



GEOSHIELD Verification Report



PROJECT REFERENCE: GEO100209

PROJECT: Prologis Park

PROJECT ADDRESS: Stockley Park

Hillingdon

West London

MEMBRANE SPECIFICATION: Gas membrane to specification BS8485 2015

Installed and Verified to CIRIA 735

PAG Monarflex Reflex Super

PAG SAGR

Gas Resistant Self Adhesive Membrane



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MEMBRANE SPECIFICATION:

DESIGN DETAILS:

Drawings as follows :-

PPWL_MSA_DC3_ZZ_M3_A_30952_SO_3301_PO3. Unit 3a floor plan

PPWL_MSA_DC3_ZZ_M3_A_30952_SO_3302_PO4 Unit 3b floor plan

30952-RE-400C Site Layout Plan

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SURVEYOR:

Michael Dodd

VERIFICATION COMPANY:

GEOSHIELD LIMITED

Suite 46, 4100 Park Approach

Thorpe Park, Leeds

West Yorkshire

LS15 8GB

CONTACT NUMBER:

07502 343063

EMAIL ADDRESS:

michael@geoshield.co.uk

ORDER NUMBER:

PER VISIT: YES:

☐

NO:

☐

PROJECT: YES:



NO:

☐

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CLIENT DETAILS

CLIENT CONTACT: Braydon Macauley

CONTACTS ROLE: Site manager Readie Construction

MOBILE PHONE: 07823389847

EMAIL ADDRESS:

CLIENT CONTACT: Darren Edwards

CONTACTS ROLE: Assistant Site Manager

MOBILE PHONE: 07584 700314

EMAIL ADDRESS

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APPLICATION TEAM LEADERS

APPLICATOR NAME: Matt Payne

COMPANY: PAG Contracting

APPLICATOR TEL: 07900 070805

APPLICATOR EMAIL: matt@pageo.co.uk

APPLICATOR NAME: Lee Childs

COMPANY: PAG Contracting

APPLICATOR TEL: 07977331694

APPLICATOR EMAIL: lee@pageo.co.uk

NOTES: Both applicators are very experienced installers and both qualified to NVQ

NOTES: Level 2

NOTES:

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AREA SURVEYED: Lift Pits 3A and 3B

SITE CONDITIONS:

WEATHER: Overcast with occasional sunshine

TEMPERATURE: 12.6c

MEMBRANE TEMPERATURE: N/A

RELATIVE HUMIDITY: N/A

TIME: 8-00am to 10-00am REPORT NUMBER: 001

DATE: 31st May 2018

ACCOMPANIED Braydon Macauley

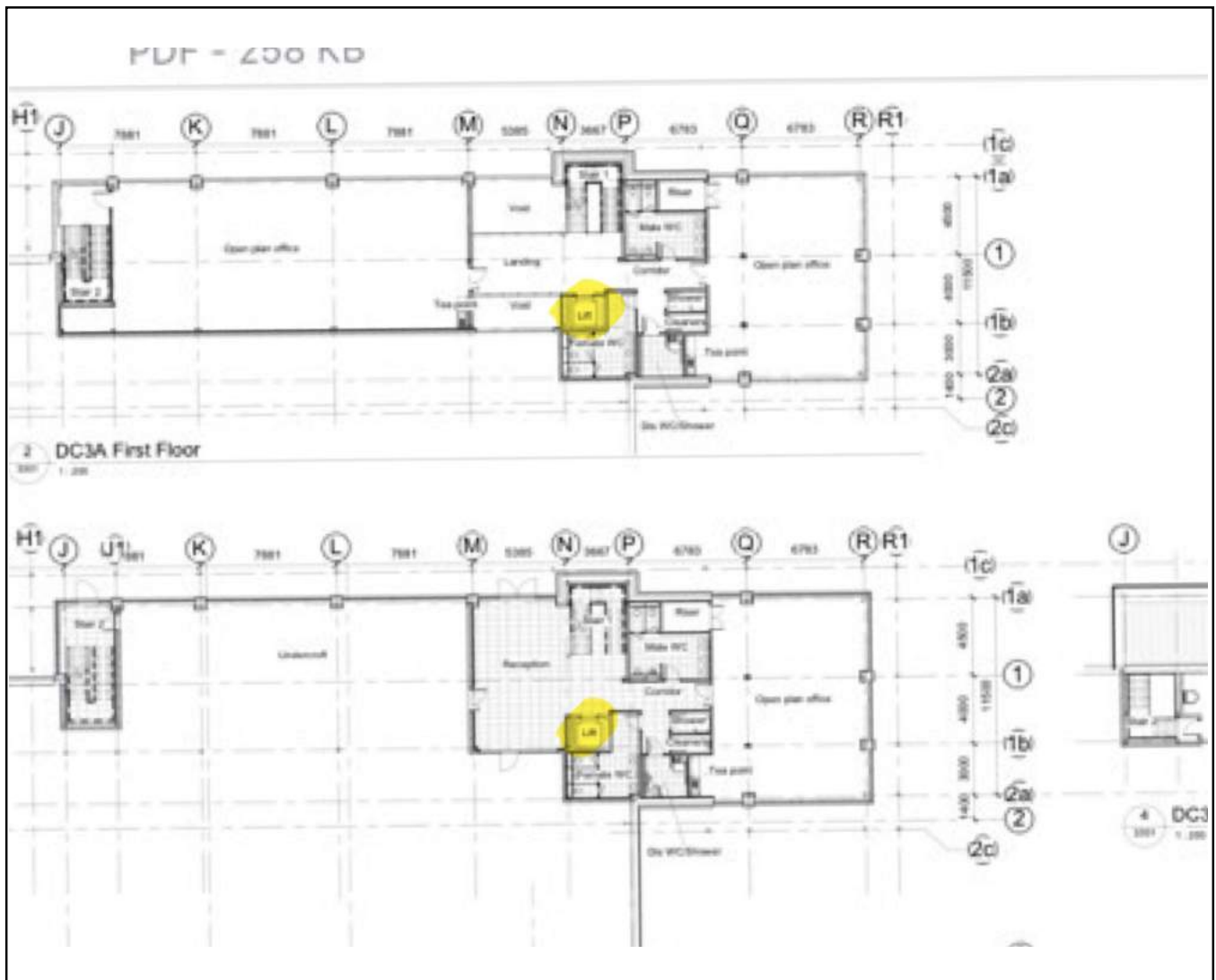
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VERIFICATION LAYOUT



Verification Area within Site Plan

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OVERVIEW PHOTOS



Overview of Verification Area - Lift Pit 3B

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OVERVIEW PHOTOS



Alternative Overview of Verification Area - Lift Pit 3B

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OVERVIEW PHOTOS



Overview of Verification Area - Lift Pit 3A

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OVERVIEW PHOTOS



Alternative Overview of Verification Area - Lift Pit 3A

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LIMITATIONS

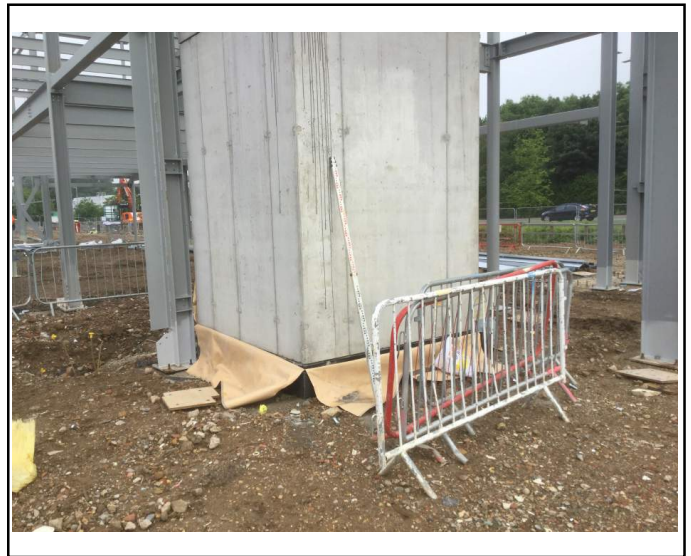
SURVEY AREA:

Lift Pit 3A

RESTRICTIONS AND LIMITATIONS:

Lift Pit had been previously wrapped in

Monarflex Super as opposed to an appropriate Self Adhesive Gas Resistant Membrane



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LIMITATIONS

SURVEY AREA: Not Applicable

RESTRICTIONS AND LIMITATIONS: Not Applicable

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VERIFICATION ITEM ONE

LOCATION/GRID LINE: Lift Pit 3A

NOTES: Limited Verification - Membrane Installation

Photo 1 - showing the PAG Monarflex Reflex Super (1) being wrapped around the corner of the Lift Pit. This was typical to all four corners and therefore a complete seal at (2).

The PAG Monarflex Reflex Super was projected prior to backfilling with Protection Board.

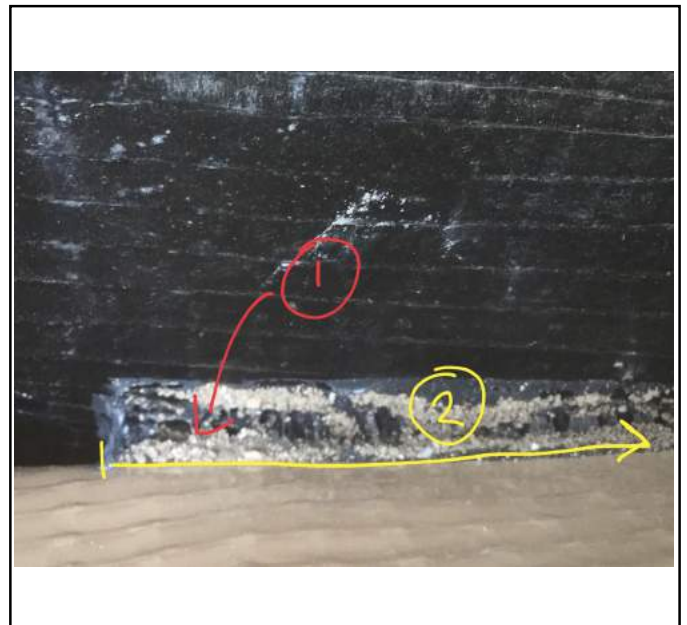
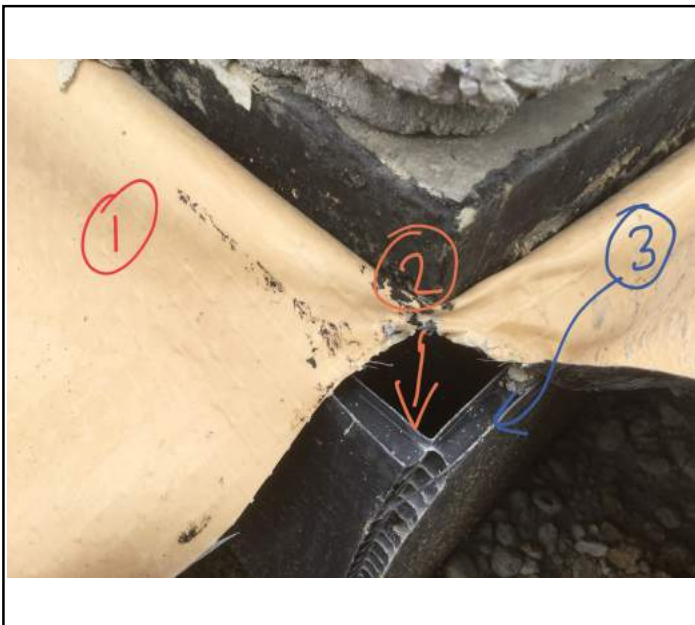


Photo 2 - showing Double Sided Butyl Tape sealing the Membrane - minimum lap 150mm

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VERIFICATION ITEM ONE



Overview of Lift Pit 3A where the PAG Monarflex Reflex Super proved to have been fully wrapped at (1). PAG Monarflex Reflex Super was protected with Protection Board at (2) prior to backfilling.

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VERIFICATION ITEM TWO

LOCATION/GRID LINE: Lift Pit 3B

NOTES: Pick & Probe Test

Photo 1 - showing the Pick & Probe Test (2) being undertaken along one of the four available GRSA Membrane Corner Lap Joints - all proved to be fully sealed

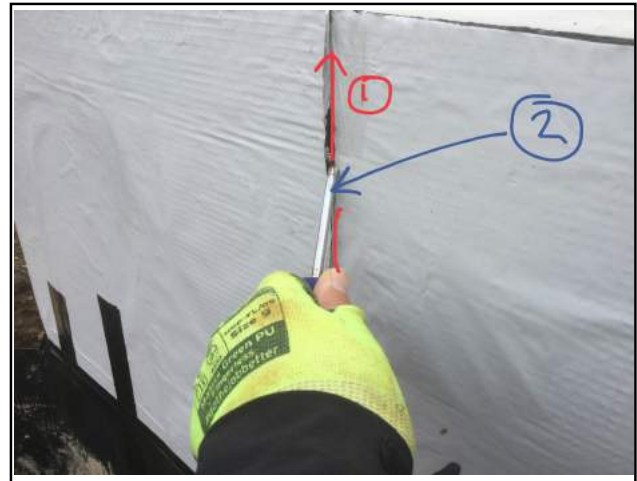


Photo 2 - showing the Pick & Probe Test being undertaken along a typical GRSA

Membrane Lap Joints proving all had a good seal.

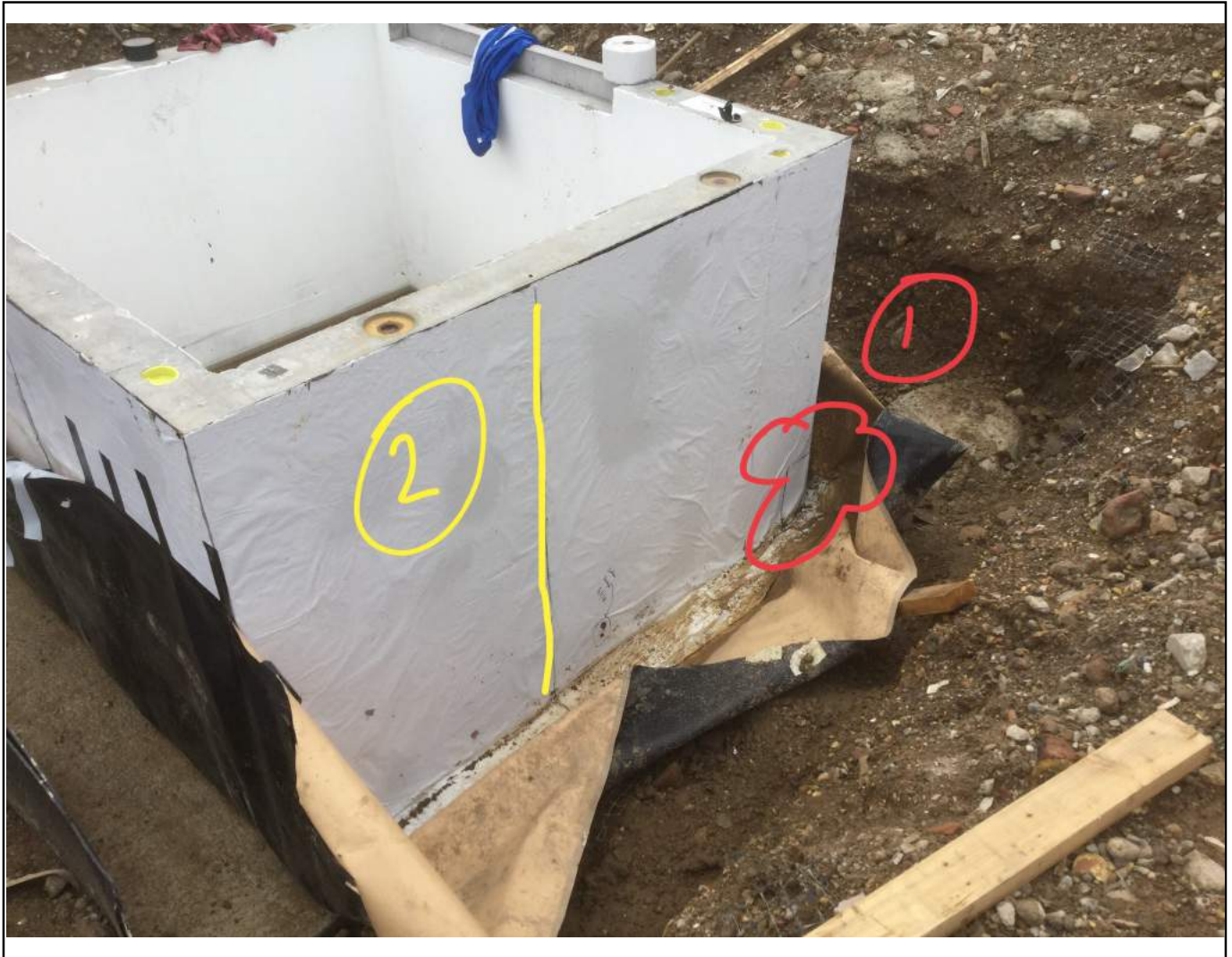
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VERIFICATION ITEM TWO



Overview of the Verification Area where (1) is showing one of the four Corner Lap

Joints and a typical Lap Joint at (2) where the Pick & Probe Test was undertaken

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VERIFICATION ITEM THREE

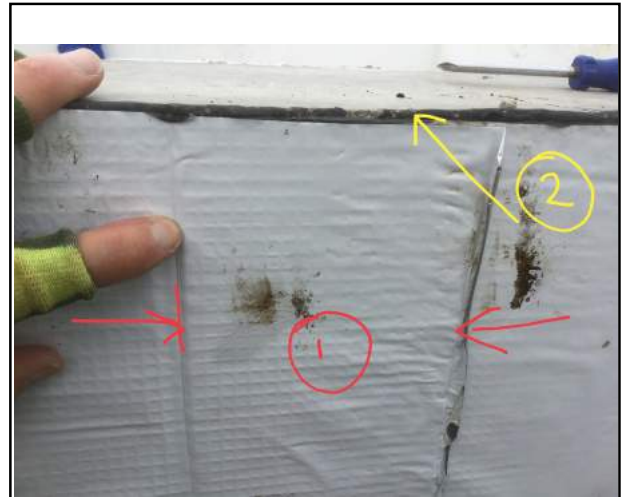
LOCATION/GRID LINE: Lift Pit 3B

NOTES: Gas Resistant Self Adhesive Membrane Application

Photo 1 - showing the GRSA Membrane sealed (2) with the previously installed

PAG Monarflex Reflex Super (1) completely sealing the Lift Pit.

Photo 2 - showing the GRSA Membrane has been sufficiently lapped at (1). The



surface of the concrete had been previously primed and evidence seen at (2).

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VERIFICATION ITEM THREE



Overview of Verification Area showing one of the four sides to the Lift Pit

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REMEDIATION LOG

Date	Nr	Remediation Description	Y/N
31st May 18	001	Three areas of debris trapped between Lift Pit 3A wall and the	
		PAG Monarflex Reflex Super - potential puncture damage.	✓
	001	Damage to GRSA Membrane at Lift Pit 3B	✓

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REMEDIATION LOG

Date	Nr	Remediation Description	Y/N

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ADDITIONAL PHOTOS



Damage to GRSA Membrane - Lift Pit



Repair to GRSA Membrane Lift Pit



Debris trapped requiring removal



Debris trapped requiring removal

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ADDITIONAL PHOTOS

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GAS MEMBRANE TESTING

VISUAL: ☐ YES ☒ NO ☐ SMOKE TEST: ☐ YES ☐ NO ☒

COMPRESSED AIR: ☐ YES ☐ NO ☒ DILECTIC ☐ YES ☐ NO ☒

DESTRUCTIVE: ☐ YES ☐ NO ☒ OTHER: ☐ YES ☐ NO ☒

Testing checklist attached: ☐ YES ☐ NO ☒

Gridline/Plot Sign off

Gridline/Plot Sign off	Lift Pit 3A	☒
Gridline/Plot Sign off	Lift Pit 3B	☒
Gridline/Plot Sign off		☐
Gridline/Plot Sign off		☐
Gridline/Plot Sign off		☐
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Gridline/Plot Sign off		☐

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INTEGRITY TESTING RECORD

DESTRUCTIVE TEST

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LAP TYPE

Weld:

☐

Tape:

☐

Pass

☐

Fail

☐

COMMENTS

Not Applicable

TEST NUMBER 1

Click to set image

LAP TYPE

Weld:

☐

Tape:

☐

Pass

☐

Fail

☐

COMMENTS

Not Applicable

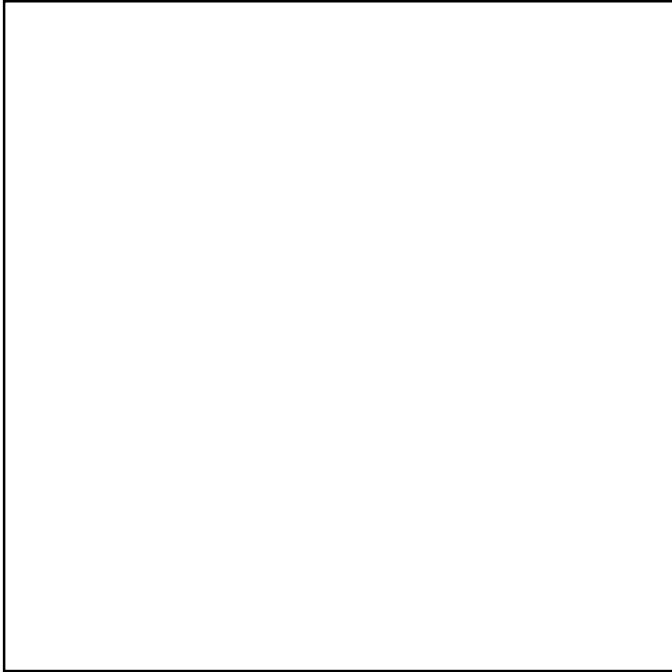
TEST NUMBER 2

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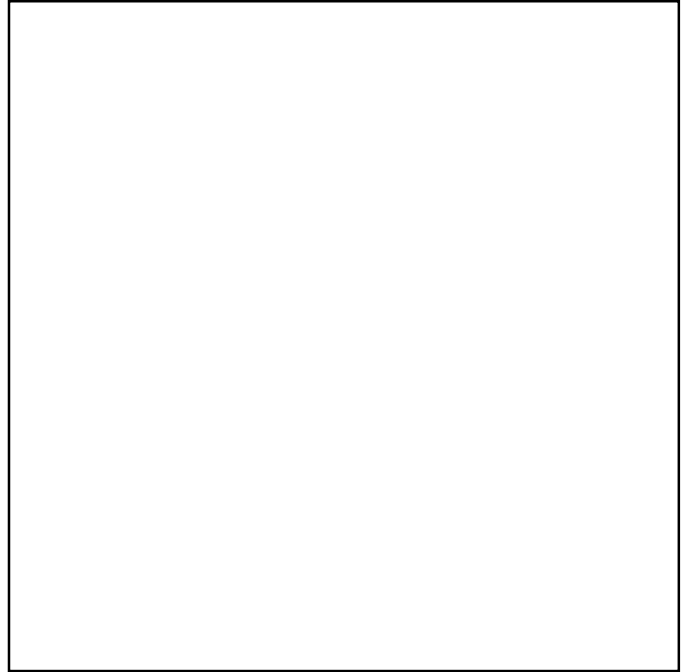
AIR LANCE INTEGRITY TESTING

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.

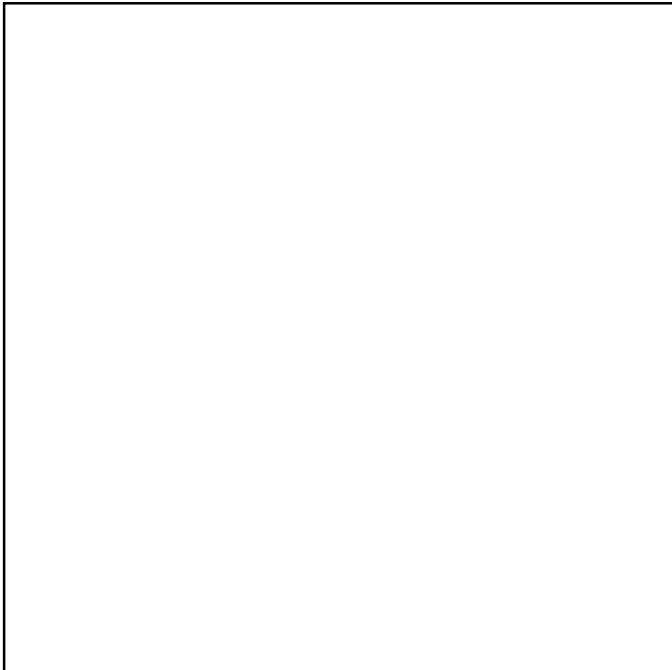
The air nozzle is directed on the upper edge seam, ripples indicate a unbonded seam. Each seam is numbered and failure marked with a F/1 F/2 classification and a description given



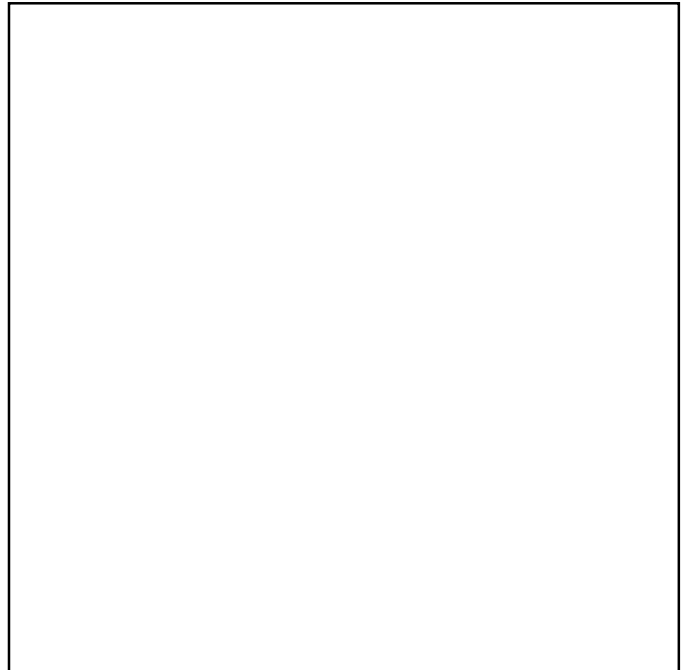
Not Applicable



Not Applicable

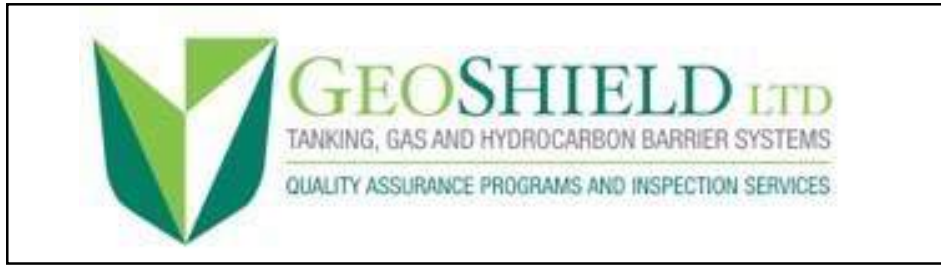


Not Applicable



Not Applicable

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INTEGRITY TESTING RECORD

AIR LANCE INTEGRITY TESTING (cont)

Detail of the Gas Membrane	PAG Monarflex Reflex Super
Detail of Tapes	Not Applicable
Joints and lap design	Welded Lap Joint

TEST NUMBER:	FAILED OR PASSED	DETAIL, COMMENT AND RECOMMENDATIONS

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VERIFICATION SUMMARY

This was this first visit where I was accompanied around the site by Braydon

Macauley - Site Manager.

Verification of two Lift Pits were required - Lift Pit 3A had been completed and

backfilling had been carried out. Although the installation method was incorrect

PAG Monarflex Reflex Super instead of GRSA Membrane, verification at ground

level proved a Gas Membrane was at least in place. It had also been protected

using a Protection Board. Lift Pit 3B had been protected using GRSA Membrane

Installation in accordance with BS8485 (2015) and verified to CIRIA 735.

GEOSHIELD SIGNITURE:

M Dool

DATE: 31st May 2018

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