

DANIEL STEWART
ARCHITECTURAL SERVICES LTD

Wayside, Church Street, Nympsfield, Stonehouse, Glos. GL10 3UB

Email: dan@danstewart.co.uk
Web: www.danstewart.co.uk

FLOOD RESILIENCE/RESISTANCE PROPOSALS

Ref: 2664

Proposed Extensions & Alterations at
Mill Farmhouse, Ewen, Cirencester, Glos. GL7 6BT

Flood Risk Assessment:

The proposals should be constructed strictly in accordance with the recommendations of the Flood Resilient Construction Details in the DCLG's 'Improving the Flood Performance of New Buildings'.

External Walls:

Concrete blocks used in foundations/below dpc level should be sealed with an impermeable material or encased in concrete to prevent water movement from the ground to the wall construction.

Ensure mortar joints are thoroughly filled to reduce the risk of water penetration.

Frogged bricks should be laid frog up.

Bricks manufactured with perforations or highly porous bricks should not be used.

Existing walls to be damp proofed strictly in accordance with specialist contractors recommendations using Newton System 500 extruded plastic membrane dpm. Membrane to be fixed using 50x75mm s.w. treated battens and neoprene plugs strictly in accordance with manufacturers instructions.

Battens to be infilled with 75mm Celotex insulation and finished with 12mm thick MDF cladding below a 1.0m high dado rail. All timber below the dado rail will be sacrificial in the event of a flood.

Internal walls:

100mm thick dense concrete blockwork.

Provide 100x150mm prestressed concrete lintels over openings by RMC Concrete Products Ltd. or similar with minimum 150mm end bearing.

Finish both sides with 12.5mm (1 cement : 6 sand : 1 lime) render with plaster skim finish. Gypsum based plasterboard should not be used.

Doors & Windows:

All effort should be made to ensure a good fit & seal to door & window frames.

Floors:

Minimum 150mm thick unreinforced concrete floor slab to engineers design.

Provide a 1200 gauge dpm with mastic taped or 300mm overlaps/joints.

Insulation should be provided above the floor slab with a sand/cement screed finish.

The ground floor should will be finished with limestone or porcelain tiles throughout.

All tiles should be bedded on a cement based adhesive/bedding compound & water resistant grout should be used.

Timber skirting boards should not be used.

Services:

Water, electric & gas meters should be located above predicted flood levels.

Electric sockets should be installed above flood level in ground floor areas to minimize damage to electrical services & allow speedy re-occupation. A dado service rail should be considered.

Electric ring mains should be installed at first floor level with drops to ground floor sockets and switches.

Boiler units and ancillary devices should be installed preferably on the first floor with heating controls such as thermostats fitted above the predicted flood level.

Wiring for telephone, TV, internet & other services should be protected by suitable insulation in the distribution ducts to prevent damage. Any proposed design solution for flood insulation should be discussed with the relevant service providers.

Under floor services using ferrous materials should be avoided.

General:

Durable fittings such as plastic or stainless steel should be used throughout the ground floor wherever possible.

Place fittings such as electrical appliances on plinths as high as practicable above floor so that they are out of reach of flood water.

Ensure adequate sealing of joints between surfaces to prevent any penetration of water behind fittings.

Ensure high quality of workmanship in the application of fittings.