



## Visqueen DPC Design Guide


**VISQUEEN**


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# Introduction

**This Design Guide will assist building stakeholders in the correct selection, design and installation of flexible damp proof courses (DPCs) in cavity wall constructions with a masonry outer leaf. It has been developed to overcome the damp proofing challenges presented by modern methods of construction.**

It has long been recognised that water penetration is a major cause of deterioration in building materials and has a harmful effect upon the health of the occupants of the building. Building Regulation C2 (England), Building Regulation 28 (Northern Ireland) and Building Standards 3.4 and 3.10 (Scotland) state the requirements to protect the building and its occupants from the harmful effects of ground moisture and rainwater penetrating to the interior of the building.

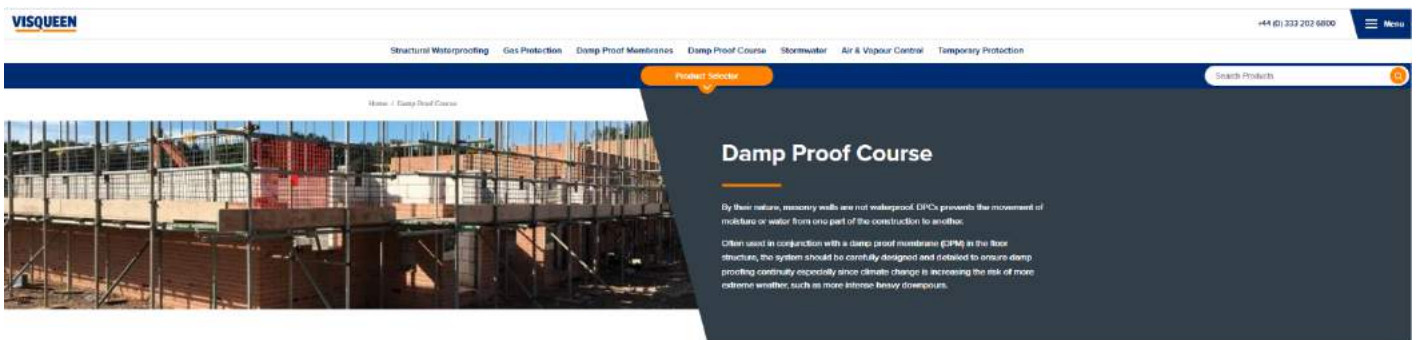
By their nature, masonry walls are not waterproof. DPCs prevent the movement of moisture or water from one part of the construction to another. Often used in conjunction with a damp proof membrane (DPM) in the floor structure, the system should be carefully designed and detailed to ensure damp proofing continuity especially since climate change is increasing the risk of more extreme weather, such as more intense downpours.

Visqueen's flexible DPCs are available in a variety of widths, each designed for use in a specific part of the construction. Rainwater will inevitably penetrate the masonry outer leaf of a cavity wall during prolonged periods of rain. DPC widths in excess of 400mm are commonly used above items bridging the cavity in order to collect the rainwater that has entered the cavity and deflect it to the exterior of the building where it can safely drain away through weepholes in the outer leaf - such DPCs are known as cavity trays.

The profile of the cavity tray can vary depending on many factors including the nature of the item bridging the cavity, the cavity width, the required vertical height of the cavity tray, whether the cavity insulation is to be cut at 90° or on a slope and whether the cavity tray is built into the inner leaf or surface fixed (face fixed) to the inner leaf.

Within the Design Guide, suggested selection criteria for the DPC systems are given; these correlate with best practice recommendations and benefit from Visqueen's extensive experience in providing damp proofing protection systems to the construction industry.

The Visqueen website provides up-to-date information regarding the full range of Visqueen Damp Proof Course systems [www.visqueen.com/damp-proof-course](http://www.visqueen.com/damp-proof-course)



## Damp Proof Courses



Visqueen Zedex CPT High Performance Damp Proof Course



Visqueen Zedex Housing Grade Damp Proof Course



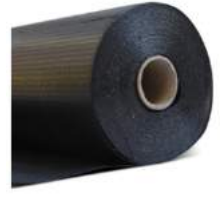
Visqueen Zedex High Bend Damp Proof Course



Visqueen Zedex Non-Combustible Damp Proof Course



Visqueen Ultimate Gas Damp Proof Course



Visqueen Polyethylene Damp Proof Course



## Brickwork

Assemblage of brick masonry units laid in a specified pattern and joined together with mortar



## Capping

Construction that protects the top of a wall, balustrade or parapet but does not shed rainwater clear of the surfaces of the wall beneath



## Cavity tray

Damp proof course that bridges a wall cavity to lead moisture to the external face of a wall



## Cavity tray - built in

A cavity tray that is embedded in the mortar joint of a masonry inner leaf

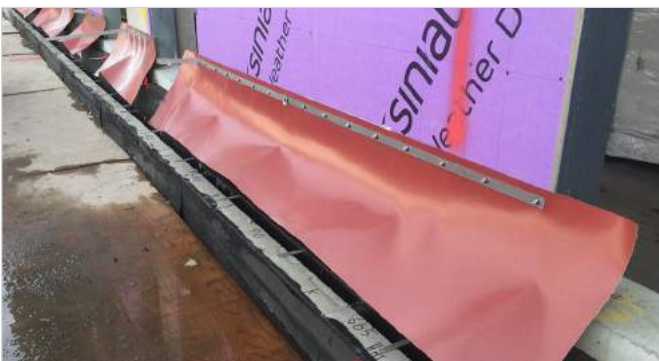


## Cavity tray - continuous

An uninterrupted cavity tray that extends around the building at a specific level e.g. used above masonry supports, horizontal cavity fire barriers or ground gas protection

## Cavity tray - discontinuous

A discrete length of cavity tray with stop ends, e.g. used above lintels at windows or doorways



## Cavity tray - surface fixed

A cavity tray that is sealed and mechanically fixed to the cavity face of the inner leaf



## Coping

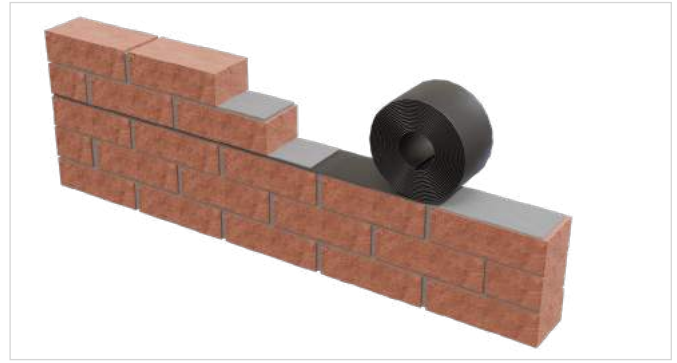
Construction that protects the top of a wall, balustrade or parapet and sheds rainwater clear of the surfaces beneath





**Course**

Single layer of masonry units of uniform height, including the bed joint



**Damp proof course (DPC)**

Impervious material that is included within a masonry panel to control the movement of moisture through the panel



**Damp proof membrane (DPM)**

Impervious material that is included within a concrete ground floor construction to control the movement of moisture from the ground through the floor construction



**Masonry**

Assemblage of masonry units laid in a specified pattern and joined together with mortar



**Preformed unit**

Factory manufactured three dimensional shapes used for damp protection at complex or awkward cavity tray junctions in masonry wall applications



**Perpend**

A vertical layer of mortar between two masonry units



**Stop end**

Detailing or preformed unit used at the end of a discontinuous cavity tray to divert the water towards the weepholes and prevent water from draining into the cavity



**Weep hole**

Hole through a wall that drains water to its outer face, often fitted with a weep vent to prevent insect or rodent access

# Product Selector

Application	Visqueen Zedex CPT HP DPC 	Visqueen Zedex Housing Grade DPC 	Visqueen Zedex High Bond DPC 	Visqueen Zedex Non-Combustible DPC 	Visqueen Ultimate Gas DPC 	Visqueen Polyethylene DPC 
Linear DPC at ground level, sleeper walls below precast suspended segmental ground floors e.g. beam and block	✓✓	✓	•	•	•	✓
Residential dwellings up to three storeys high	✓	✓✓	✓	✓	✓	✓(1)
Multi storey residential developments (2) with a masonry inner leaf	✓✓	✗	✓	✓	✓	✗
Multi storey residential developments (2) over 18m (England) or over 11m (Scotland) with an SFS inner leaf	✗	✗	✗	✓✓	✗	✗
Single storey and multi storey commercial or industrial developments, educational establishments	✓✓	✗	✓	✓	✓	✗
Parapet walls, beneath copings or cappings, above openings with stone lintels or soldier courses, freestanding walls	•	✗	✓✓	•	•	✗
Radon protection	✓✓	✗	✗	✗	✓	✗
Methane and carbon dioxide protection	✓(3)	✗	✗	✗	✓✓	✗
Volatile organic compound (VOC) protection	✗	✗	✗	✗	✓✓	✗

Key	
(1) Not suitable when downward movement of water needs to be prevented e.g parapets, chimneys and above lintels in cavity walls (extract from BS6515: 1984)	
(2) Includes dwellings, institutions, a room for residential purposes, student accommodation, care homes, sheltered housing, hospitals and dormitories in boarding schools	
(3) Only suitable for residential dwellings classified as NHBC Amber 1	
✗ Not suitable	✓ Suitable
• Contact Visqueen for further information	✓✓ Products specifically developed for the application

# Visqueen Zedex CPT High Performance Damp Proof Course

Visqueen Zedex CPT High Performance Damp Proof Course (DPC) is a black, flexible 0.8mm co-polymer thermoplastic (CPT) damp proof course and cavity tray system. It is supplied in 20m long rolls and the following widths: 100mm, 112.5mm, 150mm, 225mm, 300mm, 337.5mm, 450mm, 500mm, 600mm, 700mm, 750mm, 800mm, 900mm, 1000mm, 1200mm and 1400mm.

## Features and benefits

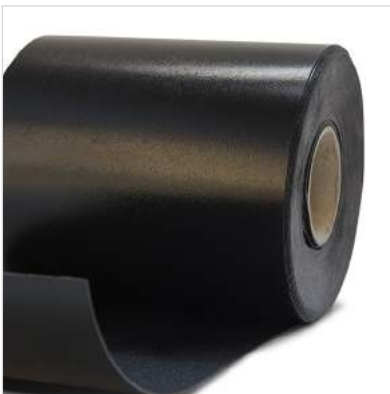
- BBA certified - third party accreditation
- Flexible cavity tray system - easy to detail and install on site
- Gas resistant - part of the Visqueen Low Permeability Gas Membrane system to provide gas protection to NHBC Amber 1
- Multi functional - also acts as a radon resistant damp proof course and can be used in conjunction with the Visqueen Radon membranes to form a complete system for radon protection
- Excellent tear resistance - robust and resistant to on site damage
- Versatile applications - widths from 100mm to 1400mm
- Visqueen Preformed Units available - simplifies complex or awkward detailing

## Approvals and standards

- Third party accreditation (BBA 94/3059)
- Conforms to the specification requirements of NHBC Amber 1 applications
- Conforms to the specification requirements of BR 211:2015
- UKCA, CE, UKNI Mark to EN 14909:2012 - Flexible sheets for waterproofing
- Quality Management System ISO 9001:2015
- Occupational Health and Safety System ISO 45001:2018
- Environmental Management System ISO 14001:2015

## Usage

Visqueen Zedex CPT High Performance Damp Proof Course is suitable for all masonry applications including residential, commercial and multi storey buildings. It can be site formed into a built-in or surface fixed cavity tray to manage the downward passage of water in cavity wall applications. The DPC is suitable for use as a gas DPC for NHBC Amber 1 conditions or where radon gas exists. It can also be used on sleeper walls below a ground floor construction e.g. beam and block floor system.



## System components



### Visqueen Zedex Jointing Tape

Visqueen Zedex Jointing Tape is a double sided butyl based compound with an oversize quick release film. It is available in roll format 100mm x 15m and coloured black.



### Visqueen HP Tanking Primer

Visqueen HP Tanking Primer is a black bituminous priming solution. The product is supplied in a 5 litre tin.



### Visqueen Zedex DPC Surface Fixing System

Visqueen Zedex DPC Surface Fixing System consists of Visqueen Zedex Fixing Strip, Zedex Fixing Pins for Masonry and Zedex Fixing Pins for Insulation. All items sold separately.



### Visqueen Preformed Units

Visqueen Preformed Units (PFUs) are factory manufactured three dimensional shapes. The units are formed from Visqueen Zedex CPT High Performance DPC (Zedex Units).



### VisqueenPro Detailing Strip

VisqueenPro Detailing Strip is a high performance single sided tape. It is available in roll format, 300mm x 10m and 500mm x 10m.



### Visqueen DPC Joint Support

Visqueen DPC Joint Supports are factory manufactured lightweight stainless steel profiles. The supports are manufactured as standard from stainless steel to BS EN 10088 grade 1.4301 (BS 1449 grade 304).

The supports are available as a pack of 10 units which can be hand bent on site to the required cavity tray profile. The pack of 10 units are suitable for cavity tray widths up to and including 500mm. Bespoke supports are available for cavity tray widths in excess of 500mm.



Download Technical Datasheet



# Visqueen Zedex Housing Grade Damp Proof Course

Visqueen Zedex Housing Grade Damp Proof Course (DPC) is a black, flexible 0.6mm damp proof course and cavity tray system. It is supplied in 20m long rolls and the following widths: 100mm, 112.5mm, 150mm, 225mm, 300mm, 337.5mm, 450mm, 600mm, 750mm and 900mm.

## Features and benefits

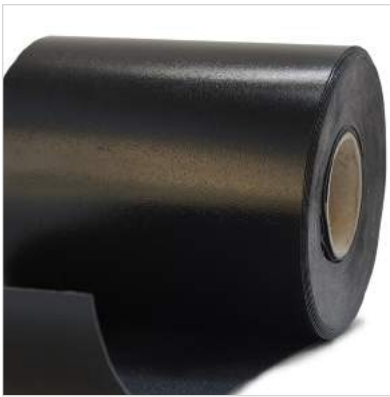
- BBA certified - third party accreditation
- Flexible cavity tray system - easy to detail and install on site
- Good tear resistance - robust and resistant to on site damage
- Versatile applications - widths from 100mm to 900mm
- Visqueen Preformed Units available - simplifies complex or awkward detailing

## Approvals and standards

- Third party accreditation (BBA 94/3059)
- UKCA, CE, UKNI Mark to EN 14909:2012 - Flexible sheets for waterproofing
- Quality Management System ISO 9001:2015
- Occupational Health and Safety System ISO 45001:2018
- Environmental Management System ISO 14001:2015

## Usage

Visqueen Zedex Housing Grade Damp Proof Course is suitable for all residential masonry applications. It can be site formed into a built-in or surface fixed cavity tray to manage the downward passage of water in cavity wall applications. The DPC should be fully supported along its length i.e. supported by the lintel. The DPC can also be used on sleeper walls below a ground floor construction e.g. beam and block floor system.



## System components



### Visqueen Zedex Jointing Tape

Visqueen Zedex Jointing Tape is a double sided butyl based compound with an oversize quick release film. It is available in roll format 100mm x 15m and coloured black.



### Visqueen HP Tanking Primer

Visqueen HP Tanking Primer is a black bituminous priming solution. The product is supplied in a 5 litre tin.



### Visqueen Zedex DPC Surface Fixing System

Visqueen Zedex DPC Surface Fixing System consists of Visqueen Zedex Fixing Strip, Zedex Fixing Pins for Masonry and Zedex Fixing Pins for Insulation. All items sold separately.



### VisqueenPro Detailing Strip

VisqueenPro Detailing Strip is a high performance single sided tape. It is available in roll format, 300mm x 10m and 500mm x 10m.



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# Visqueen Zedex High Bond Damp Proof Course

Visqueen Zedex High Bond Damp Proof Course is a heavy duty DPC and cavity tray system manufactured with a polyester reinforced carrier, rubber modified coating and surfaced on both sides with a fine silica sand. It is supplied in 8m long rolls and the following widths: 450mm, 600mm and 1000mm

## Features and benefits

- Manufactured in excess of British Standard - traditional DPC and cavity tray system
- Excellent mortar adhesion - ideal for low compressive load applications
- Versatile heat bonded material - suitable to form complex or awkward detailing on site
- Modified bituminous coating - laps can be tape bonded or heat bonded

## Approvals and standards

- Manufactured in excess of BS 6398:1983 Type A
- Conforms to the specification requirements of NHBC Technical Guidance 6.1/05
- UKCA, CE, UKNI Mark to EN 14909:2012 - Flexible sheets for waterproofing
- Quality Management System ISO 9001:2015
- Occupational Health and Safety System ISO 45001:2018
- Environmental Management System ISO 14001:2015

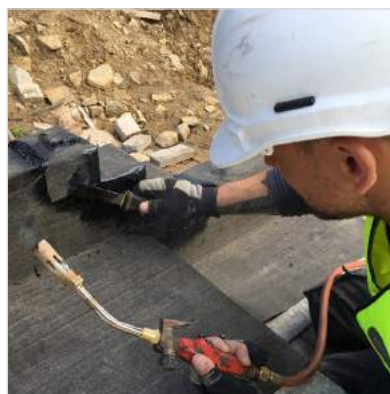
## Usage

Visqueen Zedex High Bond Damp Proof Course is suitable for masonry applications including residential and commercial up to and including three storey buildings. It can be site formed into a built-in or surface fixed cavity tray to manage the downward passage of water in cavity wall applications. It can also be used on sleeper walls below a ground floor construction e.g. beam and block floor system.

Due to its superior mortar adhesion, the DPC is ideal for use on buildings where a low imposed load occurs but a high mortar bond is required e.g. parapet walls, beneath masonry coping or capping. The DPC reduces the risk of masonry slippage due to poor mortar adhesion.

The DPC is also ideal for use in complex cavity tray detailing e.g. around steel columns, wind posts, parapet posts, etc as the product can be heat bonded on site.

In accordance with NHBC Technical Guidance 6.1/05, the DPC is suitable for cavity trays to openings with solid courses or stone lintels.



## System components



### Visqueen Zedex Jointing Tape

Visqueen Zedex Jointing Tape is a double sided butyl based compound with an oversize quick release film. It is available in roll format 100mm x 15m and coloured black.



### Visqueen HP Tanking Primer

Visqueen HP Tanking Primer is a black bituminous priming solution. The product is supplied in a 5 litre tin.



### Visqueen Zedex DPC Surface Fixing System

Visqueen Zedex DPC Surface Fixing System consists of Visqueen Zedex Fixing Strip, Zedex Fixing Pins for Masonry and Zedex Fixing Pins for Insulation. All items sold separately.



### VisqueenPro Detailing Strip

VisqueenPro Detailing Strip is a high performance single sided tape. It is available in roll format, 300mm x 10m and 500mm x 10m.



### Visqueen DPC Joint Support

Visqueen DPC Joint Supports are factory manufactured lightweight stainless steel profiles. The supports are manufactured as standard from stainless steel to BS EN 10088 grade 1.4301 (BS 1449 grade 304).

The supports are available as a pack of 10 units which can be hand bent on site to the required cavity tray profile. The pack of 10 units are suitable for cavity tray widths up to and including 500mm. Bespoke supports are available for cavity tray widths in excess of 500mm.



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# Visqueen Zedex Non-Combustible Damp Proof Course

## A2 - s1, d0 to BS EN 13501-1:2018

Visqueen Zedex Non-Combustible Damp Proof Course (DPC) achieves a reaction to fire classification A2 - s1, d0 which is denoted as non-combustible in the UK Government's Ministry of Housing, Communities and Local Government Advice for Building Owners of Multi-storey, Multi-occupied Residential Buildings, section 1.17 and 1.18 (January 2020).

The product is compliant with the requirements of The Building Regulations 2010 (England and Wales) (as amended) and The Building (Scotland) Regulations 2004 (as amended). The DPC is a flexible 0.6mm composite damp proof course and cavity tray system. It is supplied in 20m long rolls and the following standard widths: 450mm, 500mm, 600mm, 700mm, 800mm and 900mm. Other widths are available on request.

The DPC is coloured red on the upper surface and pale grey on the reverse and is installed with the red surface facing upwards or outwards i.e. facing towards the direction of moisture penetration.

### Features and benefits

- Achieves a reaction to fire classification A2 - s1, d0 to BS EN 13501-1:2018 by Warrington Fire - compliant with UK Building Regulations
- BDA certified - third party accreditation
- Flexible cavity tray system - lightweight, easy to detail and install on site
- Excellent strength and tear resistance - robust and resistant to on-site damage
- Visqueen Non-Combustible Preformed Units available - simplifies complex or awkward detailing
- Range of system components - Visqueen Non-Combustible Fixing Strip and DPC Joint Supports available

### Approvals and standards

- Third party accreditation (BDA BAW-21-203-P-A-UK)
- UKCA, CE, UKNI Mark to EN 14909:2012 - Flexible sheets for waterproofing
- Compliant with UK Building Regulations
- Achieves a reaction to fire classification A2 - s1, d0 to BS EN 13501-1:2018 by Warrington Fire
- Shear strength tested to BS EN 1052-4:2000 Methods of test for masonry - Part 4
- Flexural mortar bond strength tested in accordance with DD 86-1:1983
- Quality Management System ISO 9001:2015
- Occupational Health and Safety System ISO 45001:2018
- Environmental Management System ISO 14001:2015

### Usage

Visqueen Zedex Non-Combustible Damp Proof Course and cavity tray is designed for cavity wall constructions in residential, commercial and multi-storey buildings including those with a structural framing system inner leaf and a masonry outer leaf.

Typical applications include use as a jamb DPC, or as a site formed surface fixed cavity tray to manage the downward passage of water in cavity wall constructions.

The product is used where a DPC or DPC cavity tray is required to achieve a reaction to fire classification A2 - s1, d0 to BS EN 13501-1:2018.

Care should be taken by the Designer to ensure suitability for applications other than those stated above. Visqueen Zedex Non-Combustible DPC should be approved by all stakeholders prior to use.



### System components



#### Visqueen Zedex Mastic

Visqueen Zedex Mastic is a white, flame retardant, flexible sealant supplied in 380ml cartridges.



#### Visqueen Non-Combustible Fixing Strip

Visqueen Non-Combustible Fixing Strip is a flexible stainless steel strip, 1240mm long, 25mm high, with 8mm pre-drilled holes spaced at 150mm centres. There are 9 holes per strip and the strips are supplied in packs of 17 items.

The fixing strips are manufactured as standard from stainless steel to BS EN 10088 grade 1.4301 (BS 1449 grade 304).



#### Visqueen Non-Combustible Preformed Units

Visqueen Non-Combustible Preformed Units are factory manufactured, made to order, three dimensional shapes. The units are manufactured as standard from stainless steel to BS EN 10088 grade 1.4301 (BS 1449 grade 304).



#### Visqueen DPC Joint Support

Visqueen DPC Joint Supports are factory manufactured lightweight stainless steel profiles. The supports are manufactured as standard from stainless steel to BS EN 10088 grade 1.4301 (BS 1449 grade 304).

The supports are available as a pack of 10 units which can be hand bent on site to the required cavity tray profile. The pack of 10 units are suitable for cavity tray widths up to and including 500mm. Bespoke supports are available for cavity tray widths in excess of 500mm.



Download Technical Datasheet



# Visqueen Ultimate Gas Damp Proof Course

Visqueen Ultimate Gas Damp Proof Course (DPC) utilises Visqueen's Advanced Barrier Technology. The DPC is a 0.5mm thick, flexible 7 layer coextruded film providing hydrocarbon, volatile organic compound (VOC) and ground gas resistance. The DPC has an embossed/debossed finish, is coloured gold/white and can be installed with either surface facing upwards. It is supplied in 20m long rolls and the following widths: 500mm, 600mm, 750mm and 900mm.

## Features and benefits

- Complies with CIRIA C748:2014 - industry standard for volatile organic compounds (VOC) protection
- Complies with BS 8485:2015 + A1:2019 - industry standard for methane and carbon dioxide protection
- Flexible - easy to detail and install on site
- Multi functional - also acts as a radon resistant damp proof course
- Dual jointing methods - lap joints can be taped or heat welded
- Visqueen Ultimate Preformed Units available - simplifies complex or awkward detailing

## Approvals and standards

- Complies with CIRIA C748:2014
- Conforms to the specification 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 211:2015
- Shear strength tested to BS EN 1052-4:2000 Methods of test for masonry - Part 4.
- Flexural mortar bond strength tested in accordance with DD 86-1:1983
- UKCA, CE, UKNI Mark to EN 14909:2012 - Flexible sheets for waterproofing
- Quality Management System ISO 9001:2015
- Occupational Health and Safety System ISO 45001:2018
- Environmental Management System ISO 14001:2015

## Usage

Visqueen Ultimate Gas Damp Proof Course is suitable for all masonry wall applications including residential, commercial and multi storey buildings. It can be site formed into a built-in or surface fixed cavity tray to manage the downward passage of water in cavity wall applications.

The DPC is used to prevent harmful volatile organic compounds (VOCs) and hazardous ground gases from entering into the cavity from the ground, and is also suitable for use on NHBC Amber 1 and 2 sites or where radon gas exists. It can also be used on sleeper walls below a ground floor construction e.g. beam and block floor system.



## System components



### Visqueen Zedex Jointing Tape

Visqueen Zedex Jointing Tape is a double sided butyl based compound with an oversize quick release film. It is available in roll format 100mm x 15m and coloured black.



### Visqueen HP Tanking Primer

Visqueen HP Tanking Primer is a black bituminous priming solution. The product is supplied in a 5 litre tin.



### Visqueen Zedex DPC Surface Fixing System

Visqueen Zedex DPC Surface Fixing System consists of Visqueen Zedex Fixing Strip, Zedex Fixing Pins for Masonry and Zedex Fixing Pins for Insulation. All items sold separately.



### Visqueen Ultimate Preformed Units

Visqueen Ultimate Preformed Units (PFUs) are factory manufactured three dimensional shapes. The units are formed from Visqueen Ultimate Gas DPC (Ultimate Units).



### VisqueenPro Detailing Strip

VisqueenPro Detailing Strip is a high performance single sided tape. It is available in roll format, 300mm x 10m and 500mm x 10m.



### Visqueen DPC Joint Support

Visqueen DPC Joint Supports are factory manufactured lightweight stainless steel profiles. The supports are manufactured as standard from stainless steel to BS EN 10088 grade 1.4301 (BS 1449 grade 304).

The supports are available as a pack of 10 units which can be hand bent on site to the required cavity tray profile. The pack of 10 units are suitable for cavity tray widths up to and including 500mm. Bespoke supports are available for cavity tray widths in excess of 500mm.



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# Visqueen Polyethylene Damp Proof Course

Visqueen Polyethylene Damp Proof Course is a black, flexible 0.5mm damp proof course suitable for masonry wall constructions. It is supplied in 30m long rolls and the following widths: 100mm, 112.5mm, 150mm, 225mm, 300mm, 337.5mm, 450mm, 600mm, 900mm and 1200mm.

## Features and benefits

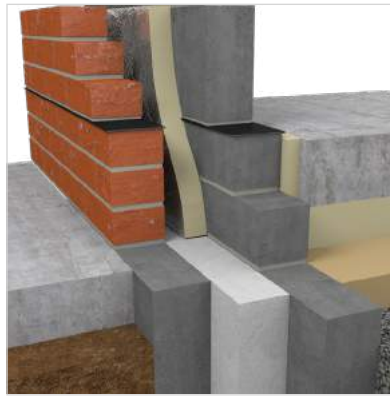
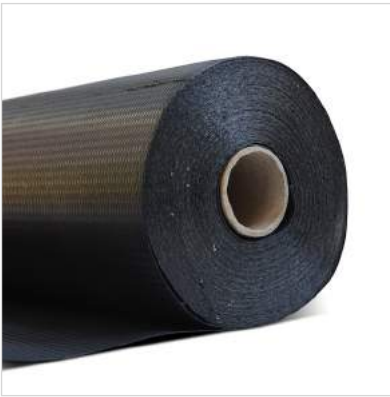
- Manufactured in excess of British Standard - achieves minimum DPC requirements
- Post use recycled content in excess of 90% - diverts waste from landfill
- Diamond embossed surface - improves mortar adhesion
- Minimum DPC standard - cost effective option

## Approvals and standards

- Manufactured to BS 6515:1984
- UKCA, CE, UKNI Mark to EN 14909:2012 - Flexible sheets for waterproofing
- Quality Management System ISO 9001:2015
- Occupational Health and Safety System ISO 45001:2018
- Environmental Management System ISO 14001:2015

## Usage

Visqueen Polyethylene Damp Proof Course is suitable for various masonry applications in accordance with Appendix D of BS 6515:1984.



## System components



### Visqueen Zedex Jointing Tape

Visqueen Zedex Jointing Tape is a double sided butyl based compound with an oversize quick release film. It is available in roll format 100mm x 15m and coloured black.



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# Visqueen Preformed Units

Visqueen Preformed Units are factory manufactured three dimensional shapes used for damp and/or ground gas protection. The preformed units are available in the following grades:

- Zedex Units
- Ultimate Units
- Non-Combustible Units

## Features and benefits

- Factory manufactured three dimensional shapes - simplifies complex detailing
- Quality inspected – reduces risk of damp and/or gas ingress on site
- Extensive range - suitable for both damp and gas proofing applications
- Versatile - suitable for built-in and surface fixed cavity tray applications
- Cost effective - speeds up installation on site
- Multi-functional - compatible with all Visqueen damp and gas proof courses

## Approvals and standards

- Enable the designer and installer to comply with British Standard codes of practice
- Quality Management System ISO 9001:2015
- Occupational Health and Safety System ISO 45001:2018
- Environmental Management System ISO 14001:2015

## Usage

Visqueen Preformed Units are suitable for detailing complex or awkward cavity tray junctions in masonry wall applications including residential, commercial and multi storey buildings. The units can also be used for complex junctions associated with damp proof membrane applications within floor constructions, e.g. door thresholds and corners etc. The units can also be used to prevent harmful ground gases from entering into the building at the above junctions.

Certain architectural details are difficult to damp and/or gas proof effectively by site forming of DPC material. Preformed units ensure effective, consistent protection that speeds up installation, reduces the risk of damp and/or gas ingress and therefore helps to reduce costs on site.

The following indicates the most appropriate grade of Visqueen Preformed Unit for use with Visqueen DPCs:

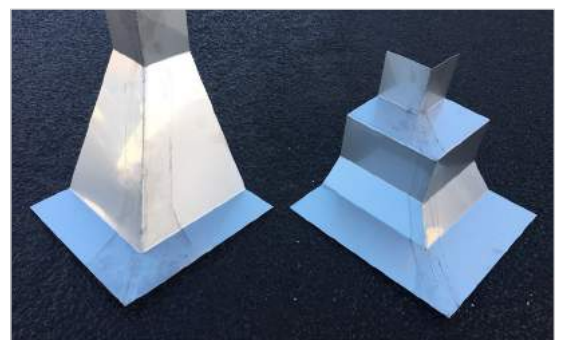
Type of Visqueen DPC	Appropriate grade of Visqueen Preformed Unit
Zedex CPT HP DPC	Zedex Units
Zedex Housing Grade DPC	Zedex Units
Zedex High Bond DPC	Formed from DPC on-site
Zedex Non-Combustible DPC	Non-Combustible Units
Ultimate Gas DPC	Ultimate Units
Polyethylene DPC	Zedex Units

BS 8215:1991 Code of practice for design and installation of damp-proof courses in masonry construction recommends the use of prefabricated units in its sections 5.3, 5.5 and 6.7; the later extract is shown below:

“Because changes in direction of a cavity tray and more complicated than joints and would involve complex bending and folding on site, it is recommended that prefabricated corner units are used”.

Where a British Standard code of practice exists, Visqueen advise that it is adhered to when installing associated Visqueen products. Most warranty providers recommend the use of prefabricated corner units.

On the following pages is a selection of commonly used corner units; the contractor/ installer can add the relevant dimensions to the drawing and send to their preferred Visqueen distributor for pricing. Other commonly used units can be found on the Visqueen website. In addition, on receipt of relevant sections, plans and elevations, our Visqueen CAD Design Service can also produce drawings for bespoke units. Contact Visqueen for further information.



# Visqueen Zedex or Ultimate Preformed Units

Built in, external/ internal corner

Surface fixed, external/ internal corner

Surface fixed, external/ internal corner with insulation ledge

**Detail Issued For Guidance Only, Designer's Approval Required**

**External Corner Cloak:**

A (Inner)	
B (Rise)	
C (Cavity)	
D (Outer)	
Angle	
Quantity	

**Internal Corner Cloak:**

A (Inner)	
B (Rise)	
C (Cavity)	
D (Outer)	
Angle	
Quantity	

Project: Standard Detail : Preformed Corner Cloaks.  
Drawing No. PFU-501 Date: 12/18. Scale: NTS.

**Detail Issued For Guidance Only, Designer's Approval Required**

**External Corner Cloak:**

B (Rise)	
C (Cavity)	
D (Outer)	
Angle	
Quantity	

**Internal Corner Cloak:**

B (Rise)	
C (Cavity)	
D (Outer)	
Angle	
Quantity	

Project: Standard Detail : Preformed Corner Cloaks.  
Drawing No. PFU-502 Date: 12/18. Scale: NTS.

**Detail Issued For Guidance Only, Designer's Approval Required**

**External Corner Cloak:**

A (Insulation)	
B (Rise)	
C (Cavity)	
D (Outer)	
Quantity	

**Internal Corner Cloak:**

A (Insulation)	
B (Rise)	
C (Cavity)	
D (Outer)	
Quantity	

Project: Standard Detail : Preformed Corner Cloaks - Insulation.  
Drawing No. PFU-503 Date: 12/18. Scale: NTS.

**PFU-501 External and internal corner**

**PFU-502 External and internal corner**

**PFU-503 External and internal corner**

# Visqueen Non-Combustible Preformed Units

Surface fixed, external corner

Surface fixed, internal corner

**External Corner Unit**

Ref:	
A (Width)	
B (Rise)	
C (Cavity)	
D (Outer)	
Angle	
Quantity	
Flexible	
Rigid	

Project No.: PFU-NC-600  
Drawing No.: PFU-NC-600  
Scale: NTS  
Date: 12/18  
Revision Status: 0

**PFU-NC-600 External corner**

**Internal Corner Unit**

Ref:	
B (Rise)	
C (Cavity)	
D (Outer)	
E (Outer)	
Angle	
Quantity	
Flexible	
Rigid	

Project No.: PFU-NC-601  
Drawing No.: PFU-NC-601  
Scale: NTS  
Date: 12/18  
Revision Status: 0

**PFU-NC-601 Internal corner**

Surface fixed, external corner with insulation ledge

Surface fixed, internal corner with insulation ledge

**External Corner Unit**

Ref:	
A (Insulation)	
B (Rise)	
C (Cavity)	
D (Outer)	
E (Width)	
Angle	
Quantity	
Flexible	
Rigid	

Project No.: PFU-NC-602  
Drawing No.: PFU-NC-602  
Scale: NTS  
Date: 12/18  
Revision Status: 0

**PFU-NC-602 External corner**

**Internal Corner Unit**

Ref:	
A (Insulation)	
B (Rise)	
C (Cavity)	
D (Outer)	
E (Outer)	
Angle	
Quantity	
Flexible	
Rigid	

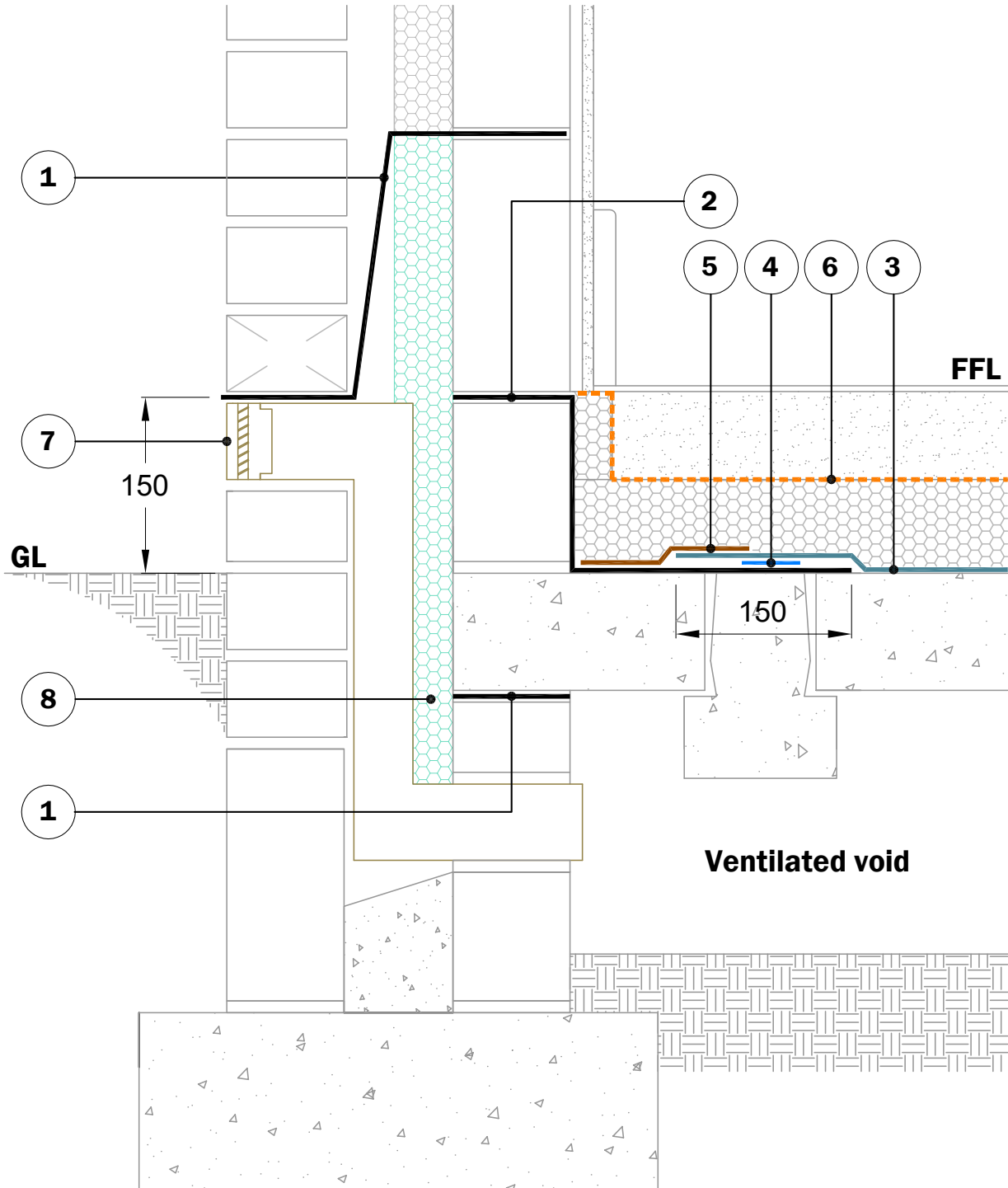
Project No.: PFU-NC-603  
Drawing No.: PFU-NC-603  
Scale: NTS  
Date: 12/18  
Revision Status: 0

**PFU-NC-603 Internal corner**



# Technical details

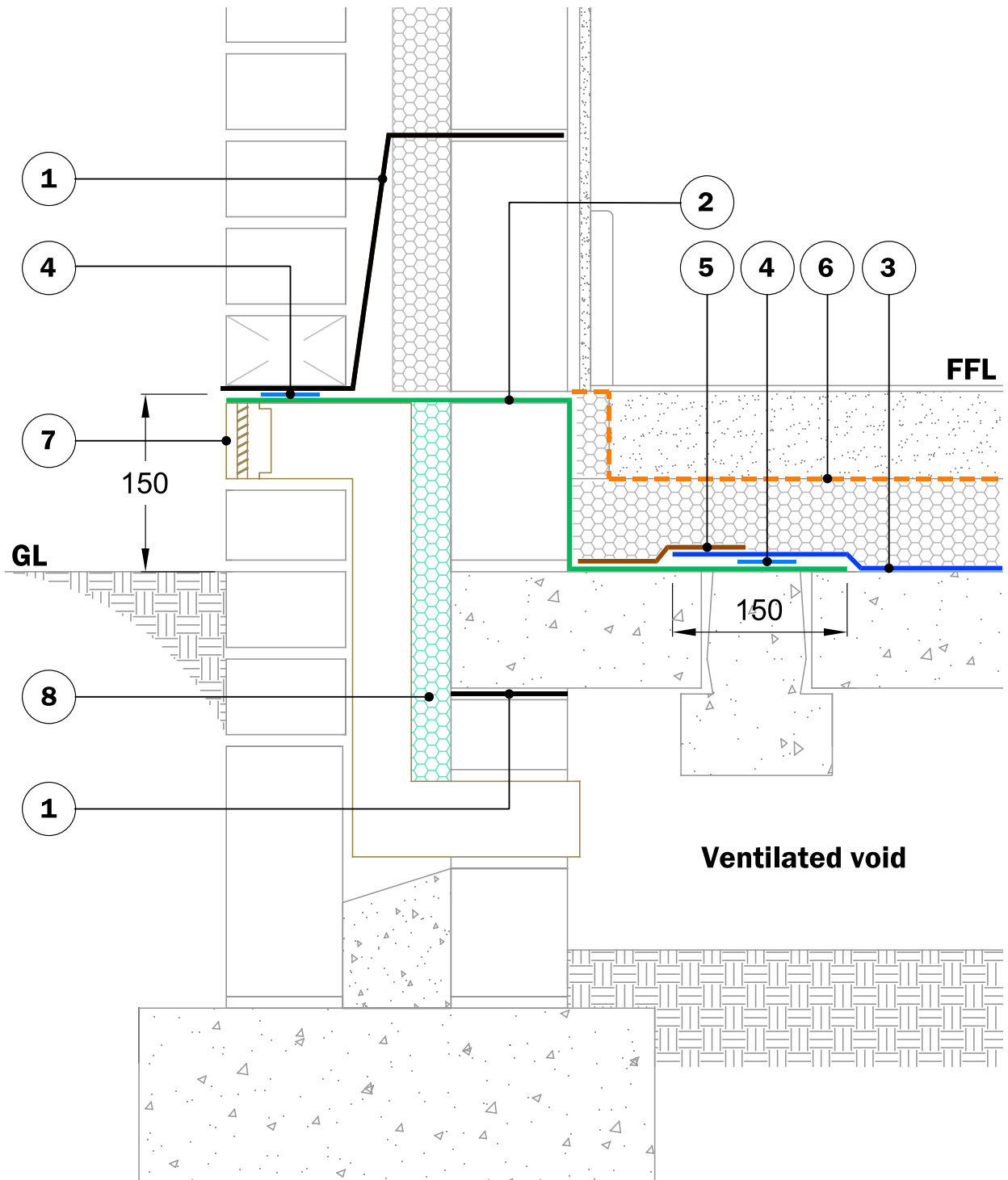
The following typical details incorporate the appropriate DPCs for buildings that do not require non-combustible DPCs. In circumstances where non-combustibility is required, contact your regional **Technical Support Manger** for guidance.



## Key to materials

- |   |  |
|---|--|
| 1. Visqueen Zedex CPT High Performance DPC    | 5. VisqueenPro Single Sided Tape                 |
| 2. Visqueen Zedex CPT High Performance DPC    | 6. Visqueen Vapour Barrier or HP Vapour Barrier  |
| 3. Visqueen High Performance DPM              | 7. Visqueen Adjustable Z Vent & Air Brick        |
| 4. VisqueenPro Double Sided Tape (50mm x 10m) | 8. Moisture resistant rigid insulation by others |

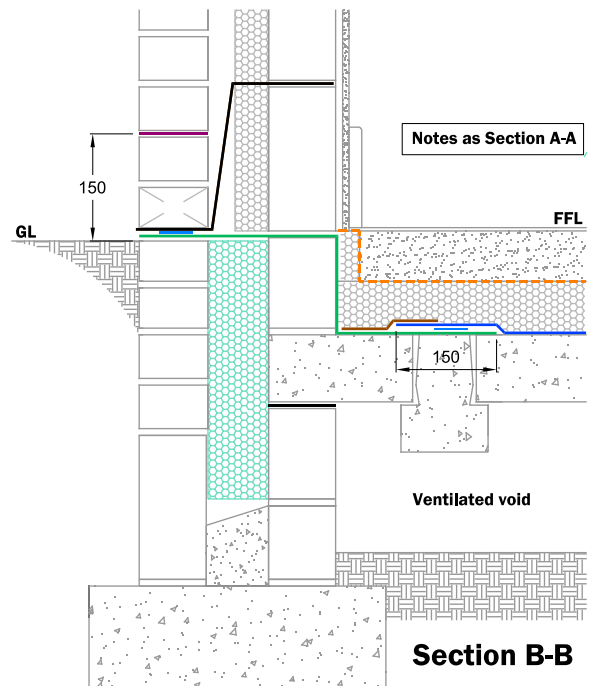
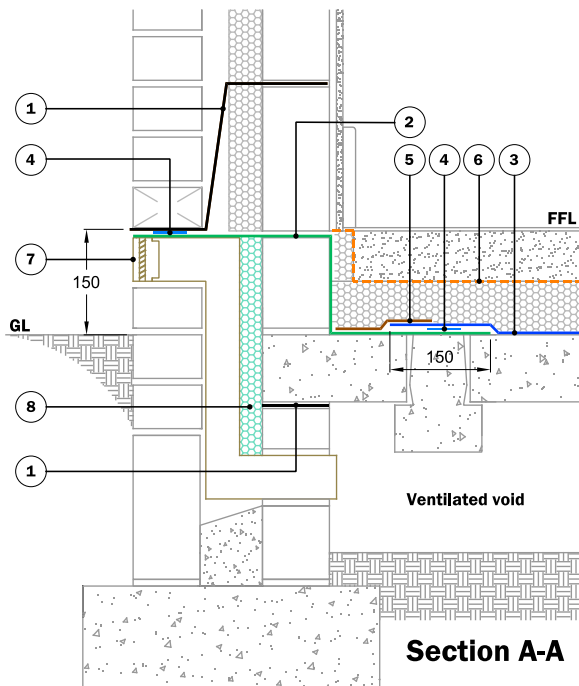
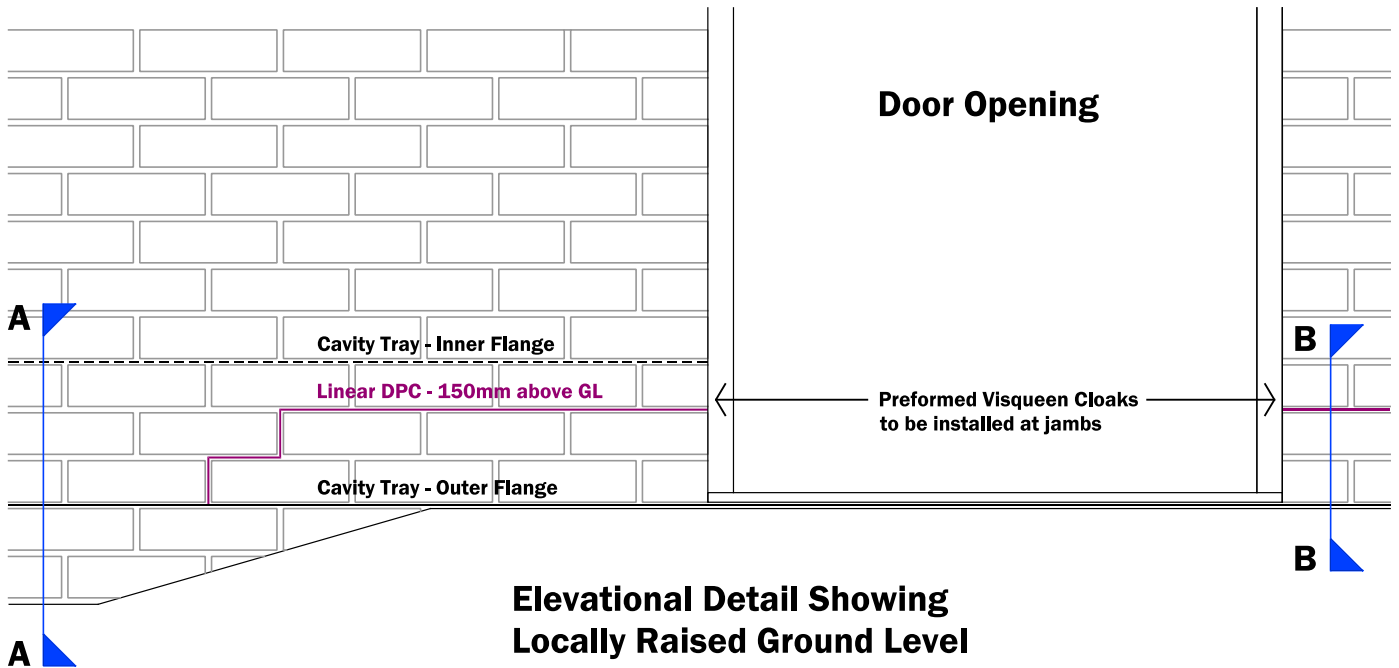
**Gas and Damp Protection – Typical section through junction of external wall and suspended floor.**



**Key to materials**

- |   |  |
|---|--|
| 1. Visqueen Zedex CPT High Performance DPC    | 5. Visqueen Gas Resistant Foil Tape              |
| 2. Visqueen Ultimate Gas DPC                  | 6. Visqueen Vapour Barrier or HP Vapour Barrier  |
| 3. Visqueen Gas Barrier                       | 7. Visqueen Adjustable Z Vent & Air Brick        |
| 4. VisqueenPro Double Sided Tape (50mm x 10m) | 8. Rigid insulation by others to support gas DPC |

Gas and Damp Protection – Typical level threshold detail with locally raised ground level.

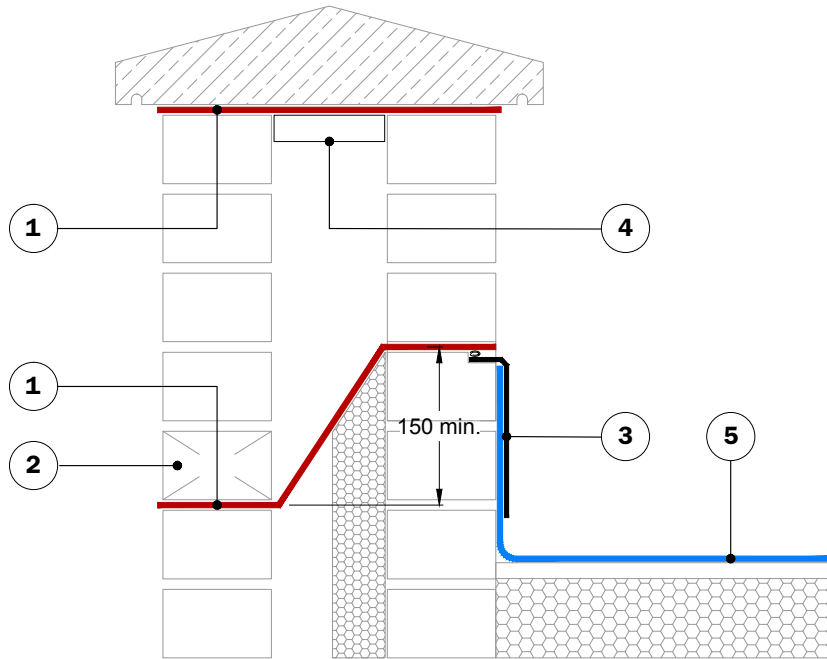


**Key to materials**

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>1. Visqueen Zedex CPT High Performance DPC</li> <li>2. Visqueen Ultimate Gas DPC</li> <li>3. Visqueen Gas Barrier</li> <li>4. VisqueenPro Double Sided Tape (50mm x 10m)</li> </ul> | <ul style="list-style-type: none"> <li>5. Visqueen Gas Resistant Foil Tape</li> <li>6. Visqueen Vapour Barrier or HP Vapour Barrier</li> <li>7. Visqueen Adjustable Z Vent &amp; Air Brick</li> <li>8. Rigid insulation by others to support gas DPC</li> </ul> |
|--|---|



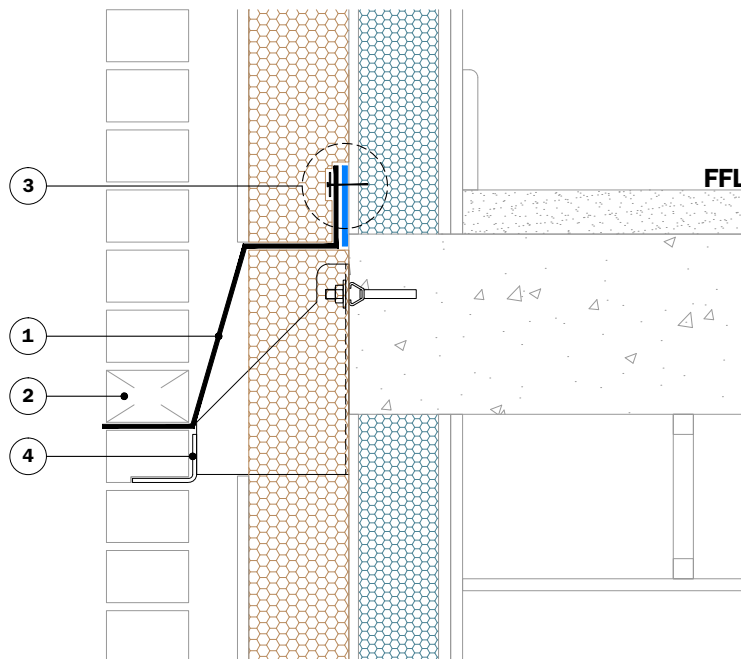
**Damp Protection - Typical section at coping**



**Key to materials**

- 1. Visqueen Zedex High Bond DPC / cavity tray sandwiched between even beds of fresh mortar. All laps to be 100mm minimum & torch bonded.
- 2. Weepholes at maximum 900mm intervals.
- 3. Wedged & pointed cover flashing to architect's detail.
- 4. Cavity closer / DPC support to architect's detail.
- 5. Roof membrane system by others.

**Damp Protection – Typical section at masonry support system**



**Key to materials**

- 1. Visqueen Zedex CPT High Performance DPC.
- 2. Weepholes at maximum 900mm intervals.
- 3. Visqueen Zedex Jointing Tape, Visqueen Zedex Fixing Strip, and stainless steel fixings by others.
- 4. Masonry support system by others.



## Sitework

### Delivery to site

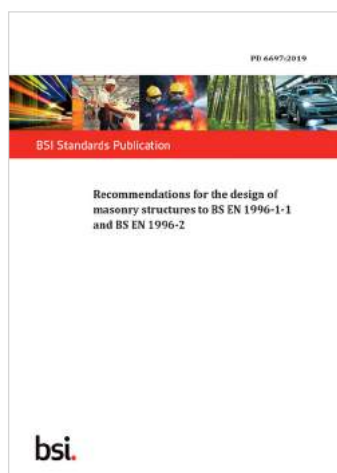
Visqueen Damp Proof Courses (DPCs) are delivered to site in rolls, secured with a wrapper. On delivery it is important to check compliance of DPC materials and system components with specification requirements.

### Storage and handling

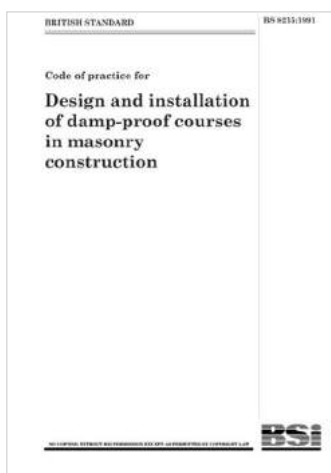
DPCs and system components should be stored in a dry area, under cover in the original packaging and protected against damage. Visqueen Preformed Units and Ultimate Preformed Units are supplied in cardboard cartons and Visqueen Non-Combustible Preformed Units are supplied on pallets. The units should also be stored in a dry area, under cover in the original packaging and protected against damage. Care should be taken when handling the products in line with current manual handling regulations.

### Installation of DPCs

Installation should follow Visqueen's guidance as set out in the relevant product datasheet, and normal good practices for the installation and detailing of damp proof courses as set out in the following British Standards:



**PD 6697:2019** Recommendations for the design of masonry structures to BS EN 1996-1-1 and BS EN 1996-2.



**BS 8215:1991** Code of practice for design and installation of damp-proof courses in masonry construction.

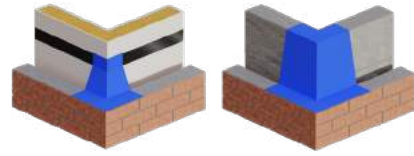


**BS 8000-3:2020** Workmanship on construction sites. Masonry. Code of practice.



When installing DPCs and site formed DPC cavity trays, it is important to have a working knowledge of the previously mentioned British Standards. Below are a few key extracts from these documents:

- Cavity wall design should be based on the assumption that rain will penetrate the outer leaf of the wall, even if it is rendered, and run down the inside of that leaf (PD6697 section 6.2.8.71).
- Forming an effective barrier to damp in cavity walls may give rise to complex three-dimensional details which, it is recommended, are prefabricated (BS 8215 section 5.5). See Visqueen Preformed Units.
- Horizontal DPCs which bridge a cavity should be stepped up by not less than 150mm from the outer to the inner leaf. Such DPCs, known as cavity trays, should preferably be formed in one piece, any necessary joints should be fully supported, well lapped and sealed (BS 8215 section 5.5). See Visqueen DPC Joint Supports.



- Where flexible DPCs are used, they should be bedded on mortar and be laid in continuous lengths for the full width of the leaf, with 100mm minimum laps in runs and with full laps at angles. At least one further course of units should be bedded on mortar on the DPC (PD6697 section 8.1.5).

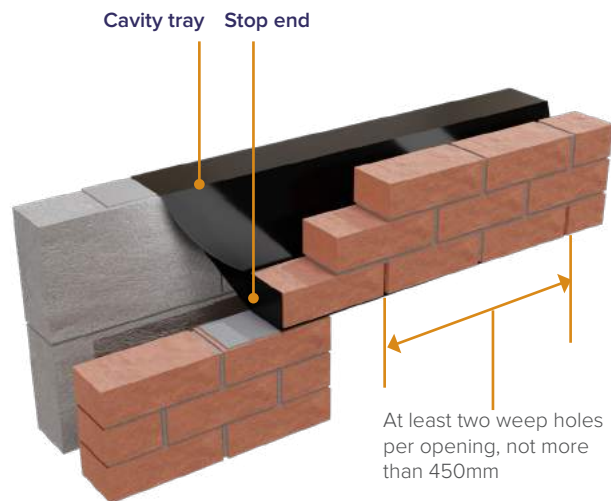


- A minimum of one further course of units, or equivalent, should be bedded in mortar on the DPC. The weight of the course above the DPC, if laid immediately after the DPC, helps to develop good adhesion between the masonry units, the mortar and the DPC (BS 8000-3 section 7.1.13).
- Use cavity trays, wherever practicable, in continuous lengths. If a joint cannot be avoided, a rigid support of suitable material should be used at the position of the joint so that solid bonding is provided. Overlap joints in DPCs to a minimum of 100mm and seal with an appropriate jointing compound (BS 8000-3 section 7.1.18a).

- Make sure that cavity trays extend beyond the full extent of any lintels or other cavity bridges; where cavity tray stop ends are formed in situ they should continue to the first perpend beyond the end of the lintel (BS 8000-3 section 7.1.18c).

- Weepholes should be formed through the outer leaf immediately above the (continuous) cavity tray at intervals not greater than 1m. There should be not less than two weepholes over each opening. Proprietary devices may be installed in weepholes (PD6697 section 6.2.8.7.3).

- (Regarding a discontinuous cavity tray) at least two weepholes per opening, not more than 450mm (BS8000-3:2020 section 7.1.18 figure 5).



### Cavity tray lap joints

All DPC or preformed unit surfaces to be jointed should be clean and dry. To aid adhesion when jointing during low temperature conditions, store jointing material in a warm location prior to use.

When forming a DPC to DPC lap joint or DPC to flexible preformed unit lap joint, use of a Visqueen DPC Joint Support directly beneath the lap joint ensures compliance with the relevant clauses in BS 8000-3 section 7.1.18a and BS 8215 section 5.5.

The joint support should be fitted in such a way as to span the cavity mirroring the cavity tray profile. The ends of the joint support should bear upon the outer and inner leaves of the wall and be appropriately fixed in position. The minimum 100mm cavity tray lap joint should be sealed in accordance with the relevant Visqueen DPC product datasheet.



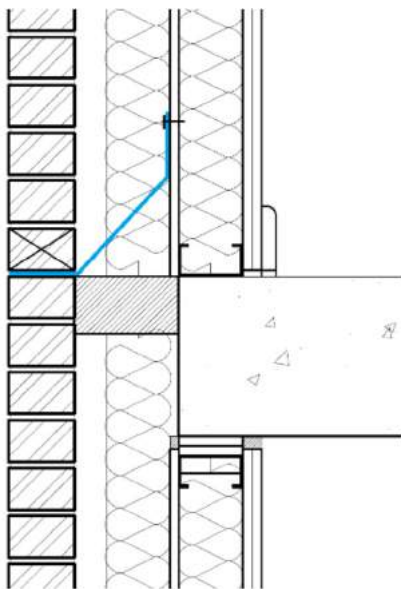
### Built-in and surface fixed cavity trays

When used as a site formed cavity tray, the DPC or preformed unit can be either built-in to the inner leaf or surface fixed (sometimes referred to as face fixed) to the cavity face of the inner leaf depending upon the type of wall construction.

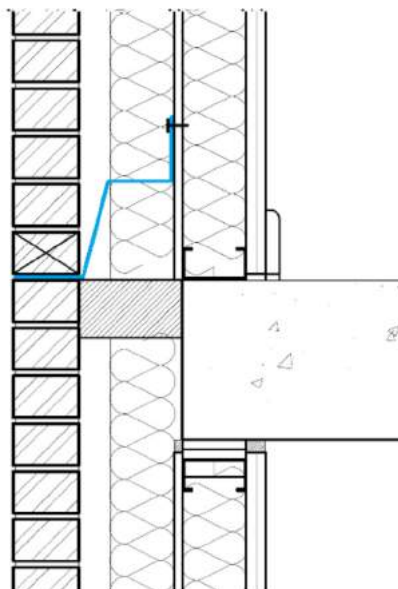




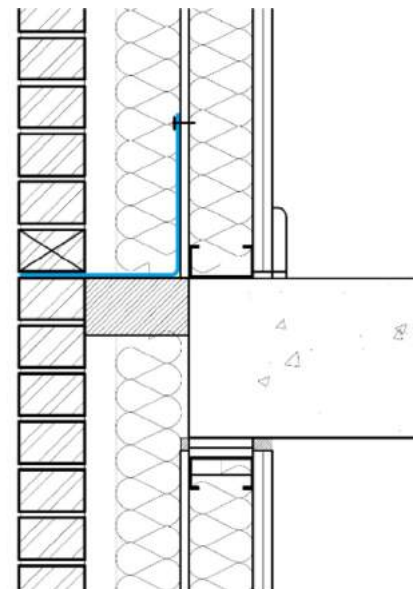
The following sections show typical surface fixed cavity tray profiles. Care should be taken if adopting the 'L' shape cavity tray profile as this does increase the risk of the cavity tray sagging, especially on wider cavities; the horizontal portion of the cavity tray must be adequately supported to ensure water is effectively expelled from the cavity via the weepholes.



**Sloping cavity tray**



**Sloping cavity tray with insulation ledge**



**L shaped cavity tray**

When using Visqueen DPC Fixing Pins for Masonry as the mechanical fixing, use the fixing strip holes as a guide and drill clearance holes 6.5mm diameter by 50mm deep through the fixing strip holes/cavity tray into the masonry substrate.

Insert the fixing pin through the fixing strip and cavity tray into the holes. Tap the central pin firmly home using a flat faced hammer. The barbed portion of the fixing pin will expand in the masonry unit providing a secure grip and high pull-out resistance.

When using Visqueen DPC Fixing Pins for Insulation as the mechanical fixings, use the fixing strip holes as a guide and, using a tool such as a bradawl, make pilot holes through the cavity tray. Push the fixing pin through the fixing strip and cavity tray into the insulation.

The serrated shank of the fixing pin will securely locate into rigid foam type insulation boards which are fully secured to the lightweight structural framing system.

**Cleaning cavities**

Care should be taken to prevent damage to DPC cavity tray materials during cleaning of mortar droppings from the cavity.

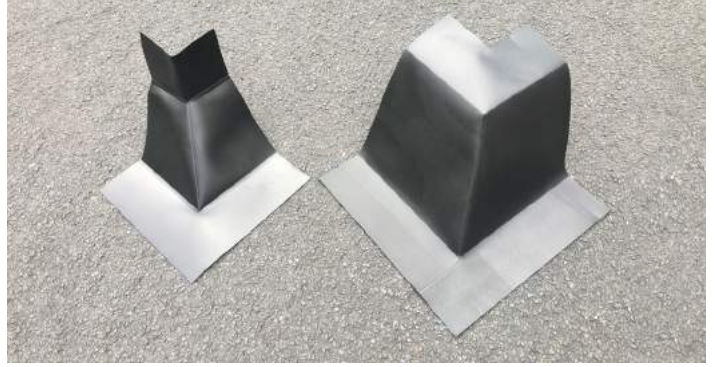
Draw battens can be used as a means of keeping the cavity clear of mortar and debris, since anything that bridges the cavity can lead to damp patches appearing on the inner leaf. The battens can be drawn up and cleaned regularly, particularly at the end of the day's work. Alternatively, voids can be left out of the external leaf at DPC cavity tray level so that hessian can be located on top of the tray to catch any dropped mortar. This can be cleaned and replaced daily until the section is complete.



### Installing Visqueen Preformed Units

Installation should follow Visqueen’s guidance, as set out in the relevant product datasheet and normal good practices for the installation and detailing of damp proof courses as set out in the previously mentioned British Standards.

The below installation examples show the detailing of a Visqueen Zedex CPT High Performance DPC cavity tray at an external corner using a Visqueen Zedex Preformed Corner Unit. Insulation has been omitted for clarity.



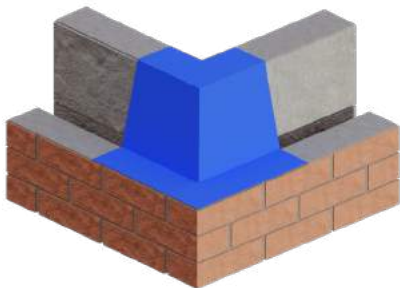
#### a) Built-in Visqueen Preformed Units



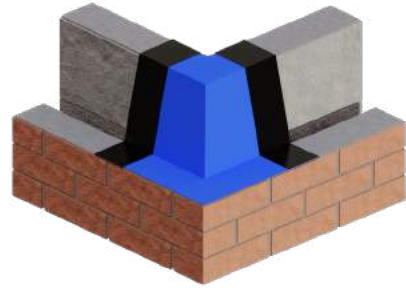
**i.** Unless the joints are otherwise fully supported, position a Visqueen DPC Joint Support beneath the joint locations ensuring that they mirror the required cavity tray profile.



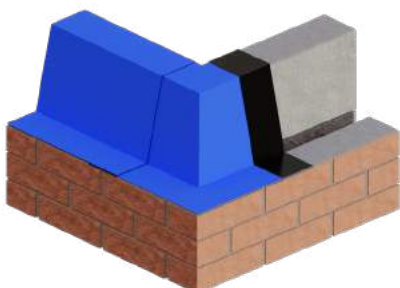
**ii.** Lay an even bed of the same type of mortar as in the course below onto each leaf and flush it up level.



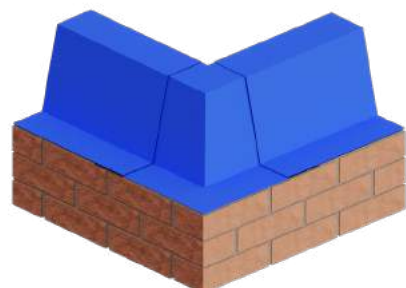
**iii.** Position the Visqueen Zedex Preformed Unit on the mortar bed.



**iv.** Apply Visqueen Zedex DPC Jointing Tape to the lap areas.



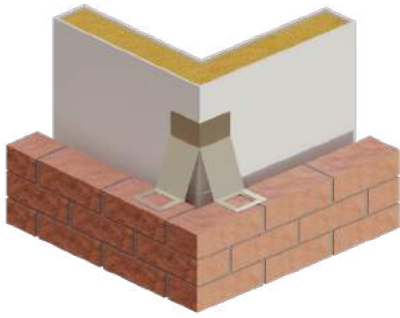
**v.** Lay the first run of Visqueen Zedex CPT High Performance DPC cavity tray and, using a seam roller, seal firmly to the preformed unit ensuring a minimum 100mm sealed overlap.



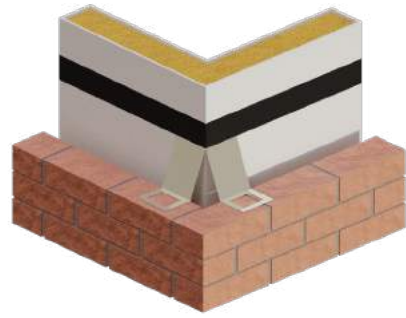
**vi.** Lay the second run of cavity tray as previous.

A minimum of one further course of masonry units should be laid immediately in mortar on the cavity tray/preformed unit. The weight of the course helps to develop good adhesion between the masonry units, the mortar and the cavity tray/preformed unit.

**b) Surface fixed Visqueen Preformed Units**



**i.** Unless the joints are otherwise fully supported, position a Visqueen DPC Joint Support beneath the joint locations ensuring that they mirror the required cavity tray profile. Secure in position.



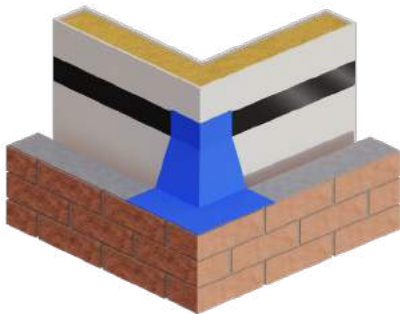
**ii.** Prime the inner leaf with Visqueen HP Tanking Primer and allow to dry.



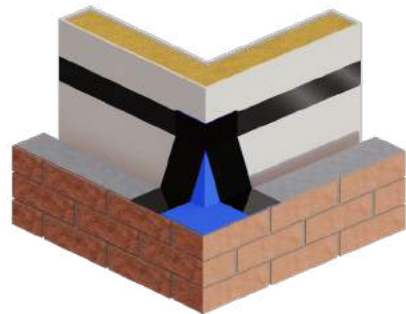
**iii.** Apply Visqueen Zedex DPC Jointing Tape to the primed inner leaf.



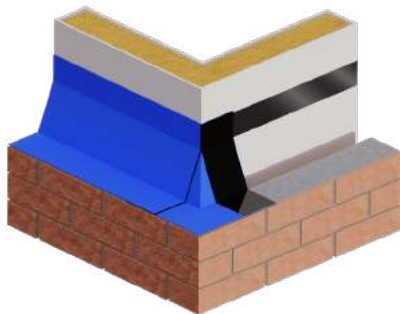
**iv.** Lay an even bed of the same type of mortar as in the course below onto the outer leaf and flush it up level.



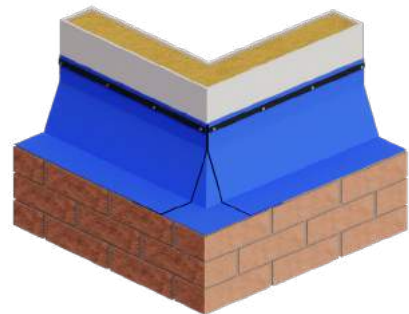
**v.** Position the Visqueen Zedex Preformed Unit on the mortar bed.



**vi.** Apply Visqueen Zedex DPC Jointing Tape to the lap areas.



**vii.** Lay the first run of Visqueen Zedex CPT High Performance DPC cavity tray and, using a seam roller, seal firmly to the preformed unit ensuring a minimum 100mm sealed overlap.



**viii.** Lay the second run of cavity tray as previous.

Secure the upper flange of the cavity tray/preformed unit with Visqueen DPC Fixing Strip and fixings appropriate for the substrate.

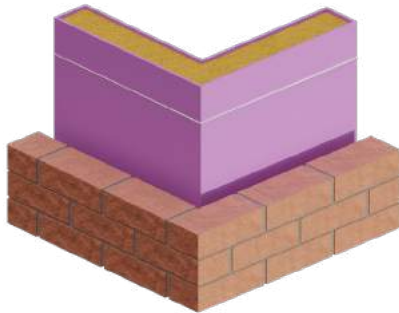
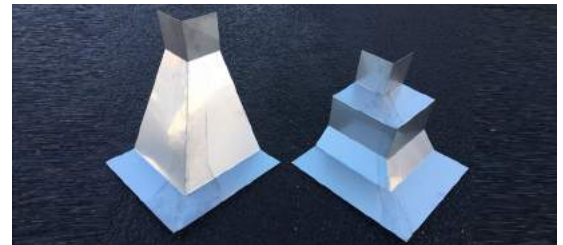
A minimum of one further course of masonry units should be laid immediately in mortar on the cavity tray/preformed unit. The weight of the course helps to develop good adhesion between the masonry units, the mortar and the cavity tray/preformed unit.



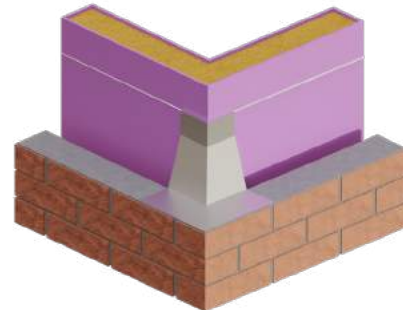
### Installing Visqueen Non-Combustible Preformed Units

Installation should follow Visqueen's guidance, as set out in the relevant product datasheet and normal good practices for the installation and detailing of damp proof courses as set out in the previously mentioned British Standards.

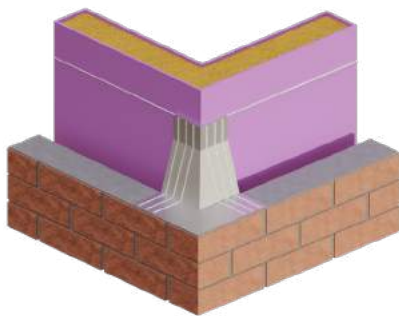
The below installation example shows the detailing of a Visqueen Zedex Non-Combustible DPC cavity tray at an external corner using a Visqueen Non-Combustible Preformed Corner Unit. Insulation has been omitted for clarity.



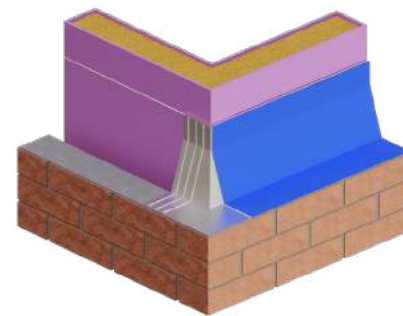
**i.** Apply a bead of Visqueen Zedex Mastic to the weather defence board.



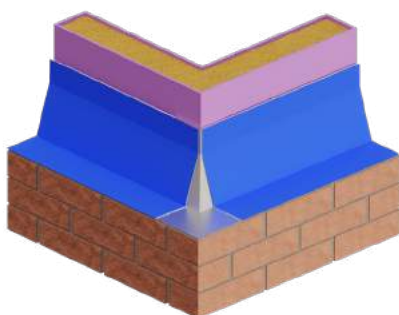
**ii.** Lay an even bed of the same type of mortar as in the course below onto the outer leaf and flush it up level. Position the Visqueen Non-Combustible Preformed unit.



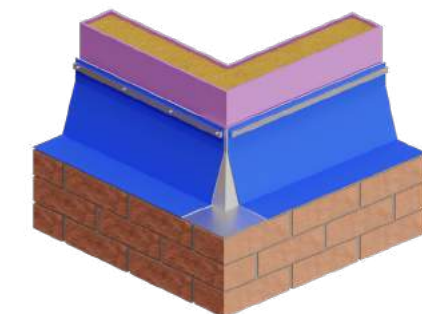
**iii.** Apply Visqueen Zedex Mastic to the 100mm lap areas of the non-combustible preformed unit.



**iv.** Lay the first run of Visqueen Zedex Non-Combustible DPC cavity tray and, using a seam roller, seal firmly to the non-combustible preformed unit ensuring a minimum 100mm sealed overlap. The extruded mastic should be wiped back over the edge of the lap.



**v.** Lay the second run of non-combustible cavity tray as previous.



**vi.** Secure the upper flange of the non-combustible cavity tray/ non-combustible preformed unit with Visqueen Non-Combustible Fixing Strip and stainless steel fixing appropriate for the substrate.

A minimum of one further course of masonry units should be laid immediately in mortar on the non-combustible cavity tray/non-combustible preformed unit. The weight of the course helps to develop good adhesion between the masonry units, the mortar and the non-combustible cavity tray/non-combustible preformed unit.



### Technical support

Visqueen's national team of Technical Support Managers are available to provide comprehensive guidance to specifiers and end users.

The team have extensive experience in the construction industry and have all been awarded the nationally recognised professional qualification Certificated Surveyor in Structural Waterproofing (CSSW). This free of charge support service includes:

- Assistance with product selection
- System design and detailing including standard and bespoke drawings
- On-site technical support and installation guidance

Visqueen offers this range of services to complement our extensive market-leading product portfolio. Our Technical Support Managers are ready to offer you the best solutions not only for damp proof courses and cavity trays, but also:

- Damp proof membranes
- Ground gas systems including radon, carbon dioxide, methane and VOC protection
- Below ground waterproofing systems including Type A, B and C protection
- Stormwater protection
- Air and vapour control (AVCL) systems

### References

- CP102: 1973 Code of practice for protection of buildings against water from the ground.
- BS EN 1996-1-1:2005+A1:2012 Eurocode 6. Design of masonry structures - General rules for reinforced and unreinforced masonry structures.
- BS 6398:1983 Specification for bitumen damp-proof courses for masonry.
- BS 6515:1984 Specification for polyethylene damp-proof courses for masonry.
- PD 6697:2019 Recommendations for the design of masonry structures to BS EN 1996-1-1 and BS EN 1996-2.
- BS 8000-3:2020 Workmanship on construction sites. Masonry. Code of practice.
- BS8215: 1991 Code of practice for design and installation of damp-proof courses in masonry construction.
- NHBC Standards 2022. Part 6: Superstructure (excluding roofs)

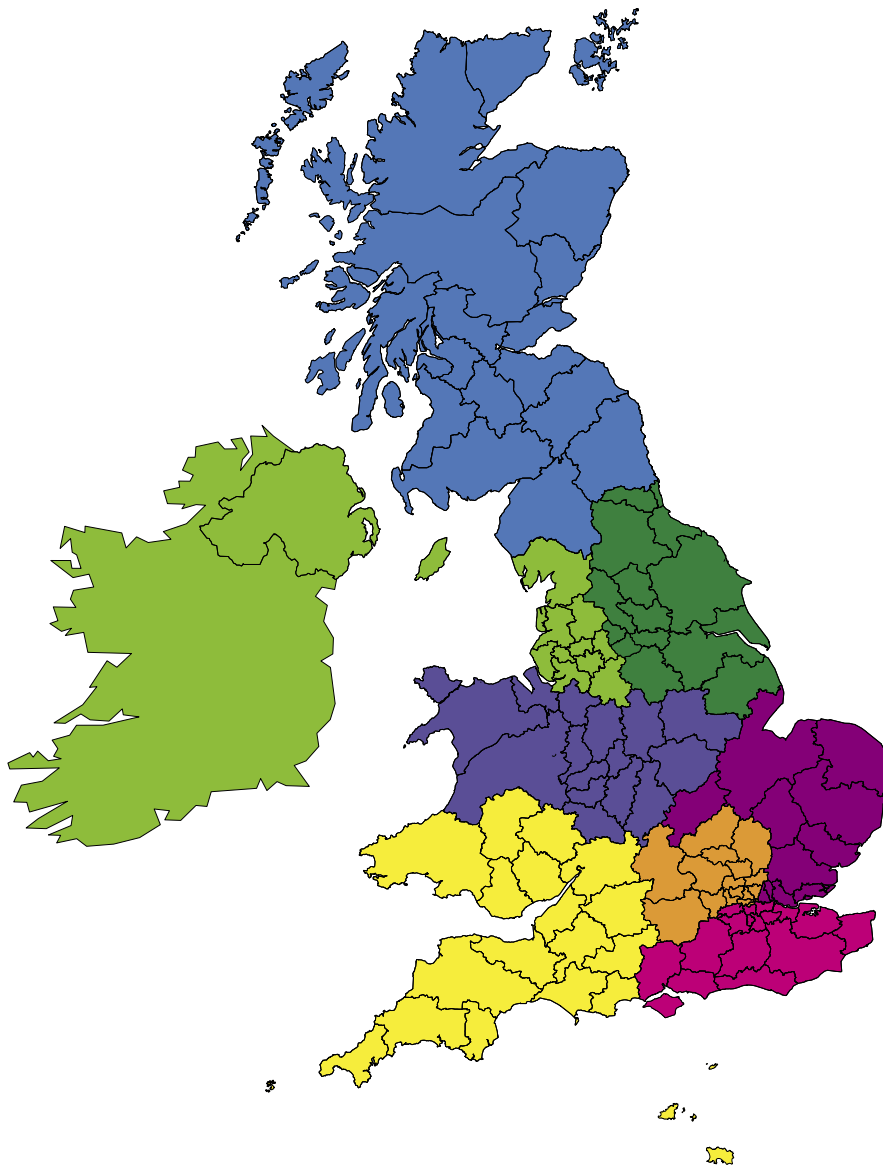


# Complete Range - Complete Solution





For more information about any of our DPC products, or technical advice, please contact your regional Technical Support Manager



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