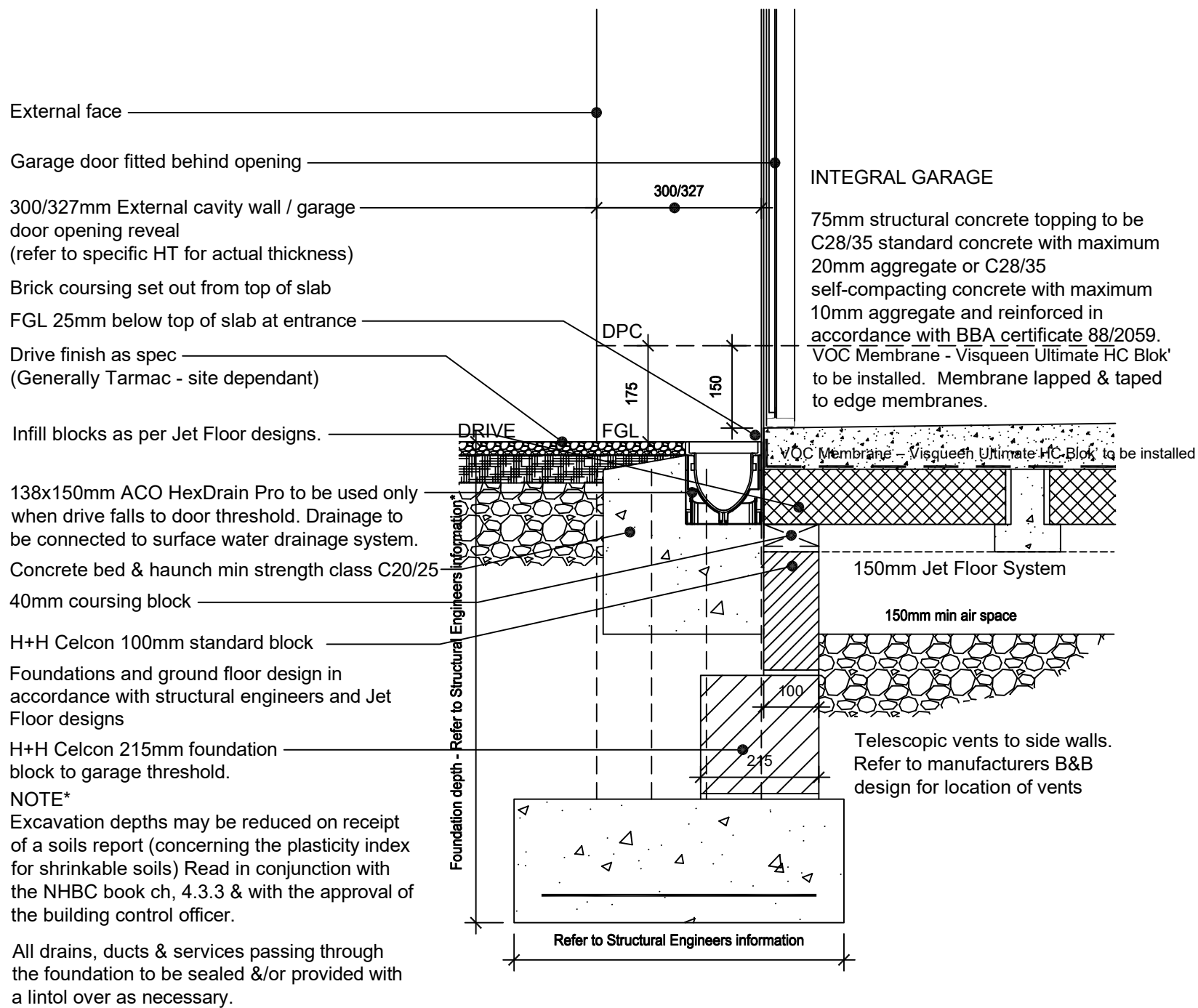


APPENDIX A

Gas Protection Detail



Section showing integral garage door thresh - door fitted behind opening
(Refer to details DB SD06-213, DB SD06-214 & DB SD06-215)

EXTERNAL REFERENCE :

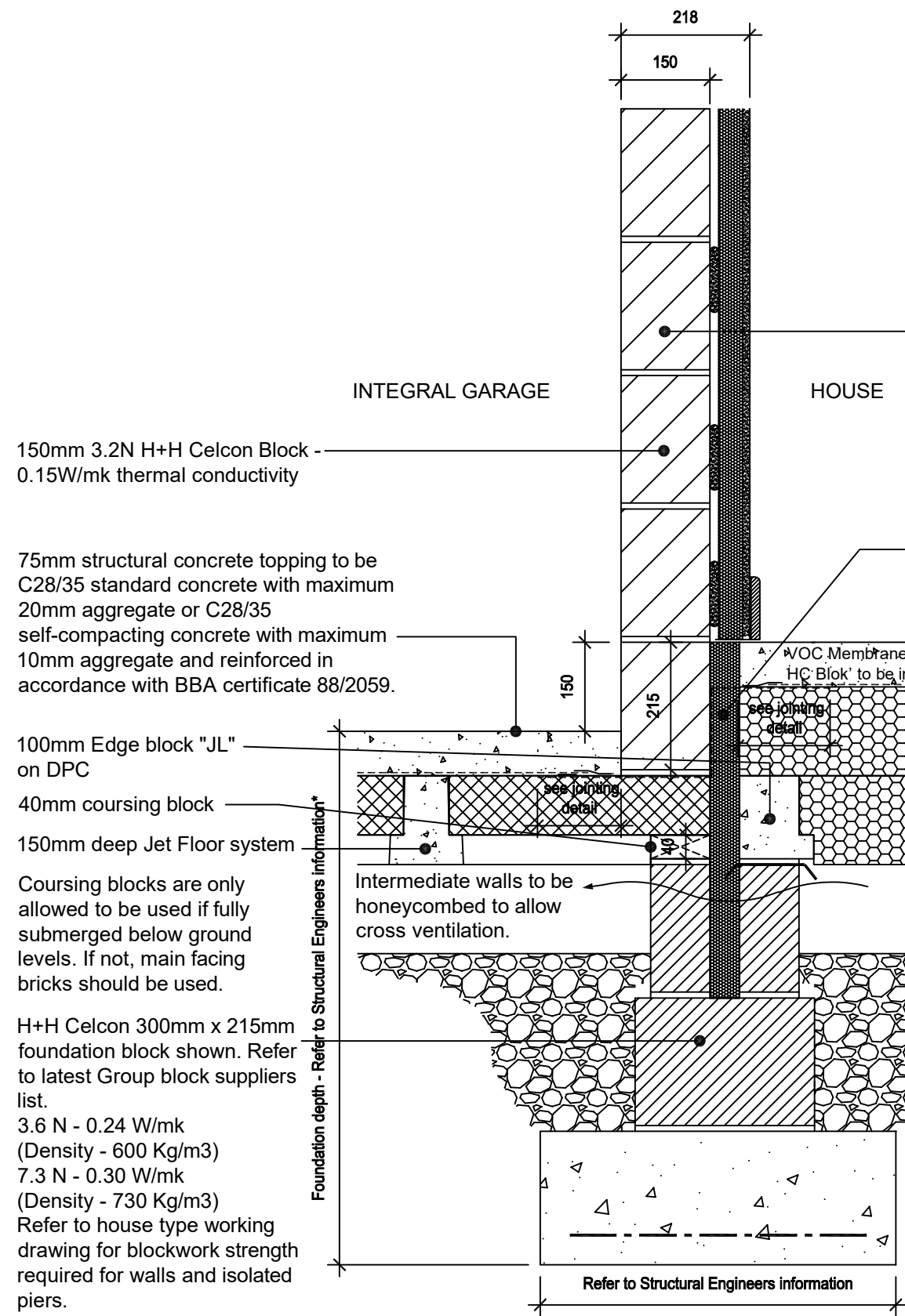
Brand: **BARRATT - WALDMERS WOOD**
Range: **2016**
Title: **Jet Floor int. garage door thresh - ACO & gas membrane**
Detail No: **BM-GM05-204**
Drawn: **SAH** Checked: **SAH** Scale: **1:10** Date: **Jan 23**

Date:
13.05.25

Description:
GAS_MEMBRANE_SPEC_ADDED

Rev:
A


BARRATT
MANCHESTER DIVISION



INTERNAL WALL/GARAGE FLOOR JUNCTION - BEAM & BLOCK TO HOUSE & GARAGE FLOOR

150mm 3.2N H+H Celcon Block -
0.15W/mk thermal conductivity

75mm structural concrete topping to be
C28/35 standard concrete with maximum
20mm aggregate or C28/35
self-compacting concrete with maximum
10mm aggregate and reinforced in
accordance with BBA certificate 88/2059.

100mm Edge block "JL"
on DPC

40mm coursing block

150mm deep Jet Floor system

Coursing blocks are only
allowed to be used if fully
submerged below ground
levels. If not, main facing
bricks should be used.

H+H Celcon 300mm x 215mm
foundation block shown. Refer
to latest Group block suppliers
list.

3.6 N - 0.24 W/mk
(Density - 600 Kg/m³)

7.3 N - 0.30 W/mk
(Density - 730 Kg/m³)

Refer to house type working
drawing for blockwork strength
required for walls and isolated
piers.

Foundation depth - Refer to Structural Engineers information*

Refer to Structural Engineers information

HOUSE

INTEGRAL GARAGE

Internal walls to garage to be 150mm
Aircrete blockwork faced with 53mm
Gyproc ThermaLine PIR Board on 15mm
plaster adhesive dabs.
Continuous dabs at board perimeters -
see air leakage detail for positioning.

50mm TE Alreflex 'Platinum'
Board to slab perimeter

75mm structural concrete topping to be
C28/35 standard concrete with maximum
20mm aggregate or C28/35
self-compacting concrete with maximum
10mm aggregate and reinforced in
accordance with BBA certificate 88/2059.
The topping is to be laid as soon as
possible after the installation of the
polystyrene components.

150mm Structural Overlay sheet (Grey)
below VOC Membrane - Visqueen Ultimate
HC Blok'

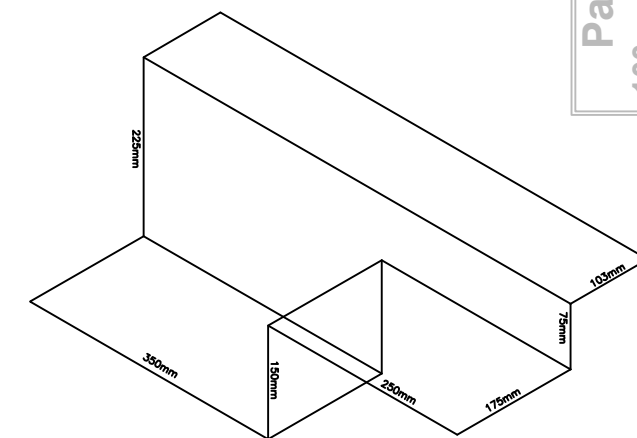
"Wide" or "Narrow" Poly blocks. Beam
spacing is set with the relevant "Wide" or
"Narrow" TS End Space Blocks. Refer to
plot specific designs.

On some sites it may be possible to use
site won material as fill instead of
hardcore. This material needs to meet the
requirements of NHBC Standards 5.1.9
and must be approved as being suitable
for use by the site groundworker and site
Structural / Civil Engineer.

NOTE*

Excavation depths may be reduced on
receipt of a soils report (concerning the
plasticity index for shrinkable soils) Read
in conjunction with the NHBC book ch,
4.3.3 & with the approval of the building
control officer.

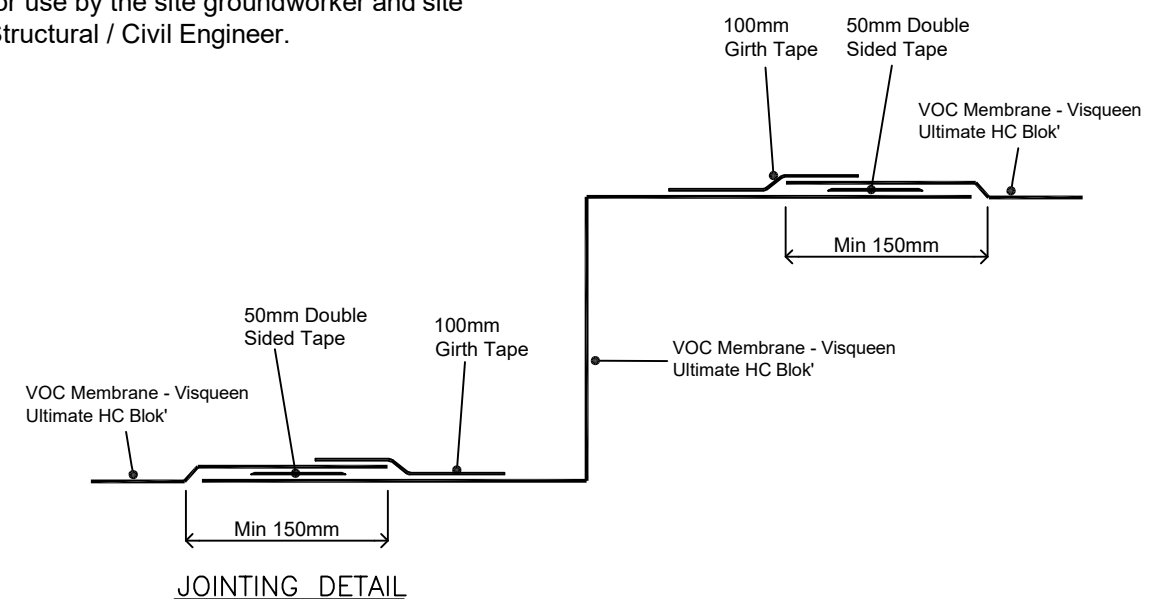
All drains, ducts & services passing
through the foundation to be sealed &/or
provided with a lintel over as necessary.



Part L
100mm Cavity
"X" Drawings

Gas Resistant Garage External Wall to Semi Exposed Wall Cavity Tray

All Party Wall units are made to Order and
should be ordered in sufficient time to allow
manufacture.



EXTERNAL REFERENCE : 22/029/GW01 ($\psi = 0.053$ W/mk)

Brand: **BARRATT - WALDMERS WOOD**

Range: **2016**

Title: **Jet Floor Integral Garage Wall Detail - Gas Membrane**

Detail No: **BM-GM05-206**

Drawn: **SAH** Checked: **SAH**

Scale: **1:10**

Date: **Jan 24**

Date: 13.05.25

Description: GAS_MEMBRANE_SPEC_ADDED

Rev: A



BARRATT
MANCHESTER DIVISION

Part L
100mm Cavity
"X" Drawings

Composite front door with weather bar and compression weather strip.

Standard mobility threshold.

DPC min. 150mm above ramp.

I.G / Ian Firth 2 part synthetic cill with 30mm overhang

DPC sandwiched in joint below cill.

Gradient 1 in 20.

Paving slab.

Perpend to be left open to facilitate drainage.

30mm P34 insulation strip

100mm thick Thermal Economics Platinum Ground Floor Insulation Board cut to suit 110mm cavity and to fill the cavity at door opening only.

Lean mix cavity fill

H+H Celcon 325mm x 215mm foundation block shown. Refer to latest Group block suppliers list.

3.6 N - 0.24 W/mk
(Density - 600 Kg/m³)

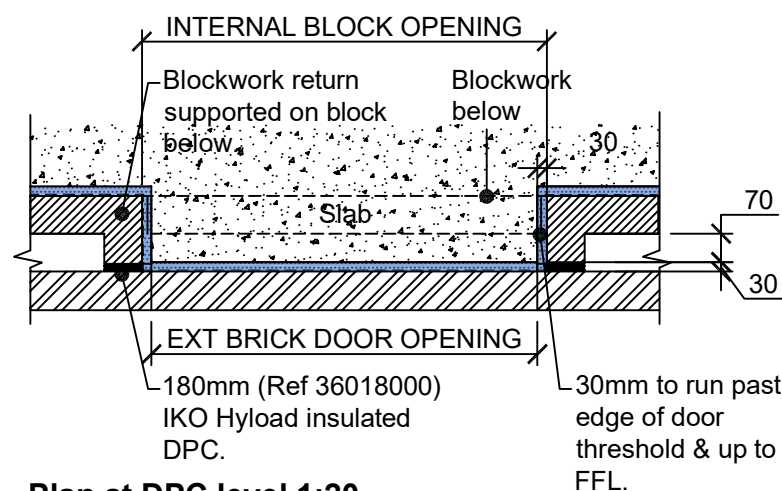
7.3 N - 0.30 W/mk
(Density - 730 Kg/m³)

Refer to house type working drawing for blockwork strength required for walls and isolated piers.

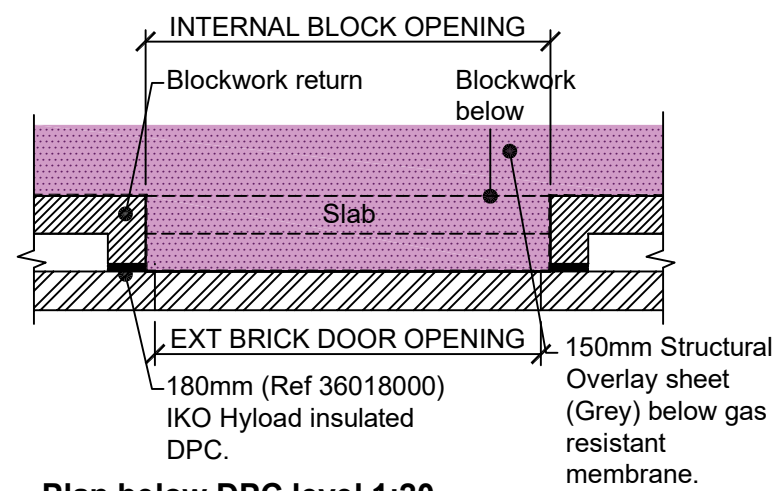
Coursing blocks are only allowed to be used if fully submerged below ground levels. If not, main facing bricks should be used.

Scale 1:10

Colours shown for clarity only



Plan at DPC level 1:20



Plan below DPC level 1:20

Ian Firth internal transition piece shown. Transition piece clips into back of door cill cut to full width of reveal between skirting boards and is bedded on mastic sealant. No screw fixings required.

Alternative Aluminium internal transition ramp from Ian Firth is available if required, Ref - STO844INRAMP (844mm long) or STO920INRAMP (920mm long). Longer lengths are available if level access is required to rear french doors. Sealed with mastic along each edge and secured to floor with 3 no screws for standard lengths referenced above.

VOC Membrane - Visqueen Ultimate HC Blok' taken up back of insulation and lapped under DPC.

75mm structural concrete topping to be C28/35 standard concrete with maximum 20mm aggregate or C28/35 self-compacting concrete with maximum 10mm aggregate and reinforced in accordance with BBA certificate 88/2059. The topping is to be laid as soon as possible after the installation of the polystyrene components.

150mm Structural Overlay sheet (Grey) below VOC Membrane - Visqueen Ultimate HC Blok'

"Wide" or "Narrow" Poly blocks. Beam spacing is set with the relevant "Wide" or "Narrow" TS End Space Blocks. Refer to plot specific designs.

On some sites it may be possible to use site won material as fill instead of hardcore. This material needs to meet the requirements of NHBC Standards 5.1.9 and must be approved as being suitable for use by the site groundworker and site Structural / Civil Engineer.

NOTE*

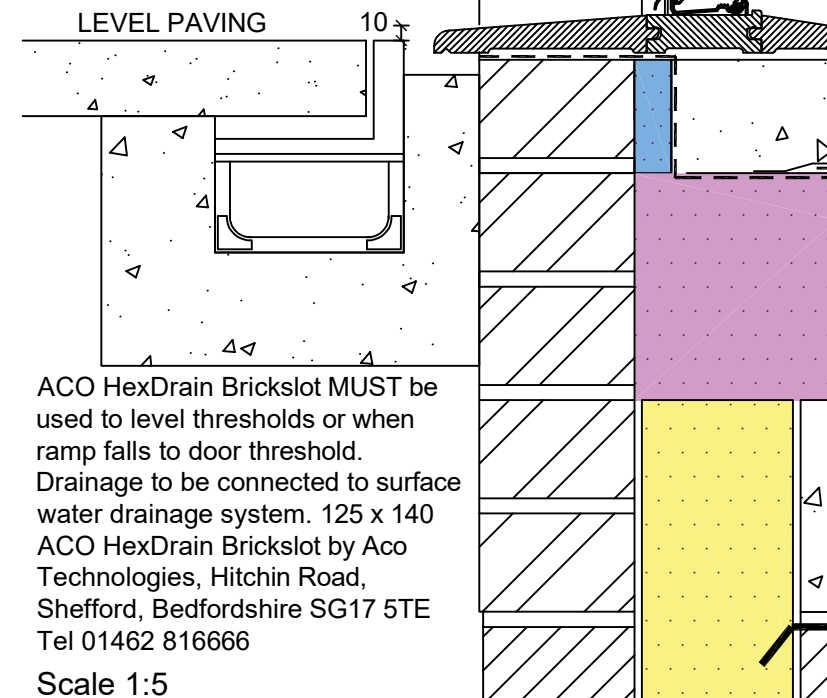
Excavation depths may be reduced on receipt of a soils report (concerning the plasticity index for shrinkable soils) Read in conjunction with the NHBC book ch, 4.3.3 & with the approval of the building control officer.

All drains, ducts & services passing through the foundation to be sealed &/or provided with a lintel over as necessary.

ACO HexDrain BrickSlot to be laid on concrete bed and surround

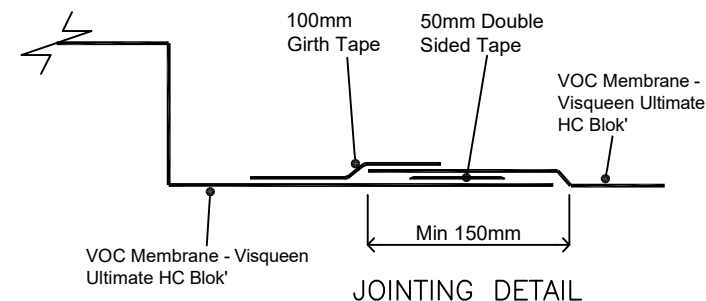
10mm cill upstand to arrest water flow during heavy rain

LEVEL PAVING

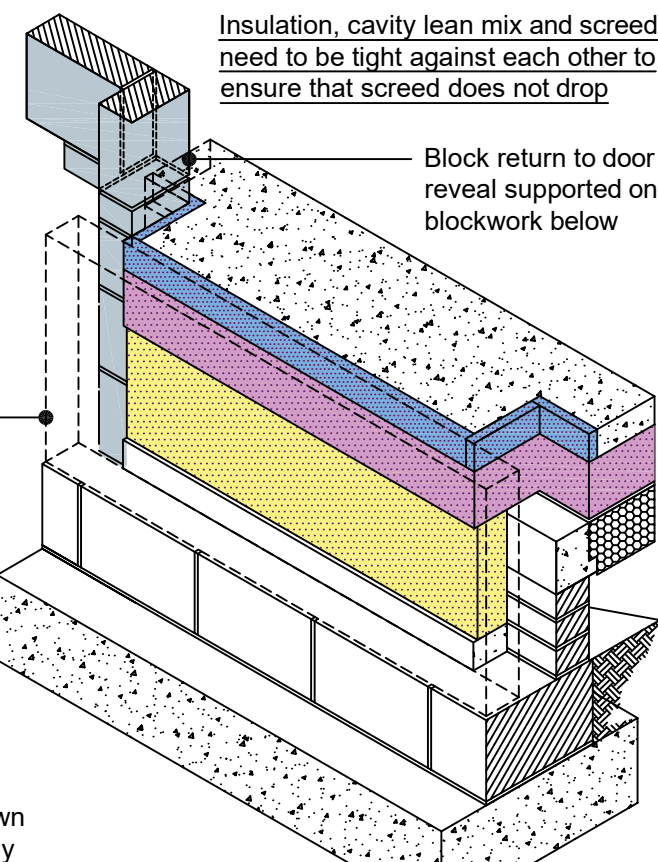


ACO HexDrain Brickslot MUST be used to level thresholds or when ramp falls to door threshold. Drainage to be connected to surface water drainage system. 125 x 140 ACO HexDrain Brickslot by Aco Technologies, Hitchin Road, Shefford, Bedfordshire SG17 5TE Tel 01462 816666

Scale 1:5



JOINTING DETAIL



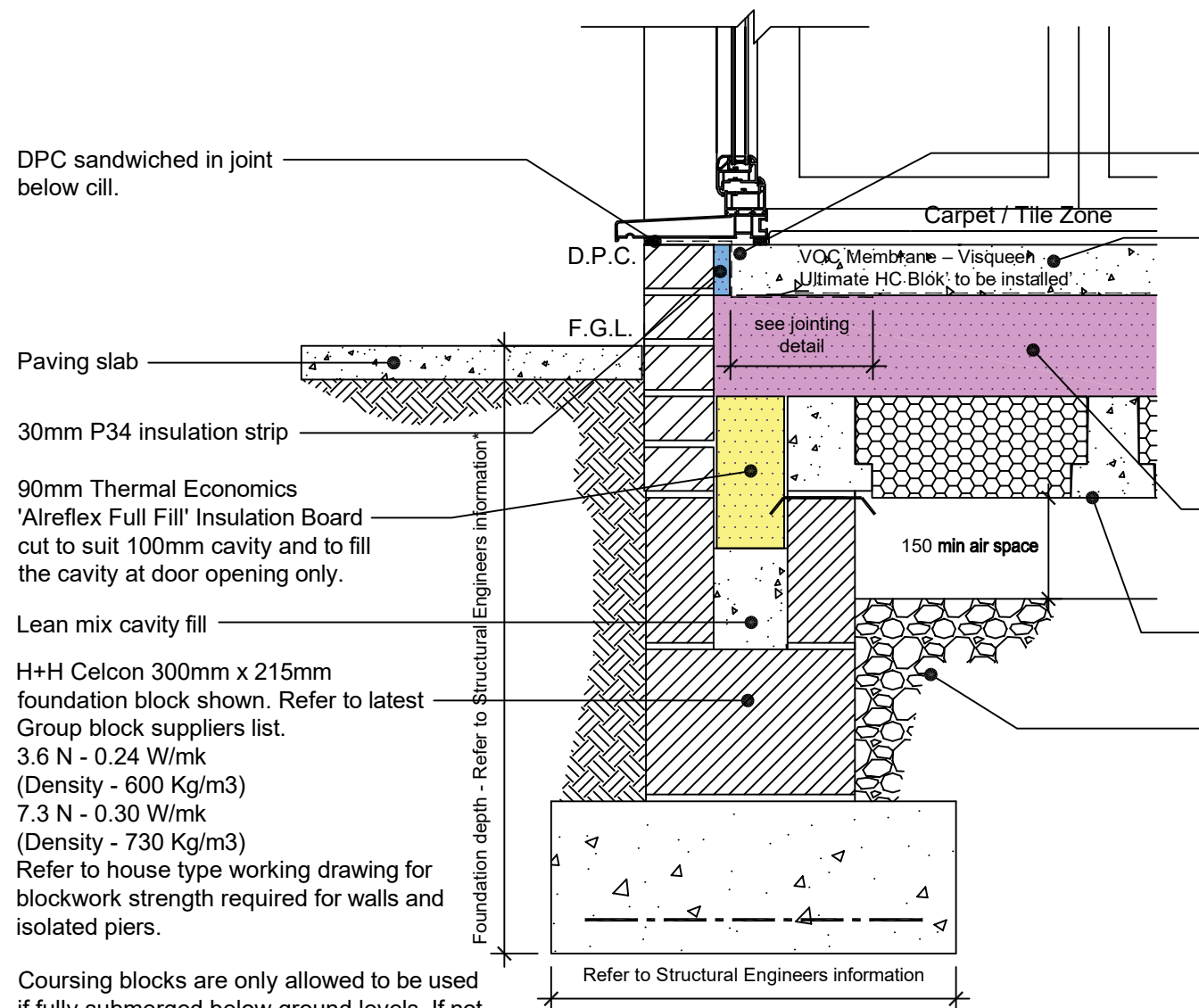
Brick outer leaf shown dashed for clarity

Scale 1:20
Isometric

Colours shown for clarity only

EXTERNAL REFERENCE :

 BARRATT MANCHESTER DIVISION		Date:	28.01.25	13.05.25
Description:		BLOCK RETURN & HYLOAD DPM ADDED AT DOOR THRESHOLD		
Rev:		GAS MEMBRANE SPEC ADDED		
		A	B	
Brand: BARRATT - WALDMERS WOOD		Scale: 1:5, 10, 20 Date: Jan 24		
Range: 2016				
Title: JET FLOOR FRONT DOOR GAS MEMBRANE				
Detail No: BM-GM05-207				
Drawn: SAH		Checked: SAH		



DPC sandwiched in joint below cill.

Paving slab

30mm P34 insulation strip

90mm Thermal Economics 'Alreflex Full Fill' Insulation Board cut to suit 100mm cavity and to fill the cavity at door opening only.

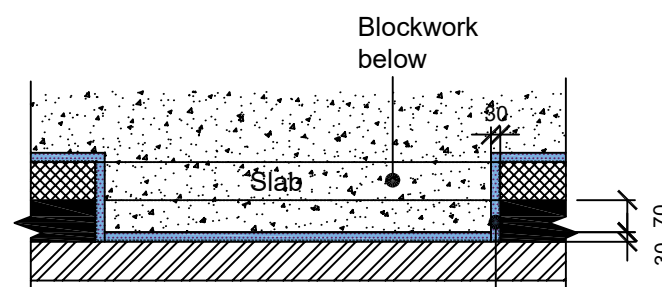
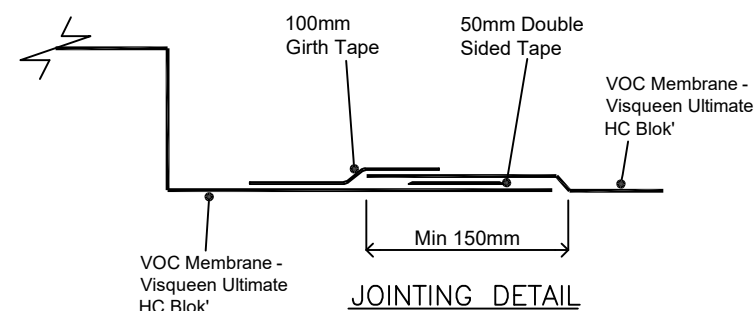
Lean mix cavity fill

H+H Celcon 300mm x 215mm foundation block shown. Refer to latest Group block suppliers list.
3.6 N - 0.24 W/mk (Density - 600 Kg/m3)
7.3 N - 0.30 W/mk (Density - 730 Kg/m3)
Refer to house type working drawing for blockwork strength required for walls and isolated piers.

Coursing blocks are only allowed to be used if fully submerged below ground levels. If not, main facing bricks should be used.

Scale 1:10

Colours shown for clarity only



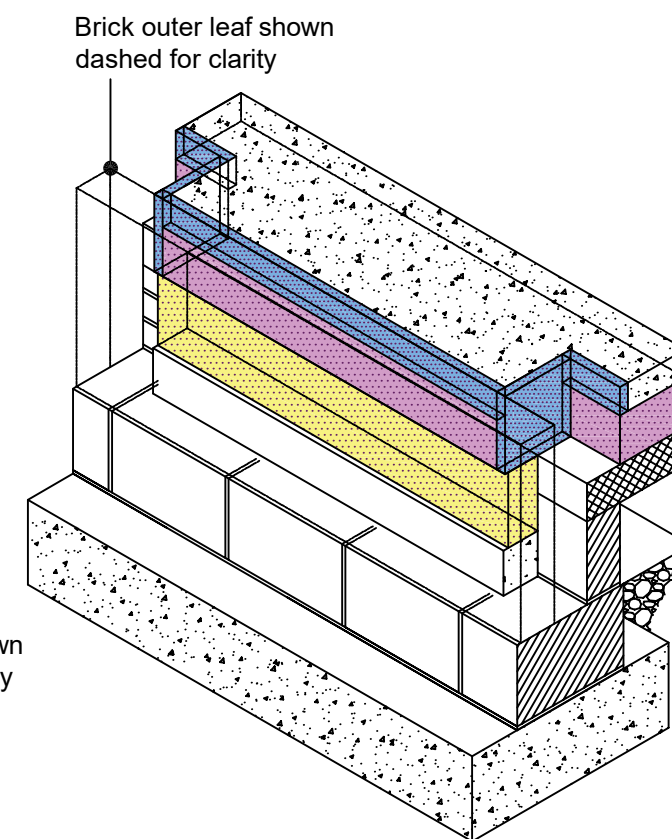
Scale 1:20
Plan at DPC level

Colours shown for clarity only

30mm to run past edge of door threshold & up to FFL.

Scale 1:20
Isometric

Colours shown for clarity only



EXTERNAL REFERENCE :

Brand: **BARRATT - WALDMERS WOOD**
Range: **2016**
Title: **JET FLOOR BAY DOOR THRESH. GAS MEMBRANE**
Detail No: **BM-GM05-210**
Drawn: **SAH** Checked: **SAH** Scale: **1:10 1:20** Date: **Jan 24**

Date: 13.05.25

Description: GAS MEMBRANE SPEC ADDED

Rev: A



BARRATT
MANCHESTER DIVISION



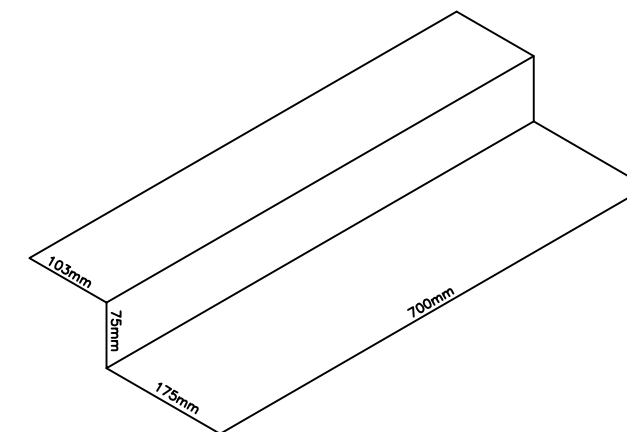
Date:
13.05.25

Description:
GAS MEMBRANE SPEC ADDED

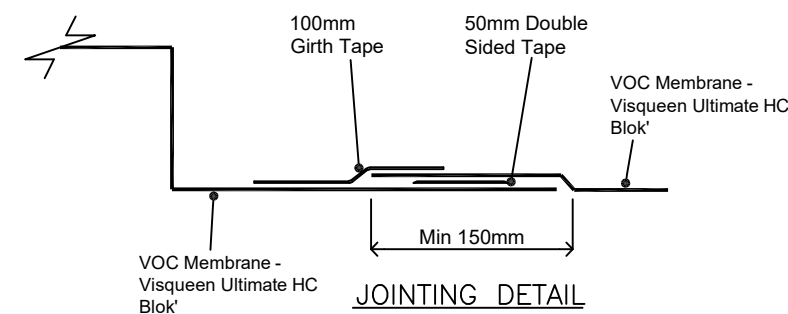
Rev:
A

Brand: **BARRATT - WALDMERS WOOD**
Range: **2016**
Title: **Jet Floor Party Wall with Gas Membrane**
Detail No: **BM-GM05-211**
Drawn: **SAH** Checked: **SAH** Scale: **1:10** Date: **Jan 24**

EXTERNAL REFERENCE : 22/029/PW01 ($\psi = 0.086 \text{ W/mK}$)



Gas Resistant External/Party Wall Cavity Tray
All Party Wall units are made to Order and should be ordered in sufficient time to allow manufacture.



100mm Party wall roll insulation as Group Agreement (full fill cavity - no gaps remain) - min 225mm below finished floor level.

Type A cavity wall ties @ 900mm c/s horz. & 450mm c/s vert. staggered (typical). First row as per manufacturers instructions.

Monarfloor Bridgestop Quilt in two lifts to prevent mortar droppings touching both masonry leaves.

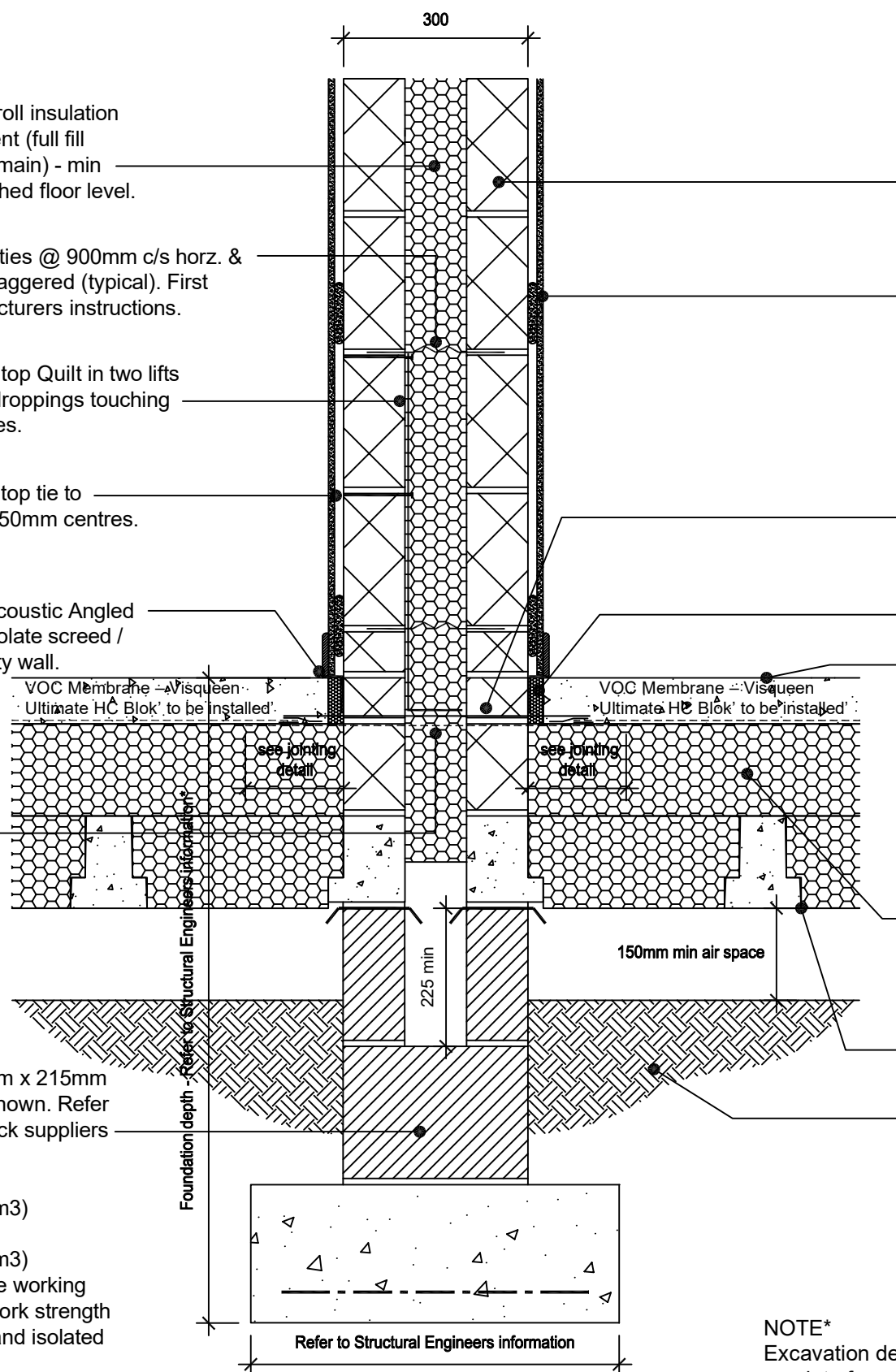
Monarfloor Bridgestop tie to penetrate at max 450mm centres.

Monarfloor 6mm Acoustic Angled Flanking Strip to isolate screed / insulation from party wall.

700mm wide VOC Membrane - Visqueen Ultimate HC Blok'

H+H Celcon 300mm x 215mm foundation block shown. Refer to latest Group block suppliers list.
3.6 N - 0.24 W/mk (Density - 600 Kg/m³)
7.3 N - 0.30 W/mk (Density - 730 Kg/m³)
Refer to house type working drawing for blockwork strength required for walls and isolated piers.

PARTY WALL / GROUND FLOOR JUNCTION (E-WM-22) JET FLOOR SYSTEM



E-WM-22 100mm Light Aggregate blocks - 3.6 N/mm², Density 1350-1600kg/m³

15mm Gyproc Wallboard (E-WM-23 density 9.8kg/m³ / E-WM-22 density 10kg/m³) with with 3mm skim finish or taped and jointed on 15mm plaster adhesive dabs on blockwork.

500mm wide MONARFLOOR BRIDGESTOP 3mm HP Acoustic Membrane laid under the party wall over the DPM/Gas membrane - refer to Appendix A2 of the Robust Details.

30mm P34 insulation strip

75mm structural concrete topping to be C28/35 standard concrete with maximum 20mm aggregate or C28/35 self-compacting concrete with maximum 10mm aggregate and reinforced in accordance with BBA certificate 88/2059. The topping is to be laid as soon as possible after the installation of the polystyrene components.

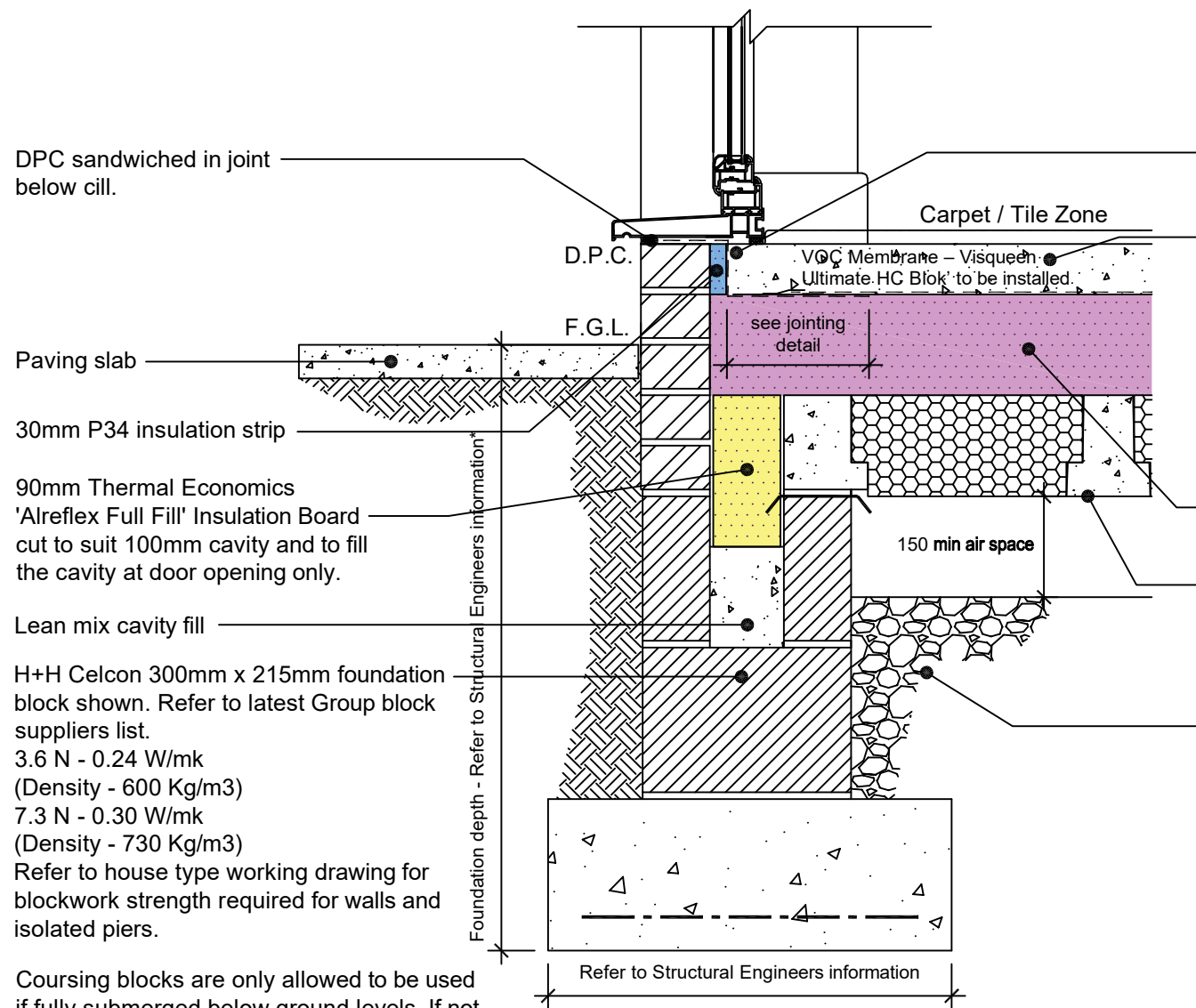
150mm Structural Overlay sheet (Grey) below VOC Membrane - Visqueen Ultimate HC Blok'

"Wide" or "Narrow" Poly blocks. Beam spacing is set with the relevant "Wide" or "Narrow" TS End Space Blocks. Refer to plot specific designs.

On some sites it may be possible to use site won material as fill instead of hardcore. This material needs to meet the requirements of NHBC Standards 5.1.9 and must be approved as being suitable for use by the site groundworker and site Structural / Civil Engineer.

NOTE*
Excavation depths may be reduced on receipt of a soils report (concerning the plasticity index for shrinkable soils) Read in conjunction with the NHBC book ch, 4.3.3 & with the approval of the building control officer.
All drains, ducts & services passing through the foundation to be sealed &/or provided with a lintel over as necessary.

Refer to Structural Engineers information



VOC Membrane - Visqueen Ultimate HC Blok' taken up back of insulation and lapped under DPC.

75mm structural concrete topping to be C28/35 standard concrete with maximum 20mm aggregate or C28/35 self-compacting concrete with maximum 10mm aggregate and reinforced in accordance with BBA certificate 88/2059. The topping is to be laid as soon as possible after the installation of the polystyrene components.

150mm Structural Overlay sheet (Grey) below VOC Membrane - Visqueen Ultimate HC Blok'

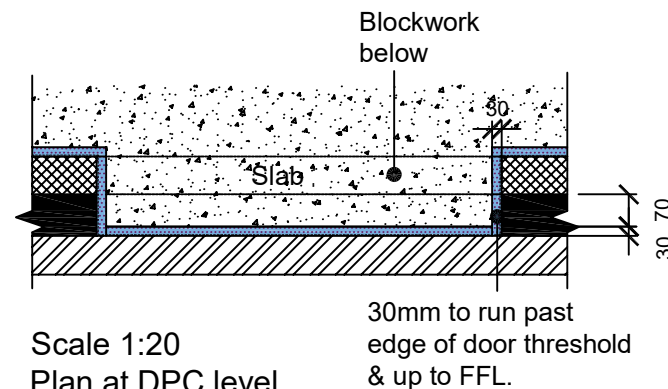
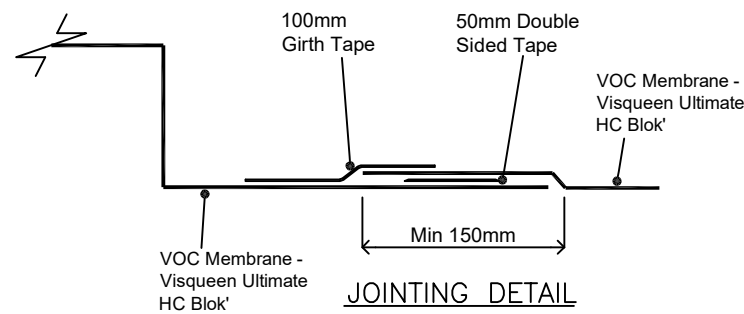
"Wide" or "Narrow" Poly blocks. Beam spacing is set with the relevant "Wide" or "Narrow" TS End Space Blocks. Refer to plot specific designs.

On some sites it may be possible to use site won material as fill instead of hardcore. This material needs to meet the requirements of NHBC Standards 5.1.9 and must be approved as being suitable for use by the site groundworker and site Structural / Civil Engineer.

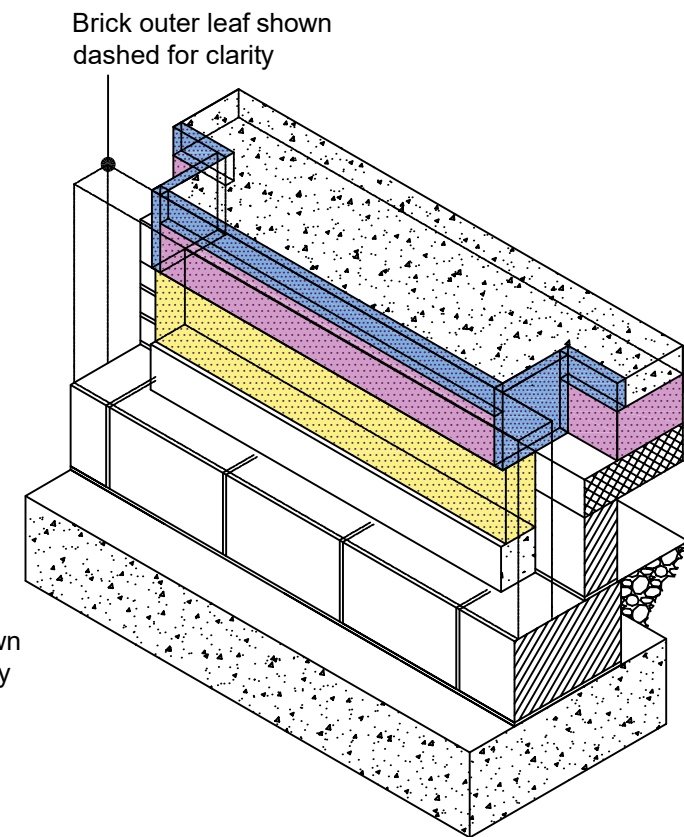
NOTE*

Excavation depths may be reduced on receipt of a soils report (concerning the plasticity index for shrinkable soils) Read in conjunction with the NHBC book ch, 4.3.3 & with the approval of the building control officer.

All drains, ducts & services passing through the foundation to be sealed &/or provided with a lintel over as necessary.



Scale 1:20
Plan at DPC level
Colours shown for clarity only



Scale 1:20
Isometric
Colours shown for clarity only

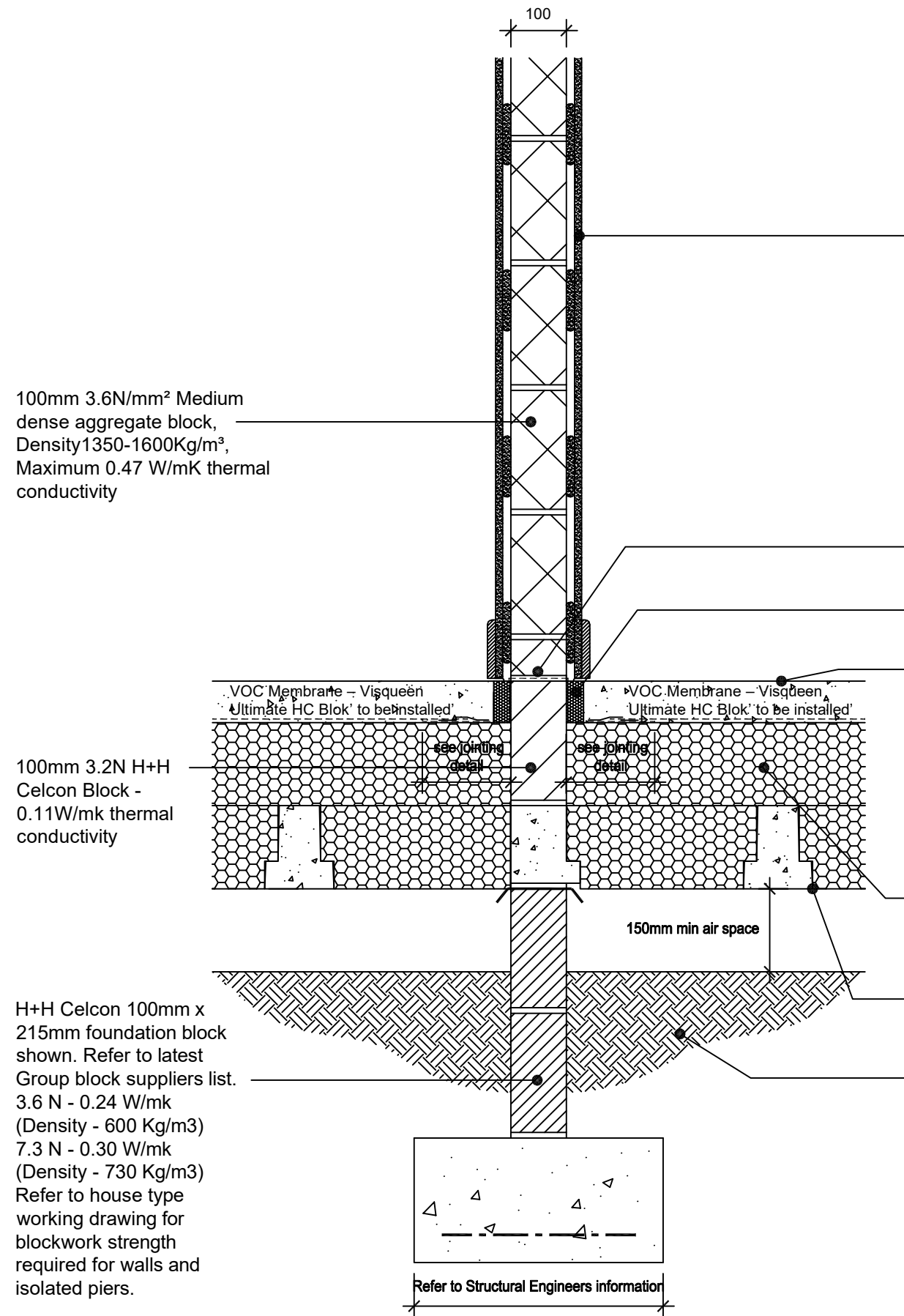
EXTERNAL REFERENCE :

Brand: **BARRATT - WALDMERS WOOD**
Range: **2016**
Title: **JET FLOOR FRENCH DOOR GAS MEMBRANE**
Detail No: **BM-GM05-218**
Drawn: **SAH** Checked: **SAH** Scale: **1:10 1:20** Date: **Jan 24**

Date: 13.05.25

Description: GAS MEMBRANE SPEC ADDED

Rev: A



INTERNAL WALL JET FLOOR

12.5mm Gyproc Wallboard (density 8.5kg/m³) with with 3mm skim finish or taped and jointed on 15mm plaster adhesive dabs on blockwork.

600mm wide VOC Membrane - Visqueen Ultimate HC Blok'

30mm P34 insulation strip

75mm structural concrete topping to be C28/35 standard concrete with maximum 20mm aggregate or C28/35 self-compacting concrete with maximum 10mm aggregate and reinforced in accordance with BBA certificate 88/2059. The topping is to be laid as soon as possible after the installation of the polystyrene components.

150mm Structural Overlay sheet (Grey) below VOC Membrane - Visqueen Ultimate HC Blok'

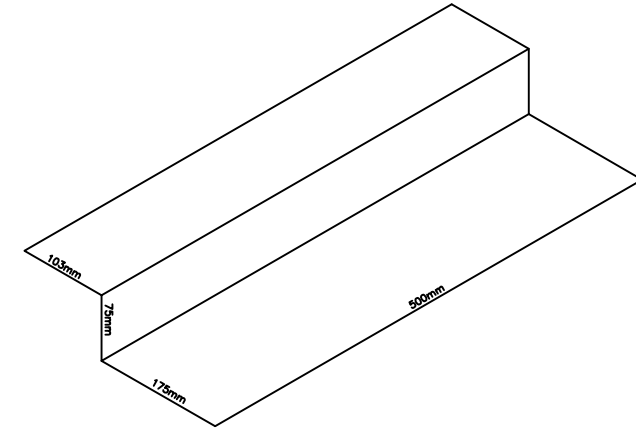
"Wide" or "Narrow" Poly blocks. Beam spacing is set with the relevant "Wide" or "Narrow" TS End Space Blocks. Refer to plot specific designs.

On some sites it may be possible to use site won material as fill instead of hardcore. This material needs to meet the requirements of NHBC Standards 5.1.9 and must be approved as being suitable for use by the site groundworker and site Structural / Civil Engineer.

NOTE*

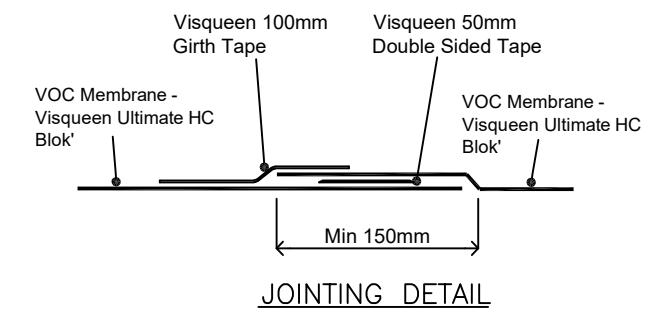
Excavation depths may be reduced on receipt of a soils report (concerning the plasticity index for shrinkable soils) Read in conjunction with the NHBC book ch, 4.3.3 & with the approval of the building control officer.

All drains, ducts & services passing through the foundation to be sealed &/or provided with a lintel over as necessary.



Gas Resistant External/Internal Wall Cavity Tray

All Party Wall units are made to Order and should be ordered in sufficient time to allow manufacture.



Part L
100mm Cavity
"X" Drawings



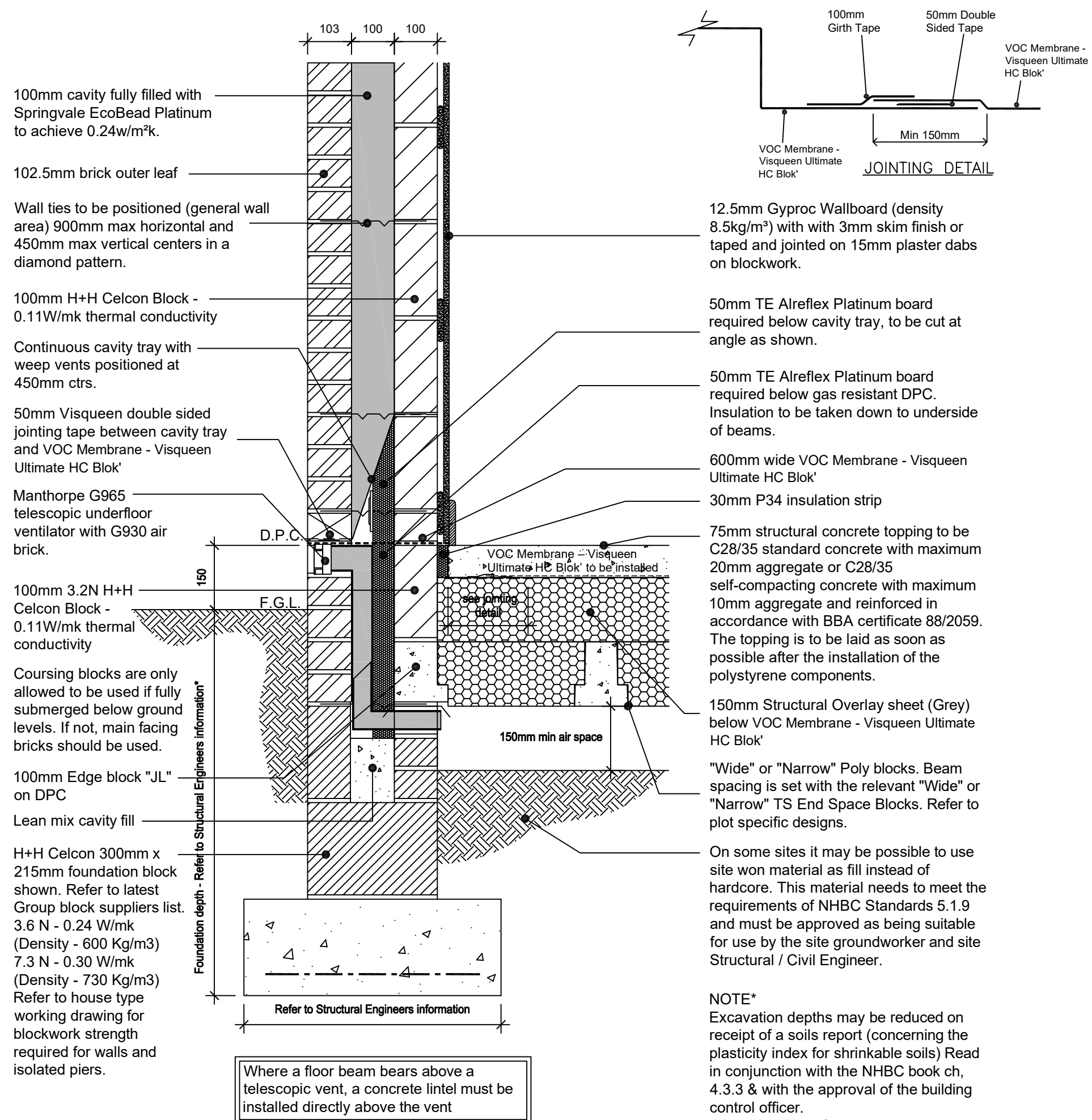
Date:
13.05.25

Description:
GAS MEMBRANE SPEC ADDED

Rev:
A

Brand: **BARRATT - WALDMERS WOOD**
Range: **2016**
Title: **Jet Floor Internal Wall with Gas Membrane**
Detail No: **BG-GM05-236**
Drawn: **SAH** Checked: **SAH** Scale: **1:10** Date: **Jan 24**

EXTERNAL REFERENCE :



EXTERNAL WALL/GROUND FLOOR JUNCTION JET FLOOR BEAMS PARALLEL

Part L
100mm Cavity
"X" Drawings



Date:
13.05.25

Description:
GAS MEMBRANE SPEC ADDED

Rev:
A

Brand: **BARRATT - WALDMERS WOOD**
 Range: **2016**
 Title: **Jet Floor - Parallel Beams Gas Membrane**
 Detail No: **BM-GM05-245**
 Drawn: **SAH** Checked: **SAH** Scale: **1:10** Date: **Jan 24**

EXTERNAL REFERENCE :

100mm cavity fully filled with Springvale EcoBead Platinum to achieve 0.24w/m²k.

102.5mm brick outer leaf

Wall ties to be positioned (general wall area) 900mm max horizontal and 450mm max vertical centers in a diamond pattern.

100mm H+H Celcon Block - 0.11W/mk thermal conductivity

Continuous cavity tray with weep vents positioned at 450mm ctrs.

50mm Visqueen double sided jointing tape between cavity tray and VOC Membrane - Visqueen Ultimate HC Blok'

Manthorpe G965 telescopic underfloor ventilator with G930 air brick.

100mm 3.2N H+H Celcon Block - 0.11W/mk thermal conductivity

Coursing blocks are only allowed to be used if fully submerged below ground levels. If not, main facing bricks should be used.

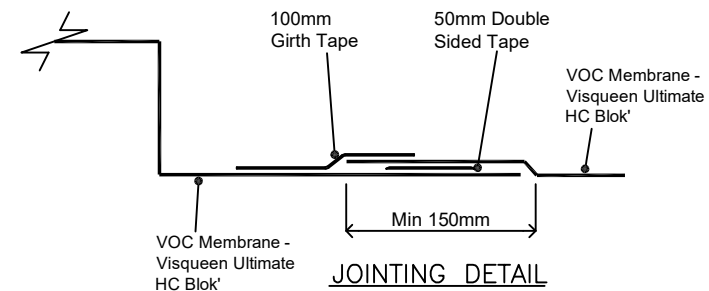
Lean mix cavity fill

H+H Celcon 300mm x 215mm foundation block shown. Refer to latest Group block suppliers list.
3.6 N - 0.24 W/mk (Density - 600 Kg/m³)
7.3 N - 0.30 W/mk (Density - 730 Kg/m³)
Refer to house type working drawing for blockwork strength required for walls and isolated piers.

Foundation depth - Refer to Structural Engineers information*

Where a floor beam bears above a telescopic vent, a concrete lintel must be installed directly above the vent

EXTERNAL WALL/GROUND FLOOR JUNCTION JET FLOOR BEAMS PERPENDICULAR



12.5mm Gyproc Wallboard (density 8.5kg/m³) with 3mm skim finish or taped and jointed on 15mm plaster dabs on blockwork.

50mm TE Alreflex Platinum board required below cavity tray, to be cut at angle as shown.

50mm TE Alreflex Platinum board required below gas resistant DPC. Insulation to be taken down to underside of beams.

600mm wide VOC Membrane - Visqueen Ultimate HC Blok'

30mm P34 insulation strip

75mm structural concrete topping to be C28/35 standard concrete with maximum 20mm aggregate or C28/35 self-compacting concrete with maximum 10mm aggregate and reinforced in accordance with BBA certificate 88/2059. The topping is to be laid as soon as possible after the installation of the polystyrene components.

150mm Structural Overlay sheet (Grey) below VOC Membrane - Visqueen Ultimate HC Blok'

"Wide" or "Narrow" Poly blocks. Beam spacing is set with the relevant "Wide" or "Narrow" TS End Space Blocks. Refer to plot specific designs.

On some sites it may be possible to use site won material as fill instead of hardcore. This material needs to meet the requirements of NHBC Standards 5.1.9 and must be approved as being suitable for use by the site groundworker and site Structural / Civil Engineer.

NOTE*

Excavation depths may be reduced on receipt of a soils report (concerning the plasticity index for shrinkable soils) Read in conjunction with the NHBC book ch, 4.3.3 & with the approval of the building control officer.

All drains, ducts & services passing through the foundation to be sealed &/or provided with a lintel over as necessary.

Part L
100mm Cavity
"X" Drawings



Date: 13.05.25

Description: GAS MEMBRANE SPEC ADDED

Rev: A

Brand: **BARRATT - WALDMERS WOOD**
Range: **2016**
Title: **Jet Floor - Perpendicular Beams Gas Membrane**
Detail No: **BM-GM05-246**
Drawn: **SAH** Checked: **SAH** Scale: **1:10** Date: **Jan 24**

EXTERNAL REFERENCE :

100mm Party wall roll insulation
as Group Agreement (full fill
cavity - no gaps remain) - min
225mm below finished floor level.

E-WM-22 100mm Light Aggregate
blocks - 3.6 N/mm², Density
1350-1600kg/m³

Type A cavity wall ties @ 900mm c/s horz. &
450mm c/s vert. staggered (typical). First
row as per manufacturers instructions.

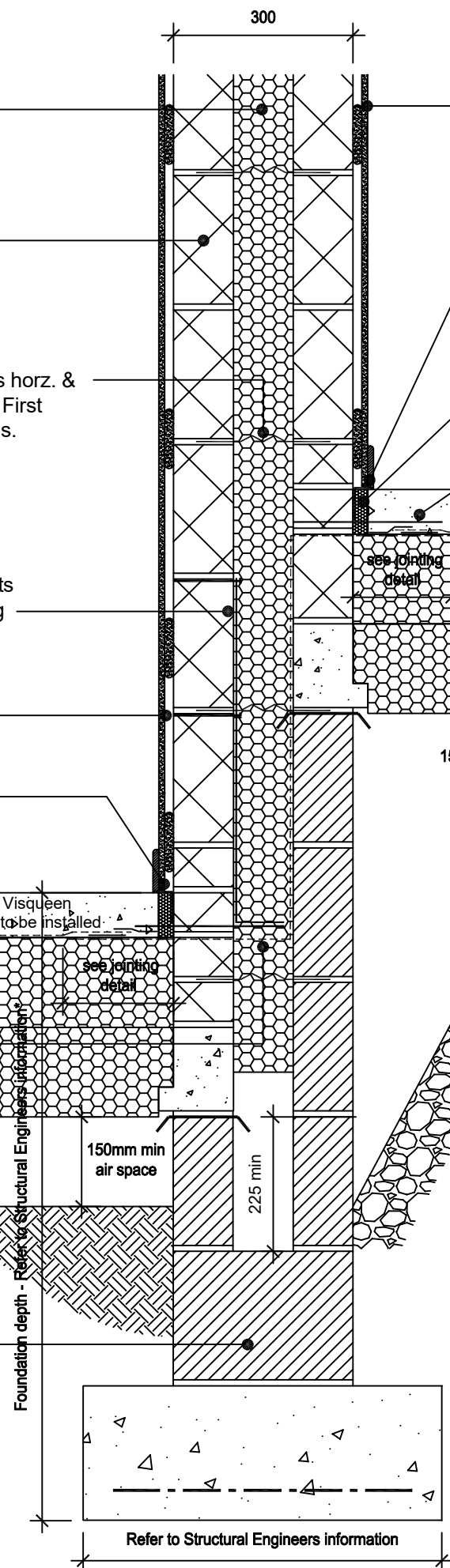
Monarfloor Bridgestop Quilt in two lifts
to prevent mortar droppings touching
both masonry leaves.

Monarfloor Bridgestop tie to
penetrate at max 450mm centres.

Monarfloor 6mm Acoustic Angled
Flanking Strip to isolate screed /
insulation from party wall.

1375mm wide VOC
Membrane -
Visqueen Ultimate
HC Blok' (for
675mm step
shown).

H+H Celcon 300mm x 215mm
foundation block shown. Refer
to latest Group block suppliers
list.
3.6 N - 0.24 W/mk
(Density - 600 Kg/m³)
7.3 N - 0.30 W/mk
(Density - 730 Kg/m³)
Refer to house type working
drawing for blockwork strength
required for walls and isolated
piers.



15mm Gyproc Wallboard (E-WM-23
density 9.8kg/m³ / E-WM-22 density
10kg/m³) with with 3mm skim finish or
taped and jointed on 15mm plaster
adhesive dabs on blockwork.

Monarfloor 6mm Acoustic Angled
Flanking Strip

30mm P34 insulation strip

250mm wide MONARFLOOR
BRIDGESTOP 3mm HP Acoustic
Membrane laid under the party wall over
Gas membrane - refer to Appendix A2 of
the Robust Details.

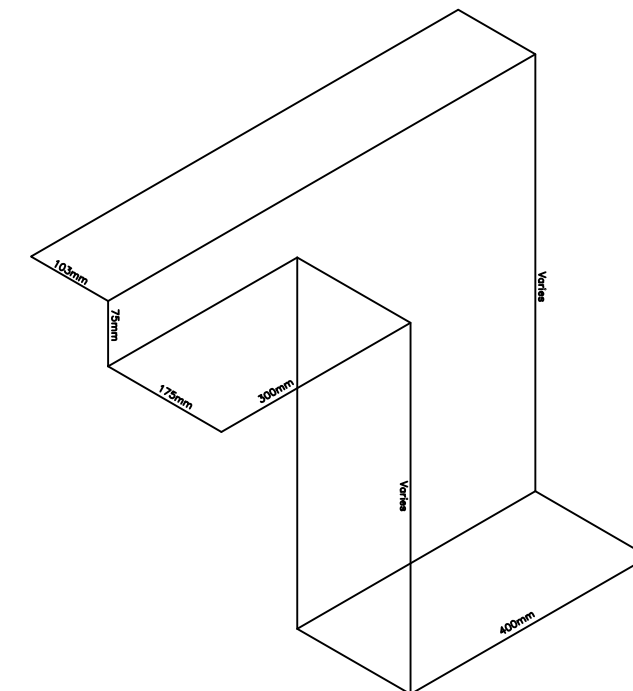
75mm structural concrete topping to be
C28/35 standard concrete with maximum
20mm aggregate or C28/35
self-compacting concrete with maximum
10mm aggregate and reinforced in
accordance with BBA certificate 88/2059.
The topping is to be laid as soon as
possible after the installation of the
polystyrene components.

150mm Structural Overlay sheet (Grey)
below VOC Membrane - Visqueen Ultimate
HC Blok'

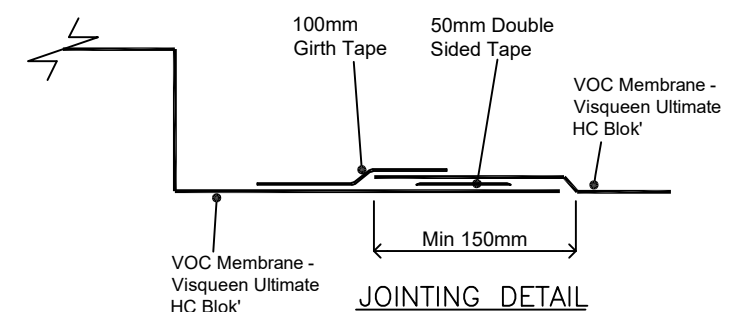
"Wide" or "Narrow" Poly blocks. Beam
spacing is set with the relevant "Wide" or
"Narrow" TS End Space Blocks. Refer to
plot specific designs.

Ground battered back on higher FFL side
as shown. On some sites it may be
possible to use site won material as fill
instead of hardcore. This material needs
to meet the requirements of NHBC
Standards 5.1.9 and must be approved as
being suitable for use by the site
groundworker and site Structural / Civil
Engineer.

NOTE*
Excavation depths may be reduced on
receipt of a soils report (concerning the
plasticity index for shrinkable soils) Read
in conjunction with the NHBC book ch,
4.3.3 & with the approval of the building
control officer.
All drains, ducts & services passing
through the foundation to be sealed &/or
provided with a lintel over as necessary.



Gas Resistant External/Stepped Party Wall Cavity Tray
All Party Wall units are made to Order and
should be ordered in sufficient time to allow
manufacture.



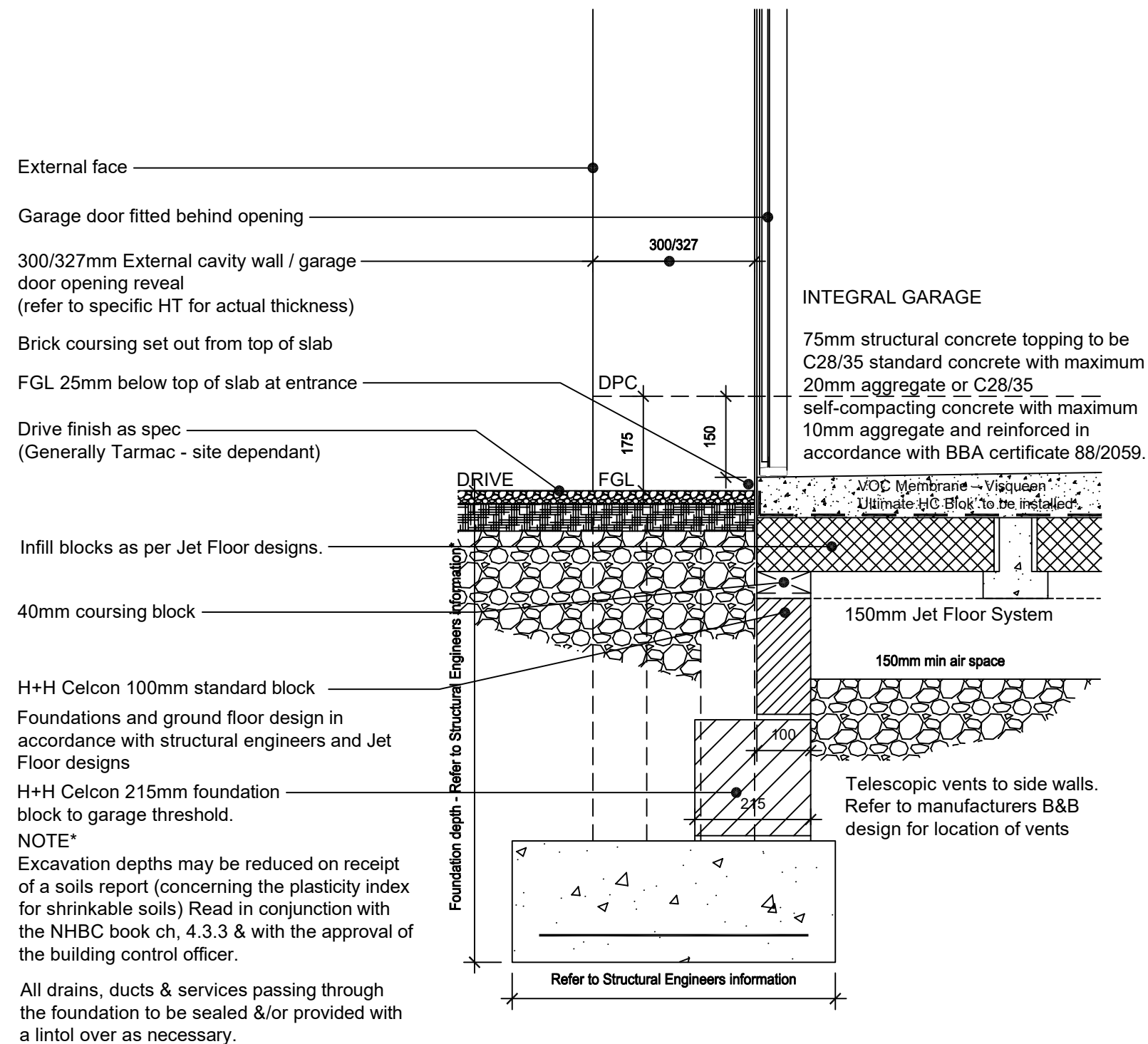
Part L
100mm Cavity
"X" Drawings

EXTERNAL REFERENCE : 22/029/PW01 ($\psi = 0.086 \text{ W/mK}$)

Brand: BARRATT - WALDMERS WOOD		Rev: A	Description: GAS MEMBRANE SPEC ADDED	Date: 13.05.25
Range: 2016				
Title: Jet Floor Stepped Party Wall with Gas Membrane				
Detail No: BM-GM05-500				
Drawn: SAH	Checked: SAH	Scale: 1:10	Date: Jan 24	



BARRATT
MANCHESTER DIVISION

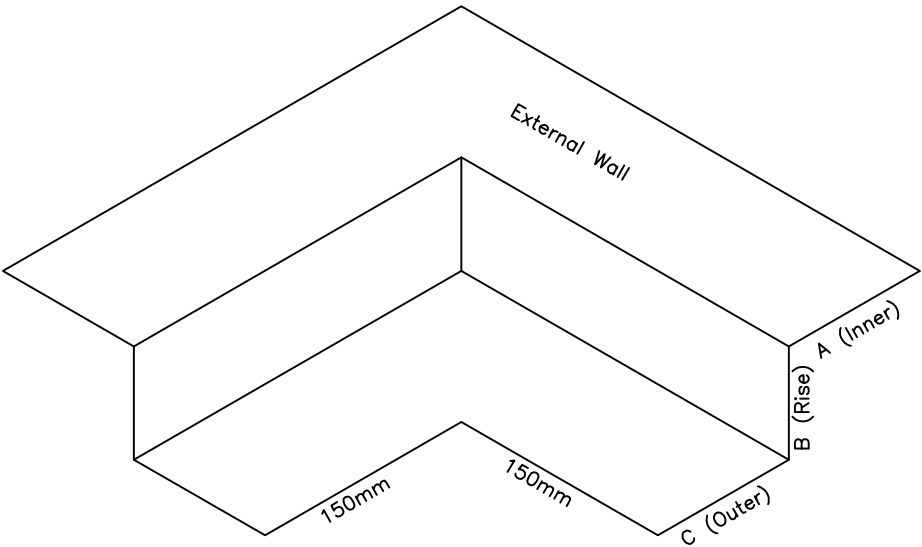
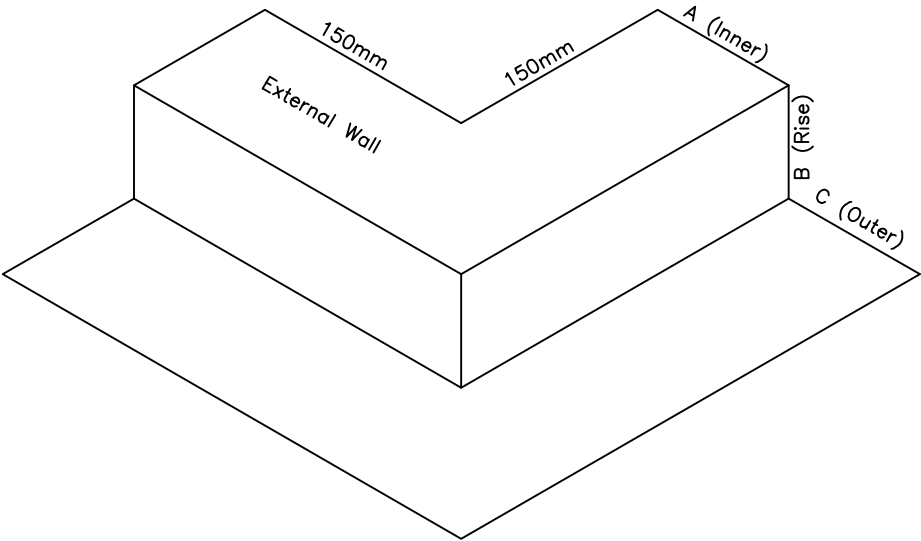


Section showing integral garage door thresh - door fitted behind opening
(Refer to details DB SD06-213, DB SD06-214 & DB SD06-215)

EXTERNAL REFERENCE :

Brand: BARRATT - WALDMERS WOOD			 BARRATT MANCHESTER DIVISION
Range: 2016			
Title: Jet Floor Int Garage door behind reveal gas membrane			
Detail No: BM-GM05-600			
Drawn: SAH	Checked: SAH	Scale: 1:10	Date: Jan 24
Rev: A			Description: GAS MEMBRANE SPEC ADDED
Date: 13.05.25			

External Corner Cloak	
A (Inner)	
B (Rise)	
C (Outer)	



Internal Corner Cloak	
A (Inner)	
B (Rise)	
C (Outer)	

Gas Resistant Preformed Corner Cloaks (ZX-16)

These are required where a step is required in the cavity due to use of non standard brickwork sizes. Dimensions to be provided to manufacturer for fabrication.

REV. A - SITE NAME ADDED. 13.05.25

Visqueen Ultimate HC BLOK

Features & benefits

- Agreement certified - third party accreditation
- Complies with NHBC Foundation's NF94 guidance for use in Type A and Type B membrane locations
- Complies with CIRIA C748:2014 - industry standard for volatile organic compounds (VOC) protection
- Complies with the methane gas transmission rate, mass per unit area and thickness requirements of BS 8485:2015 + A1:2019 - industry standard for methane and carbon dioxide protection
- Also provides radon and damp proof membrane protection
- Dual jointing methods - depending upon specification, lap joints can be taped or heat welded

Product description

Visqueen Ultimate HC Blok is a 0.5mm thick, chemically resistant co-extruded volatile organic compound barrier and gas barrier. It is coloured gold on the upper surface and white on the reverse. The product is supplied in single wound rolls (not folded), 2.44m x 41m.

Approvals and standards

- Third party accreditation (BDA certificate BAF-18-051-P-A-UK)
- Complies with NHBC Foundation's NF94 guidance for use in Type A and Type B membrane locations
- Complies with CIRIA C748:2014
- Complies with the methane gas transmission rate, mass per unit area and thickness requirements of BS 8485:2015 + A1:2019
- Suitable for all Characteristic Gas Situation (CS) ground gas regimes
- Conforms to the specification requirements of NHBC Amber 1 and Amber 2 applications
- Conforms to the specification requirements of BR 211:2023
- UKCA UKNI CE to EN 13967:2012
- Visqueen certified with Quality Management System ISO 9001:2015
- Visqueen certified with Occupational Health and Safety System ISO 45001:2018
- Visqueen certified with Environmental Management System ISO 14001:2015

Usage

Visqueen Ultimate HC Blok is suitable for use in all types of buildings to prevent the ingress of harmful levels of volatile organic compounds (VOCs), methane, carbon dioxide and radon. The barrier can be positioned above or below a concrete ground floor slab or above a precast suspended segmental ground floor system, e.g. beam and block floor.

The barrier also acts as a damp proof membrane.

Radon, carbon dioxide, methane, and VOC protection – NHBC NF94 guidance:
Visqueen Ultimate HC Blok when installed with either taped or welded joints (welded only for VOC protection) complies with NHBC Foundation's NF94 publication, Hazardous ground gas - an essential guide for housebuilders, in Type A membrane locations in precast suspended segmental subfloors and reinforced cast in situ concrete floor slabs (ground bearing, suspended or raft). Visqueen Ultimate HC Blok also complies with this guidance when installed with welded joints in Type B membrane locations in reinforced cast in situ concrete floor slabs (ground bearing, suspended or raft). For site or zone characteristic gas situations of CS4 and above, contact Visqueen Technical Services.

The product is not intended for use where there is a risk of hydrostatic pressure.

System components

- VisqueenPro Detailing Strip, 300mm x 10m, 500mm x 10m
- Visqueen Ultimate Top Hat Units
- Visqueen GR Lap Tape, 150mm x 10m
- Visqueen 100mm Double Sided Butyl Tape, 100mm x 15m

Storage and handling

Visqueen Ultimate HC Blok should be stored horizontally, under cover in its original packaging.

Care should be taken when handling the product in line with current manual handling regulations.

Preparation

Visqueen Ultimate HC Blok should be installed on a smooth continuous surface free from irregularities such as voids or protrusions e.g. grouted beam and block floor, 50mm thick sand blinding, or smooth concrete blinding.

The membrane can be cut with a sharp retractable safety knife or robust scissors.

Different jointing options are available depending on product use. Where protection against VOCs or hydrocarbon contamination is required, the barrier system should be applied with welded joints.

Visqueen Ultimate HC BLOK

Installation

Visqueen Ultimate HC Blok should be loose laid on the substrate with the gold side up so as to avoid sunlight glare. Different jointing options are available depending on product use. Where protection against VOCs or hydrocarbon contamination is required, the barrier system should be applied with welded joints.

The barrier should be clean and dry at the time of jointing. It should be overlapped by at least 150mm, bonded with Visqueen 100mm Double Sided Butyl Tape and sealed with Visqueen GR Lap Tape. Alternatively lap joints can be heat welded to achieve an effective seal. The overlap in the barrier is typically 100mm and when hand welding, a 35mm weld is normally achieved. When hand welding, a roller must be used.

Airtight seals should be formed around all service entry points. Visqueen Ultimate Preformed Top Hat Units should be used for sealing service entry pipes. The base of the top hat and the upstand should be bonded using Visqueen 100mm Double Sided Butyl Tape and sealed with Visqueen GR Lap Tape. The upstand should be secured with the supplied jubilee clip. Alternatively VisqueenPro Detailing Strip can be used to seal service entry points. The upstand should be secured with a jubilee clip.

Forming an effective barrier to gases may give rise to complex three-dimensional detailing where, it is recommended Visqueen Ultimate Preformed Units are used e.g. corners. Alternatively VisqueenPro Detailing Strip can be used to seal awkward junctions.

If the barrier is punctured or perforated a patch of the same material should be lapped at least 150mm beyond the limits of the puncture and bonded with Visqueen 100mm Double Sided Butyl Tape and sealed with Visqueen GR Lap Tape. Alternatively a patch can be formed using VisqueenPro Detailing Strip and lapped at least 150mm beyond the extents of the puncture.

Long periods of exposure to ultraviolet light will reduce the effectiveness of the membrane. The membrane should be covered by a protective layer immediately after installation to prevent damage from following trades, ultraviolet light, etc. 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 puncturing the barrier. Where there is a high risk of potential damage, the barrier should be covered with Visqueen TreadGUARD protection, screed, or other approved protection material before positioning the reinforcement.

Usable temperature range

It is recommended that Visqueen Ultimate HC Blok and all associated system components should not be installed below 5°C.

Additional information

When used in accordance with CIRIA C748:2014 or BS8485:2015 + A1:2019, a subfloor ventilation system or pressure relief maybe required.
To assist build sequencing, Visqueen Ultimate Gas DPC is available for gas protection through the wall constructions.

For additional detailing information, contact Visqueen Technical Services +44 (0) 333 202 6800.

The information in this datasheet was correct at the time of publication. It is the user's responsibility to obtain the latest version of the datasheet as it is updated on a regular basis. The information contained in the latest datasheet supersedes all previously published editions.

Property	Test method	Units	Criteria	Result
Colour				Gold/white
Weight		kg		49
Length	BS EN 1848-2	m	-0/+10%	41
Width	BS EN 1848-2	m	-0/+10%	2.44
Thickness	BS EN 1849-2	mm	+/-10%	0.5
BS 8485 and C748 physical test results		Units	Criteria	Result
Puncture	BS EN ISO 12236:2006	N	MDV	1640
Impact resistance Method A hard surface	BS EN 12691	mm	MDV	200
Impact resistance Method B soft surface	BS EN 12691	mm	MDV	1250
Tensiles yield strength MD 1	ASTM D4885-01	kN/m	MDV	5.1

Visqueen Ultimate HC BLOK

Tensiles yield strength CD 1	ASTM D4885-01	kN/m	MDV	4.91
Yield elongation MD 1	ASTM D4885-01	%	MDV	76
Yield elongation CD 1	ASTM D4885-01	%	MDV	62
Tear resistance - trouser method A - MD	BS ISO 34-1	kN/m	MDV	60.2
Tear resistance - trouser method A - CD	BS ISO 34-1	kN/m	MDV	66.1
Tear resistance - angle method B - MD	BS ISO 34-1	N	MDV	48.7
Tear resistance - angle method B - CD	BS ISO 34-1	N	MDV	49.6
1 - this is at yield and not break as the equipment used was not strong enough to break the membrane				
BS 8485 - Methane testing	Test method	Units	Criteria	Result
Methane gas transmission rate (unjointed)	ISO 15105-1	ml/m ² /day/ atm	<40	1.3
Methane gas transmission rate (welded joint)	ISO 15105-1	ml/m ² /day/ atm	<40	24
Carbon dioxide gas transmission rate	ISO 15105-1	ml/m ² /day/ atm	<40	8.3
C748:2014 - Permeation vapour tests - 100% concentration		Criteria	ml/m ² /d	mg/m ² /d
Benzene	ISO 15105-2	MDV	0.08	70
Toluene	ISO 15105-2	MDV	0.09	78.5
Ethyl benzene	ISO 15105-2	MDV	0.11	93.8
m,p xylene	ISO 15105-2	MDV	0.01	6.7
Hexane	ISO 15105-2	MDV	gas	2.6
Vinyl chloride	ISO 15105-2	MDV	0	6.4
Tetrachloroethene (PCE)	ISO 15105-2	MDV	0	3.2
Trichloroethene (TCE)	ISO 15105-2	MDV	solid	0.3
Naphthalene	ISO 15105-2	MDV	0.03	19.7
C748:2014 - Chemical immersion testing		weight %	Thickness %	Tensiles/elongation
Pass is achieved if the aged membrane is within 25% of the fresh sample				
Benzene	BS EN 14414	Pass	Pass	Pass
Toluene	BS EN 14414	Pass	Pass	Pass
Ethyl benzene	BS EN 14414	Pass	Pass	Pass
(m,p, and o) xylene	BS EN 14414	Pass	Pass	Pass
Hexane	BS EN 14414	Pass	Pass	Pass
Vinyl chloride	BS EN 14414	Pass	Pass	Pass
Tetrachloroethene	BS EN 14414	Pass	Pass	Pass
Trichloroethene	BS EN 14414	Pass	Pass	Pass
Naphthalene	BS EN 14414	Pass	Pass	Pass
CE Marking to EN13967 Type A				

Visqueen Ultimate HC BLOK

Characteristic	Test method	Units	Criteria	Result
Tensile strength - MD	BS EN 12311	N/mm ²	MDV	32.8
Tensile strength - CD	BS EN 12311	N/mm ²	MDV	33.1
Tensile elongation - MD	BS EN 12311	%	MDV	699
Tensile elongation - CD	BS EN 12311	%	MDV	723
Joint strength	BS EN 12317-2	N	MDV	265
Watertightness to 2kPa for 24 hours	BS EN 1928	-	Pass/Fail	Pass
Resistance to impact	BS EN 12691	mm	>MLV	200
Durability watertightness after heat ageing	BS EN 1296	-	Pass/Fail	Pass
Durability watertightness against chemicals	BS EN 1847	-	Pass/Fail	Pass
Resistance to tearing (nail shank) CD	BS EN 12310-1	N	MDV	245
Resistance to tearing (nail shank) MD	BS EN 12310-1	N	MDV	270
Water vapour transmission - resistance	BS EN 1931	MNs/g	MDV	1034
Water vapour transmission - permeability	BS EN 1931	g/m ² /d	MDV	0.13
Radon permeability	Sp Method 3873	m ² /s	MDV	<1.5 x 10 ⁻¹²

Health and safety information

Refer to the Visqueen Ultimate HC Blok safety datasheet (SDS).

About Visqueen

Visqueen is a leading provider of construction membrane technologies and design-based solutions for ground gas, structural waterproofing, damp proofing and fire protection.

We offer complete support at every stage of the specification, including the supply chain process. As the UK's principal technical authority, we are best placed to ensure that the principal designer and contractor specify the most technically suited, durable, and competitive solution to guarantee their project is protected for the lifetime of the building.

Visqueen is at the forefront of advanced membrane technology and innovation in the construction industry, earning the trust and loyalty of specifiers throughout the UK and Europe.

For more information, visit visqueen.com or contact our sales office at [+44 \(0\) 333 202 6800](tel:+44202332026800) or enquiries@visqueen.com

Complete Range, Complete Solution



Passive Fire Protection



Gas Protection



Damp Proof Membrane



Air and Vapor Control



Stormwater



Damp Proof Course



Temporary Protection

Visqueen Technical Support

Visqueen offer a comprehensive full nationwide technical support. Our team of CSSW qualified technical support managers provide on site design-based solutions for specifiers, contractors and builders merchants, and will ensure that from design stage to installation the project is fully risk assessed and the specification is approved by all stakeholders.

Our Technical Office, can design, prepare and manage CAD detailing, together with assisting in quantity take offs, while offering advice on technical installations and product selection.

Competency & Design

Visqueen promotes competency in building design by ensuring that its technical team possesses the necessary

Visqueen Ultimate HC BLOK

skills, knowledge, experience, and ethical practices. The company adopts the "golden thread of information," ensuring all project data is digitally secure and accessible throughout a building's lifecycle. This approach aligns with the Building Safety Act and aims to foster accountability and compliance with evolving regulations, providing clients with confidence in the safety and reliability of their projects.

Visqueen CPD Seminars

Visqueen's CPD Seminars offer insights into Building Regulations, Standards, and industry guidance related to damp proofing, hazardous ground gas protection, and structural waterproofing. These one-hour seminars are tailored for construction design professionals and delivered by our Technical Support Managers. Visit our website to book a free CPD.

Visqueen Contract Design Services

Visqueen Contract Design Services offers a bespoke design service led by our team of Certified Surveyors in Structural Waterproofing (CSSW), providing experienced and specialised waterproofing design expertise for complex projects. We provide comprehensive support throughout the entire project, ensuring that all work meets the requirements of warranty providers and adheres to the highest standards of quality, reliability and current legislation.

Visqueen Training Academy

Based at our Derbyshire facility, the Visqueen Training Academy offers a variety of training programs across the UK. These include one-day product awareness sessions for distributors and builders' merchants, and intensive two-day courses for hands-on product installation training. Contact us for more information.

APPENDIX B

Gas Membrane Validation Certificate Proforma

Gas Protection Validation Record



job number		design source/ref:		specification source/ref:		documents attached	✕	
site name / location		building use:	residential	commercial	other (describe)			
plot number		building description:	no. of storeys =	2	Detached	semi-detached	terrace	apartment block
compiled by:		gas protection type:	active / passive		foundation type:	block and beam / raft / other		

Ventilated sub-floor (if present)	inspection date/time:		inspected by:		photographed:	
--	-----------------------	--	---------------	--	---------------	--

✓ / ✕ notes (see overleaf)

void former type		1.
height of void space		2.
gravel type		3.
pipe size and spacing		4.
external wall airbricks		5.
internal sleeper walls		6.
external vent trenches / ducts		7.

Gas barrier	inspection date/time:		inspected by:		photographed:	
--------------------	-----------------------	--	---------------	--	---------------	--

membrane type		8.
extent of coverage		9.
slab/membrane condition		10.
laps and joints		11.
damp-proof course		12.
service entries and seals		13.
Integrity testing		14.

Gas Protection Validation Record

Photograph	Photograph	Photograph
Photograph	Photograph	Photograph

Gas Protection Validation Record



Guide notes:

1	void former type	proprietary type - manufacturer and specification, in accordance with design? Installed properly without damage?
2	height of void space	height of proprietary former or constructed ventilation space below suspended floor - note any debris on void / obstructions to air flow, note formation surface soil type (e.g. crushed concrete/brick), any evidence of flooding
3	gravel type	gravel type, if used (limestone / granite etc.) and any specification (e.g. 6F2), typical particle dimensions (mm), apparent fines content (low/high), compaction (loose/dense), waterlogging / contamination by clay, organic matter, other debris
4	pipe size and spacing	diameter in mm; material type (e.g. PVC); slotted or perforated; positioning and spacing / separation and jointing as on design drawing - if not sketch arrangement - do pipes connect with external (telescopic / swan-neck) vents?
5	external wall airbricks	check numbers, size and positions as design drawing (if not shown, make sketch; check for blockage, e.g. by mortar, or soil / pavings etc.
6	internal sleeper walls	check for ventilation holes - e.g. honeycombe brickwork or pipe crossings - note size, spacing and location - in accordance with design?
7	external vent trenches / ducts	check whether located and constructed in accordance with design drawings; if open-topped gravel, note gravel type and presence of fines / contamination; if pipe or other vents - check positions and construction for functionality and absence of blockages - vents may be built over
8	membrane type	note manufacturer and product specification, including batch / roll numbers if present - in accordance with specification? check stock storage arrangements - protected from dirt and damage?
9	extent of coverage	if membrane is incomplete, further inspection will be required - note areas completed / incomplete - is membrane fully visible or have internal walls been constructed over membrane / screed placed?
10	slab/membrane condition	record presence of debris / rough surfaces, in particular sharp projections, below or above membrane; record locations of all punctures or repairs, note arrangements to protect membrane surface from traffic / tools and equipment / materials, and temporary weighting down of membrane, e.g. use of boards - record evidence of footprints / tracks on membrane surface, creases or water/wind damage
11	laps and joints	check the all joints are lapped and sealed in accordance with manufacturer's requirements / specification, particularly where creases/folds are present (usually minimum 150mm laps with double-sided tape between sheets, and single-sided tape on top surface; note size of sheets and frequency of edge seals
12	damp-proof course	record DPC manufacturer and product code - usually integrated with the membrane; measure the DPC projection from external wall in mm; check laps and seals between membrane and DPC - note any potential stress points and tension between the two; check for damage to DPC
13	service entries and seals	note number, position and diameter of service entries - check top hat seal arrangements in accordance with design / specification (laps and seals between top hat and floor membrane, pipe upstand is usually a minimum 150mm) check, with jubilee clips to secure top hat seal to pipe - note presence of clips and tightness of connections
14	Integrity testing	Has integrity testing been undertaken on this plot? If yes, who undertook the testing (company name) and what type of test did they use (air lancing/other test)? Append a copy of the testing certificate to this report.

Gas Protection Validation Record



These buildings have PASSED inspection.

An additional inspection IS NOT required for this plot.

SGP Staff:

Signed:

SGP Member:

Signed:

APPENDIX C

Cover System Validation Certificate Proforma

Soil Cover Validation Record



Job number		Depth ref:		Quality ref:		Other documents attached	✓
Date		Area use:	garden	landscaped	stockpile	other	
Site name / location		Size area (m):		Approx Area (m ²):		Approx Depth Top (m):	
Plot / location:				Approx Depth Sub (m):		Approx Volume Top (m ³):	
Compiled by:				Approx Volume Sub (m ³):			
		Number depth entries required		x (at 1 per 3 gardens); x entries provided.		Number samples required: x (1 per 250m³ TS Greenfield Source; minimum of 3 from any one source). x TS samples provided.	

Quality Validation		inspection date/time:		inspected by:		photographed:	✓
notes (see below)		✓ / ✕					
Source Topsoil	1.	✓					
Description Topsoil	2.	✓					
Sample Topsoil	3.	✓					
Source Subsoil	4.	✕					
Description Subsoil	5.	✕					
Sample Subsoil	6.	✕					

Soil Cover Validation Record



Topsoil Analysis Summary

contaminant	soil standard adopted (mg/kg)	concentrations (mg/kg)	compliant?
asbestos Fibres	NAD		Yes
pH	-		Yes
soil organic matter	-		-
arsenic	37		Yes
cadmium	11		Yes
chromium III	910		Yes
chromium VI	6		Yes
copper	2,400		Yes
lead	200		Yes
mercury	40		Yes
nickel	130		Yes
zinc	3,700		Yes
naphthalene	2.3		Yes
acenaphthene	210		Yes
acenaphthylene	170		Yes
fluorene	170		Yes
phenanthrene	95		Yes
anthracene	280		Yes
fluoranthene	2,400		Yes
pyrene	620		Yes
benzo(a)anthracene	7.2		Yes
chrysene	15		Yes
benzo(b/k)fluoranthene	2.6		Yes
benzo(a)pyrene	2.2		Yes
indeno(123cd)pyrene	27		Yes

Contaminant	Soil standard adopted (mg/kg)	Concentrations (mg/kg)	Compliant?
dibenzo(ah)anthracene	0.24		Yes
benzo(ghi)perylene	320		Yes
Aliphatic C5-C6	42		Yes
Aliphatic C6-C8	100		Yes
Aliphatic C8-C10	27		Yes
Aliphatic C10-C12	130		Yes
Aliphatic C12-C16	1,100		Yes
Aliphatic C16-C21	65,000		Yes
Aliphatic C21-C35	65,000		Yes
Aromatic C6-C7	70		Yes
Aromatic C7-C8	130		Yes
Aromatic C8-C10	34		Yes
Aromatic C10-C12	74		Yes
Aromatic C12-C16	140		Yes
Aromatic C16-C21	260		Yes
Aromatic C21-C35	1,100		Yes

Soil Cover Validation Record



Subsoil Analysis Summary

contaminant	soil standard adopted (mg/kg)	concentrations (mg/kg)	compliant?
asbestos Fibres	NAD		Yes
pH	-		Yes
soil organic matter	-		-
arsenic	37		Yes
cadmium	11		Yes
chromium III	910		Yes
chromium VI	6		Yes
copper	2,400		Yes
lead	200		Yes
mercury	40		Yes
nickel	130		Yes
zinc	3,700		Yes
naphthalene	2.3		Yes
acenaphthene	210		Yes
acenaphthylene	170		Yes
fluorene	170		Yes
phenanthrene	95		Yes
anthracene	280		Yes
fluoranthene	2,400		Yes
pyrene	620		Yes
benzo(a)anthracene	7.2		Yes
chrysene	15		Yes
benzo(b/k)fluoranthene	2.6		Yes
benzo(a)pyrene	2.2		Yes
indeno(123cd)pyrene	27		Yes

Contaminant	Soil standard adopted (mg/kg)	Concentrations (mg/kg)	Compliant?
dibenzo(ah)anthracene	0.24		Yes
benzo(ghi)perylene	320		Yes
Aliphatic C5-C6	42		Yes
Aliphatic C6-C8	100		Yes
Aliphatic C8-C10	27		Yes
Aliphatic C10-C12	130		Yes
Aliphatic C12-C16	1,100		Yes
Aliphatic C16-C21	65,000		Yes
Aliphatic C21-C35	65,000		Yes
Aromatic C6-C7	70		Yes
Aromatic C7-C8	130		Yes
Aromatic C8-C10	34		Yes
Aromatic C10-C12	74		Yes
Aromatic C12-C16	140		Yes
Aromatic C16-C21	260		Yes
Aromatic C21-C35	1,100		Yes

Soil Cover Validation Record



Depth Validation	Inspection date/time:		Inspected by:		Photographed:	✓
Plot xx	Required Depth (mm)	600	Measured Depth (mm)		PASS	
Source Topsoil						
Source Subsoil						
Soil profile/description						
Photograph (depth profile)		Photograph (soil type)		Photograph (location)		

Soil Cover Validation Record



These plots have PASSED testing for quality and depth

An additional inspection visit IS NOT required.

SGP Staff:

Signed:

SGP Member:

Signed:

Guide notes:

1.	Source Topsoil	As much information as possible: Date Delivered, volume/weight delivery, supplier, certification, source address (yard), original source address (site).
2.	Description Topsoil	Full Description: Grading (Particle Size: clay, silt, sand, gravel), organic content, colour, odour, minerals, stone, glass, slate, ash, clinker, coal, coke, tarmac, plastic, other?
3.	Sample Topsoil	Date sampled, date submitted, sample reference, laboratory, laboratory job number
4.	Source Subsoil	As much information as possible: Date Delivered, volume/weight delivery, supplier, certification, source address (yard), original source address (site).
5.	Description Subsoil	Full Description: Grading (Particle Size: clay, silt, sand, gravel), organic content, colour, odour, minerals, stone, glass, slate, ash, clinker, coal, coke, tarmac, plastic, other?
6.	Sample Subsoil	Date sampled, date submitted, sample reference, laboratory, laboratory job number
7.	Material Acceptability	Presence and amount of visible deleterious or otherwise unacceptable materials, e.g. glass, metal, plastic, Knotweed shoots etc.