

VALIDATION REPORT

OF

GROUND GAS PROTECTION MEMBRANE
INSTALLATION

AT

RIVERMEAD LEISURE CENTRE, READING

FOR

PELLIKAAN CONSTRUCTION

COMPILED ON

30TH NOVEMBER 2022

TABLE OF CONTENTS

1.0	<i>Introduction</i>	<i>3</i>
2.0	<i>Site Details.....</i>	<i>3</i>
3.0	<i>Installer Competence.....</i>	<i>3</i>
4.0	<i>Inspection Dates.....</i>	<i>3</i>
5.0	<i>Overview of Site Investigation</i>	<i>3</i>
6.0	<i>Overview of Specification</i>	<i>4</i>
7.0	<i>Overview Of Verification Plan and Method.....</i>	<i>5</i>
8.0	<i>Other Information.....</i>	<i>5</i>
9.0	<i>Inspections.....</i>	<i>5</i>
10.0	<i>Observations.....</i>	<i>6</i>
11.0	<i>Conclusion</i>	<i>7</i>
12.0	<i>Appendices</i>	<i>8</i>

1.0 INTRODUCTION

- 1.1 ASW Design Cyf, acting as specialist Consultants, were instructed by Pellikaan, the main contractor, on January 2022 to provide a validation service to the installation of the Ground Gas Protection System on the project Rivermead Leisure Centre, Reading.
- 1.2 This report is in accordance with BRE 212 and BRE414. This report is required for the installation of a ground gas membrane to comply with Table 7 of BS8485:2015 and is in accordance with CIRIA C735.
- 1.3 Rivermead Leisure Complex and Gym will be replaced with a newly constructed leisure centre at the Rivermead site. The new Rivermead leisure centre will feature a teaching and diving pool, a six-court sports hall and an 120-station gym. Work at the site is planned to take place in two phases, beginning with the construction of a new leisure centre on the site of the current centre's car park.

2.0 SITE DETAILS

- 2.1 Site Address: Rivermead Leisure Centre, Reading
- 2.2 Building Description (BS8485:2015): Type C
- 2.3 Site Characteristic (BS8485:2015): CS3 as described in Main Investigation Report by Soils Limited (Aug 2019).
- 2.4 Main contractor: Pellikaan
- 2.5 Installer: Basement Waterproofing Services

3.0 INSTALLER COMPETENCE

- 3.1 Installers – Basement Waterproofing Services (UK)
- 3.2 The company was incorporated in August 2019 and specialises in the installation of structural waterproofing and ground gas protection systems. Basement Waterproofing Services have successfully installed ground gas membranes on large projects across the UK, including Associated British Ports Newport, Tarka Leisure Centre, Chard Leisure Centre, Rivermead Leisure Centre, and Coventry Logistics Park. Supervisors Neil Davies and Kurt Mogford are currently being assessed by Neil Salvidge for NVQ Level 2 - Installation of Gas Membranes. All teams are competent in the use of Leister hand welders and Leister Twinny T5.

4.0 INSPECTION DATES

- 4.1 Inspections were carried out between January 2022 to November 2022.

5.0 OVERVIEW OF SITE INVESTIGATION

- 5.1 Extract from the Main Investigation Report by Soils Limited (Aug 2019) is below:

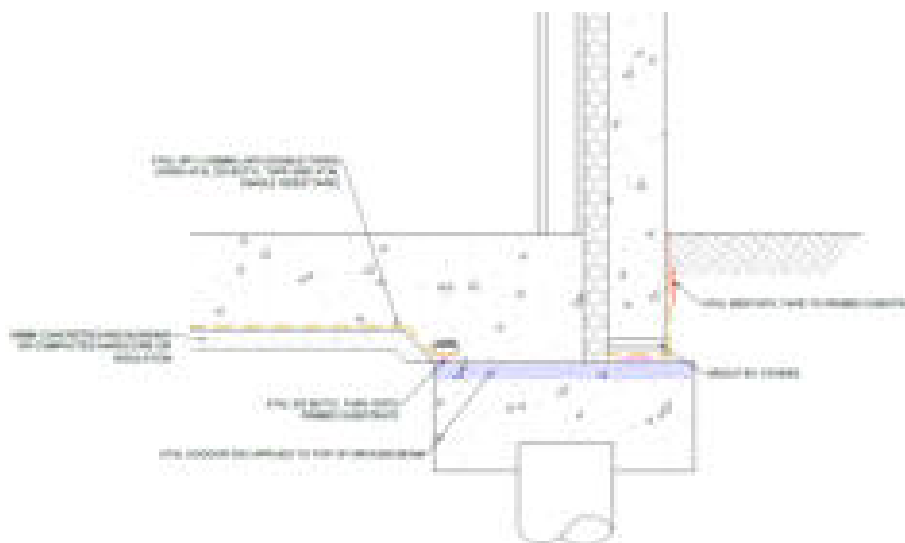
On this basis it is considered that a Characteristic Situation 3 should be adopted for the site as a precautionary measure, to protect future site occupants from the identified potential risk.

To determine the level of soil gas protection required, the type of development must first be considered. The proposed development is to comprise of a leisure centre with swimming pool and diving pool. This usage would place the building as Type C in accordance with Table 3, presented in BS8485:2015 which covers commercial buildings with central building management control of any alterations to the buildings and maintenance. To achieve the minimum gas protection required, a score of equal or greater than 3 must be achieved to ensure risks are minimized. Tables 5, 6 and 7 within BS8485:2015 detail the gas protection measures that may be incorporated into the design to achieve the required score.

6.0 OVERVIEW OF SPECIFICATION

- 6.1 The structures are classified as Type C in accordance with BS8485:2015, (commercial buildings with central building management). A Type A structure with a site characteristic of CS3 requires 3 points to comply with BS8485:2015.
- 6.2 The outline design of the system was taken on by the contractor. Basement waterproofing services then developed the design of the ground gas membrane system.
- 6.3 The swimming pool will be constructed using concrete designed to BS-EN-1992-3, the outline design set by the main contractor removed the membrane from the external face. The swimming pool is outside of the scope of this verification report as there is no membrane in this area.
- 6.4 The ground gas protection under the main slab will score 3 points, achieved using:
- Cast in situ monolithic reinforced ground bearing raft or reinforced cast in situ suspended floor slab with minimal penetrations (1 point).
 - Gas membrane (Atal GP1) on top of beam and block in accordance with BS8485:2015 Table 7 (2 points)
- 6.5 To comply with BS8485:2015 the membrane must meet the criteria of Table 7. The specification of Atal GP1 on top of beam and block will meet the following criteria:
- sufficiently impervious - (the membrane has a GTR of less than 40ml/day/m2/atm when tested in accordance with BS ISO 15105-1:2007.
 - Sufficiently durable to remain serviceable for the lifetime of the structure - we do not anticipated the membrane to contact any aggressive compounds.
 - Sufficiently strong to withstand the installation process and follow on trades - no steel reinforcement will be installed over the membrane, the membrane is suitable for light foot traffic.
 - Capable of providing a complete barrier to the entry of the relevant gas - the membrane is required due to high concentrations of methane, the membrane has been tested for permeability against this gas.
 - Verified in accordance with CIRIA C735.

FIGURE 1: EXTRACT FROM BWS3737-001



7.0 OVERVIEW OF VERIFICATION PLAN AND METHOD

- 7.1 At the start of the process ASW Design Cyf proposed to inspect 100% visual inspection of the membrane before each pour. Day certs and photographs were supplied by the installation team to the validator to ensure the quality of the installation was adequate throughout (included in the appendix of this report).

8.0 OTHER INFORMATION

- 8.1 As part of the requirements laid out in CIRIA C735 we have assumed that the main contractor has ensured that the installation of the ground gas protection system was performed in accordance with current Construction Design and Management Regulations.

9.0 INSPECTIONS

- 9.1 The following element(s) were inspected:
- General workmanship
 - Condition of sub grade
 - Gas membrane type
 - Gas membrane condition
 - Lapping design
 - Service entry detailing
 - Perimeter detailing.

10.0 OBSERVATIONS

Aspect	General workmanship	Condition of sub grade	Gas membrane type	Gas membrane condition	Lapping design	Service entry detailing	Perimeter detailing.
Evidence location	Validation proforma reports, daily progress photos from installer (all evidence in appendix)	Validation proforma reports, daily progress photos from installer (all evidence in appendix)	Validation proforma reports, daily progress photos from installer (all evidence in appendix)	Validation proforma reports, daily progress photos from installer (all evidence in appendix)	Validation proforma reports, daily progress photos from installer (all evidence in appendix)	Validation proforma reports, daily progress photos from installer (all evidence in appendix)	Validation proforma reports, daily progress photos from installer (all evidence in appendix)

11.0 CONCLUSION

- 11.1 Based on the presentation of lines of evidence, see appendices, it is the expert opinion of ASW Design Cyf that the installation of the Ground Gas Protection Membrane was performed consistent with the manufacturer's specification, datasheets, details, requirements set out in BS8485 and the remedial objectives have been achieved. This verification report has been compiled in accordance with CIRIA C735.

Signed



Ian Price

30/11/2022

12.0 APPENDICES

The appendices contains:

- Datasheets
- Installer's Qualifications
- Proforma Reports
- Progress Photos and Day Certs
- Site plan and gas membrane details
- Validator's Statements of Expertise

ASODUR®-SG2 INDUFLOOR®-IB1240

Art.-No. 2 05655

Special primer / Oil and vapour barrier

CE	
1119	
SCHOMBURG GmbH & Co. KG Aquafinstraße 2-8 D-32760 Detmold 06 2 05655	
EN 1504-2 ASODUR-SG2 Surface protection product - Impregnation	
Principle 1.2	
Capillary water absorption and water permeability	$w < 0.1 \text{ kg/m}^2 \times h_{10}$
Penetration depth	Class I < 10 mm
Tensile adhesion strength by pull-off test	$\geq 1.5 (1.0) \text{ N/mm}^2$
Reaction to fire	Class E
Hazardous substances	In compliance with 5.3 EN 1504-2

- Two component, low solvent, moisture tolerant epoxy resin.
- Water vapour impermeable.
- Due to its high density, ASODUR-SG2 displaces the water from the surface capillaries of concrete substrates and acts as a barrier to oil rising through capillary action.
- Forms a very good bond to damp concrete substrates.
- Prevents penetration of radon.

Areas of application:

- As a special priming treatment for oil contaminated but previously cleaned concrete substrates.
- As effective protection against the formation of osmosis bubbles when there is moisture penetrating from the rear.
- As a capillary breaking grout to the pool edge with high level water tables, up to 1:1 filled with 0.1–0.6 mm quartz sand.
- As a priming treatment for concrete/bonded screeds that are still damp, which are to receive floor coverings such as PVC, linoleum, carpet, parquet, tiles etc. Please refer to the advice section.
- As a primer for SOLOPLAN-30-PLUS.

Technical Data:

Basis:	two component epoxy resin
Colour:	light grey
Viscosity*:	approx. 70 s in a 4 mm DIN standard cup
Mixture ratio:	100:12 parts by weight
Density*:	1.86 g/cm ³
Ambient and substrate temperature:	min. +10 °C max. +35 °C at max. 80% rel. humidity
Pot life:	approx. 60 minutes at +23 °C approx. 30 minutes at +30 °C
Foot traffic after*:	approx. 12 hrs
Overcoat after*:	approx. 12 hrs (when broadcast with quartz sand)
Fully cured after*:	approx. 7 days
Compressive strength:	approx. 80 N/mm ²
Flexural strength:	approx. 30 N/mm ²
Tensile adhesion strength:	B 1.5
Water vapour permeability:	SD > 50 m (Class III according to EN 1504-2)

* at +23 °C and 50% rel. humidity

Cleaning tools:	Clean tools immediately after use with ASO-R001.
Packaging:	2 kg, 5 kg, 15 kg and 28 kg containers. Components A and B are delivered at a predetermined mix ratio.
Storage:	frost free, cool and dry, 24 month in the original unopened containers, $\geq +10$ °C to +25 °C. Use opened containers promptly.

ASODUR®-SG2

Substrate preparation:

The areas to be treated must be:

- Dry or damp (in accordance with DAfStB RiLi SIB*), solid, load-bearing and have a good key.
- Free from separating and adhesion reducing substances such as e.g. dust, laitance, grease, rubber marks, paint residues and similar.

Furthermore, ASODUR-SG2 can also be used on the following substrates:

- Concrete and cement-based screed areas subjected to reverse moisture penetration
- Concrete and cement-based screed areas with increased residual moisture*

*) "Guidelines for the protection and repair of concrete sections", part 2, section 2.3.5 "Concrete moisture", 07.2002.

Prepare substrates with reference to DIN EN 14879-1:2005, 4.2 following.

Dependent on the condition of the substrate to be treated, use suitable mechanical preparation methods, e.g. high pressure water blasting, scabbling, shot blasting, planing etc, with which a textured, open surface is achieved. (Repair voids and cracks beforehand with a suitable product from the SCHOMBURG range).

Oil contaminated concrete:

- Following the preparation of the substrate, treat the affected area with the cleaning agent ASO-R008 (diluted in accordance with the technical data sheet for ASO-R008).
- Clean the treated area with warm water (approx. +50°C to +70°C).
- Remove excess water with a suitable vacuum.
- Apply ASODUR-SG2 immediately to the surface whilst it is still damp, working in with a brush and finishing evenly with a paint roller.

Please note: No completely closed water film must be present on the surface of the concrete. The substrate may not dry out – with drying there is a risk that the oil will rise

again and thus no bond will be achieved between the special primer and the substrate.

Appropriate to each particular substrate, the following criteria are also to be fulfilled:

Concrete quality: min. C20/25
Screed quality: min. EN 13813 CT-C25-F6
Tensile adhesion strength: > 1.5 N/mm²

Product preparation:

Component A and component B are delivered at a predetermined mixing ratio. Tip component B into component A. Ensure that the hardener drains completely from its container. Mix both components with a suitable mixer at 300 rpm. It is important to ensure that the hardener is evenly dispersed. Stir until the mix is homogenous (free from streaks); mixing time approx.

3 minutes. The minimum temperature during mixing should be around +15° C.

Do not use mixed material directly from the packaging. Decant the mixed material into a clean container and mix through thoroughly once again.

Application method/consumption:

Using a rubber squeegee, apply ASODUR-SG2 to saturation onto the cleaned, matt damp substrate and thoroughly work into the surface with a priming brush and back roll with a short nap paint roller. Blind the fresh primer with quartz sand (grain size: 0.5 – 1.0 mm diameter). Once hardened, carefully remove all non-bound quartz sand before subsequent coatings are applied to the primer.

Material consumption:

Dependent on the substrate, the consumption is between 600 to 1000 g/m².

Consumption of broadcast sand approx. 1500 g/m².

ASODUR®-SG2

After waiting for approx. 12–24 hours any ASODUR coating system can be applied, beginning with the primer belonging to the system or alternatively other floor finishes can be applied.

Capillary breaking fluid grout:

When using ASODUR-SG2 as a capillary grout, fill the ASODUR-SG2 with 0.1–0.6 mm quartz sand at a mixing ratio of 1:1 parts by weight.

Mix density: approx. 2.15 g/cm³

Consumption: approx. 2,150 g/Liter

Broadcast the surface of the resin, before it hardens, with 0.5–1.0 mm quartz sand.

Important advice:

- When using organic acids (e.g. propanoic acid), or if they are present in drive-in silo plants, ASODUR-SG2 may not be used as the only waterproofing and surface protection measure. ASODUR-SG2 is to be coated with a top coat material appropriate to the service conditions.
- When using ASODUR-SG2 as a vapour barrier beneath conventional floor coverings e.g. PVC, linoleum, carpet and parquet, do not use solvent based adhesives. This will lead to bulging in the floor finish installed.
- Use ASODUR-SG2-thix for vertical surfaces.
- As a rule, SCHOMBURG products are supplied in working packs i.e. at a mix ratio matched together. When supplied in large containers, part quantities must be weighed out using a balance. Always thoroughly stir the filled components and only then mix with the second component. This is to be executed with a suitable stirrer e.g. Polyplan/Ronden mixing paddle or similar. In order to exclude mixing errors, decant into a clean container and mix anew. The mixing speed should be approx. 300 rpm. Ensure that no air is mixed in. The temperature of the components should be minimum +15°C. This is also valid for any potential fillers to be mixed, e.g. sands. The addition of the fillers is only to occur once both liquid components have been blended. Afterwards place the completely mixed material immediately on to the prepared substrate and quickly and carefully spread out in accordance with the instructions in the technical data sheet. For applications by roller, it is recommended to use a short nap nylon paint roller (6 mm) with a textured polyamide cover or similar. Always thoroughly stir one component products before use.
- Higher temperatures shorten the pot life. Lower temperatures increase the pot life and setting time. Material consumption is also increased at lower temperatures.
- Colours: Small variations in colour, resulting from varying production batches and raw material fluctuations, are unavoidable. When applying coatings, take this into consideration. Carry out neighbouring sections with the same production batch (same batch number on the packaging).
- The bond between individual coats can be heavily impeded by the penetration of moisture and contamination between the individual coats. Coating work requires a substrate temperature of at least 3°C above the dew point temperature.
- If there is a long down time between individual coats or if already treated areas are to be renewed with liquid resins after a long period of time, then the old surface is to be well cleaned and thoroughly abraded. Afterwards carry out a completely new pinhole free coating.
- Surface protection systems must be protected from moisture (e.g. rain, melt water) after their application for approx. 4–6 hours. Moisture produces a white discolouration and/or stickiness on the surface and can lead to interference in the curing process. Take off discoloured and/or sticky surfaces by e.g. planing or abrasive blast techniques and renew.
- Consumption quantities given are values determined by calculation without additions for surface roughness or

ASODUR®-SG2

absorption, levelling or residues in the containers. We recommend adding a calculated safety factor of 10% to the computed consumption quantities.

- Applications, which are not clearly mentioned in this technical data sheet may only be implemented after consultation with and written confirmation from the technical service department of SCHOMBURG.
- Cured product residues can be disposed of using waste disposal code AVV 150106.

Please observe a valid EU safety data sheet.
GISCODE: RE 2

This technical data sheet does not consider local building codes or legal requirements. It shall be used as general reference for the product, based on our current knowledge and experience. Legally binding is only the latest Data Sheet from one of our foreign subsidiaries inside their sales territory. In any case of uncertainty please consult our technical department for further information.

ATAL GP1

TECHNICAL DATASHEET

Tafarnaubach Industrial Estate,
Unit 27,
Tafarnaubach,
Tredegar NP22 3AA

CONTACT US:

Phone Us: 01495 717202

Email: Enquiries@ataluk.com



atal^{uk.com}

Structural Waterproofing Systems

INTRODUCTION

Atal GP1 is a multi layer, low-density polyethylene membrane, reinforced with a polypropylene reinforcing grid with an integral aluminium foil. Atal GP1 is specifically designed and manufactured to perform as a Methane, Carbon Dioxide, Radon, air and Moisture protection system.

The membrane is manufactured by using a multi-layer extrusion/coating process and incorporate a tough polypropylene reinforcement grid. Atal GP1 is extremely flexible for ease of installation and is robust enough to cope with the site conditions. atal GP1 will also protect against damp and therefore will act as a DPM and satisfy Approved Document C.

USAGE

The product will restrict the ingress of radon, methane and carbon dioxide gases into buildings from landfill and naturally-occurring sources and meet the performance criteria for a gas resistant membrane as defined in BS 8485 : 2015.

INSTALLATION

Atal GP1 should be installed in accordance with the product installation guidelines and in accordance with BS8485:2015.

The membrane can be installed in all normal site conditions, provided that the air temperature is not below 4°C to prevent the risk of surface condensation.

The product must only be applied to surfaces that have a smooth finish, ie they should be free from voids, projections and mortar deposits. Surfaces should be dry and free from dust and frost.

Concrete surfaces should be dense. Vertical surfaces of brickwork and blockwork must be dry and rendered to provide an even surface. Brickwork or blockwork not rendered must be flush pointed to give a smooth surface without sudden changes in level.

The membrane is rolled out with the coloured surface uppermost (white side down), ensuring that it is properly aligned. All end and side overlaps should be a minimum of 150 mm and prepared in accordance with the Certificate holder's instructions.

When the membrane is laid below the concrete slab, it should be loose-laid to accommodate any small movements.

All surfaces must be dried thoroughly prior to joining. Roll edges can be welded, or taped. A strip of the tape is unrolled over the membrane with its nearest edge 50 mm from the membrane edge. The protective paper is removed from the butyl tape prior to rolling an adjacent run of the membrane, which must be carefully unrolled over the jointing tape, ensuring a 100 mm overlap.

All service penetrations and direction changes should be properly detailed in accordance with the Certificate holder's instructions. Service ducts should be vented to prevent the possibility of gas accumulating in confined spaces.

The continuity of the gas protection must extend over the footprint of the building, and the gas membrane must be sealed to a gas-resistant damp-proof course.

The membrane should be covered by a screed or other protective layer, such as Atal protection fleece, as soon as possible after installation. If blockwork protection is used, care must be taken to avoid damage to the membrane during construction.

The membrane installation should be subject to third-party independent validation, in accordance with the BS 8485 : 2015.

JOINTING AND SEALING

Atal GP1 is suited to sealing using atal DS Butyl Tape and atal Single Sided Tape or by means of welding. atal GP1 should be overlapped by at least 150mm. When taping the laps a silicon roller should be used to remove trapped air and ensure a good seal is achieved.

Welding should be carried out by competent personnel with suitable qualifications in accordance with best practice, and guidance contained within BS8485:2015. Atal Premsil GMA should be used to for sealing around pipe penetrations and termination into DPC.

INSTALLATION BELOW SLAB

A 50mm sand or concrete blinding should be laid when the membrane is installed below the slab. Atal GP1 should be protected after installation using atal Protection Board, insulation or a protective blinding to prevent puncture during the construction process.

INSTALLATION ABOVE SLAB AND TO SUSPENDED FLOORS

The substrate should be smooth and free from voids, projections, mortar deposits, dust and frost. Atal GP1 should be protected after installation using atal Protection Board, insulation or a protective blinding to prevent puncture during the construction process.

RESISTANCE TO PUNCTURE

The membrane can be punctured by sharp objects. Care should be taken during installation to not damage the membrane. If damage occurs the repair should be in accordance with atal guidance.

The rolls can be stored outdoors when packaged but should be protected from exposure to UV.

ANCILLARY PRODUCTS

- atal Termination Strap
- atal DS Butyl Tape
- atal Single Sided Tape
- atal Premsil GMA
- atal Premsil Primer
- atal Protection Board
- atal Gasflow 25S

ADDITIONAL INFORMATION

For additional information or assistance please contact atal on 01495 717202.

Terms and Conditions of Sale, copies of which are forwarded on the invoice, are available on request. Atal Cyf endeavours to ensure that the above data and any further advice is correct, however, it cannot accept any direct or indirect liability for the use of its products as such usage is beyond its control.

HANDLING

Roll weights are in excess 20 kg and hence appropriate care and equipment is required for unloading and handling.

STORAGE

Rolls of atal GP1 should be stored on stable/level ground and stacked not more than five rolls high, with no other material stacked on top.



CHARACTERISTIC	TEST METHOD	UNIT	ATAL GP1
PHYSICAL PROPERTIES			
Thickness	EN 1849 - 2	mm	0.6
Width	EN 1849 - 2	m	4
Length	EN 1849 - 2	m	25
Weight	EN 1849 - 2	g/m ²	370
HYDRAULIC PROPERTIES			
Water Column	EN 20811	-	>300
Resistance to Water Penetration	EN 13967, EN 1928	-	Pass
Water Tightness	EN 1296, EN 1367, EN 1928	-	Pass
MECHANICAL PROPERTIES			
Resistance to Static Load	EN 12730 - B	kg	20
Tensile Strength (MD)	EN 12311 - 1	N/50mm	600
Tensile Strength (CMD)	EN 12311 - 1	N/50mm	480
Tensile Elongation (MD)	EN 12311 - 1	%	20
Tensile Elongation (CMD)	EN 12311 - 1	%	20
Puncture Resistance	EN 12310 - 1	kN	1.25
Resistance to Tearing (Nail Shank) MD	EN 12310 - 1	N	330
Resistance to Tearing (Nail Shank) CMD	EN 12310 - 1	N	400
DURABILITY AND CHEMICAL RESISTANCE			
Transmission Rate of Volatile Liquids - Diesel	ISO 6179:2010 (B)	g/m ² /h	0.246
Transmission Rate of Volatile Liquids - Xylene	ISO 6179:2010 (B)	g/m ² /h	0.571
Transmission Rate of Volatile Liquids - Toluene	ISO 6179:2010 (B)	g/m ² /h	0.583
Transmission Rate of Volatile Liquids - Petrol	ISO 6179:2010 (B)	g/m ² /h	0.135
GAS PERMEABILITY			
Methane Permeability	BS EN ISO 15105 - 1	ml/m ² /day/atm	<0.09
Carbon Dioxide Permeability	BS EN ISO 15105 - 1	ml/m ² /day/atm	<0.09
Radon Permeability	K124/02/95	m ² /s	8.0 x 10 ⁻¹⁵
COMPLIANCE AND CERTIFICATION			
NHBC Standards Compliant			
BS8485:2015 Compliant			

ATAL MULTIGAS 500 DATASHEET

SUMMARY

Atal MultiGas 500 is a reinforced low-density polyethylene membrane with an integral foil layer. The membrane is used to protect building users from the ingress of moisture, radon, methane and carbon dioxide from the ground. The membrane is suitable for use in situations not subject to hydrostatic pressure.

ADVANTAGES

- Laps can be sealed by welding or taping.
- Very low methane and carbon dioxide gas transmission rates.
- Cost-effective ground gas protection solution.

USAGES

Providing a barrier to the ingress of radon, methane and carbon dioxide into structures, including:

- Top of beam and block.
- Below ground floor slabs (protection board required)



Properties		Result
Colour		Silver/Green
Length		50 m
Width		2 m
Mass per unit area		370 g/m ²
Thickness	EN 1849-2	0.6 mm
Weight	EN 1849-2	370 gsm
Tensile strength	EN 12311-1/2	MD 370 N/mm XD 347 N/mm
Nail tear resistance	EN 12310-1	MD 295 N XD 341 N
Elongation	EN 12311-2	MD 22 % XD 16 %
Methane permeability	EN ISO 15105-1 & ASTM D1434	0.041 ml/day/m ² /ATM
CO ² permeability	EN ISO 15105-1 & ASTM D1434	0.195 ml/day/m ² /ATM
Radon		7.2x10 ⁻¹² m ² /s
Temperature range		-40 to +70 °C
Water vapour resistance	EN 1931 EN 12572(c)	0.01gsm/day
Sizes		2.0 x 50 m
Roll weight		38 kg
Pallet quantity		33 rolls

PROPERTIES

ATAL MULTIGAS 500 DATASHEET

INSTRUCTIONS FOR USE

HORIZONTAL FLOOR SLAB APPLICATION

1. The substrate should be free from voids, projections and mortar deposits. If installing below an RC slab, Prepare subgrade by installing a 50mm concrete/sand blinding layer.
2. Roll out the membrane so that the coloured face of the membrane is facing uppermost.
3. Ensure overlaps are 150mm in all instances.
4. Ensure surfaces are dry before joining.
5. Laps should be welded or taped.
6. For taped laps, apply Atal DS Butyl Tape 50 mm from the membrane edge. Use a hand roller to ensure the tape is fully bonded onto the membrane.
7. Remove the paper backing from the tape prior to rolling an adjacent run of the membrane, which must be carefully unrolled over the jointing tape, ensuring a 150 mm overlap. Ensure the membrane is sealed using a hand roller.
8. Avoid wrinkles, folds and uneven laps.
9. Stagger each membrane piece by 200mm to ensure four sheets of membrane do not lap in one spot.
10. Seal service penetrations using Atal Premsil GMA as per Atal standard details.
11. Damaged areas should be patched using either Atal Premsil GMA or additional pieces of membrane extending 100mm past the damaged area.
12. After the system has been validated, secure the lap using Atal Single-Sided Overlap Tape.
13. Sharp objects can puncture the membrane. After installation, the membrane should be protected with Atal Protection Board or Atal Protection Fleece to prevent damage by follow-on trades.

MEMBRANE VALIDATION

The installation of the ground gas protection system should be validated as per CIRIA C735 to comply with Table 7 of BS8485:2022.

LIMITATIONS

- Not acceptable below slabs where settlement can occur.
- If installed below the slab, damage to the LDPE layer may result in the degradation of the foil layer by alkaline conditions caused by concrete. Protection board recommended.
- Sharp objects can puncture the membrane. After installation, the membrane should be protected with Atal Protection Board or Atal Protection Fleece to prevent damage by follow-on trades.

PRECAUTIONS

HEALTH AND SAFETY:

Full health and safety data are given in the Product Safety Data Sheet.

STORAGE AND SHELF LIFE

Atal MultiGas 500 has a shelf life of 12 months when kept in dry conditions at a temperature of 5°C to 45°C. Storage at higher temperatures and high humidity may reduce the shelf life.

PACKAGING AND ORDERING

Atal Powerbond MultiGas is available in 2m x 50m rolls. Each pallet contains 33 rolls. Part pallets are available at request.

Please get in touch with your Atal UK office, as listed below, for further information and sales. Atal UK products are guaranteed against defective materials and manufacture.

ATAL MULTIGAS 500 DATASHEET

Products are sold subject to the Atal UK Terms and Conditions of Sale, copies of which are forwarded on the invoice and are available on request. Atal UK endeavours to ensure that the above data and any further advice are correct; however, it cannot accept any direct or indirect liability for the use of its products as such usage is beyond its control.

CERTIFICATION

Certified as Powerbase Multigas Membrane MG 500. Cert No. 21/5895.

ATAL PREMSIL GMA TECHNICAL DATASHEET

Tafarnaubach Industrial Estate,
Unit 27,
Tafarnaubach,
Tredegar NP22 3AA

CONTACT US:

Phone Us: 01495 717202

Email: Enquiries@ataluk.com



atal uk.com

Structural Waterproofing Systems

EC Certificate of factory production control 0836-CPD-13/F032 accredited by the BBA.

DESCRIPTION

Atal Premsil GMA is an advanced waterproof membrane capable of resisting the passage of methane gas. The membrane is manufactured from an aluminium, and cross-orientated HDPE film laminated to a layer of rubber modified bitumen adhesive.

Independent tests show that this advanced backing film and adhesive layer provides excellent technical performance for the suppression of methane, radon and other common ground gases.

The membrane should be covered as soon as possible after installation with protective blinding or Atal Flo Board 4e.

Use Atal Premsil GMA for the following applications:

- External tanking of underground structures
- Car parks and Retaining Walls
- Subways and Lift Shafts

ADVANTAGES

- Independent certification for the suppression of methane and radon gas
- Excellent overlap integrity due to bitumen joint
- Factory controlled thickness
- Rapid and easy application
- Flexible and accommodating giving an excellent bond to the substrate
- Non-hazardous and resistant to dilute acids and alkalis
- High-performance protection against groundwater and soluble salts such as sulphates and chlorides
- Capable of resisting a 6 metre head of water when fully supported

STORAGE

The membrane rolls must be stacked on end and stored in dry, well-ventilated buildings, out of direct sunlight or other significant sources of heat. Storage conditions should be adjusted before application to bring the temperature of the rolls to within the relevant specified application range.

INSTRUCTIONS FOR USE

First, apply Atal Premsil Primer ensuring complete coverage and allow to dry. Only prime areas where Atal Premsil GMA is to be applied on the same day.

Atal Premsil GMA should be applied, allowing 50mm for edge laps and 100mm for end laps.

Terms and Conditions of Sale, copies of which are forwarded on the invoice, are available on request. Atal Cyf endeavours to ensure that the above data and any further advice is correct, however, it cannot accept any direct or indirect liability for the use of its products as such usage is beyond its control

Dimensions	Method	Units	Data
Backing Thickness	-	mm	0.1
Backing Type	-		Aluminium Polythene Laminate
Adhesive Thickness	-	mm	0.9
Total Thickness	-	mm	1
Width	-	mm	1050
Length	-	m	28.6
Area	-	m ²	30
Weight	-	kg/m ²	1.1
Carton Weight	-	kg	33

Mechanical Data	Method	Units	Data
Membrane Strength	ASTM D1000	N/mm	3
Elongation	ASTM D1000	%	40
Puncture Resistance	ASTM E154	N	250
Adhesion (180° Peel)	ASTM D1000	N/mm	2

Functional Data	Method	Units	Data
Water Vapour Transmission	ASTM E96	g/m ² /24h	<0.1
Methane Gas Permeability	-	ml/m ² /24 hrs	<0.03
Radon Diffusion	-	m ² /s	5.0 X 10 ⁻¹⁴
Dimensional Stability	MOAT 27 5.1.6	%	
	(80°C)		
Longitudinal			0
Lateral			0



May 11, 2020

COURSE CERTIFICATE

Kurt Mayford

has successfully passed the course

Product Training: System 200

with a score of 100%



Course certifica...



May 12, 2020

COURSE CERTIFICATE

Murt mogford

has successfully passed the course

Product Training: System 300

with a score of 100%

Only available to test





Course certifica...



May 12, 2020

COURSE CERTIFICATE

Murt mogford

has successfully passed the course

Product Training: System 400

with a score of 100%

certified by 





May 15, 2020

COURSE CERTIFICATE

Murt mogford

has successfully passed the course

Product Training - System 500

with a score of 100%

Certificate issued by [Newton Learning College](#)





Course certifica...



May 15, 2020

COURSE CERTIFICATE

Murt mogford

has successfully passed the course

Product Training: System 600

with a score of 100%

certified by the [JN Newton Waterproofing](#)





June 17, 2020

COURSE CERTIFICATE

Kurt mogford

has successfully passed the course

Pumping 2 - Drainage & Floors

with a score of 100%



Course certifica...



May 15, 2020

COURSE CERTIFICATE

Murt mogford

has successfully passed the course

Product Training: System 700

with a score of 100%

Certified by [https://www.jnwaterproofing.com](#)





May 1, 2020

COURSE CERTIFICATE

Kurt Mogford

has successfully passed the course

Product Training: System 100

with a score of 100%



June 10, 2020

COURSE CERTIFICATE

Kurt mogford

has successfully passed the course

Pumping 1 - Design Considerations

with a score of 100%

CERTIFICATE OF ATTENDANCE

This certificate is awarded to:

Neil Davies

to certify their attendance to the

Ground Gas Protection: An Introduction and Best Practice

14th & 15th September

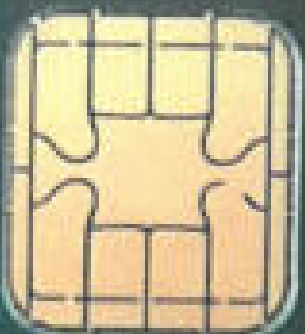
2017



Managing Director

CSCS

CONSTRUCTION SKILLS CERTIFICATION SCHEME



MS&E
TESTED

MR M A DAVIES

REF: 04030528

EXPIRES
END: September 2023



LABOURER



Part of the NOCN Group

This is to certify that

Neil Davies

has achieved the following Qualification

**NOCN_Cskills Awards Level 2 NVQ Diploma
in Sub-structure Work Occupations
(Construction) - Installation of Gas
Membranes**

Qualification Approval No: 603/1279/8
ULN: 8204535766
Award Date: 02/12/2022
Certificate No: 47947680



Graham Hasting-Evans

Graham Hasting-Evans
Chief Executive
NOCN Group



ofqual
REGISTERED
register.ofqual.gov.uk



DEVELOPING PEOPLE

Neil Davies

Unit(s) Awarded

Unit Title	Unit Code	Credit(s)	Level
Conforming to General Health, Safety and Welfare in the Workplace	A/503/1170	2	L1
Moving, Handling and Storing Resources in the Workplace	F/503/1171	5	L2
Conforming to Productive Working Practices in the Workplace	J/503/1169	3	L2
Preparing to install gas membranes in the workplace	K/615/6045	15	L2
Installing gas membranes in the workplace	M/615/6046	19	L2

Qualification Approval No: 603/1279/8
ULN: 8204535766
Award Date: 02/12/2022
Certificate No: 47947680



Graham Hasting-Evans

Graham Hasting-Evans
Chief Executive
NOCN Group



ofqual
REGULATED
register.ofqual.gov.uk



May 12, 2020

COURSE CERTIFICATE

Neil Davies

has successfully passed the course

Product Training: System 700

with a score of 100%



April 23, 2020

COURSE CERTIFICATE

Neil Davies

has successfully passed the course

Product Training: System 100

with a score of 100%



April 18, 2020

COURSE CERTIFICATE

Neil Davies

has successfully passed the course

Product Training: System 200

with a score of 100%.



April 22, 2020

COURSE CERTIFICATE

Neil Davies

has successfully passed the course

Product Training: System 300

with a score of 100%.



April 28, 2020

COURSE CERTIFICATE

Neil Davies

has successfully passed the course

Product Training: System 400

with a score of 100%.



April 30, 2020

COURSE CERTIFICATE

Neil Davies

has successfully passed the course

Product Training - System 500

with a score of 100%



CONSTRUCTION SKILLS CERTIFICATION SCHEME



MR K M J MOGFORD

REG NO: 05208810 EXPIRES END: August 2024

LABOURER



PART OF NOCN GROUP

This is to certify that

Kurt Mogford

has achieved the following Qualification

**NOCN_Cskills Awards Level 2 NVQ Diploma
in Sub-structure Work Occupations
(Construction) - Installation of Gas
Membranes**

Qualification Approval No: 603/1279/8

ULN: 3030887021

Award Date: 27/01/2023

Certificate No: 47975445



Graham Hasting-Evans

Graham Hasting-Evans
Chief Executive
NOCN Group



ofqual
REGULATED
register.ofqual.gov.uk



PART OF NOCN GROUP

Kurt Mogford

Unit(s) Awarded

Unit Title	Unit Code	Credit(s)	Level
Conforming to General Health, Safety and Welfare in the Workplace	A/503/1170	2	L1
Moving, Handling and Storing Resources in the Workplace	F/503/1171	5	L2
Conforming to Productive Working Practices in the Workplace	J/503/1169	3	L2
Preparing to install gas membranes in the workplace	K/615/6045	15	L2
Installing gas membranes in the workplace	M/615/6046	19	L2

Qualification Approval No: 603/1279/8
ULN: 3030887021
Award Date: 27/01/2023
Certificate No: 47975445

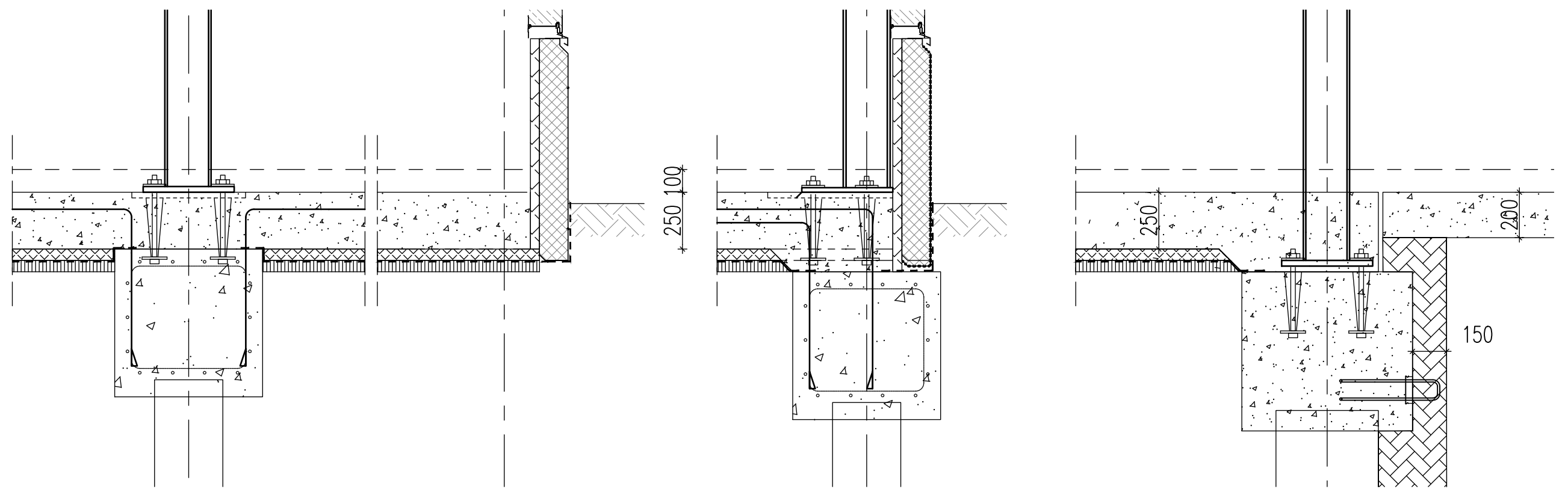
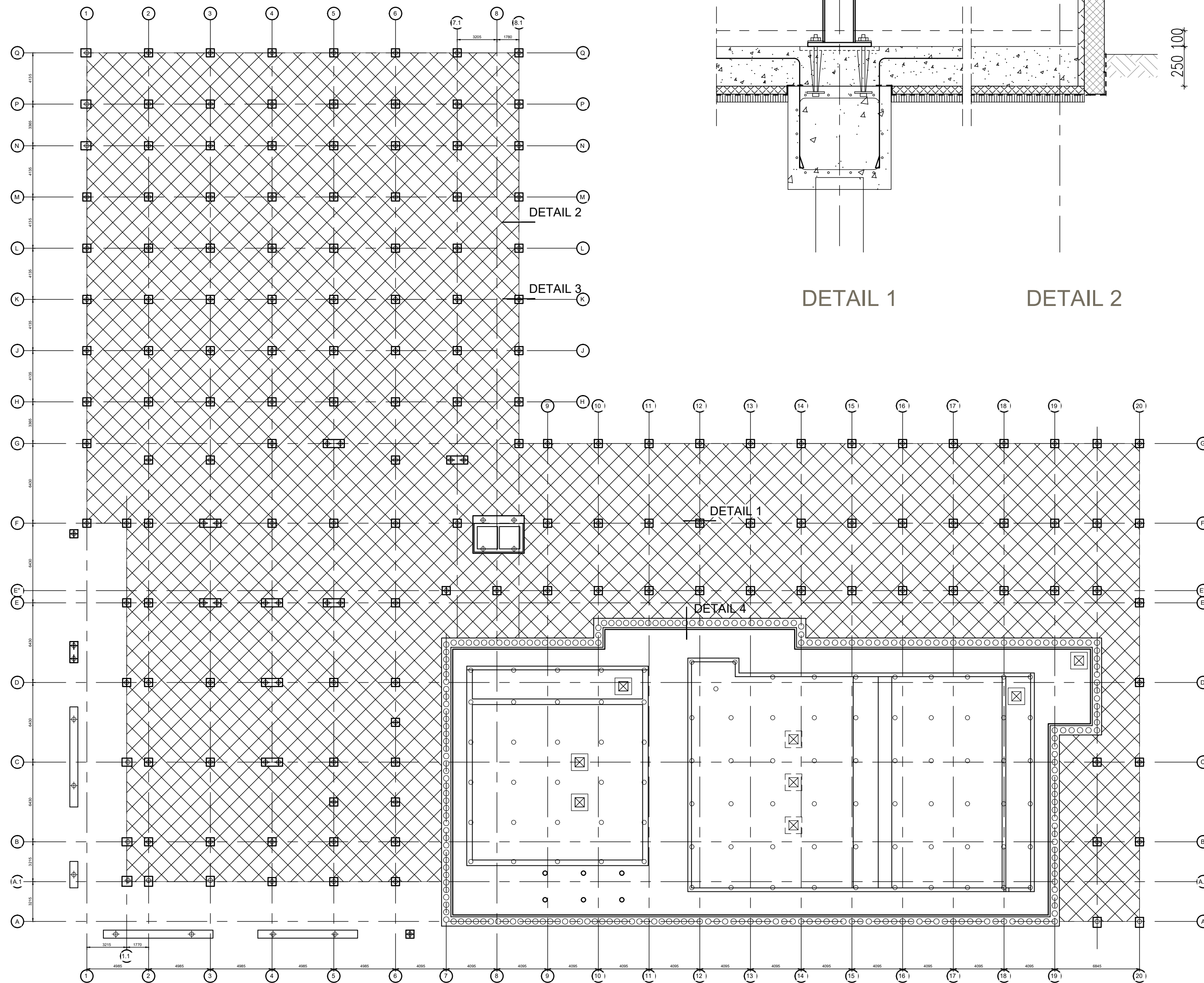


Graham Hasting-Evans

Graham Hasting-Evans
Chief Executive
NOCN Group



ofqual
REGULATED
register.ofqual.gov.uk



DETAIL 1

DETAIL 2

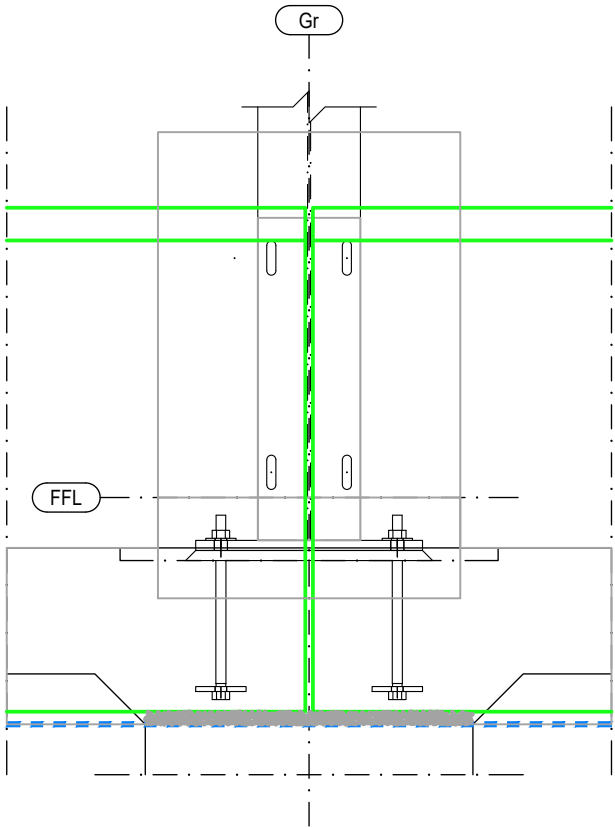
DETAIL 3

DETAIL 4

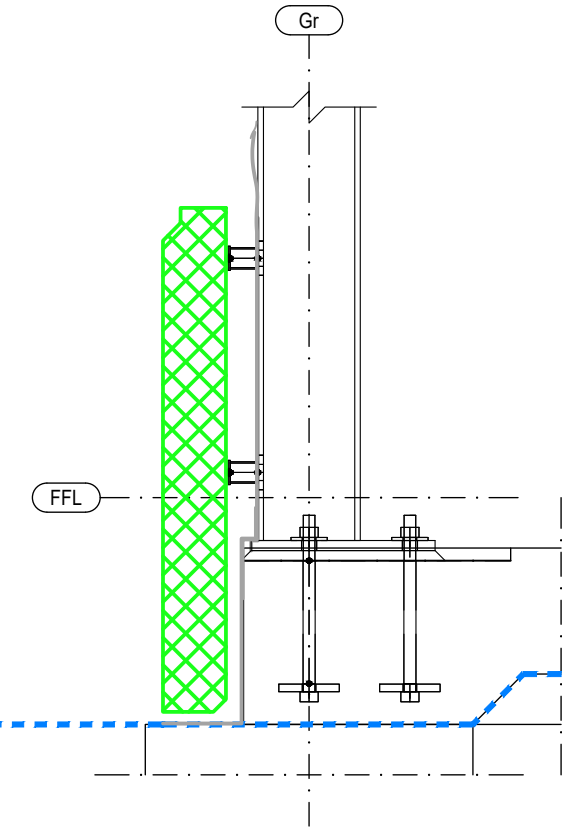
- finishing 100mm
- suspended floor slab 250mm
- rigid insulation 50mm
- gas membrane
- sand blinded sub base

Step 6

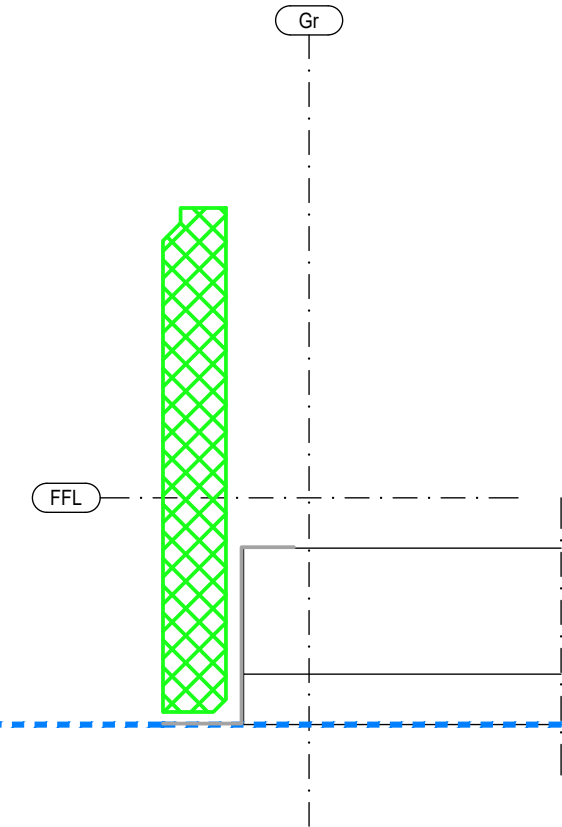
- Punch holes in the DPM prior fixing the ring beams local at the slotted holes (by PP construction)
- Fix ring beams to steel column as per specialists design (by PP construction)
- After installing the ring beams grout¹ the ring beams for the full foundation pad extents (by PP construction)



Front view

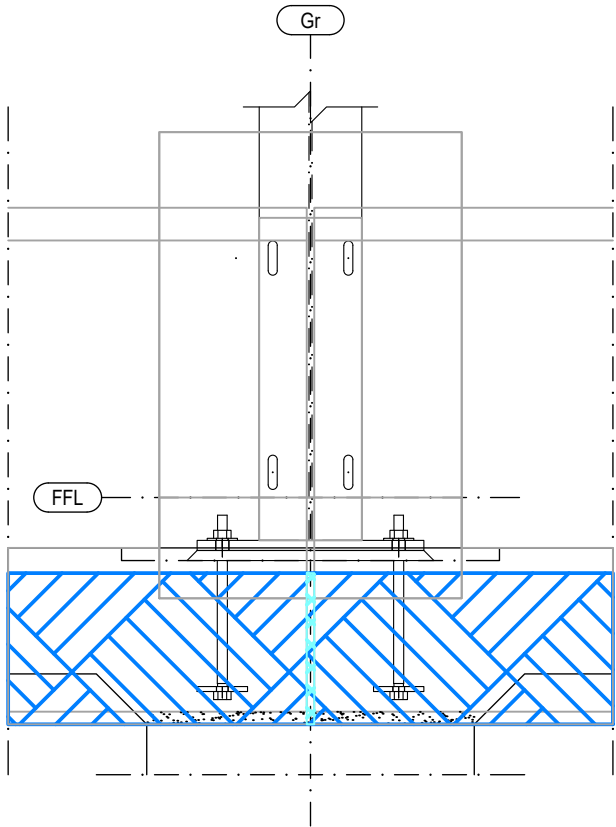


Section

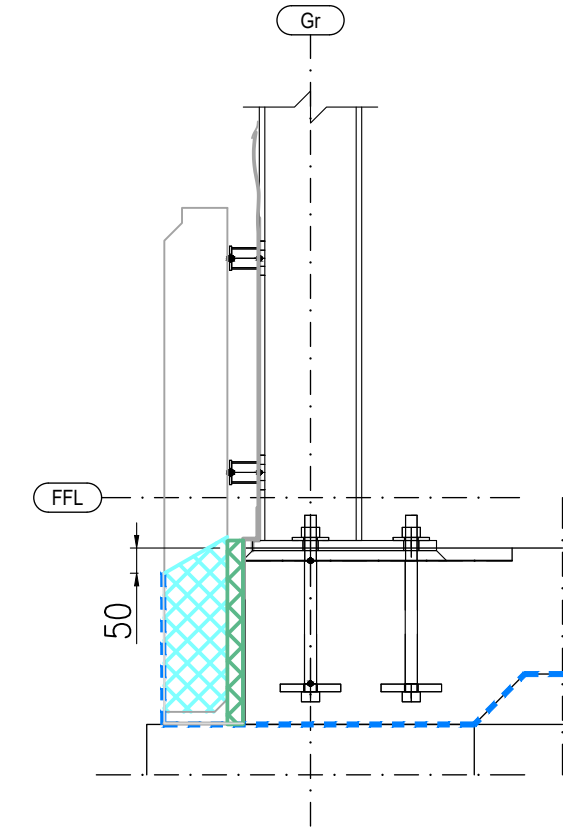


Step 7

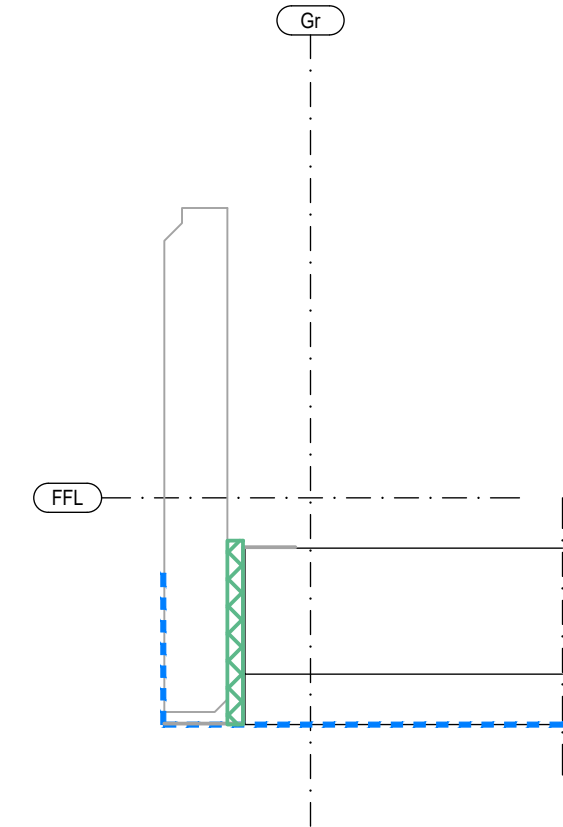
- Place 35 mm insulation⁷ between slab and ring beam (by subcontractor)
- Insulation⁵ infill -150 to bottom between the ring beam joints (by subcontractor)
- Fold back and stick the Gas Membrane⁶ to the front of the ringbeam (by Atal)



Front view

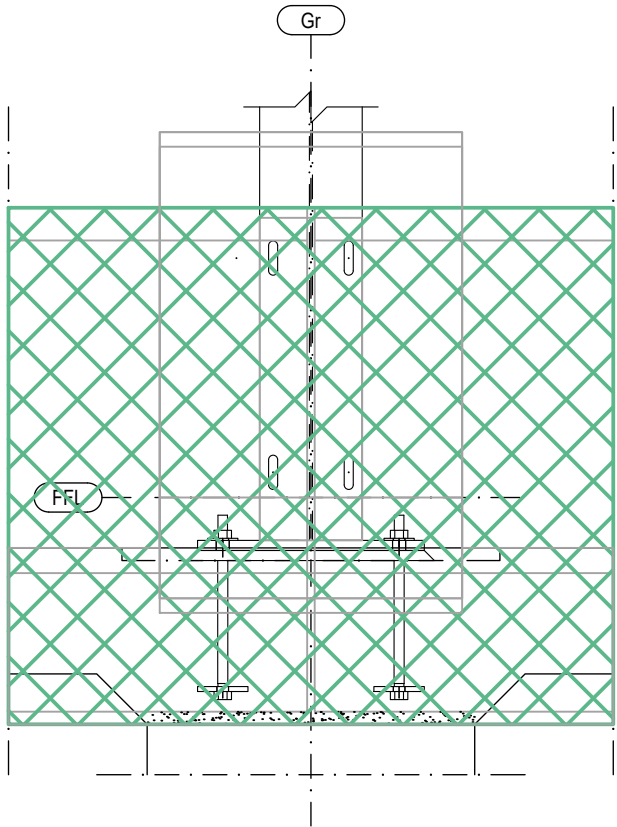


Section

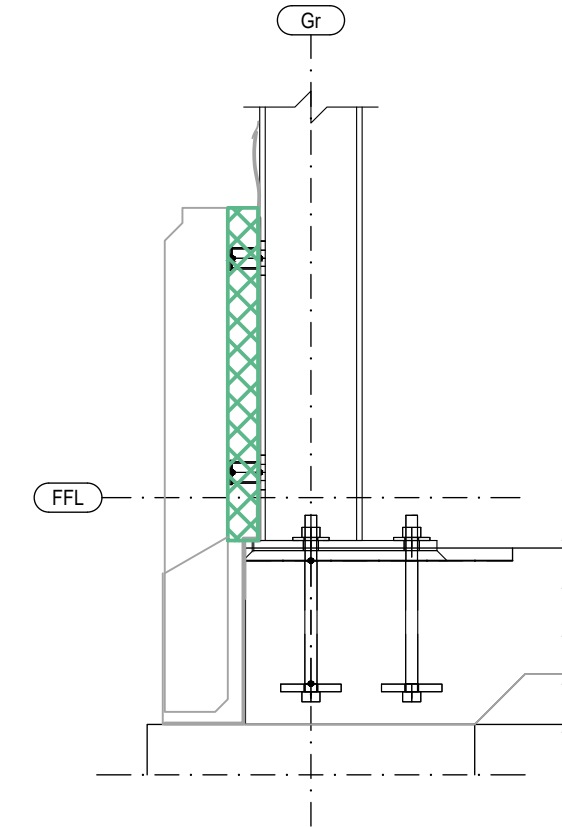


Step 8

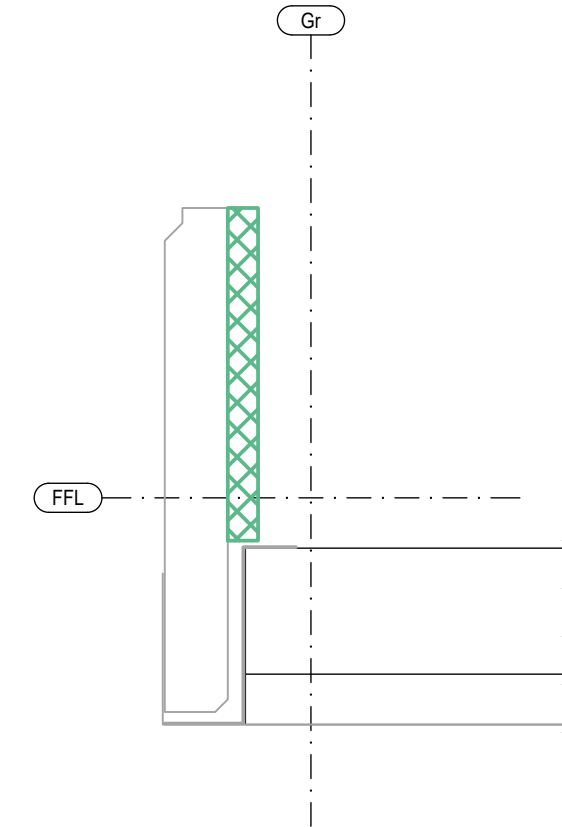
- Place 60 mm insulation⁸ at the back of the ringbeams (by subcontractor)



Front view

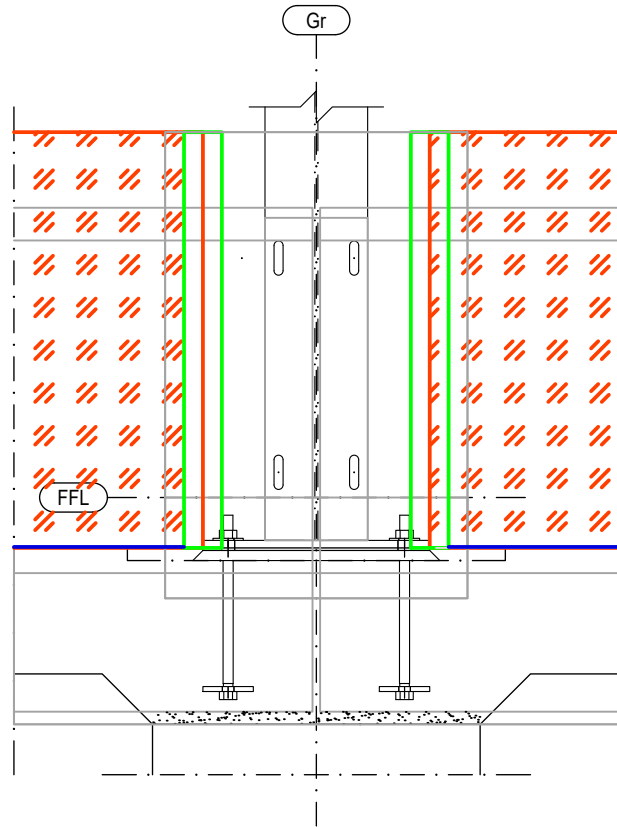


Section

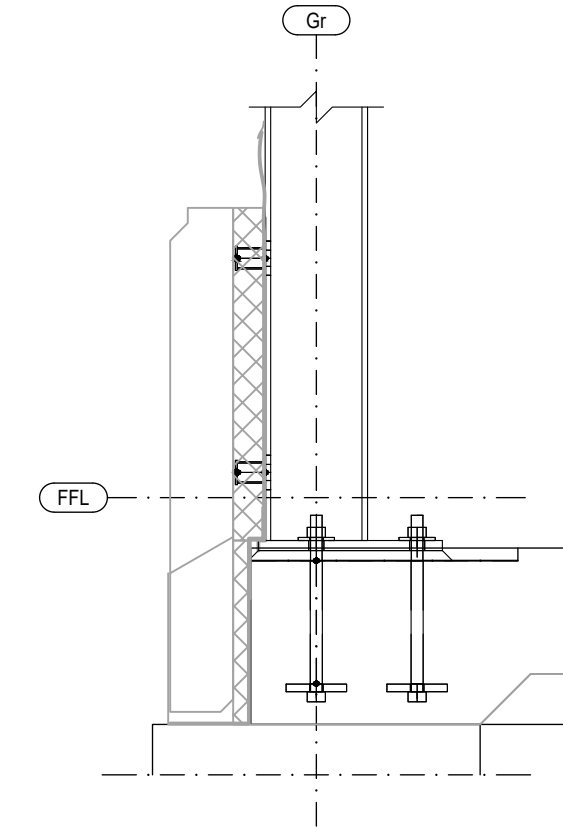


Step 9

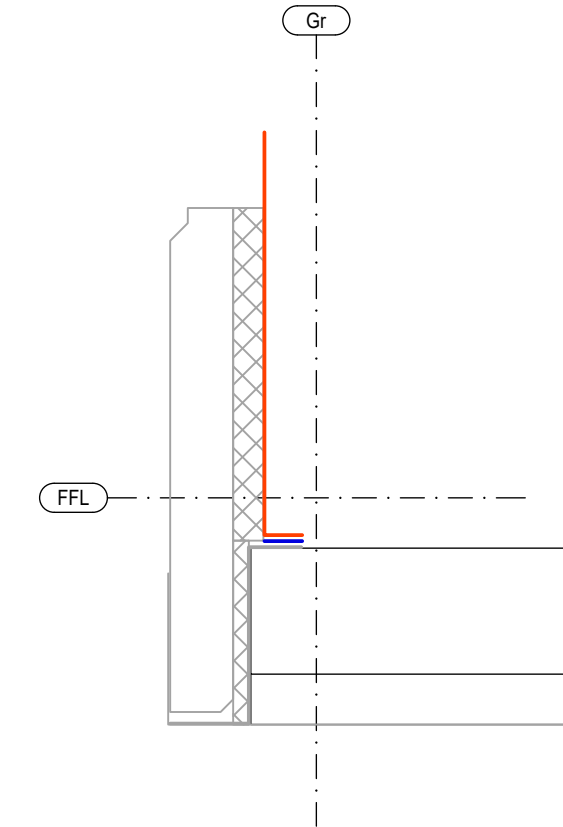
- Apply double sided tape⁹ (horizontally) on the Self Adhesive Membrane³ on the slab (by subcontractor)
- Apply Membrane³ to the back of the insulation (by subcontractor)
- Apply single sided tape¹⁰ (vertically) the both Membranes² (by subcontractor)



Front view



Section



Legend Materials

- 1 Non-shrink grout - *spec by subcontractor*
- 2 Gaffer tape
- 3 Visqueen Ecomembrane 500µm
- 4 Visqueen Self Adhesive Membrane
- 5 Insulation 15mm EPS or PUR foam
- 6 Gas Membrane - *spec by subcontractor*
- 7 Insulation 35mm Mineral Wool
- 8 Insulation 60mm PIR
- 9 Visqueen DOUBLE sided jointing tape
- 10 Visqueen SINGLE sided jointing tape
- 11 Visqueen Liquid Gas Membrane primer
- 12 Visqueen Liquid Gas Membrane

Pellikaan

DESIGN • BUILD • OPERATE

TILBURG • BRUSSELS • DÜSSELDORF • LONDON

Pellikaan Construction Ltd
38 Graemesdke avenue
East Sheen,London SW14 7BJ

Phone 020 83 92 93 55
Fax 020 82 41 13 71
E-mail info@pellikaan.co.uk

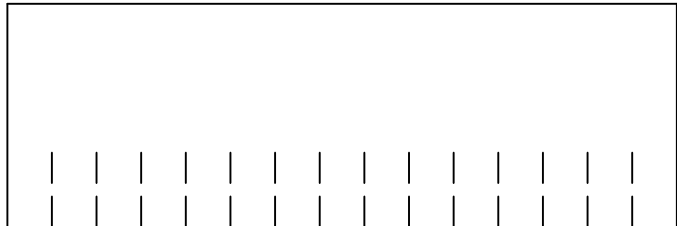
PROJECT TITLE
Reading - Rivermead

DRAWING TITLE
120 - Ring beam construction principle
Sheet 2

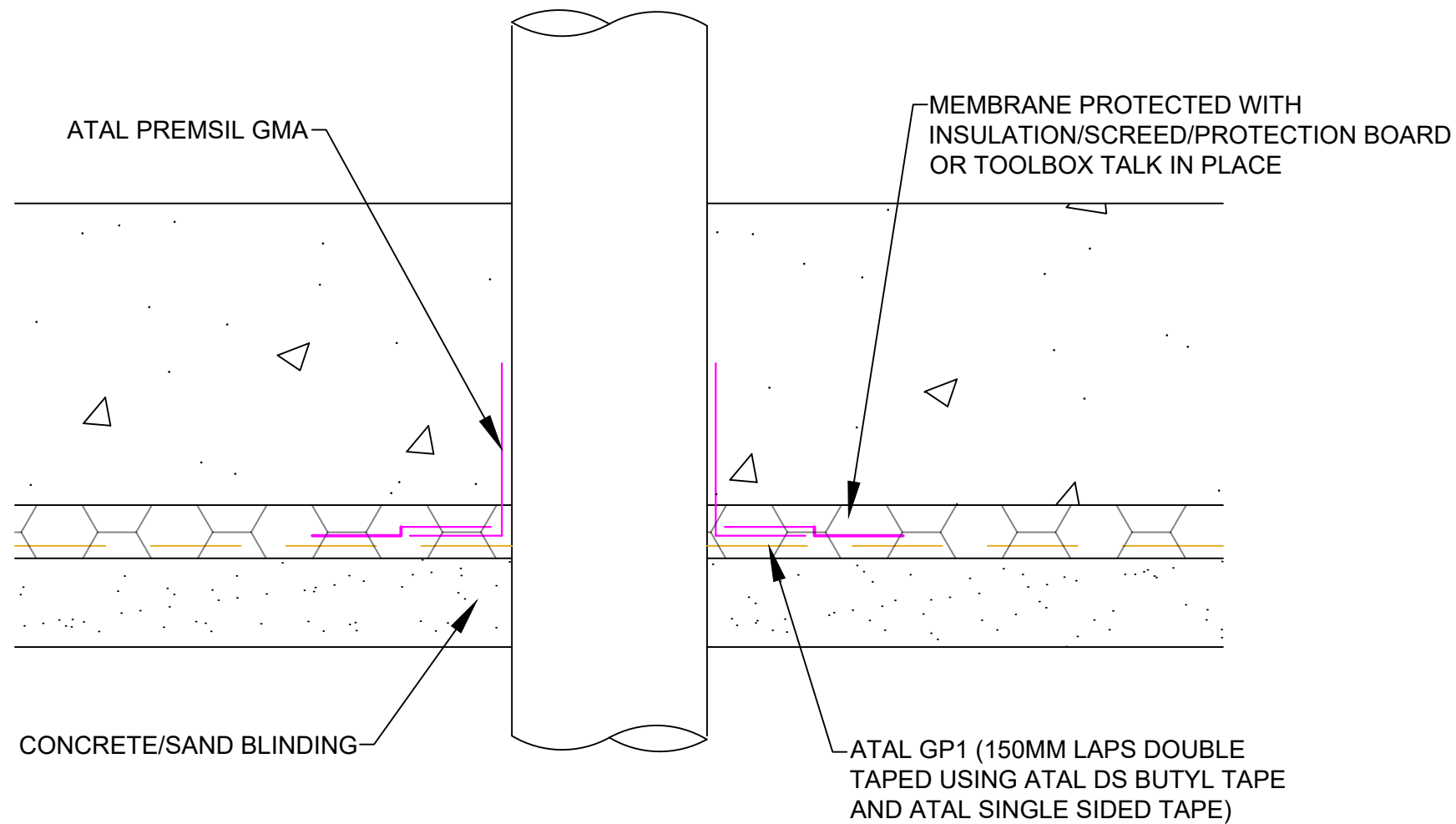
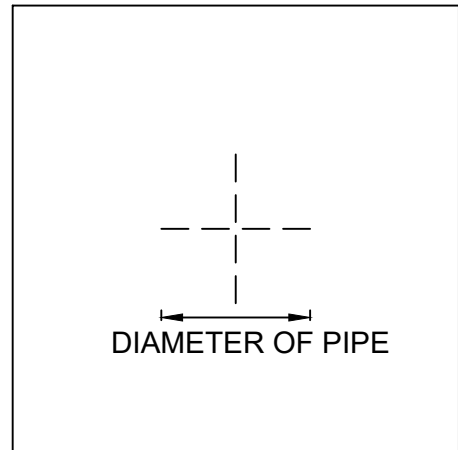
SCALE 1:15 SHEET SIZE A3 DATE 2022-04-05 DRAWN RGA CHECKED N/A

DRAWING NO 120-002 REVISION P3 DRAWING STATUS PRELIMINARY

PIECE ONE: TO BE WRAPPED AROUND PIPE



PIECE TWO: TO BE PLACED OVER PIPE



Installation Notes

DETAILS ISSUED BY BWS ARE WORKING DRAWINGS FOR WATERPROOFING INSTALLER'S, FOR STRUCTURAL DETAILS AND FINISHES SEE ENGINEERING AND ARCHITECTURAL DRAWINGS RESPECTIVELY.

ATAL BENTOFIX 5000 AND ATAL BENTOFIX 5300 SHOULD BE APPLIED TO THE INSIDE OF SLAB SHUTTERING IN ALL INSTANCES TO CREATE A TENACIOUS BOND AT THE EDGE OF SLAB. UNLESS INSTRUCTED OTHERWISE BY BWS

PLASTIC SLEEVE IN TIE BOLT HOLES SHOULD BE REMOVED USING A DRILL TO DEPTH OF 50MM AND FILLED USING ATAL FIX T20 PRIOR TO MEMBRANE INSTALLATION (POST-APPLIED) OR BACKFILL (PRE-APPLIED).

SUBSTRATES NEED TO BE FREE FROM LOOSE MATERIAL AND DEBRIS. BEFORE APPLYING LIQUID MEMBRANE ENSURE DUST, OIL, GREASE, ORGANIC GROWTH, SOIL ARE REMOVED VIA JET WASHING AND SCABBLING IF REQUIRED.

INSTALL ATAL BENTOFIX WITH NON-WOVEN SIDE FACING CONCRETE UNLESS INSTRUCTED OTHERWISE BY BWS

INSTALL ATAL FLO BOARD 4E GEOTEXTILE FACING BACKFILL UNLESS INSTRUCTED OTHERWISE BY BWS

BWS

Notes

BWS ARE SUPPLIERS OF BUILDING AND CIVIL ENGINEERING PRODUCTS AND OFFER A DESIGN AID SERVICE ONLY.

ALL INFORMATION SHOWN ON THIS DRAWING IS PROVIDED IN GOOD FAITH AND IS BASED ON THIRD PARTY TECHNICAL LITERATURE AND BEST PRACTICE GUIDELINE.

THIS DRAWING SHOULD NOT BE USED FOR CONSTRUCTION PURPOSES UNLESS IT HAS BEEN SIGNED OFF BY A DESIGN TEAM MEMBER.

Date
09/09/2021

Description
Gas flow 25s and vent added

Revision
B

Project Title

BWS 3737C - Rivermead Leisure Centre, Richfield Avenue,
Reading RG1 8EQ

27/09/2021

Gas flow 25s removed

C

Drawing Title

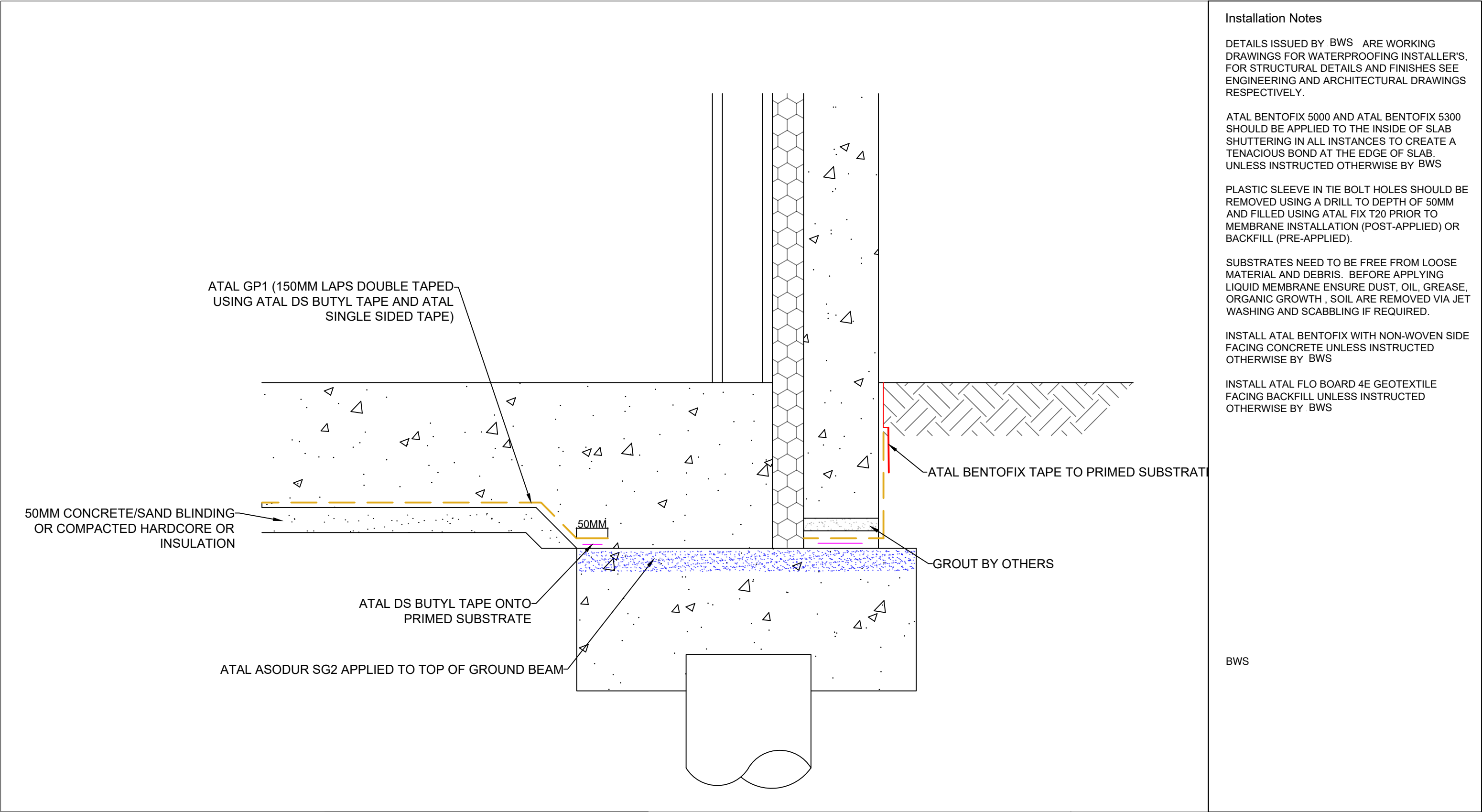
Pipe Penetration through GP1 Detail

Basement

WATERPROOFING SERVICES.

trial Estate,
NP22 3AA
95 717202
ataluk.com
ns

Drawn By WW	Date 27/09/2021	Checked by IP
Drawing No. 004	Rev C	Checked Date 27/09/2021



Installation Notes

DETAILS ISSUED BY BWS ARE WORKING DRAWINGS FOR WATERPROOFING INSTALLER'S, FOR STRUCTURAL DETAILS AND FINISHES SEE ENGINEERING AND ARCHITECTURAL DRAWINGS RESPECTIVELY.

ATAL BENTOFIX 5000 AND ATAL BENTOFIX 5300 SHOULD BE APPLIED TO THE INSIDE OF SLAB SHUTTERING IN ALL INSTANCES TO CREATE A TENACIOUS BOND AT THE EDGE OF SLAB. UNLESS INSTRUCTED OTHERWISE BY BWS

PLASTIC SLEEVE IN TIE BOLT HOLES SHOULD BE REMOVED USING A DRILL TO DEPTH OF 50MM AND FILLED USING ATAL FIX T20 PRIOR TO MEMBRANE INSTALLATION (POST-APPLIED) OR BACKFILL (PRE-APPLIED).

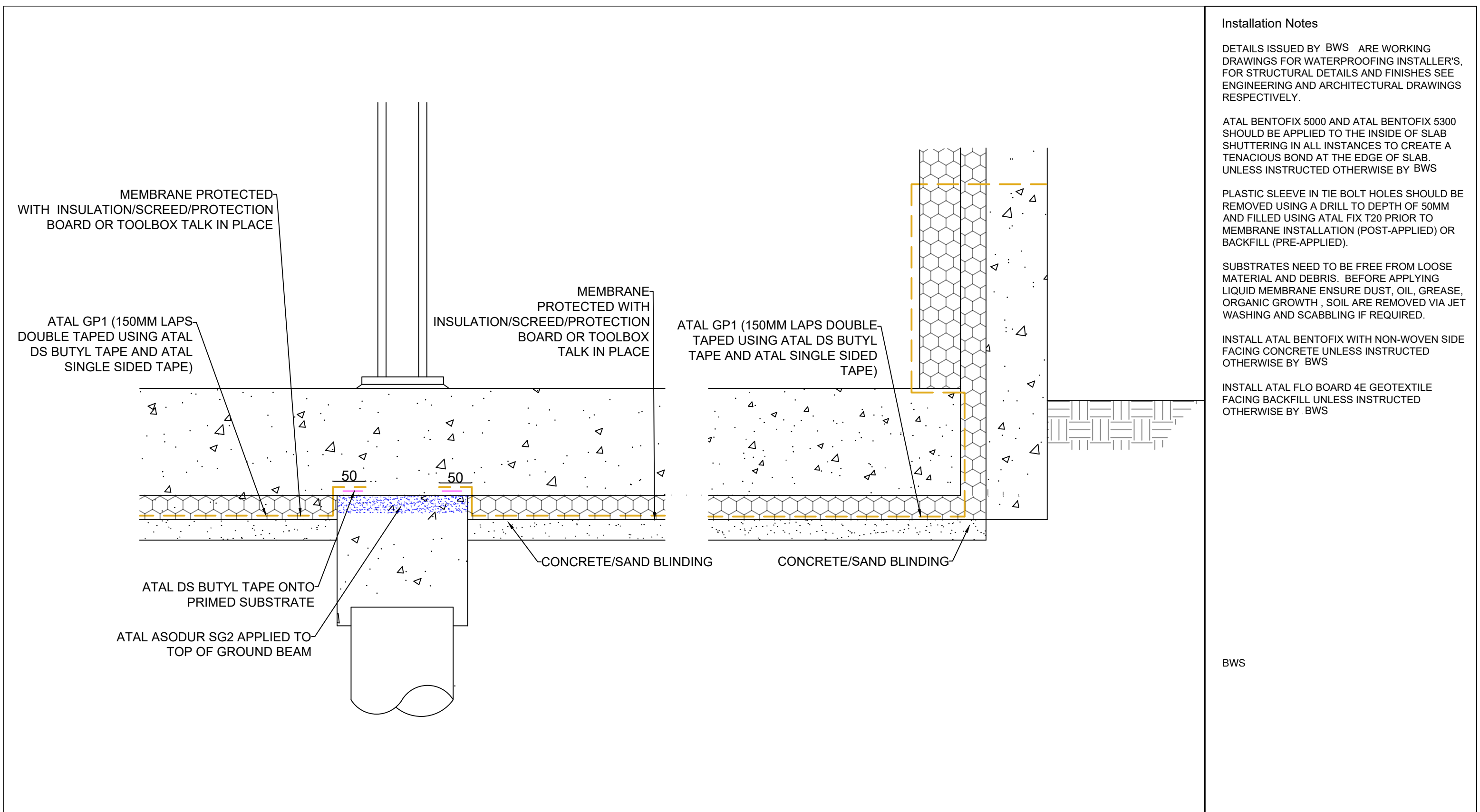
SUBSTRATES NEED TO BE FREE FROM LOOSE MATERIAL AND DEBRIS. BEFORE APPLYING LIQUID MEMBRANE ENSURE DUST, OIL, GREASE, ORGANIC GROWTH, SOIL ARE REMOVED VIA JET WASHING AND SCABBLING IF REQUIRED.

INSTALL ATAL BENTOFIX WITH NON-WOVEN SIDE FACING CONCRETE UNLESS INSTRUCTED OTHERWISE BY BWS

INSTALL ATAL FLO BOARD 4E GEOTEXTILE FACING BACKFILL UNLESS INSTRUCTED OTHERWISE BY BWS

BWS

Notes BWS ARE SUPPLIERS OF BUILDING AND CIVIL ENGINEERING PRODUCTS AND OFFER A DESIGN AID SERVICE ONLY. ALL INFORMATION SHOWN ON THIS DRAWING IS PROVIDED IN GOOD FAITH AND IS BASED ON THIRD PARTY TECHNICAL LITERATURE AND BEST PRACTICE GUIDELINE. THIS DRAWING SHOULD NOT BE USED FOR CONSTRUCTION PURPOSES UNLESS IT HAS BEEN SIGNED OFF BY A DESIGN TEAM MEMBER.	Date 25/11/2021	Description Atal Premsil 100 removed. Atal bentofix tape used to tape Atal GP1 Atal SG2 to Capping Beam	Revision E	Project Title BWS 3737C - Rivermead Leisure Centre, Richfield Avenue, Reading RG1 8EQ	Basement WATERPROOFING SERVICES. trial Estate, NP22 3AA 95 717202 ataluk.com ns		
				Drawing Title Edge Of Slab Detail	Drawn By SB	Date 25/11/2021	Checked by IP
				Drawing No. 001	Rev E	Checked Date 25/11/2021	



Installation Notes

DETAILS ISSUED BY BWS ARE WORKING DRAWINGS FOR WATERPROOFING INSTALLER'S, FOR STRUCTURAL DETAILS AND FINISHES SEE ENGINEERING AND ARCHITECTURAL DRAWINGS RESPECTIVELY.

ATAL BENTOFIX 5000 AND ATAL BENTOFIX 5300 SHOULD BE APPLIED TO THE INSIDE OF SLAB SHUTTERING IN ALL INSTANCES TO CREATE A TENACIOUS BOND AT THE EDGE OF SLAB. UNLESS INSTRUCTED OTHERWISE BY BWS

PLASTIC SLEEVE IN TIE BOLT HOLES SHOULD BE REMOVED USING A DRILL TO DEPTH OF 50MM AND FILLED USING ATAL FIX T20 PRIOR TO MEMBRANE INSTALLATION (POST-APPLIED) OR BACKFILL (PRE-APPLIED).

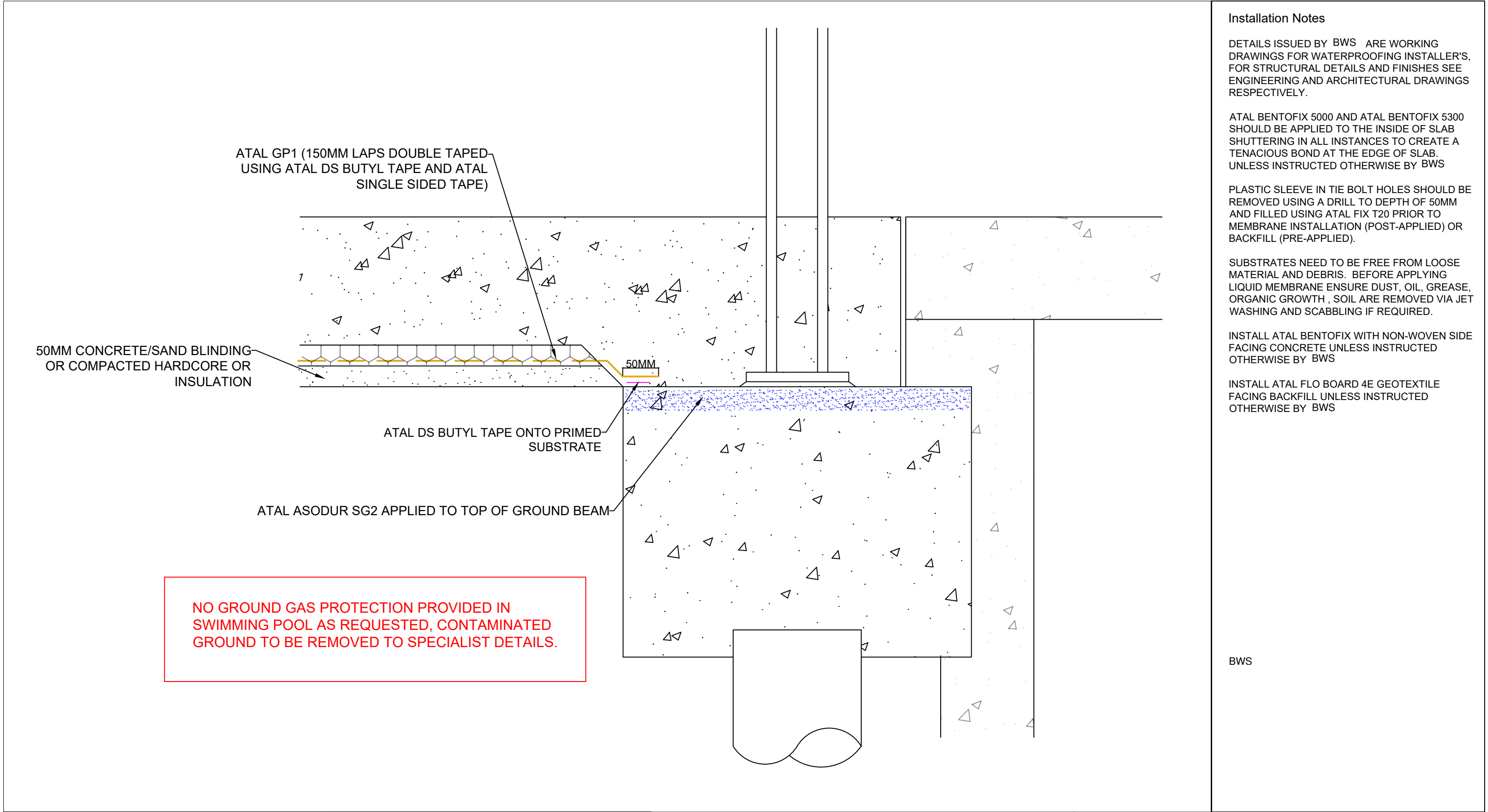
SUBSTRATES NEED TO BE FREE FROM LOOSE MATERIAL AND DEBRIS. BEFORE APPLYING LIQUID MEMBRANE ENSURE DUST, OIL, GREASE, ORGANIC GROWTH , SOIL ARE REMOVED VIA JET WASHING AND SCABBLING IF REQUIRED.

INSTALL ATAL BENTOFIX WITH NON-WOVEN SIDE FACING CONCRETE UNLESS INSTRUCTED OTHERWISE BY BWS

INSTALL ATAL FLO BOARD 4E GEOTEXTILE FACING BACKFILL UNLESS INSTRUCTED OTHERWISE BY BWS

BWS

Notes BWS ARE SUPPLIERS OF BUILDING AND CIVIL ENGINEERING PRODUCTS AND OFFER A DESIGN AID SERVICE ONLY. ALL INFORMATION SHOWN ON THIS DRAWING IS PROVIDED IN GOOD FAITH AND IS BASED ON THIRD PARTY TECHNICAL LITERATURE AND BEST PRACTICE GUIDELINE. THIS DRAWING SHOULD NOT BE USED FOR CONSTRUCTION PURPOSES UNLESS IT HAS BEEN SIGNED OFF BY A DESIGN TEAM MEMBER.	Date 10/01/2022	Description Atal GP1 to go on the inside of the insulation and over the top of the pre cast slab.	Revision B	Project Title BWS 3737C - Rivermead Leisure Centre, Richfield Avenue, Reading RG1 8EQ	Basement WATERPROOFING SERVICES. trial Estate, NP22 3AA 95 717202 ataluk.com ns		
				Drawing Title Column Detail			
					Drawn By SB	Date 10/012022	Checked by IP
					Drawing No. 009	Rev B	Checked Date 10/01/2022



Notes BWS ARE SUPPLIERS OF BUILDING AND CIVIL ENGINEERING PRODUCTS AND OFFER A DESIGN AID SERVICE ONLY. ALL INFORMATION SHOWN ON THIS DRAWING IS PROVIDED IN GOOD FAITH AND IS BASED ON THIRD PARTY TECHNICAL LITERATURE AND BEST PRACTICE GUIDELINE. THIS DRAWING SHOULD NOT BE USED FOR CONSTRUCTION PURPOSES UNLESS IT HAS BEEN SIGNED OFF BY A DESIGN TEAM MEMBER.	Date	Description	Revision	Project Title	Basement WATERPROOFING SERVICES. trial Estate, NP22 3AA 95 717202 ataluk.com ns		
	01/12/2021	Insulation added on top of the blinding.	B	BWS 3737C - Rivermead Leisure Centre, Richfield Avenue, Reading RG1 8EQ			
	02/12/2021	Atal GP1 moved under insulation	C	Drawing Title	Drawn By	Date	Checked by
				Edge Of Pool And Capping Beam Detail	SB	02/12/2021	IP
					Drawing No.	Rev	Checked Date
					010	C	02/12/2021

ATAL GP1 (150MM LAPS DOUBLE
TAPED USING ATAL DS BUTYL TAPE
AND ATAL SINGLE SIDED TAPE)

LIFT PIT

ATAL DS BUTYL TAPE

50MM CONCRETE/SAND
BLINDING OR COMPACTED
HARDCORE OR INSULATION

ATAL LIQUID GAS BARRIER

50X50MM TRIANGULAR FILLET OF ATAL
ASOCRET M30

MONOLYTHIC PRE CAST PIT

ATAL ASODUR SG2

150

Installation Notes

DETAILS ISSUED BY BWS ARE WORKING
DRAWINGS FOR WATERPROOFING INSTALLER'S,
FOR STRUCTURAL DETAILS AND FINISHES SEE
ENGINEERING AND ARCHITECTURAL DRAWINGS
RESPECTIVELY.

ATAL BENTOFIX 5000 AND ATAL BENTOFIX 5300
SHOULD BE APPLIED TO THE INSIDE OF SLAB
SHUTTERING IN ALL INSTANCES TO CREATE A
TENACIOUS BOND AT THE EDGE OF SLAB.
UNLESS INSTRUCTED OTHERWISE BY BWS

PLASTIC SLEEVE IN TIE BOLT HOLES SHOULD BE
REMOVED USING A DRILL TO DEPTH OF 50MM
AND FILLED USING ATAL FIX T20 PRIOR TO
MEMBRANE INSTALLATION (POST-APPLIED) OR
BACKFILL (PRE-APPLIED).

SUBSTRATES NEED TO BE FREE FROM LOOSE
MATERIAL AND DEBRIS. BEFORE APPLYING
LIQUID MEMBRANE ENSURE DUST, OIL, GREASE,
ORGANIC GROWTH, SOIL ARE REMOVED VIA JET
WASHING AND SCABBLING IF REQUIRED.

INSTALL ATAL BENTOFIX WITH NON-WOVEN SIDE
FACING CONCRETE UNLESS INSTRUCTED
OTHERWISE BY BWS

INSTALL ATAL FLO BOARD 4E GEOTEXTILE
FACING BACKFILL UNLESS INSTRUCTED
OTHERWISE BY BWS

BWS

Notes

BWS ARE SUPPLIERS OF BUILDING AND CIVIL
ENGINEERING PRODUCTS AND OFFER A DESIGN AID
SERVICE ONLY.

ALL INFORMATION SHOWN ON THIS DRAWING IS
PROVIDED IN GOOD FAITH AND IS BASED ON THIRD
PARTY TECHNICAL LITERATURE AND BEST PRACTICE
GUIDELINE.

THIS DRAWING SHOULD NOT BE USED FOR
CONSTRUCTION PURPOSES UNLESS IT HAS BEEN SIGNED
OFF BY A DESIGN TEAM MEMBER.

Date

13/01/2022

Description

Insulation Around the lift pit slab
removed.
Atal GP1 to be taped
Onto Atal Liquid gas barrier
below the slab.
Atal Liquid Gas Barrier to
terminate at the bottom of the
slab.

Revision

Project Title

BWS 3737C - Rivermead Leisure Centre, Richfield Avenue,
Reading RG1 8EQ

Drawing Title

Lift Pit Detail

Basement
WATERPROOFING SERVICES.

trial Estate,
NP22 3AA
95 717202
ataluk.com

ns

Drawn By
SB

Date
13/01/2022

Checked by
IP

Drawing No.
011

Rev
E

Checked Date
13/01/2022

Installation Notes

DETAILS ISSUED BY BWS ARE WORKING DRAWINGS FOR WATERPROOFING INSTALLER'S, FOR STRUCTURAL DETAILS AND FINISHES SEE ENGINEERING AND ARCHITECTURAL DRAWINGS RESPECTIVELY.

ATAL BENTOFIX 5000 AND ATAL BENTOFIX 5300 SHOULD BE APPLIED TO THE INSIDE OF SLAB SHUTTERING IN ALL INSTANCES TO CREATE A TENACIOUS BOND AT THE EDGE OF SLAB, UNLESS INSTRUCTED OTHERWISE BY BWS

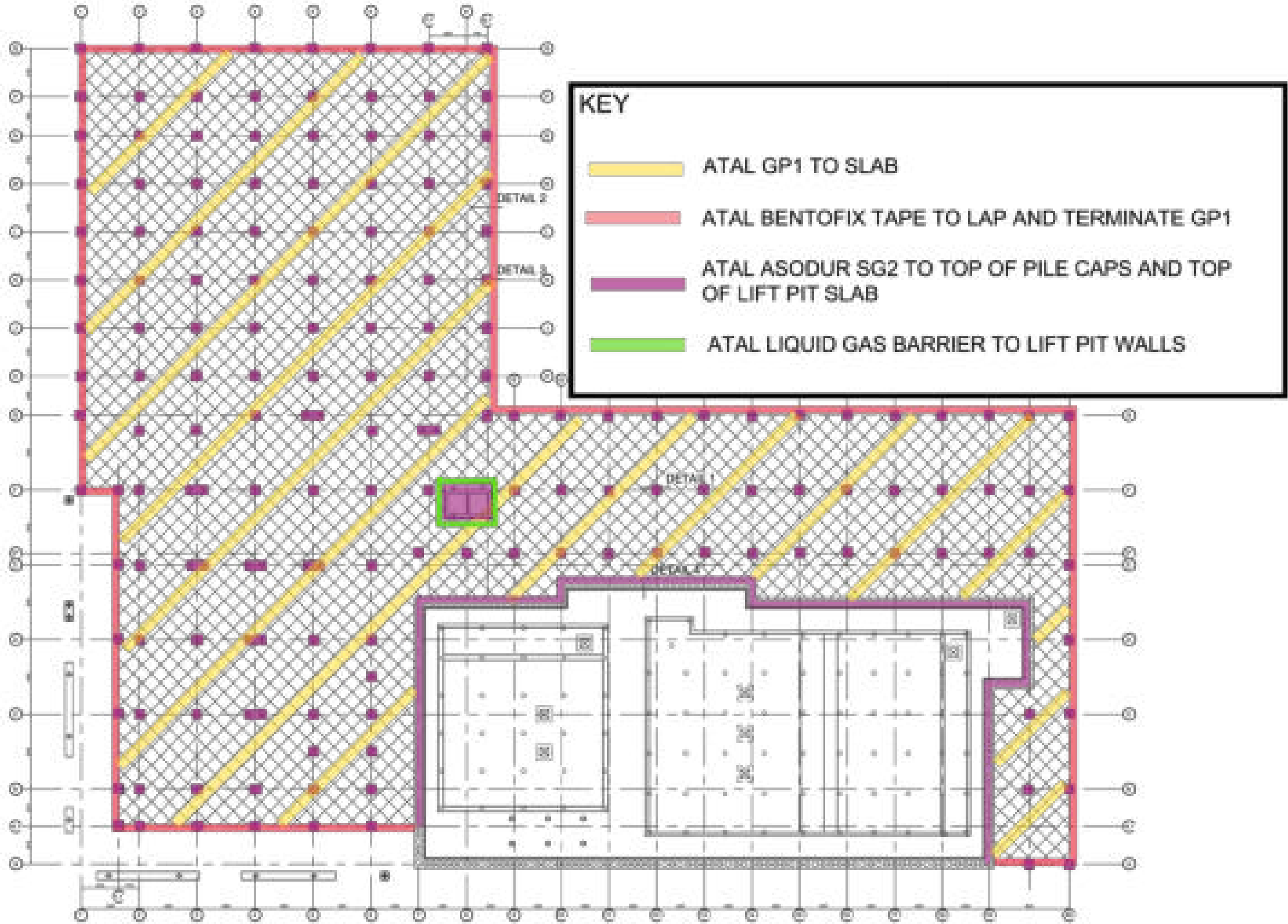
PLASTIC SLEEVE IN TIE BOLT HOLES SHOULD BE REMOVED USING A DRILL TO DEPTH OF 50MM AND FILLED USING ATAL FIX T20 PRIOR TO MEMBRANE INSTALLATION (POST-APPLIED) OR BACKFILL (PRE-APPLIED).

SUBSTRATES NEED TO BE FREE FROM LOOSE MATERIAL AND DEBRIS. BEFORE APPLYING LIQUID MEMBRANE ENSURE DUST, OIL, GREASE, ORGANIC GROWTH, SOIL ARE REMOVED VIA JET WASHING AND SCABBLING IF REQUIRED.

INSTALL ATAL BENTOFIX WITH NON-WOVEN SIDE FACING CONCRETE UNLESS INSTRUCTED OTHERWISE BY BWS

INSTALL ATAL FLO BOARD 4E GEOTEXTILE FACING BACKFILL UNLESS INSTRUCTED OTHERWISE BY BWS

BWS



Notes

BWS ARE SUPPLIERS OF BUILDING AND CIVIL ENGINEERING PRODUCTS AND OFFER A DESIGN AID SERVICE ONLY.

ALL INFORMATION SHOWN ON THIS DRAWING IS PROVIDED IN GOOD FAITH AND IS BASED ON THIRD PARTY TECHNICAL LITERATURE AND BEST PRACTICE GUIDELINE.

THIS DRAWING SHOULD NOT BE USED FOR CONSTRUCTION PURPOSES UNLESS IT HAS BEEN SIGNED OFF BY A DESIGN TEAM MEMBER.

Date	Description	Revision
07/01/2022	Atal Asodur SG2 to lift pit slab Atal liquid gas barrier to lift pit walls.	B

Project Title

BWS 3737C - Rivermead Leisure Centre, Richfield Avenue, Reading RG1 8EQ

Drawing Title

Marked Up Plan

Basement
WATERPROOFING SERVICES.

trial Estate,
NP22 3AA
95 717202
ataluk.com
ns

Drawn By SB	Date 07/01/2022	Checked by IP
Drawing No. 100	Rev B	Checked Date 07/01/2022

ASW Design Cyf - Validation Report #1

Description	Perimeter pile caps
-------------	---------------------

Status	Submitted
--------	-----------

Assignee	Ian Price (IPR)
----------	-----------------

Date	01-06-2022
------	------------

Details Of Site

Site name	Rivermead Leisure Centre
-----------	--------------------------

Gas characteristic situation	CS2
------------------------------	-----

Type of development:	Commercial Leisure
----------------------	--------------------

Building description	Type C
----------------------	--------

Visited by	D Rees
------------	--------

Weather at time of inspection	Cold, light rain
-------------------------------	------------------

Gas protection type	Passive
---------------------	---------

Gas Membrane

Condition of sub-grade and underside of gas membrane	Compacted sand
--	----------------

Gas membrane type	Atal GP1, atal SG2 to pile caps
-------------------	---------------------------------

Gas membrane condition	Good, free from mechanical damage
------------------------	-----------------------------------

Jointing tape product	Atal Premsil GMA lapping GP1 to SG2 at pile caps
-----------------------	--

Lapping design	Welded laps
----------------	-------------

Laps, welds and joints seals	GP1 laps , welded GP1 to SG2, primed and taped with Premsil GMA
------------------------------	--

Service entry seals	N/A
---------------------	-----

Passive Venting

Sub floor void	N/A
----------------	-----

External walls airbricks	N/A
--------------------------	-----

Internal sleeper walls	N/A
------------------------	-----

External vent trenches/ducts	N/A
------------------------------	-----

Active Venting

System Details Passive

Additional Notes

Notes Good coverage of SG2 to plie caps, primed with good adhesion of Premsil GMA to GP1

Signed by

Conclusion

The gas protection measures inspected Are acceptable and comply with the specification

Photos





ASW Design Cyf - Validation Report #2

Description	Grid Lines Q-H/1-8
Status	Submitted
Assignee	Steve Tomlinson (STO)
Date	01-21-2022

Details Of Site

Site name	Rivermead Leisure Centre Reading
Gas characteristic situation	CS2
Type of development:	Commercial
Building description	Type C
Visited by	Steve Tomlinson
Weather at time of inspection	Dry and cold
Gas protection type	Passive

Gas Membrane

Condition of sub-grade and underside of gas membrane	Subgrade free from debris and sharp objects.
Gas membrane type	GP1
Gas membrane condition	Generally good. During the inspection some welds were unsatisfactory. These areas were sprayed red and shown to the contractor. On the second visit the areas requiring remedial works had been completed.
Joining tape product	Bentofix Tape
Lapping design	Welded
Laps, welds and joints seals	Welded
Service entry seals	N/A

Passive Venting

Sub floor void	N/A
External walls airbricks	N/A
Internal sleeper walls	N/A
External vent trenches/ducts	N/A

Active Venting

System Details N/A

Additional Notes

Notes Please see accompanying photos for evidence of installation quality. A final check of the membrane should be completed prior to covering with any damage reported with evidence of repair provided if required.

Signed by

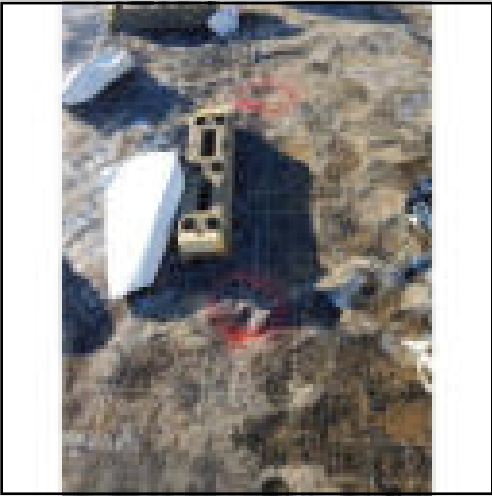
Signed by Steve Tomlinson
on January 24, 2022 08:50 AM from Steve Tomlinson's device

Steve Tomlinson

Conclusion

The gas protection measures inspected Are acceptable and comply with the specification

Photos



ASW Design Cyf - Validation Report #3

Description	Sports Hall, pour 5
Status	Submitted
Assignee	Matthew Poynter (MPO)
Date	03-04-2022

Details Of Site

Site name	Riverbmead Leisure Centre, Reading
Gas characteristic situation	CS2
Type of development:	Comercial
Building description	Type C
Visited by	Matthew Poynter
Weather at time of inspection	Cloudy after rain
Gas protection type	Passive

Gas Membrane

Condition of sub-grade and underside of gas membrane	Laid on sand blinding, no sharp objects underneath.
Gas membrane type	GP1
Gas membrane condition	Membrane has some water and debris on the surface, one tear and one puncture seen, repair to be done.
Jointing tape product	All joints in membrane welded
Lapping design	100mm welded
Laps, welds and joints seals	All laps and joints sealed well.
Service entry seals	Service entries sealed with GMA

Passive Venting

Sub floor void	N/A
External walls airbricks	N/A
Internal sleeper walls	N/A
External vent trenches/ducts	N/A

Active Venting

System Details N/A

Additional Notes

Notes

Signed by

Signed by Matthew Poynter
on March 04, 2022 04:55 AM from Matthew Poynter's device



Conclusion

The gas protection measures inspected Are acceptable, but attention is drawn to the issues relate to items

Photos





ASW Design Cyf - Validation Report #4

Description	Changing Village, Pour 6
Status	Submitted
Assignee	Matthew Poynter (MPO)
Date	03-16-2022

Details Of Site

Site name	Rivermead Leisure
Gas characteristic situation	CS2
Type of development:	Commercial
Building description	Type C
Visited by	Matthew Poynter
Weather at time of inspection	Cloudy after rain
Gas protection type	Passive

Gas Membrane

Condition of sub-grade and underside of gas membrane	Laid on sand blinding, free of sharp objects.
Gas membrane type	Atal GP1
Gas membrane condition	Membrane has some water and debris on the surface, no tears or punctures seen at time of inspection.
Joining tape product	All joints in membrane welded.
Lapping design	100mm welded laps.
Laps, welds and joints seals	All laps and joints sealed well.
Service entry seals	All services entries sealed with GMA

Passive Venting

Sub floor void	N/A
External walls airbricks	N/A
Internal sleeper walls	N/A
External vent trenches/ducts	N/A

Active Venting

System Details	N/A
----------------	-----

Additional Notes

Notes

Signed by

Signed by Matthew Poynter
on April 12, 2022 07:10 AM from Matthew Poynter's device



Conclusion

The gas protection measures inspected Are acceptable and comply with the specification

Photos





ASW Design Cyf - Validation Report #5

Description	Plant room
Status	Submitted
Assignee	Matthew Poynter (MPO)
Date	04-13-2022

Details Of Site

Site name	Rivermead Leisure Centre, Reading
Gas characteristic situation	CS2
Type of development:	Comercial
Building description	Type C
Visited by	Matthew Poynter
Weather at time of inspection	Clear
Gas protection type	Passive

Gas Membrane

Condition of sub-grade and underside of gas membrane	Sand blinding, no sharp objects underneath.
Gas membrane type	Atal GP1
Gas membrane condition	Good, no punctures. Some light foot traffic.
Joining tape product	Welded
Lapping design	100mm welded
Laps, welds and joints seals	All laps and joints sealed well.
Service entry seals	Service entries sealed with GMA.

Passive Venting

Sub floor void	N/A
External walls airbricks	N/A
Internal sleeper walls	N/A
External vent trenches/ducts	N/A

Active Venting

System Details	N/A
----------------	-----

Additional Notes

Notes Some areas to be finished, see photos for standard of workmanship.

Signed by

Signed by Matthew Poynter
on April 21, 2022 09:38 AM from Matthew Poynter's device

Matthew Poynter

Conclusion

The gas protection measures inspected Are acceptable and comply with the specification

Photos

















CAUTION!
BY EXPECTED

CP 1
GAS MEMBRANE
CAUTION!
NO UNAUTHORIZED
PERSONNEL
ALLOWED



juta.co.uk

www.juta.co.uk

























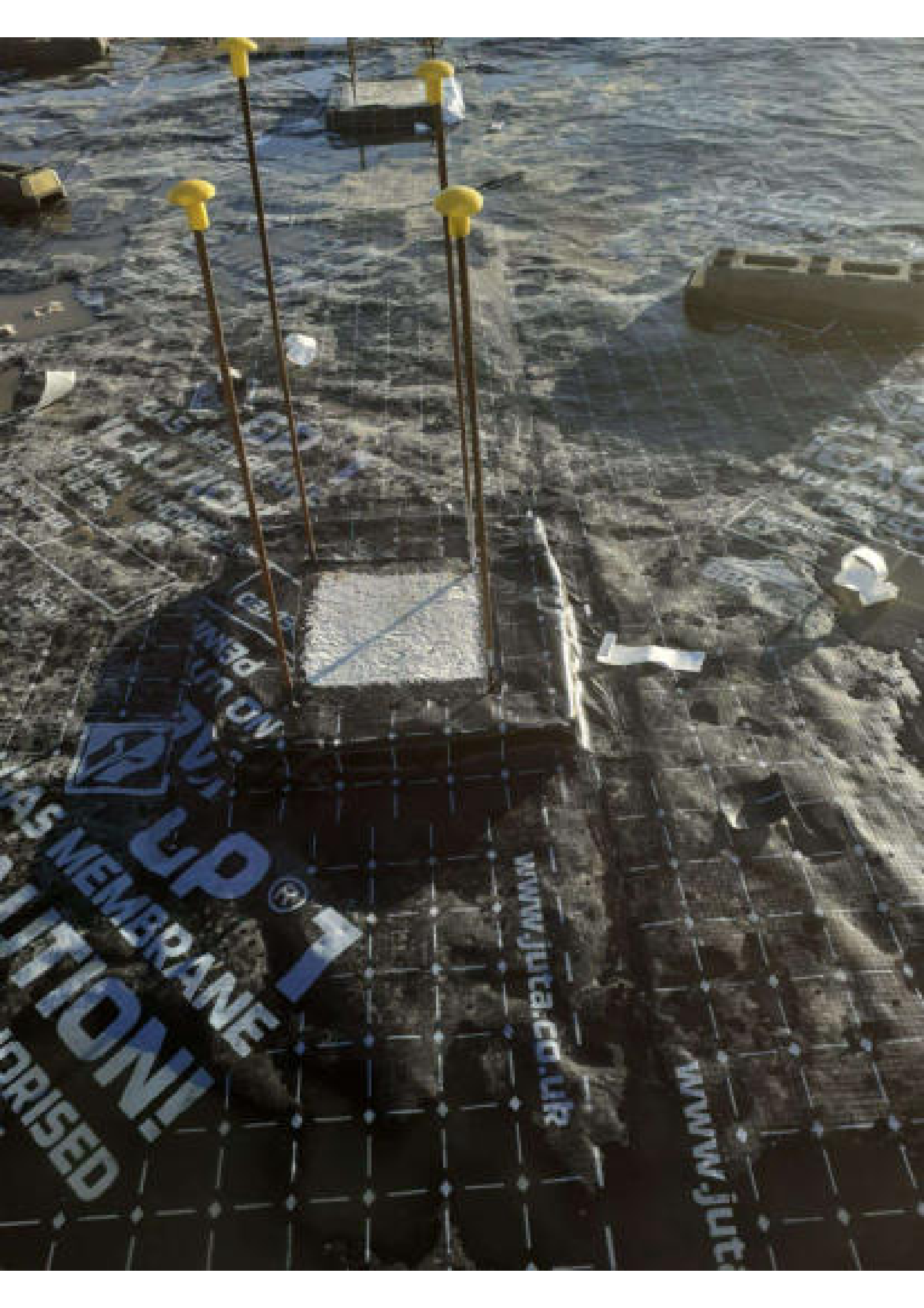












MADE IN CHINA
L.P.®
MEMBRANE
LUTION!
ORISED

www.juta.co.uk

www.juta









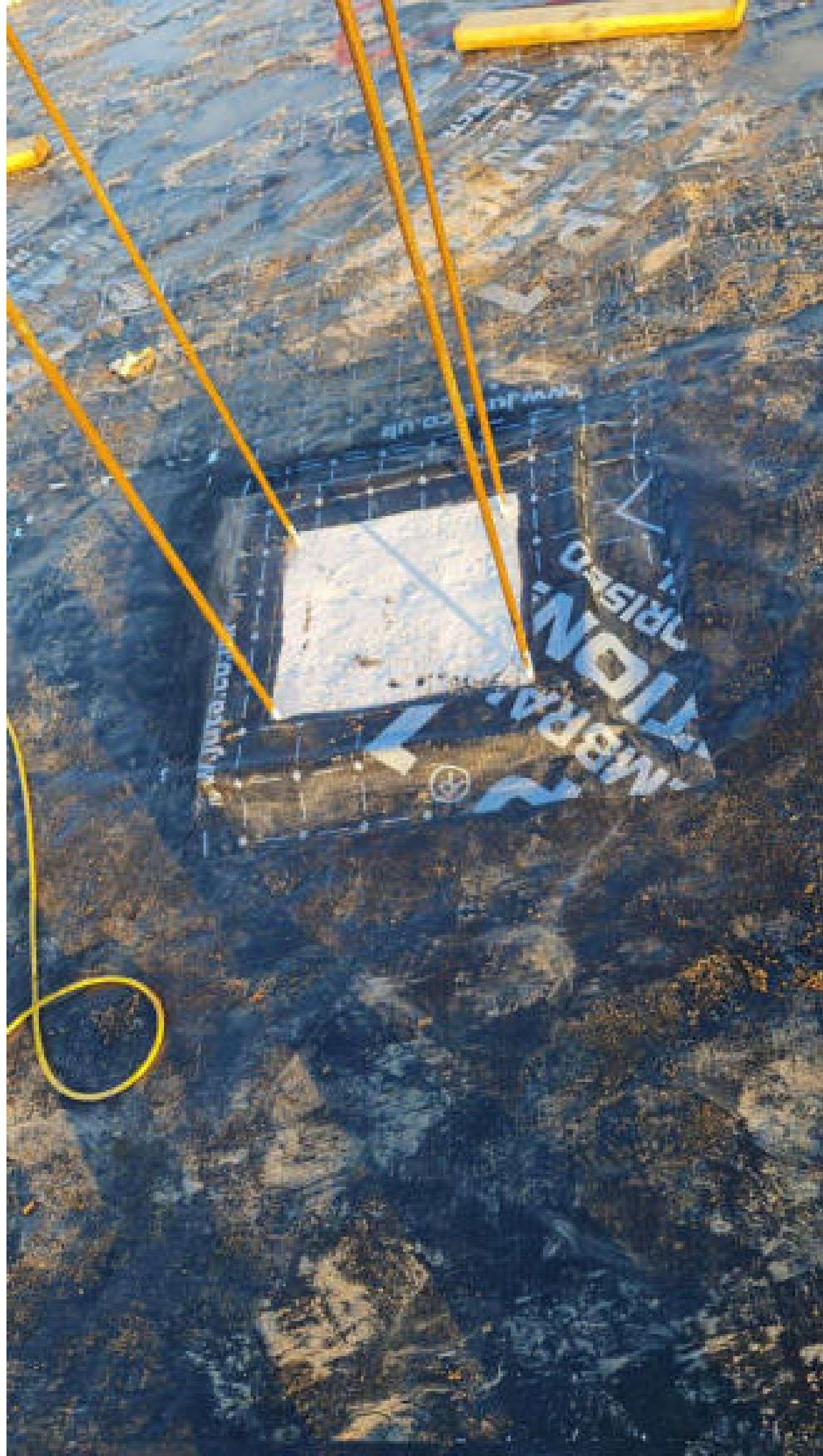


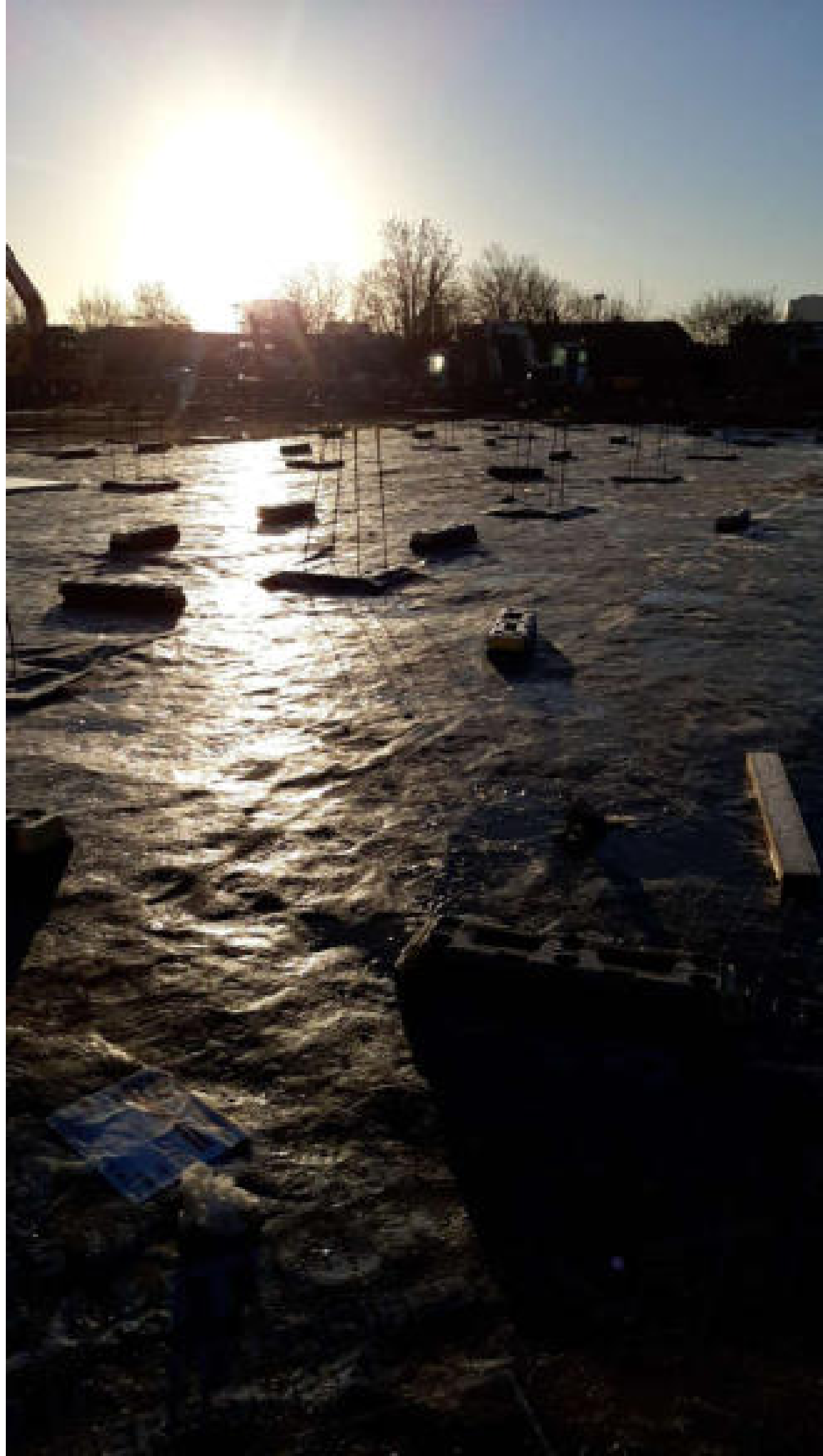












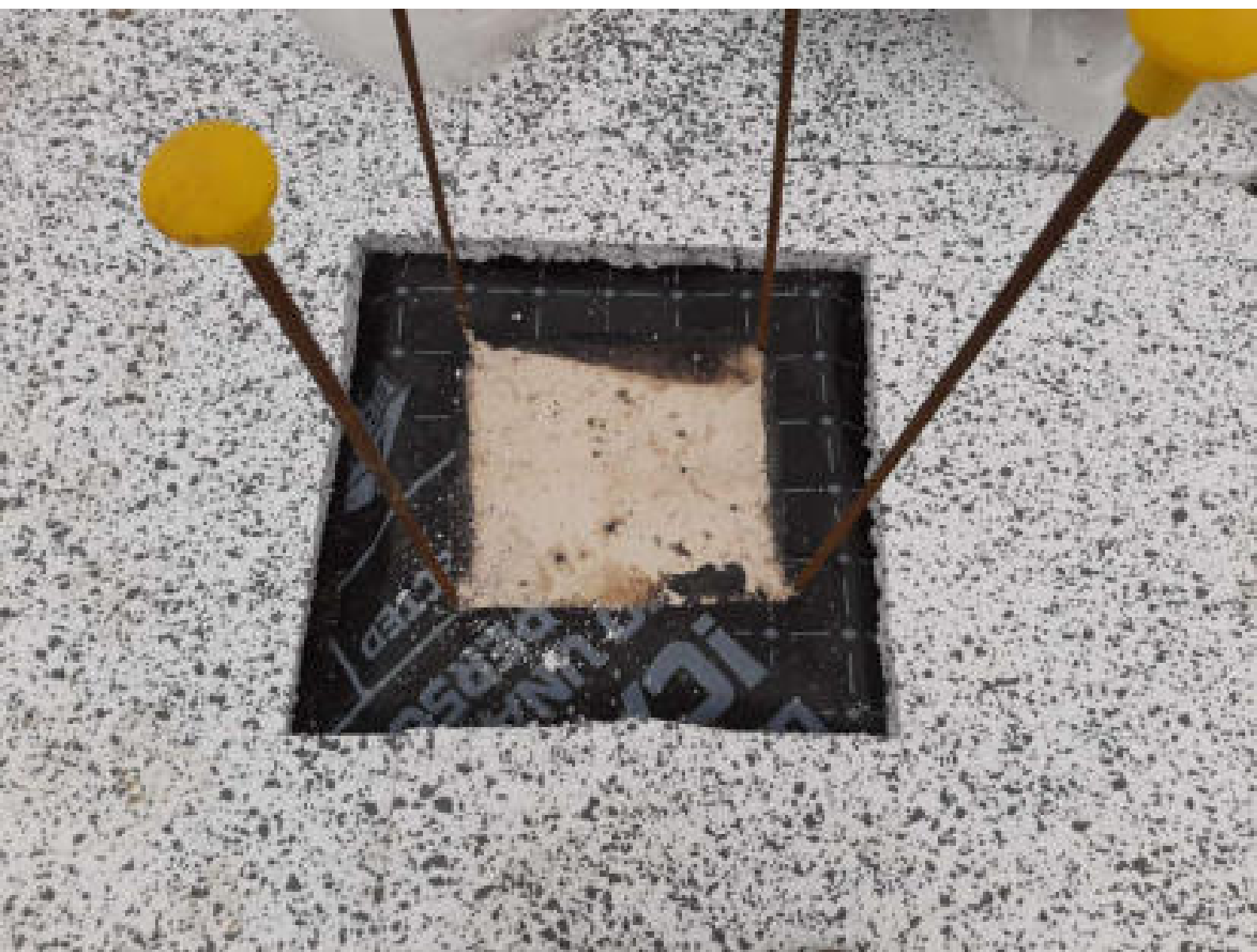




























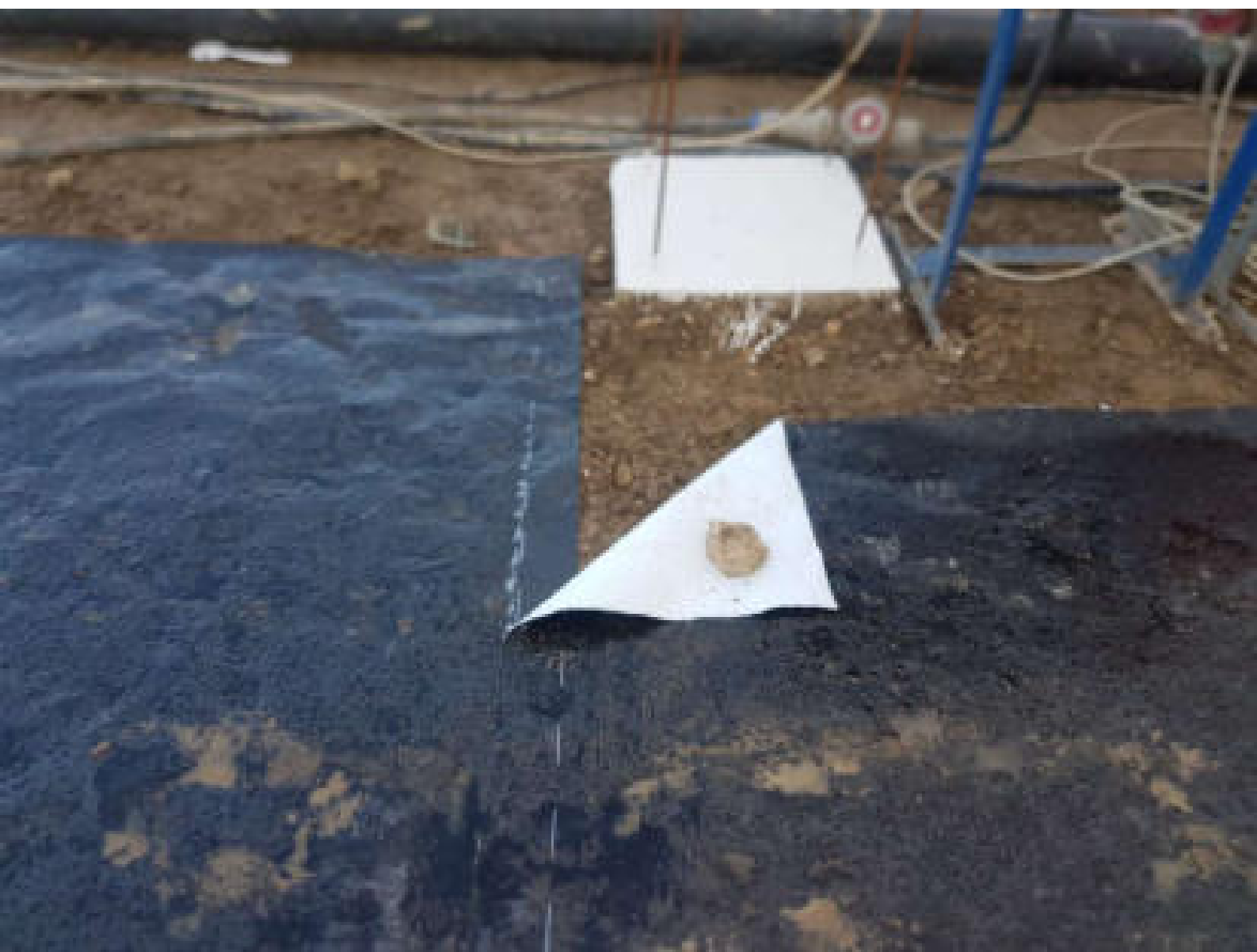




















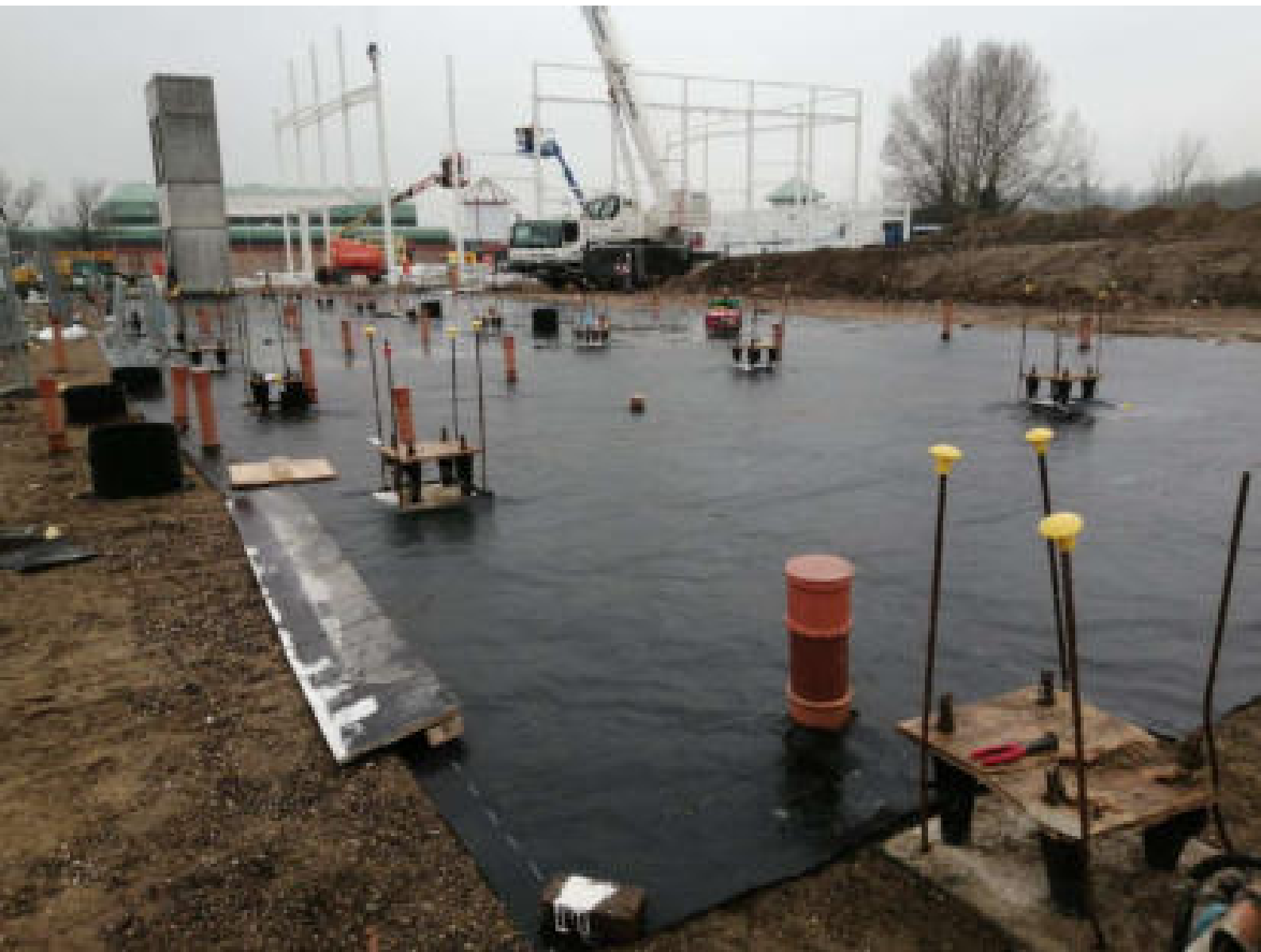


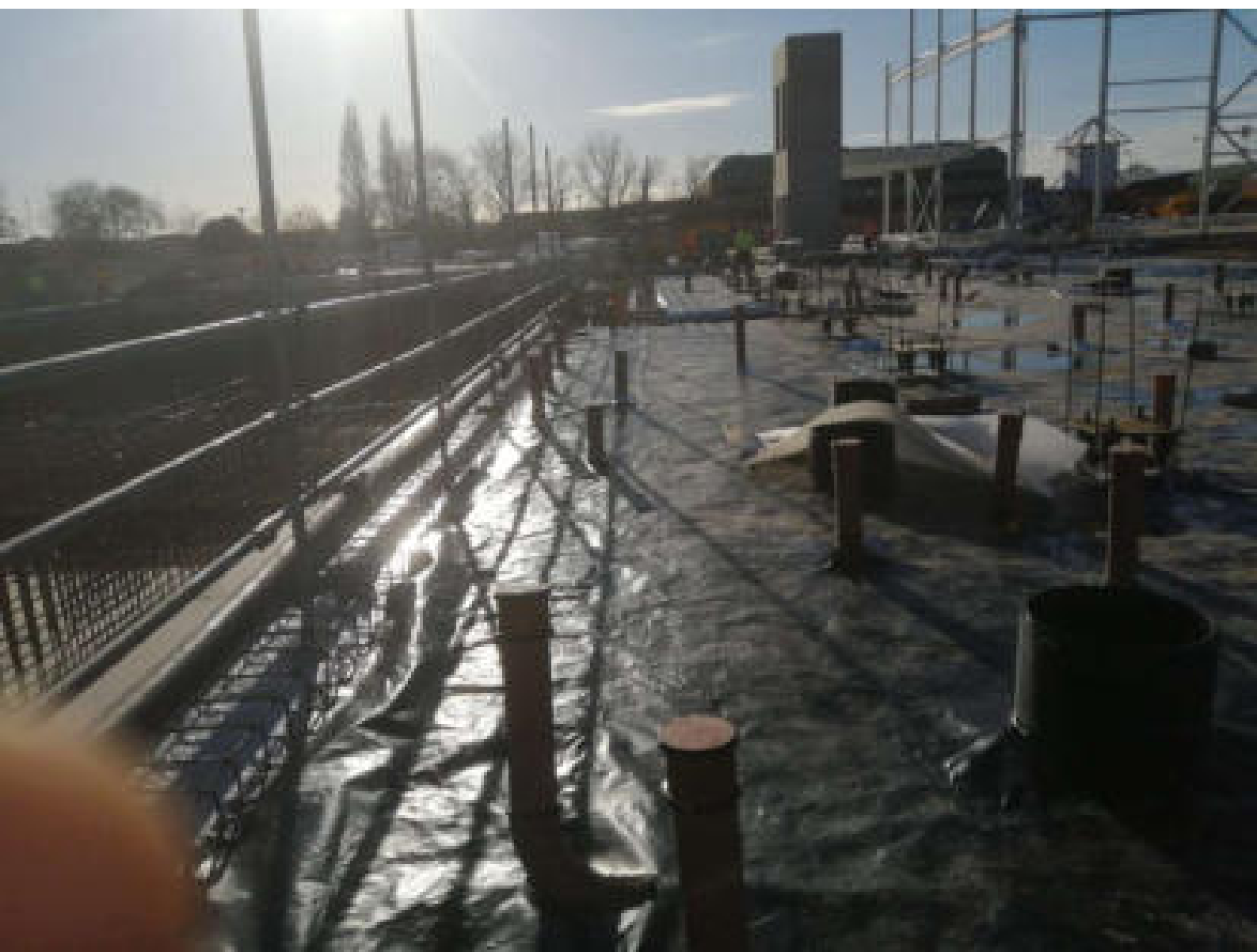




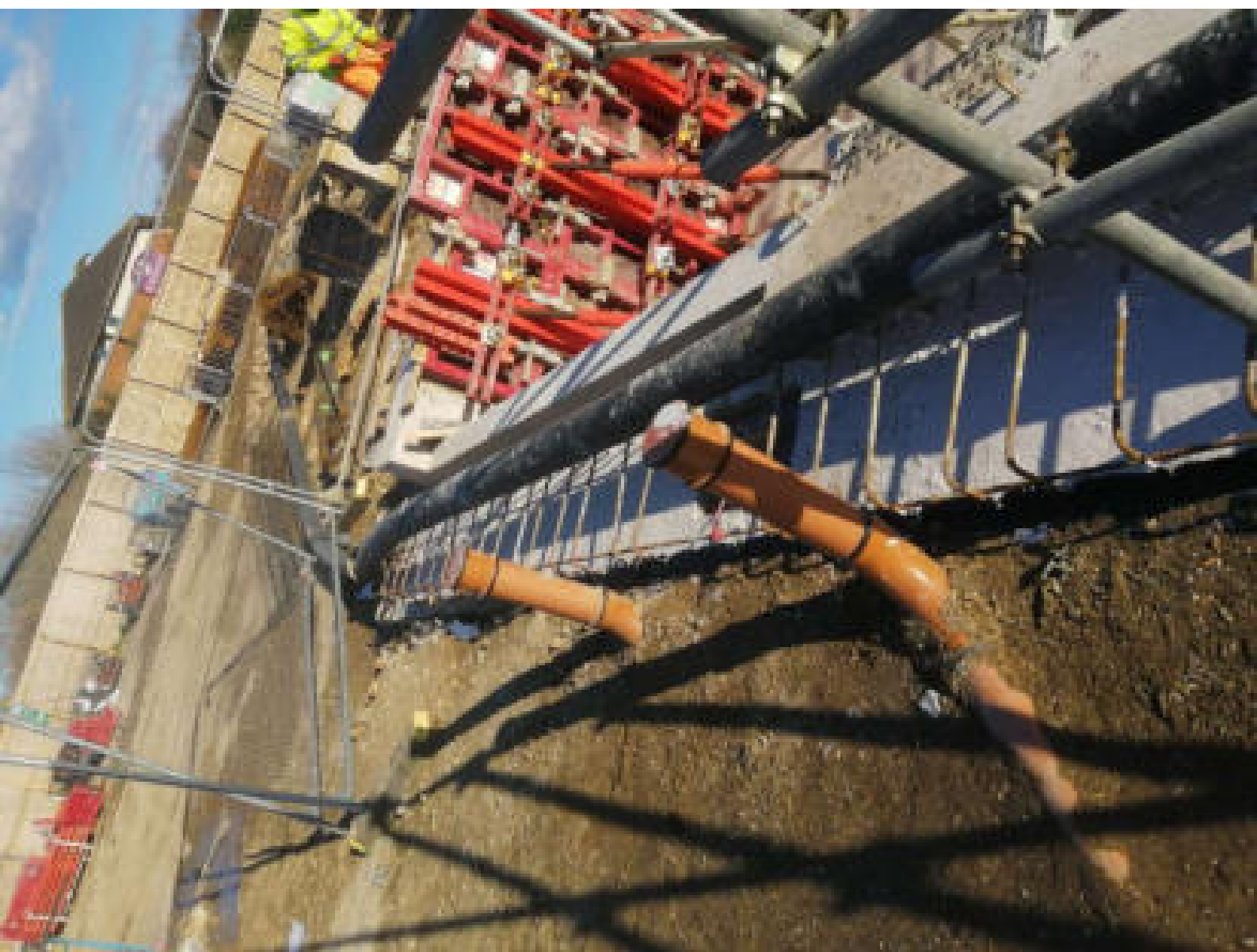
































































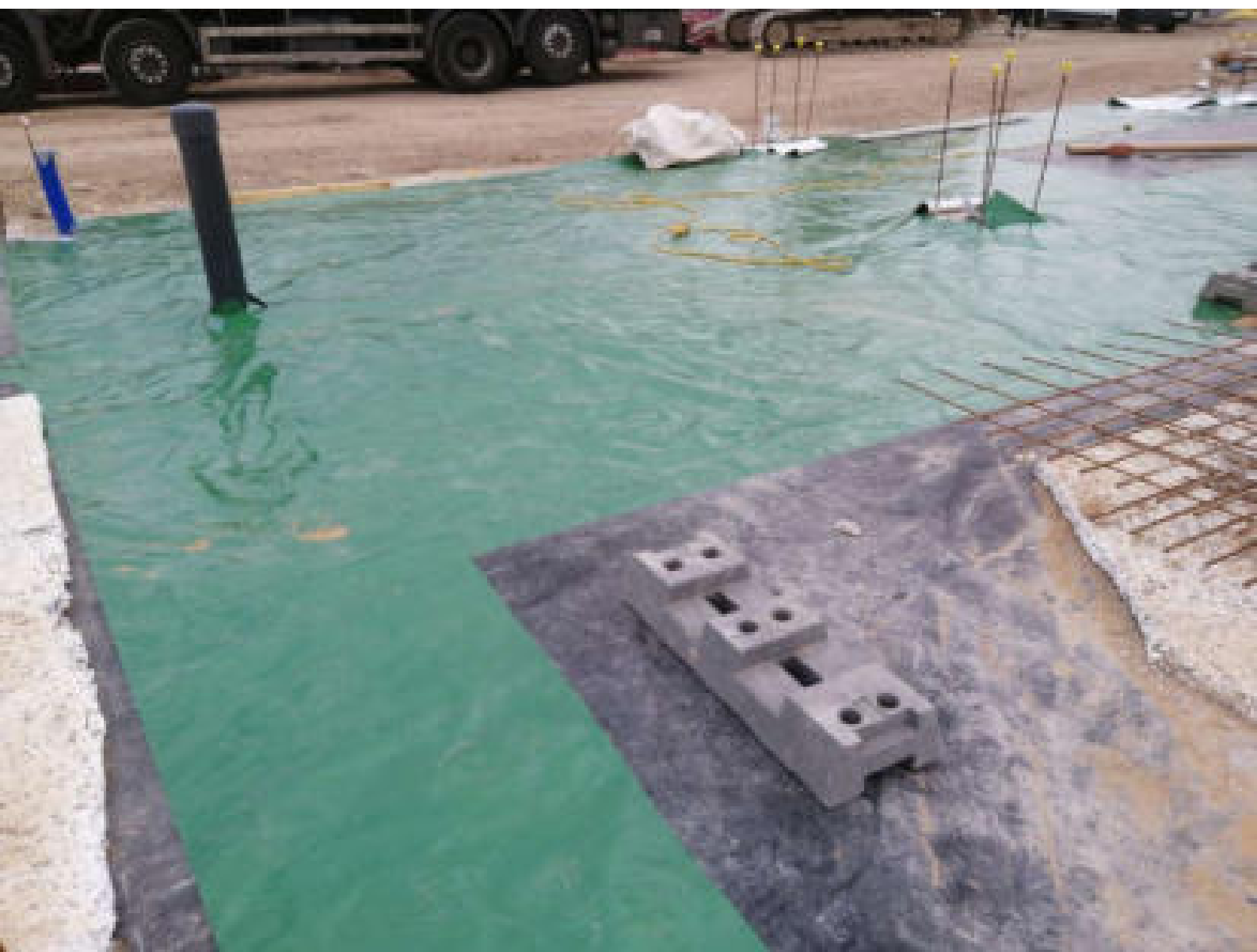


















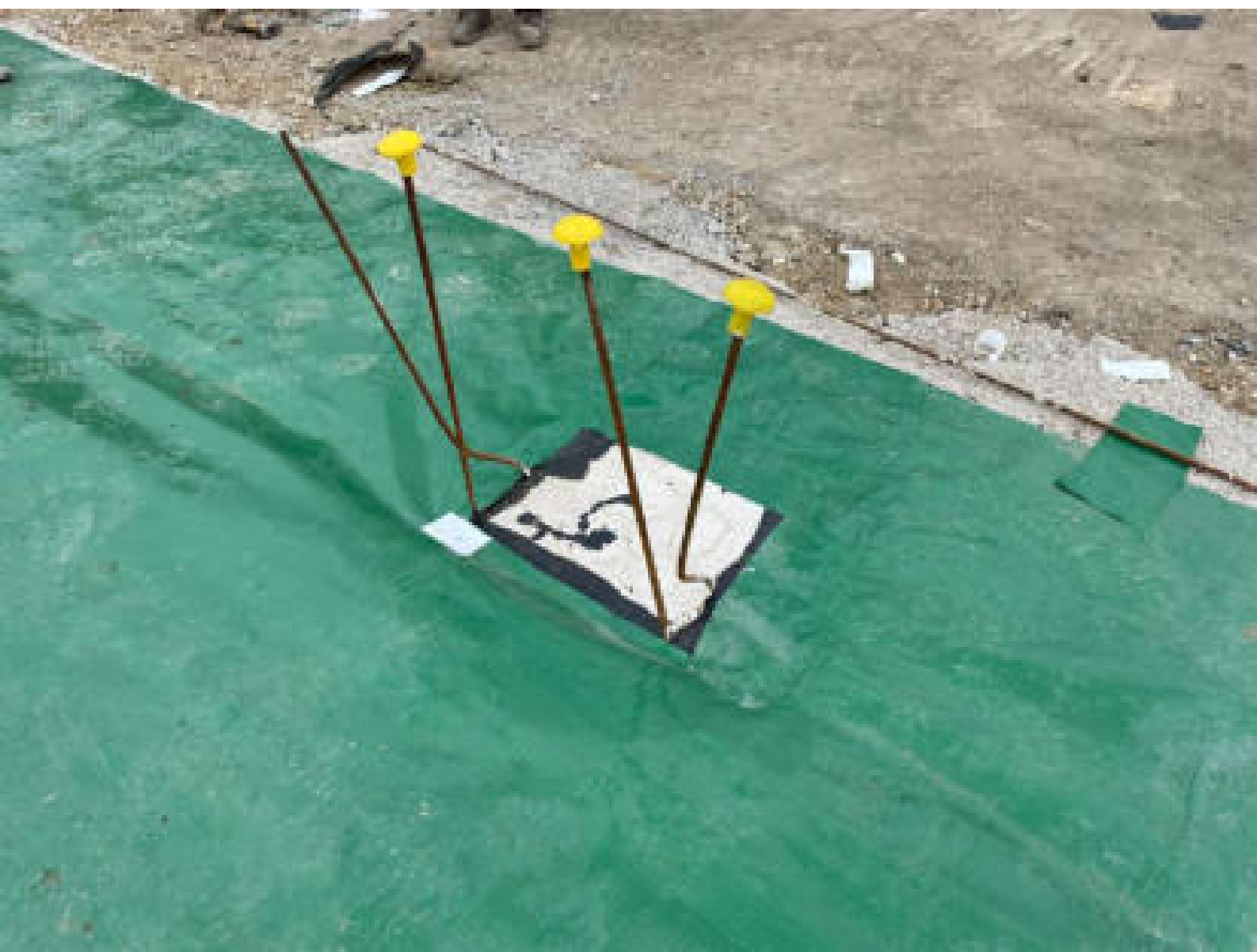




















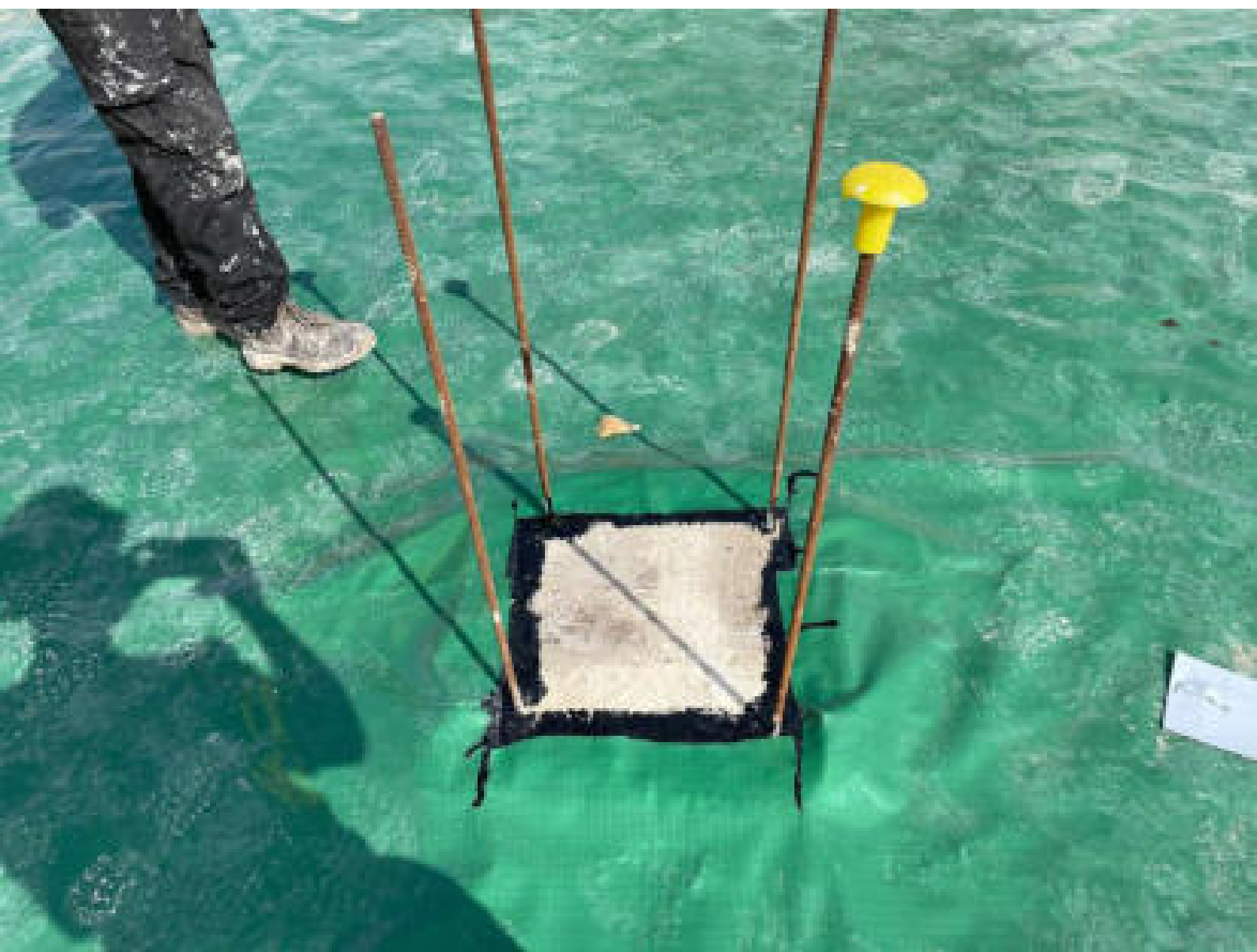




























































































BASEMENT WATERPROOFING SERVICES (UK) Ltd.

Work Completion and Acceptance - To be completed Daily

This is to certify that BWS (UK) Ltd. has completed the works at the following address

Job Name: **RIVERHEAD CENTRE**
Job Ref: **1260000**

Contract Number

Date: **29/03/22** **3 DAYS**

Description of work completed including existing base	Material used	Quantity used
37 Pile Caps	SC2	2 Pairs
4 TERMINATIONS	BENTONITE TAPE	
	3 DAYS	
	Work	

Name of operative	Time Signed in at site	Time Signed out at site
S O'HEARN	8AM - 4 PM	
J DAVIES	8AM - 4 PM	

All work has been carried out in accordance with the manufacturer's recommendations by the above Operatives at the above date/time

Signature of BWS (UK) Ltd:

Name: **STEPHEN O'HEARN**

Signature of contractor:

Name: **P BLACK**

Received:

Comments:

Date: **07/01/22**

Date:

Date: **7/1/2022**

Work completed

YES

NO

BASEMENT WATERPROOFING SERVICES (UK) Ltd.

Work Completion and Acceptance - To be completed Daily

This is to certify that BWS (UK) Ltd. has completed the work on the following project

Site Name: **RIVERHEADS**

Site Ref:

Plot Number:

Date: **01/12/21**

Description of work completed including standing time	Material Used	Qty/Measurements
LAD MEMBRANE UNDER SWS	GPI	278m ² (NOT WEIGHED)
PAINTED PIRE CAPS	SG2	17 PIRE CAPS

Name of operative	Time Signed in at site	Time Signed out at site
C DAVIES	12.00	16.15
J DAVIES	12.00	16.15

The above work has been carried out in accordance with the manufacturer's recommendations by the above Operatives(s) on the above date(s).

Signature of BWS (UK) Ltd: 

Date: **01/12/21**

Print Name: **C. DAVIES**

Date:

Signature of contractor:

Date:

Print Name:

Supervisor Received:

Checked and Comments:

Is work has been completed	☒ YES	☐ NO
----------------------------	---	-----------------------------

BASEMENT WATERPROOFING SERVICES (UK) LTD For Completion and Acceptance - To be completed Only

Job Number: 14/11/2022

Area	Material	Quantity
25 m ² masonry	GP4	12.5m ²
25 m ² masonry	Double Lap GP4	x16
Name of operative	Time Signed in at site	Time Signed out at site
Ryan Davies	8:20	4:00
Morgan Ball	8:20	4:00

The above work has been carried out in accordance with the manufacturer's recommendations by the above Operative(s) at the above date/time:

Signature of BWS (UK) Ltd: 

Date: 14/11/2022

Print Name: RYAN DAVIES

Date:

Signature of contractor:

Print Name:

Date:

Supervisor Received:

Checked and Comments:

All work has been completed	YES	NO
-----------------------------	-----	----

BASEMENT WATERPROOFING SERVICES (UK) Ltd.

Work Completion and Acceptance - To be completed Daily

This is to verify that BWS (UK) Ltd. have completed the works in the following order:

Project Name: Redwood House
Plot Ref: 3157L

Plot Number: Sports Hall

Date: 17-1-22

Description of work completed including standing time	Material Used	Quantity
		KG/L
GP2 under slab	GP2	192 m ²
Sealer GP2 L		2 Litres
Grout columns		

Name of operative	Time Signed in at site	Time Signed out at site
Kurt Megford	8:03	17:32

The above work has been carried out in accordance with the manufacturer's recommendations by the above Operative(s) at the above date/time.

Signature of BWS (UK) Ltd: K. Megford

Date: 17-1-22

Print Name: Kurt Megford

Date:

Signature of contractor:

Print Name:

Date:

Supervisor Received:

Checked and Comments:

All work has been completed	YES	NO
-----------------------------	-----	----

BASEMENT WATERPROOFING SERVICES (UK) Ltd.

Work Completion and Acceptance - To be completed Daily

This is to certify that BWS (UK) Ltd. has completed the work at the following project

Site Name: Kilnhamel, Llanwr.

Plot Number:

Date (Y/M/D): 11

BWS Ref: 3731

Description of work completed including standing time	Material Used	Quantity/Remarks
GFL under slab	GFL	4m ²
SGF to concrete column	SGF	13 columns
Sealed GFL to concrete columns	brush tape	5 columns

Name of operative	Time Signed in at site	Time Signed out at site
<u>K. Mayford</u>	<u>7.30</u>	<u>17.30</u>

The above work has been carried out in accordance with the manufacturer's recommendations by the above Operative(s) at the above date/time

Signature of BWS (UK) Ltd: K. Mayford

Date:

Print Name: Kurt Mayford

Date:

Signature of contractor:

Print Name:

Date:

Supervisor Received:

Checked and Comments:

All work has been completed	YES	NO
-----------------------------	-----	----

BASEMENT WATERPROOFING SERVICES (UK) LTD

Work Completion and Acceptance - To be completed Daily

This is to verify that BWS (UK) Ltd. has completed the work at the following project

BWS Name: Southwold

Plot Number: Plot 2/3

BWS Ref: 3157-

Date: 19/1/25

Description of work completed including standing time	Material used	Method/quantity used
GP2 100mm Slab	GP2	4m ²
Gravel GP2 to concrete	Gravel 100mm	60 tonnes Gravel + Sand
SG2 to concrete 100mm	SG2	3 tonnes (150 x 150mm)
		3 tonnes (150 x 150mm)
Name of operative	Time Signed in at site	Time Signed out at site
K. Mayfield	7.30	17.05

The above work has been carried out in accordance with the manufacturer's recommendations by the above Operative(s) at the above site/time

Signature of BWS (UK) Ltd: K. Mayfield

Date: 19/1/25

Print Name: K. Mayfield

Date:

Signature of contractor:

Print Name:

Date:

Supervisor Received:

Checked and Comments:

All work has been completed

YES

NO

BASEMENT WATERPROOFING SERVICES (UK) Ltd.

Work Completion and Acceptance - To be completed Daily

Project Name: **Rivermead Leisure Centre**

Plot Number: **SE PAB SLAB**
Date: **24/01/22**

Description of work completed including standing time	Material Used	Qty/Measurements BSLM
APPLYING DPM	GPI	250sqm ²
LET IT SLAB OUTAIL	SBZ (EPOXY)	15sqm ² 5 PILES

Name of operative	Time Signed in at site	Time Signed out at site
STEVEN	08:15	16:00

The above work has been carried out in accordance with the manufacturers' recommendations by the above Operative(s) at the above date/time:

Signature of BWS (UK) Ltd: 

Date: **24/01/22**

Print Name: **STEVEN HOLVER**

Date:

Signature of contractor:

Print Name:

Date:

Supervisor Received:

Checked and Comments:

All work has been completed	YES	NO	
-----------------------------	-----	-----------	--

BASEMENT WATERPROOFING SERVICES (UK) Ltd.

Work Completion and Acceptance – To be completed Daily

This is to certify that BWS (UK) Ltd. has completed the works at the following project

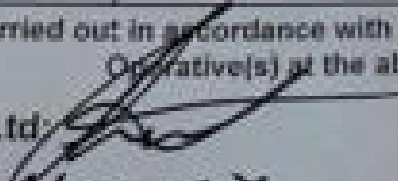
Job Name **LYSEBRO**
 Job Ref **LOQUEL CUNEE**

Plot Number **PAC 11A0**
 Date **25/01/22**

Description of work completed including standing time	Material Used	Qty/Measurements M2/L/M
WELDING	GP1	330 Sqm²
TERMINATION	PRIMER	11 x PILE (TAPED)
DETAIL ON PILE	SB2 (EPOXY)	6 x PILE

Name of operative	Time Signed in at site	Time Signed out at site
STEVEN	08:15	16:00

The above work has been carried out in accordance with the manufacturers' recommendations by the above Operative(s) at the above date/time:

Signature of BWS (UK) Ltd: 

Date: **25/01/22**

Name: **STEVEN HOLLEY**

Signature of contractor:

Date:

Name:

Date:

Supervisor Received:

Notes and Comments:

Work has been completed	YES	NO
-------------------------	-----	-----------

BASEMENT WATERPROOFING SERVICES (UK) Ltd.

Work Completion and Acceptance - To be completed Daily

This is to certify that BWS (UK) Ltd. has completed the works at the following address
 Job Name REINFORCE
 Plot Number PA-1100
 Date 26/01/22

Description of work completed including standing time	Material Used	Qty/Measurement
WELDS	GP2	100.5m ²
TERMINATION	DOUBLE SIDED TAPE / BENTONITE TAPE	50 LM

Name of operative	Time Signed in at site	Time Signed out at site
STEVEN	07:00	14:30

The above work has been carried out in accordance with the manufacturers' recommendations by the above Operative/s at the above date/time:

Signature of BWS (UK) Ltd: 

Date: 26/01/22

Print Name: STEVEN HOWER

Signature of contractor:

Date:

Print Name:

Supervisor Received:

Date:

Checked and Comments:

All work has been completed

YES

NO

BASEMENT WATERPROOFING SERVICES (UK) Ltd.

Work Completion and Acceptance - To be completed Daily

This is to certify that BWS (UK) Ltd. has completed the works at the following project
 Job Name Redwood Concre Plot Number 184 01/07
 Site Ref CONCRE Date 25/07/22

Description of work completed including standing time	Material Used	Qty/Measurement
Welding	GP1	50 Lm
Termination	DOUBLE SIDED TAPE / GEMMA TAPS	7x PILES 25 Lm
	OFF HIRE	
	GEMMA / HEAT GUN	

Name of operative	Time Signed in at site	Time Signed out at site
STEVEN	07:00	14:25

The above work has been carried out in accordance with the manufacturers' recommendations by the above Operative(s) at the above date/time:

Signature of BWS (UK) Ltd:

Name: STEVEN KOLVER

Signature of contractor:

Name:

Inspector Received:

Notes and Comments:

Date: 25/07/22

Date:

Date:

Work has been completed

YES

NO

BASEMENT WATERPROOFING SERVICES (UK) Ltd.

Work Completion and Acceptance – To be completed Daily

This is to certify that BWS (UK) Ltd. has completed the works at the following project.

Site Name Riverstone, Leominster

Plot Number

BWS Ref

Date 11/02/22

Description of work completed including standing time	Material Used	Cty/Measurements M2/M
<u>Gas membrane</u>	<u>GPI</u>	<u>200sqm2</u>
<u>Termination</u>	<u>OMA</u>	<u>8 x PIPE RUN</u>

Name of operative	Time Signed in at site	Time Signed out at site
<u>STEVEN</u>	<u>08:00</u>	<u>15:45</u>

The above work has been carried out in accordance with the manufacturers' recommendations by the above Operative(s) at the above date/time:

Signature of BWS (UK) [Signature]

Date: 11/02/22

Print Name: STEVEN HOLVEY

Signature of contractor:

Date:

Print Name:

Supervisor Received:

Date:

Checked and Comments:

All work has been completed

YES

NO

BASEMENT WATERPROOFING SERVICES (UK) Ltd.

Work Completion and Acceptance – To be completed Daily

This is to certify that BWS (UK) Ltd. has completed the works at the following project

Site Name Livermore, County

Plot Number

BWS Ref

Date 12/02/22

Description of work completed including standing time	Material Used	Qty/Measurements M2/L/M
<u>CAS MEMBRANE INSTALL</u>	<u>GP1</u>	<u>50 Sqm2</u>
<u>TERMINATIONS</u>	<u>1" TAPE</u> <u>BENTONITE TAPE</u>	<u>9 PILLS</u>
<u>BEAM TERMINATION</u>	<u>SG2 (EPOXY)</u>	<u>45 Lm</u>
Name of operative	Time Signed in at site	Time Signed out at site
<u>STEVEN</u>	<u>08:00</u>	<u>13:45</u>

The above work has been carried out in accordance with the manufacturers' recommendations by the above Operative(s) at the above date/time:

Signature of BWS (UK) Ltd:

Date: 12/02/22

Print Name: STEVEN HOLLEY

Signature of contractor:

Date:

Print Name:

Supervisor Received:

Date:

Checked and Comments:

All work has been completed

YES

NO

Work Completion and Acceptance – To be completed Daily

Site Name RWCMETRO LEISURE
CENTER

Plot Number 1031 11443

BNS Real

Date 02/03/22

Name of operative	Time Signed in at site	Time Signed out at site
STEVEN HOLLEY	08:00	14:30

Signature of BNY Mellon Ltd.

Name: CHAD HOLVER

... of contracted

1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26

Received

[View Comments](#)

Date: 02/03/22

Date:

0316

2000

[illegible]

BASEMENT WATERPROOFING SERVICES (UK) Ltd. **Work Completion and Acceptance - To be completed Daily**

This is to certify that BWS (UK) Ltd. has completed the works at the following address:
 Job No: Burgess Hill 14.5.22
 Plot Number: 17375
 Date: 03.03.2022

Description of work completed including standing time	Material Used	Quantity of materials used
CA to Floor slab installed	GPI	6.5m ²
Cg2 to ground level	Seal	2.5 litres
Termination to DPC	Cura	2.11 litres

Name of operative	Time Signed in at site	Time Signed out at site
James Hyman	~~8.15~~ 8.15	16.15
Lockhart FR-602	1 8.45	16.30

The above work has been carried out in accordance with the manufacturer's recommendations by the above Operative(s) at the above date/time.

Signature of BWS (UK) Ltd: J Hyman

Date: 03.03.2022

Print Name: James Hyman

Date: 03.03.2022

Signature of contractor:

Date: 03.03.2022

Print Name:

Signature Received:

Checked and Comments:

All work has been completed

YES

NO

/

BASEMENT WATERPROOFING SERVICES (UK) Ltd.

Work Completion and Acceptance - To be completed Daily

This is to certify that BWS (UK) Ltd. has completed the works at the following project:

Site Name: Riverhead Leisure

Plot Number: SAB

BWS Ref: 29761

Date: 4.3.2022

Description of work completed including standing time	Material Used	Qty/Measurements M2/Ltr
GP to Floor	GP	45m ²
Painted edge of LRP Pile	ATAL PRIMER	10 Ltr
Termination to Columns	DOUBLE TAPE	x 20
Sg2 to Columns	Sg2	x 2
Termination to Soil Pipes	GMA	x 13

Name of operative	Time Signed in at site	Time Signed out at site
JAMIE HAYMAN	8:15	17:00
CAMERON FRIEND	8:15	17:00

The above work has been carried out in accordance with the manufacturers' recommendations by the above Operative(s) at the above date/time:

Signature of BWS (UK) Ltd: J Hayman

Date: 4.3.2022

Print Name: JAMIE HAYMAN

Date: 4.3.2022

Signature of contractor:

Print Name:

Date: 4.3.2022

Supervisor Received:

Checked and Comments:

All work has been completed	YES	☒	NO	
-----------------------------	-----	-------------------------------------	----	--

Unit 27, Tafernaubach industrial estate, Tredgar. NP22 3AA

tel: 0848212183 vat no: 342141346 reg no: 12158637

BASEMENT WATERPROOFING SERVICES (UK) Ltd.

Work Completion and Acceptance – To be completed Daily

This is to verify that BWS (UK) Ltd. has completed the works at the following project.

Site Name *Riverhead Leisure*

Plot Number *S106*

Draw Ref *34761*

Date *14-03-2022*

Description of work completed including standing time	Material Used	Qty/Measurements BQ/LM
<i>GP to floor</i>	<i>GP1</i>	<i>240 m²</i>
<i>Sg2 to corners</i>	<i>Sg2</i>	<i>26 corners</i>

Name of operative	Time Signed in at site	Time Signed out at site
<i>JAMIE HAYMAN</i>	<i>8:30</i>	<i>16:35</i>
<i>CAMERON FENN</i>	<i>8:30</i>	<i>15:35</i>

The above work has been carried out in accordance with the manufacturers' recommendations by the above Operative(s) at the above date/time:

Signature of BWS (UK) Ltd: *J Hayman*

Date: *14-3-2022*

Print Name: *JAMIE HAYMAN*

Signature of contractor:

Date: *14-3-2022*

Print Name:

Supervisor Received:

Date: *14-3-2022*

Checked and Comments:

All work has been completed

YES

NO

/

BASEMENT WATERPROOFING SERVICES (UK) Ltd.

Work Completion and Acceptance – To be completed Daily

This is to certify that BWS (UK) Ltd. has completed the works at the following project.

Site Name: Riverwind

Plot Number

BWS Ref: 3976C

Date: 15.3.2022

Description of work completed including standing time	Material Used	Qty/Measurements BOLM
GP to ~~Base~~ <u>Base</u> ~~Back~~	GP	170 m ²
Primed Columns	Primer	23
Termination to Columns	Double Tape	x 23 Columns
Sge to Columns	Sge	x 9 Columns

Name of operative	Time Signed in at site	Time Signed out at site
JAMIE HAYMAN	8:05	~~17:45~~
CARLETON FRIED	8:05	17:45

The above work has been carried out in accordance with the manufacturers' recommendations by the above Operative(s) at the above date/time:

Signature of BWS (UK) Ltd: J Hayman

Date: 15.3.2022

Print Name: JAMIE HAYMAN

Signature of contractor:

Date: 15.3.2022

Print Name:

Supervisor Received:

Date: 15.3.2022

Checked and Comments:

All work has been completed	YES	NO	/
-----------------------------	-----	----	---

BASEMENT WATERPROOFING SERVICES (UK) Ltd.

Work Completion and Acceptance - To be completed Daily

This is to certify that BWS (UK) Ltd. has completed the works at the following project:

Site Name: Princed Leisure
 BWS Ref:

Plot Number: 34741
 Date: 16.03.2022

Description of work completed including working time	Material Used	Qty/Measurements BWS Ref
Ch 50 Feet	CP1	138 m ²
Name of operative	Time Signed in at site	Time Signed out at site
Jamie Hayman	8:20	12:15
Cancelled Faint	8:20	12:15

The above work has been carried out in accordance with the manufacturers' recommendations by the above Operative(s) at the above date/time:

Signature of BWS (UK) Ltd: J Hayman

Date: 16.03.2022

Print Name: Jamie Hayman

Date:

Signature of contractor:

Date:

Print Name:

Supervisor Received:

Checked and Comments:

All work has been completed	YES	NO	<u>✓</u>
-----------------------------	-----	----	----------

BASEMENT WATERPROOFING SERVICES (UK) Ltd.

Work Completion and Acceptance - To be completed Daily

This is to certify that BWS (UK) Ltd. has completed the works at the following project:
 Plot Number: ~~1000000~~
 Date: 17.3.2022

Description of work completed including standing time	Measured Area	Cumulative Area
Basin g/f	GP1	1m ²
GP to Foot	GP1	41m ²
GP to Foot	GP1	20m ² in
Sig 2 to ground beam	Sig 2 + columns	5 columns 40m ² in
Down to edge of ground beam	Primer	4.1 Lm
Drainage Ditch	Drainage Line	4.1 Lm
Name of operative	Time Signed in at site	Time Signed out at site
James Harrison	8:03	18:00
Campton French	8:03	18:00
1		

The above work has been carried out in accordance with the manufacturers' recommendations by the above Operative(s) of the above date/time

Signature of BWS (UK) Ltd. J Harrison
 Print Name: James Harrison

Date: 17.3.2022

Signature of contractor:

Date: 17.3.2022

Print Name:

Supervisor Received:

Date: 17.3.2022

Checked and Comments:

All work has been completed	YES	NO
-----------------------------	-----	----

BASEMENT WATERPROOFING SERVICES (UK) Ltd.

Work Completion and Acceptance – To be completed Daily

This is to certify that BWS (UK) Ltd. has completed the works at the following project:

Site Name: Riverhead Leisure
 Plot Ref: 34 Plot

Plot Number:

Date: 18.3.2022

Description of work completed including standing time	Material Used	Qty/Measurements
Termination to Columns	Double Tape	5 Columns
~~to~~ Repairs to GP	GMA	x 50 Patches
Termination to P.P.S	GMA	62 P.P.S
Termination to ~~to~~	Double Tape	4x 1m Stick Dam

Name of operative	Time Signed in at site	Time Signed out at site
James Hayman	8:00	12:30
Cancelled Friend	8:00	12:30

The above work has been carried out in accordance with the manufacturers' recommendations by the above Operative(s) at the above date/time:

Signature of BWS (UK) Ltd: J Hayman

Date: 18.3.2022

Print Name: James Hayman

Date: 18.3.2022

Signature of contractor:

Print Name:

Date: 18.3.2022

Supervisor Received:

Checked and Comments:

All work has been completed	YES	☒	NO	
-----------------------------	-----	-------------------------------------	----	--



























Work Completion & Acceptance

Project/Site Name

BWS3737 - Rivermead Reading

Date

Wednesday, March 30, 2022

Contractor

Pellikaan

Plot Number/Location of Work

Sports hall

Vehicle Registration

SE16 XSN

Time on Site

8:00 AM - 3:30 PM

Operative 1

Morgan Hall

Operative 2

Corey John

Work Detail

Product

GP1

Area of Work

To underside slab

Quantity.

37

Unit

LM

Product (2)

Premasil GMA

Area of Work (2)

To underside slab

Quantity (2).

146

Unit (2)

Number

Product (3)

Premasil GMA

Area of Work (3)

To ground beams/side of foundations

Quantity (3). 13

Unit (3) Number

Additional Work Detail

Please add any additional work detail here

Product 1- 37lm x 600mm

Product 2- 146 patches at 100mm to repair gp1 damaged by other trades

Product 3- sealed gp1 to SG2 on ground beams- 13 columns

BWS Name Kurt Mogford

Signature of BWS UK Ltd 

Contractor Company Pellikaan

Contractor Position Site manager

Contractor Name Sam

Contractor Signature 

Upload Image or File



Upload Image or File



Upload Image or File



Upload Image or File



Upload Image or File



Upload Image or File



Wednesday, May 4, 2022



Work Completion & Acceptance

Project/Site Name

BWS3737 - Rivermead Reading

Date

Wednesday, May 4, 2022

Contractor

Pillikaan

Plot Number/Location of Work

Edge of slab

Vehicle Registration

YB64 WXC

Time on Site

2:00 PM - 4:00 PM

Supervisor

Jamie Hayman

Work Detail

Additional Work Detail

Please add any additional work detail here

Gp1 extension 20 m @ 700mm
Cut Gp1 back to 20m @ 700mm

BWS Name

Jamie Hayman

Signature of BWS UK Ltd

A handwritten signature in black ink, appearing to read 'J Hayman', written over a light blue grid background.

Contractor Company

Pillikaan

Contractor Position

Site manager

Contractor Name

Sam hulme

Contractor Signature

A handwritten signature in black ink, appearing to read 'SH', written over a light blue grid background.



Work Completion & Acceptance

Project/Site Name

BWS3737 - Rivermead Reading

Date

Wednesday, October 5, 2022

Contractor

Pelikaan

Plot Number/Location of Work

Edge of slab

Vehicle Registration

PN13 VMJ

Time on Site

8:00 AM - 3:00 PM

Supervisor

Kurt Mogford

Work Detail

Product

Protection board

Area of Work

To edge of slab

Quantity.

100

Unit

LM

Product (2)

Premsil GMA

Area of Work (2)

To patch repairs

Quantity (2).

30

Unit (2)

Number

Additional Work Detail

Please add any additional work detail here

Product 1- 100lm X 0.3m

BWS Name

Kurt Mogford

Signature of BWS UK Ltd



Contractor Company

Pelikaan

Contractor Position

Site manager

Contractor Name

Sam

Contractor Signature





Work Completion & Acceptance

Project/Site Name

BWS3737 - Rivermead Reading

Date

Monday, May 30, 2022

Contractor

Pillikaan

Plot Number/Location of Work

Edge of slab ring beam

Vehicle Registration

Hire Vehicle

Time on Site

8:40 AM - 4:00 PM

Supervisor

Neil Davies

Operative 1

Jamie Hayman

Operative 2

Cameron Friend

Operative 3

Christian Callaghan

Work Detail

Product

Premsil primer

Area of Work

To edge of slab

Quantity.

55

Unit

LM

Additional Work Detail

Please add any additional work detail here

Marked out 240mm single grey taped 55lm to create neat line Primed edge of slab 55lm @ 240 mm cut back membrane 35m @150 mm

BWS Name

Jamie Hayman

Signature of BWS UK Ltd

A handwritten signature in black ink, appearing to read "J Hoag".

Contractor Company

Pillikaan

Contractor Position

Site manager

Contractor Name

Sam

Contractor Signature

A handwritten signature in black ink, appearing to read "Sam".

Work Completion & Acceptance

Project/Site Name	BWS3737 - Rivermead Reading
Date	Thursday, July 14, 2022
Contractor	Pelicaan
Plot Number/Location of Work	Perimeter of build ,Termination
Vehicle Registration	BF11 GYA
Time on Site	7:45 AM - 3:45 PM
Supervisor	Kurt Mogford
Operative 1	Stephen O'leary
Operative 2	Jacob Davies

Work Detail

Product	Premsil primer
Area of Work	To perimeter
Quantity.	65
Unit	LM
Product (2)	ASO joint tape
Area of Work (2)	To termination into DPC
Quantity (2).	75
Unit (2)	LM

Additional Work Detail

Please add any additional work detail here

No additional work,
Termination to Perimeter,
All completed ,
Protection agreed by client to apply at area of loading bay ,

BWS Name Stephen O'leary

Signature of BWS UK Ltd 

Contractor Company Pelicaan

Contractor Position Site manager

Contractor Name Sam

Contractor Signature 

Upload Image or File



Upload Image or File



Upload Image or File



Upload Image or File



Upload Image or File



Upload Image or File



Work Completion & Acceptance

Project/Site Name	BWS3737 - Rivermead Reading
Date	Thursday, July 14, 2022
Contractor	Pelicaan
Plot Number/Location of Work	Perimeter of build ,Termination
Vehicle Registration	BF11 GYA
Time on Site	7:45 AM - 3:45 PM
Supervisor	Kurt Mogford
Operative 1	Stephen O'leary
Operative 2	Jacob Davies

Work Detail

Product	Premsil primer
Area of Work	To perimeter
Quantity.	65
Unit	LM
Product (2)	ASO joint tape
Area of Work (2)	To termination into DPC
Quantity (2).	75
Unit (2)	LM

Additional Work Detail

Please add any additional work detail here

No additional work,
Termination to Perimeter,
All completed ,
Protection agreed by client to apply at area of loading bay ,

BWS Name	Stephen O'leary
-----------------	-----------------

Signature of BWS UK Ltd	
--------------------------------	---

Contractor Company	Pelicaan
---------------------------	----------

Contractor Position	Site manager
----------------------------	--------------

Contractor Name	Sam
------------------------	-----

Contractor Signature	
-----------------------------	---

Upload Image or File



Upload Image or File



Upload Image or File



Upload Image or File



Upload Image or File



Upload Image or File





Work Completion & Acceptance

Project/Site Name

BWS3737 - Rivermead Reading

Date

Friday, April 8, 2022

Contractor

Pellikaan

Plot Number/Location of Work

Final pour

Vehicle Registration

MK16 UUE

Time on Site

8:00 AM - 2:15 PM

Supervisor

Kurt Mogford

Operative 1

Corey John

Work Detail

Product

Pipe penetrations

Area of Work

To floor area

Quantity.

2

Unit

Number

Product (2)

GP1

Area of Work (2)

To floor area

Quantity (2).

70

Unit (2)

m2

Product (3)

Asodur SG2

Area of Work (3)

To ground beams/side of foundations

Quantity (3). 15

Unit (3) m2

Additional Work Detail

Please add any additional work detail here

Pipe pens-150mm- GMA

BWS Name Kurt Mogford

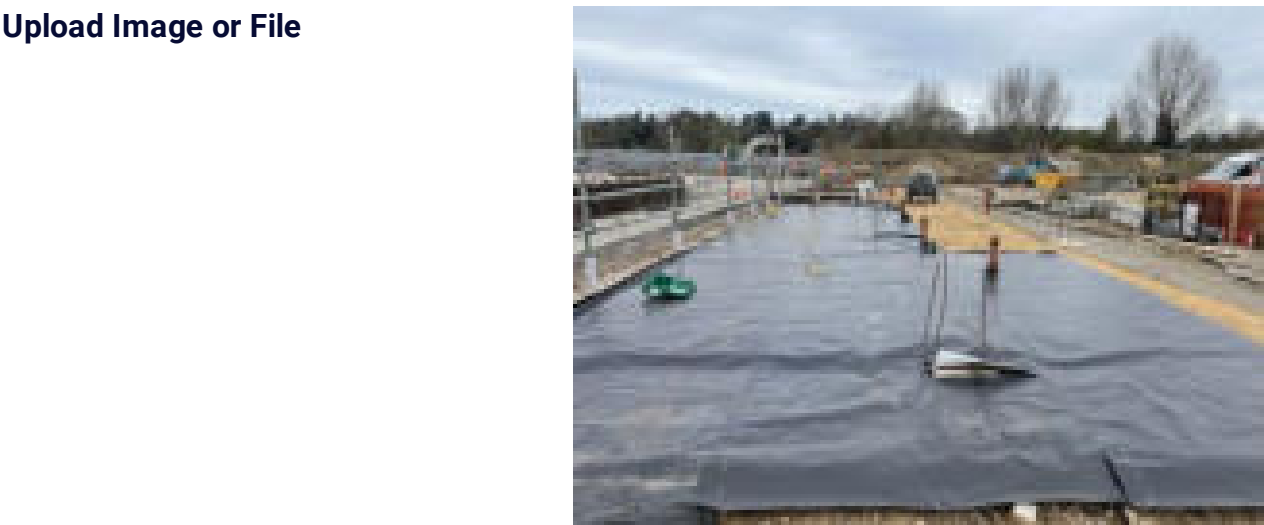
Signature of BWS UK Ltd 

Contractor Company Pellikaan

Contractor Position Site manager

Contractor Name Sam

Contractor Signature 



Upload Image or File





Work Completion & Acceptance

Project/Site Name

BWS3737 - Rivermead Reading

Date

Thursday, November 10, 2022

Contractor

Pelikaan

Plot Number/Location of Work

Edge of slab

Vehicle Registration

PN13 VMJ

Time on Site

8:30 AM - 3:15 PM

Supervisor

Kurt Mogford

Work Detail

Product

Pipe penetrations

Area of Work

To floor area

Quantity.

6

Unit

Number

Product (2)

Premasil GMA

Area of Work (2)

To edge of slab

Quantity (2).

3

Unit (2)

m2

Product (3)

GP1

Area of Work (3)

To floor area

Quantity (3).

5

Unit (3)

m2

Additional Work Detail

Please add any additional work detail here

Day rate for 1 man + material cost

BWS Name

Kurt Mogford

Signature of BWS UK Ltd



Contractor Company

Pelikaan

Contractor Position

Site manager

Contractor Name

Sam

Contractor Signature





Work Completion & Acceptance

Project/Site Name

BWS3737 - Rivermead Reading

Date

Tuesday, March 29, 2022

Contractor

Pellikaan

Plot Number/Location of Work

Sports hall

Vehicle Registration

MK16 UUE

Time on Site

10:00 AM - 4:00 PM

Supervisor

Kurt Mogford

Operative 1

Morgan Hall

Operative 2

Corey John

Work Detail

Product

Premsil GMA

Area of Work

To underside slab

Quantity.

130

Unit

Number

Additional Work Detail

Please add any additional work detail here

Patched holes made by other trades- 130 holes 100mm circles. 2 hours of cleaning membrane to allow premsil to bond

BWS Name

Kurt Mogford

Signature of BWS UK Ltd



Contractor Company

Pellikaan

Contractor Position

Site manager

Contractor Name

Sam

Contractor Signature



Upload Image or File



Upload Image or File



Upload Image or File



Upload Image or File



Dave Rees Statement Of Expertise

I have been involved the structural waterproofing and the ground gas protection industry for over 18 years. I have worked for two of the largest manufacturers of structural waterproofing systems, one being Fosroc Ltd. As the demand for gas membranes grew in the UK Market place, we brought in a ground gas protection system from Du Pont the original suppliers of gas protection membrane, who initially trained myself in the installation of ground gas membranes, and it was I that trained the installers and inspected the installation of the first two gas barrier installations Fosroc gained in the UK, Newport East Retail Park and Riverside Arts Centre, Newport 19 years ago.

Another company for whom I worked was CETCO. Due to my experience in below ground waterproofing and in ground gas protection I was tasked with compiling suitable systems for both protection against Radon and a more robust system for protection against CO² and methane, whilst maintaining waterproof integrity. The system was compliant with the relevant BRE digests, to add to their established BBA certified waterproofing system.

Predominantly I have worked across Wales and the West Country, in which there is some of the highest levels of Radon in the UK and I have trained, supervised and inspected thousands of membrane installations to protect structures from ingress of water and ground gases. I have also written hundreds of system specifications in accordance with BS8102 for structural waterproofing and ground gas protection systems in accordance with BRE digests and BS8485.

I am a Certified Surveyor in Structural Waterproofing, CSSW, and within the scope of designing a structural waterproofing system according to BS8102:2009, for which I am qualified, is the need to consider protection from ground gas and hydrocarbons. I am well versed in BS8485:2015, BRE 212, BRE211, BRE214 and the NHBC guidance on evaluation of development proposals on sites where methane and Carbon Dioxide are present.

Capital Valley Plastics, the manufacturers of the Radbar ground gas and hydrocarbon protection systems, employ me as a technical consultant, services include producing CAD details, provide on-site training and inspections.

I have independently validated many ground gas protection installations, including the high profile Land Rover Jaguar Facility and many NHBC backed projects.

In August 2012 I established Atal Cyf, an independent company specialising in structural waterproofing and ground gas protection. Part of the services we provide is the design and supply of BBA certified systems, installation inspections, validation reports and installations of structural waterproofing and ground gas protection systems. We have Sika, Triton and Newton approval. As a company we hold PI. In August 2019, we established Basement Waterproofing Systems to carry out the installation works whom are registered with Construction line and carry the necessary insurances.

Ian Price Statement Of Expertise

Relevant Qualifications

- 1st Class BEng Hons Civil Engineering
- Level 3 Award in Assessing Competence in the Work Environment
- Level 2 NVQ Diploma in Sub-structure Work Occupations (Construction) - Installation of Gas Membranes
- Certified Surveyor in Structural Waterproofing (CSSW)
- Skilled Worker CSSW Card
- Attendance of Ground Gas, Getting It Right course by the PCA
- Attendance of Verification of Gas Protection Systems course by CL:AIRE at the MEC offices in Blackburn.

Relevant Experience

Validation of ground gas protection systems in accordance with CIRIA C735 for major UK contractors including Speller Metcalfe, Bouygues, BAM, Colmore Tang, Redrow Homes, O'Halloran & O'Brien and Knights Brown.

Steering committee of two CIRIA guidance documents:

- Retrofitting ground gas protection measures in existing or refurbished buildings (C795)
- Hazardous ground gas - a site management guide (C801)

Experience solely as a waterproofing and ground gas protection specialist since November 2013.

Experience on 3000 projects providing specifications, detailing, pricing and verifying installations of waterproofing and ground gas protection systems.

Experience of installation of ground gas membranes onsite.

Well versed in the following ground gas protection guidelines/digests:

- BS8485:2015 - Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings
- BRE 212 - Construction of new buildings on gas-contaminated land
- BRE211 - Radon: Protective measures for new buildings
- BRE214 - Protective measures for housing on gas contaminated land
- NHBC - Guidance on evaluation of development proposals on sites where methane and Carbon Dioxide are present
- CIRIA C735 - Good practice on the testing and verification of protection systems for buildings against hazardous ground gases

Preparation of 100s of NBS style ground gas specifications with project specific CAD details from analysis of ground investigation reports to comply with BS8485:2015 and other requirements.

Onsite training delivered for the installation of ground gas membranes to 100s of installers throughout the UK.

Experienced in preparation of RAMS and setting work schedules.

Familiar with BBA certified materials in the UK construction market, their installation and use.

Matthew Poynter Statement Of Expertise

Matthew Poynter works as an external technical advisor for Atal and completes ground gas protection validation for ASW Design as part of his role when required. Matthew started working at Atal in August 2018; Matthew began his career at Atal as a Technical Estimator, which gave him a good grounding in waterproofing and ground gas protection. In one year, he was fully trained and proficient in preparing waterproofing and ground gas protection drawings and specifications, reading construction drawings, providing technical advice via email and telephone, measuring construction drawings, providing estimates, and drafting warranties.

After a year of office-based working, in 2019, Matthew's natural progression was to go out onto the road as an external technical advisor. Since then, he has provided onsite training across the UK on 100s of waterproofing and ground gas protection projects. Matthew returns to every site to ensure the installation is per Atal's details and datasheets provided. He is highly proficient in reporting observations and providing recommendations in line with design details and product literature using Fieldwire reporting system. All of Matthew's training has been in-house.

Matthew has completed ground gas protection validations across the UK for contractors, including Bouygues, MPB Structures and Speller Metcalfe.

Matthew's background before working in structural waterproofing and ground gas protection was in the aerospace industry, working at UTC Aerospace and Rolls Royce, in technical administration and configuration control. He has a bachelor of science degree in aircraft maintenance. Matthew emigrated to Australia for 2 years, where he worked as a concrete formworker, steel fixer, and groundworker. Matthew has a national diploma in engineering.