JN®

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 structural waterproofing systems, damp proofing, water control and drainage products.

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

In 1986 Newton developed their flagship internal cavity drain membrane system for new-build and domestic below ground structures.

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.

John Newton circa 1848

> *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 a specialist supplier 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 invented Newlath meshed damp proofing membrane, a first for the industry
1986	Newton System 500 invented for basement waterproofing and installed in thousands of properties across the UK
2003	Newton Specialist Basement Contractor (NSBC) scheme set up, the first of its kind in the UK
2012	Newton Waterproofing Systems moved to Tonbridge
2016	Newton continues to grow to include products for waterproofing and protecting new-build structures and basement redevelopments, as well as tunnels, roofs, decks and damp proofing

The Total Solution for Protecting Buildings

At Newton Waterproofing Systems we possess an advanced range of waterproofing materials which allow us and those working with our products to design and install effective and robust Type A, B and C waterproofing systems. In accordance with current legislation and best practice guides, Newton is able to ensure that the desired internal environment required by the end user is achieved. Ranging from the smallest domestic projects, to high-end residential city and country 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 recent Oxfordshire floods*

Technical Expertise

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 design service
- Technical drawings supplied in .dwg (AutoCad) and .pdf (Acrobat)
- BIM objects for insertion into your project
- Both NBS Create and NBS Building used in-house to produce bespoke specifications tailored to your project
- 3D sections, details and product representation to assist in visualising the concept
- Drawings available on FastrackCAD
- Product information listed on NBS Plus
- Members of IHS where all of our specification information is available
- RIBA Approved CPD options, offering specifiers and designers double points CPD seminars at their premises or via the Members Area of our website
- Product data sheets and MSDSs available on the website and the app

AUTODESK AUTOCAD

RIBA Approved CPD

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 watched online via the Members Area on our website.

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

Double Points RIBA Approved CPD

Newton Waterproofing Systems offer the following RIBA Approved CPDs for architects, engineers and construction industry professionals:

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

Option 1: 20 minutes (online presentation. We will email your certificate once you've watched it).

Option 2: 45 minutes plus Q & A (at your offices).

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 RIBA Approved Factory Tour double points CPD is carried out at our head office and training facility in Tonbridge, Kent.

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

The Factory Tour is separated into two components. The first part is the classroom section, which outlines the different types of waterproofing systems available, and how they can be used in conjunction to protect structures to the highest level. The second part of the tour includes a practical demonstration of different waterproofing systems, an overview of the battery backup protection available, and how cementitious coatings can be spray-applied.

The tour will conclude with a light buffet lunch with time for a Q & A session afterwards.

"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

"Many thanks for providing a training session for the graduates at Drivers Jonas. We had some very positive feedback from the session and will look forward to Newton Waterproofing Systems presenting again in the future."

Drivers Jonas Deloitte, London

British Standard Requirements

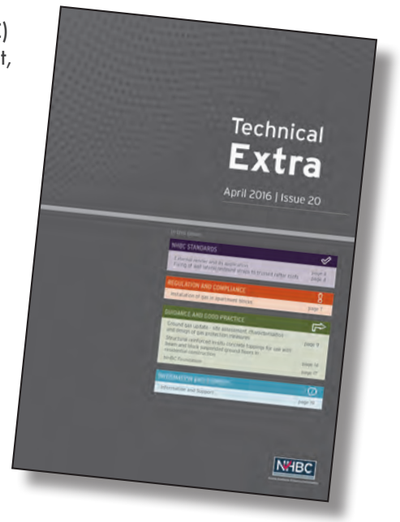
The British Standard 8102:2009 is the *'Code of Practice for Protection of Below Ground Structures Against Water From the Ground'*. It explains the various types of waterproofing available and advises on the correct specification of those systems.

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 having a difficult time 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 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. Only once this is all established, can the design progress.

Grade 1

Some seepage and damp areas tolerable

Grade 2

No water penetration acceptable. Damp areas tolerable

Non-Habitable

Grade 3

No water penetration acceptable

Habitable

Types of Waterproofing

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

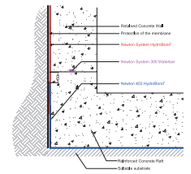
A

Newton System

100 | 400

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

Type 'A' Protection



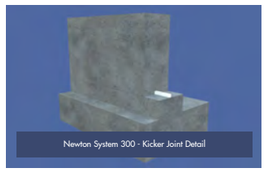
B

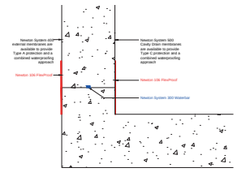
Newton System

300

'Structurally integral' joint seals and maintainable interjoint protection against water transmission

Type 'B' Protection





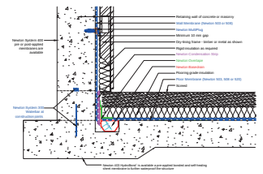
C

Newton System

500

An internally maintainable 'drained system' with dedicated ground water discharge management

Type 'C' Protection



Type A: Barrier Protection

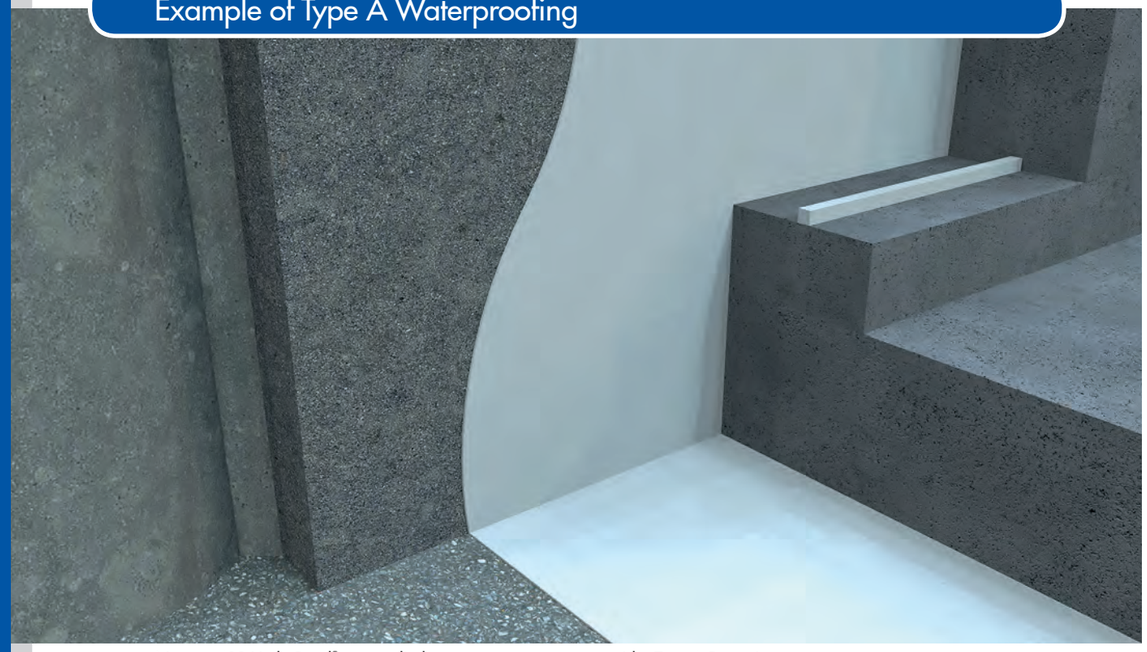
BS 8102:2009 Definition

A structure itself has no integral protection against water. Type A waterproofing systems are barrier membranes which are applied to the structure. The membrane can be applied internally or externally to prevent the ingress of water into the inner building fabric. Examples of barrier membranes applied externally to the "positive" side are bonded sheet membranes, sodium bentonite matting and liquid applied coatings (cementitious/bitumen or polymer).

Internally, similar approaches that can be adopted to hold water back on the "negative" side of the below ground structure include cementitious coatings and bitumen or polymer based liquids applied via spray, trowel, brush or roller.

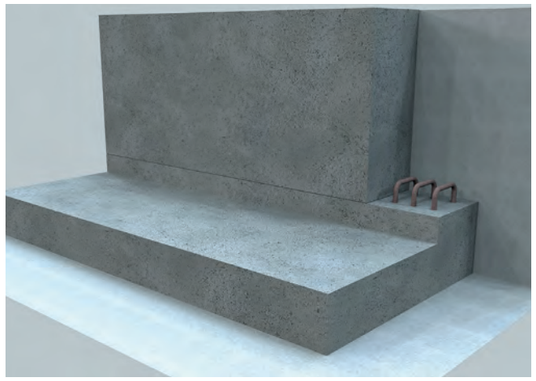
Newton System 100	Liquid Waterproofing Membranes	Single or Multi-Layer Systems
Newton System 400	External Waterproofing and Drainage Membranes	Waterproofing and Drainage

Example of Type A Waterproofing



Newton 403 HydroBond® pre-applied to a concrete structure provides Type A Protection

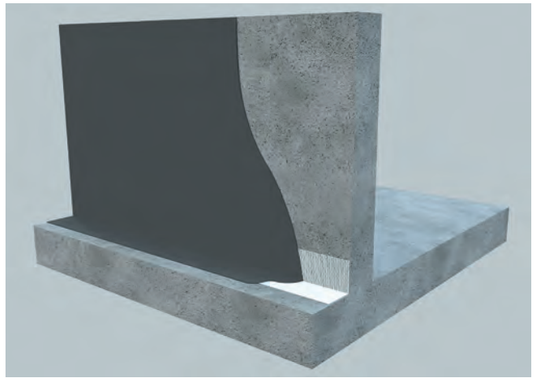
Featured Products



Newton 403 HydroBond®

Externally Applied Hydrophilic Waterproofing Membrane

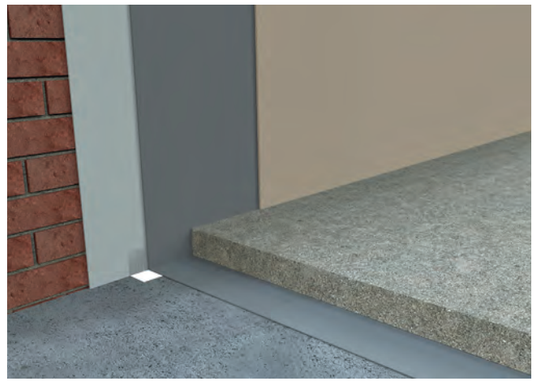
A high performance, pre-applied self-healing sheet membrane that features a locking fleece and a polymer hydrophilic coating. The 403 HydroBond®-GB variant also provides resistance to radon, carbon dioxide and hydrocarbon gases.



Newton 108 HydroBond®-LM

Seamless Rubber Waterproofing Membrane

A cold spray-applied, seamless rubber waterproofing membrane for the external waterproofing of basements and foundation walls. The product is extremely quick to apply and has high puncture resistance, elasticity, and recovery memory.



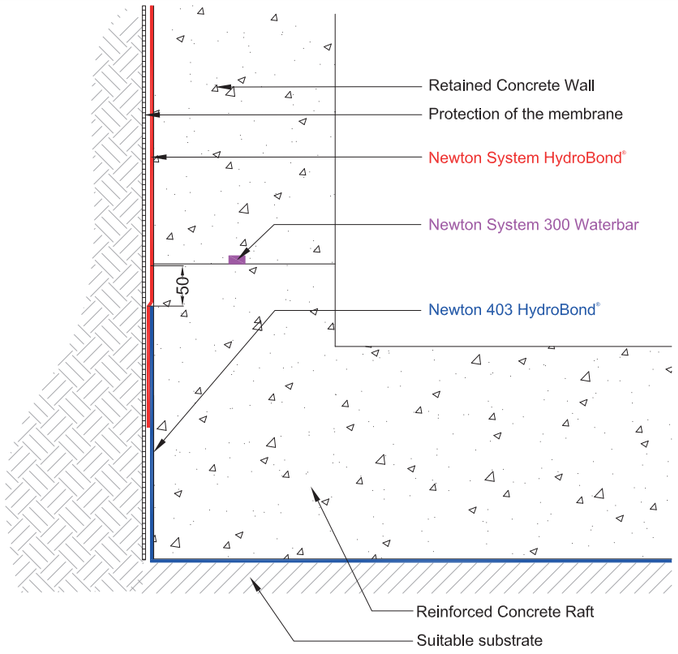
Newton 107F

Cementitious Flexible Waterproofing Membrane

A two-component, cementitious coating ideally suited for the waterproofing and protection of concrete and masonry. Tough and flexible Newton 107F is especially capable where the structure has both masonry and concrete elements.

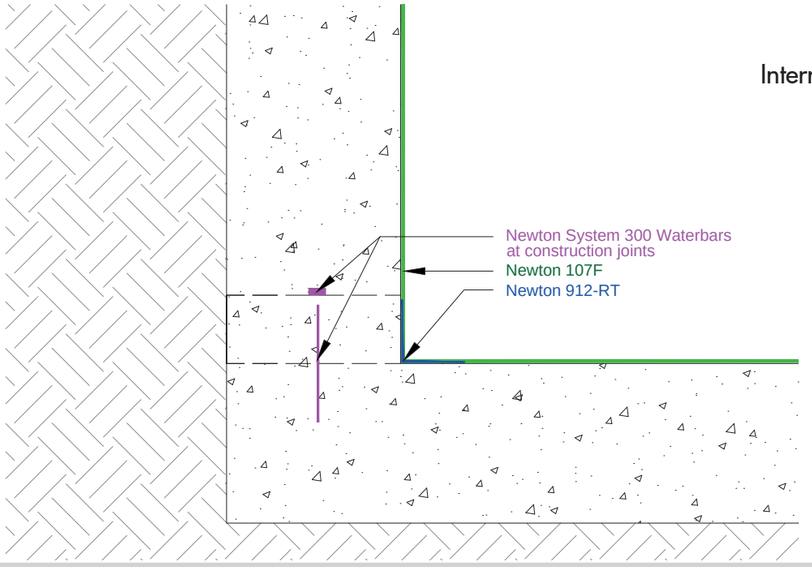
Type A: Barrier Protection

Typical Specifications



External

Type A protection can be achieved in one of two ways: Firstly, on the external surface of the structure by using a pre-applied membrane such as Newton 403 HydroBond®



Internal

Secondly, on the internal face of the structure by using a post-applied membrane such as Newton 107F. Both methods provide Type A barrier protection

Case Study: Structural Waterproofing - Park Avenue Development

> *Newton HydroBond® 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® 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

BS 8102:2009 Definition

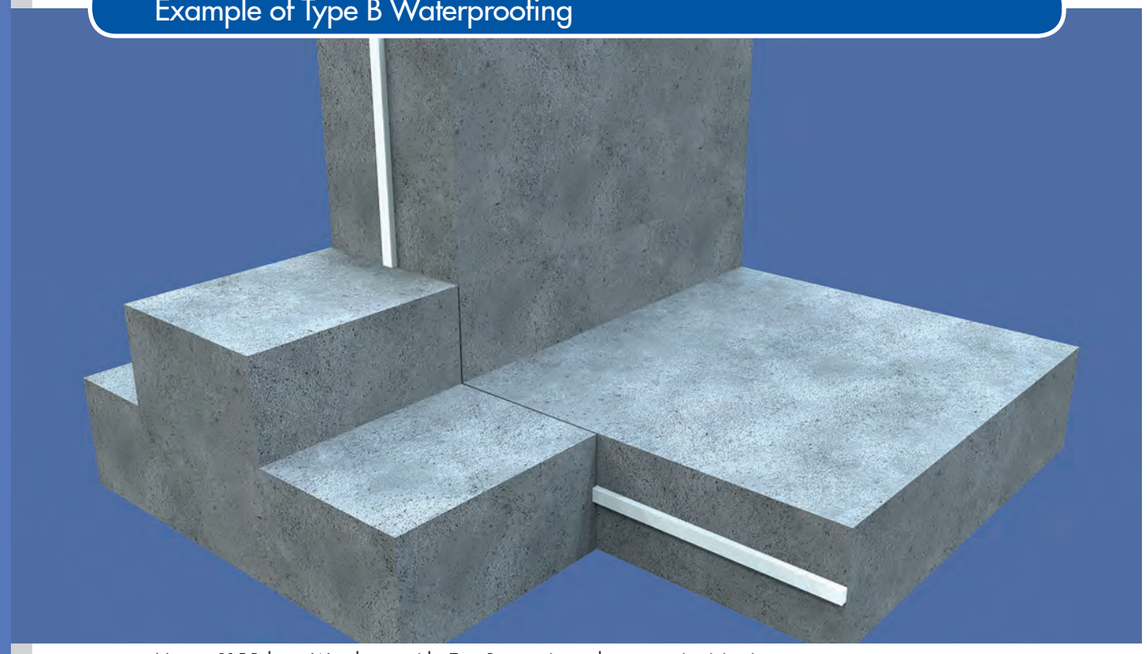
The structure itself is constructed to be integrally waterproof and the primary resistance against water ingress. These types of structure are generally made of high grade concrete, usually with more reinforcement fabric introduced to reduce the risk of shrinkage cracks and as such, the potential for water ingress.

Additionally, these forms of structure will have either hydrophilic waterbars which swell on contact with water, metal waterbars which form an actual physical barrier to protect the vulnerable construction joints from the risk of water penetration, or injection waterbars that have the capability to inject grout to porous and poorly compacted joints, as well as resins for post-construction leak sealing.

Newton System 300 — Waterbars, Waterstops and Waterplugs — Metal & Hydrophilic

Nothing provides primary resistance to water ingress better as a building medium than well designed and well placed reinforced concrete, and given the choice this would be included in any professional waterproofer's design. The preference would be for a design that limits crack widths to 0.2mm for both flexural cracks and cracks that pass through section, and in so doing would conform to BS 8110 (EN 1992).

Example of Type B Waterproofing



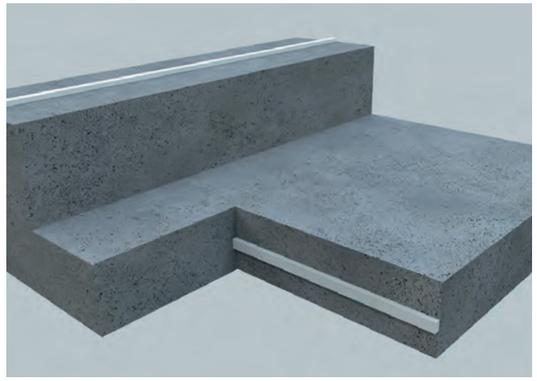
Newton 315 Polymer-Waterbar provides Type B protection to the construction joints in a concrete structure

Featured Products

Newton 301 EasyProof

Metal Construction Joint Waterbar

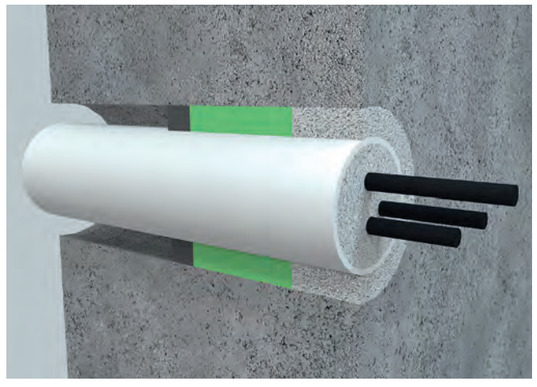
Newton 301 EasyProof is a coated metal waterbar system used for the sealing of construction joints within retained concrete structures. Its flexible, adherent coating is covered with a granular material to create a watertight seal with the surrounding concrete.



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.

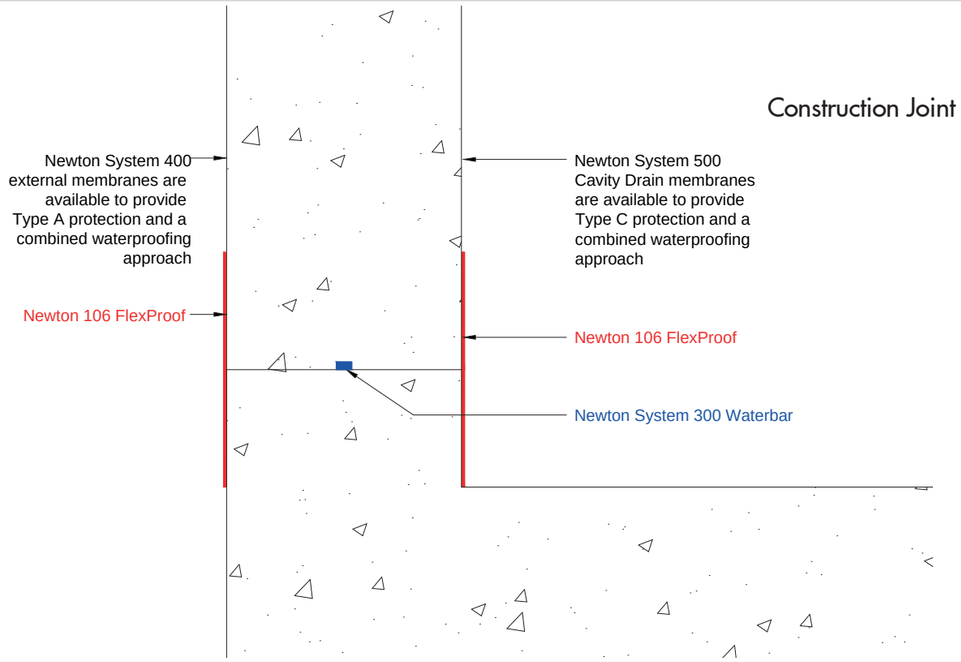


Newton 308 Stopaq

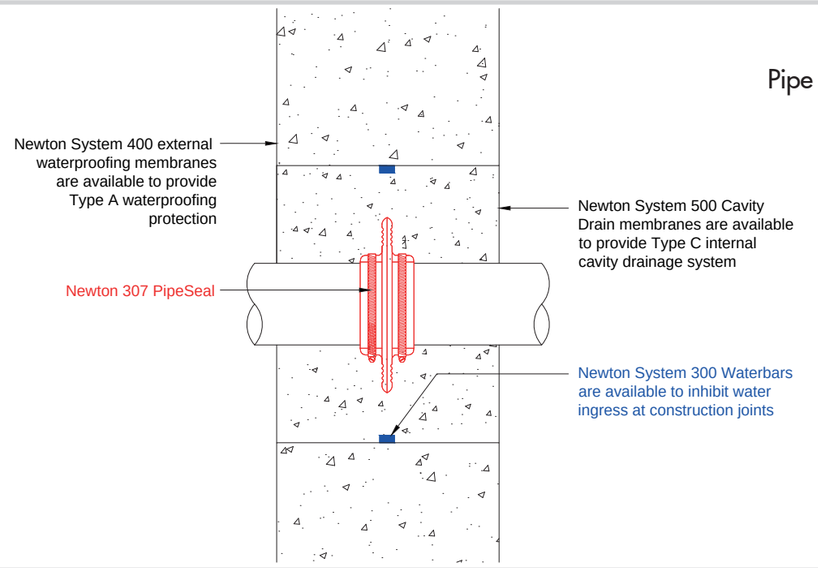
Pipe Sealant For Pipes Through Service Duct Sleeves

Newton 308 Stopaq is a single-component, highly flexible compound used for sealing around numerous services within the sleeve, even where significant water ingress exists. The product is also effective at sealing around the service duct sleeve itself.

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

Case Study: Waterproofing Manchester United's Hotel Football

> *"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

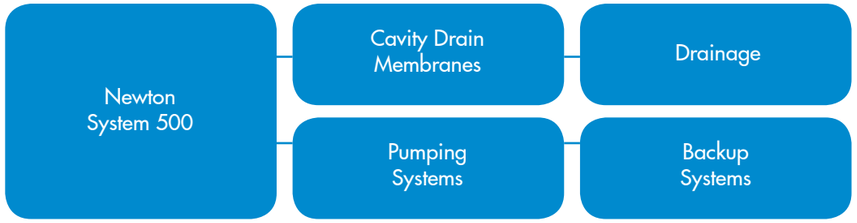
The 138-bed, 10-storey Hotel Football at Manchester United's Old Trafford ground, features a five-a-side football pitch on the roof, a supporters' club, and has capacity for 1,500 fans on match days.

Trace Basements were commissioned to design and install a waterproofing solution throughout the new structure. The Newton System 500 range of cavity drain membranes, drainage and pumps were applied internally, whilst Newton Systems 100 and 200 were applied externally to offer an extensive combined waterproofing solution for ultimate protection against water ingress.

Type C: Drained Protection

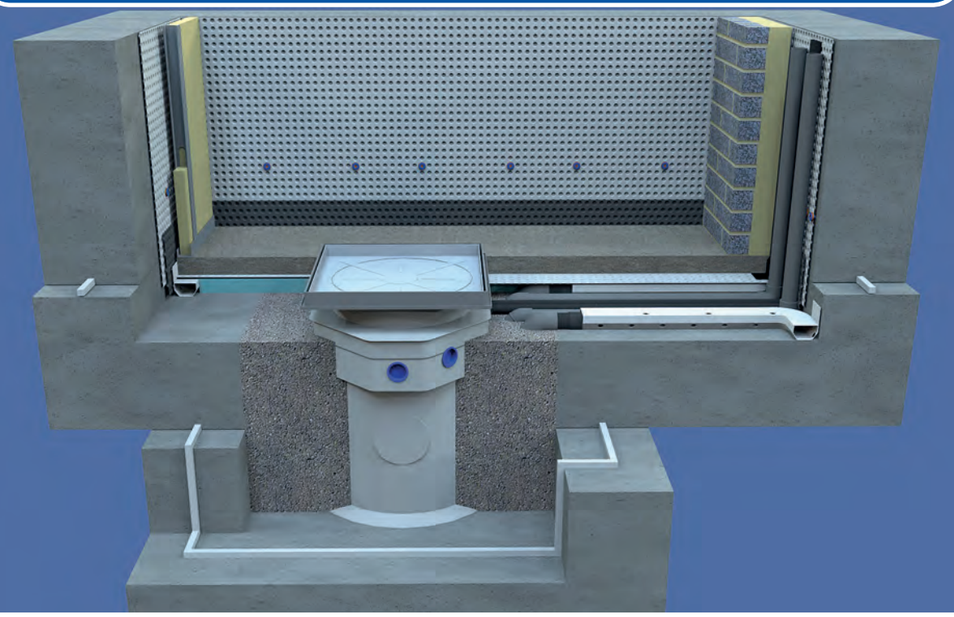
BS 8102:2009 Definition

A Type C System is a below ground, internal waterproofing system, comprising of membranes, drainage and, if required, pumping systems with backup ancillary products.



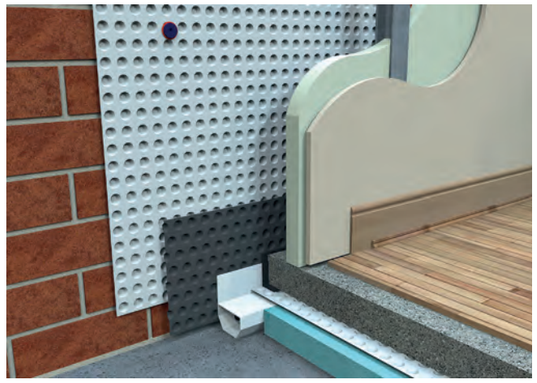
Type C Systems meet with the BS 8102:2009 recommendations for a 'maintainable waterproofing system'. With this design, it is accepted that water could enter the building and an internal cavity is provided to depressurise and manage the water, which is why they are sometimes referred to as 'water management systems'. Once captured, water can be discharged from the property either via gravity to open elevations or removed by mechanical means.

Example of Type C Waterproofing



Newton cavity drain membranes are applied to the walls and floors, with Newton Basedrain providing a drainage channel to ingressing water from the structure. This can be linked to Newton sump and pump systems if required

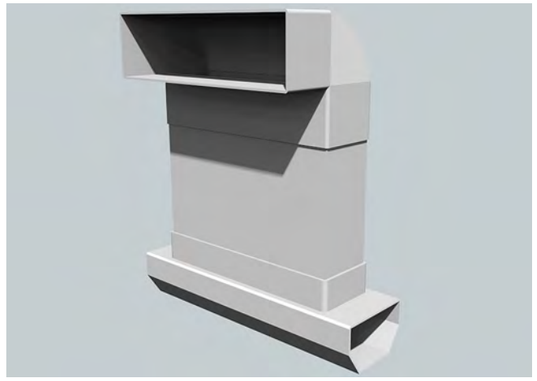
Featured Products



Newton 508

Cavity Drain Membrane

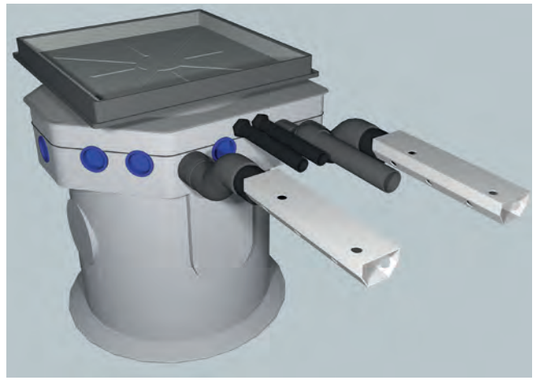
A high quality cavity drain waterproofing membrane used to create a depressurised space. Suitable for use behind independent frames, timber battens and concrete block wall coverings, Newton 508 is just one of Newton's range of BBA Certified System 500 membranes.



Newton Basedrain

Inspection Port

Allows access to the drainage channel, making Newton System 500 maintainable, meaning it meets the requirements of Section 4.3.2 of BS 8102:2009. This states that the issue of repairability should be taken into account, and feasibility of remedial measure assessed.

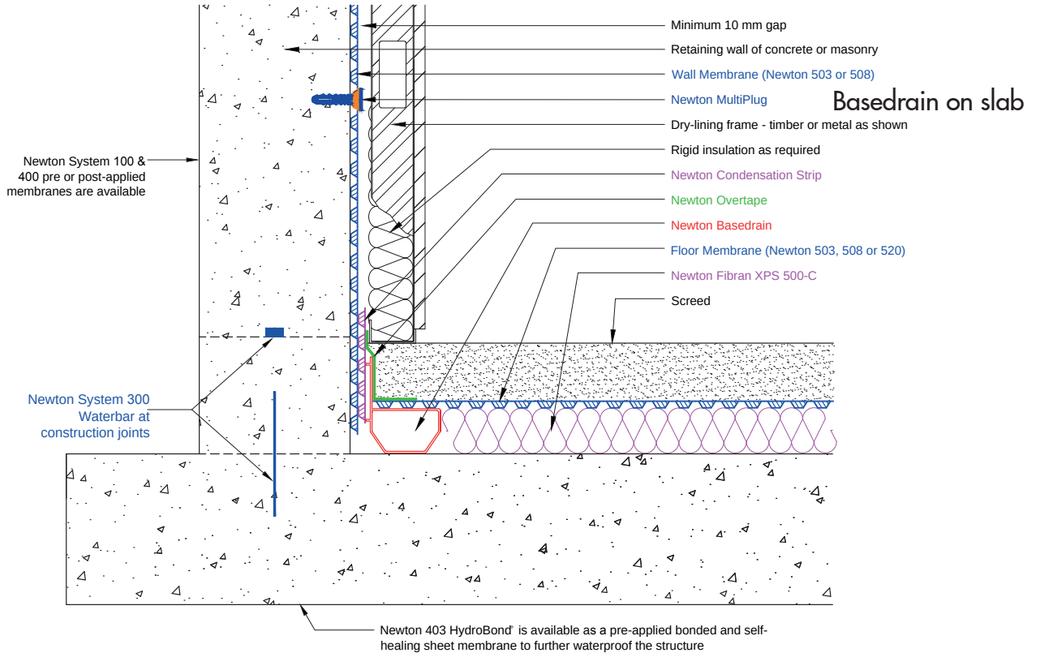


Newton Titan-Pro White

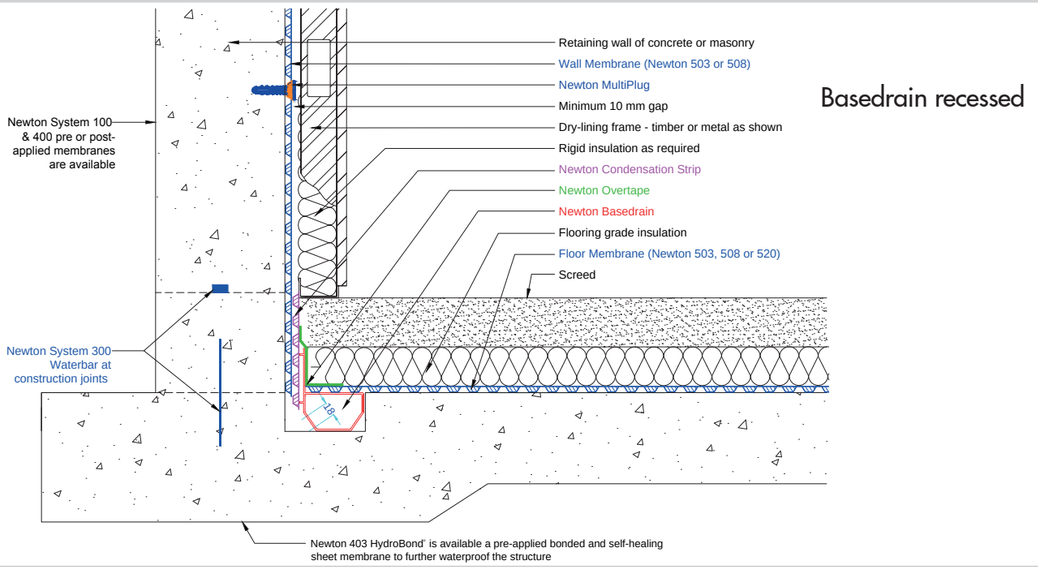
Pumping System for Newton System 500

Designed specifically for Newton System 500. The adjustable neck allows for the sump to be installed so that the connection in from the Newton drainage system and the pump discharge line are made above the concrete and always at the same height, relative to the slab.

Typical Specifications



Typical installation of Newton System 500 with Newton Basedrain channel located on the slab.
Newton Fibran XPS 500-C is used as a spacer to enable the floor membrane to sit over the Newton Basedrain channel



Typical installation of Newton System 500 with Newton Basedrain channel recessed into the slab

Case Study: Basement Waterproofing a New-Build Basement

> *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. Newton System 500 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. Newton System 500 was deemed the best range of products 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 throughout the perimeters of the wall/floor junction and pumped out to safe drainage using the Newton Titan-Pro White pumping system.

Combination Waterproofing Systems

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

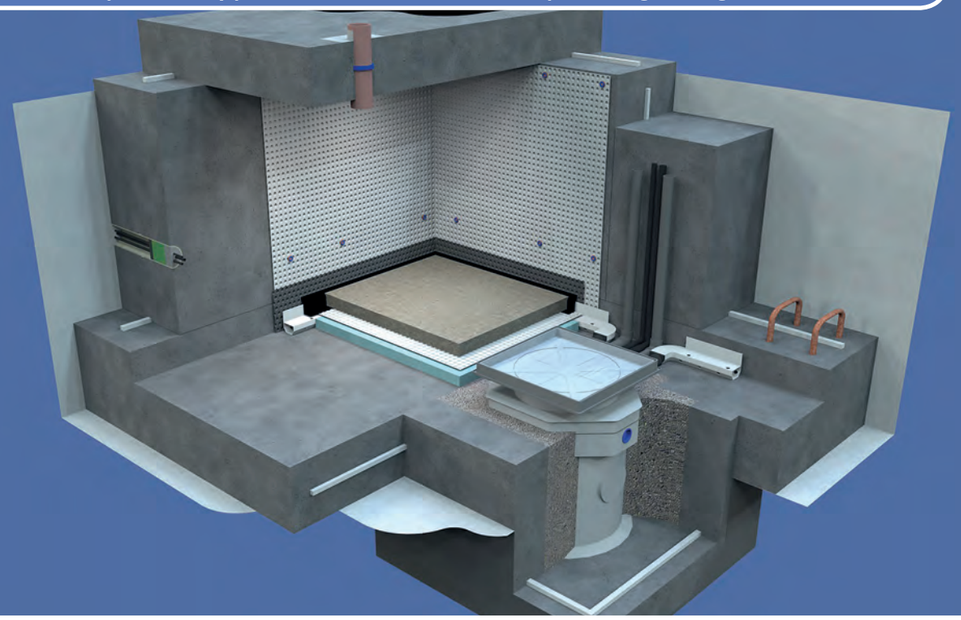
C. Type C (drained) protection

Waterproofing Design Specialists are tasked to recommend a "combined" waterproofing system approach particularly 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

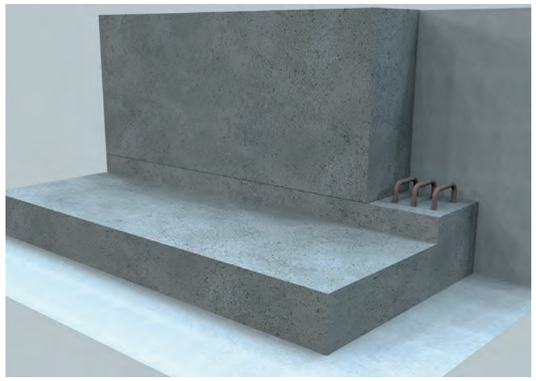
With this in mind, the possible combinations of waterproofing are Type A, B & C, Type A & B, Type A & C or Type B & C. Usually a combination of 2 forms of waterproofing is adequate when designing a habitable space requiring a completely dry internal environment, defined as 'Grade 3' within BS 8102:2009. Whichever combination of waterproofing is chosen to achieve the Grade 3 environment, in most cases the safest combination will include a Type C internal cavity drain membrane system as one of the forms of waterproofing. 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 Newton System 500 Cavity Drain System internally (Type C), Newton System 400 membrane externally (Type A), and Newton System 300 waterbars and waterstops within the structure itself (Type B)

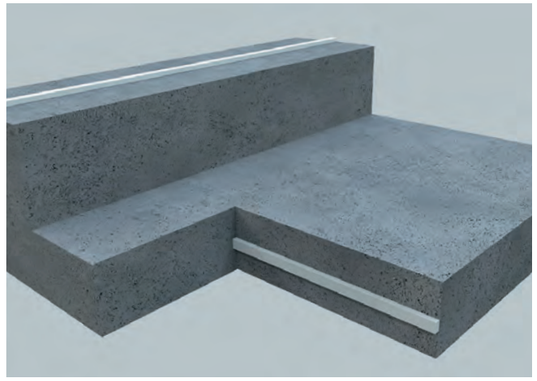
Featured Products



Newton 403 HydroBond®

Externally Applied Hydrophilic Waterproofing Membrane

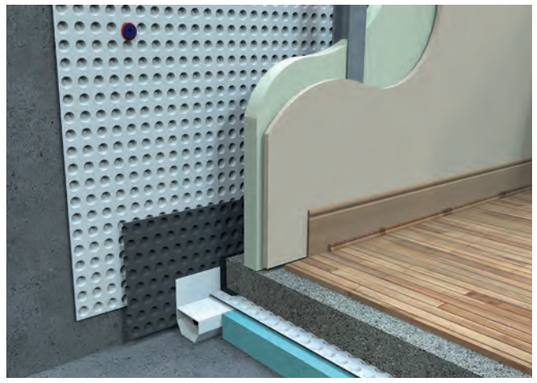
A high performance, pre-applied self-healing sheet membrane that features a locking fleece and a polymer hydrophilic coating. The 403 HydroBond®-GB variant also provides resistance to radon, carbon dioxide and hydrocarbon gases.



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.



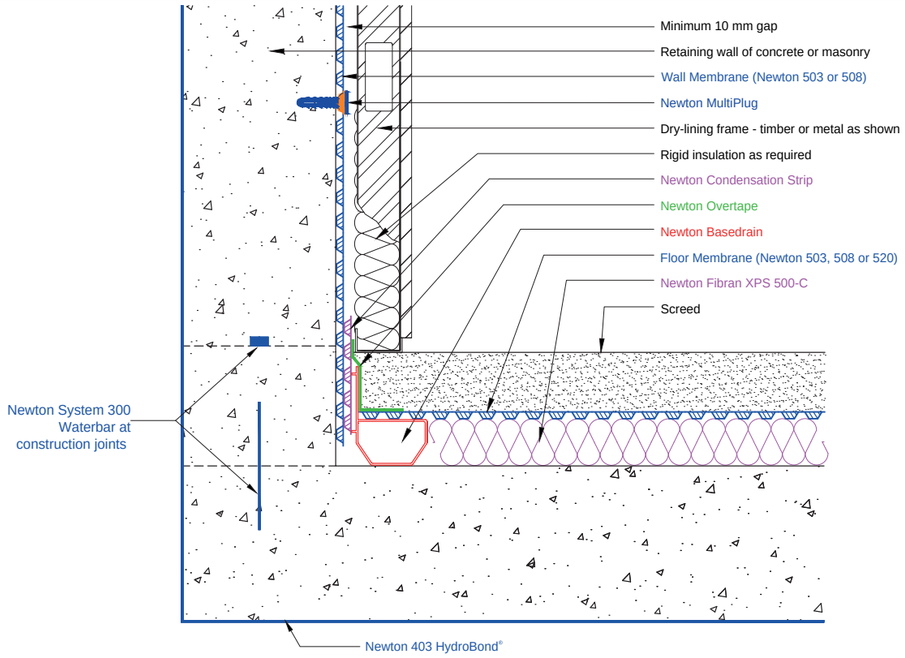
Newton System 500

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.

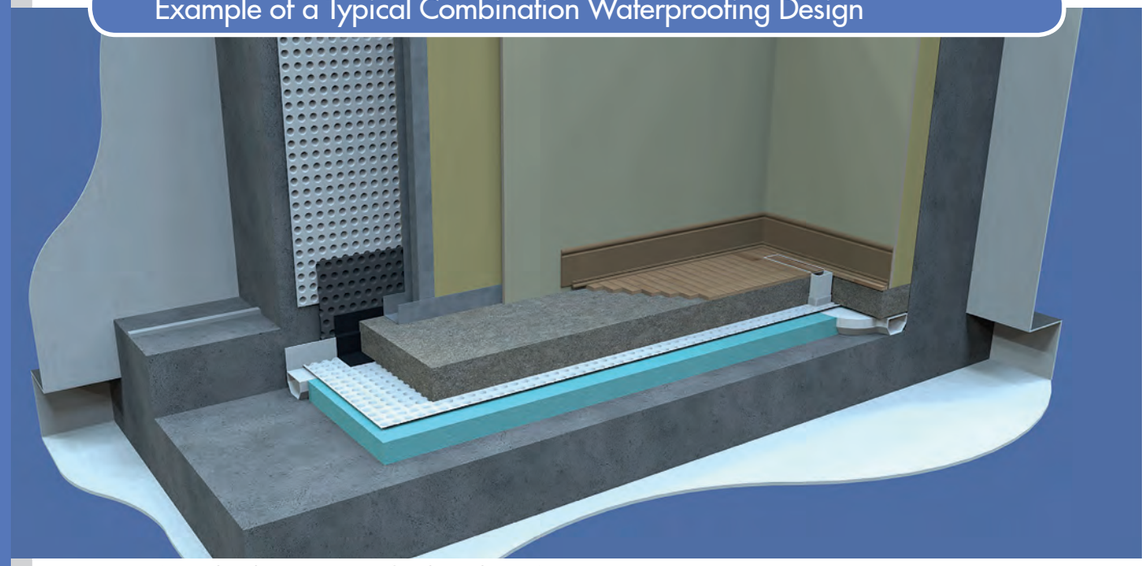
Combination Waterproofing Systems

Typical Specification



Newton Systems 400, 300 and 500 are employed to provide Type A, B & C waterproofing protection

Example of a Typical Combination Waterproofing Design



A typical combination waterproofing design showing Newton System 500 Cavity Drain System internally (Type C), Newton System 400 membrane externally (Type A) & Newton System 300 for integral waterproofing details (Type B)

Case Study: Structural Waterproofing - Christian Dior Store

"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 application of the Type A system, a Newton System 500 Cavity Drain Membrane (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.

Deck Waterproofing

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.

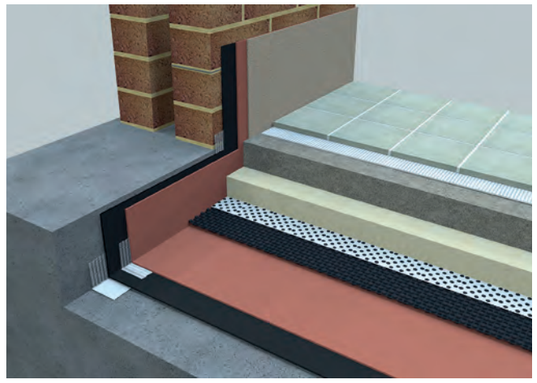
Typical specifications would be:

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

Example of Deck Waterproofing

Newton inverted warm roof detail interfacing with the damp proof course and the internal System 500 Cavity Drain waterproofing

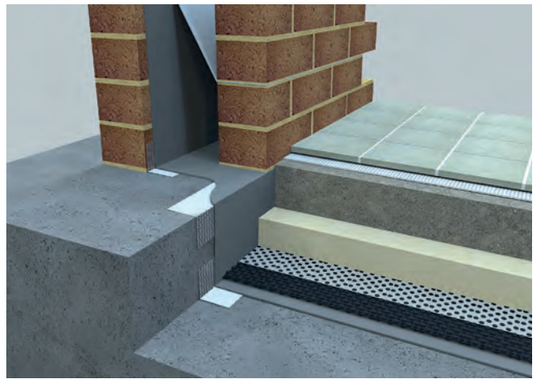
Featured Products



Newton 114 Acriflex

Elastic Fibre-Reinforced Liquid Waterproofing Membrane

A two-component, fibre-reinforced liquid waterproofing membrane based on cement and a water-based acrylic resin. Suitable for a great many applications such as the waterproofing of flat roofs, balconies, swimming pools, parking areas, and terraces.



Newton 408 DeckDrain

Drainage Membrane For Decks And Flat Roofs

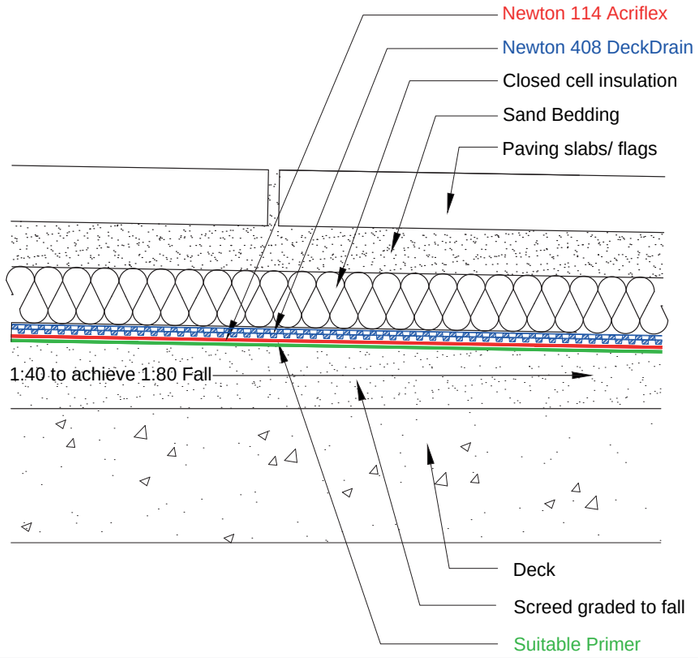
A double cuspated, deck and flat roof drainage membrane, that incorporates a polypropylene geotextile filter layer, bonded to a water impermeable HDPE (High Density Polyethylene) core.

Newton 706-HB

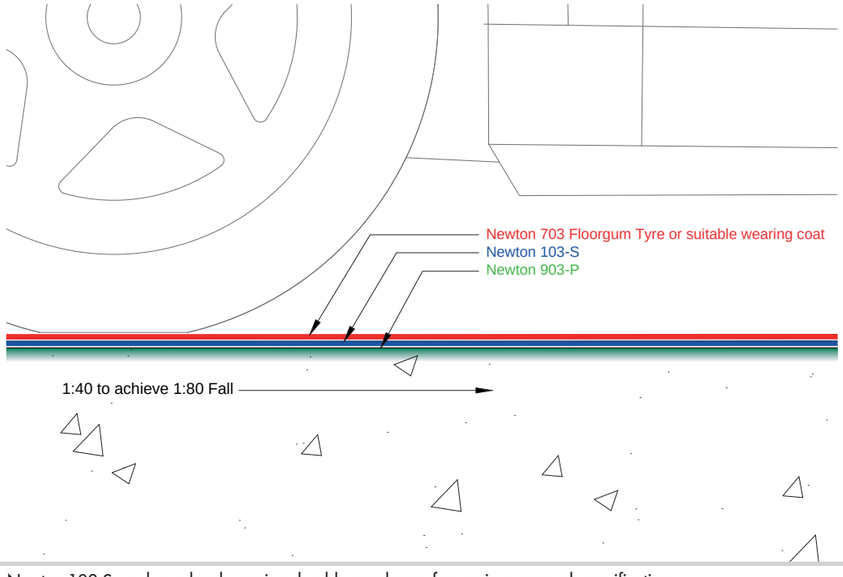
Cementitious Based Waterproofing Membrane

Two-component epoxy and cementitious polymer modified coating, with a self-smoothing system that provides excellent resistance against water, aggressive chemicals and abrasion.

Typical Specifications



Newton 114 Acriflex is installed in an inverted warm roof specification, in conjunction with Newton 408 DeckDrain, enabling the creation of a paved area above a habitable zone using an inverted warm roof detail



Newton 103-S used as a hard-wearing durable membrane for use in a car park specification. This can be used on a concrete deck which could be situated above a dry internal environment

Case Study: Deck Waterproofing Gunwharf Quays

"As a long-standing Newton customer, we're always being kept up to date and supported with the latest product developments, like 109-LM, and getting the right training for our contractors. The liquid rubber is something we've used before and it's always really quick and easy to apply, regardless of how it's applied or what it's being used for. Using the drainage membrane alongside was good for this job too, as it meant the finishes could be put back in quickly. Gunwharf Quays was back in use swiftly."

Simon Towers, Rubber Spray Solutions

Contractor: Rubber Spray Solutions

Rubber Spray Solutions prepared the surfaces and repaired the existing deck waterproofing. Newton's single-component, seamless waterproofing membrane Newton 109-LM was then hand-applied around the pipe penetrations to prevent water leaking into the car park below. Newton 108 HydroBond®-LM was spray-applied to the retaining walls and adjacent deck areas.

Newton 408 DeckDrain membrane was applied to the newly waterproofed surfaces to protect the membranes and filter and reduce the flow of water onto the primary waterproofing.

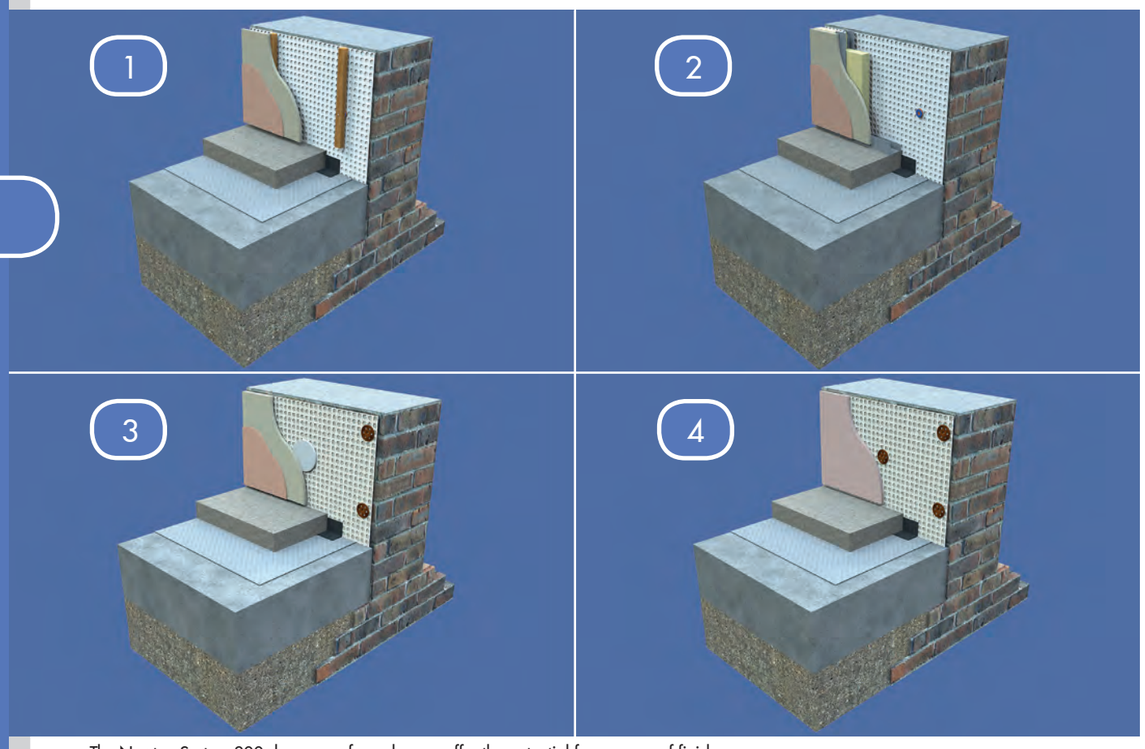
Damp Proofing

Definition

Newton System 800 is 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 impermeable barrier on any damp or deteriorating surface ready for plaster, render or dot and dab plasterboard. The unmeshed Newton 803 is used where insulation requirements dictate the use of a timber or steel frame ready for plasterboard. Newton damp proof membranes are the ideal solution for listed buildings as they are deemed 'reversible'.

Newton damp proof membranes are ideal for accommodating a number of finishes, as illustrated in the following drawings:

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



The Newton System 800 damp proof membranes offer the potential for a range of finishes

Featured Products

Newton 806 CWC

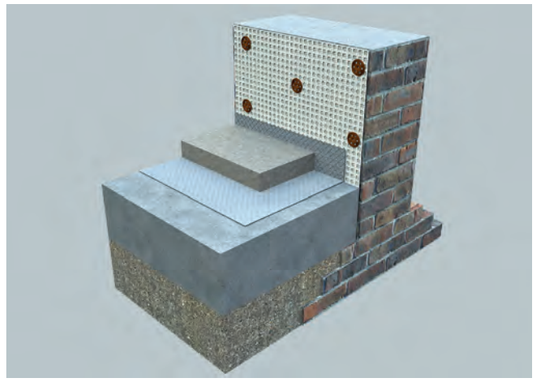
Thermal Paint

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 and therefore better protected against frost damage.

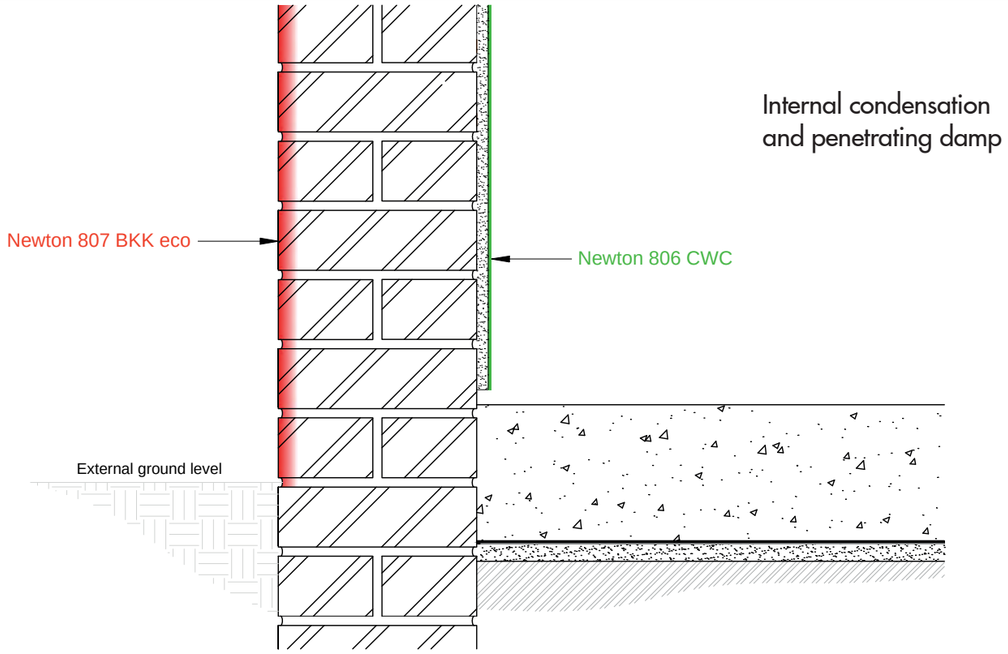


Newton 803 Newtonite

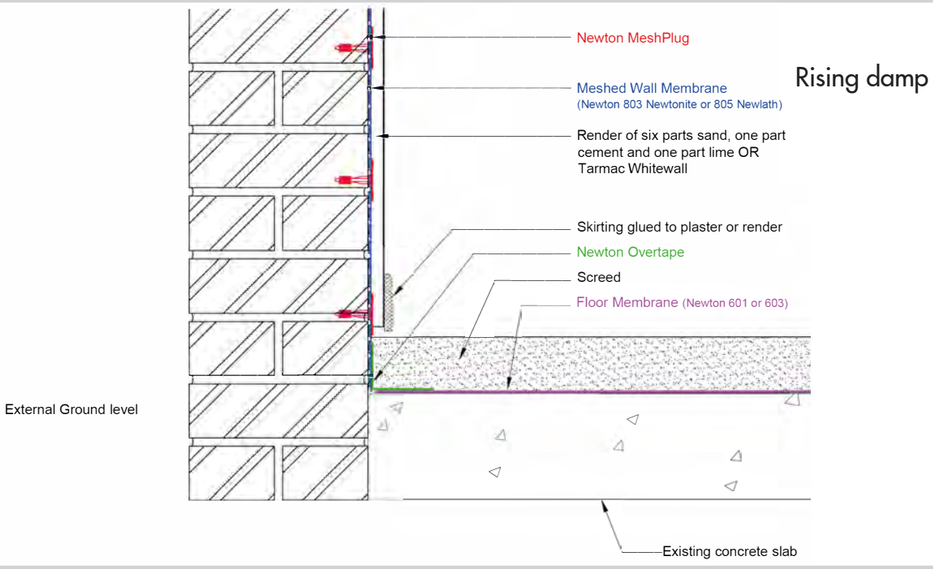
Meshed Damp Proofing Membrane

A composite damp proofing membrane comprising of a HDPE membrane with a rot-proof polythene mesh, heat-welded to the surface of one side. The mesh provides a key for the direct application of plaster or dot and dab plasterboard.

Typical Specifications



Newton System 800 damp proofing products can be utilised in order to prevent the occurrence of penetrating damp, internal condensation and black spot mould in an existing structure



Newton System 800 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

Case Study: Damp Proofing St Mary's Hall

> *"The Newton System 800 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 Newton 508 Cavity Drain Membrane ensures that any water ingressing into the vaults will be diverted by the System for safe removal away 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

Newton 508 Membrane was installed, and wooden battens were hung from Newton MultiPlugs. Water is now diverted to the Basedrain and then directed into the sump chambers formed within the concrete.

Structural Waterproofing: The Arndale Centre

Newton 114 Acriflex and Newton 702 Floorgum Paint were applied to weatherproof the structure

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 weather-line 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 specialist PAC-500 System combines basement waterproofing and ground gas mitigation on a large scale

NSBC Contractor: MacLennan

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

Tunnel Waterproofing: London Bridge Underground - The Shard Project

Installation of Newton 508 Cavity Drain Membrane to the internal face of the London Bridge Underground link

NSBC Contractor: Stonehouse Property Care

Newton System 500 and 101F provided the ideal solution in order 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 System 500 Type C solution.

Basement Waterproofing: Pickenham Hall

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

NSBC Contractor: AP Gooch

Newton System 500 Cavity Drainage was installed with the 8 mm deep Newton 508 membrane to the walls and floors of the large basement area to manage and remove any ingressing water.

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. Furthermore, they could – if ever required – be removed at a later date so the building could be restored to the original condition, which also meets listed building recommendations by being a reversible solution.

Basement Waterproofing: Houses of Parliament

Newton cavity drain membranes were applied to the interior vaults throughout this iconic Grade I Listed building

NSBC Contractor: MacLennan

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.

Externally, Newton's innovative Type A 403 HydroBond® membrane was applied extensively to ensure the necessary waterproofing around the basement, whilst, internally, Newton 508 and Newton 520 membranes were both applied from floor to ceiling as part of Newton's complete Type C System 500 Cavity Drainage solution.

Rapid Reoccupation Following Flooding

Lord Deben, Chairman of the Committee on Climate Change, recently stated: "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, 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 still be painfully slow and inhibit any 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

Newton System 500 cavity drain waterproofing was installed in five properties in the village. Sump and pumps were installed to manage any ingressing water through the building fabric and direct it to the sump and pump systems so it could then be discharged.

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 System 500 Cavity Drainage 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 Newton Waterproofing App

The World of Waterproofing at Your Fingertips

The Newton Waterproofing App presents complete 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 and below ground sites, 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*

Download on the App Store

ANDROID APP ON Google play

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

Practical Functionality

Systems

From our advanced System 100 liquid waterproofing membranes, to complete System 500 cavity drain waterproofing solutions, you will be able to access technical and material safety data sheets, declarations of performance, installation manuals and product certifications.

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.

Drawings

Navigate through over 200 sections and details, categorised by the BS 8102:2009 Types, as well as damp proofing and deck waterproofing.

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*

Newton Goes Green

In partnership with our NSBC network, Newton is proud to introduce our NSBC Membrane Recycling Service to the Structural Waterproofing Industry. The Service is a tailor made "back to base" membrane recycling facility, whereby Newton and their NSBCs actively recycle off-cuts of virgin and recycled HDPE from commercial and domestic construction sites throughout the UK. To provide this service, Newton has dedicated drivers who will pick up HDPE from the site or offices of our NSBC network for recycling back at our head office in Tonbridge, Kent. The recycled off-cuts are also collected at the same time as new construction membranes are being delivered, thus saving on dedicated pick ups and the associated carbon emissions.

Newton is the first waterproofing materials supplier to initiate a "back to base" membrane recycling service in our market sector as a drive to achieve both waste reduction and reduced reliance on landfill. As a company, we hold ISO 14001 certification and are always seeking to improve our environmental credentials, as well as all participants who are associated with us in the structural waterproofing industry. This bespoke service allows us to not only offer specifiers a quality waterproofing solution installed by a fully trained and competent professional, it also shows a real commitment to lowering all of our carbon footprints in the process.

Newton and our NSBC network have a true commitment to all parties involved in the construction process. This ensures our HDPE membrane systems will be installed in the most efficient manner with continuous focus on quality and minimal wastage. It is, however inevitable that some off-cuts will be produced. Specifiers and end clients should look for the NSBC Membrane Recycling Service logo on vehicles and literature as a mark of quality assurance that the HDPE membranes are being recycled and not sent to landfill.

NSBC Membrane Recycling Service

JN NEWTON WATERPROOFING

RECOUP

RECycling Of Used Plastics Limited

> *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*

Accreditations & Trade Bodies

ISO

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

ISO 9001
ISO 14001
OHSAS 18001
ISOQAR REGISTERED 0026 UKAS MANAGEMENT

Certificate Number 12252

BBA

Numerous Newton cavity drain and damp proofing membranes hold BBA Certification.

BBA APPROVAL INSPECTION TESTING CERTIFICATION

BDA

Multiple Newton products also hold BDA Certification, including Newton 403 HydroBond® external waterproofing membrane.

BDA ADVIES

RIBA

Newton's CPD is part of the RIBA Core Curriculum and offers architects double CPD points. Newton products and systems are hosted on RIBA Product Selector.

RIBA · CPD · CORE CURRICULUM

LCCI

Newton is an active member of the London Chamber of Commerce and Industry (LCCI), London's largest independent networking and business support organisation. Their Property and Construction Group is an established support forum for members who are involved with property, building development, planning, design and construction.

Proud to be Affiliated to LONDON CHAMBER OF COMMERCE AND INDUSTRY
CONNECT. INFLUENCE. SUPPORT.

British Structural Waterproofing Association

The British Structural Waterproofing Association seeks to improve standards within the structural waterproofing industry. They promote training for all members involved in specifying and applying waterproofing systems, and actively promote standards through trade press and construction authorities.

British Structural Waterproofing Association

Basement Information Centre

Newton is a member of the Basement Information Centre, a national centre for information about the development and use of basements in new or existing dwellings. Their aim is to encourage good practice in design and construction of basements through the media and through education and training.

THE Basement INFORMATION CENTRE

Property Care Association

Newton is proud to be a member of the Property Care Association (PCA). Their aim is to provide high standards of professionalism and expertise within the property and construction industry through training and other support services.

PCA Property Care ASSOCIATION

Complete Waterproofing Systems

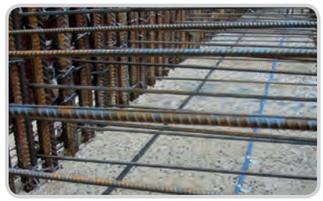
Extensive Product Range

System 100 - Liquid Waterproofing Membranes

A comprehensive portfolio of liquid-applied membranes for all substrates and all applications ranging from very flexible liquid rubber products through to hard-wearing and resilient cementitious membranes. Suitable for the waterproofing of retained structures and both covered and uncovered decks.

System 200 - High Build Cement Mortars

Range of cement-based mortars suitable for where a high depth of repair or levelling to concrete is required.



System 300 - Waterbars, Waterstops and Waterplugs

A range of products used to waterproof construction joints and movement joints of retained concrete structures so that they become integrally waterproof – defined within BS 8102:2009 as Type B waterproofing.

System 400 - External Waterproofing and Drainage Membranes

Complete range of preformed waterproofing and drainage membranes which can be applied externally to the structure to provide waterproofing solutions for earth-retained structures and covered decks.

System 500 - Cavity Drain Waterproofing

Including our range of cavity drain membranes, drainage conduits and sophisticated pumping and control systems. Applied internally, the system provides new-build or refurbished basements with Type C protection as defined by BS 8102:2009, and also holds BBA certification (94/3010).

System 600 - Sheet Flooring Membranes

Range of flooring membranes which provide a complete damp proof solution. Our membranes de-couple the floor finish from the substrate, preventing damage due to substrate movement and cracking.

System 700 - Coatings

A range of liquid-applied protective and decorative internal flooring products. These products are fast-curing and available in a variety of colours. They are typically used for the refurbishment and protection of commercial and domestic floors.

System 800 - Damp Proofing

A range of BBA approved damp proof membranes and ancillaries which are quick and clean to install and offer a permanent solution for damp proofing above ground walls.

System 900 - Primers, Preparation and Reinforcement

A full range of liquid-applied primers and reinforcement tapes which are used to prepare substrates and construction joints prior to waterproofing with System 100 and 700 liquid membranes and coatings.

Pumps, Pumping Systems and Ancillaries

Extensive range of submersible pumps and pumping ancillaries for controlling clean groundwater, grey water, effluent or sewage in basements.

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WATERPROOFING

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PROTECTING BUILDINGS SINCE 1848