



Chartered Surveyors &
Architectural Services

Flood Risk Assessment for the proposed extension at:

31 Elm Drive,
Middleton-on-sea,
Bognor Regis,
West Sussex,
PO22 6JE



Affinity REF: 374

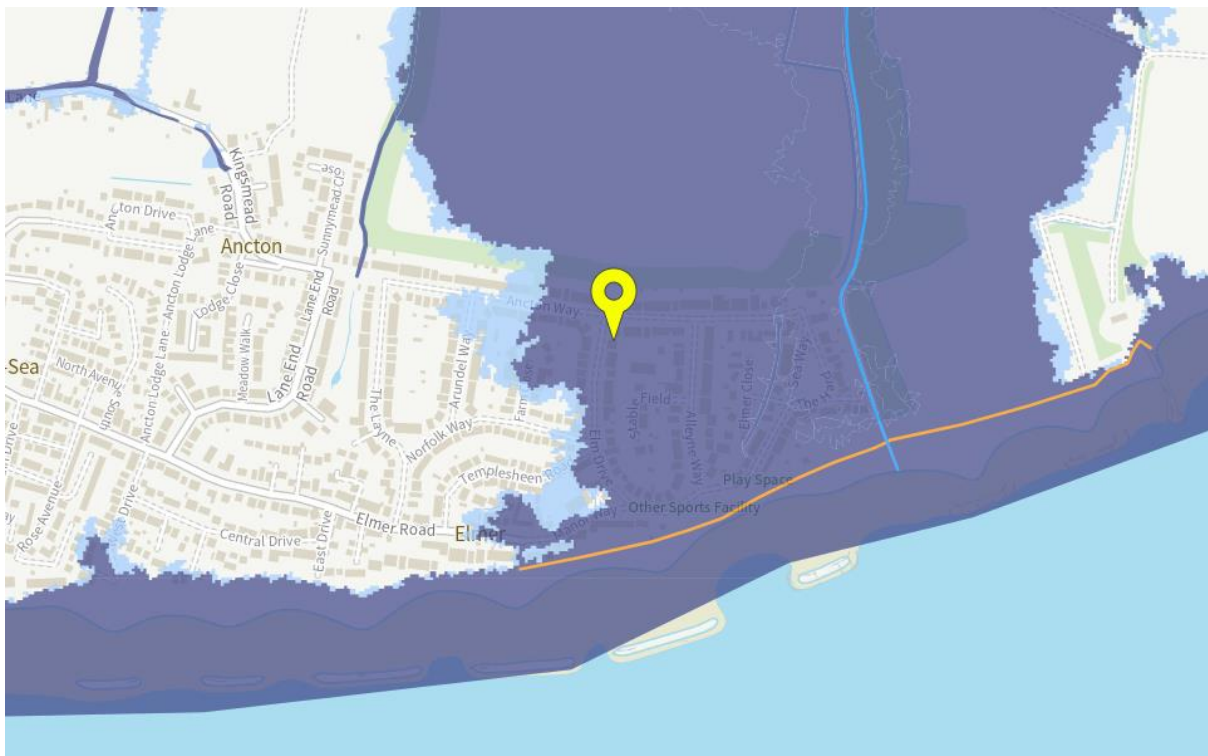
March 2022



Regulated by RICS

Introduction.

This report is produced as supporting documentation for the planning application for the single storey extension to the east of the property, replacing an existing conservatory. This report is produced as the site is within Flood Zone 3. The flood risk map for the area is attached below which details a risk of flooding from Rivers or the Sea which is deemed to be a 1 in 100 year risk from rivers and 1 in 200 year risk of flooding from the sea as defined on the government website. The risk of flooding covers a large area of the land to the east and north of the site with the subject site located towards the edge of the flood zone, adjacent to the western residential developments that do not present a risk of flooding. The current site is vulnerable to flooding with the existing surface water drainage being dealt with by soakaways.



River and Sea flooding map

Flood Risk Mitigation

The proposed alterations are replacing an existing conservatory structure to the rear of the residential property which is already established in its form and construction which limits the alterations that can be implemented to the current structure to improve the flood

resistance and issues such as the floor heights and the heights of the sockets above floor level cannot be changed as a result. The application relates to a small increase in footprint of the buildings currently found on site due to the replacement of the conservatory being removed with a total increase of 11m.sq being proposed which is sited over the foot print of the conservatory and over the current hard standing adjacent. The majority of the main amenity space to the east of the property is laid to lawn and as such is porous and there are no plans within the current scheme to reduce the area of porous surface provided. Due to the small increase in footprint there will be no impact on the adjacent properties.

Proposed Floor Protection / Water Exclusion Strategy

Limited changes are able to be implemented to the existing building as it is currently established and due to the proposed extension occupying the same footprint as the current conservatory the overall risk of flooding to the property over what is currently presented is negligible however measures will be implemented for the extension which will make this area of the building more resilient to the effects of flooding and simple, cost affected alterations to the existing doors serving the site will also be considered to improve the resilience of the building as a whole.

Despite the low risk of flooding affecting the property to a greater degree than would currently be experienced, the design has taken into account the suggested best practise advice regarding the construction methods used and the materials which are proposed to provide an extension resilient to the effects of flooding that may occur. The proposed extension is to include mass fill concrete foundations and a cavity wall construction incorporating two skins of engineering bricks below the damp proof course as this type of material offers good resistance to water penetration, has good drying capabilities and has a high level of structural and dimensional retention in post flood situations. The floor construction is to incorporate a solid 100 – 150mm concrete slab provided with a 1200-gauge polythene damp proof membrane which is to be linked and made continuous with the damp proof course in the walls. The DPM is to be lapped a minimum of 300mm and taped at the joints using mastic tape with a minimum 50mm lap. A low-level cavity tray is to also be included around the perimeter of the building linking the inner DPC to the outer skin installation. The proposed floors are to include ceramic tiles which are also resilient in terms of post flooding stability and dimensional integrity. The external walls will be rendered with a cementitious render including a waterproofing additive that will provide an effective barrier to water penetration. It is proposed to include a percentage of lime to the cement mortar mix which will decrease the drying time of the render in the event of a flood event. The cavity wall will contain a rigid PIR insulation board which is again resistant to the effects of flooding as it does not hold moisture to the same degree as fibre glass or mineral wool bat alternatives, which will be held in place with plastic clips attached to the stainless steel

cavity wall ties. The internal face of the walls is proposed to be finished with renovating plaster which is not hygroscopic like traditional gypsum plaster and will retain its form and provide a faster drying time over traditional gypsum plasters following a flooding event. The proposed doors are to be a double glazed UPVC installation which should adequately resist any flood water that may occur in this instance, with the addition of plastic or aluminium flood-boards in watertight channels also included to provide protection 600mm high. Flood-board provisions will also be implemented for the main entrance door. No pipe penetrations will be included to the extension at low level reducing the risk of lateral water ingress into the building via these voids. The skirtings boards and architraves will also be adhesive fixed to enable the continuity of the masonry and finishes to be maintained.

Evacuation Measures

A personal evacuation plans will be implemented which will be based on the Environment Agency 'Personal Flood Plan; documentation and will include the key items as listed below:

1. Place flood-boards, sandbags and other measures required in place following warnings of a possible flood event.
2. Turn off electrical, water and gas supplies in the event of an emergency evacuation situation.
3. Roll up and move loose laid floor finishes such as rugs.
4. Move sentimental items to a safe place.
5. If possible, items of furniture should be stored at a height where the risk of damage due to flooding is minimised.
6. Floor length curtains are to be removed or lifted clear of the ground
7. Passports and other important documentation is to be stored in sealed polythene bags and should be located to be at ease of hand for removal in the event of an evacuation.
8. Motor vehicles are to be moved to a safe location outside of the likely flood risk area, in this instance likely to the west of the subject site.
9. If the property is to be evacuated contact family and friends to notify them of your evacuation.