



GEOSHIELD

Verification Report



PROJECT REFERENCE:

GEO101436

REPORT NUMBER:

008

PROJECT:

GCL - Clarendon Road PHASE 3

PROJECT ADDRESS:

Clarendon Road

Hornsey

N8 0JU

MEMBRANE SPECIFICATION:

Gas membrane to specification BS8485 2015

Installed to CIRIA 735

Pudlo GP Ultra+ Gas Barrier

Pudlo GP Ultra Tape

Pudlo GP Ultra EXT Tape

Pudlo Liquid Gas Barrier



GEOSHIELD Verification PLAN



SPECIFICATION:

INFORMATION INCLUDED:

Material specification technical data sheets

5192204/P3_RemStrat Rev0.4

W257-PUD-D1-00-DR-S-02-1000

W257-PUD-D2-00-DR-S-02-1001

W257-PUD-D3-FN-DR-S-02-1002

W257-PUD-D3-XX-DR-S-02-1005

W257-PUD-D3-XX-DR-S-05-1000

W257-PUD-D4-00-DR-S-01-1006

W257-PUD-D4-BL-DR-S-02-1003

W257-PUD-DD-XX-DR-S-03-0001 to W257-PUD-DD-XX-DR-S-03-0024

W257-PUD-DD-XX-SK-S-03-0001 to W257-PUD-DD-XX-SK-S-03-0003

Information brought forward from the Pre Verification Plan. Any alterations to the originaally

submitted design should be made aware to Geoshield



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VERIFICATION OFFICER: John Cornish

VERIFICATION COMPANY: GeoShield Limited

Icon Business Park, 4100 Park Approach

Thorpe Park, LEEDS

West Yorkshire

LS15 8GB

CONTACT NUMBER: 07493769477

EMAIL ADDRESS: Jcornish@Geoshield.co.uk

ORDER NUMBER:

PER VISIT: YES:



NO:



PROJECT: YES:



NO:





GEOSHIELD

Verification Report



CLIENT DETAILS

CLIENT CONTACT: Rohallah De Sousa

CONTACTS ROLE: Ground Construction Ltd

MOBILE PHONE: 02082387000

EMAIL ADDRESS: RohallahDeSousa@GroundConstruction.com



CLIENT CONTACT:

CONTACTS ROLE:

MOBILE PHONE:

EMAIL ADDRESS

NOTES:

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GEOSHIELD Verification Report



APPLICATION TEAM LEADERS

APPLICATOR NAME: Ermal

COMPANY: GCL - Site Engineer

APPLICATOR TEL: 07479553833

APPLICATOR EMAIL:

APPLICATOR NAME: Adrian Toderasc

COMPANY: GCL

APPLICATOR TEL:

APPLICATOR EMAIL:

NOTES: Installers have been toolbox talked by Geoshield during Visit no.6.

NOTES: The application standard will be monitored throughout and during each

NOTES: future inspection visits.

NOTES: Further training will be provided if deemed necessary.



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AREA SURVEYED: Block D1 - Pour 2

Block D1 - Pour 3

SITE CONDITIONS:

WEATHER:

TEMPERATURE: 10c.

MEMBRANE TEMPERATURE: N/A

RELATIVE HUMIDITY: N/A

TIME: 08:00 - 10:30

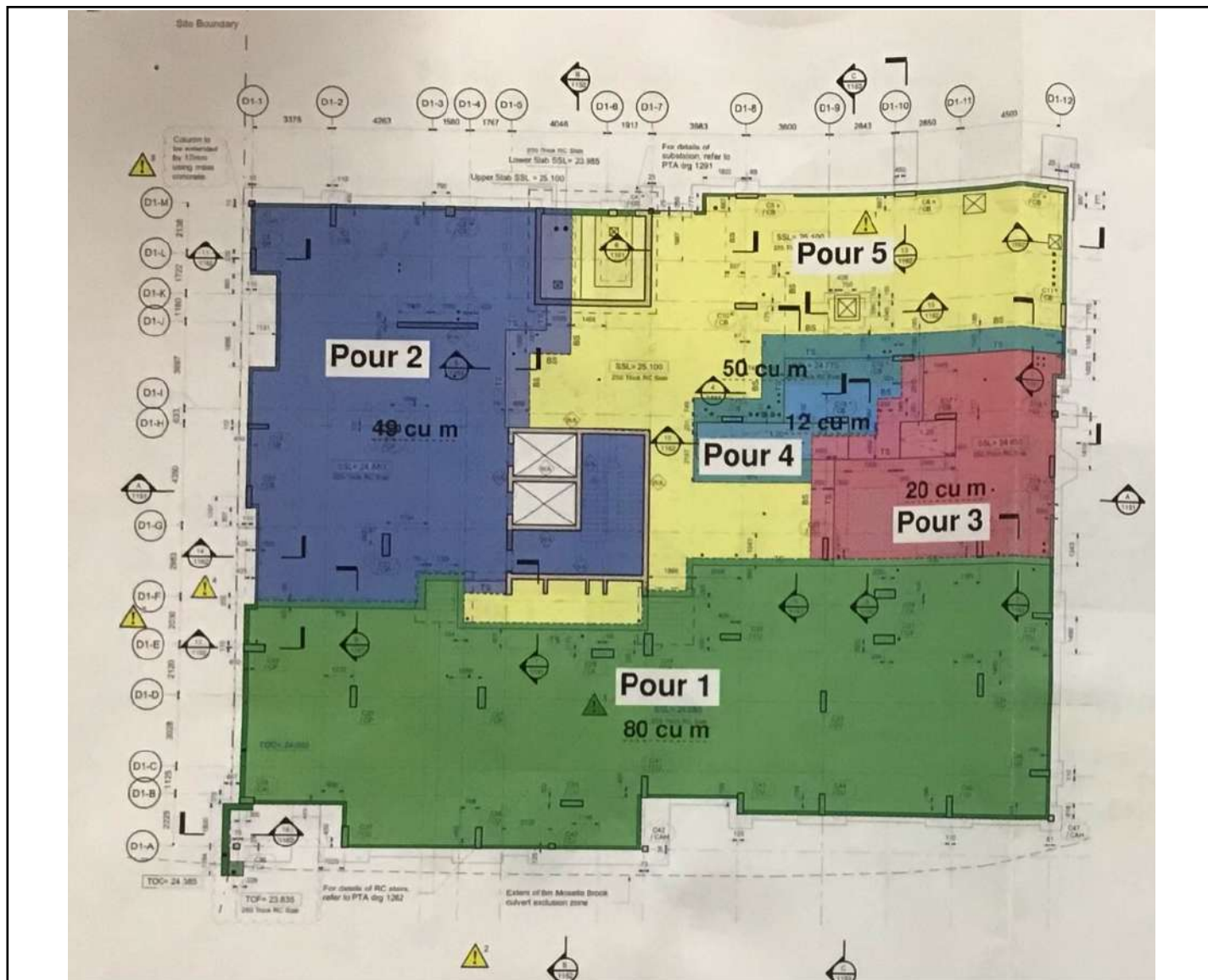
REPORT NUMBER: 008

DATE: 22/01/2021

ACCOMPANIED: Ermal - GCL Site Engineer

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VERIFICATION LAYOUT



Pour 2 and 3 shown above is where verification of Block D1 took place during

this visit.



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OVERVIEW PHOTOGRAPHS



The photograph above shows an overview of pour 2. Pour 2 is not yet complete

due to ongoing works to D1 substation which is preventing all the blinding

being poured.

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OVERVIEW PHOTOGRAPHS



The photograph above shows pour 3 of Block D1 where verification also took place during this visit. Area is not yet complete due to outstanding penetrations to the membrane which haven't been sealed.



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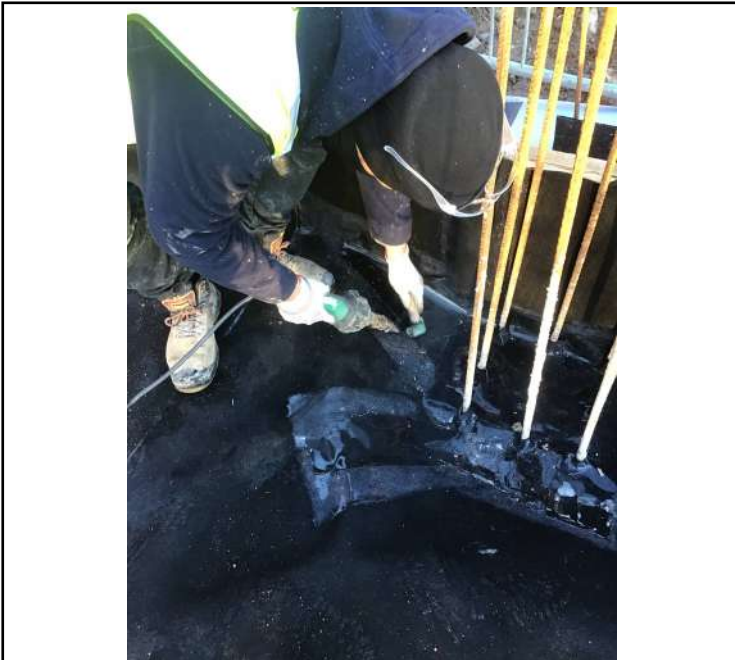


VERIFICATION ITEM ONE

LOCATION/GRID LINE: Block D1 - Pour 2 + Pour 3

NOTES: Installation of Pudlo GP Ultra+ Gas Barrier.

The first photograph below shows the installers using a hot air leister and roller to weld the laps of the Pudlo GP Ultra+ Gas Barrier. The installers have achieved a 40mm weld on all laps of the membrane.



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

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



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VERIFICATION ITEM TWO

LOCATION/GRID LINE: Block D1 - Pour 2 + Pour 3

NOTES: Piles and pipe penetrations sealed.

The two pictures below show examples of sealed piles. The installers have first applied a coat of Pudlo liquid membrane to the pile heads. Once dry the installers have used EXT tape to seal the Pudlo GP Ultra+ Gas Barrier to the pile heads and also...



.... to seal the steel bars. Once completed the installers have then applied additional Pudlo liquid membrane to ensure no concrete is showing through the paint.

No faults or defects identified.

Installed in accordance with BS 8485:2019.

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VERIFICATION ITEM TWO



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

penetration verified during this visit.

No faults or defects identified.

Verified in accordance with CIRIA 735.



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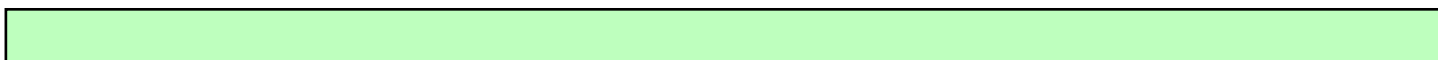
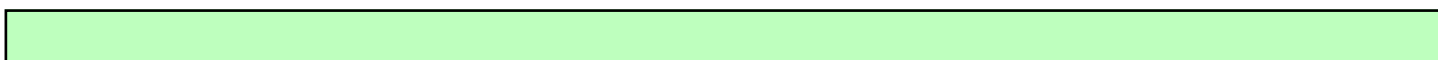
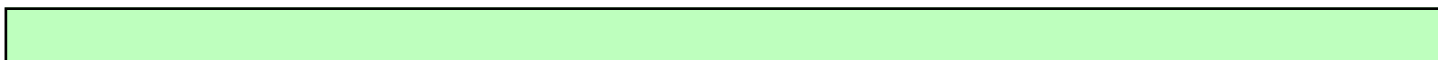
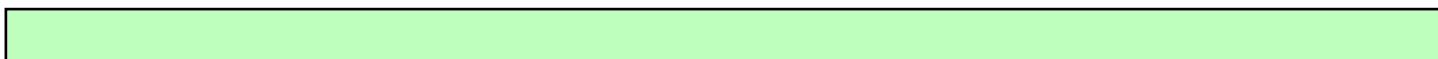
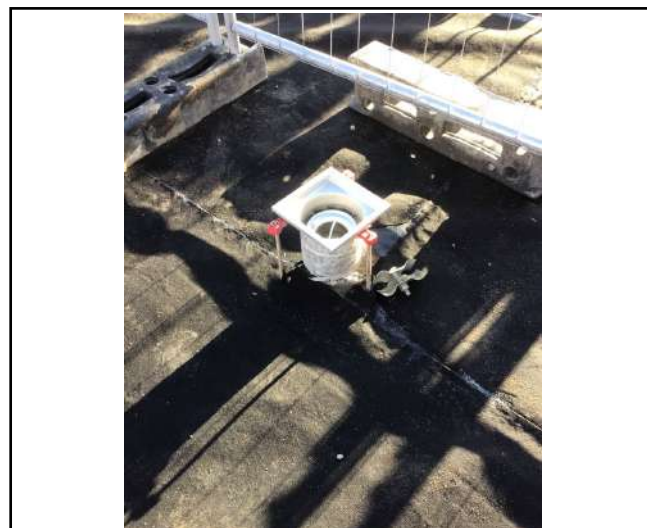


VERIFICATION ITEM THREE

LOCATION/GRID LINE: Block D1 - Pour 3

NOTES: Unfinished works.

The two photographs below show outstanding penetrations of the Pudlo GP Ultra + Gas Barrier located in Block D1 pour 3. These penetrations will have to be sealed and verified during the next visit.



GEOSHIELD

Verification Report

ADDITIONAL PHOTOGRAPHS



Sealed corner detail using EXT tape.



Sealed pile using Pudlo liquid

membrane and EXT tape.



Additional pick and probe test carried

out to pipe penetration.



Hole identified in the membrane.

This was patched during this visit.



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REMEDIATION LOG

Date	Nr	Remediation Description	Y/N
10/11/2020	001	No faults found	✓
12/11/2020	002	Damaged corner repaired	✓
01/12/2020	003	1. Damage to the membrane had been patched but the fleece	✓
		below had not been removed and therefore the seal wasn't very	✓
		strong. This patch was removed and the damage was repaired	✓
		correctly during this visit.	✓
		2. 3 x pile caps sealed using the Pudlo Liquid GB had been	✓
		chipped and therefore additional Liquid Gas Barrier had to be	✓
		applied to small areas.	✓
10/12/2020	004	1. Incorrect sealing of lap joints in membrane - taped not welded.	✓
		2. 3 x pipe penetrations not sealed.	✓
18/12/2020	005	No faults or defects identified during this visit.	✓
12/01/2021	006	1. Some pile caps incomplete as per the detail for sealing.	✓
		2. Several welded joints required re-welding to achieve a seal.	✓
		3. Corner details not sealed due to access required to the area.	✓



GEOSHIELD Verification Report



REMEDIATION LOG

Date	Nr	Remediation Description	Y/N
15/01/2021	007	1. 1 lap had not been welded correctly the installers have used	✓
		a hot air leister and roller to ensure that a 40mm weld has been	✓
		achieved.	✓
22/01/2021	008	1. One hole in the membrane identified. The installers have	✓
		patched the hole by removing the fleece around the hole and then	✓
		a hot air leister has been used to adhere EXT tape ove the hole.	✓
		2. A couple small areas in the laps of the Pudlo GP Ultra+ Gas	✓
		Barrier did not have a 40mm weld. Installers have re welded	✓
		these areas during this visit.	✓
		3. Some penetrations of the membrane have not been sealed	
		these will have to be sealed and verified during the next visit	
		(See verification item 3 - Report 8)	



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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	Block D1 - Core - Lower	☒
Gridline/Plot Sign off	Block D1 - Core - Middle and Upper	☒
Gridline/Plot Sign off	Pump Chamber Base	☒
Gridline/Plot Sign off	Block D2 - Core.	☒
Gridline/Plot Sign off	Block D1 Slab - Pour 1 (50%)	☒
Gridline/Plot Sign off	Pumping station.	☒
Gridline/Plot Sign off	Block D1 Slab - Pour 1 (Base installation only).	☒
Gridline/Plot Sign off	Block D1 slab - Pour 1 (100%)	☒
Gridline/Plot Sign off	D1 Substation.	☒
Gridline/Plot Sign off	Block D1 - Pour 2	☐
Gridline/Plot Sign off	Block D1 - Pour 3	☐
Gridline/Plot Sign off		☐



GEOSHIELD Verification Report



VERIFICATION SUMMARY

This was the 8th visit to site where verification of the installation of Pudlo

GP Ultra+ Gas Barrier to Block D1 Pour 2 + Pour 3 was required. The installers

have welded all laps of the Pudlo GP Ultra+ Gas Barrier using a hot air leister

and roller. The installers have achieved a consistent 40mm weld. All pipe

penetrations that have been sealed have been sealed using EXT tape. All piles

have been sealed using Pudlo liquid membrane and EXT tape. The installers

have rectified any faults identified during this visit. Incomplete works will have to

be carried out and verified during the next visit.

Installed in accordance with BS8485:2019.

Verified in accordance with CIRIA 735.

GEOSHIELD SIGNATURE:

DATE: 22/01/2021