



## Background

Flooding has always been an occasional feature of life in our wet climate. However in recent years the increased incidence of extreme weather has brought the misery of flooding to thousands more homes and businesses. The objective of this specification is to outline measures that building professionals can adopt to provide a “fast – track” re-entry for displaced home and business owners saving time, money & disruption.



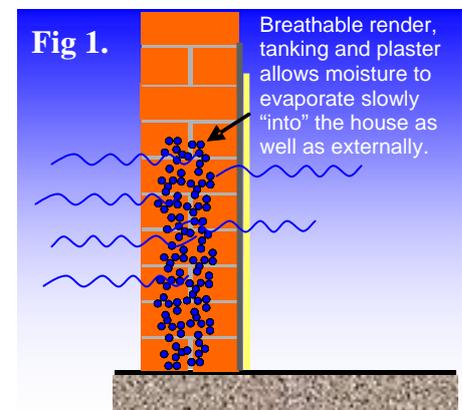
## Flood Repair – The Challenges

1. **Bacterial contamination** – Hazardous bacteria carried in sewage contaminated flood water pose a danger to public health during “clear up” and remedial building works.
2. **Long delays** – Usually repair works cannot even commence until the building has dried out. Saturated bricks, mortar, stonework, timber and contaminated plaster etc. can take many months to dry out even with dehumidifiers and driers installed.
3. **Expensive & Traumatic.** Insurance companies and local authorities often have to pay for expensive temporary accommodation. Displaced families having gone through the distress of losing personal possessions are then moved out of their homes for anything up to a year or more.
4. **Specialist repair skills required.**  
During repair works, particular attention must be paid to the specific problems of salt contamination and other flood specific factors e.g. damage to electrical wiring etc.

## Option 1 Fast-Track Repair (Of saturated walls)

A saturated wall dries out at roughly an inch per month, so a six inch thick wall may take 6 months to fully evaporate its' moisture.

By borrowing some of the long-established principles of “damp proofing” and “tanking” it is however possible to speed things up dramatically. By using special mortars, plasters and surface treatments a building can be returned to habitable condition much faster than with basic construction methods and materials.....



### 1. Initial Sanitising

Particularly where sewage contaminated foul water has entered the property it is recommended that the work area be liberally sprayed with Kingfisher K-X5 sanitising solution prior to commencement of works. This will help to reduce operatives' initial exposure to harmful bacteria (Listeria, Ecoli, MRSA, Salmonella & more) which may be lurking in contaminated materials.

### 2. Remove all contaminated plaster

Flood damaged plaster frequently contains sulphates (salts) which are naturally present in ground water. These salts are “hygroscopic” which means that they will draw moisture for an indefinite period of time, often appearing as white “fuzz” on the surface. Plaster should therefore be removed to at least 300 to 400 mm past the last signs of damp or salt contamination – usually the “high water” mark.



### 3. Sanitise the bare wall surface

- a) Apply Kingfisher “K-X5” sanitising solution to kill any latent bacteria and leave to “soak in”.
- b) Apply a first treatment of Kingfisher “Anti-sulphate” solution, dilute 50:50 with clean water and leave overnight.
- c) Within 24 hours apply a further treatment of “neat” “Anti-sulphate” solution. These latter two stages are critical as “Anti-sulphate” neutralises harmful ground water salts which can seriously damage the cementitious “tanking” layer which will be applied in subsequent stages.



### 4. Render coat

- a) Within 24 hours of applying the “Anti-sulphate”, prepare a primer mix of Kingfisher “K-X11”, 50:50 with water and Ordinary Portland Cement (OPC) to form a thin paintable grey liquid which can be easily brushed on with a Kingfisher “tanking” brush or similar.
- b) This will rapidly dry to a “tacky” feel and is ready for application of the render coat...  
3:1 washed sharp sand and OPC in a gauging liquid of  
1:4 Kingfisher “K-X11” and Water

### 5. Tanking

- a) Mix the gauging liquid 5 : 1 clean water and Kingfisher “K-X11” (Usually approx 6 litres of gauging liquid per 25 kg bag and the “TANKIT” is mixed in ½ bag amounts i.e. 3 litres needed.)
- b) Add the powder to the liquid while mixing with a low speed, power driven paddle until a thick batter consistency is reached. Leave to stand for 10 minutes, then remix and adjust consistency with more liquid if necessary. The mixture should be stiff enough to support the weight of a fibre application brush.
- c) Using the brush, load the “TANKIT” to it and apply to the pre wetted, prepared surface. Do not brush out as with paint but spread the mixture, maintaining a flowing edge.
- d) The first coat should be applied using vertical strokes and a coverage of 16 sq metres per 25 kg bag must be achieved. The first coat should be left to set for minimum 4 hours, maximum 36 hours.





- e) Apply the second coat using horizontal brush strokes and ensure the same coverage to achieve an overall figure of 8 sq. metres per 25 kg bag. Allow to cure. Note: - Do not allow "TANKIT" to cure too rapidly i.e. in hot conditions mist spray with water or cover with polythene. Do not use hot air dryers or de-humidifiers in initial stages of curing.

## 6. Re-plastering

- a) To gain a key onto the "TANKIT", a primer can be used as earlier, made up with ordinary Portland cement. The next coat must be applied to wet and tacky primer. Alternatively a spatter dash of 1 : 1 sand and cement gauged with "K-X11" & water can be used onto the 'green' "TANKIT" then allowed to cure. If the "TANKIT" is allowed to cure light grey then the "K-X11" and cement primer must be used.
- b) Only cement and lime based renovating plasters can be used onto the Tanking system (i.e. Kingfisher Drywall Plaster). Gypsum based backing plasters are not suitable. Kingfisher Drywall will gain a 'warmer' surface for the tanked wall and will not show condensation as droplets on the surface.
- c) The best method of providing a decorative surface is to fit a thermal laminated plasterboard system (i.e. "Gyproc" Thermalboard Super). This can be 'dot and dab' fixed direct to the "TANKIT" surface and will provide an insulated surface with a vapour barrier included. This will provide the best surface to ensure that no condensation occurs, either surface or interstitial. The plasterboard is tapered edge and can be dry-line finished or skimmed.



*Note: Take care not to puncture the tanking with nails or screws during joinery works – use adhesives (Kingfisher K- Grip) to fix skirting boards and fascias etc.*

### Option 2 Conventional Repair (Slow drying)

1. Remove plaster to 300 to 400mm above contamination as in "Option 1" above.
2. Sanitise the surface as in "Option 1" above.
3. Leave the bare exposed brick / stonework to dry out (up to 6 months).
4. Render coat as in "Option 1" above.
5. Re-plaster as in "Option 1" above

*Note: Most traditional properties with internal brick walls are made of a single course of brick and being thinner than the outer walls, dry much more quickly (6 to 8 weeks). In most cases you should use "Option 2" for their repair.*



## Concrete Floors

Where concrete floors or floor screeds have been affected by flooding, these too will often retain moisture and require repair. Older concrete floors in particular may pose a problem as the surface frequently breaks down and damp patches persist.

### Option 1 – Old floor requires re-levelling & Waterproofing

We recommend the use of the Kingfisher Epoxy Self level flooring system which allows you to apply a thin but extremely durable flooring screed. Please request Product Data sheet for details of how to apply.

### Option 2 – Floor requires Waterproofing only

We recommend the use of Kingfisher Epoxy floor sealer which is a two coat application system for use on sound but water contaminated floors.

*Please note: Before applying either system the floor should be free of standing water and be as dry as possible (damp patches permissible). You should apply dilute anti-sulphate to neutralise any hygroscopic salt contamination prior to application.*

## QUESTIONS & ANSWERS

Q. If I tank the walls, what happens to the moisture in the walls – is it trapped there forever?

A. No, on the external walls you are only tanking the inside face so the moisture will evaporate naturally from the outside (as in Fig 1). There will be some evaporation “into” the building but at a slower rate regulated by the tanking.

Q. If I decide to leave the property to dry out fully (Option 2), why do I still need the “Anti-sulphate” and “drywall renovating plaster”?

A. Even when dry, the walls will likely contain “hygroscopic” salts which will attract moisture indefinitely, even from normal condensation occurring naturally in the home - causing white crystals and damp lines to form. “Anti-sulphate” and “drywall renovating plaster” neutralise this unsightly effect.

Q. Some or all of my internal walls are timber framed. How do I treat them?

A. Cut the plaster board out to 300mm above the high water mark and remove any damp insulation materials and allow the exposed timber to dry. Then treat with Kingfisher “K-F8 fungicide” to kill any fungal mould spores before re-instating the plasterboard and insulation.

Q. How soon after flooding should I strip the plaster back?

A. As soon as possible. Removing the plaster allows the air to get directly to the brick or stonework and promotes faster evaporation.

This specification is intended as a broad guide and has been developed based on our extensive experience in the field of structural waterproofing. Whilst it sets out some specifics, each property is different and we would urge you to contact our technical department should you have any further questions. Should you require a site inspection, this is often possible in conjunction with your local Kingfisher representative so please telephone to arrange an appointment. Information offered free of charge within this specification is given in good faith but without responsibility.