

INSTALLATION METHOD STATEMENT



Bituthene
3000

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INTRODUCTION

This Work Method Statement is intended to supplement Bituthene® Data Sheets. Application must be carried out by specialist contractors or site operatives experienced in the correct installation procedures of Bituthene® products. NURALITE Waterproofing Ltd has the authority to vary the method statement to suit the contract drawings and actual site conditions.

The information in this product Method Statement is based on Nuralite Waterproofing Ltd experience and testing. It represents the latest information available at the time of printing, but no guarantee of its accuracy is made or implied, nor responsibility taken for use to which this information may be put. We reserve the right to alter or up-date information parameters and formulations at any time without notice.

PRODUCT SELECTION

- Bituthene® Solvent Primer – primer to prepared, dry concrete
- Bituthene® Primer Type C – primer to prepared, damp concrete
- Bituthene® 3000 – non-exposed waterproof membrane
- Bituthene® LM – detailing of turn-ups, internal corners, penetrations
- Nuradrain-Drain – drainage cell and membrane protection
- Nurapatch – a polymer modified cement repair
- Waterbar XR2010

TYPICAL TOOLS & EQUIPMENT

- Disposable paint brushes and rollers
- Site approved cutter with sharp blade
- Tape measure
- Overlap roller
- Plywood/plastic cutting board
- Metal straight edge
- Soft bristled broom
- 100-500rpm variable speed heavy-duty drill or mixer
- Spiral mixing paddle
- Round nose trowel or spatula
- Cleaning solvent – xylene, MEK, cellulose paint thinner etc

SUBSTRATE

Concrete should be cured 28 days and high strength render 7 days. Where waterproofing of “green” concrete is required, concrete shall be cured no less than 7 days and a primer suitable for green or damp concrete shall be used, as described below.

Concrete provided to the waterproofing applicator must be of high uniform quality and well compacted. Poured concrete surfaces to be finished by light steel trowel. Finishing is to produce a surface that is neither highly porous or burnished.

For off-form concrete, use of plastic faced, self-releasing formwork is recommended, to eliminate the requirement to remove form release agents by water blasting prior to primer or membrane application.

Highly porous concrete may require patching, repair, or additional priming steps to make good.

Burnished, high density concrete may require diamond surface grinding to make good. Concrete finish to be regular, smooth, and stable with no gaps or voids greater than 12mm in size.

SUBSTRATE PREPARATION

Concrete Substrates

Remove all traces of dirt, dust, concrete residue, laitance, curing compounds, oil, grease and other contaminants from the concrete substrate by an appropriate method. This may include,

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brooming, vacuuming, scraping, water blasting (4000 psi with rotor jet head), captive sand blasting or surface grinding.

Chamfer and radius (minimum 15mm) all external corners receiving Bituthene® membrane.

Repair substrate defects greater than 12mm in size including voids, honeycombing, bugholes and pinholes Nurapatch, low shrinkage polymer modified cement concrete repair. Allow all repairs to cure fully.

Allow cured concrete and repairs to dry to a maximum 5.0% moisture content, or 10% for green or damp concrete.

Other Masonry Substrates

Remove all traces of dirt, dust, concrete residue, laitance, oil, grease and other contaminants from the substrate by an appropriate method. This may include, brooming, vacuuming, scraping, water blasting (4000 psi with rotor jet head), captive sand blasting or surface grinding.

Chamfer and radius (minimum 15mm) all external corners receiving Bituthene® membrane.

Repair substrate defects greater than 12mm in size and flush point blockwork using high strength Nurapatch, low shrinkage polymer modified cement repair. Allow all repairs to cure fully.

Allow cured repairs to dry to a maximum 5.0% moisture content.

Metals

Remove all traces of dirt, dust, oil, grease and other contaminants. Remove completely all corrosion and oxides from steel, aluminium, zinc/galvanising copper etc and roughen surface by mechanical abrasion. Roughen stainless steels by mechanical abrasion.

Note – Prevent flash rust or oxidation of steel, aluminium, zinc/galvanising, copper or other metals prone to rapid oxidation by abrading and xylene/MEK solvent wipe just prior to membrane application. Alternatively, treat these metals with a suitable anti-corrosion coating.

Plastics

Remove all traces of dirt, dust, oil, grease and other contaminants from. Note - Immediately prior to membrane or Bituthene® LM fillet application, solvent wipe with methyl ethyl ketone solvent only. As soon as solvent dries, apply membrane to surface.

DETAILING

Apply 20mm x 20mm fillets of Bituthene® LM to all primed internal corners. Primer and membrane application may proceed immediately.

EXPANSION JOINTS

Thoroughly clean joint and remove all traces of foreign material. Examine joint condition, especially joint arises and rebuild if necessary. Broken or fretted joint arises are to be saw-cut to re-profile joint edges then cleaned of dust and foreign material.

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Rebuild and re-profile joint using epoxy mortar to original dimensions. Ensure correct joint geometry is maintained. Allow epoxy mortar to fully cure.

Seal expansion joints using suitable backer rod and sealant, tooled flush with concrete surface, or seal as per project specification.

Allow sealant to cure for 24 hours. Allow sealant to cure fully for 7 days before applying bituminous membrane or primers, or cover polyurethane sealant with polyethylene faced, self-adhesive blast tape/slip tape.

PRIMER APPLICATION

For dry (below 5.0% moisture content) concrete use Bituthene® Solvent Primer or Bituthene® Primer Type C.

For damp (no surface water present) concrete, use Bituthene® Primer Type C only.

By brush or roller, apply primer to clean, dry, dust free and prepared substrate in one or more coats to give an evenly primed surface. Allow primer to dry tack free.

Avoid applying primer to Preprufe®, metals or other non-porous surfaces, as effectiveness of the bond will be reduced.

MEMBRANE APPLICATION

Peel back the protective release paper and unroll the adhesive surface of the Bituthene® 3000 onto the primed surface, as described on the carton. The membrane should be firmly smoothed and brushed onto the surface to ensure that air is excluded from under the membrane, minimizing air bubbles and wrinkles in the membrane.

Overlap adjacent rolls of Bituthene® 3000 by 50mm at the edges (selvedge) and 150mm at ends to ensure complete continuity. Pressure-roll all edge and end laps to ensure complete adhesion between both layers.

Apply membrane to achieve double layer membrane at internal, corners, external corners and construction joints. Double layering to extend a minimum 150mm either side of the corner/construction joint.

To expansion joints where movement will be less than 15mm, apply a 300mm wide strip of Bituthene® 3000 centered over the joint, adhesive side away from the concrete. Then install Bituthene® 3000 over substrate and Bituthene® 3000 strip to form a Bituthene® slip joint. For movements greater than 15mm, consult the NURALITE technical department.

Apply membrane to ensure water sheds away from membrane laps.
Detail penetrations by applying a 25mm x 25mm fillet around the penetration extending 65mm..

Where Bituthene® 3000 is to lap onto existing installed Preprufe®, such as at slab edges, continue Bituthene® down the wall, over the Bituthene® LM fillet, over top of slab toe (where present) and down slab edge onto the Preprufe® membrane by a minimum 150mm. Ensure Bituthene® 3000 lap onto Preprufe® is free from bubbles and wrinkles. Pressure-roll the lap to ensure full adhesion.

Where Bituthene® 3000 is expected to be left without backfilling at the top of a wall for any length of time, secure the top edge using NURALITE termination bar or into a chase to prevent slumping. Seal the top chase and flashing with Millennium LPS sealant.

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The perimeter of Bituthene® 3000 placed in any given day's operation shall have the free edges sealed by pressure-rolling down tightly to prevent entry of moisture and cleaned before continuing with application.

INSPECTION & REPAIR OF DAMAGED MEMBRANE

Immediately prior to covering the membrane, carefully inspect for accidental damage. Any damaged areas shall be cleaned and patched using Bituthene® 3000 extending a minimum 100mm in all directions beyond the damaged area.

MEMBRANE PROTECTION

Once applied and inspected, protect the Bituthene® 3000 by applying Nuradrain as soon as practicably possible. On warm sunny days or when installed to "green" or damp concrete, the installed membrane must be covered immediately with Nuradrain to prevent formation of vapour or outgassing blisters beneath the membrane.

Fix Nuradrain to Bituthene® membrane surface using NURALITE Sticky Nails and tape. At top edges of membrane to walls, retain Bituthene® under the NURALITE termination bar which should be encapsulated in LM. Protect the Bituthene® from UV using fibre cement board.

The area of Bituthene® 3000 laid horizontally in a working day should not exceed that which can be adequately protected in the same working period. No storage of materials or trafficking by other trades shall be allowed to take place until the membrane has been covered with protection.

BACKFILLING OPERATIONS

Backfilling must be carried out with care. Backfill shall be free of sharp materials that could puncture membrane and membrane protection during filling or compaction operations.

The back-filling process shall be monitored to prevent membrane damage or displacement of membrane protection/drainage cell. Any damage or displacement that occurs must be reported and corrected by the waterproofing contractor prior to continuing with fill operations. Failure to do so will void warranty conditions.

APPLICATION RECORDS

The waterproofing applicator shall maintain records for future reference, including a photographic record of each stage of application.

The application manager should produce a standard form indicating the records required, which can be used and completed by the applicators.

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SAFE2TORCH CHECK LIST (PRIOR TO BASE SHEET INSTALLATION)

It is recommended that anyone preparing a specification or applying a membrane should complete this check sheet and if any boxes are ticked avoid the use of a direct torch-on application in these areas.

Project name: _____

Form completed by: _____

Company: _____

Area ready: _____

Applicator _____

Decks and Insulation	X / ✓
Timber / Other combustible materials.	
Metal deck (refurbishment) where old materials may accumulate in the troughs.	
Insulation – unless specifically designed and tested for use with torch-on membranes.	

Details	X / ✓
Expansion joints with voids and/or combustible fillers.	
Bitumen or timber fillets.	
Detail under all abutments to roof tiles, slates and roofing iron.	
All timber substrates.	
Change in level details with fixed timber or plastic fascias and/or all soffits, gutters or restricted spaces.	
Windowsills and frames, door sills, louvered vents, air ducts, intakes and outtakes.	
Junctions to existing waterproofing with flammable insulation/deck materials.	
Vulnerable plastic curbs, domes, pipes and the like.	
Working when in close proximity to potentially flammable coatings and shrinkwrap.	
Cladding and roofing underlays.	
Working in close proximity to stored chemicals, flammable liquids and explosives.	

Existing weathering components with concealed flammable materials?	X / ✓
Timber, DPC or sarking membranes beneath fixed metal capping systems.	
Existing kitchen extraction plant coated in oils or fats.	
Flammable wrapping to trunking/ducting/bitumen sheet rolls and roll inserts.	
Timber cladding.	
Existing metal or plastic copings/capping's.	

Notes

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Bituthene 3000

Signed:

Date:

BITUTHENE®/PREPRUFE® CONCRETE SUBSTRATE READINESS CHECKLIST

Project name: _____

Form completed by: _____

Company: _____

Area ready: _____

Applicator _____

X / ✓

Concrete cured with curing membranes removed. Concrete substrate contains less than 5% moisture content.	
Cavities and cracks filled with repair mortar, flushed off and cured.	
Waterstop installed to construction joints as per specification – located 75mm from rebar.	
Concrete surface firm with any soft concrete or laitance removed.	
All protrusions removed. Surface free from foreign matter.	
Mortar or bitumen fillets to all upstands and smooth 5mm radius to all external edges.	
If terminating into a chase, pre-form the chase and ensure it's straight and 20mm deep.	
Substrate clean, firm and suitable condition for laying the Nuralite system.	

Notes

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Bituthene 3000

Signed:

Date:

BITUTHENE®/PREPRUFE® INSTALLED PRODUCT CHECKLIST ON CONCRETE SUBSTRATE

Project name: _____

Form completed by: _____

Company: _____

Area ready: _____

Applicator _____

X / ✓

Concrete Substrate checklist completed before work commenced.	
Any movement joints installed to approved specification/detail.	
Mortar/concrete fillets fitted to all internal junctions and corners chamfered at a 45°.	
All corners and upstands incorporate reinforcing or under flashing	
Under-slab membrane extends beyond footing and protected until vertical membrane installed.	
Side laps and end laps fully bonded and seamed. Bleed visible on all joints where applicable.	
All penetrations installed to specification including under/over flashings.	
Junction of the floor and wall membranes installed to specification fully bonded and watertight.	
All non-standard details installed as per pre-approved specification (attach approved drawings).	
Any mechanical damage to membrane repaired to specification.	
Membrane termination completed to approved detail.	
Suitable drainage system installed below footing as per specification.	
Membrane protection boards installed correctly.	
Membrane fully adhered to substrate with no bridging, bubbling, or delaminating.	
Overall installation free of wrinkles, bubbles, creases and splits.	

Notes

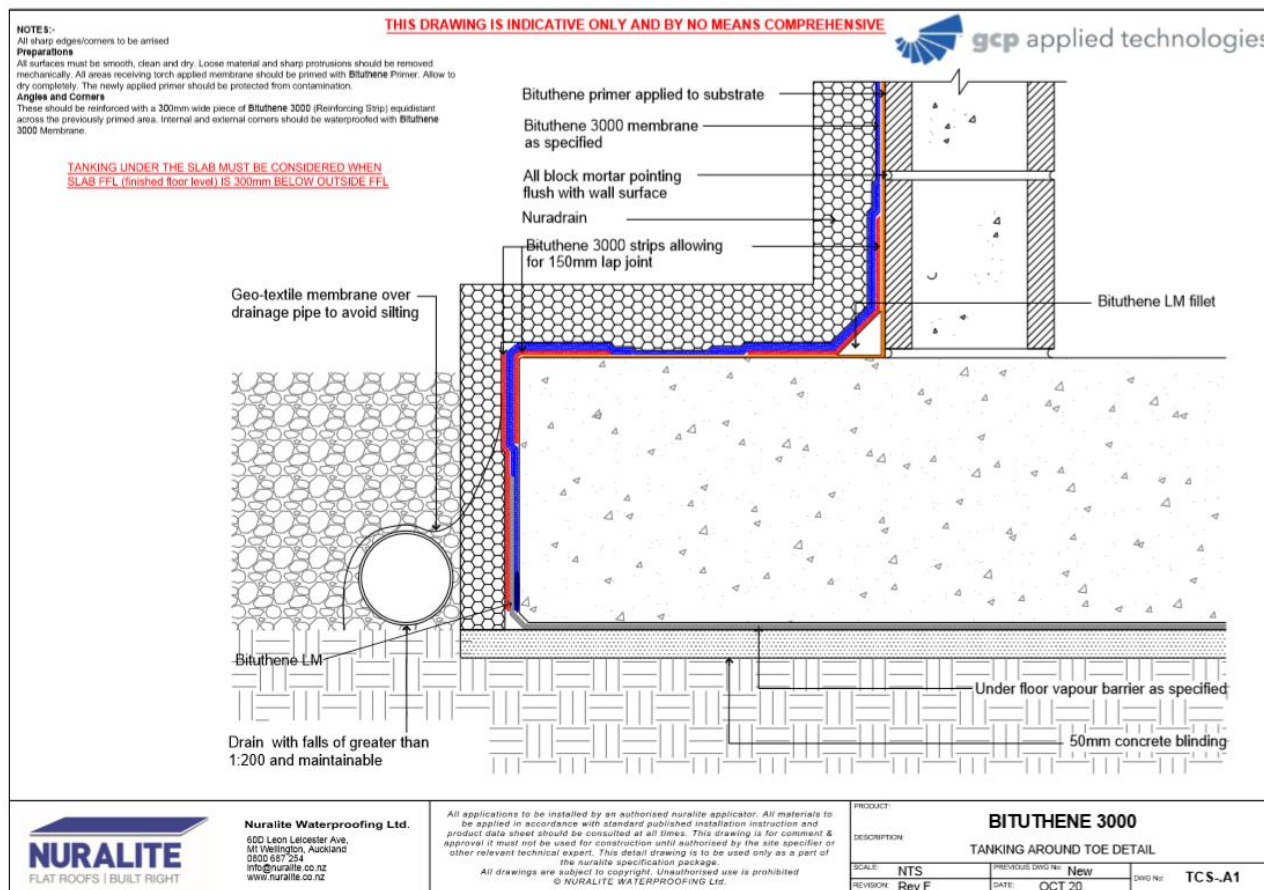
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INSTALLATION METHOD STATEMENT

Signed:

Date:

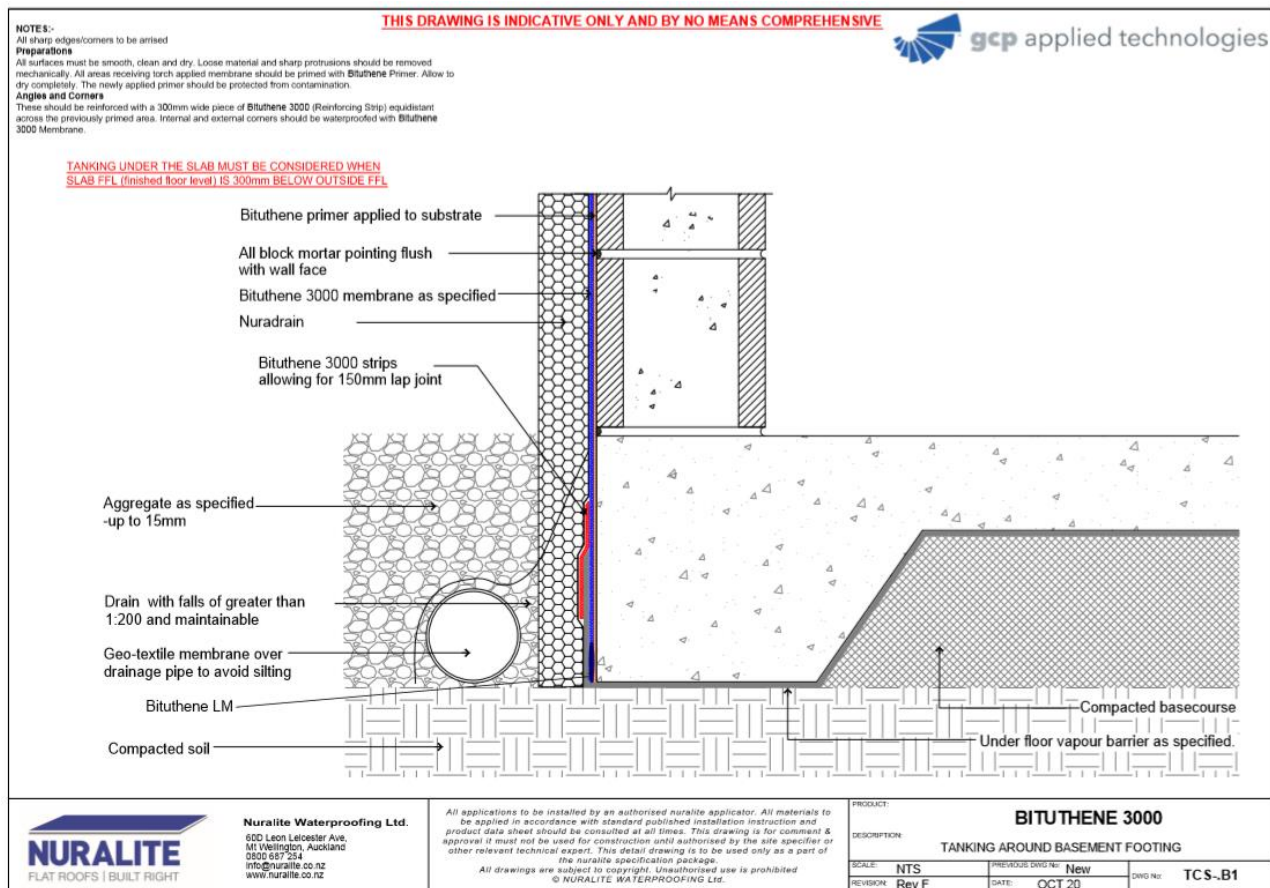
DETAILS



Bituthene 3000

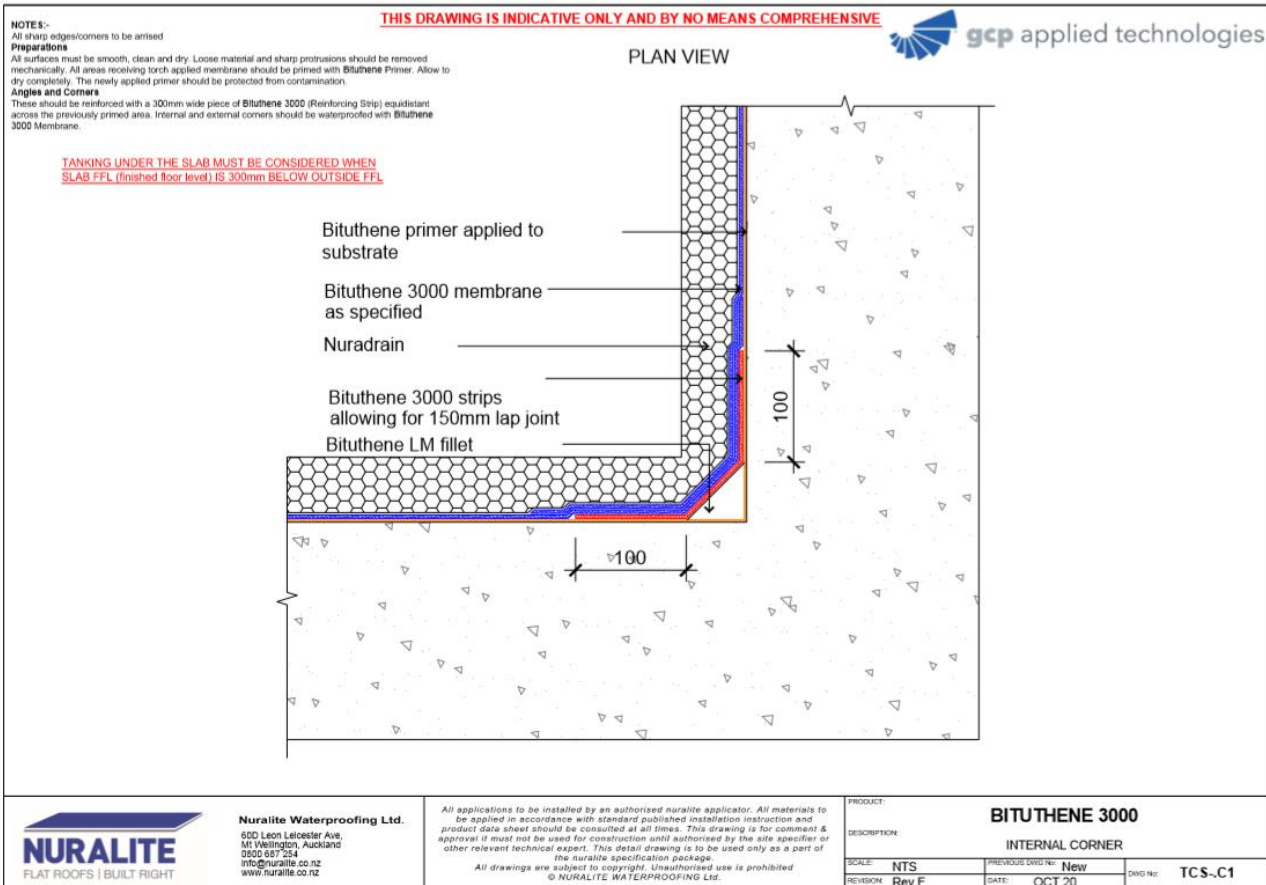
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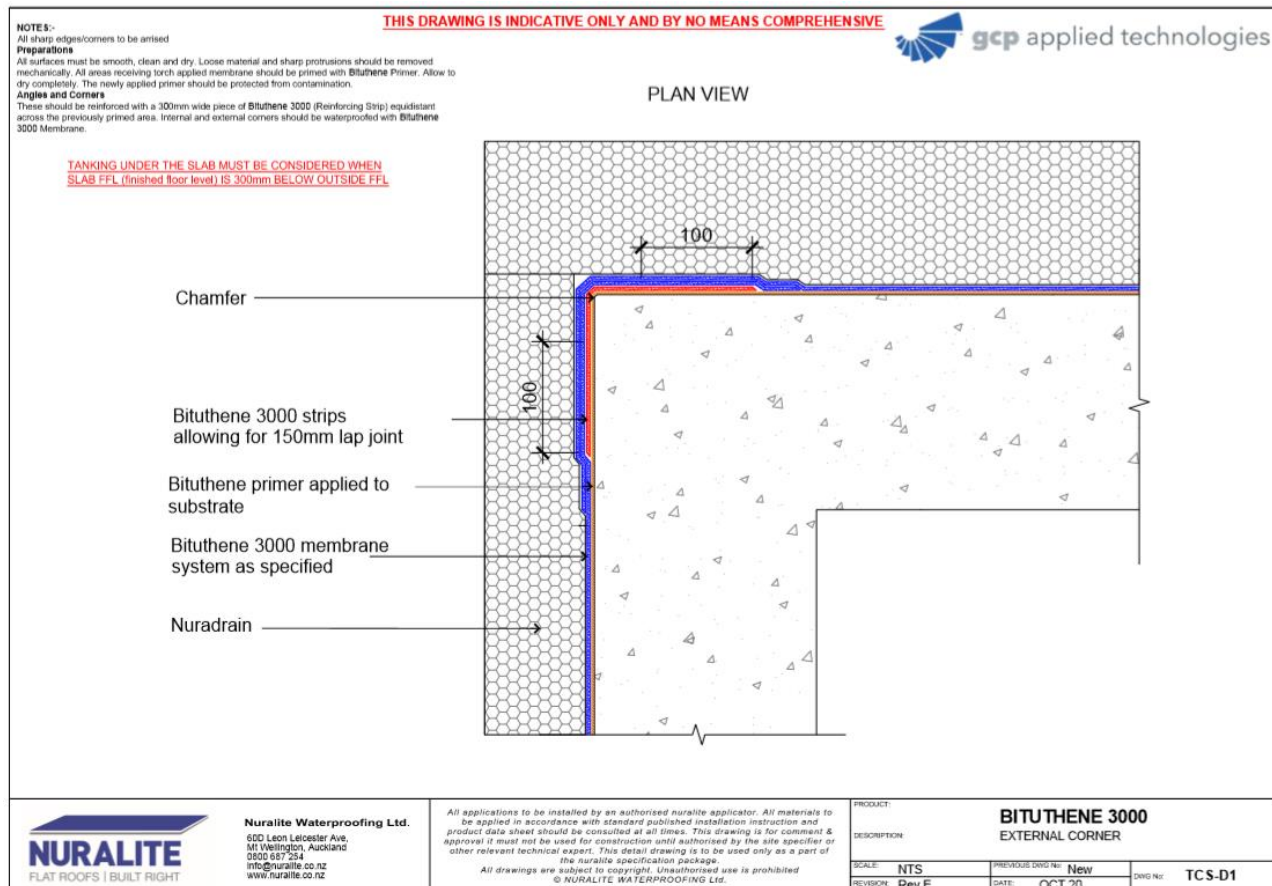
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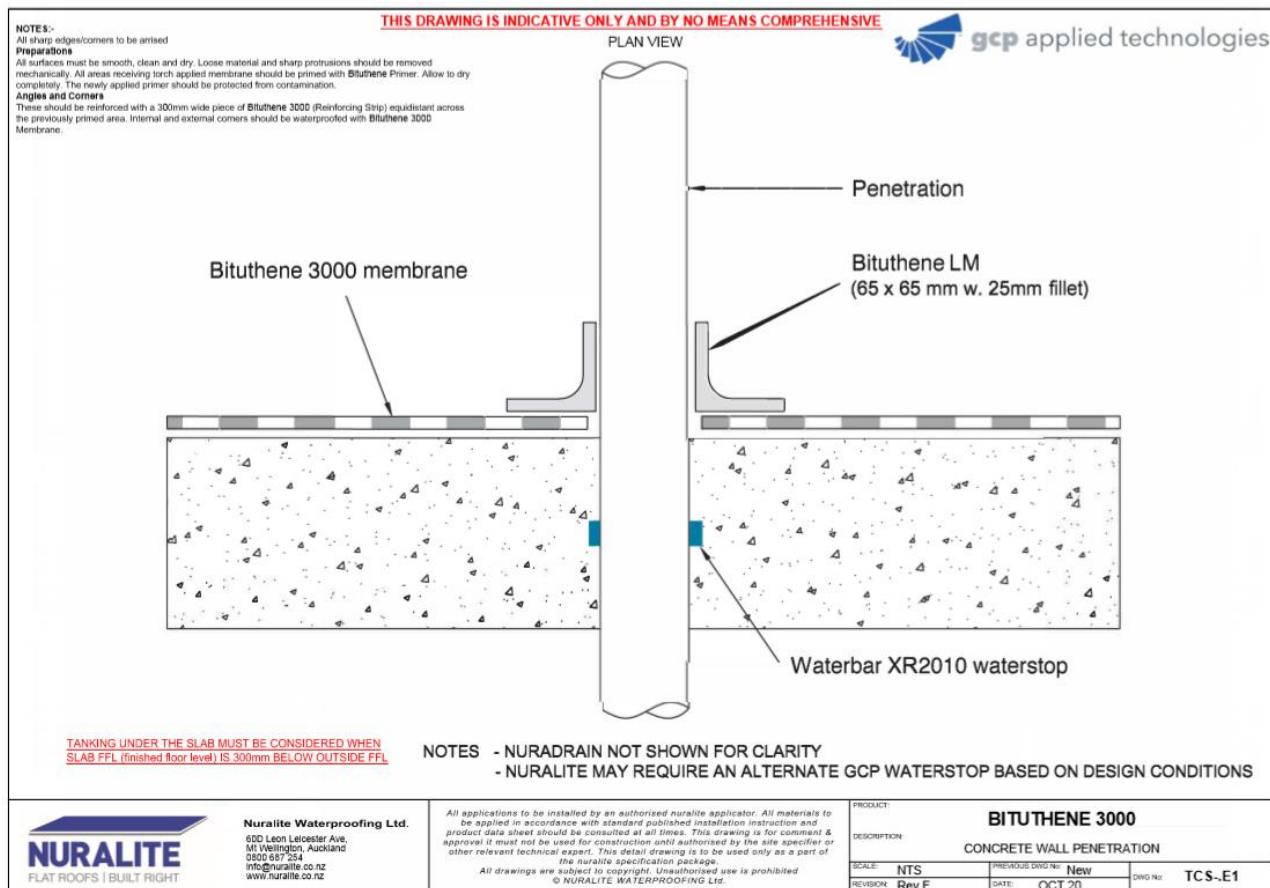
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NOTES:-
All sharp edges/corners to be arised

Preparations
All surfaces must be smooth, clean and dry. Loose material and sharp protrusions should be removed mechanically. All areas receiving torch applied membrane should be primed with Bituthene Primer. Allow to dry completely. The newly applied primer should be protected from contamination.

Angles and Corners
These should be reinforced with a 300mm wide piece of Bituthene 3000 (Reinforcing Strip) equidistant across the previously primed area. Internal and external corners should be waterproofed with Bituthene 3000 Membrane.

THIS DRAWING IS INDICATIVE ONLY AND BY NO MEANS COMPREHENSIVE

gcp applied technologies

Millennium LPS sealant

Metal overflashing

Bituthene primer applied to substrate

Fibre cement board for UV protection

Bituthene 3000 membrane system as specified

Pointing flush finished.

Nuradrain

Bituthene 3000 turned into chase

TANKING UNDER THE SLAB MUST BE CONSIDERED WHEN

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PRODUCT:
BITUTHENE 3000

DESCRIPTION:
TERMINATION INTO CHASE

SCALE: NTS	PREVIOUS EDITION: New	DWG No: TCS-F2
REVISION: Rev F	DATE: OCT 20	

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Bituthene 3000

NOTES:-
All sharp edges/corners to be arised

Preparations
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Angles and Corners
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gcp applied technologies

TANKING UNDER THE SLAB MUST BE CONSIDERED WHEN SLAB FFL (finished floor level) IS 300mm BELOW OUTSIDE FFL

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PRODUCT: BITUTHENE 3000

DESCRIPTION: TERMINATION USING TERMINATION BAR

SCALE: NTS	PREVIOUS DATA: New	DWG NO: TCS-F3
REVISION: Rev F	DATE: OCT 20	

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