FLOOD PROOFING / RESILIENCE AND RESISTANCE TECHNIQUES

Site Address: 227 Harbour Way, Shoreham-by-Sea, BN43 5HZ
Proposed Works: Extension to north side, loft conversion including raising the existing ridge-height, and replacement of front bay window with enlarged porch.

Flood Risk:

The local flood zone map places the property between flood zones 2 and 3. From the detailed work performed on the Adur West Bank Sea defences, the actual building can be placed in zone 2 (this conclusion can be made based on the height it is positioned above the proposed sea defence work in the area that will provide protection to a 1 in 300 year flood event in 2060). Further, the existing ground floor and proposed extension achieves the 300mm above the known/modelled zone 2 flood level, negating the need to include flood proofing/resilience/ resistance techniques, the formal proof of this has not been sort to date, hence the measures that will limit flood damage have been outlined in this document.

Proposed Development:

The Property is currently a single storey that was built in the early 1970s. A garage and carport were subsequently built pre 1990, both of which will be demolished as part of this proposed development. On the ground floor the proposed development consists of an extension to the side encompassing a garage at the front and kitchen behind. The roof will be replaced to provide more height to enable accommodation to be provided at a first floor level. In addition a porch will replace and extend a little further forwards than the current bay at the front of the property.

Approach:

It is of little overall benefit to address inadequacies in the materials used in the existing building unless flooding actually occurs at a future date. There is also little that can be done to protect the existing property to exclude water on a permanent basis. Therefore the choice of construction and materials will be made to minimise water absorption and not be detrimental to the drying process or intended to be sacrificial.

Foundations:

The type of foundation is dictated by the requirement to support the extension from a depth below 3.1m as stipulated by Southern Water in their letter dated 18 September 2007 giving permission to build over the public sewer. Therefore concrete of steel piles will be used.

Floor:

As piles will support the reinforced concrete floor, it will effectively be a suspended floor as opposed to ground-supported. To ensure sewer material can collect beneath the floor, no void will be permitted under it. 1200 gauge polythene damp proof membrane will be used with overlaps of 300mm or taping with mastic tape with 50mm overlap minimum. Rigid closed cell insulation will be used on top of the floor slab. The floor finish will permit any moisture penetration into the insulation to escape; therefore a concrete screed will be avoided.

Walls:

Concrete blocks with stainless steel ties will be used at the lower level for internal and external walls. The whole property will be covered in render. Cavity Insulation will be closed cell.

Services:

Ground floor services, electric, water and gas will be distributed from the ceiling.