

Type A & C Waterproofing

AC-05 SPECIFICATION SHEET

Internal Waterproofing of Underpinning

Rev 5.1 - 24 September 2025

BUILD**WALL CONSTRUCTION:**

Underpinned existing structure

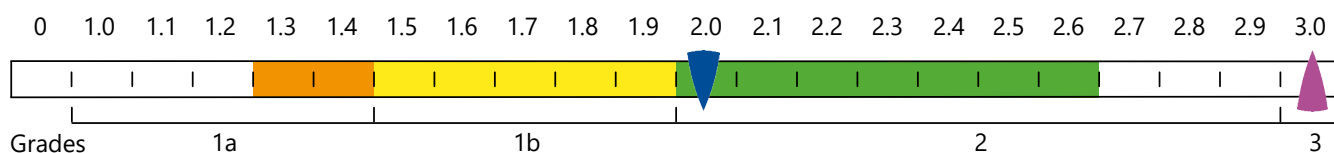
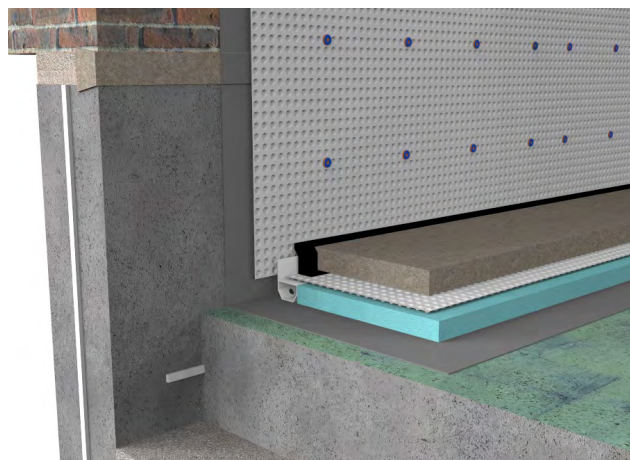
FLOOR CONSTRUCTION:

Reinforced Concrete (RC) Slab

NWI SCALE

Waterproofing solutions can only achieve environmental Grades 1a, 1b or 2.

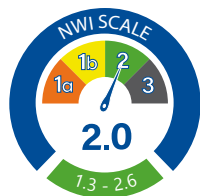
Refer to page 5 of the Newton Design Philosophy.



 NWI Score when ventilation has not been included.

 Ventilation, dehumidification or air conditioning is necessary; appropriate to intended use to achieve Grade 3 - BS 8102:2022.

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 C - Drained Protection) to ensure that the desired internal environment is achieved. The success of the waterproofing is dependent on the Type A system being effective at controlling the quantity of water passing through the structure so as not to inundate the Type C. There is therefore also a reliance on the Type C system being designed and installed correctly.

**SPECIFICATION****ANCILLARIES**

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

TYPE A APPLIED INTERNALLY

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

TYPE C INSTALLED INTERNALLY

Waterproof internally with [Newton CDM System](#) providing drained 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 1a, 1b, 2 and 3.

NOTES

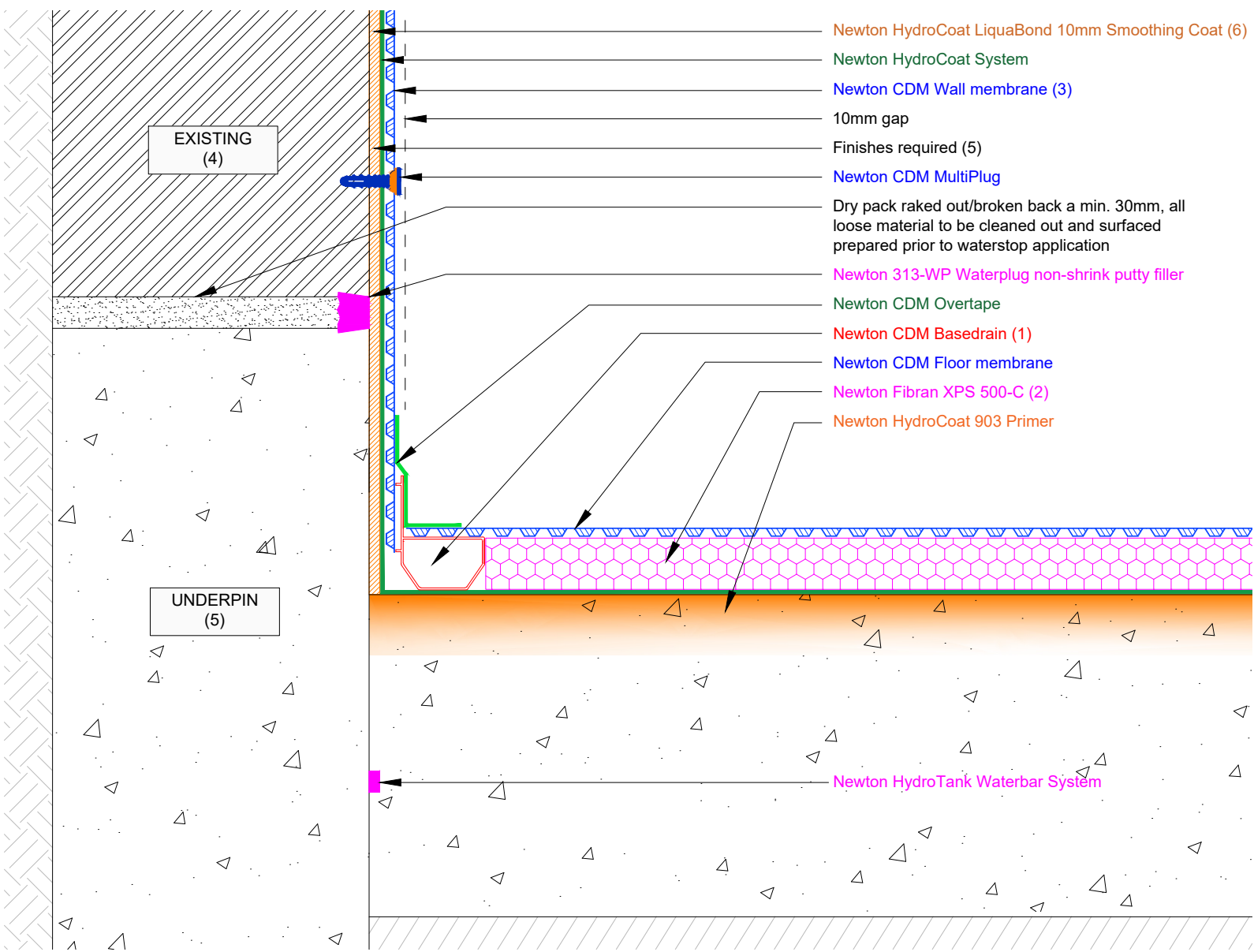
To improve the NWI score please see Newton Specification Sheet E-AC-01.

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.



The dry pack used within underpinning contains a large amount of free lime which can cause limescale build up within the drainage channel of the Newton CDM System should water enter through the dry pack, this drawing shows a method of sealing the dry pack to prevent water ingress.

This detail assumes that the structure is in good condition - constructed to BS EN 1992 (Eurocode 2), and that the structure as a whole is of sufficient mass and quality to resist heads of water pressure as required by BS8102.

1. Newton Basedrain should always be laid level and connected to the sump chamber or safe gravity drainage with at least two Drainage Connectors, see drawings CDM-P03 (Basedrain Layout & Parts) and CDM-P09 (Titan-Pro Pump System). Construction joints to the floor should be protected by Newton Floordrain, see drawing CDM-D01 (Construction joints protected by Newton Floordrain). For supporting walls detailing please see drawing CDM-D03.
2. Newton Fibran XPS 500-C is placed below the Newton flooring membrane as a fully drained supporting spacer. The maximum floor load is 16 Mpa (1.6 tonnes/m2). Newton Fibran XPS 500-C has a thermal conductivity of 0.035W/mk and as such will make a significant contribution to the U-value of the floor.
3. Terminate at a viable DPC or 1.2m above the external ground level. The wall membrane should be trimmed to 40mm from slab to keep clear of the Basedrain holes.
4. Existing structure repaired as and if required to confirm to clause 10.1 of the BS8102:2022. The existing plaster will need to be removed to above the DPC or if no DPC exists to 1200mm above the external ground levels.
5. Concrete underpin to SE Specification. Joints between pins should be waterproofed with Newton HydroTank System waterbar.
6. Newton HydroCoat LiquaBond smoothing coat Render 3 parts sand, one part cement.
7. All construction joints (day joints, shrinkage joints, movement joints etc) should be waterproofed with Newton HydroTank System waterbars to limit water ingress through joints in the structure.

To access further details and relevant technical information please call our Technical Team on 01732 360 095 or refer to our [website](#).

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Reference	SS AC-05	Designed	AJG
Revision	C	Drawn	AJG
Date	24/09/2025	Checked	

Type A Waterproofing

AC-05 SPECIFICATION OUTLINE

Internal Waterproofing of Underpinning

Specification

Description

Build

NEWTON HYDROCOAT SYSTEM

NEWTON HYDROTANK SYSTEM

Build

Existing walls and slab are to comply with Section 10.1 of BS 8102:2022 — Protection of below ground structures against water ingress – Code of practice.

NEWTON CDM SYSTEM

AC-05

Combined waterproofing to underpinning. No gas protection.

Underpinning, with reinforced concrete slab to BS EN 1992.

an internal Type A waterproofing (Barrier Protection) is applied to the internal surface of a structure to resist any water that is trying to enter the building.

All construction joints (day joints, shrinkage joints, movement joints etc) should be waterproofed with Newton System 300 waterbars to limit water ingress thorough joints in the structure.

The external elements of the structure should be capable of regulating the rate of water ingress to ensure it remains within the design capacity of the cavity drain system. Water entering a drained cavity system is regulated by the structure, so any defects or conditions that could lead to excessive or uncontrolled leakage must be identified and rectified prior to installation.

Maintainable basement waterproofing solution ideal for new-build basements and refurbishment projects. Comprises four components: Cavity Drain Membranes, Drainage, Pumps and Control Systems. Complies with the British Standard for Waterproofing.