Hydroswell
MEMBRANE PRODUCTS

BENTOGUARD MEMBRANE

METHOD STATEMENT (MS)

Product Description

BentoGuard Membrane is a Type A (BS 8102:2022) highly effective waterproofing barrier formed of geotextiles and Sodium Bentonite. Sodium Bentonite is high swelling and has very low permeability which is encapsulated between both a non-woven and woven geotextile. These are then needle punched, interlocking the geotextiles together creating a strong barrier that provides an even coverage of bentonite. This geotextile barrier also protects it from inclement weather and construction related damage. Once backfilled, the Sodium Bentonite hydrates and forms a monolithic waterproofing layer.

BentoGuard Membrane contains no VOCs and can be installed in almost any weather condition to green concrete, and most importantly, has proven effective on both new and remedial water proofing projects.

Application Procedures

(*Note: These instructions should be read in conjunction with the relevant TDS and MSDS*)

BentoGuard Membrane should only be installed after substrate preparation has been properly completed (see below) and is suitable to receive the waterproofing system. Concrete works should use conventional cast-in-place removable formwork that produce a smooth surface. BentoGuard Membrane requires a minimum of 150mm thick reinforced concrete coverage for both wall and slab construction, where hydrostatic conditions exist, BentoGuard Membrane should be installed under footings and ground beams.

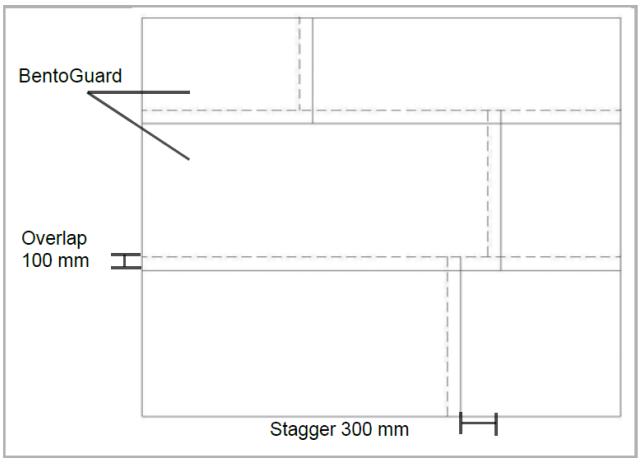
Preparation of Substrate

Substrate can be either concrete, earth, sand, or crushed stone. If earth or sand substrates are used these should be compacted to a minimum 85% Modified Proctor density. Crushed stone should be no larger than 19mm in size. Substrate should be smooth and without sharp deflections or pockets.

Method

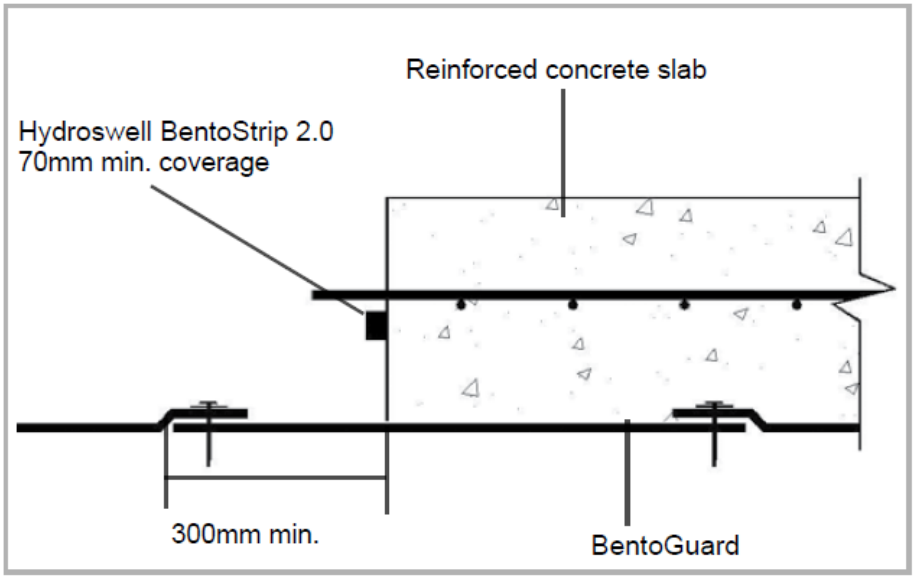
1.1 Installation

Install Hydroswell BentoGuard Membrane over the properly prepared substrate (see above) with the dark grey geotextile side up. Overlap all adjoining edges a minimum of 100mm and stagger sheet ends a minimum of 300mm. Using Hydroswell MF 66/32 secure edges together as required to prevent any displacement before and during concrete placement.



Overlap edges 100mm min. with seams staggered 300mm min.

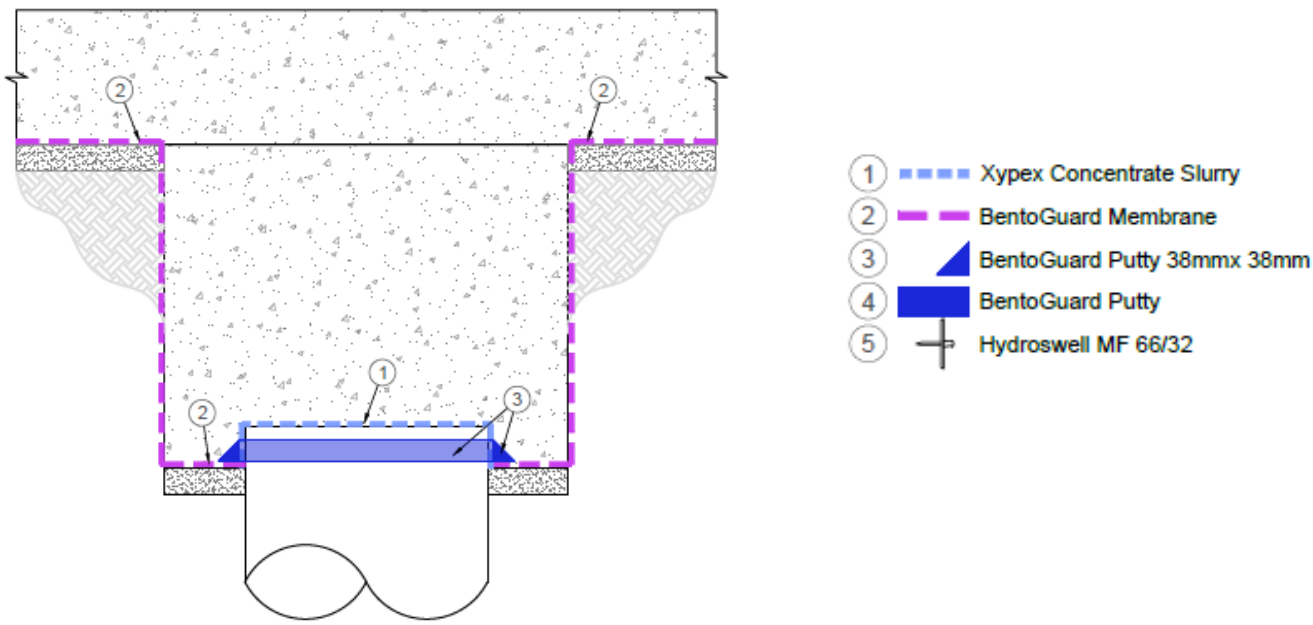
When the slab is poured in sections, BentoGuard Membrane should extend a minimum 300mm beyond the slab edge. This enables BentoGuard Membrane to be properly overlapped for subsequent slab section pours. Hydroswell BentoStrip 2.0 should be installed in all applicable slab construction joints.



Extend BentoGuard a minimum 300mm beyond slab edge. Install Hydroswell BentoStrip 2.0 in joint

1.2 Pile Caps

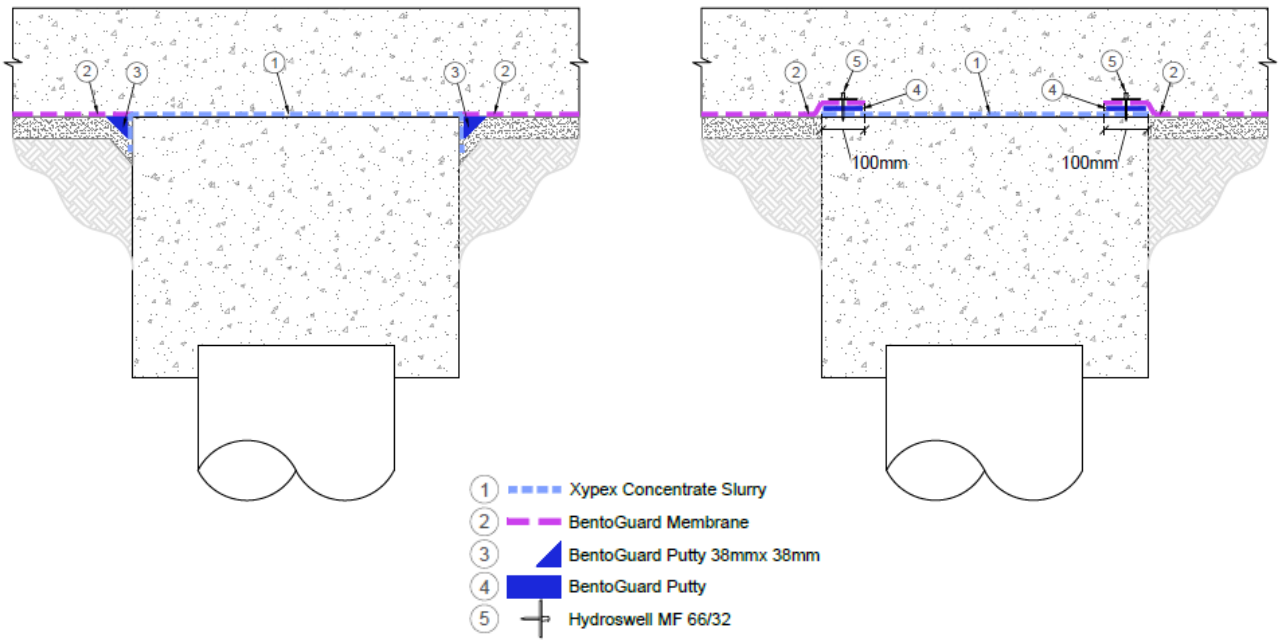
Hydroswell BentoGuard Membrane is not installed over the pile crown but cut to fit tightly around the pile. A slurry coat of Xypex Concentrate is applied to the crown of the pile. Then a minimum 38mm thick fillet of BentoGuard Putty is placed at the intersection of BentoGuard Membrane and the slurry coat.



1.3 Ground Beams

For hydrostatic conditions, BentoGuard Membrane should be installed under the entire ground beam. Line the ground beam formwork with BentoGuard Membrane prior to placement of reinforcing steel. Leave a minimum 300mm of BentoGuard Membrane at the top of the form to tie into below slab waterproofing.

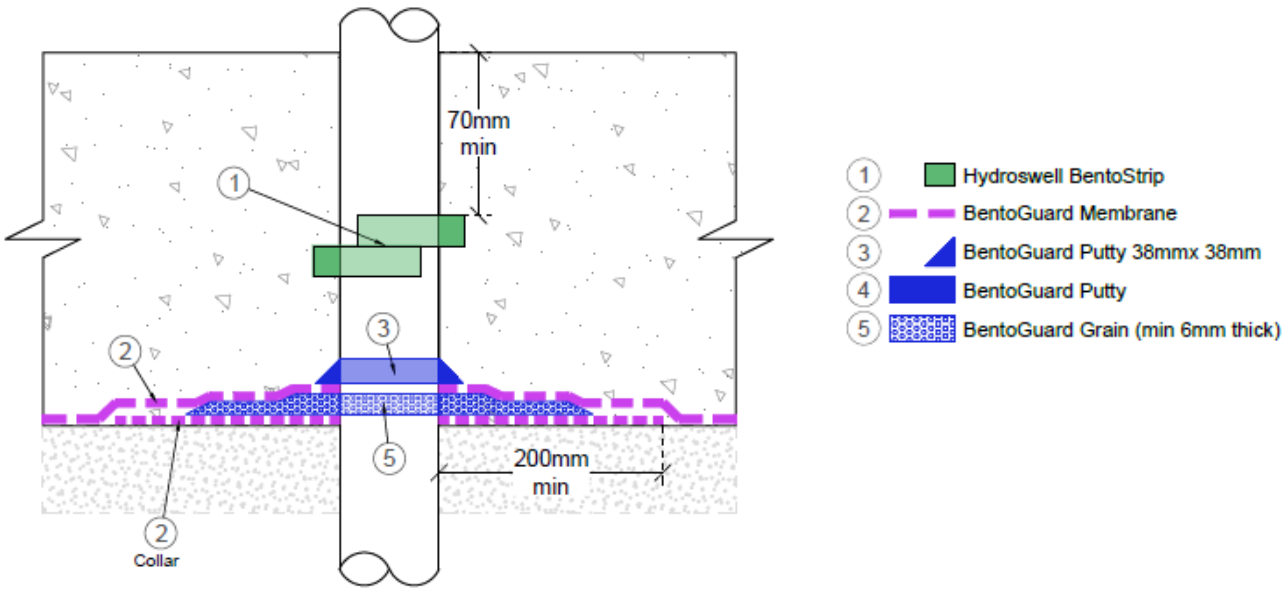
Detail ground beams the same as pile caps with a non-hydrostatic condition.



1.4 Slab Penetrations

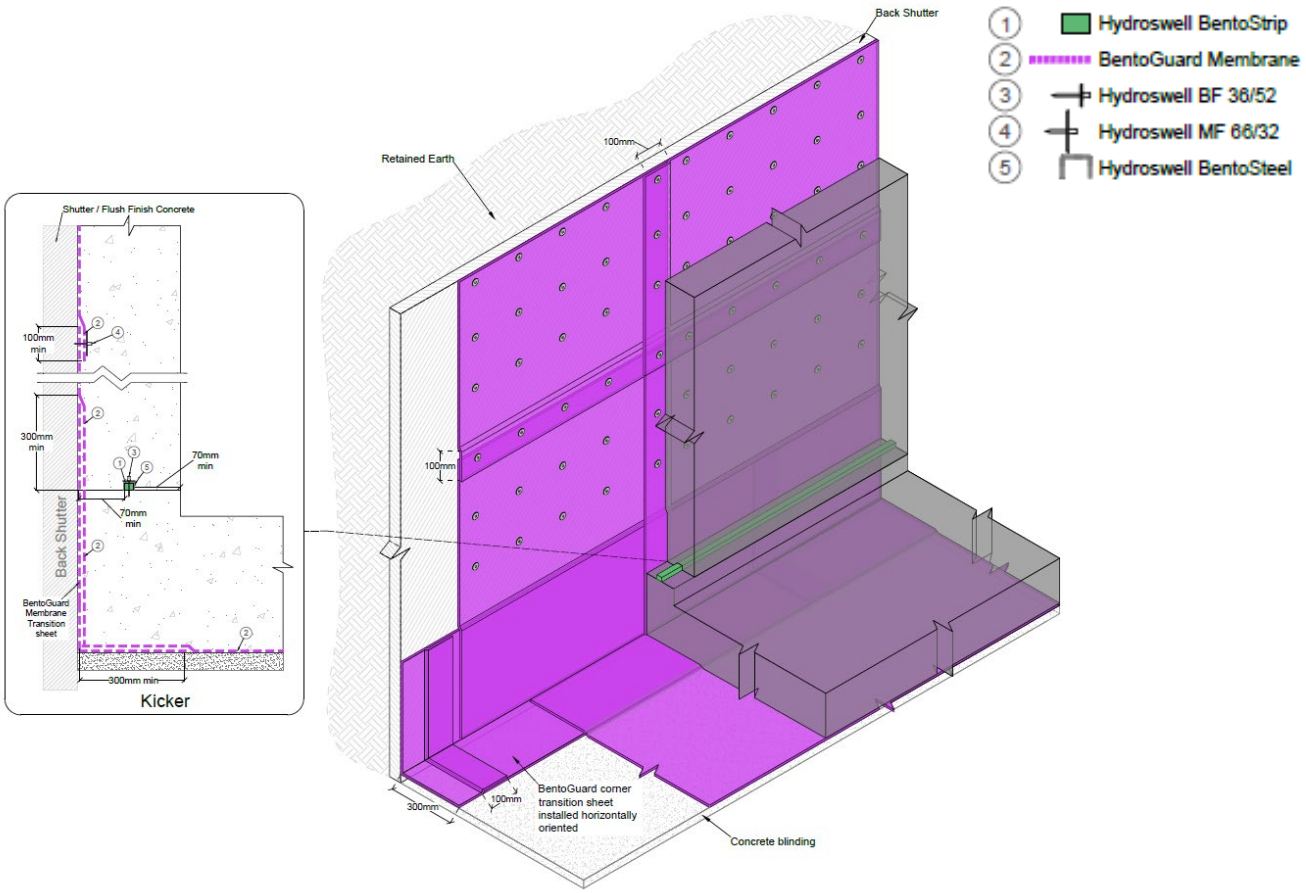
Cut BentoGuard Membrane to closely fit around penetrations. Trowel a minimum 38mm thick fillet of BentoGuard Putty around the penetration to completely fill any void area between BentoGuard Membrane and the penetration. The BentoGuard Putty should extend up the penetration about 38mm and extend onto BentoGuard Membrane. In areas where multiple penetrations are close together, it may be impractical to cut BentoGuard Membrane to fit around each penetration. Pour BentoGuard Grain a minimum 6mm thick around the penetrations covering the entire substrate area.

With gravel substrate, install minimum 200mm collar of BentoGuard Membrane around penetration prior to placing BentoGuard Grain. Then apply a thick layer of BentoGuard Putty around each penetration as detailed.



1.5 Slab to wall

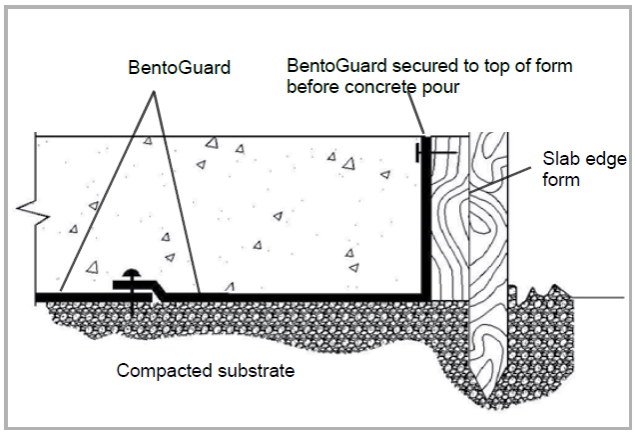
BentoGuard Membrane should be placed on vertical surfaces and on the substrate below the slab to form a continuous envelope around the construction. If the vertical soil cut is smooth and stable, BentoGuard Membrane may be installed directly against the soil. Contain unstable soils with concrete back blinding. Install BentoGuard Membrane directly against the concrete back blinding. BentoGuard Membrane corner sheet should extend past the height of the top of the finished slab level a minimum 300mm and extend under the slab 300mm.



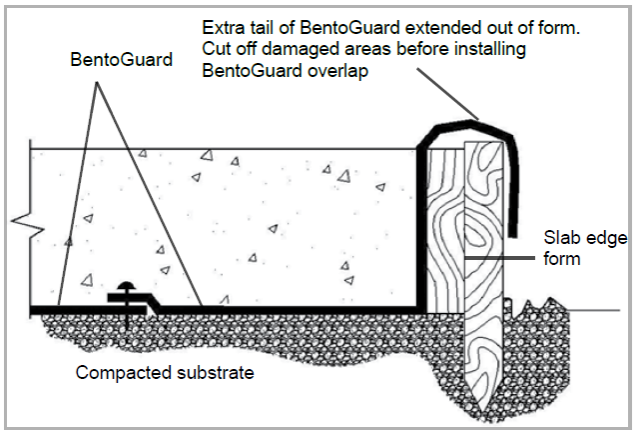
1.6 Edge of Slab, Backfilled Walls

When the installation reaches the outer edge of the slab, continue BentoGuard Membrane up to the top edge of the forms inside surface or extend the BentoGuard Membrane sheet a minimum of 300mm. At the slab corner, BentoGuard Membrane should remain in contact with the substrate and the inside surface of the concrete form.

When the slab edge form is removed, any undamaged portion of BentoGuard Membrane extended outside the form should be positioned and secured to the top of the concrete footing. Damaged material outside the form should be cut off and disposed of. Overlap the secured BentoGuard Membrane edge on top of the footing a minimum 150mm with the succeeding wall waterproofing. Install BentoGuard Putty fillet (min 38mm x 38mm) at wall-to-footing corner prior to installing overlapping wall waterproofing



BentoGuard turned up and secured at top of concrete form



Extra tail of BentoGuard extended out of form and later cut off after concrete pour

Hydroswell BentoStrip 2.0 should be installed in the perimeter wall/slab intersection joint.

NOTE:
Please refer to issued site specific drawings for all details not covered above.

Coverage
Hydroswell Membrane is supplied in 1.1m x 5m rolls.

Safety
The MSDS is available for download from www.smrhydroswell.co.uk

Storage Conditions
Must be kept in a dry environment away from water/moisture.

Packaging
Hydroswell Membrane is supplied in 1.1m x 5m rolls.

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