

Our Ref: 21-388.02L

FAO Chris Duignan
Brierstone Limited
Brindley House
Lowfields Business Park
Elland
West Yorkshire
HX5 9HF

22nd June 2022

Dear Chris,



Arc Environmental Ltd
Solum House
Unit 1 Elliott Court
St Johns Road
Meadowfield
Durham
DH7 8PN

Re: Gas Membrane Validation for Plots 1 to 6, Elbut Lane, Birtle, Heywood, BL9 7TU

As requested by Brierstone Limited, a number of site visits were conducted between the 11th April 2022 and 21st June 2022 by a suitably qualified and experienced senior geo-environmental engineer from Arc Environmental Ltd. in order to independently validate the implementation of a hazardous ground gas protective membrane within the proposed housing development, located at Elbut Lane, Birtle, Heywood.

In order to ensure that the construction / installation of the gas protective membrane has been properly implemented, validation works were undertaken comprising the inspection of the construction and installation of the gas barrier membrane, in general accordance with BS8485:2015 & A1:2019 - Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings, CIRIA C735:2014 - 'Good Practise on the Testing and Verification of Protection Systems for Buildings Against Hazardous Ground Gas' and drawings provided by the Design Team (attached).

The inspection details are summarised in Table 1 below and on the following page. Photographic record sheets for the inspections are also attached with this report.

Table 1

1. Development Summary		
1.1	Type of development and building/block inspected	Residential Development: 6 no. detached dwellings.
1.2	Foundation type	Conventional strip foundations with block and beam suspended floor.
1.3	Gas protection type	Installation of a hazardous ground gas barrier membrane placed above the block and beam suspended floor with ventilated sub-floor void.
2. Ventilation		
2.1	Passive Ventilation	Ventilated sub-floor void below block and beam floor. Swan neck telescopic vents installed at regular intervals around building exterior.
3. Gas Barrier Membrane		
3.1	Condition of gas membrane (floor area)	The gas membrane had been swept and was free of any building debris. The general condition of the gas membrane was noted to be very good.
3.2	Gas membrane types	Visqueen Gas Barrier is a multi-layer reinforced polyethylene membrane with an integral 20 micron aluminium foil. For ease of identification on site Visqueen Gas Barrier is coloured blue on one side and silver on the reverse. The barrier combines strength and performance with flexibility and easy installation – product specifications are attached with this report. All gas membrane products utilised on this site were kept within a sealed container to protect from dirt and damage. The gas barrier membrane was installed by specialist installers – Heat and Screed.

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Re: Gas Membrane Validation for Plots 1 to 6, Elbut Lane, Birtle, Heywood, BL9 7TU (Cont'd)

Table 1 (cont'd)

3. Gas Barrier Membrane (cont'd)		
3.3	Extent of Coverage	Visqueen Gas Barrier was confirmed across the entire floor areas.
3.4	Membrane Condition	The condition of the Visqueen Gas Barrier membrane was confirmed as being generally good. No minor tears or punctures were evident over the floor area.
3.5	Joining Details	The Visqueen Gas Barrier was primarily jointed to further gas barrier sheets using double sided butyl tape. In some cases a secondary seal of Visqueen Single-sided Foil Tape or Visqueen Gas Resistant Self-Adhesive Membrane (GR-SAM) was utilised. The gas barrier membrane was in turn lapped onto and joined to the Gas Resistant Damp Proof Course (GRDPC) with double sided butyl tape. All overlaps were equal to or greater than 150mm.
3.6	Damp Proof Membrane	Visqueen Gas Barrier Membrane also used as a damp-proof membrane (in accordance with manufacturers specifications) across the whole of the floor area. Confirmed all laps and joints sealed to manufacturers' specifications.
3.7	Service Entries, Seals	Visqueen Pre-formed Top Hats were utilised to seal service entries and these in turn were sealed to the gas barrier membrane and service pipe using Visqueen Gas Resistant Self-Adhesive Membrane (GR-SAM), Visqueen Single-sided Foil Tape and jubilee clips where required.

Based on the inspections carried out by Arc Environmental Ltd., this letter confirms that the installation of the gas membrane barrier has been satisfactorily installed within the abovementioned plots at the Elbut Lane, Birtle site and as such has PASSED inspection.

I trust the information we have provided to you is to your satisfaction. However, if you require any further information or clarification, please do not hesitate to contact us.

Yours Sincerely

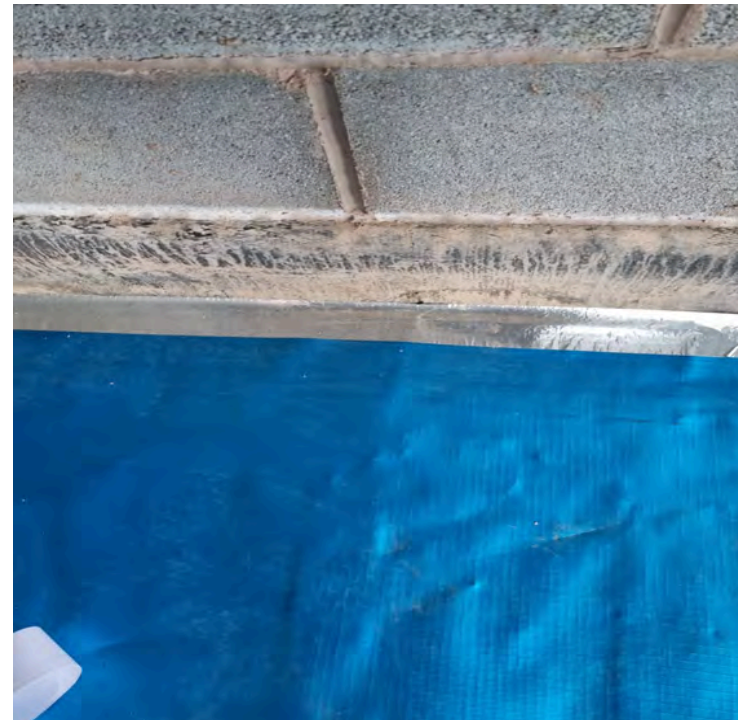
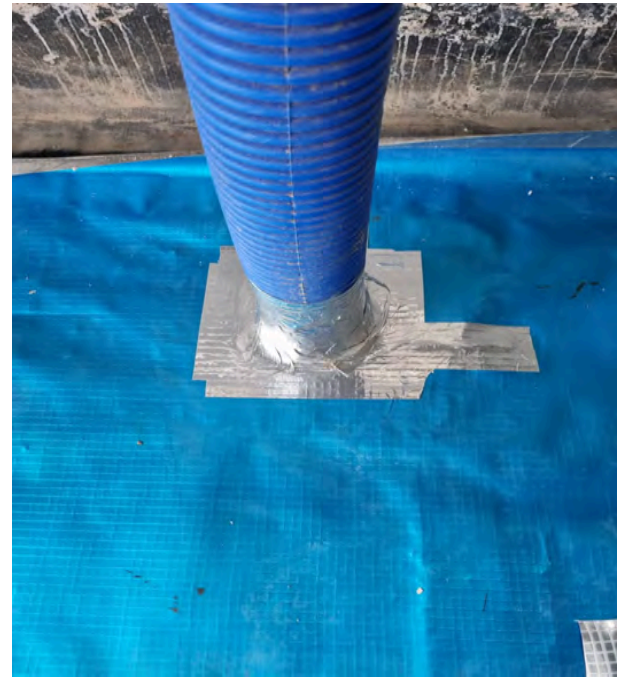
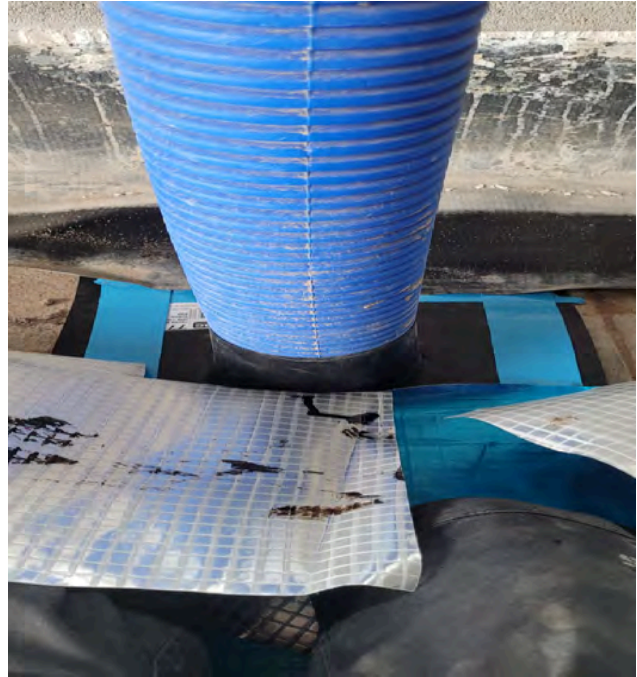
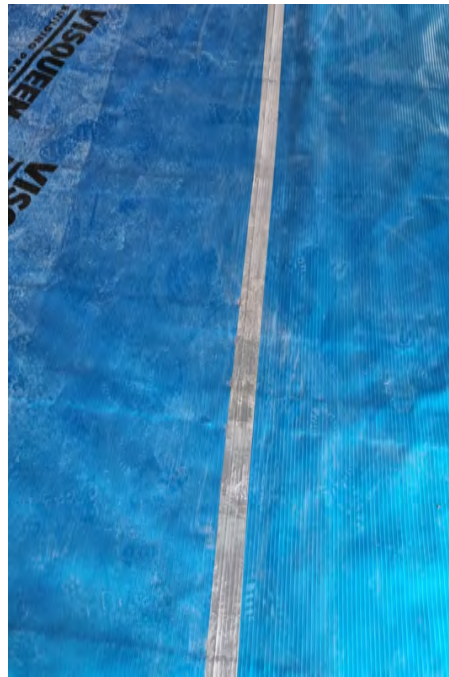


.....
For and on behalf of Arc Environmental Ltd
Geoff Heron
Senior Field Technician

Photographic Record Sheets

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rev.	date	amendments	drawn	chkd	

Client:
Brierstone Ltd

Project Title:
**Proposed Residential Development
Elbut Lane, Birtle, Heywood, BL9 7TU**

Drawing Title:
**Photographic Record Sheet 1
Gas Membrane Validation
(Plots 1 & 2)**

Scale at A3: | Date: 22.06.22 | Drawn by: | Approved by:

Job Ref: | Drg no: | Rev:
21-388



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rev.	date	amendments	drawn	chckd

Client:
Brierstone Ltd

Project Title:
Proposed Residential Development
Elbut Lane, Birtle, Heywood, BL9 7TU

Drawing Title:
Photographic Record Sheet 2
Gas Membrane Validation
(Plots 3 & 4)

Scale at A3: | Date: 22.06.22 | Drawn by: | Approved by:

Job Ref: | Drg no: | Rev:
21-388



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rev.	date	amendments			drawn chkd

Client:
Brierstone Ltd

Project Title:
Proposed Residential Development
Elbut Lane, Birtle, Heywood, BL9 7TU

Drawing Title:
Photographic Record Sheet 3
Gas Membrane Validation
(Plots 5 & 6)

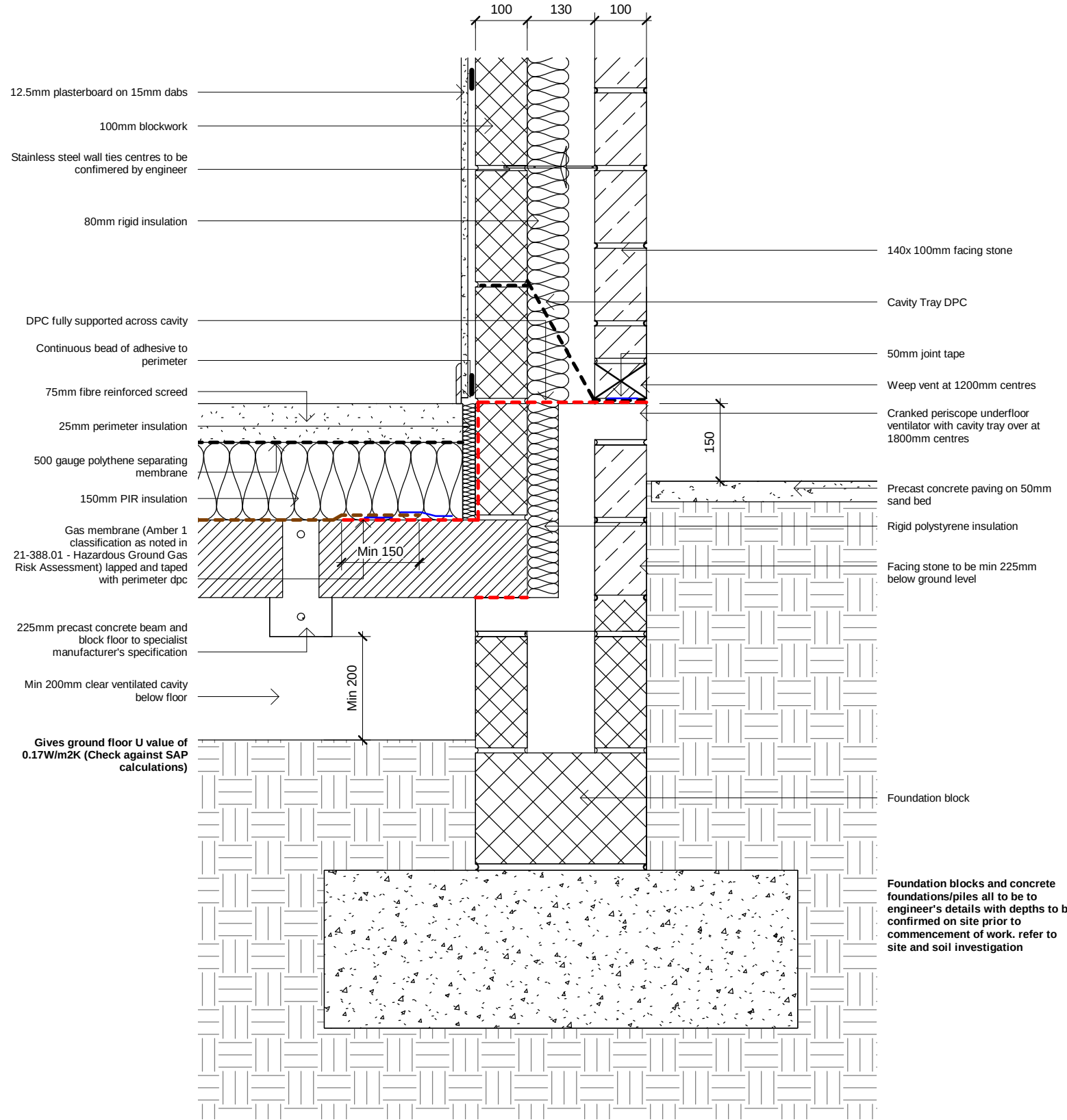
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21-388

Design Drawings

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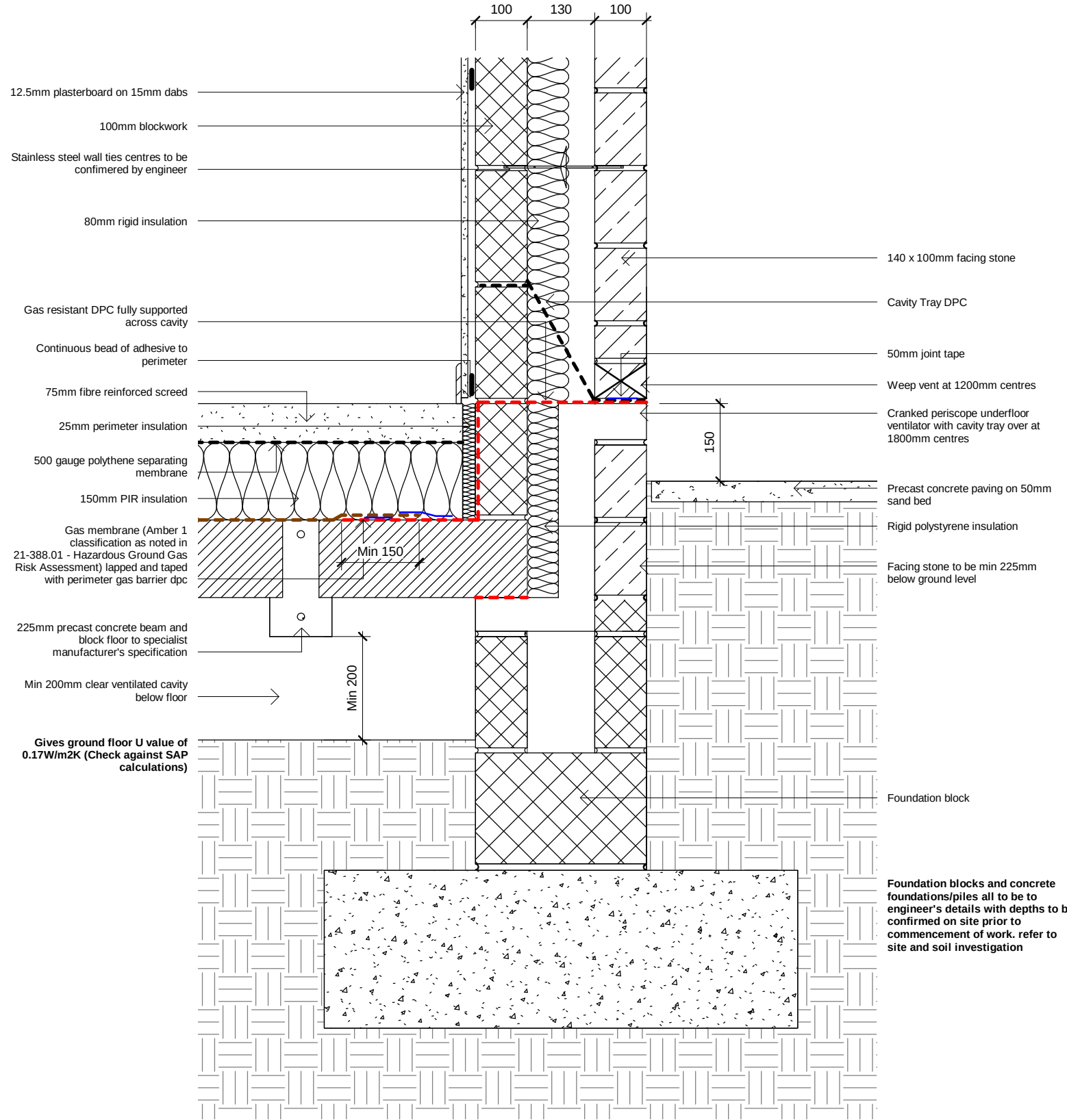




Ground Floor Detail
1:10

Rev	Date	Description
A	23.09.21	Bristone Comments

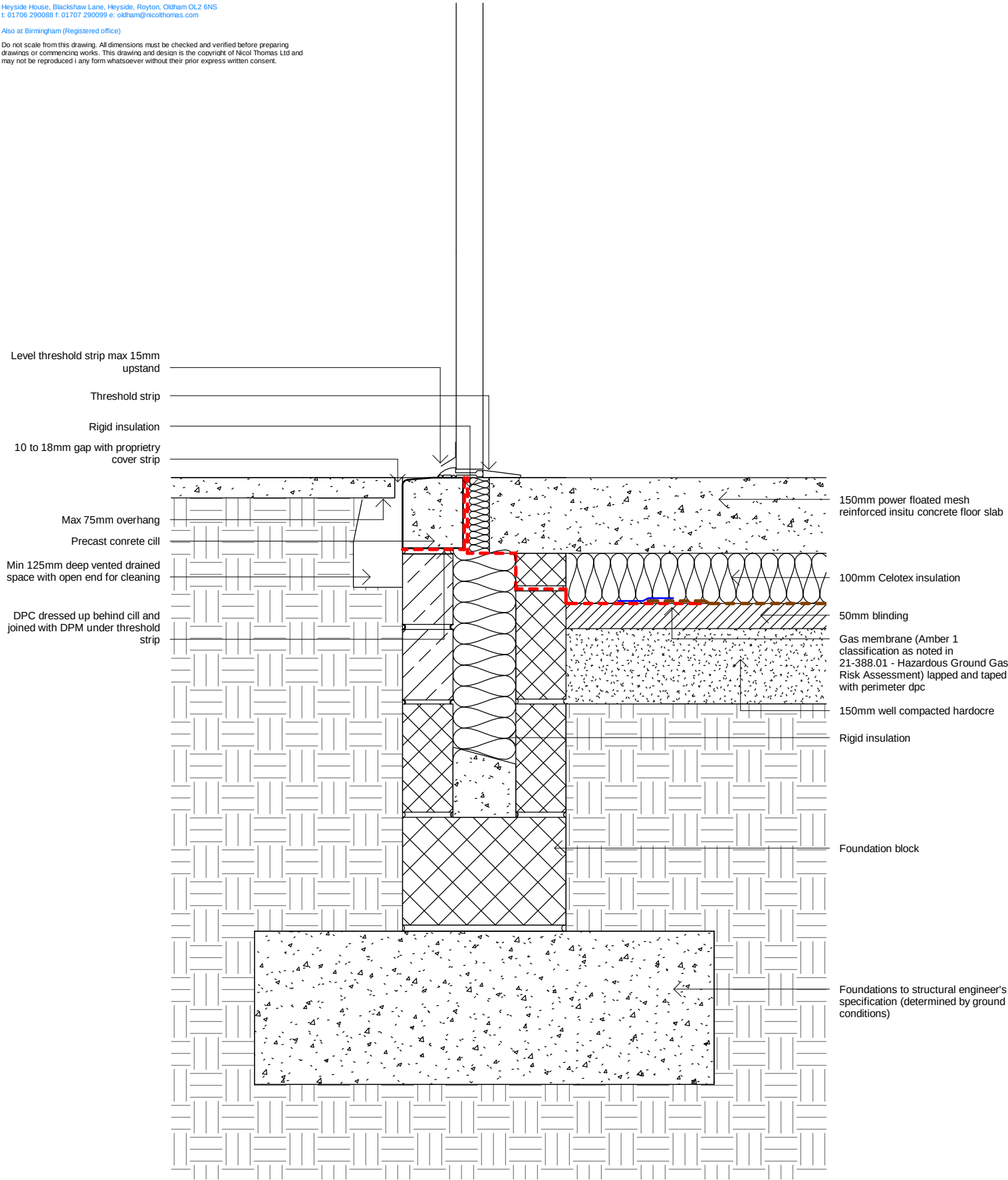
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Job	Birtle Riding School, Elbut Lane		
Drawing title	GROUND FLOOR DETAIL		
Project number	M4839	(40)01	Rev A
Scale	1 : 10	@ A4	
Date	09/20/21		
Drawn by	KS	Checked by	GRF



Ground Floor Detail
1:10

Rev	Date	Description
A	23.09.21	Bristone Comments
B	18.10.21	Power floated finish, gas DPC

Client	Bristone		
Job	Birtle Riding School, Elbut Lane		
Drawing title	GROUND FLOOR DETAIL		
Project number	M4839	(40)01	Rev B
Scale	1 : 10	@ A4	
Date	09/20/21		
Drawn by	KS	Checked by	GRF

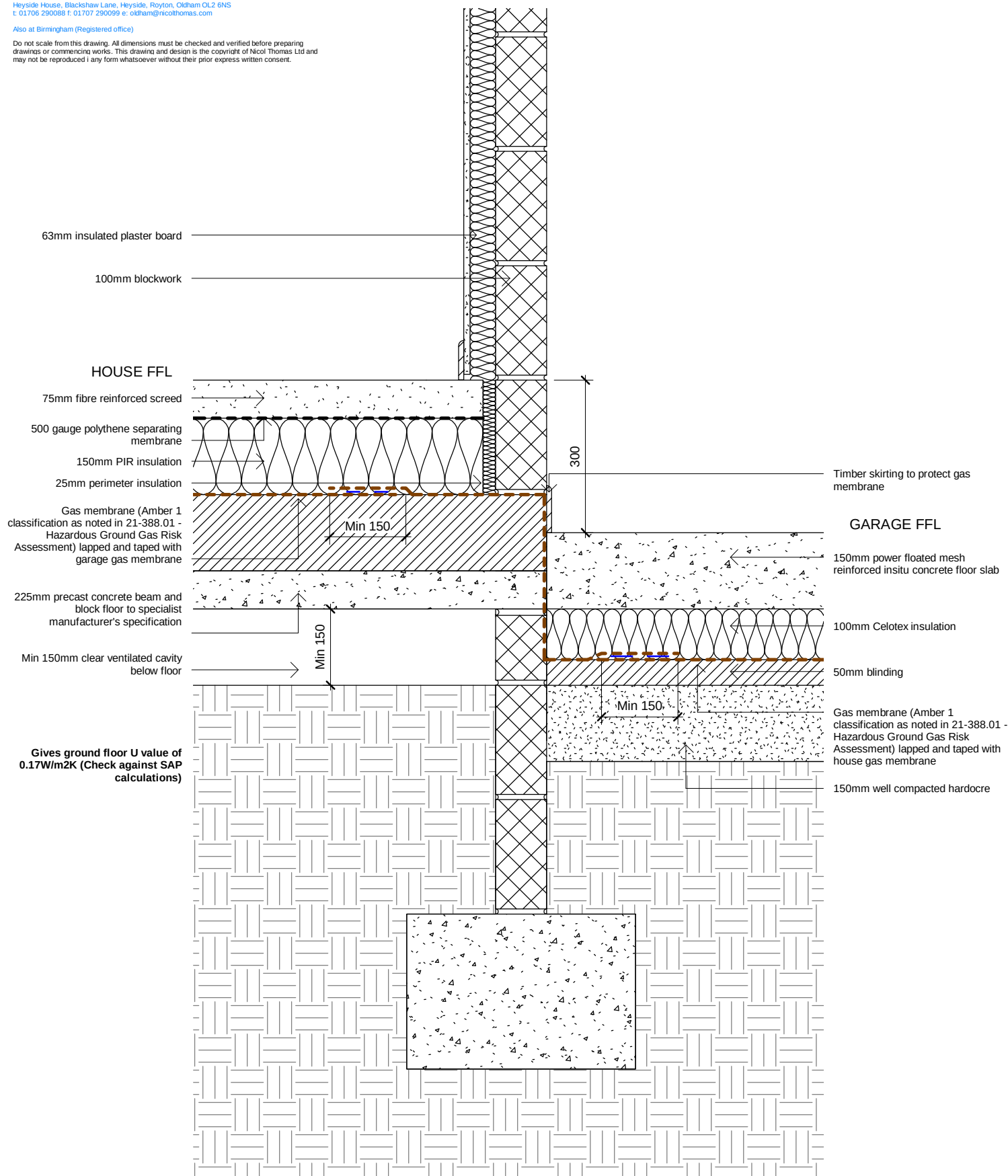


Ground Bearing Floor - Level Threshold Detail
1:10

Rev	Date	Description
A	29.09.21	130mm Cavity

Client	Bristone		
Job	Birtle Riding School, Elbut Lane		
Drawing title	GROUND BEARING FLOOR - LEVEL THRESHOLD		
Project number	M4839	(40)04	Rev A
Scale	1 : 10 @ A4		
Date	09/21/21		
Drawn by	KS	Checked by	AS

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Garage Wall Detail

1:10

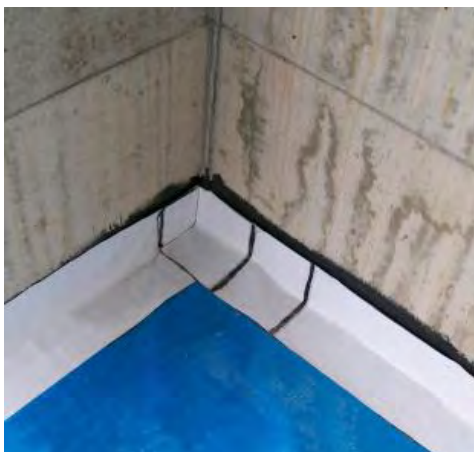
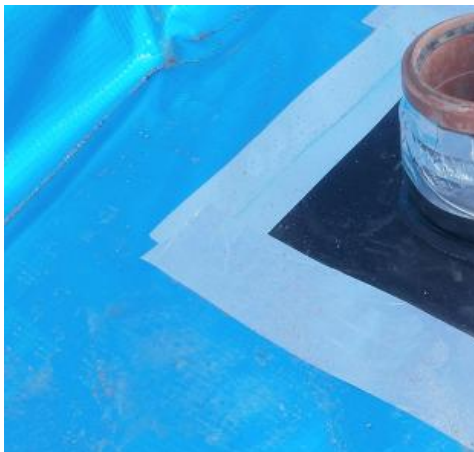
Rev	Date	Description
A	23.09.21	Bristone Comments

Client	Bristone		
Job	Birtle Riding School, Elbut Lane		
Drawing title	GARAGE WALL DETAIL		
Project number	M4839	(40)05	Rev A
Scale	1 : 10 @ A4		
Date	09/21/21		
Drawn by	Author	Checked by	Checker

Product Specifications

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VISQUEEN
BUILDING PRODUCTS



- **BBA approved, fully complies with BS8485:2015**
- **Low permeability to methane, radon and carbon dioxide**
- **Approved for use in NHBC Amber 2 applications**
- **Multi-layer reinforced LDPE membrane with aluminium core**
- **High puncture and tear resistance**

Description

Visqueen Gas Barrier is a 400 gsm multi-layer reinforced polyethylene membrane with an integral 20 micron aluminium foil that is approved for use in BS8485:2015 and NHBC Amber 2 applications. For ease of identification on site Visqueen Gas Barrier is coloured blue on one side and silver on the reverse. The barrier combines strength and performance with flexibility and easy installation. Visqueen Gas Barrier also acts as a damp proof membrane.

BS8485:2015

When risk assessing under BS8485:2015 for sites which are effected by methane and carbon dioxide then the Visqueen Gas Barrier is an ideal solution.

The membrane has been modified to be 400 gsm with the multi layer structure greatly enhanced to improve its puncture and impact performance.

Visqueen utilise a 20 microns foil to avoid issues associated with thinner (12microns) foils.

Application

The Building Regulations require that proper precautions be taken to prevent danger to health and safety when building on contaminated land. Visqueen Gas Barrier offers a safe solution for the protection of buildings against methane, radon, stythe (a gas commonly found from disused mines, also known as blackdamp), and carbon dioxide, when installed in accordance with the relevant codes of practice such as BRE, CIRIA and the Chartered Institute of Environmental Health Ground Gas Handbook

Typically these are sites previously used as coalfields, landfill or are contaminated industrial sites.

The membrane should be installed blue side up

System components

- Visqueen Double Sided Jointing Tape
- Visqueen Gas Resistant (GR) Foil Tape
- Visqueen Top Hat Units
- Visqueen TreadGUARD1500
- Visqueen Detailing Strip

Installation Guidelines

Visqueen Gas Barrier and ancillary components must be installed in accordance with the recommendations of Building Research Establishment BRE 414 "Protective measures for housing on gas contaminated land" and CIRIA C665 "Assessing risks posed by hazardous ground gases to buildings", NHB C guidelines, and the Chartered Institute of Environmental Health Ground Gas Handbook. The product is not intended for use where there is a risk of hydrostatic pressure. **The membrane should be installed blue side up**



The membrane should be installed on a compacted sand blinding layer or smooth concrete float finish. In areas where high levels of unsupported membrane occur it is recommended that Visqueen Pre Applied Membrane is used. To avoid slip or shear planes and high compressive loadings it is not recommended to take the membrane through the wall. In order to provide a continuous barrier across the cavity Visqueen Gas Resistant DPC should be taken through the blockwork and incorporated below the damp proof course cavity tray in the outer leaf.

Laps can be joined together by either using the Visqueen Gas Barrier jointing system or welded by our specialist on-site contractors.

Jointing and Sealing

Visqueen Gas Barrier should be overlapped by at least 150mm (Welded membranes can be by less than 150mm as long as the joint integrity is not compromised) and bonded with Visqueen Double Sided Tape. The joint should be secured with Visqueen Foil Backed Girth Jointing Tape. Ensure that the membrane is clean and dry at the time of jointing

Airtight seals should be formed around all service entry points. Visqueen Pre-formed Top Hat Units must be used for sealing service entry pipes. The base of the top hat should be sealed using Visqueen Double Sided Tape and Visqueen Foil Backed Girth Jointing Tape is used to secured the joint

Punctures

If the membrane is punctured or perforated, then a patch of material with identical thickness should be lapped at least 150mm beyond the limits of the puncture and bonded with Visqueen Double Sided Jointing Tape and seal with Visqueen Foil Backed Jointing Tape. Alternatively a patch can be formed using Visqueen Detailing Strip and lapped at least 150mm beyond the limits of the puncture. External and Internal corners should be round and reinforced with Visqueen Detailing Strip. Where this is not possible and the 3 dimensional shapes are complex it is recommended a pre-formed unit is used.

NB. In demanding site conditions use Visqueen GR Lap Tape as a high performance alternative to Visqueen Foil Jointing Tape.

Ventilation

When medium to high levels of ground gases are present or when the generation of gases still occurs, then an open void beneath the ground floor should be constructed, as ventilation beneath the ground floor will dilute and disperse the gases to atmosphere. Open voids are normally restricted to beam and block floors or other precast concrete floor systems, an alternative for providing ventilation to in situ concrete floor slabs is to install a Visqueen Ventilation System.

Covering

Visqueen Gas Barrier should be covered by a protective layer as soon as possible after installation. Care should be taken to ensure that the membrane is not punctured, stretched or displaced when applying a screed or final floor covering. A minimum thickness of 50mm screed is recommended. When reinforced concrete is to be laid over the barrier the wire reinforcements and spacers must be prevented from contacting the barrier.

It is recommended that the barrier is covered with Visqueen Protection Boards or screed before positioning the reinforcement. When underfloor heating is being installed, it is recommended that the barrier is positioned between the blinded hardcore and insulation. This will protect the insulation from moisture and avoid any risk of overheating the membrane.

Storage and Handling

Visqueen Gas Barrier is classified as non-hazardous when used in accordance with the relevant Code of Practice (CP 1021973). The product is chemically inert and is not affected by acids and alkalis that may be present in the



sub-soils. The material is not recommended for uses where it will be exposed to long periods of outdoor weathering as exposure to ultraviolet light will embrittle the product. Weathering will not occur when the membrane is installed in accordance with CP102 1973. Care should be taken to avoid accidental damage when handling the membrane on site. When the weather is cold, Visqueen Double Sided Jointing Tape and Visqueen Foil Backed Girth Jointing Tape should be kept in a warm, dry place until needed. Installation is not recommended below 5°C.

Technical Data and CE Mark

Visqueen Gas Barrier complies with the requirements and clauses of EN 13967 - Flexible sheets for waterproofing - Plastic and rubber damp proof sheets including plastic rubber basement tanking sheet - Definitions and characteristics.

British Board of Agreement performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control, and issued the certificate of constancy of conformity of the factory production control 0836-CPR-13/F060 applies.



Product Data

Gas Barrier
CE Mark to EN 13967

Product Data

heading	Characteristic	Test method	Units	Compliance criteria	Value or Statement
	Visible defects	EN 1850 -2	-	Pass/Fail	Pass
	Length	EN 1848-2	m	-0%/+10%	25 or 50
	Width	EN 1848-2	m	-0%/+10%	2
	Thickness	EN 1849-2	mm	-10%/+10%	0.52
	Mass	EN 1849-2	g/m2	-10%/+10%	370
	Tensile Strength - MD	EN EN12311	N	>MLV	350
	Tensile Strength - CD	EN EN12311	N/mm2	>MLV	350
	Tensile Elongation - MD	EN EN12311	%	>MLV	17
	Tensile Elongation - CD	EN EN12311	%	>MLV	15
	Joint Strength	EN12317-2	N	>MLV	332
	Watertightness 2kPa	EN 1928	-	Pass/Fail	Pass
	Resistance to impact	EN 12691	mm	>MLV	200
	Dart Impact	BS 2782	g	MDV	731
	Low temperature flexibility	EN 495-5	oC	-40	Pass
	Durability against ageing	EN 1296 and EN 1928	-	Pass/Fail	Pass
	Durability Chemical Resistance	EN 1847	-	Pass/Fail	Pass
	Resistance to tearing (nail shank) CD	EN 12310-1	N	MDV	358
	Resistance to tearing (nail shank) MD	EN 12310-1	N	MDV	368
	Resistance to static loading	EN 12730	Kg	>MLV	Pass 20
	Water vapour transmission - resistance	EN 1931	MNs/g	MDV	7000
	Water vapour transmission - permeability	EN 1931	g/m2/d	MDV	0.03
	Reaction to Fire	EN 13501-1	Class	MDV	F
	BS8485:2015 testing requirements				
	Methane Permeability	ISO15105-1	mls/m2/d/atm	Pass/Fail	<40 Pass
	Puncture CBR	BS EN ISO 12236	N	MDV	1114
	Impact resistance	EN12691	mm	MDV	1000
	Tensiles Yield strength MD	ASTM D4885-01	kN/m	MDV	12.5
	Tensiles Yield strength CD	ASTM D4885-02	kN/m	MDV	7.3
	Yield elongation MD	ASTM D4885-03	%	MDV	18
	Yield elongation CD	ASTM D4885-04	%	MDV	19
	Tear resistance - trouser method A - MD	BS ISO 34-1	kN/m	MDV	48.2
	Tear resistance - trouser method A - CD	BS ISO 34-1	kN/m	MDV	44.8
	Tear resistance - angle method B - MD	BS ISO 34-1	N	MDV	53.5
	Tear resistance - angle method B - CD	BS ISO 34-1	N	MDV	60.6





Visqueen Building Products

Visqueen is the market leader in the manufacture and supply of structural waterproofing and gas protection systems. Visqueen offers the complete package - a proven, reliable range backed by a technical support service that goes unmatched in the market - everything you would expect from a reputable and ethical company.

System Accessories

To ensure full waterproofing protection please use the following certified system components:

- Visqueen High Performance (HP) Tanking Primer
- Visqueen TreadGUARD1500
- Visqueen Protect&Drain
- Visqueen Top Hat Unit

Downloads Library

- Technical Datasheet
- Declaration of Performance
- Visqueen's Guide to CE Marking

Find your local stockist

Search our directory of Visqueen specification Stocking Centres to locate your nearest Visqueen Partner.

Distributor Support

Our specification Stocking Centres can access a free library of sales support tools, bespoke catalogues and more, [click here](#).

Technical support throughout your project

We are specialists in our field and can help you specify the correct solutions with the necessary performance levels, in accordance with building regulations.

- Nationwide site support team
- Specification advice
- Installation guidance & project sign off
- System design including CAD details



Double Sided Jointing Tape

Page 1



- Resists Moisture & Gas Ingression
- Excellent adhesion
- BBA Approved
- Part of the VisqueenPRO 2 part system

Description

Visqueen Double Sided Jointing Tape is a high performance blue double sided butyl mastic tape, supplied in 50mm x 10m rolls for damp proof membrane joints; and Visqueen Zedex Joint tape 100mm x 15m for damp proof course joints.

Application

A tape for bonding Visqueen Damp Proof Membranes (DPM) at overlaps and for bonding membranes to Damp Proof Courses (DPC) at junctions with internal and external walls.

For Visqueen Damp Proof Membranes, the joint/lap should then be sealed using VisqueenPro Single Sided Jointing Tape.

Installation

Ensure surfaces are clean and dry. Apply tape to the lap area of the laid sheet starting approx 50mm from the membrane edge. Overlap adjoining membrane by minimum 150mm and remove tape release paper. Apply pressure to the jointed area to ensure adhesion.

For Visqueen Damp Proof Membranes, the joint/lap should then be sealed using VisqueenPro Single Sided Jointing Tape.

Storage

When the weather is cold, store tape in a warm, dry place until required.

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Double Sided Jointing Tape

Appendix A



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- Visqueen TreadGUARD1500
- Visqueen Protect&Drain
- Visqueen Top Hat Unit

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- Nationwide site support team
- Specification advice
- Installation guidance & project sign off
- System design including CAD details





- **Aluminium foil to resist methane, radon, CO2 and low levels of hydrocarbon**
- **Easy to apply using traditional methods**
- **Use as part of an integral gas protection system**
- **Independently assessed**
- **Excellent physical characteristics and good cold flexibility performance**

DESCRIPTION

Visqueen Gas Resistant (GR) Damp Proof Course is a flexible polyethylene DPC with an aluminium foil designed to prevent the transmission of carbon dioxide, radon, methane and low level hydrocarbon vapours. This is in addition to the product's usage as a damp proof course. Resistance to harmful gases is achieved by an integral aluminium film.

APPLICATION

Visqueen Gas Resistant (GR) DPC should be used on any site where carbon dioxide, radon, methane or low level hydrocarbon vapours are a problem. Methane can occur in any construction on any site previously used for landfill. Such conditions can exist on household, commercial and industrial sites. Visqueen Gas Resistant (GR) DPC has excellent physical characteristics and good cold flexibility performance. It is suitable for vertical, horizontal, stepped and cavity tray applications.

Good Practice Tip

To avoid slip or shear planes it is not recommended to take membranes through the wall. In order to provide a continuous barrier across the cavity Visqueen Gas Resistant DPC should be sealed to the membrane, taken through the blockwork, up the wall and incorporated below the damp proof course on the cavity tray outer leaf

IMPORTANT

Where the DPC may be in direct contact with hydrocarbon contamination the use of Visqueen GX DPC must be considered.

The DPC must be installed with the black side facing up.

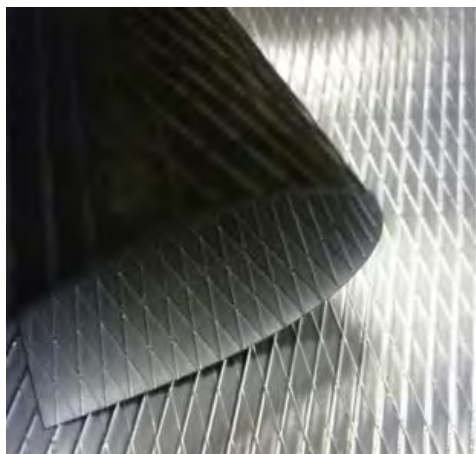
Installation

Visqueen Gas Resistant (GR) DPC should be installed in accordance with BS 8215:1991, BS 8000: Part 3, 2001 and BS 5628: Part 3, 2005. All horizontal DPCs must be bedded on both sides with fresh mortar. All DPCs must project through the full width of the wall, including any externally applied rendering and project 5mm beyond the finished external face. All cavities must be kept clear of mortar droppings and other debris. Any mortar droppings reaching the DPCs must be removed before they harden, avoiding the use of sharp objects for removal. Reference should also be made to NHB C guidance notes and BRE Report BR211.

The DPC must be installed with the black side facing up.

STORAGE AND HANDLING

Visqueen Gas Resistant (GR) DPC is classified as non-hazardous when used in accordance with the relevant British Standards. The product is chemically inert and is not affected by acids and alkalis that may be present in the subsoils.



VISQUEEN
BUILDING PRODUCTS



Gas Resistant DPC CE Mark to EN 14909

Page 2

Technical Data and CE Mark

Visqueen Gas Resistant Damp Proof Course complies with the requirements and clauses of EN 14909 - Flexible sheets for waterproofing - Plastic and rubber damp proof courses - Definitions and characteristics.

Visqueen Gas Resistant DPC products are manufactured under a Quality Management System (ISO 9001) - Certificate of Compliance reference no. 4560-3 by Knight International applies.



Gas Resistant DPC

CE Mark to EN 14909

Product Data

Product Data

Characteristic	Test method	Units	Compliance criteria	Value or Statement
Visible defect	EN 1850 -2	-	Pass/Fail	Pass
Length	EN 1848-2	m	-0%/+10%	30
Width	EN 1848-2	m	-0%/+10%	0.5 to 1
Straightness	EN 1848-2	-	Pass/Fail	Pass
Thickness	EN 1849-2	mm	-20%/+20%	0.5
Mass	EN 1849-2		-12%/+12%	257;379;475
Watertightness	EN 1928	-	Pass/Fail	Pass
Resistance to impact	EN 12691	mm	>MLV	40
Durability (artificial ageing)	EN 1296 and EN 1928	-	Pass/Fail	Pass
Durability (alkali)	Annex C	-	Pass/Fail	NPD
Resistance to low temperature	EN 495-5	?C	<MLV	-40
Resistance to tearing (nail shank)	EN 12310-1	N	MDV	280 310
Water vapour permeability properties	EN 1931		+20%	0.13
Resistance to static loading	EN 12730	Kg	>MLV	20
Reaction to fire	EN 13501-1		Class	F
Methane Permeability	ISO 7229		MDV	12
Reaction to Fire	EN 13501-1	Class	MDV	F





Visqueen Building Products

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System Accessories

To ensure full waterproofing protection please use the following certified system components:

- Visqueen High Performance (HP) Tanking Primer
- Visqueen TreadGUARD1500
- Visqueen Protect&Drain
- Visqueen Top Hat Unit

Downloads Library

- Technical Datasheet
- Declaration of Performance
- Visqueen's Guide to CE Marking

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We are specialists in our field and can help you specify the correct solutions with the necessary performance levels, in accordance with building regulations.

- Nationwide site support team
- Specification advice
- Installation guidance & project sign off
- System design including CAD details



Single Sided Jointing Tape

Page 1



- Twice the adhesive strength of rival tapes - see datasheet for test results
- Independently tested for peel and adhesion
- Crossweave film for excellent anti-tear properties
- Part of the BBA approved DPM Jointing system

Description

A cross weave glass fibre reinforced tape coated with a high tack aggressive adhesive system for sealing laps in damp proof membranes. When used in conjunction with Visqueen Double Sided Jointing tape, the system performs a BBA (Cert 94/3009) approved watertight seal.

Application

VisqueenPro Single Sided Jointing tape is for sealing Visqueen Damp Proof Membranes at overlaps and for sealing membranes to Visqueen Damp Proof Courses at junctions with internal and external walls.

Peel Adhesion

VisqueenPro Single Sided Jointing Tape peel adhesion testing was conducted to BS EN 60454-2 2007 at an independent UKAS accredited test house at two temperatures - 23oC and 5oC. Five alternative tapes including a PP and cloth were also tested.

The results are shown on the table below. The test results indicated that VisqueenPro Single Sided Tape had twice the adhesive strength of the nearest alternative.

Installation

Ensure surfaces are clean and dry. Apply tape equidistant over the bonded membrane lap. Apply pressure to the tape to ensure adhesion. When the weather is cold, store tape in a warm, dry place until required. Installation is not recommended below 5oC.

VISQUEEN
BUILDING PRODUCTS



Single Sided Jointing Tape

Appendix A



Visqueen Building Products

Visqueen is the market leader in the manufacture and supply of structural waterproofing and gas protection systems. Visqueen offers the complete package - a proven, reliable range backed by a technical support service that goes unmatched in the market - everything you would expect from a reputable and ethical company.

System Accessories

To ensure full waterproofing protection please use the following certified system components:

- Visqueen High Performance (HP) Tanking Primer
- Visqueen TreadGUARD1500
- Visqueen Protect&Drain
- Visqueen Top Hat Unit

Downloads Library

- Technical Datasheet
- Declaration of Performance
- Visqueen's Guide to CE Marking

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Top Hat Unit

Page 1



- Provides an effective seal around service pipe penetrations

Description

Visqueen Top Hat Units are used to provide an effective seal around service pipe penetrations. They are available in a range of sizes, the typical size being 110mm in diameter.

Application

Airtight seals should be formed around all service entry points. Visqueen Pre-formed Top Hat Units are available for sealing around pipe entries. The base of the pre-formed unit should be sealed using Visqueen Double-sided Jointing Tape and Visqueen Girth Jointing Tape.

Please Note:

When ordering your Top Hat Units, please provide the outside diameter of your pipe for the correct Top Hat fitting.

Installation

Procedure

Cut a circular hole in the membrane as close as possible to the pipe, or pipe socket. Ensure that pipe penetrations do not occur at joints in the membrane.

With the pipe in position, slide the Visqueen Pre-formed Top Hat Unit over the pipe (various diameters are available – 110mm being the most common).

Mark the extent of the square horizontal skirt over the membrane and also mark the line of the top of the top hat unit around the pipe.

Raise the top hat unit and cut four lengths of Visqueen Double Sided Jointing Tape, one for each side of the horizontal skirt, allowing for an overlap at each corner. Cut one length to go round the pipe.

Start to remove the protective paper from the double-sided tape around the pipe and raise it up at an angle so that it will project above the top hat unit when it is stuck to the membrane.

Release the protective paper from each of the four lengths of double-sided tape. Lower the top hat unit, ensuring that the free end of the protective paper around the pipe is reachable, and seal the horizontal skirt to the membrane.

Gradually remove the remainder of the protective film from the double-sided tape around the pipe.

Seal the junction of the horizontal skirt and the membrane with Visqueen Girth Jointing Tape and secure the top hat unit to the pipe with a jubilee clip.



Top Hat Unit

Appendix A

About Visqueen

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Complete Range, Complete Solution

- [Structural Waterproofing](#)
- [Damp Proof Course](#)
- [Damp Proof Membranes](#)
- [Gas Protection and Gas Venting](#)
- [Vapour Control Layers](#)
- [Stormwater Protection](#)

Download Library

- [Technical Datasheet](#)
- [Standard Details](#)
- [Technical Service](#)
- [Visqueen Gas Protection Brochure](#)
- [NBS Clauses](#)
- [BBA Certificates](#)
- [Material Safety Datasheets](#)
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Gas Protection CPD

The specification, technical design, and installation of gas protection systems, enabling the sustainable regeneration of brownfield sites.



Structural Waterproofing CPD

The specification, technical design, and installation of structural waterproofing systems for protection against water and damp ingress in both above and below ground projects.



Visqueen Training Academy

We are now able to offer exclusive in depth training opportunities on a wide variety of Visqueen products at our Training Academy.



Visqueen Special Projects

We provide high-level expertise, comprehensive support and experience in all types of waterproofing and gas protection.



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