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CBP
STRUCTURAL WATERPROOFING SYSTEM

CBP Structural Waterproofing System is a highly effective waterproof treatment process for sound stable surfaces normally encountered within building structures. CBP Tanking Slurry is a pre-mixed formulation of plastic modified hydraulically setting powder. When mixed with water and applied to a masonry substrate, silicate salts form at the interacting faces which enter and fill the pores and capillaries of the substrate and form a monolithic bond thereby blocking the passage of water as well as becoming an integral part of the structure.

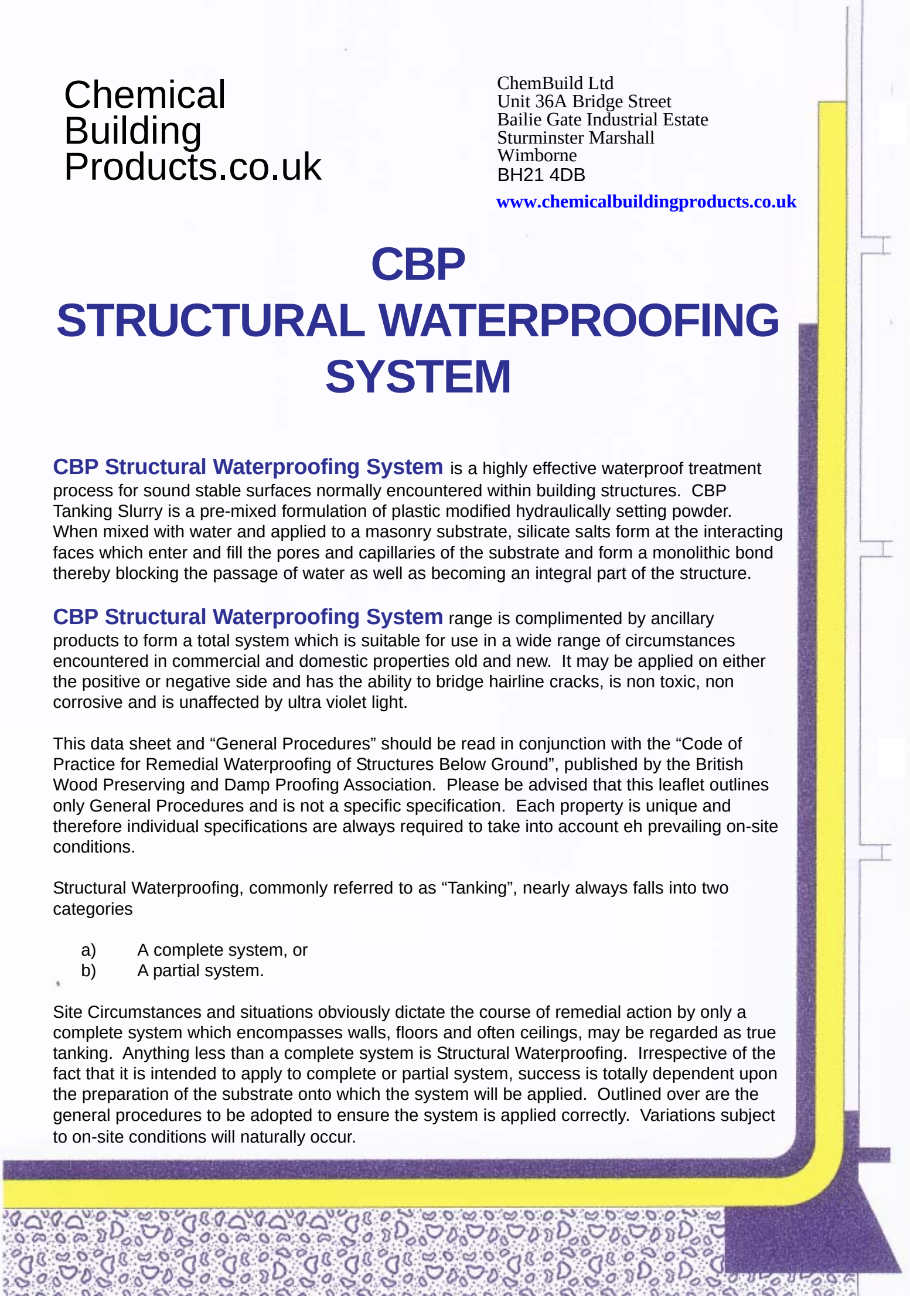
CBP Structural Waterproofing System range is complimented by ancillary products to form a total system which is suitable for use in a wide range of circumstances encountered in commercial and domestic properties old and new. It may be applied on either the positive or negative side and has the ability to bridge hairline cracks, is non toxic, non corrosive and is unaffected by ultra violet light.

This data sheet and “General Procedures” should be read in conjunction with the “Code of Practice for Remedial Waterproofing of Structures Below Ground”, published by the British Wood Preserving and Damp Proofing Association. Please be advised that this leaflet outlines only General Procedures and is not a specific specification. Each property is unique and therefore individual specifications are always required to take into account eh prevailing on-site conditions.

Structural Waterproofing, commonly referred to as “Tanking”, nearly always falls into two categories

a) A complete system, or
b) A partial system.

Site Circumstances and situations obviously dictate the course of remedial action by only a complete system which encompasses walls, floors and often ceilings, may be regarded as true tanking. Anything less than a complete system is Structural Waterproofing. Irrespective of the fact that it is intended to apply to complete or partial system, success is totally dependent upon the preparation of the substrate onto which the system will be applied. Outlined over are the general procedures to be adopted to ensure the system is applied correctly. Variations subject to on-site conditions will naturally occur.



GENERAL PROCEDURES

SECTION 1 - PREPARATORY WORK – WALLS

1.1 Remove all windows, linings, staircases, radiators, brackets, wires, pipes, electrical sockets etc. that may be present and which would prevent a continuous seal.
1.2 Remove existing plaster and/or render back to original substrate and clear away resultant rubble.
1.3 Where whitewash, paint, dirt, oil etc. is present, totally remove either by grit blasting or needle gunning. Bush hammering is considered too aggressive and should be avoided, as it also creates a layer of compacted dust.
1.4 Remove any exposed timber fixing blocks, lintels etc. and either brick up resultant voids or replace with reinforced concrete lintels.
1.5 If embedded wall plates and joist ends of the room above are exposed, consider the need for treating using CBP
1.6 Carefully examine surfaces to be coated and remove any nails or other metal fixings.
1.7 Using a 3:1 sand:cement mix, together with additional brickwork where necessary, make good any holes, angles etc.
1.8 Rake out mortar joints to a depth of 10-15mm in order to provide a good key and resist shrinkage forces.
1.9 Power wash prepared walls to remove all loose dust and dirt.
1.10 At this stage apply CBP Salt Neutralisers in strict accordance with the instructions.
1.11 Apply a first “tight” coat of 3 parts sharp washed sand to 1 part cement. The gauging water for this mix should comprise of 1 part CBP SBR Bonding Agent to 4 parts water. Force well into raked out joints and leave in a relatively smooth continuous surface. Allow 24 hours prior to the application of any subsequent coat.
1.12 Should water pressure be present, this may be relieved by inserting weep tubes into the wall. This will enable work to continue and the week holes can eventually be sealed using CBP SWS Rapid Setting Plug.

SECTION 2 – PREPARATORY WORK – FLOOR/WALL JUNCTION AND VERTICAL/HORIZONTAL INTERNAL ANGLES

One of the potentially weakest points of any structural waterproofing application process is the floor/wall junction and particular attention to this detail is required.

1.1 At floor wall junction chase out the floor to a minimum of 25mm from the wall and 25mm into the floor, cutting into the wall where possible.
1.2 Flush out chase formed to remove grit dust etc., and whilst still damp fill chase with CBP SWS Fillet Seal. Press fully into chase and whilst still green form a “bottle” cove.
1.3 Apply CBP SWS Fillet Seal to all vertical internal angles and again form a rounded “bottle” cove.
1.4 CBP SWS Fillet Seal should also be applied to the wall/ceiling joints of vaults if relevant.

SECTION 3 – PREPARATORY WORK – PENETRATING SERVICES

Very often works take place where penetrating services are present i.e. electric, water and gas mains. Careful attention to these areas is essential.

1.1 Carefully chase out masonry surrounding the penetrating service to a minimum depth and width of 25mm.
1.2 Flush out with water to remove loose grit dust etc.
1.3 If considered appropriate, first of all apply a flexi joint material around the penetrating service. Using CBP SWS SBR Bonding Agent diluted with water at a 4:1 ratio, mix a quantity of CBP SWS Fillet Seal and ram into the chase surrounding the penetrating service.
1.4 If the penetrating service or item is of iron or steel, then this must be thoroughly prepared and treated with a proprietary rust inhibitor in accordance with the manufacturers instructions, prior to the application of any tanking procedures and paying particular attention to the point of entry into the building.

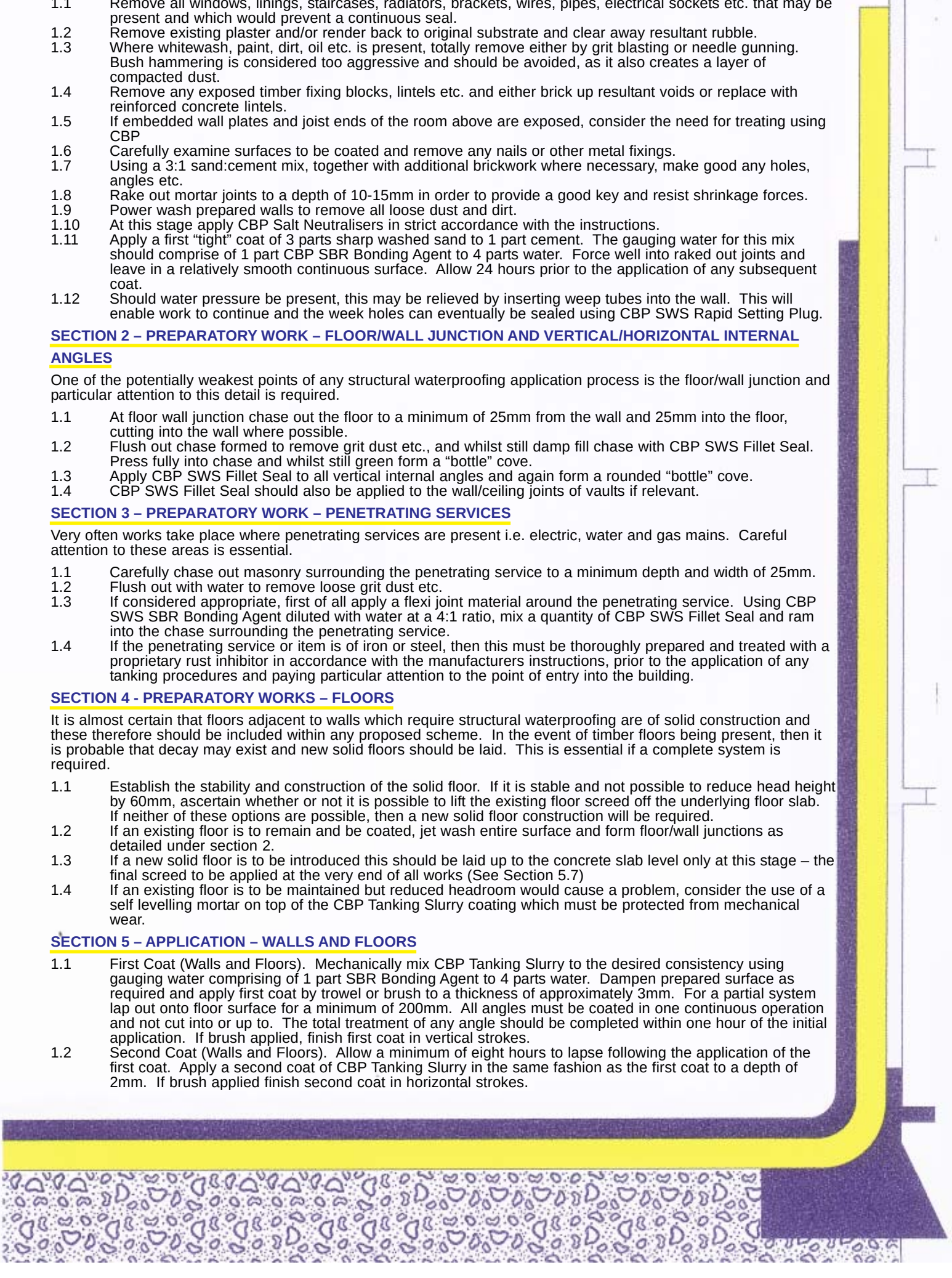
SECTION 4 - PREPARATORY WORKS – FLOORS

It is almost certain that floors adjacent to walls which require structural waterproofing are of solid construction and these therefore should be included within any proposed scheme. In the event of timber floors being present, then it is probable that decay may exist and new solid floors should be laid. This is essential if a complete system is required.

1.1 Establish the stability and construction of the solid floor. If it is stable and not possible to reduce head height by 60mm, ascertain whether or not it is possible to lift the existing floor screed off the underlying floor slab. If neither of these options are possible, then a new solid floor construction will be required.
1.2 If an existing floor is to remain and be coated, jet wash entire surface and form floor/wall junctions as detailed under section 2.
1.3 If a new solid floor is to be introduced this should be laid up to the concrete slab level only at this stage – the final screed to be applied at the very end of all works (See Section 5.7)
1.4 If an existing floor is to be maintained but reduced headroom would cause a problem, consider the use of a self levelling mortar on top of the CBP Tanking Slurry coating which must be protected from mechanical wear.

SECTION 5 – APPLICATION – WALLS AND FLOORS

1.1 First Coat (Walls and Floors). Mechanically mix CBP Tanking Slurry to the desired consistency using gauging water comprising of 1 part SBR Bonding Agent to 4 parts water. Dampen prepared surface as required and apply first coat by trowel or brush to a thickness of approximately 3mm. For a partial system lap out onto floor surface for a minimum of 200mm. All angles must be coated in one continuous operation and not cut into or up to. The total treatment of any angle should be completed within one hour of the initial application. If brush applied, finish first coat in vertical strokes.
1.2 Second Coat (Walls and Floors). Allow a minimum of eight hours to lapse following the application of the first coat. Apply a second coat of CBP Tanking Slurry in the same fashion as the first coat to a depth of 2mm. If brush applied finish second coat in horizontal strokes.



1.3 Allow second coat to dry for a minimum of 24 hours. Where severe dampness is being covered a few “weak spots” may show. Should this happen apply a third coat of CBP Tanking Slurry over the areas in question, allowing a sufficient over lap onto the surrounding drier surfaces.

4.4 Third Coat (Walls Only). Allow a minimum of 24 hours from the application of the final CBP Slurry coat. Apply a 10mm render coat made up of 3 parts sharp washed sand (B.S. 822 M Grade) to one part cement incorporating SBR bonding Agent in the gauging water, diluted at a ratio of 1:4. If this coat is to be left overnight or for a period of time, apply as a splatter coat in order to ensure an adequate key later. Take this coat down to the floor.

4.5 Fourth Coat (Walls Only). Whilst the third coat is still green or provided it has been left adequately keyed, apply a render coat of 3 parts sharp washed sand (B.S. 822 M Grade) to 1 part cement to a depth of 10mm. Take down to floor and scratch finish.

4.6 Finish Coat (Walls Only). Finish using Thistle Multi-finish or similar. Do not over-trowel and stop 25mm above intended finished screed level.

4.7 Floors. Following the final finish coat to the walls, check that the first and second coats applied to the floor have not been damaged. It is suggested that the floors are physically protected following the second coat, whilst the third, fourth and finish coats are applied. Lay a conventional floor screed over entire floor area.

Special Note

a) Metal angle beads should NOT be used in structural waterproofing situations. All angles should be formed. If angle beads are to be used in the finishing coat then they should be of either stainless steel or plastic type.

b) All cementitious based systems are susceptible to considerable shrinkage forces as the water employed in the application process evaporates. It is inevitable therefore that some cracking and possible de-bonding will occur to some degree. Refer to the B W P D A code of practice for practical guidance.

SECTION 6 – FIXINGS

1.1 Ideally any structurally waterproofed surface should not be punctured, as this creates a point of weakness. Where it is not possible to avoid a fixing, the following procedure should be followed.

i) Drill a hole twice the thickness and 13mm deeper than the proposed fixing.

ii) Flush hole with minimal water and ram in a stiff mix of CBP Fillet Seal to ensure that no air pockets exist and the hole is completely filled.

iii) Allow to fully cure, then drill the centre of the CBP Fillet plug with the correct size hole to accommodate the proposed fixing. Note. Where water pressure exists, the structurally waterproofed surface should not be punctured at all.

1.2 Skirting board and services. Any skirting boards to be re-fitted should be fixed using a suitable adhesive. Pipes and electric cable should be concealed in glue fixed surface conduits.

1.3 Door frames, window frames, skirtings, staircases etc. to be re-fitted should have their concealed surfaces thoroughly treated with CBP Deepkill Timber Paste prior to fixing. If re-fixed whilst treated walls are still damp, protect contact surfaces with a physical DPC material.

SECTION 7 – CONDENSATION

1.1 By virtue to their position within a property, surfaces which require structural waterproofing will nearly always have a cooler surface temperature and as a consequence will be more prone to the effects of condensation. This point should always be borne in mind when “designing” a structural waterproofing system and recommendations for the control of atmospheric moisture ie. Humidistat controlled ventilation fans, de-humidifiers, constant dry heat etc. should always be incorporated within specifications.

SECTION 8 – DECORATION

1.1 Because the substrate behind the structurally waterproofed surface will never dry out, it is very important that any re-decoration must not act as a vapour barrier. Only vapour permeable materials such as Trade Emulsions and ordinary wall papers should be used. Gloss paints, vinyl emulsions, together with vinyl and washable wall papers should be avoided as these will “trap” moisture behind the decorated surface, allow salts to migrate and cause a blistering and peeling of the decorative surface, thereby giving the appearance of a system failure. Any redecoration within 12 months after the completion of the works should be only regarded as temporary.

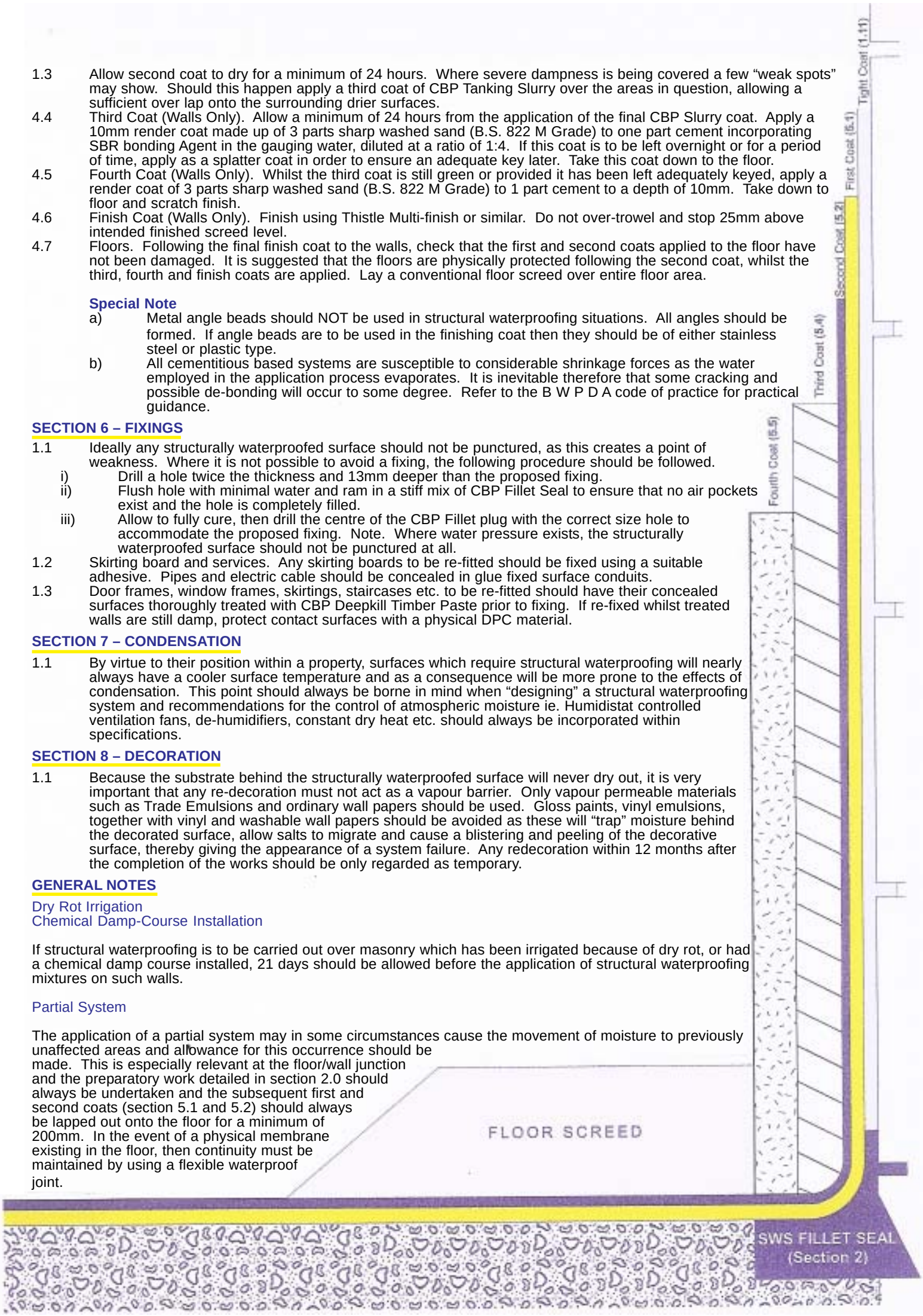
GENERAL NOTES

Dry Rot Irrigation
Chemical Damp-Course Installation

If structural waterproofing is to be carried out over masonry which has been irrigated because of dry rot, or had a chemical damp course installed, 21 days should be allowed before the application of structural waterproofing mixtures on such walls.

Partial System

The application of a partial system may in some circumstances cause the movement of moisture to previously unaffected areas and allowance for this occurrence should be made. This is especially relevant at the floor/wall junction and the preparatory work detailed in section 2.0 should always be undertaken and the subsequent first and second coats (section 5.1 and 5.2) should always be lapped out onto the floor for a minimum of 200mm. In the event of a physical membrane existing in the floor, then continuity must be maintained by using a flexible waterproof joint.



CHEMICAL BUILDING PRODUCTS
SWS RANGE

CBP TANKING SLURRY

A cement based, plastic modified hydraulic setting powder. Applied by brush or trowel in a minimum of two coats at a rate of between 3 and 6Kg/m^2/coat subject to site conditions and requirements. To be applied only onto a sound, stable well prepared substrate (refer to General Procedures of Safeguard Data Sheet 25). Available in 25kg buckets.

CBP FILLET SEAL

A cement based, rapid curing non shrink hydraulic setting powder. Used at points of stress i.e. floor/wall or wall/wall junction and applied normally by trowel. Refer to section 2 of Chemical Building Products Data Sheet. Applied at a rate of 15-20 linear metres per 25kg bag subject to site conditions and requirements. Available in 25kg bags or buckets.

CHLORIDE & SULPHATE SALT NEUTRALISER

A low viscosity solvent free heavy metal fluro-silicate solution which converts water soluble chloride and sulphate salts into insoluble or hardly soluble reactive compounds. Used to prevent themigration of these salts present in the masonry by the gauging water of the slurry/fillet coat. Applied at a rate of 500ml/m2. For further information refer to Chemical Building Products Data sheet. Available in 5kg plastic containers.

NITRATE SALT NEUTRALISER

A low viscosity, salt repellent and solvent free impregnating agent which forms a sealing film over absorbent masonries. This prevents to a large extent the ingress of chemically non-convertible salts (nitrates) into the gauging water of the slurry/fillet seal coat. Applied at a rate of 500ml/m2. For further information refer to Chemical Building Products Data Sheet. Available in plastic containers.

SBR BONDING AGENT

A styrene butadiene copolymer latex specifically designed for use with cement compositions. It improves the tensile, flexural and compressive strengths of cement mixes and it forms polymer modified systems which exhibit excellent adhesive properties. It considerably decreases the water/cement ratio and may also be used in repair mortars. For further information refer to Chemical Building Products Data Sheet. Available in 10 litres and 25 litres containers.

RAPID SETTING PLUG

A very rapidly setting cement based material used to seal holes where free water is present. Also suitable for general repair work on concrete or masonry and for the provision of anchorage points. Expands slightly as it sets. For further information refer to Chemical Building Products Data Sheet. Available in 5kg containers.

HEALTH & SAFETY

Please refer and adhere to all the information on the relevant Health & Data Sheets which are available on request.

CHEMICAL BUILDING PRODUCTS STRUCTURAL WATERPROOFING SYSTEMS

Also includes a range of Cavity Drainage Membranes.
The CDM Range
This range includes a variety of membranes, fixings and sealants and is ideal for fast track dry wall framing systems and floor refurbishment. Please ask for further details.

IMPORTANT

All reasonable care has been taken in compiling the technical data on the company's products. As the conditions of use are beyond the control of the company any recommendations or suggestions regarding the use of such products is without guarantee. The customer should satisfy himself that each product is fit for its intended use and that the actual conditions and substrate are suitable prior to application.

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