

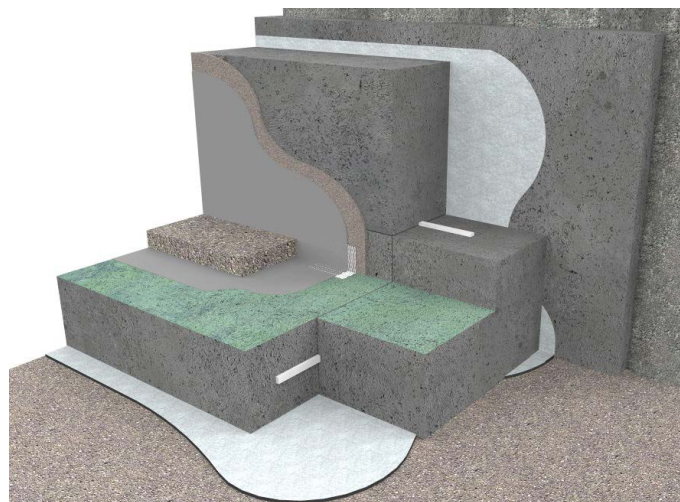
# Type A Waterproofing

## AA-05 SPECIFICATION SHEET

### Barrier Waterproofing of Contiguous Piles

Rev 2.0 - 28th April 2021

**BUILD**
**WALL CONSTRUCTION:**  
 Reinforced Concrete (RC)

**FLOOR CONSTRUCTION:**  
 RC Raft
**NWI SCORE**

This specification employs 2 forms of waterproofing (Type A - Barrier Protection) to prevent ground water passing through the structural elements of the building and (Type A - Barrier Protection) to ensure that the desired internal environment is achieved. The effectiveness of the waterproofing is dependent on the Type A system controlling the quantity of water that can pass through the structure so as not to put pressure on the Type A. There is therefore also a reliance on the Type A system being designed and installed correctly.

**SPECIFICATION****TYPE A INSTALLED EXTERNALLY**

Waterproof the structure with [Newton HydroBond System](#) consisting of pre-applied fully bonded membranes and fully bonded liquid applied membranes.

**TYPE A APPLIED INTERNALLY**

Waterproof the walls with [Newton HydroSeal System](#) liquid applied membranes.

**ANCILLARIES**

Install appropriate Newton waterbars to all construction joints and service penetrations.

**NEWTON WATERPROOFING INDEX**

The Newton Waterproofing Index (NWI) is a unique scoring system that accurately assesses the level of risk and potential success of specific waterproofing specifications.

The NWI score is awarded by a panel of experienced waterproofing design specialists and reflects the chances of success of that specification. The scoring system works in conjunction with the British Standard for waterproofing, which defines the three types of internal environments as Grades 1, 2 and 3.

**NOTES**

The detailing of other building elements and termination details are available within the Newton Waterproofing specification library.

**A-RATED INSURANCE**

Tailor made insurance policies available depending on the specialist contractor and specification.

# Type A Waterproofing

## AA-05 SPECIFICATION OUTLINE

### Barrier Waterproofing of Contiguous Piles

The following specification provides 2 layers of waterproofing

<b>Specification</b>	AA-05
<b>Description</b>	Combined waterproofing to RC structure. No gas protection.
<b>Build</b>	Reinforced concrete walls to BS EN 1992, supported from an RC raft.
<b>NEWTON HYDROBOND SYSTEM</b>	The Newton HydroBond System provides a complete and continuous waterproof barrier to the external surface of any below ground structure
Newton 403 HydroBond®	a mechanically bonded and self-healing membrane that is pre-applied ready for the placement of the concrete raft to a suitable smooth sound substrate such as a concrete blinding, closed cell insulation, void former system or drainage membrane such as Newton 410 GeoDrain.
<b>Preparation</b>	See J40/112 NBS Clause for Newton 403 HydroBond
<b>Application</b>	Install the membrane as described in the product Installation Manual Lap the vertical membrane down onto the suitable substrate, ready for the horizontal application
Base of Piles Page 5	1. First run of vertical Newton 403 HydroBond applied 900mm up from blinding level. Working from top down fix with Newton fasteners as necessary to allow close contouring of piles cut and splayed at base to form lap. 2. Newton 403 HydroBond (under slab) loose laid onto suitable oversite lapped over the 'cut and splayed lap from vertical application. 3. Newton 403 HydroBond is lapped 70mm to the first run of Newton 403 HydroBond.
Pile cap Page 4	1. Newton 403 HydroBond terminated at ground level. Continuity to DPC level as per Newton instructions. 2. Newton 403 HydroBond peel adhered to capping beam (applied to inside of formwork prior to pouring) cut to tightly abut the profile of the secant piled wall. Sealed with a fillet of Newton Detailing Paste. 3. Newton 403 HydroBond mechanically fixed (shotfired) to profile of concrete piles. Neatly abut underside of capping beam, and seal with fillet of Newton Detailing Paste.
HydroBond Plan view Page 6	At base of piles, vertical Newton 403 HydroBond extended horizontally onto blinding (min 100mm), cut and splayed as necessary to allow to lay flat. Newton 403 HydroBond (under slab) loose laid onto suitable oversite lapped over the 'cut and splayed lap from vertical application.
<b>NEWTON HYDROSEAL SOLUTION</b>	Type A, internally applied waterproofing system.
Newton 107F	Cementitious coating for the waterproofing and protection of concrete and masonry. Can be spray-applied so ideal for large projects.
<b>Preparation</b>	Install the membrane as described in the product Installation Manual
<b>Priming</b>	<a href="#">Newton 903-P</a>
<b>Application</b>	See J10/510 NBS Clause for Newton 107F
<b>NEWTON HYDROTANK SYSTEM</b>	All construction joints (day joints, shrinkage joints, movement joints etc) should be waterproofed with <a href="#">Newton System 300</a> waterbars to limit water ingress thorough joints in the structure.
Newton 315 Polymer Waterbar	Option to include 3rd party certified Newton 315 Polymer Waterbar with NHBC approval A high grade, hydrophilic waterbar with high elasticity and high tensile strength, made from a polymer which swells when in contact with moisture.
<b>Substrate Preparation</b>	See E40/230 NBS Clause for Newton 315 Polymer-Waterbar

### Application

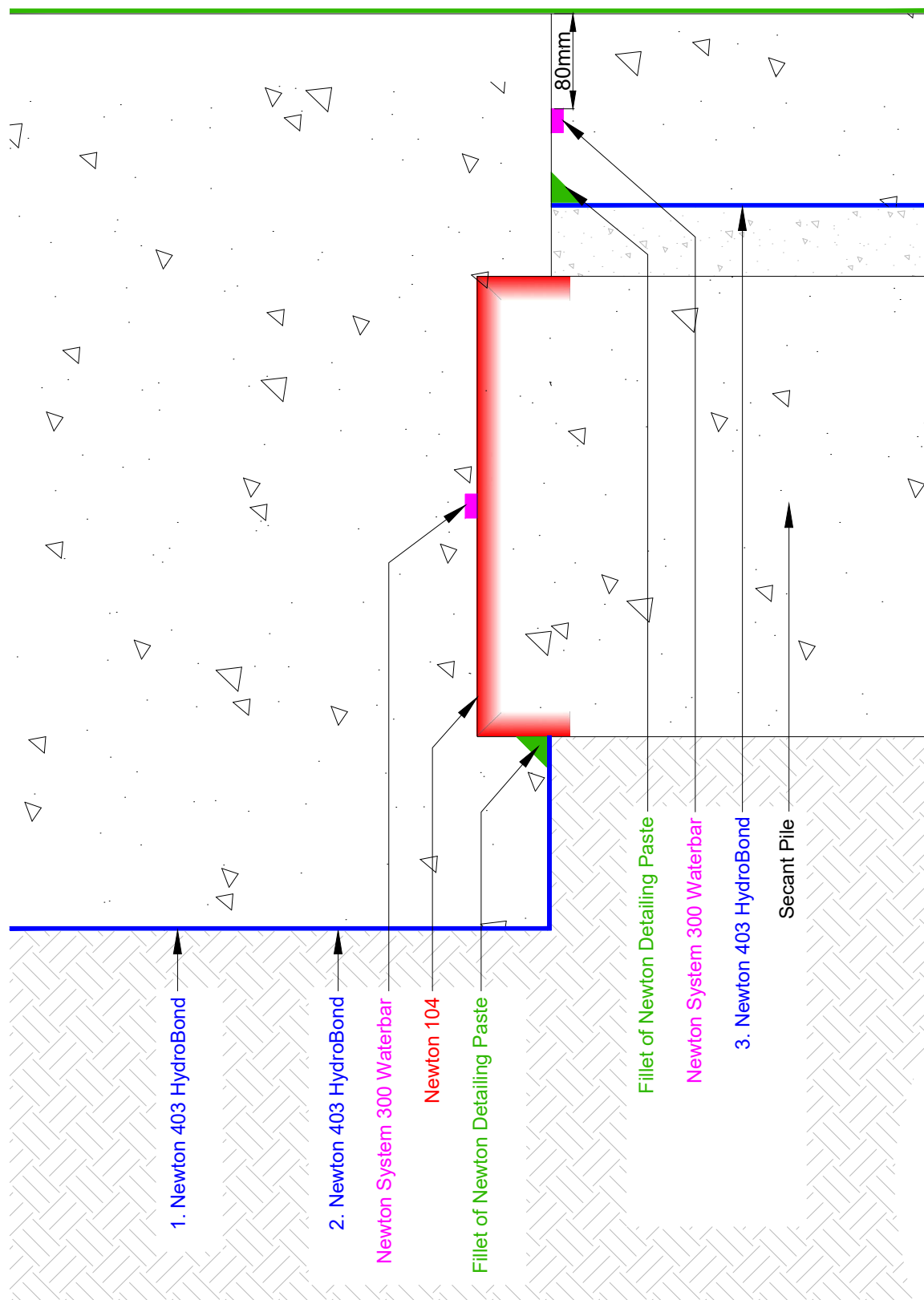
Install the waterbar as described in the product datasheet

Fix waterbars at the centre dimension of joints

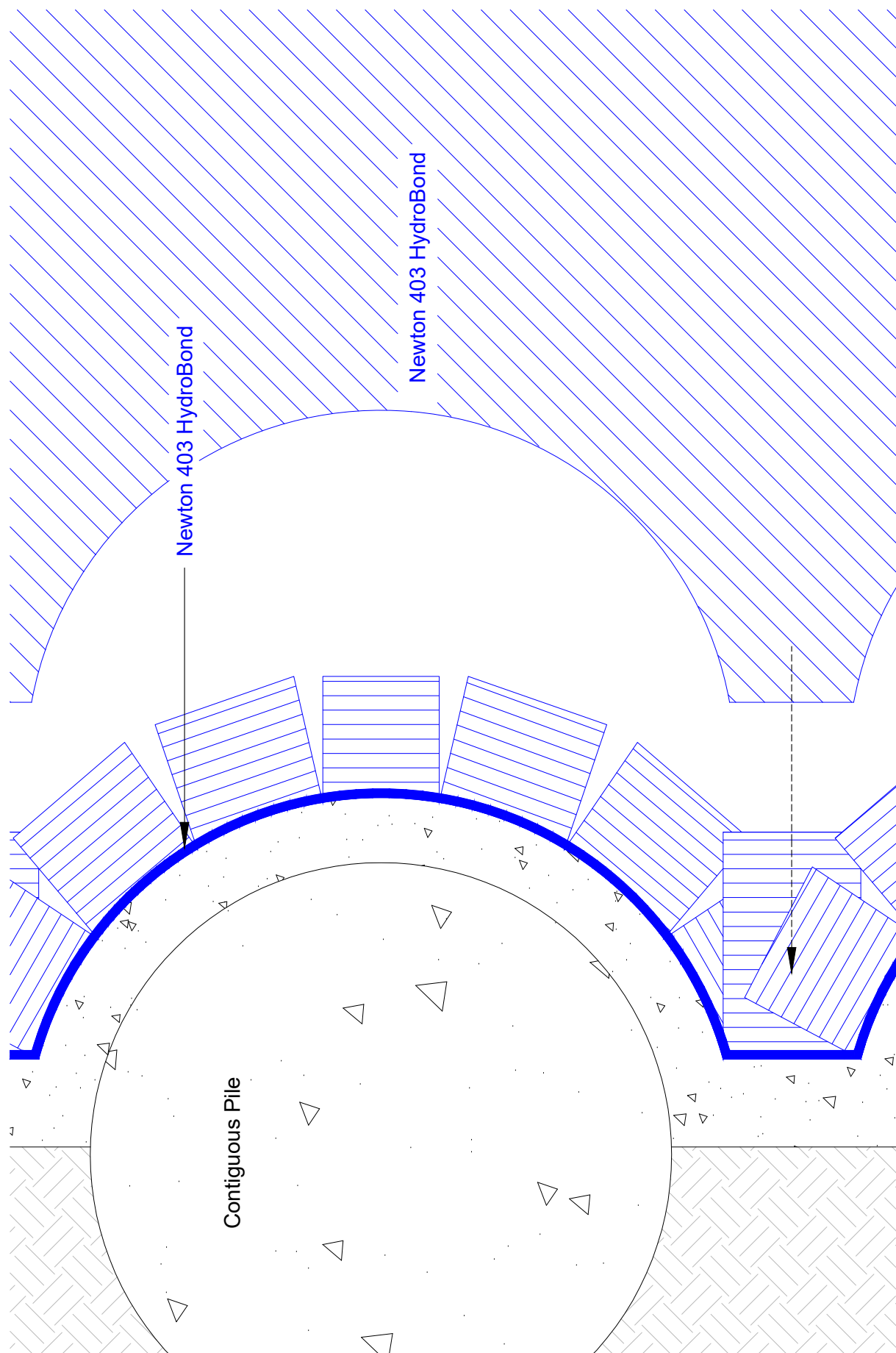
### Place slab

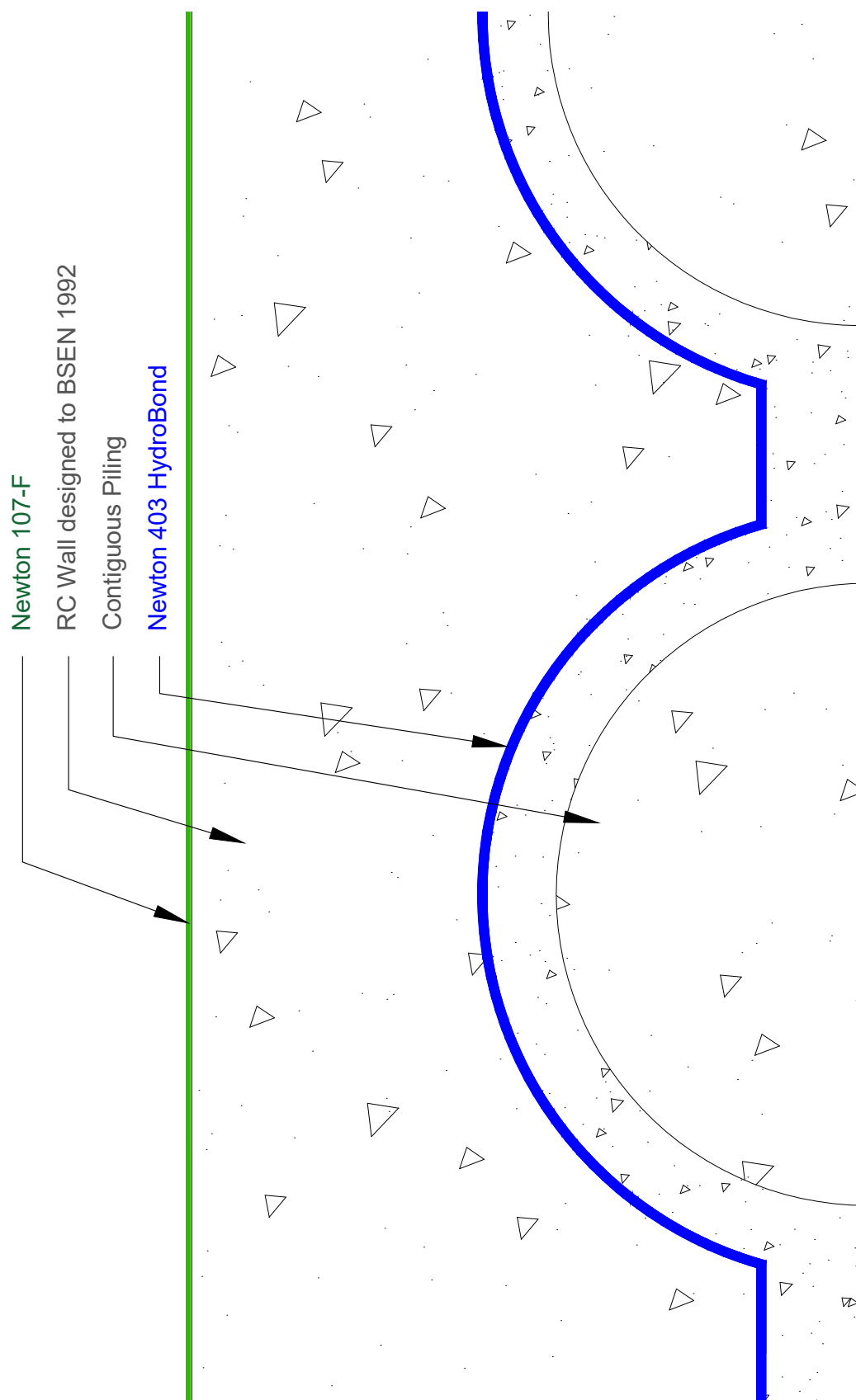
Place RC raft ensuring that the concrete is fully compacted, paying attention to compaction below the reinforcement steel and waterbar.

Pay particular attention not to damage the Waterbar during vibration of the concrete.











# Type A Waterproofing

## AA-05 NBS CLAUSE

### Barrier Waterproofing of Contiguous Piles

The following document is to be read alongside the relevant Newton Waterproofing datasheets.

#### NEWTON J40 - NEWTON HYDROBOND SYSTEM

##### J40 Flexible sheet waterproofing/ damp proofing

##### 297A WATERPROOFING MEMBRANE

##### Newton 403 HydroBond

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

Newton 403 HydroBond provides a complete waterproof envelope to the structure to achieve Type A (barrier) waterproofing suitable for Grades 1, 2 and 3 as defined by BS 8102:2009, are suitable for all below ground and earth-retained structures from domestic basements to the largest civil engineering projects, and can be used as part of the HydroBond® System with Newton 108 HydroBond-LM which is sprayed to the exposed walls of the basement after the temporary formwork is removed. Where space is tight, Newton 109-LM can be applied by roller or brush or small airless spray machine.

Newton 403 HydroBond can be used in conjunction with other Newton products to provide a co-ordinated and combined approach to the waterproofing of the whole structure that includes protection against water ingress to the deck, through construction joints, through and around service entries and to movement joints.

Correctly protected, the Newton HydroBond System will provide, under normal service conditions, a durable waterproof barrier for the life of the building to which it is installed; the expected lifetime of the building itself should be at least 60 years. The Newton HydroBond System is supported by BDA Agrément Certificate BAB 16-031/03/A and is accepted by the NHBC as a suitable waterproofing system for Type A Waterproofing to Grades 1, 2 & 3 – BS 8102:2009 System Manufacturer:

Newton Waterproofing Systems Ltd, Newton House, 17-20 Sovereign Way, Tonbridge, Kent, TN9 1RH

Tel: 01732 360095, Email: [Tech@Newtonwaterproofing.co.uk](mailto:Tech@Newtonwaterproofing.co.uk), Web: [www.newtonwaterproofing.co.uk](http://www.newtonwaterproofing.co.uk)

[Please click here to download the full Newton 403 HydroBond NBS Clause](#)

#### NEWTON J10 - NEWTON HYDROSEAL SYSTEM

##### J10 Designed joints in in situ concrete

##### 120A CEMENTITIOUS COATING

##### Newton 107F

Cementitious coating for the waterproofing and protection of concrete and masonry. Can be spray-applied so ideal for large projects. Suited to the waterproofing of reservoirs, tunnels, water tanks, basements, podium decks, flat roofs and balconies.

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[Please click here to download the full Newton 107F NBS Clause](#)



# Type A Waterproofing

## AA-05 NBS CLAUSE

### Barrier Waterproofing of Contiguous Piles

#### NEWTON E40 - NEWTON HYDROTANK SYSTEM

##### E40 Designed joints in in situ concrete

#### 120 CONSTRUCTION/ MOVEMENT JOINTS GENERALLY

##### Newton 315 Polymer-Waterbar

A high grade, hydrophilic waterbar with high elasticity and high tensile strength, made from a polymer which swells when in contact with moisture. Ideal for sealing structures against water leaks to both cast-in-place concrete and pre-cast construction joints.

The swelling is achieved through hydrophilic acrylate polymers, which are inseparably embedded within the butylene carrier material. This results in high elasticity and exceptional tensile strength, even when fully expanded within the joint.

Due to its high resistance to acids, alkalis and organic solutions, Newton 315 Polymer-Waterbar can be used to seal joints where aggressive water is expected such as within sewage treatment plants, biogas plants and liquid waste holding tanks.

Newton 315 Polymer-Waterbar swells up to 9 times its original size when in contact with water, sealing the joint fully and reliably. Newton 315 Polymer-Waterbar is particularly suited to sealing non-compressed joints such as at the junction between slab and wall.

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[Please click here to download the full Newton 315 Polymer-Waterbar NBS Clause](#)