

Flood risk assessment.

August 2018

Address: 3 Irvine Road, Littlehampton, West Sussex BN17 5LA

1 The proposal:

The proposal is to extend and convert the garage to habitable accommodation for a disabled child and his mother. The child suffers from downs syndrome and requires constant attention.

2 Proportional risk:

The proposed dwelling is small with a foot print of some 38m² on an overall plot of some 460m². The area is predominantly residential in nature with a varied mix of older and new dwellings. The development density is high.

3 Consequential flood risk:

Under the building regulations guidelines for rainwater disposal the 38m² roof area of the proposal gives a soakaway requirement of 2x1x1.2 m from calculations to BRE Digest 365. The site area offering ample scope for soakaway construction.

Any new paving and hard surfacing would be designed to be porous throughout the site.

The risk of consequential flooding due to the development is thus considered very low.

4 Climate change:

The site is currently in FRZ3a thus, with an annual risk of river flooding >1% and of sea flooding >0.5%. The sea is considered to be the highest risk in this instance with a tidal surge up the River Arun, an event with a probability greater than 1 in 200 annually.

The current predicted tidal surge is 4.1m AOD rising to 5.3m AOD by 2115.

The lowest habitable floor level in the proposal is 3.25m AOD with a general ground level of 3.2m AOD and the upper floor is at 5.4m AOD.

The above figures are taken from an EA sources and the building design detailed on the application drawings.

5 Flood prevention:

As detailed on the application drawings an evacuation route is available Northwards from the site, through the rear gate and via ever rising ground to the northern half of Lobs Wood or the adjoining roads in that area which are in FZ1 at a distance of approximately 55m from the gate.

6 Flooding:

As noted in 4 above the primary risk of flooding is from natural sources, that being a tidal surge up the River Arun. The location of the site and surrounding development are such as to preclude flooding as a result of human activity. No activity in the locale uses, stores or requires the disposal of large volumes of water, all activity is of a domestic nature. To our knowledge there have been no historical natural flood events in this area so data are not available on the extent, time period or otherwise of the progress of a such an event. There have been a few very local flood events as the result of faulty sewerage equipment.

Again to our knowledge there are no future proposals that would increase the flood risk to the area, there being little potential to site such development in the urban area of Littlehampton.

River flooding as a result of extreme rainfall historically causes the river to flood and the upper sections of the river inundate surrounding farmland. Flood plain areas around Pulborough, South Stoke and through the Arun valley towards Arundel are extensive and ameliorate any flooding further downstream in more urban environments. Downstream from Arundel the river has large well maintained embankments and the land to either side is predominantly below high water level. The storage capacity of this zone South of the Downs is extensive and of a rural and agricultural nature. Lower lying land tends to be to the West rather than the East of the River.

It is felt that the proposed development is at little risk from river flooding and that, as the EA consider, the main risk is the sea.

Given that improvements to the river defences are now complete it can be considered that over the medium term the flood risk is minimal.

It should also be born in mind that a 3 storey house in the same family ownership is on the site.

7 Residual risks:

Due to the density of development in the area of the site and the small scale of the proposal any residual risks are too minor to compute. The site is more than capable of preventing water run-off and easily able to contain and disperse rainwater within its confines.