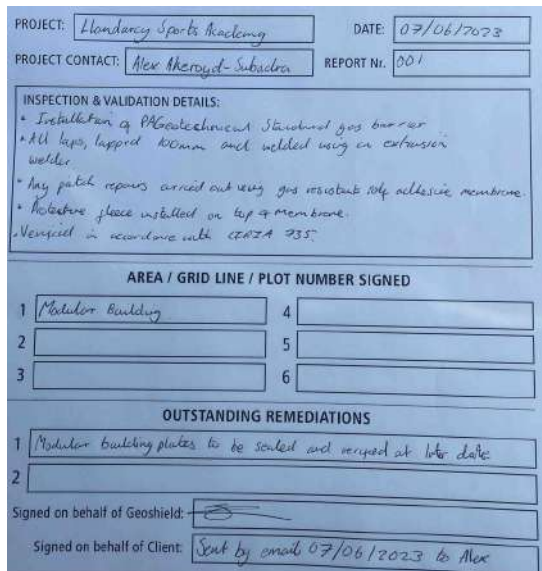
Work Completed By Contractor	Observations and Recommendations by Verifier
A PAGeotechnical standard gas barrier was successfully installed. All laps were welded. Patchwork comprises gas resistant self-adhesive membrane.	Protective fleece was installed on top of membrane. Membrane installation was verified in accordance with CIRIA 735. Modular building plates (perimeters) need to be sealed and verified at a later date.
	
Photograph One - View of installed membrane	Photograph Two - GeoShield job sheet 1

Table Two: Details of Site Visit – 7th June 2023

Client: Portable Venues (Group) Limited (Smart Space)	Ground-Gas Membrane Validation Report	Report	IN21655 CL 003
		Date	July 2023
		Page	4

Llandarcy Academy, Neath

SUBADRA

Environmental - Geotechnical - Laboratory - Foundations

13 Triangle Business Park, Stoke Mandeville, HP22 5BL

Tel: 01296 739400 Email: consultants@subadra.com

Work Completed By Contractor

The installers have used the PAG SAGR to create a continuous seal between the terminated perimeters and the steel columns.

Observations and Recommendations by Verifier

Previously installed PAGeotechnical standard gas barrier has been terminated to perimeters using PAG SAGR. Verified in accordance with CIRIA 735.

PAG SAGR cannot be left exposed to possible damage/elements. Evidence of protective measures will be needed prior to sign-off.



Photograph Three - View of continuous seal

PROJECT: Llandarcy Academy - Neath	DATE: 14/06/2023
PROJECT CONTACT: Alex Akeroyd-Subadra	REPORT NO: 002

INSPECTION & VALIDATION DETAILS:

- Previously installed Pag standard gas barrier has been terminated to perimeter using PAG SAGR.
- Next required to seal in accordance.
- PAG SAGR can not be left exposed. Concrete should be poured or SAGR protected and backfilled against. Evidence required before sign off.
- Verified in accordance with CIRIA 735

AREA / GRID LINE / PLOT NUMBER SIGNED	
1 Module Building - Perimeter	4
2	5
3	6

OUTSTANDING REMEDIATIONS

- Remaining perimeters to be sealed - Photos required.
- Perimeters to be protected once complete.

Signed on behalf of Geoshield: [Signature]

Signed on behalf of Client: Sent by email - 14/6/23

Photograph Four - GeoShield job sheet 2

Table Three: Details of Site Visit – 14th June 2023

Photographic Evidence of Outstanding/Required Remediations - Provided by Client



Photograph Five - Evidence that perimeters have now been protected with a PVC trim.



Photograph Six - Evidence that steel columns have now also been protected - with a PVC box.

Table Four: Final Evidence Issued – June/July 2023

Client: Portable Venues (Group) Limited (Smart Space)	Ground-Gas Membrane Validation Report	Report	IN21655 CL 003
		Date	July 2023
		Page	5

3 Conclusions

The site/installation was visited twice by GeoShield and verified in accordance with current best practise guidance. Some additional actions were required prior to final sign-off (detailed above), of which, have all now been completed (and signed off).

A Verification Certificate (see Attachment Two) has subsequently been issued by GeoShield and it states:

'The installation of the Gas Membrane and ancillaries was installed to specification. Verified in accordance with BS 8485:2015+A1:2019 and CIRIA 735. All areas were verified, and remediation issues corrected.'

Therefore, we consider the site to be suitable for it's intended use and no further remedial works are required.

Your attention is drawn to the Notice to Interested Parties included as Attachment One.

Client: Portable Venues (Group) Limited (Smart Space)	Ground-Gas Membrane Validation Report	Report	IN21655 CL 003
		Date	July 2023
		Page	6

**ATTACHMENT ONE:
NOTICE TO INTERESTED PARTIES**

NOTICE TO INTERESTED PARTIES

The purpose of our work is to provide general information on the environmental And/OR geotechnical conditions existing at the site And related to soil And/OR groundwater. The Client Or others specified the scope of the investigation And the validity of our conclusions is limited by the scope of work specified. We are Not responsible for any such limitations Or omissions.

Where stated in this report, we have used information supplied by third parties. While we have evaluated As far As possible the validity Of this information, we cannot guarantee its accuracy In any way whatsoever.

No investigation technique is capable Of completely identifying all Of the contaminants that might be present In the soil Or groundwater under a site. Where specified In our report, we have examined the ground by constructing a number Of boreholes And/OR trial pits. We recovered samples Of soil And/OR groundwater from available exposures.

The depth And spacing Of our Sampling locations were selected To ensure With a reasonable probability that they would be representative Of the actual conditions across the whole site. However, safety considerations relating To existing site infrastructure may have restricted our ability To investigate all potential contaminant sources. Specifically, we were unable To investigate the soil And groundwater condition immediately adjacent To the underground structures And/OR buried services. These limitations must be borne In mind When considering the conclusions reached In this report.

Soil is intrinsically variable And the spread Of contaminants within the soil is therefore subject To a degree Of non-uniformity. For these reasons no sampling technique can completely eliminate the possibility Of obtaining samples that are Not representative Of the actual conditions. Our sampling techniques are intended To reduce the possibility To an acceptable level, within the limits imposed by the scope of the investigation.

Groundwater levels And soil vapour levels that we report were accurate at the time of the investigation. Groundwater And soil vapour levels are variable. Long term monitoring may be required to ensure that the levels recorded during our investigation are representative of long term And possible 'worst case' conditions. In accepting our recommendations and/or conclusions the Client acknowledges that further, more detailed investigation would allow a more accurate assessment of site conditions to be made and that this would reduce any consequential risk to the Client.

Our investigation was carried out to assess the significance of contamination resulting from use of the site as identified in this report. Unless we have indicated otherwise, no assessment of the potential impact of any other previous uses has been made. No investigation was carried out to determine whether or not any deleterious or hazardous materials (such as asbestos) have been used in the construction of the buildings present on the site. Unless otherwise stated no investigation or assessment has been made of the presence or otherwise of invasive plant species including but not limited to Japanese Knotweed.

Unless specifically stated otherwise, we have not assessed the effect of any proposed future construction activities on existing structures on or near to the site. Nor, unless stated otherwise, have we assessed the likely effect of trees on existing or proposed structures on or near the site.

We do not accept any responsibility for the cost of remedial works or other costs incurred in whatever way whatsoever as a result of any omissions, errors or other shortcomings in this report unless we have been given reasonable opportunity to verify ourselves that such faults exist and we have been given a reasonable opportunity to carry out works to remedy such faults ourselves using the most practicable means available to us. We do not accept liability for any consequential losses incurred by you while either we or others carry out any remedial works we deem necessary.

This report has been prepared for the Client, as specified on the cover page of this report. In accepting our recommendations and/or conclusions the Client accepts that the terms of our appointment were as detailed in the Proposal, or Proposals, that we provided to the Client before being appointed and that these terms supersede any other terms and/or conditions set out in any contracts agreed between ourselves and the Client, regardless of when such terms and/or conditions were agreed to by us and/or signed by us.

Use of, and reliance on, this report by other third parties will be at such third parties own risk, and we do not accept any liability or responsibility to them.

Neither the whole nor any part of this report, or any reference to it, may be included in any published document circular or statement or published in any way without our prior written approval.

This report and its contents, together with any supporting correspondence or other documentation, remain the property of Subadra Consulting Limited until paid for in full. The copyright to this report remains vested in Subadra Consulting Ltd at all times.

Client: Portable Venues (Group)
Limited (Smart Space)

Report	IN21655 CL 003
Date	July 2023
Page	Attachment One - 2

Llandarcy Academy, Neath

SUBADRA

Environmental - Geotechnical - Laboratory - Foundations

13 Triangle Business Park, Stoke Mandeville, HP22 5BL

Tel: 01296 739400 Email: consultants@subadra.com

**ATTACHMENT TWO:
GEOSHIELD HANDOVER PACKAGE**

Client: Portable Venues (Group)
Limited (Smart Space)

Report	IN21655 CL 003
Date	July 2023
Page	Attachment Two - 1



Verification Certificate

Date: 14 June 2023

Sudabra Consulting Limited

Llandarcy Academy

Neath
SA10 6JD

The documentation in this handover package shows that the installation of the Gas Membrane and ancillaries was installed to specification.

Verified in accordance with BS 8485:2015+A1:2019 and CIRIA 735.

All areas were verified, and remediation issues corrected.

Paul Colbeck
Director of Site Services





GeoShield Verification Report



PROJECT REFERENCE: GEO103448

PROJECT: Llandarcy Academy

PROJECT ADDRESS: Llandarcy Academy,

Neath,

SA10 6JD

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

PAG Standard Gas Barrier

PAG SAGR



GeoShield Verification Report



NAME OF SURVEYOR:

John Cornish

VERIFICATION COMPANY:

GeoShield Limited

Icon Business Centre

4100 Park Approach

Thorpe Park

Leeds

CONTACT NUMBER:

07493769477

EMAIL ADDRESS:

Jcornish@geoshield.co.uk

ORDER NUMBER:

To be confirmed

PER VISIT:

YES:

☐

NO:

☐

PROJECT:

YES:

☐

NO:

☐



GeoShield Verification Report



CLIENT DETAILS

CLIENT CONTACT:	Alex Akeroyd
CONTACTS ROLE:	
MOBILE PHONE:	07511 281864
EMAIL ADDRESS:	akeroyda@subadra

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



GeoShield Verification Report



APPLICATOR'S DETAILS

APPLICATOR NAME: Jack

COMPANY: PAG

APPLICATOR TEL: 07498 993872

APPLICATOR EMAIL:

APPLICATOR NAME:

COMPANY:

APPLICATOR TEL:

APPLICATOR EMAIL:

NOTES: At least one member of each installation team possesses an NVQ Level 2 in ground gas membrane installation.



GEOSHIELD Verification Report



AREA SURVEYED: Modular Building.

SITE CONDITIONS:

WEATHER: Sunny

TEMPERATURE: 23c

MEMBRANE TEMPERATURE: N/a

RELATIVE HUMIDITY: N/a

TIME: 08:00-09:30

REPORT NUMBER: 001

DATE: 07/06/2023

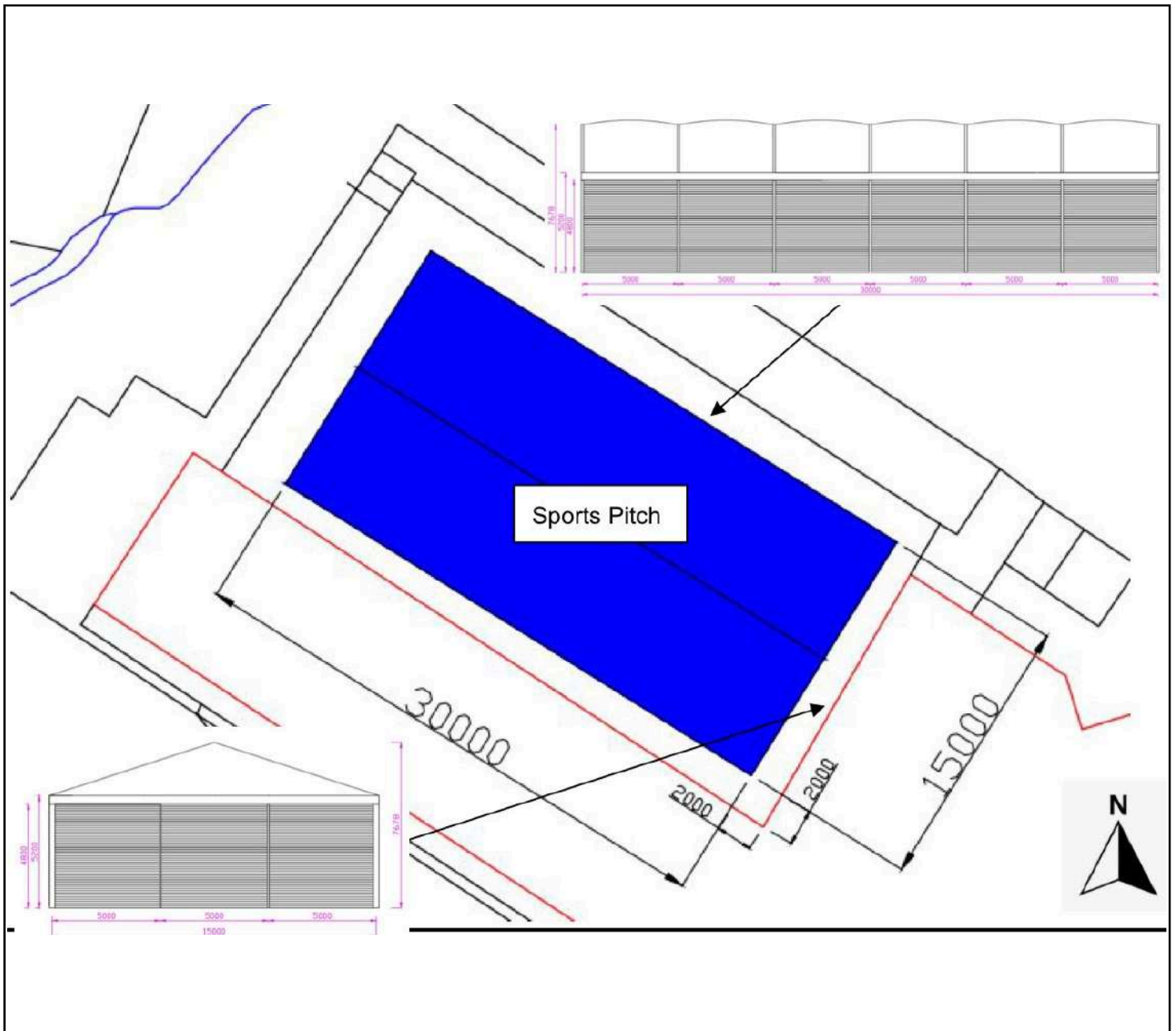
ACCOMPANIED Jack - PAG



GEOSHIELD Verification Report



VERIFICATION LAYOUT



The area highlighted in blue above shows where the installers have installed the
PAG Standard Gas Barrier and where verification took place during this visit.

GEOSHIELD Verification Report

OVERVIEW PHOTOGRAPHS



The photograph above shows an overview of the modular building area

where the PAG Standard Gas Barrier has been installed.

GEOSHIELD Verification Report

OVERVIEW PHOTOGRAPHS



The photograph above shows the membrane has been protected using a

fleece.



GEOSHIELD Verification Report

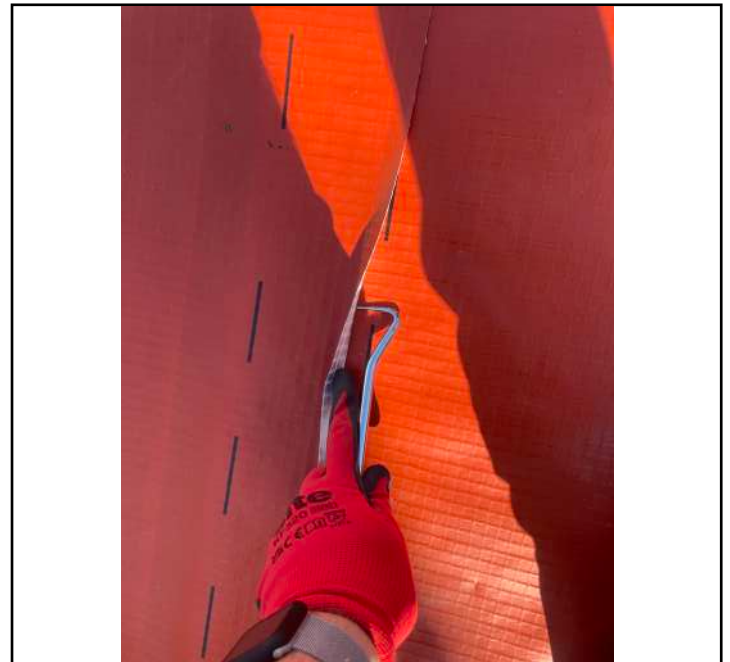
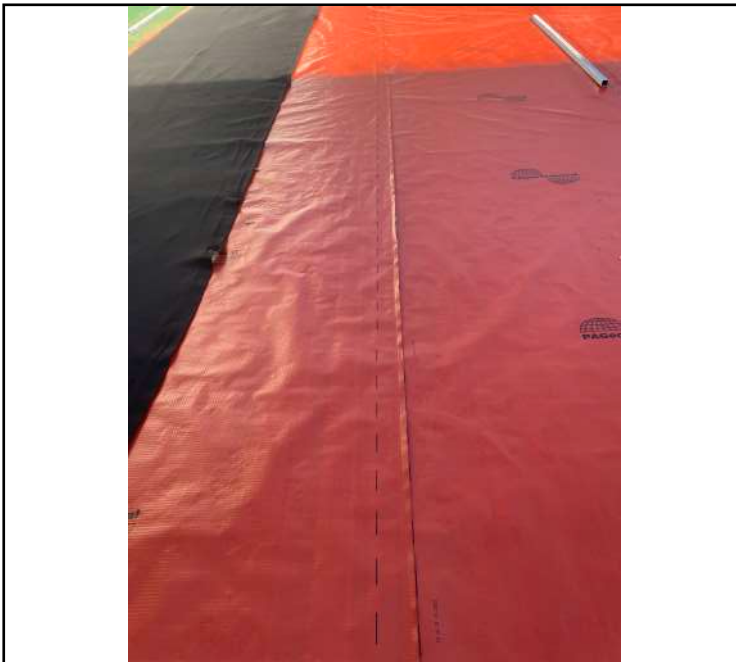


VERIFICATION ITEM ONE

LOCATION/GRID LINE: Modular Building.

NOTES: Installation of the PAG Standard Gas Barrier.

The first photograph below shows an overview of a welded lap of the PAG Standard Gas Barrier. The installers have first lapped the gas barrier a sufficient amount before using an extrusion welder.



The second photograph above shows pick and probe test carried out to a welded lap.

Verified in accordance with CIRIA 735.



GEOSHIELD Verification Report

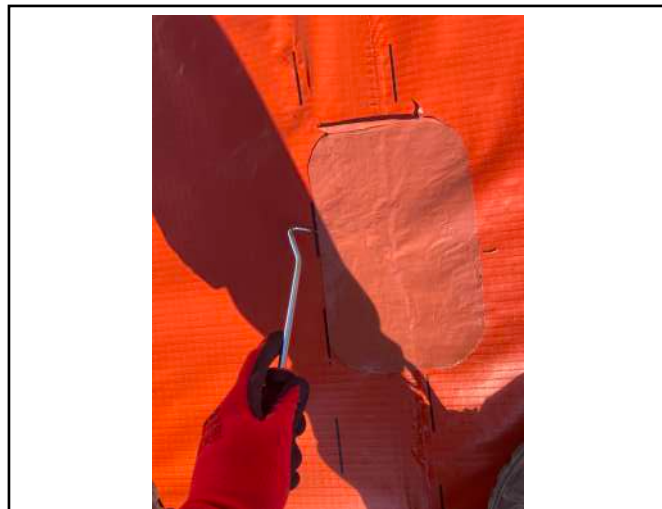


VERIFICATION ITEM TWO

LOCATION/GRID LINE: Modular Building.

NOTES: Patch repairs.

A couple patch repairs had been carried out prior to this visit to site. Any patch repairs have been carried out using gas resistant self adhesive membrane.



To ensure a strong seal has been achieved a gas blow torch has been used to aid in the adherence of the gas resistant self adhesive membrane.

The second photograph above shows a pick and probe test carried out to a sealed

A patch repair.

Verified in accordance with CIRIA 735.



GEOSHIELD Verification Report

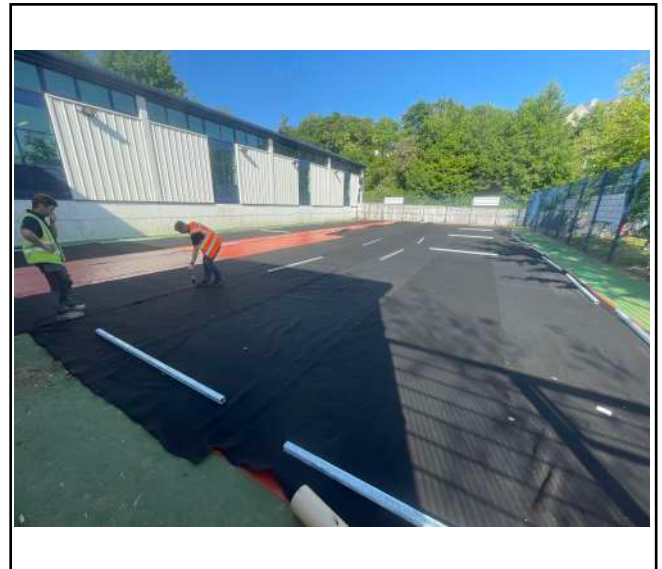
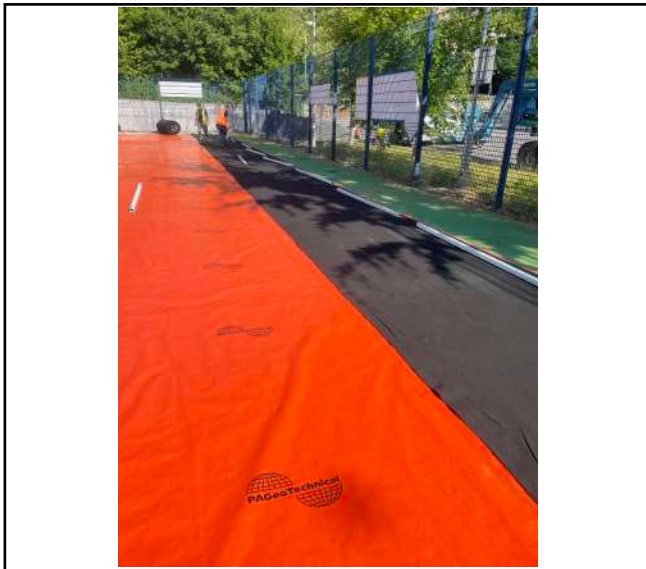


VERIFICATION ITEM THREE

LOCATION/GRID LINE: Modular building.

NOTES: Protection of the PAG Standard Gas Barrier.

The two photographs below show the installers have then installed the fleece on top of the PAG Standard Gas Barrier once verification had been carried out.

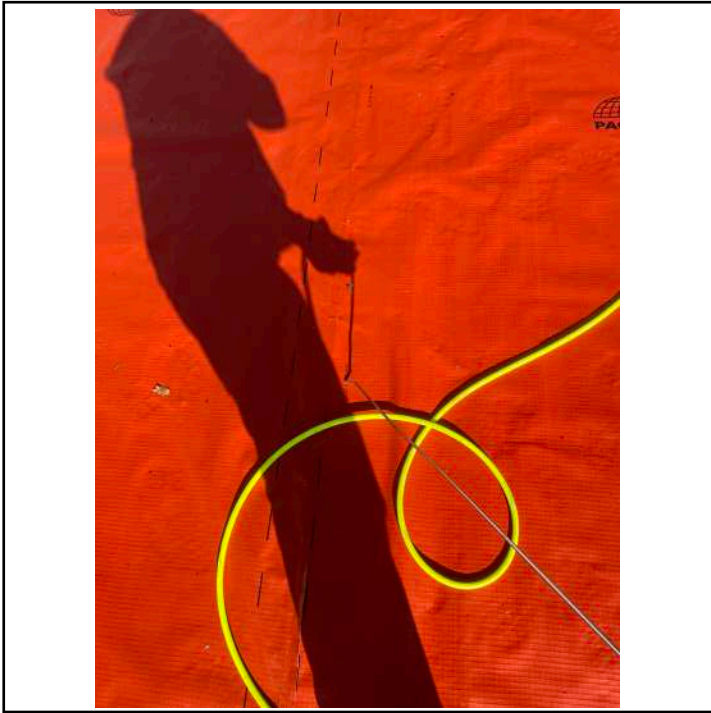


The fleece has been installed to avoid the PAG Standard Gas Barrier being damaged as follow on trades continue.

[illegible]

AIR LANCE INTEGRITY TESTING

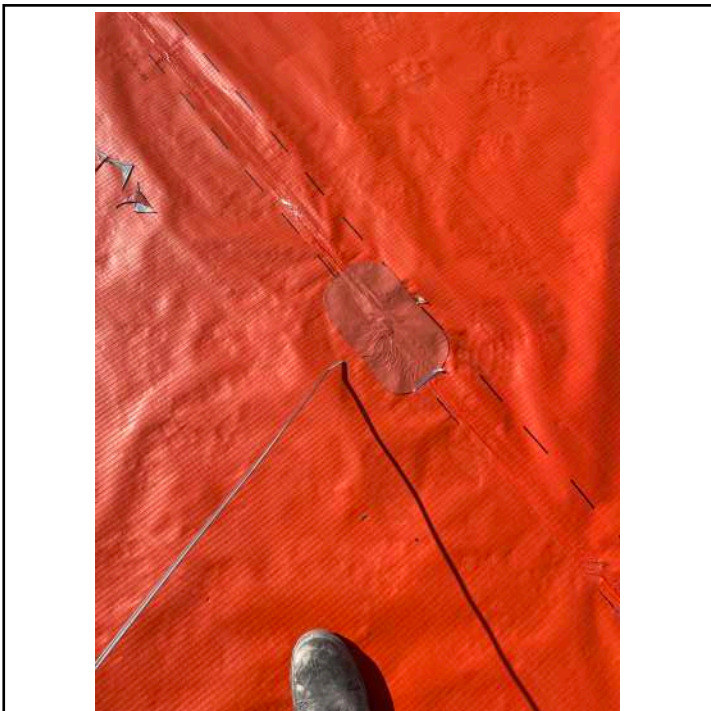
AIR LANCE TEST: ASTM D4437-08:2013 Inspects all seams for unbonded areas using a 4.8mm air nozzle held not more than 51mm away from the seam. 50 Psi is the minimum requirement. The air nozzle is directed on the upper edge seam, ripples indicate a unbonded seam. Each seam is numbered and failure marked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



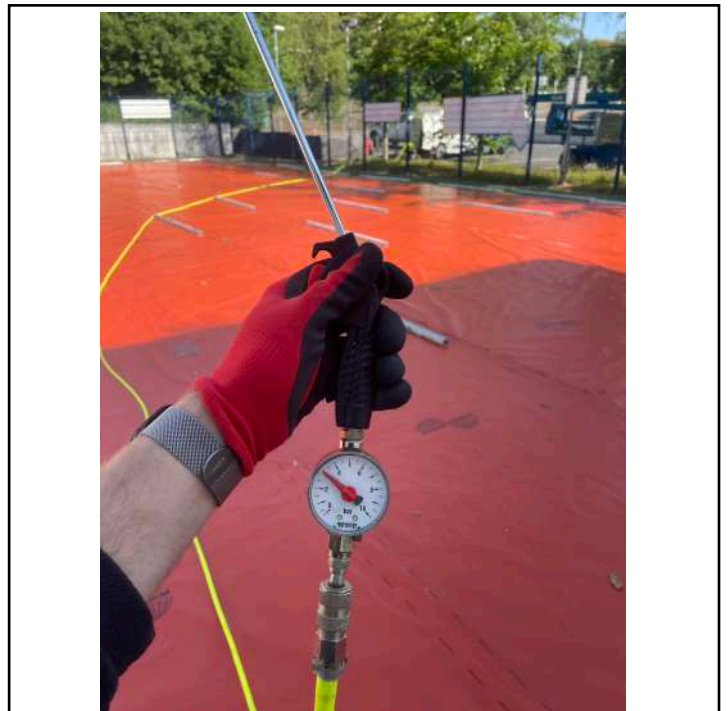
Air lance test to welded lap.



Air lance test to welded lap.



Air lance test to sealed patch repair.



Air lance equipment set up.



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 PAG Standard gas barrier

Detail of Tapes PAG SAGR

Joints and lap design Welded

TEST NUMBER:	FAILED OR PASSED	DETAIL, COMMENT AND RECOMMENDATIONS
Line 1	Passed	No faults or defects were identified during this visit.
Line 1	Passed	No faults or defects were identified during this visit.
Line 3	Passed	No faults or defects were identified during this visit.
Line 4	Passed	No faults or defects were identified during this visit.

NOTES:

Application of Membrane to specification and conforming to manufacturing technical data



GEOSHIELD Verification Report



VERIFICATION SUMMARY

This was the first visit to site where verification of the installation of the PAG

Standard Gas Barrier under the base of the modular building was required. All

laps of the PAG Standard Gas Barrier have been lapped a sufficient amount before

using an extrusion welder to weld each lap. Any patch repairs carried out prior

to this site visit have been sealed using gas resistant self adhesive membrane.

A gas blow torch has been used to aid in the adherence of the gas resistant self

adhesive membrane. Steel plates to be installed and sealed as well as the

perimeters.

Installed in accordance with BS 8485:2019.

Verified in accordance with CIRIA 735.

GEOSHIELD SIGNATURE:

DATE: 07/06/2023



GeoShield Verification Report



PROJECT REFERENCE: GEO103448

PROJECT: Llandarcy Academy

PROJECT ADDRESS: Llandarcy Academy,
Neath,

SA10 6JD

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

PAG Standard Gas Barrier

PAG SAGR



GeoShield Verification Report



NAME OF SURVEYOR:

John Cornish

VERIFICATION COMPANY:

GeoShield Limited

Icon Business Centre

4100 Park Approach

Thorpe Park

Leeds

CONTACT NUMBER:

07493769477

EMAIL ADDRESS:

Jcornish@geoshield.co.uk

ORDER NUMBER:

To be confirmed

PER VISIT:

YES:

☐

NO:

☐

PROJECT:

YES:

☐

NO:

☐



GeoShield Verification Report



CLIENT DETAILS

CLIENT CONTACT:	Alex Akeroyd
CONTACTS ROLE:	
MOBILE PHONE:	07511 281864
EMAIL ADDRESS:	akeroyda@subadra

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



GeoShield Verification Report



APPLICATOR'S DETAILS

APPLICATOR NAME: Jack

COMPANY: PAG

APPLICATOR TEL: 07498 993872

APPLICATOR EMAIL:

APPLICATOR NAME:

COMPANY:

APPLICATOR TEL:

APPLICATOR EMAIL:

NOTES: At least one member of each installation team possesses an NVQ Level 2 in ground gas membrane installation.



GEOSHIELD Verification Report



AREA SURVEYED: Modular Building (Perimeters).

SITE CONDITIONS:

WEATHER: Sunny

TEMPERATURE: 27c

MEMBRANE TEMPERATURE: N/a

RELATIVE HUMIDITY: N/a

TIME: 11:00-12:30

REPORT NUMBER: 002

DATE: 14/06/2023

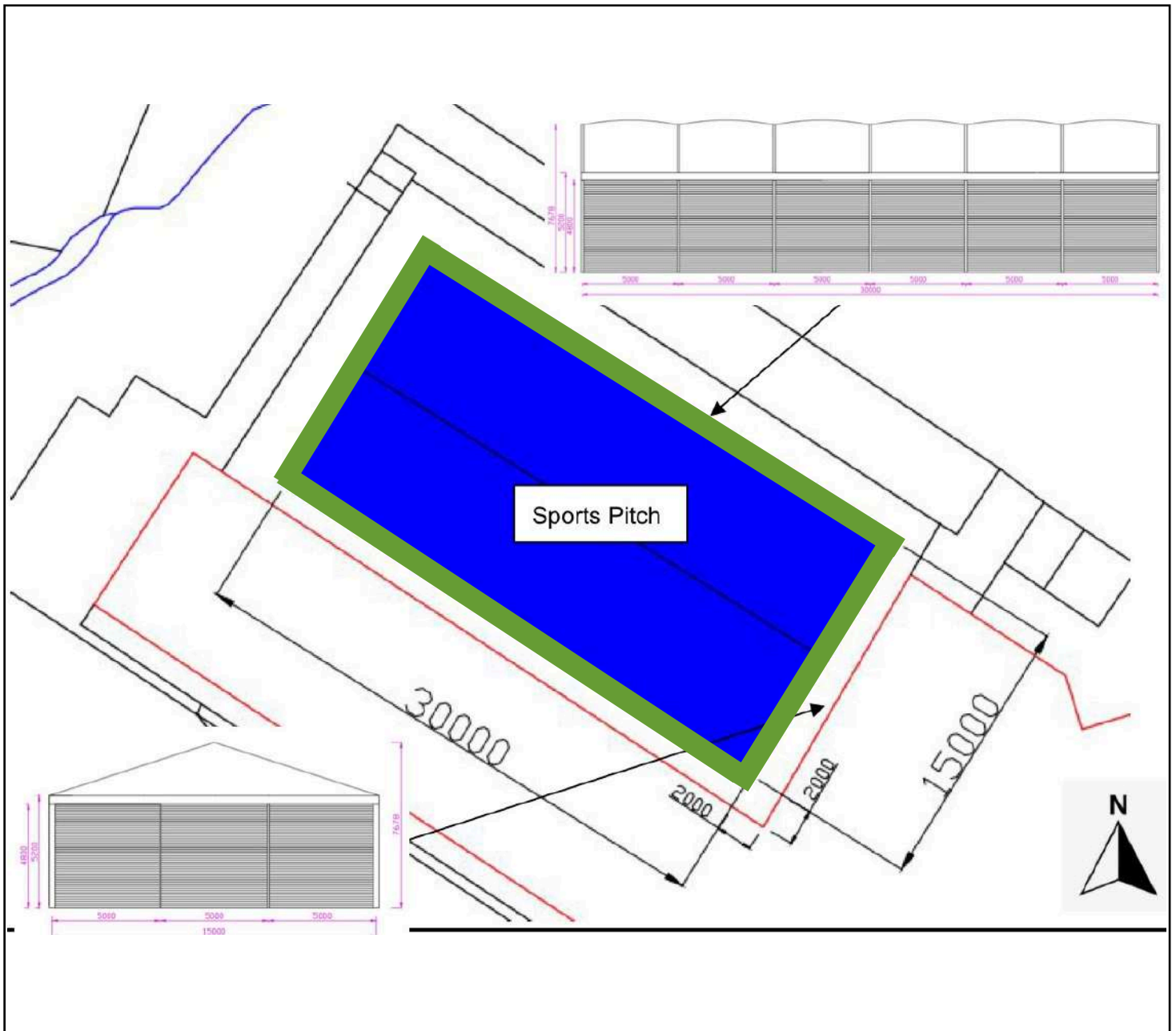
ACCOMPANIED Mike - PAG



GEOSHIELD Verification Report



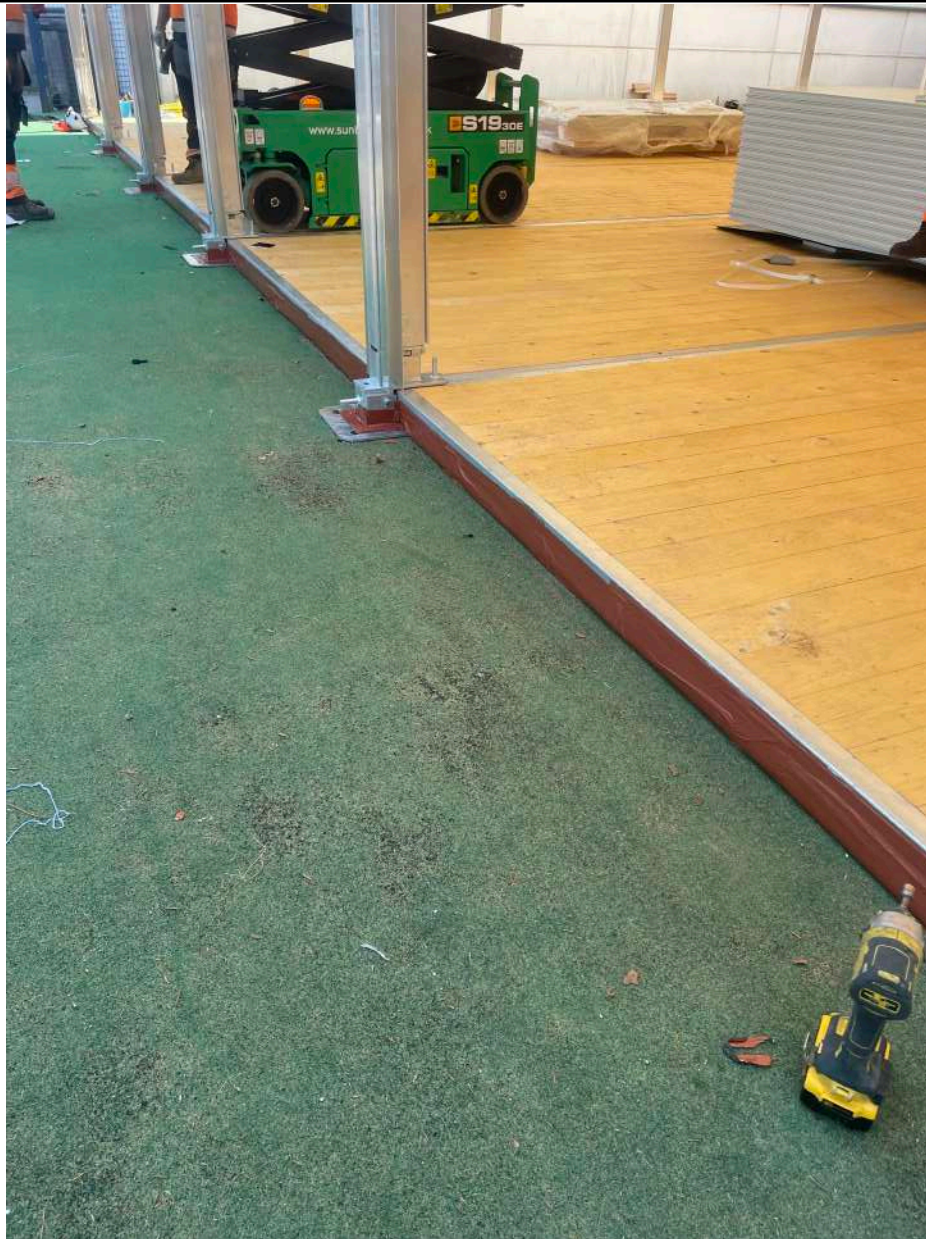
VERIFICATION LAYOUT



The perimeters highlighted in green above shows where the installers have terminated PAG standard gas barrier using PAG SAGR.

GEOSHIELD Verification Report

OVERVIEW PHOTOGRAPHS



The photograph above shows an overview of the perimeters of the modular

building.

GEOSHIELD Verification Report

OVERVIEW PHOTOGRAPHS



The photograph above shows an additional overview photograph.



GEOSHIELD Verification Report

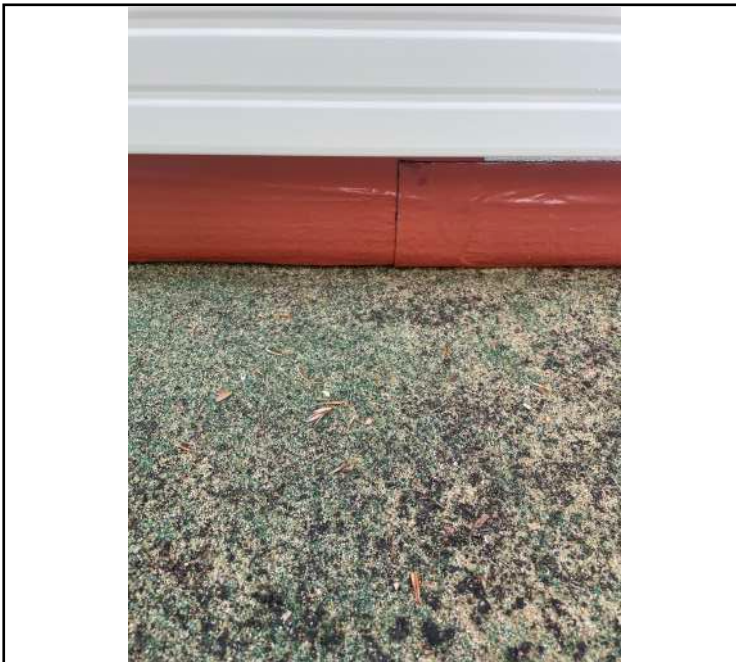


VERIFICATION ITEM ONE

LOCATION/GRID LINE: Modular Building (Perimeters).

NOTES: Termination of the PAG Standard Gas Barrier.

The installers have terminated the previously installed and verified PAG Standard Gas Barrier to the perimeters of the modular building using PAG SAGR. A gas blow torch has been used to aid in the adherence of the PAG SAGR.



The second photograph above shows a pick and probe test carried out to the seal achieved. Verified in accordance with CIRIA 735.

GEOSHIELD Verification Report

VERIFICATION ITEM ONE



The photograph above shows a pick and probe test carried out to a sealed lap of the

PAG SAGR. The installers have lapped the SAGR a sufficient amount before using

a gas blow torch to aid in the adherence of the self adhesive gas resistant membrane.

No faults or defects were identified. Verified in accordance with CIRIA 735.



GEOSHIELD Verification Report



VERIFICATION ITEM TWO

LOCATION/GRID LINE: Modular Building (Perimeters).

NOTES: Steel columns sealed.

The first photograph above shows an example of a steel column. The installers have used the PAG SAGR to to create a continuous seal between the terminated perimeters and the steel columns.



The installers have used a gas blow torch to aid in the adherence of the PAG SAGR.

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

Verified in accordance with CIRIA 735.

GEOSHIELD

Verification Report

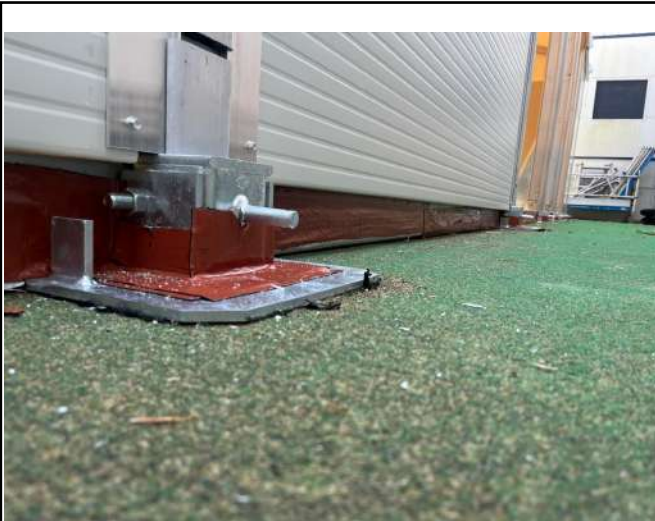
ADDITIONAL PHOTOGRAPHS



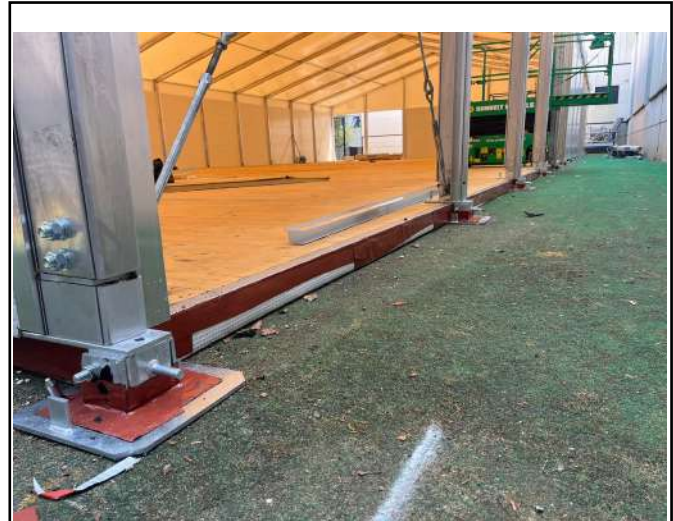
Gas blow torch used to aid in the
adherence of the PAG SAGR.



PAG SAGR.



Additional overview photograph.



Additional overview photograph.



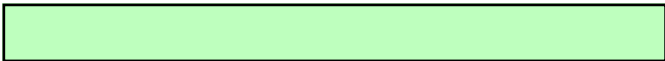
GEOSHIELD Verification Report



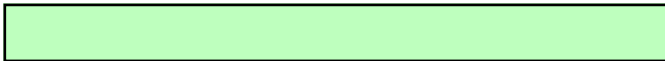
ADDITIONAL PHOTOGRAPHS



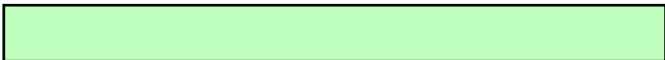
Additional sealed steel column.



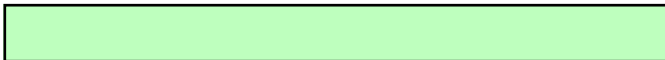
Additional sealed steel column.



Additional overview photograph.



Additional overview photograph.





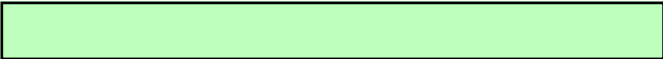
GEOSHIELD Verification Report



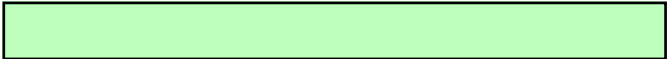
ADDITIONAL PHOTOGRAPHS



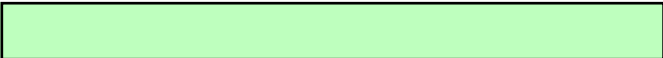
Perimeters protected.



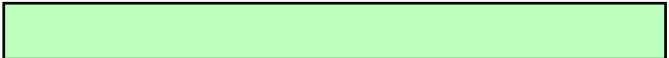
Perimeters protected.



Perimeters protected.



Steel column protected.





GEOSHIELD

Verification Report



GAS MEMBRANE LAP TESTING

[illegible]



GEOSHIELD Verification Report



VERIFICATION SUMMARY

This was the second visit to site where verification of the termination of the previously installed and verified PAG Standard gas barrier to the perimeters of the modular building was required. The installers have used PAG SAGR to terminated the gas barrier. A gas blow torch has been used to aid in the adherence of the PAG SAGR. Steel columns have also been sealed using PAG SAGR.

The perimeters need to be protected from damage or being exposed the the material degrading over time. Evidence of this needs to be provided before sign off - Evidence now provided and displayed in additional photos of this report. Installed in accordance with BS 8485:2019.

Verified in accordance with CIRIA 735.

GEOSHIELD SIGNATURE:

DATE: 14/06/2023