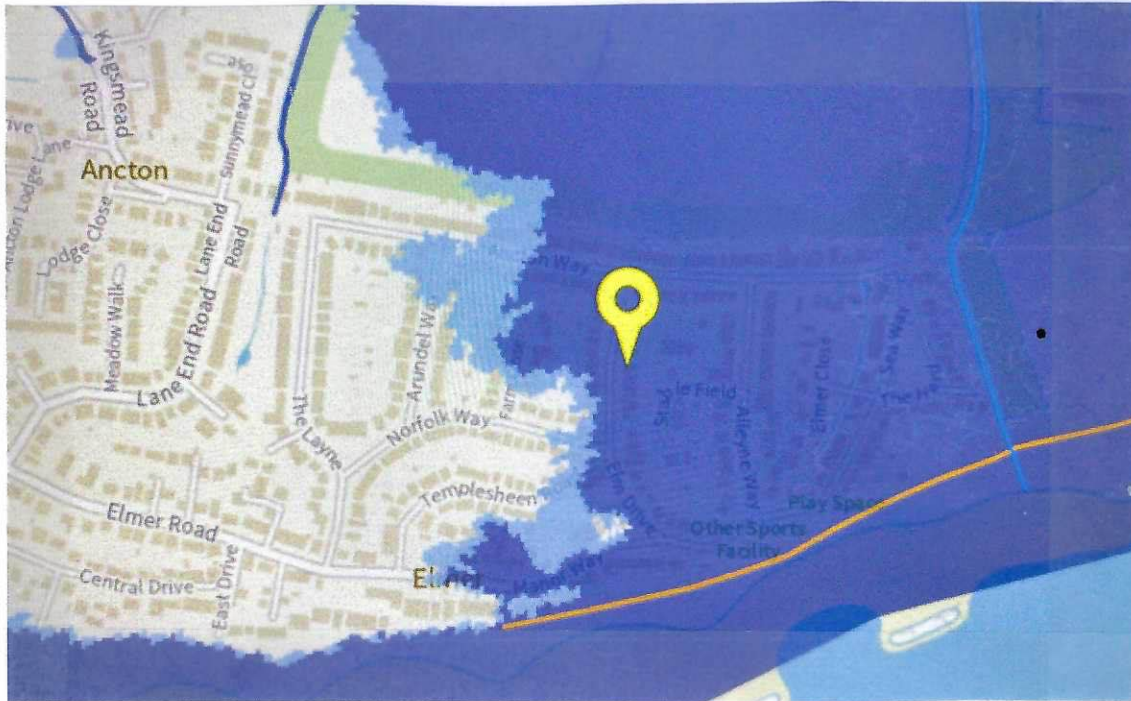


# **Flood Risk Assessment for 20, Elms Drive, Elmer.**

## **Site Flooding Context:-**

The property is located in Zone 3 of the EA Flood Map and therefore deemed to be in 'at risk' area as the plan below:-



The site is vulnerable to flooding with the existing surface water drainage dealt with by soakaways and the proposal does not change this.

The probability of the site flooding is 1 in every 100 years although with climate change this is likely to increase.

## **Mitigation:-**

The existing floor levels are set 375mm above ground level with construction details including height of electrical power points cannot be changed so protection from flooding on these points remain unchanged.

Existing external surface are all porous surfaces with 90% of the rear garden laid to grass and front parking areas laid in concrete surrounded by gravel areas.

As the application is for a small [5.80 sq. metres of new floor area] there is limited practical solutions to the resistance to flood water.

With the small extension there will be no impact on other nearby properties.

### **Proposed Flood Protection:-**

Limited possible changes to flood protection are available so therefore a proportionate nature and scope has been considered.

No additional external hard surfacing will be carried out under the proposal.

As the application is for an extension to the existing property it is deemed impractical to raise the new FFL and thus flood proofing of the extension is deemed to be the most practical solution.

Although these measures will produce some resistance to the entrance of flood water consideration has also been given to the type of materials used in relation to the absorbent nature of the material and its ease of replacement and drying out should flooding occur.

It is not required as part of these recommendations for the proposed extension to consider the flood preventive qualities of the existing property especially in regard to suspended timber floor and external air bricks.

The effectiveness of the flood proofing is very reliant upon the quality of the installation and good building practice.

### **Floor:-**

Provide 100mm solid concrete floor. Provide 250µ polythene barrier with fully taped joints between oversite fill and oversite slab with polythene lapped over internal skin of cavity wall below d.p.c.

Provide cement/flooring grit screed with added waterproofer on 3 coats of liquid d.p.m. solution.

### **External Walls:-**

Provide polythene cavity tray with fully taped joints between both trays and polythene barrier below slab.

Provide protection to external skin of cavity wall with 500mm band of cement/washed sand render with added waterproofer.

Provide low absorbing insulation cavity wall batts within the 500mm band.

Provide stainless steel cavity wall ties.

Provide waterproofing sealant to internal face of internal blockwork to 500mm high band with cement/sand render with added waterproofer and set coat.

Provide provision for watertight covers to be fitted over external air bricks in possible flood warnings.

### **Door Floodboards:-**

Increased flood protection is by 600mm high plastic OR aluminium floodboards in watertight channels are fixed to door frames in event of possible flood warning.

General:-

Skirting boards to be fixed to internal walls with adhesive.

Evacuation Plan:-

A personal evacuation plan and strategy is to be put in place through the filling out the relevant Environment Agency 'Personal Flood Plan' form and forming a strategy including:-

Move furniture and electrical items to safety.

Put flood boards, polythene and sandbags in place.

Make a list now of what you can move away from the risk.

Turn off electricity, water and gas supplies.

Roll up carpets and rugs.

Unless you have time to remove them hang curtains over rods.

Move sentimental items to safety.

Put important documents in polythene bags and move to safety.

Move car to a safe location.

Inform family and friends of any evacuation.