GEOSHIELD Verification Report

PROJECT REFERENCE:	GEO101436
REPORT NUMBER:	007
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 orignaally

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: ☑

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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:	
NOTES:	
NOTES:	

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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 Slab - Pour 1 (third visit for this area)

D1 Substation.

SITE CONDITIONS:

WEATHER: Raining - Cold

TEMPERATURE: 10c.

MEMBRANE TEMPERATURE: N/A

RELATIVE HUMIDITY: N/A

TIME: 14:00 - 16:00 REPORT NUMBER: 007

DATE: 15/01/2021

ACCOMPANIED Ermal - GCL Site Engineer

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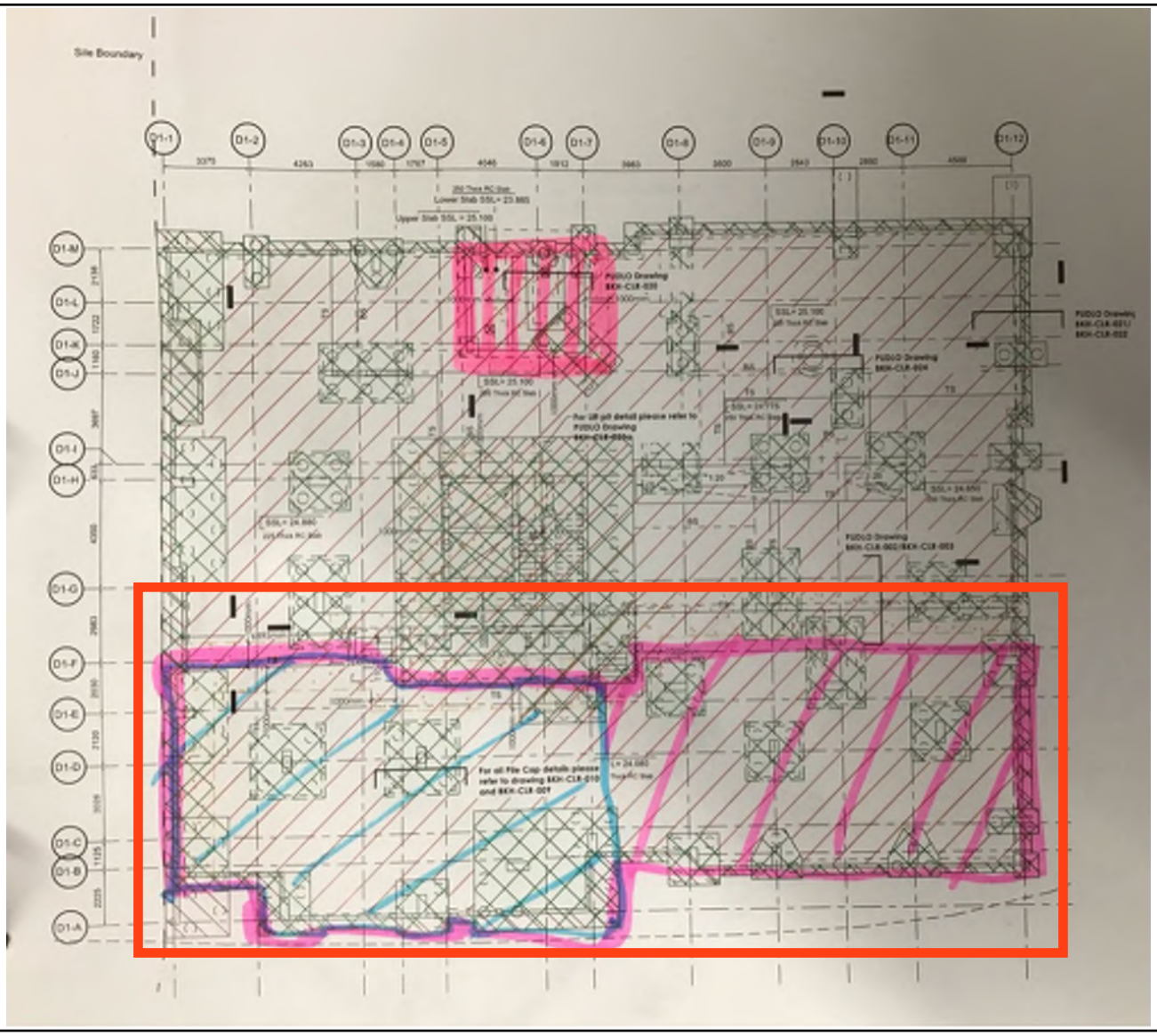
VERIFICATION LAYOUT



The area within the red box above shows Block D1 Slab which was 100% complete

and ready for verification on this visit. The small pink area above shows D1

substation which was also verified during this visit.

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OVERVIEW PHOTOGRAPHS

The photograph above shows an overview of D1 slab where verification of

the remaining works identified in the last report was carried out.

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OVERVIEW PHOTOGRAPHS

The photograph above shows an overview of D1 substation which was also

verified during this visit.

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VERIFICATION ITEM ONE

LOCATION/GRID LINE: Block D1 Slab.

NOTES: Remaining works completed the last visit.

The first photo below shows the installers have sealed the corner details using Pudlo EXT tape. The installers have used a hot air leister and roller to ensure a good seal has been achieved. The second photo below shows the installers have first applied a coat...

... of Pudlo liquid membrane before sealing around the pile using the Pudlo EXT tape.

Installed in accordance with BS 8485:2019.

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VERIFICATION ITEM ONE

The photograph above shows a pick and probe test was carried out to a sealed corner which has been sealed using Pudlo EXT tape and a hot air leister to achieve a good seal. No faults or defects identified.

Verified in accordance with CIRIA 735.

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VERIFICATION ITEM TWO

LOCATION/GRID LINE: D1 Substation.

NOTES: Installation of Pudlo GP Ultra+ Gas Barrier

The first photo below shows an overview of a welded lap of the Pudlo GP Ultra+ Gas Barrier. The installers have first ensure the gas barrier is clean and dry before using the hot air leister and roller to achieve a consistent 40mm weld.

The second photo above shows a pick and probe test carried out to a welded lap of the Pudlo GP Ultra+ Gas Barrier. A strong weld has been achieved.

No faults or defects identified.

Verified in accordance with CIRIA 735.

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VERIFICATION ITEM THREE

LOCATION/GRID LINE: D1 Substation

NOTES: Pile heads and details sealed.

The two photographs below show examples sealed pile heads. The installers have first applied a coat of the Pudlo liquid membrane to each pile head. Once dry the installers have then used the Pudlo EXT tape to seal the pile heads to the....

... Pudlo GP Ultra+ Gas Barrier. The EXT tape has been cut around each steel bar before using a hot air leister to seal the EXT tape to the pile head. Next the installers have then used additional EXT tape to seal each steel bar individually.

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VERIFICATION ITEM THREE

The photograph above shows a pipe penetration which has been sealed. The installers have first cut a hole tightly around the pipe to minimise gaps. Next the fleece of the membrane has been removed in order to seal the pipe using Pudlo EXT Tape.

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ADDITIONAL PHOTOGRAPHS

Sealed corner detail.

Installers welding a lap which had not been sealed correctly.

Hot air leister used to weld laps of the Pudlo GP Ultra+ Gas Barrier.

Additional pick and probe test carried out to welded joint.

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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.	✔

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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.	✔

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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		
Gridline/Plot Sign off		
Gridline/Plot Sign off		

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VERIFICATION SUMMARY

This was the 7th visit to site where verification of Block D1 slab and D1 substation was required. The installers have carried out all remediations and out standing works identified in the last report to Block D1 slab. They have also installed the Pudlo GP Ultra+ Gas Barrier to D1 substation. All laps of the Pudlo GP Ultra+ Gas Barrier have been welded using a hot air leister and roller to apply pressure. A consistent 40mm weld has been achieved. All pile heads have been sealed using Pudlo liquid gas membrane and the sealed to the Pudlo GP Ultra+ Gas Barrier using Pudlo EXT tape. All pipe penetrations have also been sealed. Installed in accordance with BS 8485:2019.

Verified in accordance with CIRIA 735.

GEOSHIELD SIGNATURE:

DATE:	15/01/2021