

Flood Risk Assessment and Flood Proofing Measures

24 Sheerstone
Iwade
Sittingbourne
Kent
ME98RN

This development is sited within flood zone 2 and 3 of the Environment Agency's flood map.

This flood risk assessment is based upon published advise by the Environment Agency titled "Householder and other minor extensions in flood zone 2 and 3" and Planning Policy statement 25.

This proposal is for a domestic side and rear extension with a footprint less than 250msq.

The proposal is not within 35m of a main river or stream nor does it involve culverting or obstruction to the flow of a river or stream.

Flood levels within the proposed development will be set no lower than the existing levels and flood proofing of the proposed development has been incorporated where appropriate.

Supporting Information

The finished floor level of the existing dwelling is approximately 10.20m AOD; the proposed extension will have the same finished floor level. The existing surrounding landscaping and the proposed landscaping will be approximately 8.6mAOD.

With this in mind, it would be anticipated that any flood would give rise to water levels no greater than 0.6m between the outside and inside, thus the design has been based upon a worst case "water Entry" Strategy allowing water into the building, facilitating drainage and consequent drying.

These resilience measures are designed to allow the building to be occupied safely over it proposed lifetime, taking into account climate change in accordance with "Improving the flood performance of a new dwelling" CLG (2007)

Details of Flood Proofing and Resistance Techniques

The ground floor slab of the new extension will be designed as a suspended block and beam type. This is the preferred option for flood resistance as agreed with BCO. The average depth of the sub floor void will be around 450mm with the allocation of air bricks built into the perimeter of the new walls to allow for drainage and airflow.

The hardcore and blinding of the subsoil will be well compacted to reduce the risk of settlement and consequential cracking.

The dampproof membrane in the design will be a minimum 1200 gauge specification to reduce risk in tearing, it will be overlapped at least 300mm and taped with a mastic tape with an overlap of at least 50mm.

The floor insulation in the new extension will be a rigid close-cell polyisocyanurate (PIR) such as Celotex. This type of rigid insulation has been developed to minimise the impact of water. This will be placed on top of the block and beam, with 70mm screed finish going on top.

The expected frequency of flooding is not high at the proposed development, so consequently the allocation and installation of a floor sump will not be included in the design.

The walls will be brick and block to match existing. External bricks will be of good quality pressed facing brick having a medium classification for water penetration.

The internal walls will be a standard aircrete block, these blocks do have slightly less qualities for drying out, but the water penetration is classified as medium. They are more suitable in comparison to a concrete block which has less water penetration qualities.

The wall insulation will be a rigid (PIR) such as Celotex, as it retains its integrity and has low moisture intake.

Internal finish will be 12.5mm plasterboard on dabs as a sacrificial material.

All door and window will be UPVC or Aluminium double glazed, which will conform to the relevant standard and FENCA certified.

Services and pipework will be insulated, and entries will be sealed with expanding foam.

Electrical services and wiring will be installed at high level above floor to facilitate the risk of susceptible flood waters as well as being protected by suitable distribution ducts where necessary.