

PROPOSED 2 STOREY SIDE & FIRST FLOOR REAR EXTENSIONS TO
9 MARINERS CLOSE, HAMBLE, HAMPSHIRE, SO31 4PD

FLOOD RISK STATEMENT

Sept 2023

Introduction

Eastleigh Borough Council have identified the above property as falling within a flood zone 3. According to the Environment Agency this means the property has a 1 in 100 chance or higher of flooding each year.

We propose to build a 2 storey side extension and 1st floor rear extension offering more useable family space for the home.

We propose to use flood resilient, low permeability materials in the design which will mitigate the effects of possible flooding. These will be included in the Building Control drawings and specification.

Mitigation Measures

The flood resilience measures include:

1) A concrete ground floor slab, fitted with a 3000DPM and closed cell insulation. Proposed floor level to be flush with the existing floor level and to the following specification -

To meet min U value required of 0.18 W/m²K. Solid ground floor to consist of 150mm consolidated well-compacted hardcore. Blinded with 50mm sand blinding. Provide a Proofex 3000 DPM laid in accordance with the provisions of BS 8102:2009, DPM to be lapped in with DPC in walls. Floor to be insulated over DPM with 100mm thick Celotex. 25mm insulation to continue around floor perimeters to avoid thermal bridging. A VCL should be laid over the insulation boards and turned up 100mm at room perimeters behind the skirting, all joints to be lapped 150mm and sealed, provide 100mm ST2 or Gen2 ground bearing slab concrete mix to conform to BS 8500-2 over VCL. Finish with 65mm sand/cement finishing screed with light mesh reinforcement. Where drain runs pass under new floor, provide A142 mesh 1.0m wide within bottom of slab min 50mm concrete cover over length of drain.

2) The proposed cavity wall construction will include stainless steel wall ties and closed cell insulation. Internally the walls will have a lime based plaster to mitigate the effects of possible flooding. All skirting boards will be sealed with an oil based paint. All electrical sockets will be a minimum of 300mm above floor level. The cavity walls will be built to the following specification –

To achieve minimum U Value of $0.18\text{W/m}^2\text{K}$. Provide 103mm facing brick to match existing construction or rendered blockwork. 10mm clear residual cavity, 90mm Celotex Thermaclass insulation fixed to 100mm standard block K value 0.15 (Celcon standard, Thermalite shield, Toplite standard.) All walls constructed using stainless steel vertical twist type retaining wall ties built in at 750mm ctrs horizontally, 450mm vertically and 225mm ctrs at reveals and corners in staggered rows. Wall ties to be suitable for cavity width and in accordance with BS 5628-6.1: 1996 and BS EN 845-1: 2003. For DPC provide horizontal strip polymer (hyload) damp proof course to both internal and external skins minimum 150mm above external ground level. New DPC to be made continuous with existing DPC's and with floor DPM. Vertical DPC to be installed at all reveals where cavity is closed. Provide cavity trays over openings. All cavities to be closed at eaves and around openings using Thermabate or similar non combustible insulated cavity closers.

Provide vertical DPCs around openings and abutments. All cavity trays must have 150mm upstands and suitable cavity weep holes (min 2) at max 900mm centres. Internal finish to be 13mm sand/cement render finished with a lime based plaster. Walls to be built with 1:1:6 cement mortar.

3) The new windows and will be UPVC and the new external doors will be aluminium. Door to meet following specification –

New doors to achieve a U-Value of $1.4\text{W/m}^2\text{K}$. Glazed areas to be double glazed with 16mm argon gap and soft low-E glass. Glass to be toughened or laminated safety glass to BS 6206, BS EN 14179 or BS EN ISO 12543-1:2011 and Part K of the current Building Regulations.

4) Foul drainage will connect to the existing sewers. New surface water will be drained into a soakaway, to meet Part H of the Building Regulations using the following specification –

New rainwater goods to be new 110mm UPVC half round gutters taken and connected into 68mm dia UPVC downpipes. Rainwater taken to new soakaway, situated a min distance of 5.0m away from any building, via 110mm dia UPVC pipes surrounded in 150mm granular fill. Soakaway to be min of 1 cubic metre capacity (or to depth to Local Authorities approval) with suitable granular fill and with geotextile surround to prevent migration of fines. If necessary, carry out a porosity test to determine design and depth of soakaway.

Conclusion

In summary being aware of the flood risk in this area, every effort will be made to mitigate these effects. This is a previously developed site and historically the clients have not experienced flooding. Due to the floor level being the same as the existing and the existing neighbouring properties the proposal does not increase the risk of flooding.