

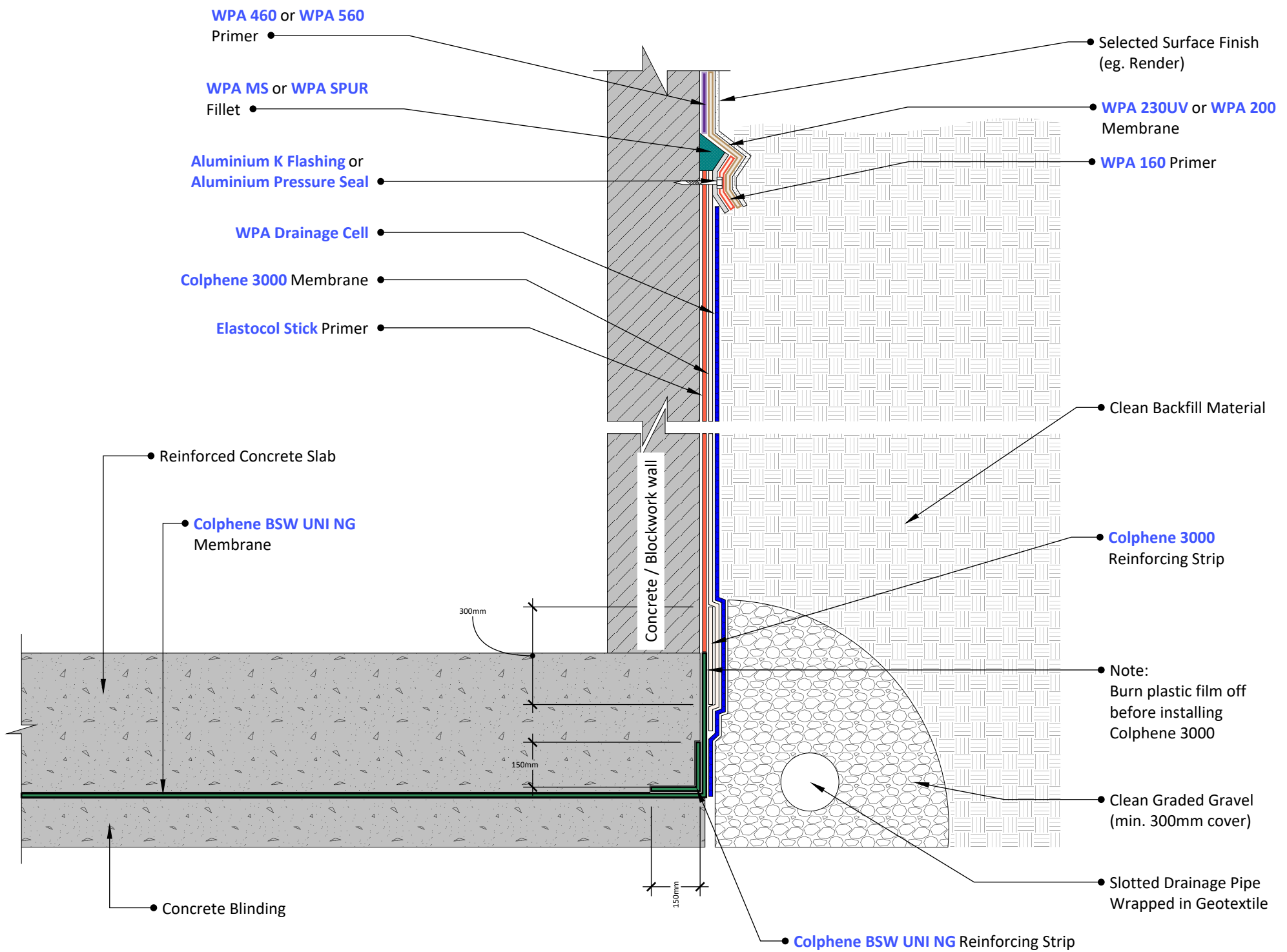
# WP105 Waterproofing Retaining Walls and Under Slab

## Preparation:

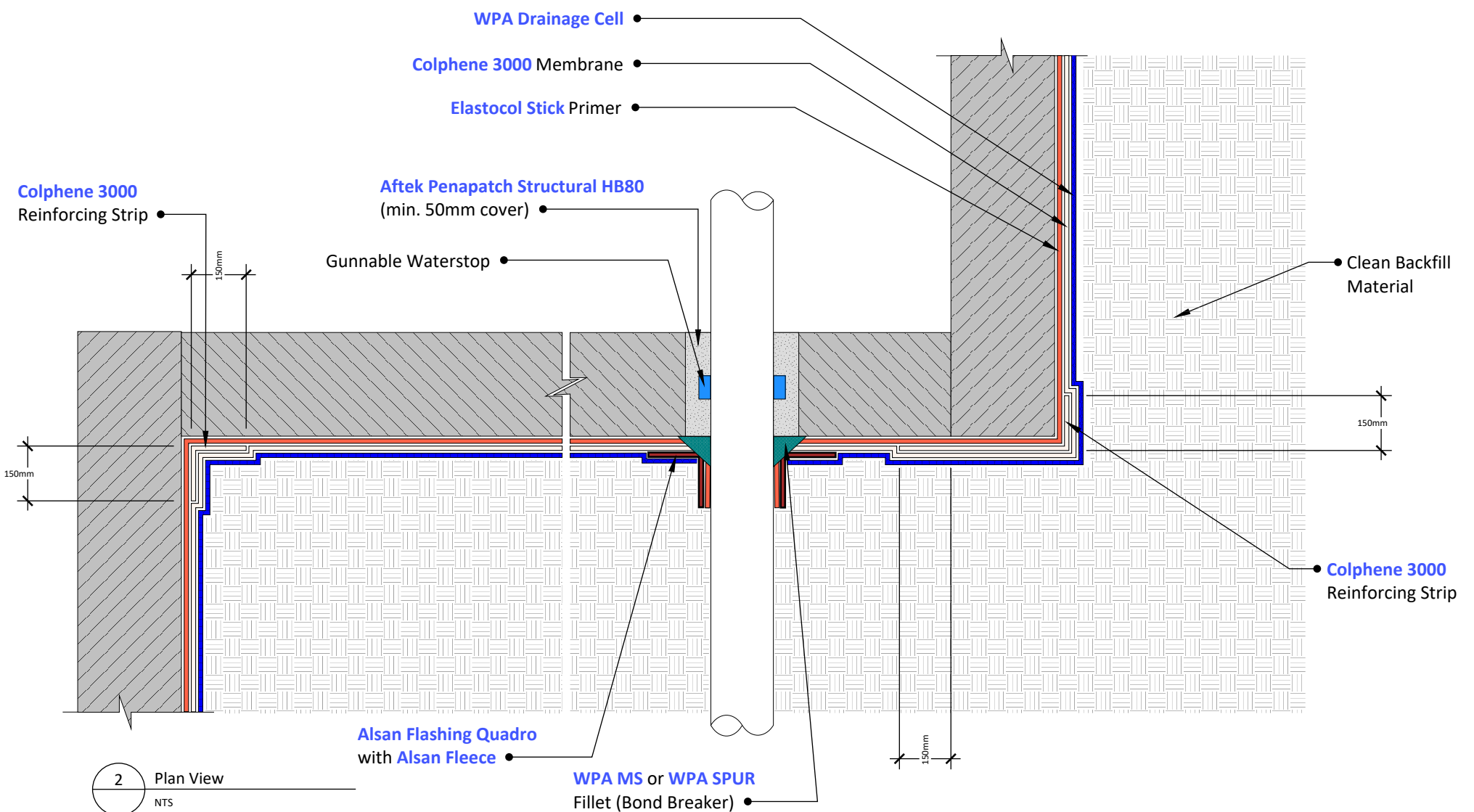
1. All surfaces to be waterproofed must be firm, clean, dry, sound and smooth. All grease, oil, wax, curing compounds, loose material, paint and any other contaminants must be removed, masonry surfaces must be pointed flush and surface defects repaired. New concrete must be cured for a minimum of 28 days.
2. External corners to be waterproofed must be bevelled to ensure a smooth transition of membrane from vertical to horizontal surfaces.

## Installation:

1. Install **Colphene BSW UNI NG** directly on top of the blinding layer. Install a 300mm reinforcement strip of **Colphene BSW UNI NG** to all construction joints and transitions.  
**Colphene BSW UNI NG** is a waterproofing membrane composed of a composite reinforcement and SBS modified bitumen, used under concrete slabs, on foundation walls and for blindside waterproofing.
2. Repair all surface defects on retaining wall masonry surfaces with **Aftek Penapatch Structural HB80**.  
**Aftek Penapatch Structural HB80** is a high strength; high build shrinkage compensated structural repair mortar.
3. Install a Gunned Waterstop around all penetrations. The waterstop must be packed in between at least a 50mm cover of **Aftek Penapatch Structural HB80**.  
Gunned waterstop products are caulk grade, single component swelling pastes used to stop water infiltration through concrete construction joints.
4. Make sure that the **Colphene BSW UNI NG** is properly adhered to the slab edge, heat weld and apply pressure if the membrane is delaminating. Use a propane torch to burn the plastic film off the **Colphene BSW UNI NG** where it will be overlapped by the **Colphene 3000**.
5. Apply **Elastocol Stick** primer to the previously prepared substrate, after all required heat welding is completed. **DO NOT APPLY ELASTOCOL STICK WITH ANY OPEN FLAMES IN CLOSE PROXIMITY**. Only prime an area that can be covered within a work day. If the primed area is not covered with the membrane within 6-8 hours, the primer must be re-applied.  
**Elastocol Stick** is a primer designed to enhance the adhesion of self-adhesive membranes on porous surfaces.
6. Install a 300mm reinforcing strip of **Colphene 3000** to all construction joints and transitions.  
**Colphene 3000** is a self-adhering membrane which is manufactured from a select blend of elastomeric SBS modified bitumen.
7. Install **Soprema Colphene 3000** to the retaining wall. Pressure must be applied over the entire membrane surface utilizing an appropriate neoprene pressure roller to ensure adequate adhesion is achieved.
8. Detail all penetrations with **Alsan Flashing Quadro** incorporating **Soprema Alsan Fleece**, ensuring to completely encapsulate the reinforcing fleece.  
**Alsan Flashing Quadro** is a single-component, root and rhizome resistant polyurethane resin used for flameless waterproofing junctions between horizontal surfaces, up-stands and various roof details.  
**Alsan Fleece** is a non-woven perforated polyester fleece specially designed for use with the Alsan Flashing or Alsan Flashing Quadro waterproofing resin.
9. Install **Aluminium K Flashing** or **Aluminium Pressure Seal** with appropriate mechanical fixings to protect the exposed membrane edge at the top of the wall. Seal the top of the pressure seal with **WPA MS** or **WPA SPUR**.  
**Aluminium K Flashing** is an extruded aluminium flashing with pre-punched holes, designed for the top termination of sheet membrane systems.  
**Aluminium Pressure Seal** is designed to seal the top edge of sheet membrane systems.  
**WPA MS** is a single component, moisture cured silane modified hybrid sealant.  
**WPA SPUR** is a high quality, professional, universal, low modulus sealant based on hybrid technology.
10. Prime **Aluminium K Flashing** or **Aluminium Pressure Seal** using **WPA 160** primer.  
**WPA 160** is a specialised solvent free primer designed for enhancing the adhesion of subsequent membranes, adhesives, toppings and decorative finishes over non-porous substrates.
10. Apply **WPA 460** or **WPA 560** primer to the remainder of the retaining wall above the **Aluminium K Flashing** or **Aluminium Pressure Seal**.  
**WPA 460** is a two-part, water-based epoxy primer, used to seal concrete and masonry surfaces.  
**WPA 560** is a two-part, water-based epoxy primer, designed as a water and vapour proof coating under waterproofing membranes.
11. Apply **WPA 200** or **WPA 230UV** waterproofing membrane to the primed **Aluminium K Flashing** or **Aluminium Pressure Seal** and the remainder of the retaining wall.  
**WPA 200** is a flexible, two-part, rapid drying, cementitious waterproofing membrane system, specifically designed for use under tile, stone and exposed applications.  
**WPA 230UV** is an elastomeric, fibre reinforced, water-based polyurethane membrane system designed for exposed or under tile applications.
13. Install **WPA Drainage Cell** over **Colphene 3000**, terminating under the **Aluminium K Flashing** or **Aluminium Pressure Seal**.  
**WPA Drainage Cell** is a two-core drainage sheet consisting of a non-woven geotextile filter layer thermally welded to a water impermeable, recycled HDPE (High Density Polyethylene) drainage membrane.
14. Install slotted drainage pipe wrapped in geotextile next to the slab edge.
15. Cover drainage pipe with 300mm minimum of gravel and cover gravel with additional geotextile filter layer.
16. Backfill with clean material.



1 Cross Section  
NTS



2 Plan View  
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