

Type A & B Waterproofing

BABA-01 SPECIFICATION SHEET

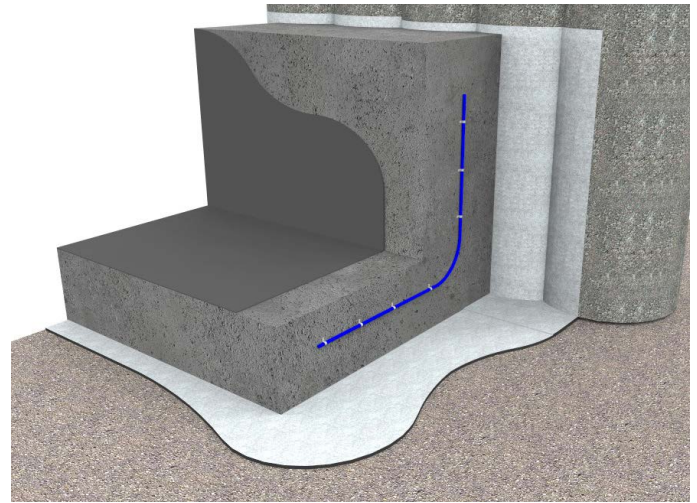
Barrier Waterproofing of RC Box in front of Secant Piles

Rev 2.0 - 3rd December 2019

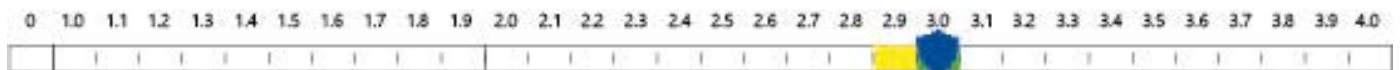
BUILD

WALL CONSTRUCTION:
Reinforced Concrete (RC)

FLOOR CONSTRUCTION:
RC Raft



NWI SCORE



This specification employs 2 forms of waterproofing (Type A - Barrier Protection) and (Type B - Integral Protection) to prevent ground water passing through to 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](#) providing barrier protection.

TYPE B ANCILLARIES

[Newton InjectionHose](#) installed and injected within all construction joints and service penetrations providing integral protection.

TYPE A APPLIED INTERNALLY

Waterproof the structure with [Newton HydroSeal System](#) providing barrier protection.

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.

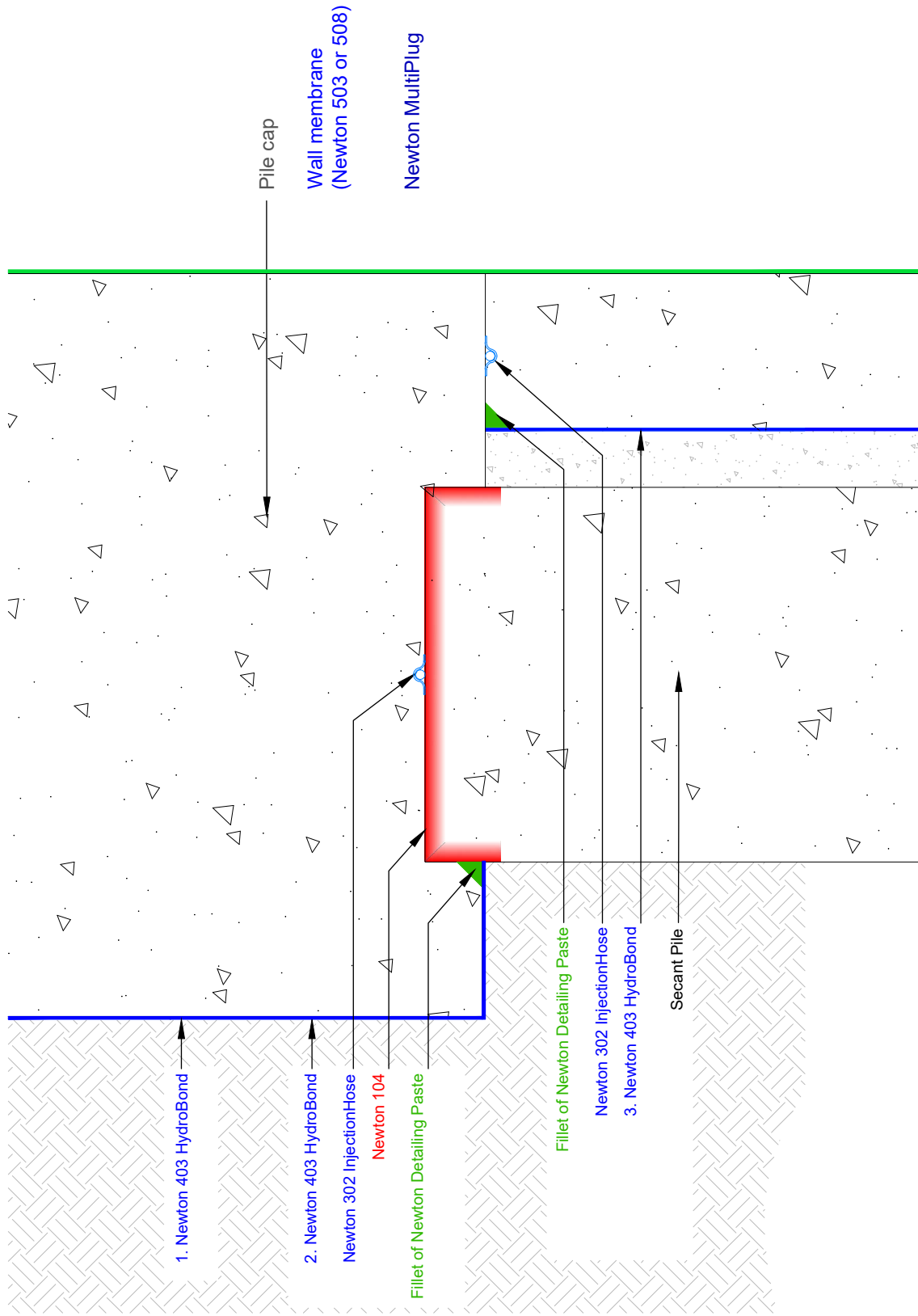
A-RATED INSURANCE

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

Any specification/advice provided is only valid if used with products supplied by John Newton and Company Ltd (trading as Newton Waterproofing Systems). Newton Waterproofing Systems reserve the right to update product literature at any time. Please always refer to our website for the latest versions.

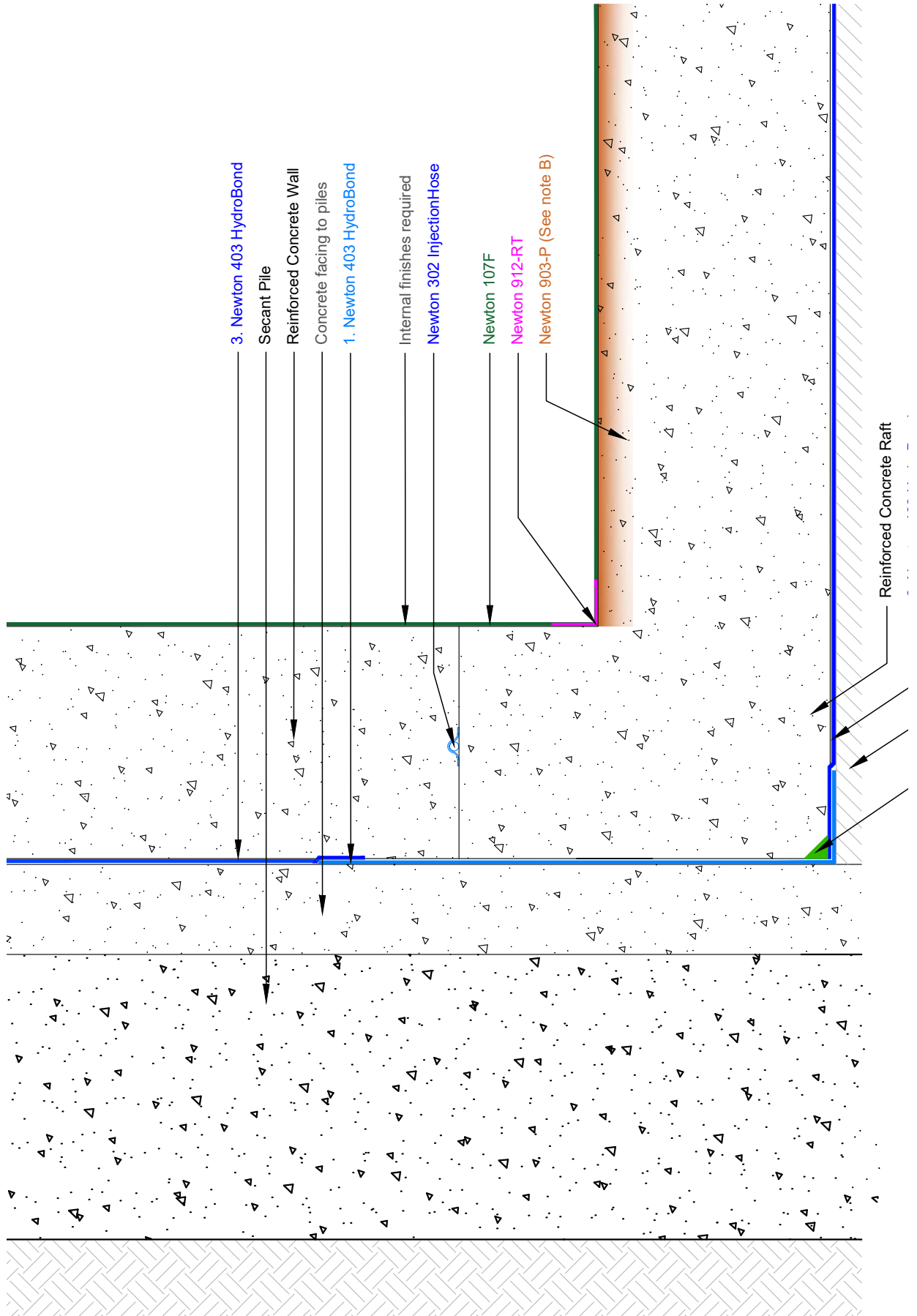
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Barrier Waterproofing of Secant Piles



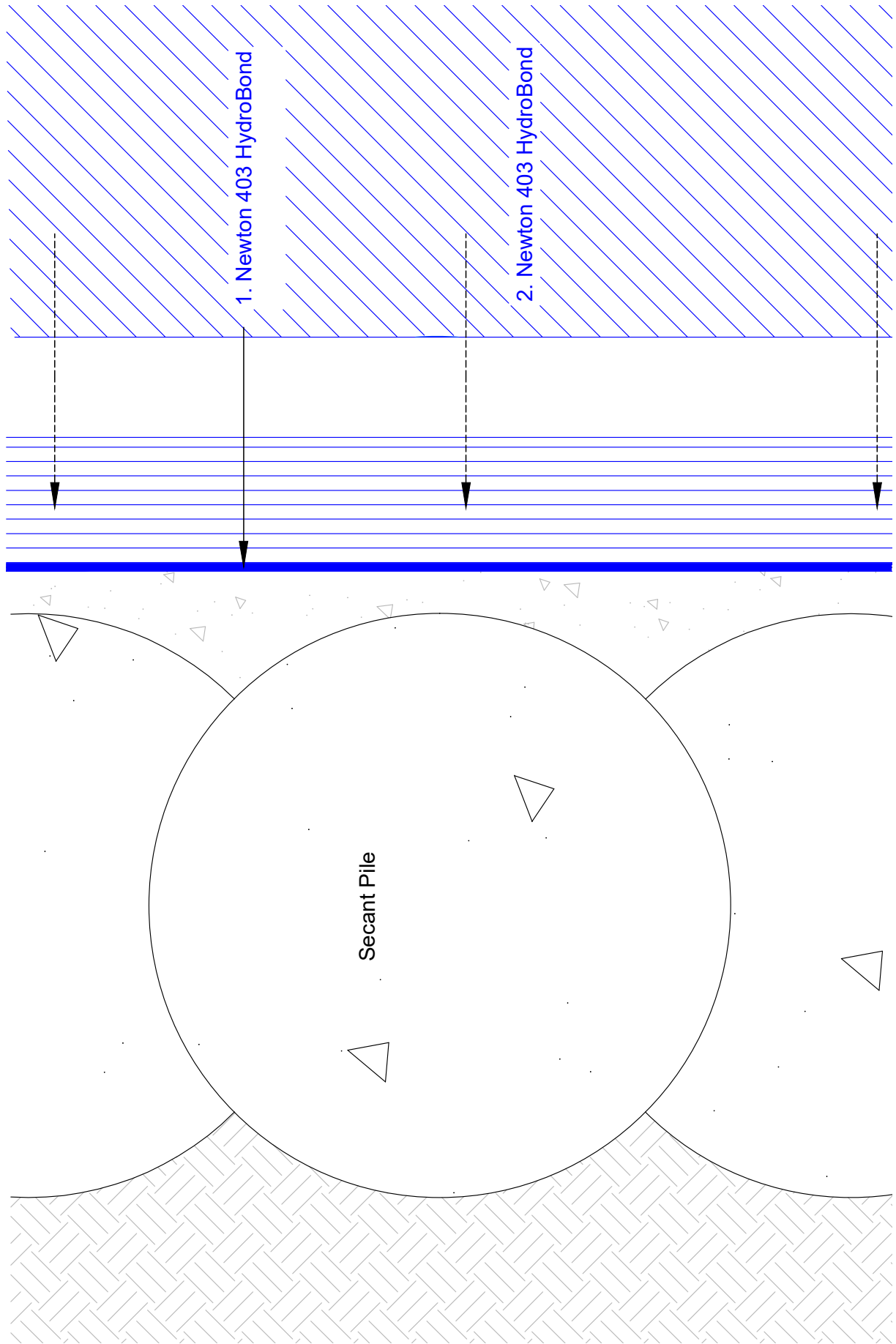
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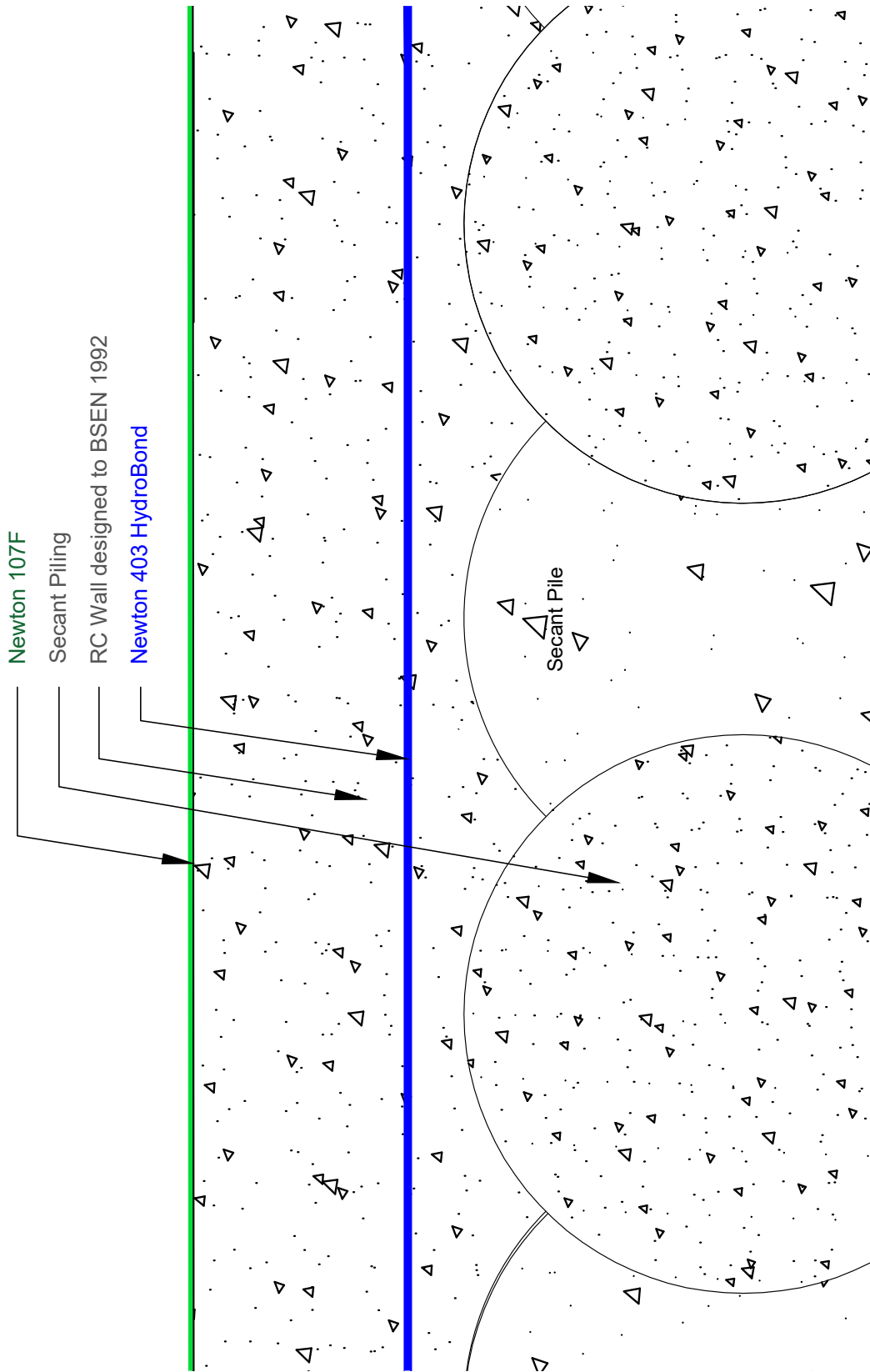
Barrier Waterproofing of Secant Piles



BABA-01

Barrier Waterproofing of Secant Piles





Type A & B Waterproofing

BABA-01 SPECIFICATION OUTLINE

Barrier Waterproofing of Secant Piles

The following specification provides 2 layers of waterproofing

Specification	BABA-01
Description	Combined waterproofing to RC structure. No gas protection.
Build	Reinforced concrete walls supported from an RC raft designed with flexural and through section crack widths limited to 0.2mm, and which conforms to BS EN 1992
NEWTON HYDROBOND SYSTEM	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.
Preparation	See J40/112 NBS Clause for Newton 403 HydroBond
Application	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 3	<ol style="list-style-type: none"> 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 2	<ol style="list-style-type: none"> 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 about 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 about underside of capping beam, and seal with fillet of Newton Detailing Paste.
HydroBond Plan view Page 4	<p>At base of piles, vertical Newton 403 HydroBond extended horizontally onto blinding (min 100mm), cut and splayed as necessary to allow to lay flat.</p> <p>Newton 403 HydroBond (under slab) loose laid onto suitable oversite lapped over the 'cut and splayed lap from vertical application.</p>
NEWTON HYDROSEAL SOLUTION	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.
Preparation	Install the membrane as described in the product Installation Manual
Priming	Newton 903-P
Application	See J10/510 NBS Clause for Newton 107F
NEWTON HYDROTANK SYSTEM	All construction joints (day joints, shrinkage joints, movement joints etc) should be waterproofed with Newton System 302 injectable waterbars to limit water ingress thorough joints in the structure.
Newton 302 Injection Hose	Inject Newton range of resin injection materials after 28 days concrete cure to ensure defects are repaired.
Substrate Preparation	See E40/230 NBS Clause for Newton 302 Injection Hose
Application	Newton injection hose clips every 100/150mm. Fix waterbars at the centre dimension of joints
Preparation	None required

Type A & B Waterproofing

BABA-01 NBS CLAUSE

Barrier Waterproofing of Secant 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, Web: www.newtonwaterproofing.co.uk

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

NEWTON E40 - NEWTON HYDROTANK SYSTEM

E40 Designed joints in in situ concrete

120 CONSTRUCTION/ MOVEMENT JOINTS GENERALLY

Newton 302 Injection Hose

A high performance waterbar system installed within and used for sealing construction joints in earth-retaining and water-retaining concrete structures. When injected with injection resin, the material penetrates into the concrete surrounding the construction joint to permanently seal any cracks, capillaries, pores and honeycombing within the structure.

Newton 302 Injection Hose features micro-ports equally spaced over the entire circumference of the hose, and when injected with injection resin at 1-bar of pressure or above the microscopic ports open and the low-viscosity resin penetrates deeply into the concrete surrounding the construction joint.

The injection hose is compatible with both polyurethane and acrylic injection resins, and when installed and injected correctly Newton 302 Injection Hose improves the water tightness of the 'Type B' waterproof structure by sealing the joints and encouraging improvements in the quality of the concrete placement.

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[Please click here to download the full Newton 302 Injection Hose 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](#)