

# JN<sup>®</sup>

## NEWTON

### WATERPROOFING



# The Guide To Waterproofing

COMPLETE WATERPROOFING SOLUTIONS FOR NEW AND EXISTING STRUCTURES

## Protecting Buildings Since 1848

Newton Waterproofing Systems, est. 1848, is the UK's leading independent supplier of complete waterproofing and damp proofing systems for all structures, from new and existing domestic properties to large-scale commercial developments and extensive civil projects.

John Newton founded the company in 1848 at Verney Road in South London, and the first unique ventilated waterproofing membrane, Newtonite, was introduced in 1937. Over five million metres of Newtonite were sold before its modernisation into a polyethylene product in 1984.

In 1986 Newton developed their flagship System 500 internal cavity drain membrane system for all below ground structures requiring a dry internal space.

Newton Waterproofing Systems is a family-run business with a proven history in designing quality damp and waterproofing materials, together with an exceptional technical advice and support service.



Winners of two awards at the 2018 Kent Excellence in Business Awards



Chairman, Christopher Newton cuts the cake at our 170th Anniversary Boat party on the River Thames

*“ Having been involved in the company since I started stoking the boiler in 1963, right through to the present day in my position as Chairman, I have always been proud to be able to say that Newton is a family-run company, with a family ethos that remains strong even as we continually expand, grow and improve. This ethos, alongside our independent status, is the foundation for the 21st Century Newton, allowing us to constantly offer the highest levels of service, and source new and innovative solutions to the trickiest waterproofing problems. ”*

*Christopher Newton, Chairman  
Newton Waterproofing Systems*



**1848**

Established in London as suppliers of plasterers' hair and ancillary products for the construction industry



**1937**

Designed and produced the first physical damp proof membrane 'Newtonite'



**1940 - 1945**

Business put on hold during World War II



**1945 - 1983**

Over 5 million metres of Newtonite damp proof membrane were sold



**1970s**

Christopher Newton became Chairman, having taken the business over from his uncle



**1984**

Christopher Newton invents Newlath, the first meshed damp proofing membrane in the industry



**1986**

Newton System 500 is developed for basement waterproofing and installed in thousands of UK properties



**2003**

Newton Specialist Basement Contractor (NSBC) scheme set up, the first of its kind in the UK



**2012**

Newton Waterproofing Systems moved to Tonbridge



**Today**

Newton celebrates 170 years and continues to expand its product range for complete structural waterproofing and damp proofing solutions

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### The Complete Solution for Protecting Buildings

At Newton Waterproofing Systems we supply an advanced range of waterproofing materials which allow us and those working with our products to design and install effective, robust and third-party accredited Type A, B and C waterproofing systems. In accordance with current legislation and best practice, Newton ensures that the desired internal environment required by the end user is achieved. Ranging from the smallest domestic projects, to high-end residential properties, commercial buildings and extensive civil projects, the Newton name is synonymous with comprehensive technical design, superior materials and expert installation.

#### Specialist Installation

Newton Specialist Basement Contractors (NSBCs) are an elite group of waterproofing contractors who work in partnership with Newton to provide the highest quality products, design and installation in all aspects of domestic and commercial basement waterproofing.

All NSBCs adhere to strict criteria and are required to demonstrate quality workmanship, resulting in a meaningful scheme that provides unsurpassed technical excellence.

NSBCs can also provide a substantial insured guarantee and take full design liability on the project, fulfilling the role of 'waterproofing specialist' as recommended by the BS 8102:2009 'Code of Practice for Protection of Below Ground Structures Against Water From the Ground'.



“My friends and family were amazed how well the system did exactly what it was supposed to. Following the event, I have not had to claim on my insurance, I have not had to clean up or had any stress put on me, as my home was saved. I believe that due to your waterproofing, I will be able to at any point sell my house and that due to the waterproofing system, it will actually add value. My neighbours whom had not installed the flood protection were devastated at the amount it was going to cost them to repair the damage caused by the flooding, the stress it caused and is causing and the sheer turmoil it leaves behind.”

Detective Sgt Maria Banks, Oxford Police Station commenting during the 2012 Oxfordshire floods

We pride ourselves on our technical support and have a team of dedicated staff to deal with enquiries, provide technical drawings and help design the best waterproofing solution for your project. Our library of technical drawings can be downloaded in CAD and PDF via our website, and we have an expanding library of BIM objects.

In addition, Newton holds regular training sessions at our head office in Tonbridge, covering:

- Internal Waterproofing
- Liquid and Spray-Applied Systems
- External Waterproofing
- Pumps & Pumping Ancillaries



### Here to Help

Newton Waterproofing Systems provide a range of specifier services to aid in the correct specification of our products.

- In-house CAD service
- Technical drawings supplied in .dwg (AutoCad) and .pdf (Acrobat)
- 3D sections, details and images to assist in visualising the concept
- BIM objects on both NBS BIM and bimobject.com
- Product information listed on NBS Plus
- NBS Create and NBS Building used in-house to produce bespoke specifications
- Drawings available on FastrackCAD
- RIBA Approved CPD seminars either at your premises or at Newton's dedicated training facility in Tonbridge, Kent
- Product data sheets and MSDSs available on the website, and the bespoke Newton Waterproofing app, free on both Apple and Android devices
- Site visits to provide quality assurance and support on product installations



AUTODESK  
AUTOCAD

### RIBA Approved CPD Seminars

Newton technical experts frequently deliver our double points RIBA Approved CPD on Waterproofing Design Strategies to the BS 8102:2009 'Code of Practice for Protection of Below Ground Structures Against Water From the Ground'. The CPD can be presented at your office, viewed at one of the RIBA CPD Roadshows or performed at Newton's dedicated training facility.

Newton Waterproofing Systems are also the first in our industry to offer a RIBA Approved Factory Tour. The tour offers specifiers a practical demonstration of the installation of Type A, B and C structural waterproofing systems, as well as educating designers on their obligations when specifying below ground waterproofing in accordance with BS 8102:2009.



“These visual and tactile aspects of seeing and feeling the products are very important educational tools and promote the understanding of interfaces between different types of substrate, as well as how important preparation is.”

RIBA CPD Assessor

Newton Waterproofing Systems offer three RIBA Approved, double points CPDs for architects, engineers and construction professionals, all of which can be tailored to your requirements:

#### CPD 1 – 'Structural Waterproofing Design Strategies to BS 8102:2009'

Our top-rated RIBA CPD, consisting of a 45 minute presentation plus Q&A either at your offices or at Newton's dedicated training facility at our head office in Tonbridge, Kent.

The seminar focuses on the different forms of structural waterproofing systems on the market and how to waterproof to achieve the environmental grades required within BS 8102:2009.

- A focus on how combination waterproofing systems are specified for below ground environments on both new-build and existing structures
- Section details discussion on how different waterproofing designs interface with below ground structures

#### CPD 2 – 'Factory Tour'

Our Factory Tour CPD is carried out at our head office training facility in Tonbridge, Kent.

The objectives are to educate the specifier on their design obligations within the UK structural waterproofing industry in accordance with BS 8102:2009.

The Factory Tour is separated into two sections; the classroom section outlines the different waterproofing systems available and how they can be used in combination to protect structures, and the practical section provides demonstrations of different waterproofing systems, pumping systems and spray-applied systems.

#### CPD 3 – A Designers Guide To Type C Waterproofing To British Standard 8102:2009

Explore waterproofing design requirements in accordance with current legislation, British Standards and NHBC standards:

- Understand the evolution of Type C internal cavity drain waterproofing
- Examine the important requirement for maintainability in BS 8102:2009
- Understand sustainability issues and the importance of using specialist waterproofing designers and contractors



“On behalf of The British Board of Agrément, I would like to thank you for the quality of your CPD training provided to a number of technical Project Managers and other staff members.”  
Mike Wiseman Phd, British Board of Agrément

“Newton provided a CPD that was engaging, up-to-date and tailored to us. The speaker was extremely knowledgeable, and ensured that they accommodated all team members equally. We will certainly be in touch with Newton in future to discuss our projects.”  
Louise Duval, HollandGreen Architecture & Interiors

## British Standard Requirements

British Standard 8102:2009 is the 'Code of Practice for Protection of Below Ground Structures Against Water From the Ground'. It explains the various types of waterproofing available and advises on the correct specification of those systems.

### Design Philosophy

- The standard recognises that, for a below ground project to be successful, strategies for dealing with groundwater, soil gases and contaminants are considered from the very earliest stages of the design process
- A 'Waterproofing Specialist' should be included as a part of the design team so that an integrated waterproofing solution is created. Newton Specialist Basement Contractors (NSBCs) can fulfil this role
- Waterproofing measures should be designed on the basis of water to the full height of the retained ground at some point in the structure's life
- Combination waterproofing systems should be considered where the likelihood of leakage is high, or the consequences of leakage are unacceptable



Failure to use the standard could result in the designer facing difficult questions in a court of law in the event of litigation following a waterproofing failure.

## The National House Building Council (NHBC)

Between 2005 and 2013, claims related to waterproofing below ground cost the National House Building Council (NHBC) approximately £21 million and affected 890 homes. As a result, in 2013 NHBC released their Chapter 5.4 'Waterproofing of basements and other below ground structures'.

The new Chapter introduces meaningful benchmarks and supporting technical guidance for a range of situations where structures are required to resist the ingress of water from the ground and other sources, and where 'normal' waterproofing arrangements are not considered appropriate.

The Chapter explains how the range of structures that require waterproofing goes significantly beyond what readers might typically consider as 'basements'. Below ground constructions that generally require waterproofing, and should take account of the new Chapter, include basements, below ground parking areas, plant and storage rooms, lift pits, and stepped floor slabs where the step is greater than 150 mm.



## Grades of Waterproofing

The British Standard categorises potential internal environments into three Grades. In order to deliver a robust and effective waterproofing solution, consideration must be given to the form of structure being used and the intended use of the internal space.



**Grade 1**  
Some seepage and damp areas tolerable



**Grade 2**  
No water penetration acceptable. Damp areas tolerable



**Grade 3**  
No water penetration acceptable



## Types of Waterproofing

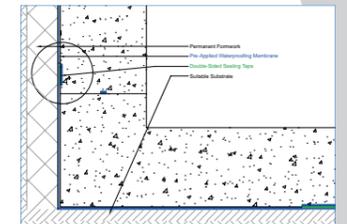
Newton provides waterproofing products in order to fulfil all 3 'Types' of waterproofing defined within BS 8102:2009.



### The Newton HydroBond System

Protection against water ingress by a 'barrier membrane' applied externally to the structure

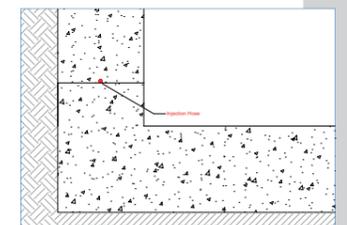
'TYPE A' PROTECTION



### The Newton HydroTank System

'Structurally integral' sealing of joints and protrusions to provide a watertight, reinforced concrete structure

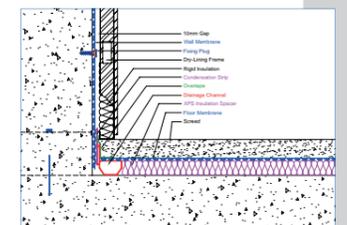
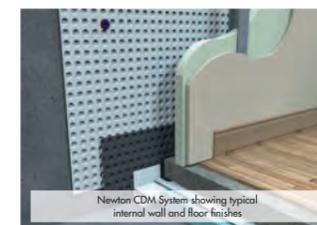
'TYPE B' PROTECTION



### The Newton CDM System

Internally applied and maintainable cavity drain waterproofing system

'TYPE C' PROTECTION



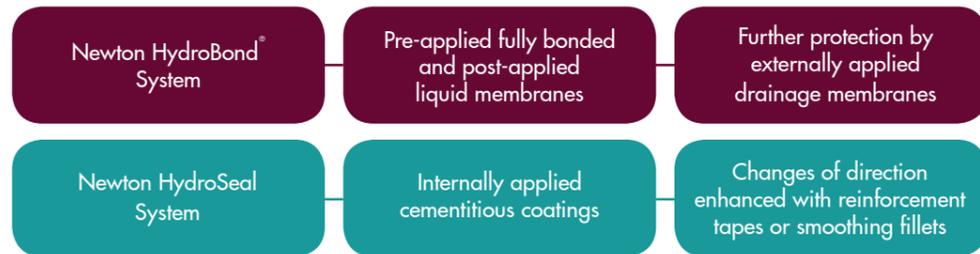
# Type A: Barrier Protection

## Featured Products

### BS 8102:2009 Definition

Type A waterproofing is where a membrane is applied to the structure as the primary barrier to water ingress. Where enhanced protection is required, application to a reinforced concrete structure that qualifies as Type B waterproofing provides combined protection that increases the potential success of the waterproofing.

Type A membranes can be applied either internally or externally. Examples of barrier membranes applied externally to the "positive pressure" side are pre-applied fully bonded sheet membranes and post-applied, liquid cementitious or bitumastic coatings.



For internal application, cementitious coatings have tremendous grip and are therefore suitable for application to the "negative pressure" side of the structure. They can be applied by spray, trowel, brush or roller.

### Example of Type A Waterproofing



Newton 403 HydroBond® pre-applied to concrete faced piles provides Type A protection



### Newton 403 HydroBond® Externally Applied Hydrophilic Waterproofing Membrane

A high performance, external self-healing membrane featuring a locking fleece and hydrophilic polymer coating. The membrane is also BDA approved, NHBC accepted as Type A waterproofing, and the gas barrier variant provides resistance to radon, carbon dioxide and hydrocarbons.



### Newton 109-LM Seamless Rubber Waterproofing Membrane

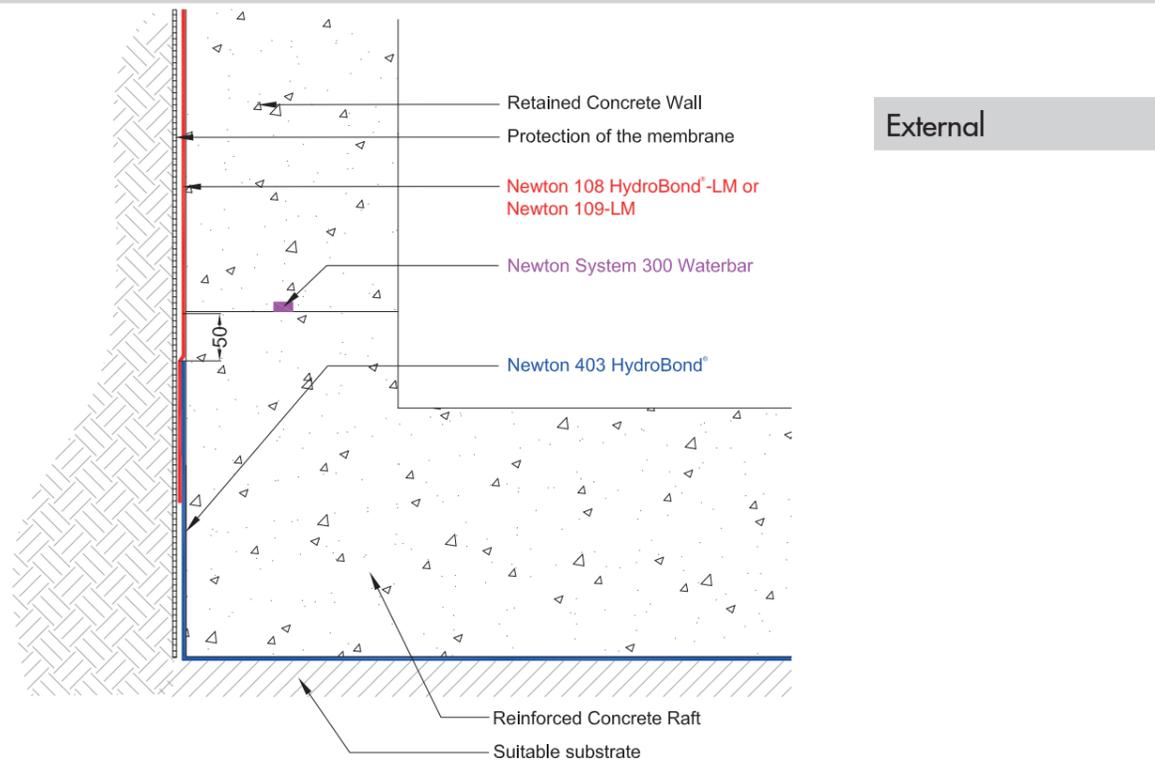
A radon certified, single-component, cold-applied membrane for external waterproofing of earth-retaining structures. 109-LM is quick to apply either by hand or spray, as well as puncture-resistant, flexible, and BDA approved and NHBC accepted as a form of Type A waterproofing.



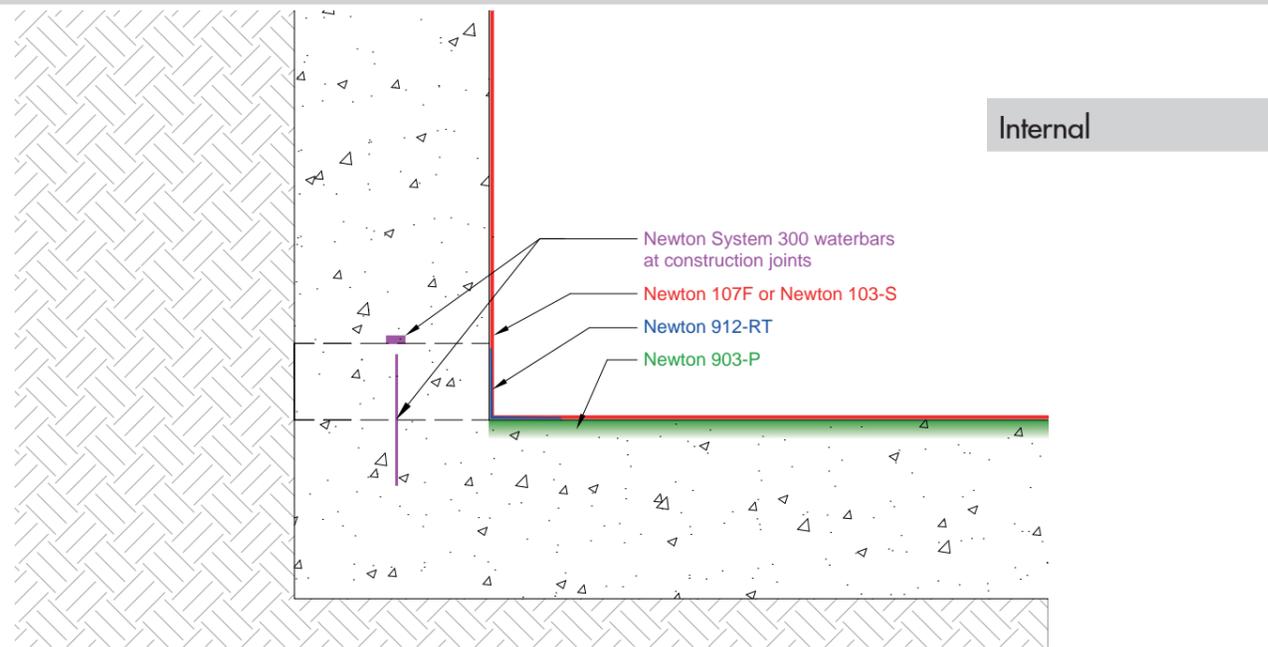
### Newton 107F Cementitious Flexible Waterproofing Membrane

A two-component, cementitious coating ideal for waterproofing and protecting structures that have both concrete and masonry elements. Newton 107F is also supported by BDA Agrément approval and accepted by the NHBC as a form of Type A waterproofing.

### Typical Specifications



Type A protection can be achieved externally using a pre-applied membrane such as Newton 403 HydroBond<sup>®</sup>, or a post-applied liquid membrane such as Newton 108 HydroBond-LM or Newton 109-LM



Type A internal waterproofing can be achieved by using a post-applied membrane such as Newton 107F or Newton 103-S. Both methods provide Type A barrier protection



“ Newton HydroBond<sup>®</sup> is a very robust, unique and easy to install system. Newton Waterproofing Systems provides training and backup where needed, which ensures the product is installed correctly and makes certain that the final structure is fully waterproof. I would not hesitate to recommend this superior product to our clients on future developments. ”

Paul Dennison, Buxted Construction

### Contractor: Buxted Construction

Newton 403 HydroBond<sup>®</sup> was applied to the Crest Nicholson Park Avenue development in Sunbury-on-Thames; a combination of 193 apartments and spacious executive homes on the site of the old training grounds for London Irish Rugby club.

The high performance membrane was used in order to provide a complete waterproof envelope to the structure, and to provide a Type A (barrier) waterproofing solution suitable for Grades 1, 2 and 3 as defined by BS 8102:2009.



# Type B: Integral Protection

## Featured Products

### BS 8102:2009 Definition

With Type B waterproofing, the structure itself is constructed to be integrally waterproof and therefore provide the primary resistance against water.

Type B structures are formed by using concrete with a low water-to-cement ratio and more reinforcement steel in order to reduce the risk of shrinkage cracks that might act as pathways for water. Creating such a structure should therefore be the goal in any earth-retaining scenario, by using a design that limits crack widths in line with the requirements of BS EN 1992.

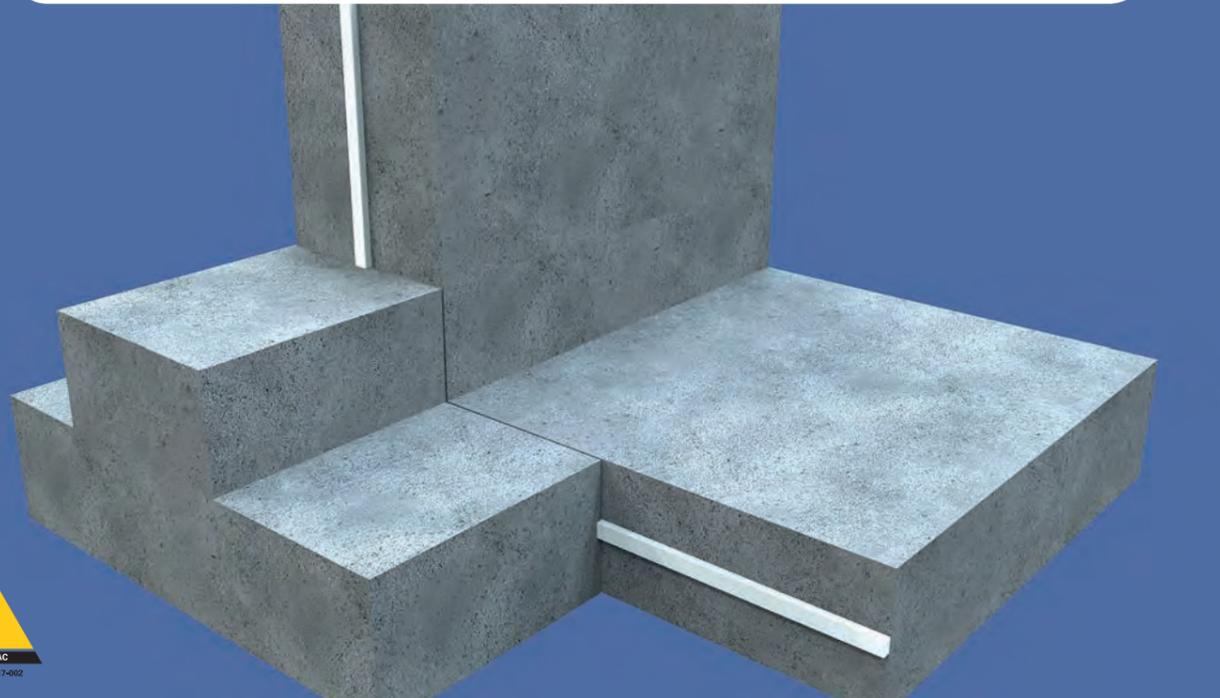
Newton HydroTank System

Waterbars, Waterstops, Waterplugs & Injection Hoses

Type B water-resisting structure

However, no matter how good the concrete is, water will still try to enter where there is no concrete present – the construction joints. In order to seal these joints and provide a fully watertight structure, hydrophilic waterbars that swell on contact with water, metal waterbars that form a physical barrier, or injection waterbars that inject resins into porous and poorly compacted joints, can all be utilised.

### Example of Type B Waterproofing



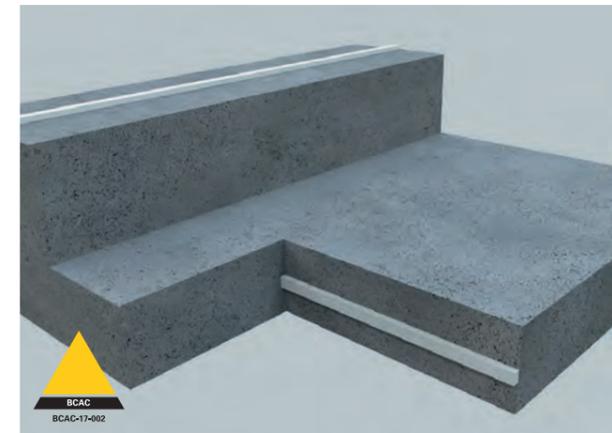
Newton 315 Polymer-Waterbar expands to seal water leaks through joints within the concrete to provide a Type B, water-resisting structure



### Newton 301 EasyProof

#### Metal Construction Joint Waterbar

Newton 301 EasyProof is a coated metal waterbar system used for the sealing of construction joints within retained concrete structures. Its flexible, adherent coating is covered with a granular material to create a watertight seal with the surrounding concrete.



### Newton 315 Polymer-Waterbar

#### Swelling Waterbar

Hydrophilic waterbar which swells on contact with water in order to seal either non-compressed joints such as raft-to-raft, or compressed joints such as at the kicker. Newton 315 Polymer-Waterbar is also supported by BDA Agrément approval and accepted by the NHBC as a form of Type B waterproofing.

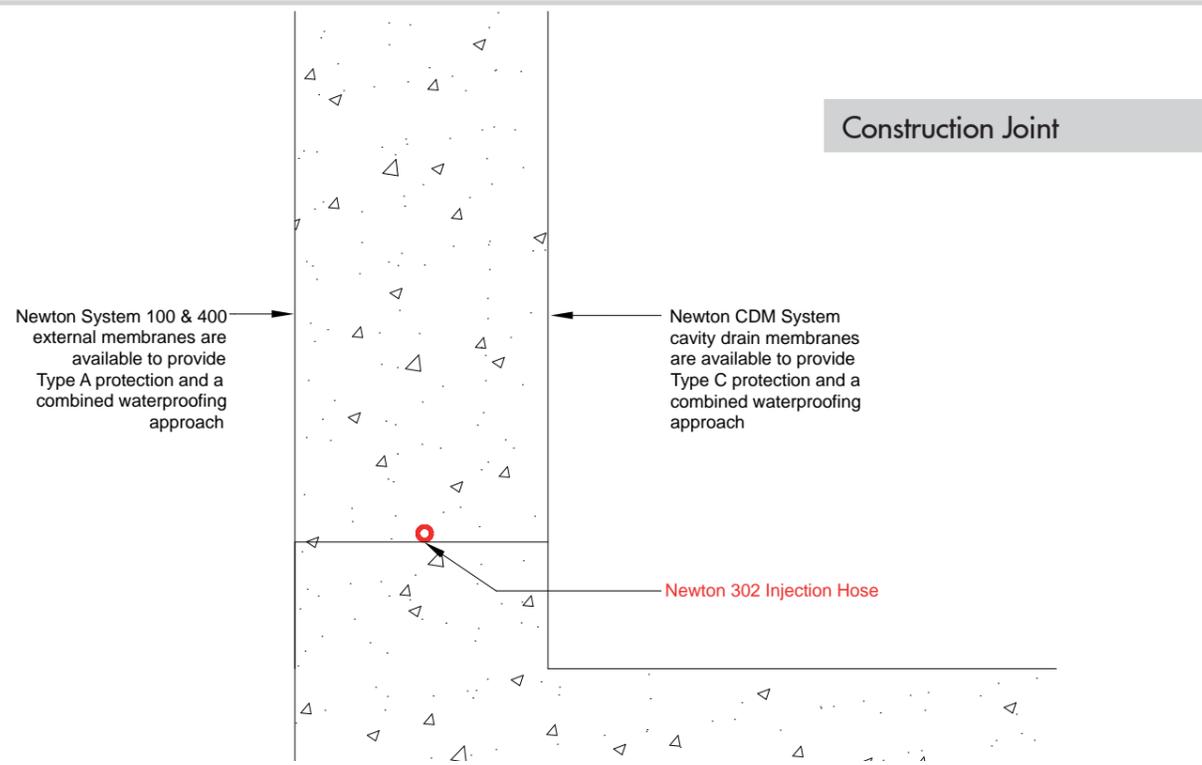


### Newton 302 Injection Hose

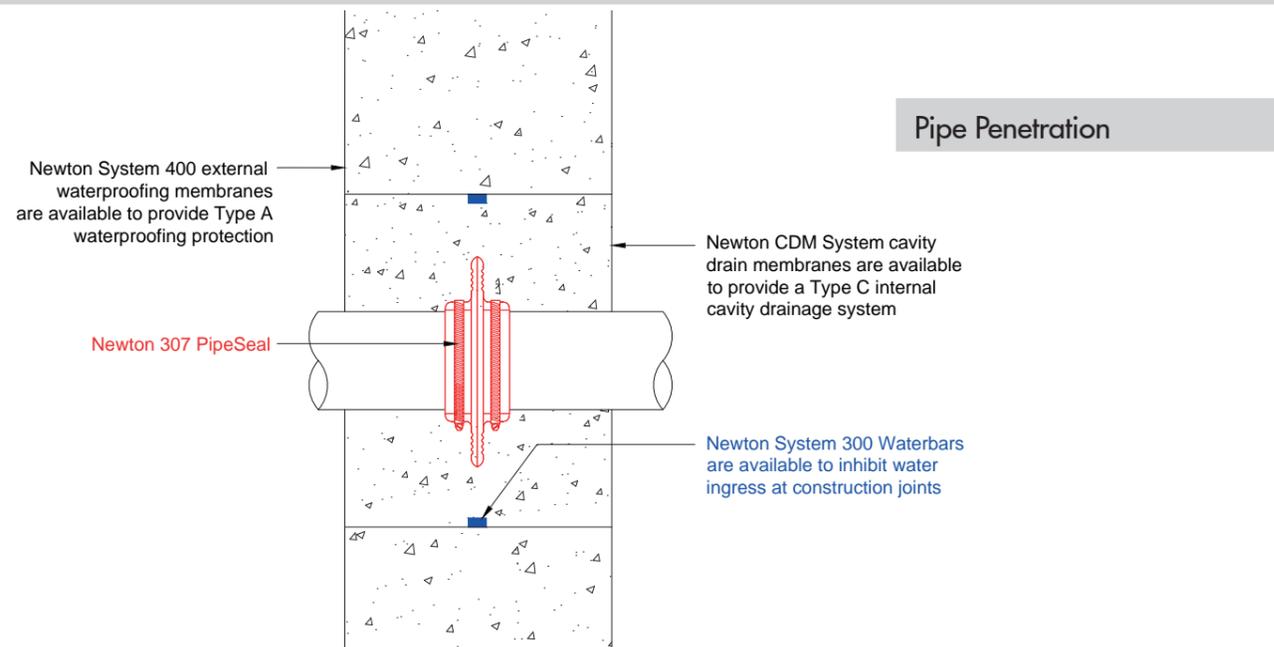
#### Re-injectable Injection Hose

A high performance injectable waterbar system for the sealing of construction joints within retained concrete structures. The benefits over conventional waterbars include its ability to grout poorly compacted concrete and the offer of a maintainable solution that reseals construction joints, post-construction.

### Typical Specifications



System 300 Waterbars are used to protect construction joints within the structure



Newton 307 PipeSeal, applied through a new-build concrete wall using a "Box detail", prevents water ingress around a new service entry



“ Newton Waterproofing Systems offer a complete wrap-around service to its specialist contractor network, both in range of products and quality of technical and practical application support. They are continually looking to innovate, enhance and improve their range of products. ”

Bill Hockey, Trace Basements

### NSBC Contractor: Trace Basements

The 138-bed, 10-storey Hotel Football at Manchester United's Old Trafford features a football pitch on the roof, supporters' club, and has capacity for 1,500 fans.

Trace Basements designed and installed combined waterproofing throughout, including the numerous construction joints and pipe penetrations within the 4-level stepped slab. The hydrophilic Newton 315 Polymer-Waterbar and high strength Newton 203-RM were used in conjunction in order to achieve a Type B concrete structure.

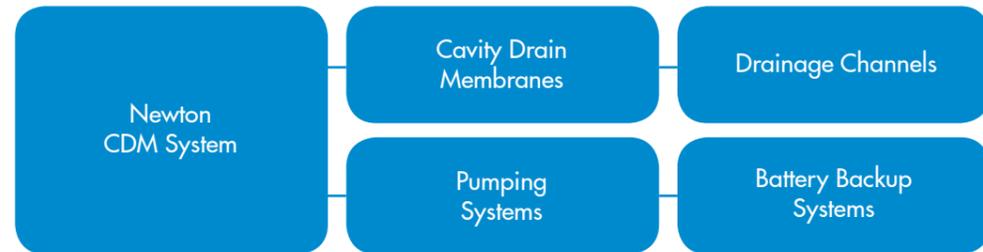


# Type C: Drained Protection

## Featured Products

### BS 8102:2009 Definition

A Type C System is an internal waterproofing solution for below-ground structures that manages ingressing water by collecting it in cavities behind the internal wall surface and removing it from the property.



Often referred to as a 'water management system', water entering through the external walls of the structure is captured and depressurised in internal cavities that are created using drainage membranes and drainage channels. Now captured and stripped of its potency, the ingressing water can be safely removed from the building either by gravity to open elevations or by pumps.

The advanced Newton CDM System meets with the requirements of BS 8102:2009 that Type C Systems should be maintainable.

### Example of Type C Waterproofing



Newton cavity drain membranes are applied to the walls and floors, whilst Newton Basedrain channels collect water and provide drainage around the perimeter and above construction joints. Where removal by gravity is not possible, the Basedrain is connected to the Newton Titan-Pro pumping system to remove the water.



### Newton 508R Cavity Drain Membrane

A high quality cavity drain waterproofing membrane used to create a depressurised space. Suitable for use behind independent frames, timber battens and concrete block wall coverings, Newton 508R is also a radon barrier, and just one of Newton's range of BBA Certified cavity drain membranes.



### Newton Basedrain Inspection Port

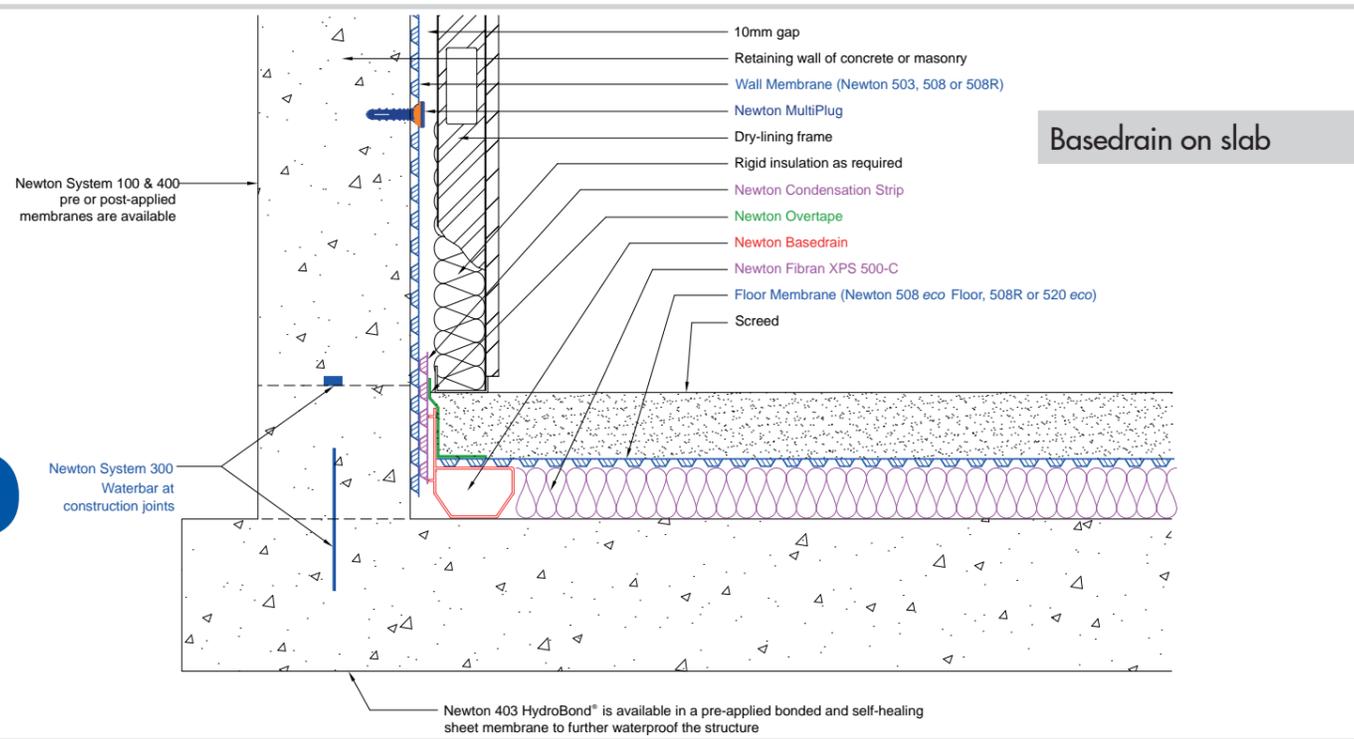
Allows access to the drainage channel, making The Newton CDM System maintainable, and meaning it meets the requirements of Section 4.3.2 of BS 8102:2009. This states that the issue of reparability should be taken into account, and feasibility of remedial measure assessed.



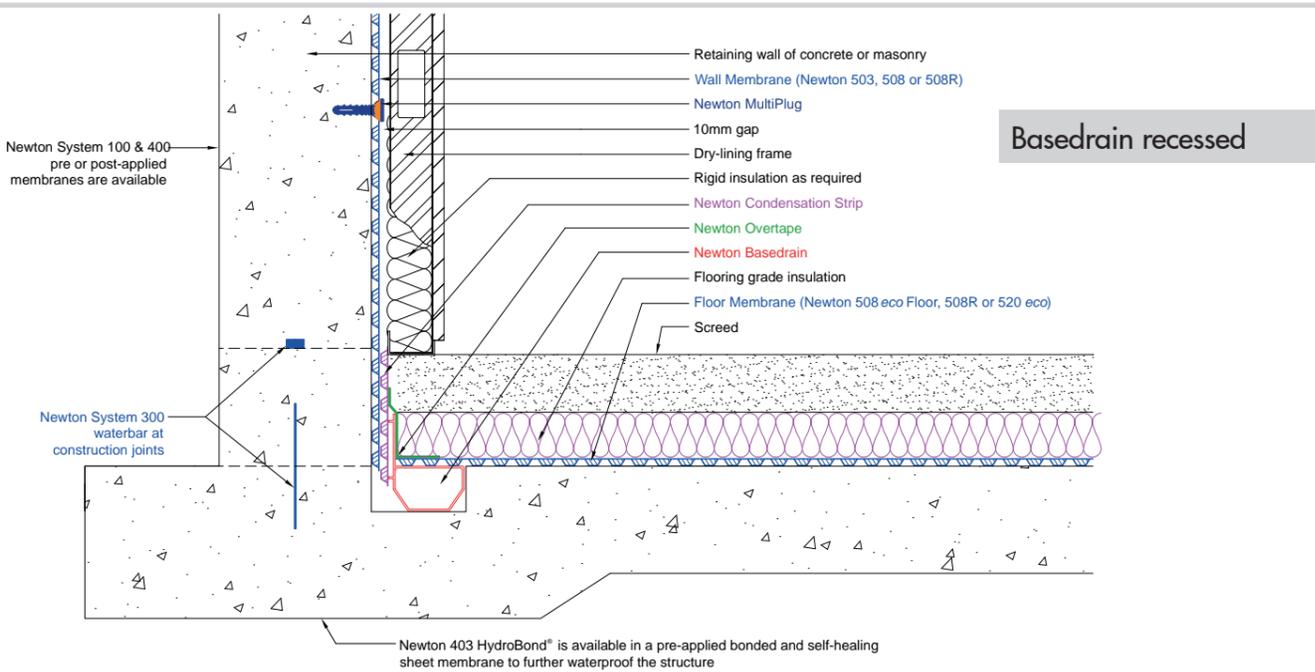
### Newton Titan-Pro Pumping System for the Newton CDM System

Designed specifically for the Newton CDM System, the adjustable neck allows the sump to be installed at the same height relative to the slab every time, regardless of the floor finish, also allowing for easy connections to the rising main, electrical conduits and drainage system.

### Typical Specifications



Typical detail showing the Newton CDM System with Newton Basedrain channel above the slab. Newton Fibran XPS 500-C is used as a spacer to ensure that the floor membrane is at the correct height above the Newton Basedrain channel



Typical detail showing the Newton CDM System with the Newton Basedrain channel within a formed recess



“ MacLennan worked with Ali Galvin Homes to come up with a risk-free waterproofing strategy to waterproof the very impressive and luxurious property that they were constructing. The Newton CDM System is the best system available to waterproofing professionals and was ideal for this project. ”

Ian MacLennan, MacLennan Waterproofing

### NSBC Contractor: MacLennan

Newton Specialist Basement Contractor MacLennan were commissioned to design and install a cavity drain waterproofing system. The Newton CDM System was deemed the most suitable option for the project as it provides a maintainable waterproofing solution - and thus meets the requirements of BS 8102:2009.

Newton 508 Cavity Drain Membrane was applied to all internal walls and ingressing water was collected into the Newton Basedrain channels pumped from the building using the Newton Titan-Pro pumping system.



### BS 8102:2009 Definition

When tasked to waterproof retaining structures in accordance with BS 8102:2009, professional waterproofing designers should consider using more than one type of waterproofing to provide enhanced protection of the structure and to achieve the necessary environmental grade. Newton provide waterproofing products for all three types of waterproofing as defined within BS 8102:2009:

- A. Type A (barrier) protection
- B. Type B (structurally integral) protection
- C. Type C (drained) protection

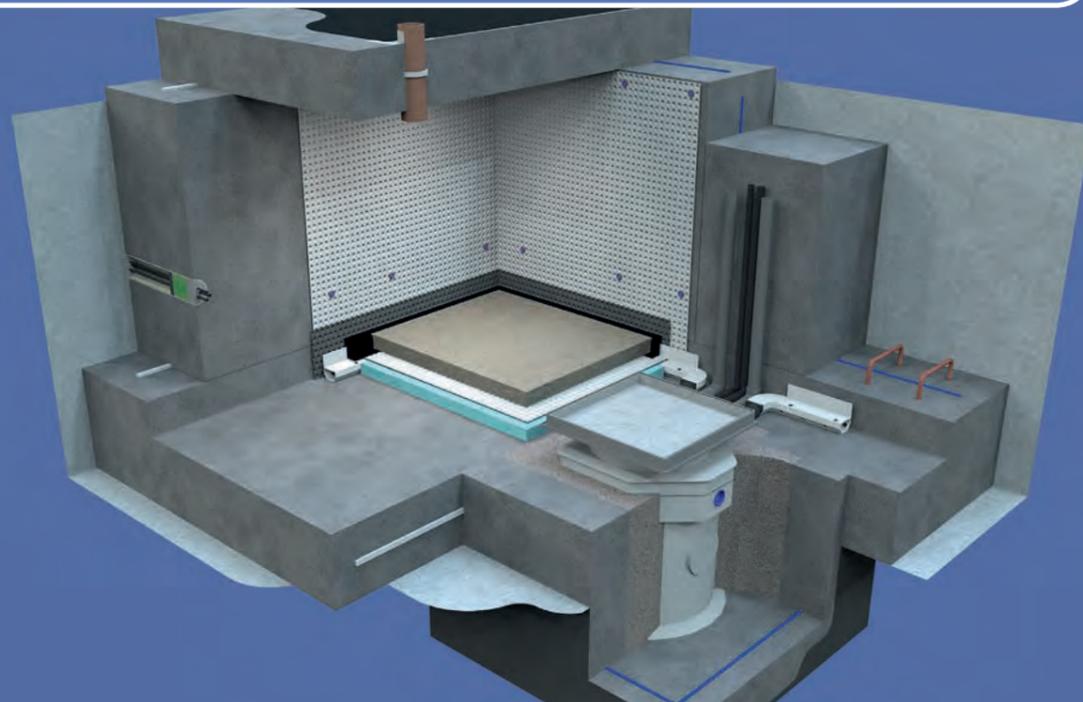
BS 8102:2009 recommends "combined" waterproofing systems where:

1. The likelihood of leakage is high
2. The consequences of leakage are unacceptable
3. Additional vapour checks are necessary for a system where unacceptable water vapour transmission could otherwise occur

Within the possible combinations of waterproofing, usually two forms are adequate when designing a habitable space requiring a completely dry internal environment, defined as 'Grade 3' within BS 8102:2009.

Whichever combination of waterproofing is chosen however, in most cases the safest combination will include a Type C internal cavity drain membrane system as one of the forms. The choice of the other system is largely dictated by the type of structure.

### Example of a Typical Combination Waterproofing Design

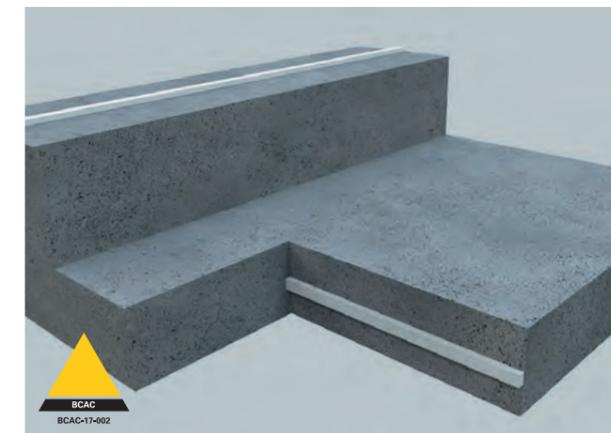


A typical combination waterproofing design showing the Newton CDM Cavity Drain System internally (Type C), Newton HydroBond® System externally (Type A), and the Newton HydroTank System incorporating waterbars and waterstops at weaknesses within the RC structure (Type B)



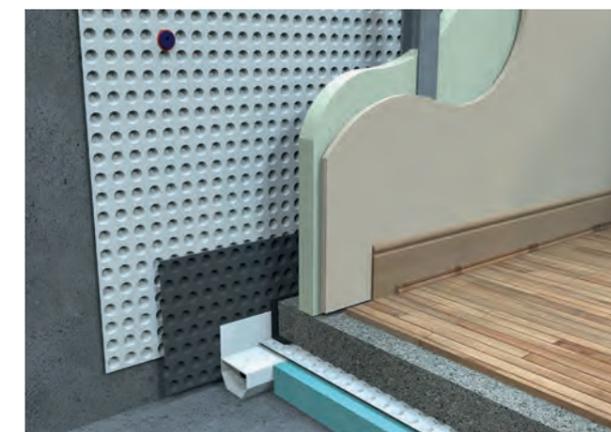
### Newton 403 HydroBond® Externally Applied Hydrophilic Waterproofing Membrane

A high performance, external self-healing membrane featuring a locking fleece and hydrophilic polymer coating. The membrane is also BDA approved, NHBC accepted as Type A waterproofing, and the gas barrier variant provides resistance to radon, carbon dioxide and hydrocarbons.



### Newton 315 Polymer-Waterbar Swelling Waterbar

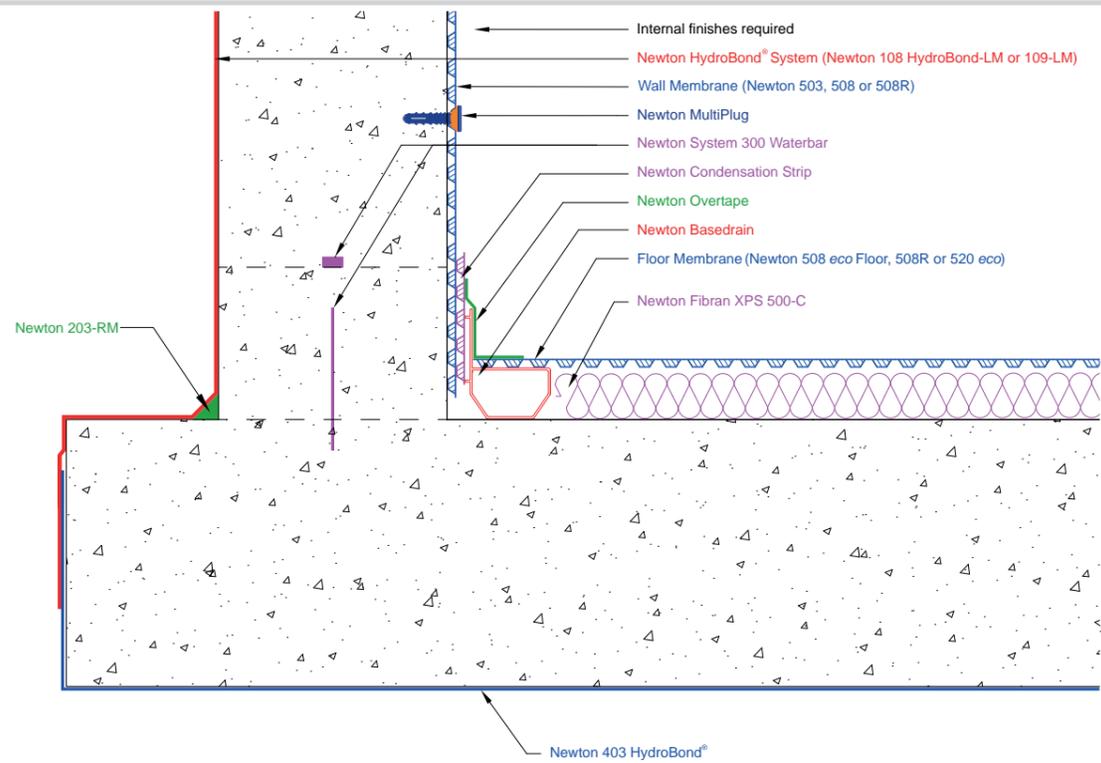
Hydrophilic waterbar which swells on contact with water in order to seal either non-compressed joints such as raft-to-raft, or compressed joints such as at the kicker. Newton 315 Polymer-Waterbar is also supported by BDA Agrément approval and accepted by the NHBC as a form of Type B waterproofing.



### Newton CDM System Cavity Drain Protection

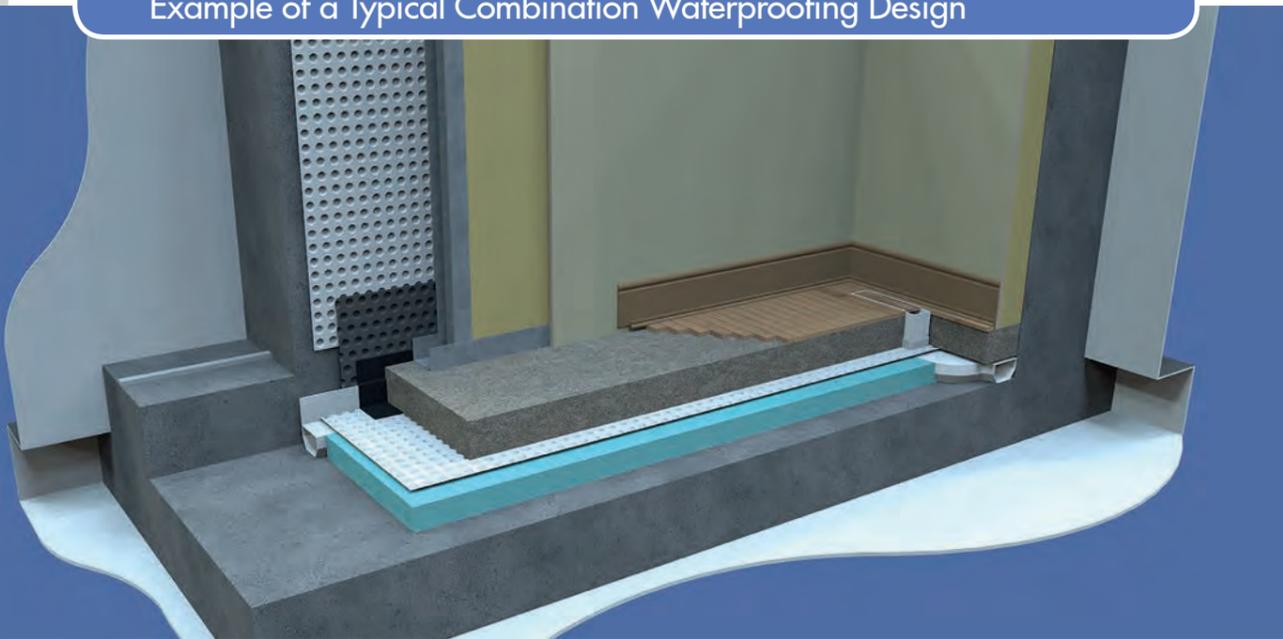
Maintainable waterproofing solution, including a range of cavity drain membranes, pumps, pumping control panels and drainage provision. Where possible a Type C internal cavity drain system should be used as part of a combination waterproofing system, as it is the safest form of waterproofing.

### Typical Specification



Newton HydroBond®, HydroTank and CDM Systems are employed to provide Type A, B & C waterproofing protection

### Example of a Typical Combination Waterproofing Design



A typical combination waterproofing design showing the Newton CDM Cavity Drain System internally (Type C), Newton HydroBond® System externally (Type A) & Newton HydroTank for integral waterproofing details (Type B)



“Due to the quality of finish and goods to reside within this large basement, the waterproofing scheme was designed with a combination of Type A and Type C systems for maximum protection. It was therefore essential that the product quality reflected the design effort. We were pleased to install Newton membranes throughout to help maintain the highest of standards due to their forward thinking, reliable technical support and complete range of quality waterproofing products.”

Nick Wells, Advanced Basements

#### NSBC Contractor: Advanced Basements

The extensive basement area of Christian Dior's newest and most prestigious flagship outlet in New Bond Street, Central London, is to be used as stockrooms, changing rooms, and staff and shop floor areas.

Following the external application of the HydroBond® System, a Newton CDM cavity drain membrane system (Type C) was applied to the internal wall and floor areas by Advanced Basements, who also guaranteed the work. The system included perimeter drainage using Newton Basedrain and two Newton Titan-Pro pumping systems.



## Definition

The waterproofing of podium decks and balconies is often an important requirement of a complete structural waterproofing solution. Due to the clients' requirements to maximise the available space, we frequently find that the below ground structure will extend beyond the footprint of the above ground building. It is therefore essential that these areas and the detailing at ground floor level are completely impervious to water ingress.

Newton offer a complete range of externally applied liquid membranes, protection and drainage products for these scenarios in isolation, or, when required, to interface with other waterproofing elements. As with all waterproofing systems, the correct design and application will ensure the products fulfil the design function and provide internal conditions which are fit for purpose in terms of the area's required use.

Typical specifications would be:

- Warm roofs
- Inverted warm roofs
- Cold roofs
- Green/garden roofs
- Balconies

## Example of Deck Waterproofing

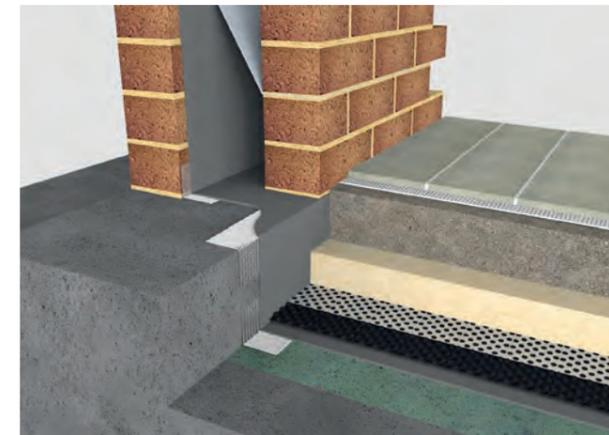


The Newton DeckFlex System providing multi-coat liquid-applied waterproofing to an inverted warm roof



### Newton 107F Flexible Cementitious Waterproofing Membrane

The Newton DeckFlex System incorporates Newton 107F for the waterproofing of reinforced concrete buried or covered decks, flat and living roofs, balconies, car park areas and terraces.



### Newton 408 DeckDrain Drainage Membrane For Decks And Flat Roofs

A double cusped, deck and flat roof drainage membrane, that incorporates a polypropylene geotextile filter layer, bonded to a water impermeable HDPE (High Density Polyethylene) core.

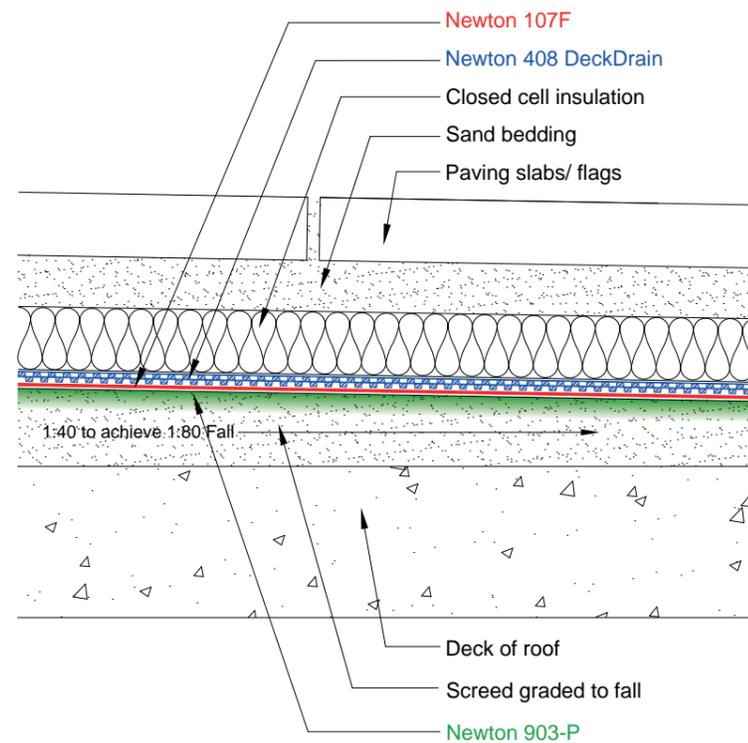


### Newton 111-LM Single Component Polyurethane

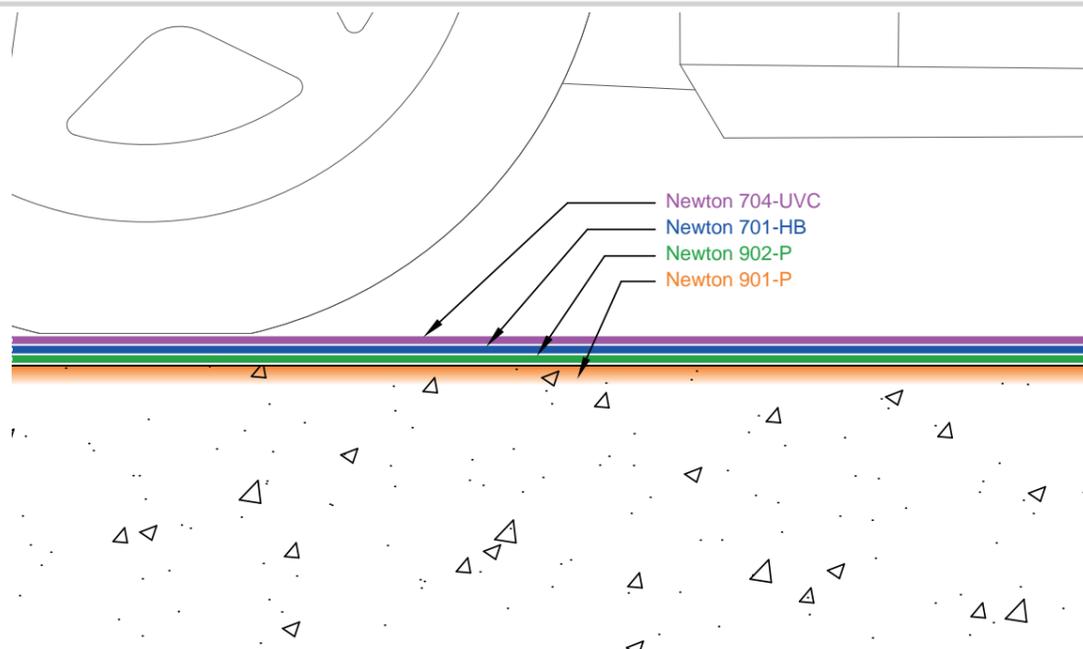
Newton 111-LM is a BBA certified, single component polyurethane with an incredibly fast rain resistance time and an impressive low VOC content.

The Newton DeckFlex System incorporates Newton 111-LM to provide a solution for covered decks and exposed, low-traffic roofs.

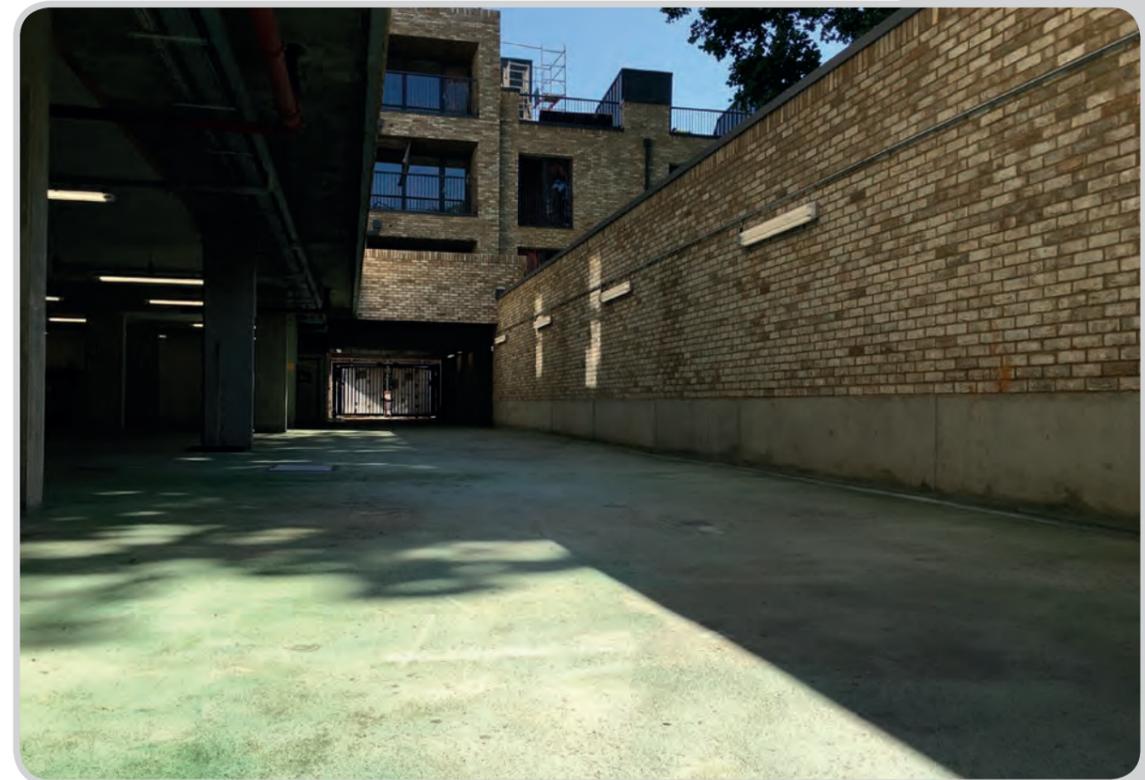
### Typical Specifications



The Newton DeckFlex System providing waterproofing to an inverted warm roof specification to an RC concrete deck to protect the habitable space below



The Newton NewSeal system providing a highly durable, chemical-resistant, waterproof finish. The coating can be made anti-slip for external use and can be supplied in any RAL colour



“CCL were delighted to carry out the waterproofing in collaboration with Newton, who provided excellent on-site training and practical assistance to our team of operatives when required. The project ran smoothly, thanks to the excellent working relationship that CCL and Newton have developed over many years and the confidence our team had in the products specified for the project. Newton were a pleasure to work with and ensured the project was executed professionally and to the tight deadlines demanded by the client.”

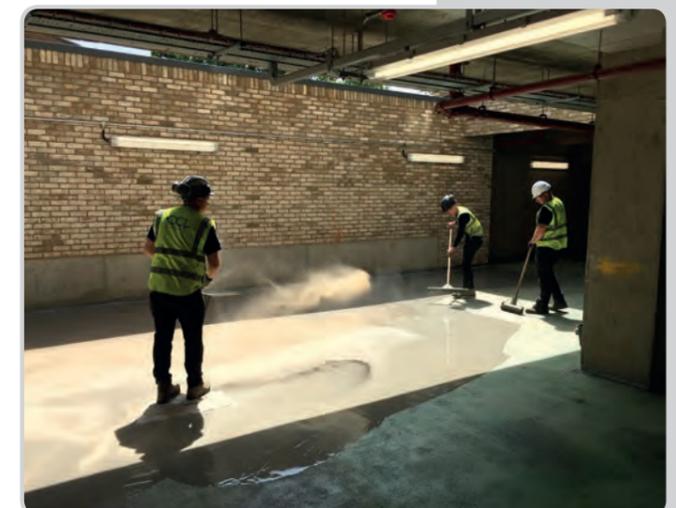
Jim Langdon, Cast Contracting Ltd

### NSBC Contractor: Cast Contracting Ltd

Situated beneath 110 new properties, CCL installed a waterproofing membrane and vapour barrier to provide a durable, non-slip finish in this 700m<sup>2</sup> basement car park.

Newton 903-P primer enabled the application of Newton 706-HB by pin-leveller and spiked roller. Newton 902-P then provided a barrier to vapour, finally followed by two coats of Newton 701-HB with aggregate for an anti-slip finish.

The client now has a high-specification and durable car park, finished to their specified RAL colour.

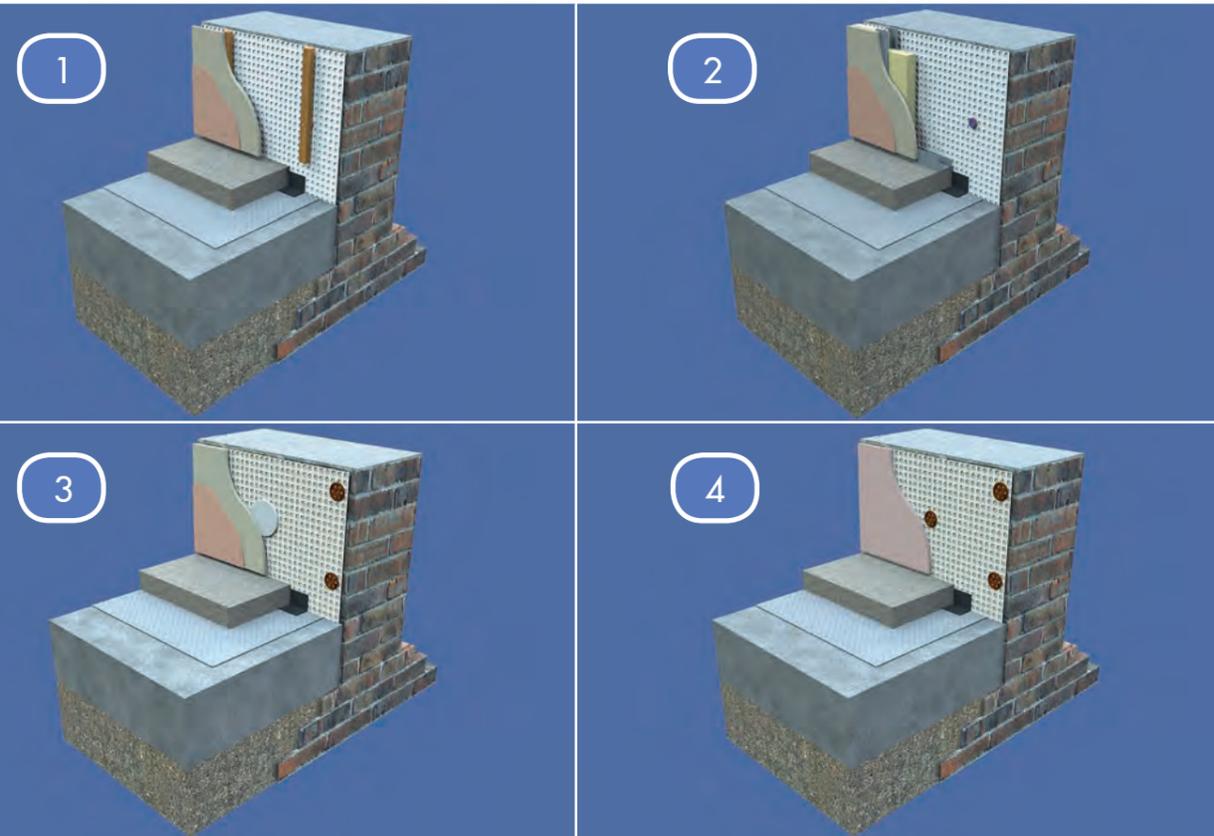


### Definition

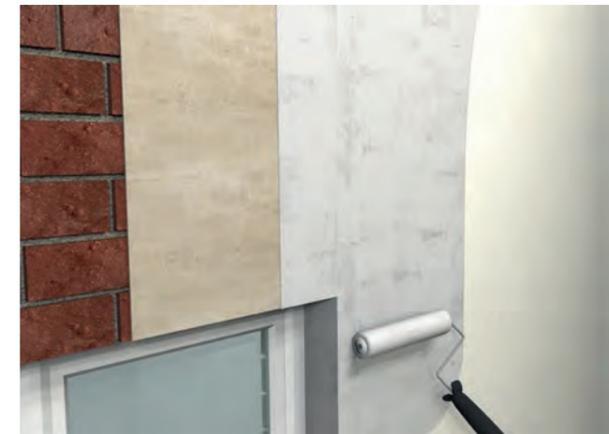
Newton's Newtonite Damp Proofing System features a range of BBA approved damp proof membranes and ancillaries which are quick and clean to install and offer a permanent solution for treating damp walls. Newton 805 Newlath and Newton 803 Newtonite meshed membranes provide a firm key and an impermeable barrier to damp walls, making them ready for plaster, render or dot and dab plasterboard. The unmeshed Newton 803 is used where a timber or galvanised frame is preferred.

Newton damp proof membranes are often preferred in listed buildings as they are less damaging than directly applied renders and, if installed carefully, can be removed with only minor repairs required. They are also ideal for accommodating a number of finishes, as illustrated by the following drawings:

1. Newton 803 with battens
2. Newton 803 with a metal frame
3. Newton 805 Newlath/803 Newtonite with dot and dab plasterboard
4. Newton 805 Newlath/803 Newtonite with plaster/lime plaster/render



Newtonite Damp Proofing System membranes offer the potential for a range of finishes



### Newton 806 CWC

#### Thermal Paint

A white thermal coating for cold and poorly insulated surfaces. It contains specific mineral powders which, thanks to their insulating features, raise the surface temperature of the treated wall by up to 4°C, and so reduces the incidence of surface condensation.



### Newton 807 BKK

#### Water Repellent Treatment For Exposed Walls

A transparent, colourless wall coating, water and siloxane based, ideal to protect porous walls of various substrates from wind-driven rain. After treatment, the wall is deeply impervious to water ingress, more thermally efficient and therefore better protected against frost damage.

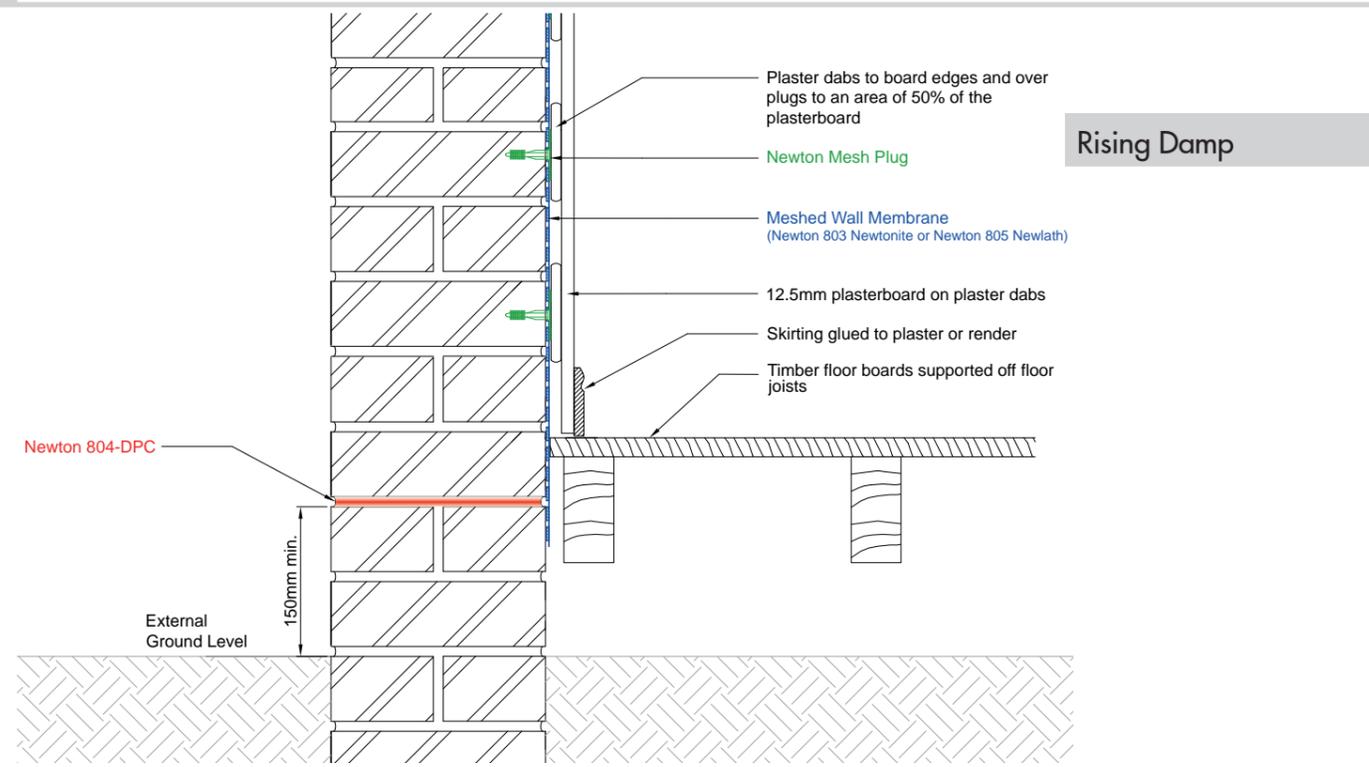


### Newton 804-DPC

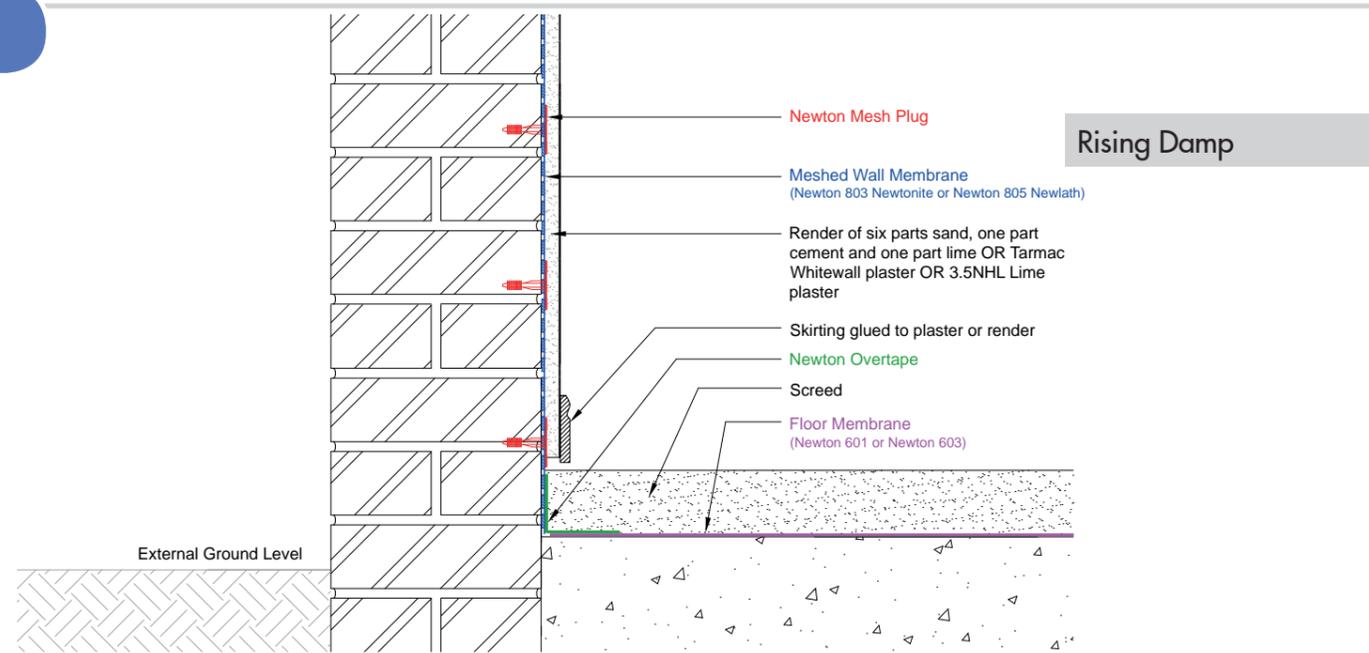
#### Injection Damp Proofing Cream for Rising Damp

BBA certified, high strength cream that is injected into the mortar bed of existing walls to form an effective damp proof course and protect against rising damp. Newton 804-DPC is also quick and easy to install, suitable for a wide variety of walls, and effective for at least 20 years.

### Typical Specifications



The Newtonite Damp Proofing System is the ideal solution to stop rising damp and allow for plaster finishes to be applied before the wall has fully dried out



Newtonite damp proofing membranes, such as 803 Newtonite, provide a complete damp proofing solution when the wall and floor have been diagnosed with rising damp. The meshed surface provides a mechanical key for the direct application of plaster, render or dot and dab plasterboard



“The Newton Newtonite Damp Proofing System was easily installed in a timely manner enabling the project to move forward at a pace without the need for drying out time or suffering delays from adverse weather conditions. We were able to provide the client with an insured backed guarantee for damp proofing this prestigious listed school.”

Philip Assheton, CavityTech Ltd

### NSBC Contractor: CavityTech Ltd

St Mary's Hall in Brighton is a prestigious private school which required treatment for both rising and penetrating damp as part of its refurbishment. The different construction elements within the structure and the space constraints also needed to be considered when designing the damp proofing solution.

BBA certified Newton 803 Mesh was mechanically fixed to the substrate by CavityTech using Newton Mesh Plugs, providing a physical barrier between the damp substrates and the new internal surfaces.



## Basement Waterproofing: Royal Courts of Justice



A large part of the brick basement area was converted into habitable space for this Grade I listed structure

**NSBC Contractor: Stonehouse Property Care**

The installation of the Newton CDM System ensures that any water entering the vaults is depressurised by the system and safely removed from the property.

## Basement Waterproofing: Riverside Properties



This multi-million pound listed property required robust protection due to its proximity to the River Thames

**NSBC Contractor: Wing Waterproofing**

The Newton CDM System was installed with dry-lining fixed directly to Newton MultiPlug fixings. Water was removed by a Titan-Pro sump system.

## Structural Waterproofing: The Arndale Centre



Newton waterproofing membranes were used to weatherproof behind the large digital sign

**NSBC Contractor: Trace Basements**

The world's first digital media screen retrofitted and recessed into an existing structure required removal of the existing glass façade and the formation of a new waterproof liner behind the screen.

## Structural Waterproofing: Lillie Square



Newton Waterproofing Systems provided solutions for Grade 3 habitable areas via our NSBC

**NSBC Contractor: Stonehouse Property Care**

Lillie Square is a 7.4 acre site of apartments, penthouses and townhouses with below ground reinforced concrete structures waterproofed to BS 8102:2009.

## Ground Gas Protection and Waterproofing: New-Build Mansion



Newton's PAC-500 System is the UK's only patented combined gas and waterproofing system

**NSBC Contractor: Maclennan Waterproofing**

Requiring specialist installation from NSBC Maclennan, Newton PAC-500 was the perfect solution for this large-scale new-build basement project which included multiple swimming pools.

## Tunnel Waterproofing: London Bridge Underground - The Shard Project



Installation of the Newton CDM cavity drain waterproofing system to the internal face of the London Bridge Underground link

**NSBC Contractor: Stonehouse Property Care**

The Newton CDM and HydroSeal Systems were used in combination to convert the existing London Bridge tunnel network into a Grade 3 habitable environment for Transport for London.

## New-Build Waterproofing: Llandegfedd Reservoir



The pre-designed waterproofing system combined Type A (Barrier) and Type C (Drained) protection

**NSBC Contractor: Protectahome**

Externally, Newton 410 GeoDrain was installed along the earth retaining elevations, whilst, internally Newton 508 was installed as part of a full Newton CDM Type C solution.

## Basement Waterproofing: Pickenham Hall



The main room of the extension has been made completely dry and habitable

**NSBC Contractor: AP Gooch**

The Newton CDM System was used to waterproof the vast basement of this Listed Neo-Georgian Norfolk hall.

## Listed Building Requirements

Section 7 of the Planning (Listed Buildings and Conservation Areas) Act 1990 states that “no person shall execute or cause to be executed any works for the demolition of a listed building or for its alteration or extension in any manner which would affect its *character* as a building of special architectural or historic interest, unless the works are authorised”.

The fundamental challenge when dealing with buildings of special architectural or historic interest is therefore to maintain structural and aesthetic integrity, whilst remaining sympathetic in the product application and still achieving the desired effect.

Damp proofing and cavity drain membranes can be sympathetically applied with little or no preparation at all and, depending on the chosen wall finish, often only require the very minimum of strategically placed fixings to hold the membrane in place. It is also possible, if ever required, to remove the waterproofing at a later date so the building can be restored to the original condition, which meets listed building recommendations by being a reversible solution.

## Basement Waterproofing: Houses of Parliament



Newton CDM System was applied to the interior vaults throughout this iconic Grade I Listed building

### NSBC Contractor: MacLennan Waterproofing

This complex project required the design and installation of an external waterproofing system, an internal cavity drain system, and a polyurea roofing system to ensure a high standard of waterproofing.

Newton HydroBond®, our innovative Type A waterproofing System was applied externally as the primary barrier to water ingress. The combined system was completed with the internal installation of the Newton CDM Type C cavity drain waterproofing system.

## Rapid Reoccupation Following Flooding

Lord Deben, Chairman of the Committee on Climate Change, states that: “climate change is expected to increase the frequency and magnitude of severe flooding across the UK”.

Defences that might historically have provided protection against a 1 in 100 year flood will, with climate change, therefore provide a much lower level of protection and be overwhelmed more frequently. The latest projections suggest periods of intense rainfall could increase in frequency by a factor of five this century, as global temperatures rise.

When dealing with flood-hit properties, saturated walls can take up to a month per inch of thickness to dry out, and even with dehumidifiers, heaters and air changing units, this process can be painfully slow, preventing successful reoccupation for a prolonged period of time.

The installation of cavity membranes can speed up the reoccupation of flood affected buildings as they can be installed while the wall is still damp. The membrane will form an impermeable barrier which separates new finishes from the damp structure so the new wall finishes will not be affected by the salts and staining which could occur during the drying process.

## Designing A Flood Mitigation System: South Hinksey Village



South Hinksey suffers from high flood risk. In 2007, a major flood engulfed the village with devastating results

### NSBC Contractor: Stonehouse Property Care

The Newton CDM cavity drain waterproofing system was installed in five properties in the village. The cavity created by the drainage membranes and Basedrain channels, collects water entering through the walls and floor and diverts it into the Titan-Pro pumping system so it can be removed from the property.

During the major floods in Oxfordshire in November 2012, these systems were tested to the extreme, with 500 to 800 mm of water engulfing the village completely. The Newton CDM System protected all of the properties it was installed in, while houses all around were flooded and in some cases families were evacuated from their homes.

## The World of Waterproofing at Your Fingertips

The Newton Waterproofing App profiles Newton's complete range of structural waterproofing and damp proofing solutions, including basement waterproofing and pumping systems, through the provision of product information, images, technical drawings, case studies and videos.

Once downloaded, the app's wealth of information is automatically accessible offline, without the need for an internet connection.

Even in the most remote or awkward locations, from basement developments and refurbishments, to large-scale commercial or residential excavations, the relevant technical information will always be at hand.

The videos are the only element of the app that require an internet connection, as they feed directly from the Newton Waterproofing YouTube channel. However, with the further Search, History, and Bookmark functionalities, accessing the documents you want, when you want them, is always quick and easy.

Any new products, documents, and updates are automatically updated and downloaded whenever a good Wi-Fi connection is detected.

“As a company, Newton are always looking to move forward. The introduction of the Newton Waterproofing App heralds the beginning of a new era of integration between the waterproofing industry and digital technology, and will form the foundation for future developments, as Newton will look to expand upon the capabilities of our digital presence.”

Warren Muschialli, Managing Director  
Newton Waterproofing Systems



For further information regarding the Newton Waterproofing App, or to contact any of our Technical team, please get in touch on either 01732 360 095 or [tech@newtonwaterproofing.co.uk](mailto:tech@newtonwaterproofing.co.uk)

## Systems

The Newton Waterproofing App provides complete access to the products that make up the Newton Systems, giving users access to technical and safety data sheets, declarations of performance, installation manuals and product certificates.

## Drawings

Navigate through over 200 sections and details, covering the three forms of waterproofing categorised within BS 8102:2009, as well as drawings confirming solutions for damp proofing, deck waterproofing and floor coatings.

## Case Studies

Examine Newton's top case studies from across the waterproofing spectrum, including structures as wide ranging as the Grade I Listed Royal Courts of Justice, the iconic Houses of Parliament, Manchester United's Hotel Football, and new-build developments by the UK's biggest housebuilders.

## Videos

Watch and learn from Newton's entire library of educational waterproofing and product application videos, linked directly to the Newton YouTube channel.



“Thank you for supplying your app to myself and all of our site and office staff. This app has transformed the way we work and has saved us hours in researching data prior to carrying out work on site. This is the most useful innovation we have received from any company in all our years of trading. An app for waterproofing. Why hasn't anyone else thought of that? Keep up the great work.”

Ian MacLennan, Managing Director  
MacLennan Waterproofing

## A Unique & Award-Winning Recycling Service

In partnership with our NSBC network, Newton is proud to operate the only recycling service in the waterproofing industry. The service directly tackles an inherent waterproofing problem – what to do with the tonnes of off-cuts that go to landfill each year when HDPE waterproofing membranes are installed, even when it is being done in the most efficient way possible?

The Newton Membrane Recycling Service works via NSBCs collecting waste membrane on their projects, which is then picked up by Newton's dedicated drivers at the same time as making a delivery, therefore avoiding additional carbon emissions. Once back at Newton's head office in Tonbridge, Kent, the membrane is chipped and then collected by a national recycler for reprocessing and reusing to make new products for the construction industry, creating a closed-loop recycling process.



Overall, the service allows Newton to provide specifiers with industry-leading solutions, installed by a professional contractor, whilst also reducing reliance on landfill and achieving significant waste reductions. For every kilogram of HDPE membrane recycled, Newton prevents the release of 1.149 kg of CO<sub>2</sub> into the atmosphere, and saves the equivalent of 14 pence in energy. Furthermore, following a successful launch in September 2017, Newton has set a target of recycling 20 tonnes of waste membrane by the end of 2020.

In recognition of the significant sustainability strides being made by Newton, the service has also been recognised by several high-profile awards, including the Property Care Association 2018 'Sustainability' Award, the 2018 Kent Excellence in Business 'Commitment to the Environment' Award, and a shortlisting for the 'Commercial Waste Reduction Initiative' Award at the 2018 National Recycling Awards.

To ensure that waste membrane from your project is recycled rather than sent to landfill, please contact Newton to get a list of registered NSBCs in your area.

“ We are delighted that Newton Waterproofing Systems are investing in membership of RECOUP and have taken the lead in looking at ways post-industrial plastics can be recycled by the construction industry. Utilising the knowledge and membership links that RECOUP have to increase and improve plastics recycling through their Membrane Recycling Service shows real commitment and foresight from the company's leadership. ”

Stuart Foster, CEO  
RECOUP



MEDIUM BUSINESS OF THE YEAR &  
COMMITMENT TO THE ENVIRONMENT

## A First For The Industry

The Newton Waterproofing Index is the construction industry's very first scoring system for waterproofing that gives specifiers the ability to assess their designs by indicating their potential success.

### The Scoring System

The NWI scoring system reflects the three Grades of desired internal environment, as defined by British Standard 8102:2009, making it easy to visually assess any design.

### Tailored Specification Sheets

Newton's library of waterproofing solutions bring together product and specification information, NBS clauses and technical drawings into one complete resource for specifiers.



## Newton Protected Basement Guarantee

Newton Protected Basements are the only specifications that achieve the top NWI score of 4.0, and are therefore supported by our industry-leading 10-year guarantee that covers both latent defects and consequential loss.

- 10 years LDI cover with an A rated Lloyds insurer
- No defects liability period
- Up to £100,000 of cover per project for consequential loss\*
- Cover for product, design and installation failures
- In-house design assistance and on-site quality assurance
- Independent auditing included where required, to ensure continued quality

\* For full information on the Newton Protected Basement scheme please contact our technical department.



“ Newton and our Specialist Basement Contractors can now provide specifiers, developers and contractors with a guaranteed specification that provides A-rated cover on the design, products and installation. For the UK waterproofing market this is a groundbreaking innovation and it highlights Newton's ongoing campaign to improve standards throughout the industry. ”

Warren Muschialli, Managing Director  
Newton Waterproofing Systems

## Extensive Product Range



### The Newton Newtonite System

The Newtonite Damp Proofing System is a BBA certified solution for combating all internal, above ground damp problems. Regardless of the scenario, the correct combination and application of Newton's System 800 damp proofing membranes, 804-DPC injectable damp proof course and 808-RA plaster additive will provide a comprehensive solution for rising damp. The application of Newton 807 BKK eco will also prevent penetrating damp from entering through the fabric of the wall.



### The Newton HydroBond® System

The flexible, easy-to-apply liquid membranes Newton 108 HydroBond-LM and Newton 109-LM combine with the hydrophilic membrane 403 HydroBond to provide a Type A external waterproofing solution that is not only BDA certified, but is also self-healing, gas proof, and can terminate directly to the above-ground damp proof course.



### The Newton HydroSeal System

When waterproofing an existing structure there will often be the requirement for an internal 'Type A' waterproof membrane to BS 8102:2009.

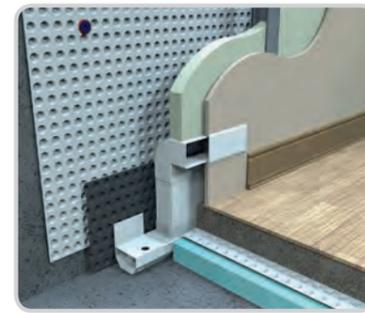
The liquid applied membranes and reinforcement products in the Newton HydroSeal System offer a BDA certified solution, utilising advanced products that are also quick and easy to apply.



### The Newton HydroTank System

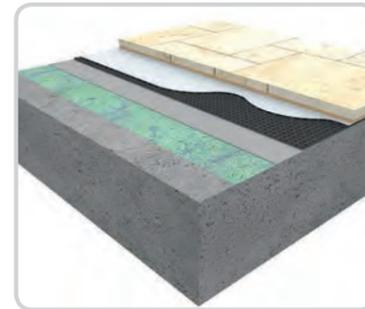
The Newton HydroTank solution includes a selection of BDA certified waterbars, waterstops, flanges, sealants and capillary blocking treatments that are used to seal the joints and penetrations through the concrete to achieve an effective 'Type B' waterproofing solution.

Newton injection hose waterbars also offer a maintainable Type B solution that reseals construction joints, post-construction.



### The Newton CDM System

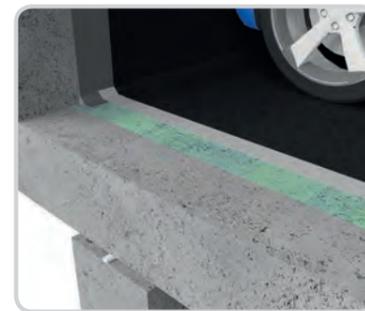
The Newton CDM System is a combination of our decades of basement waterproofing experience and the highest quality BBA certified cavity drain membranes from Newton System 500. Coupled with the bespoke sump and pump configurations, backup systems, telemetry and ancillary options, the Newton CDM System is the most reliable and maintainable waterproofing solution for any habitable space below ground.



### The Newton DeckFlex System

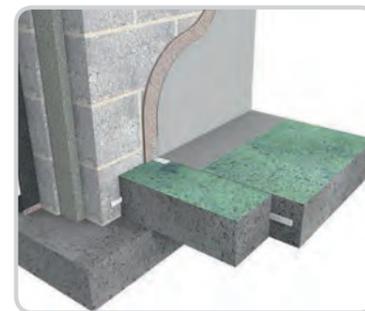
The Newton DeckFlex System provides a liquid applied waterproofing solution to various substrates and weather conditions, including membranes that can be applied just minutes after heavy rain, as well as moisture-cured membranes that are rain resistant shortly after application.

Drainage membranes also ensure that water is removed, as recommended within NHBC Chapter 7.1, further strengthening the waterproofing design.



### The Newton NewSeal System

With a variety of class-leading liquid resin coatings, the Newton NewSeal System provides solutions for the waterproofing of exposed decks and balconies, as well as hard-wearing and decorative coatings to factory floors, car parks and garage floors that are subject to wear by pedestrian, vehicular or warehouse traffic.



### The Newton ReSeal System

The Newton Reseal System for concrete utilises a selection of Newton System 100, 200 and 300 products that offer the user a variety of options for effective structural repairs.

Depending on the scenario, products will be used as a standalone solution or in combination with other products from the Reseal System.

All information is correct at the time of printing, however products and their specifications can be changed or modified without prior notice and Newton Waterproofing Systems reserve the right to update

product literature at any time. Newton Waterproofing Systems is a trading name of John Newton & Company Ltd.

## Memberships and Approvals

### ISO

ISO 9001:2008 – Processes and Procedures  
 ISO 14001:2004 – Environmental  
 BS OHSAS 18001:2007 – Health and Safety



### British Board of Agrément – BBA

The BBA Certificate 94/3010 covers Newton's internal Type C waterproofing membranes, as well as our above-ground damp proofing membranes.



### BDA Agrément

Independently tested by the Kiwa testing house, Newton 107F, 315 Polymer-Waterbar and 403 HydroBond® are all BDA approved and accepted by the NHBC.



### RIBA

Newton has three CPD presentations within the RIBA Core Curriculum, each providing architects with double CPD points. We also host our products and systems on RIBA Product Selector.



### Constructionline

Newton currently holds Silver (level 2) membership of Constructionline, the UK's largest register of contractors, consultants and materials suppliers for the construction industry.



### The Concrete Society

The Concrete Society is an independent organisation that encourages the exchange of knowledge, promotes excellence and encourages innovation in the use of concrete by providing members with access to world class resources.



### Property Care Association

The Property Care Association (PCA) aims to provide high standards of professionalism and expertise within the property and construction industry through training and other support services.



### Basement Information Centre

The Basement Information Centre is a national centre for information on the development and use of basements. They encourage good practice in design and construction through the media, education and training.



PROTECTING BUILDINGS SINCE 1848

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