

Flood Risk Assessment: Development at 63 South Terrace Littlehampton BN17 5LG

FLOOD RISK ASSESSMENT

Site Assessment – Sources, Mechanisms and Pathways of Flooding

This flood risk assessment has considered the six possible sources of flooding: Fluvial (Rivers); Tidal (Seas); Surface Water; Groundwater; Sewers and Infrastructure Failure.

Fluvial flooding is due to out-of-bank flow, overtopping or breach of river defences and blockages to culverts, flood channel or flood corridors.

Tidal flooding occurs by the sea or estuary and can be due to breach or over topping of flood defences, wave action and fluvial flows due to tide locking.

Sheet runoff from adjacent land (urban and rural) can result in local surface water flooding.

The level of groundwater rises during wet winter months, and fall again in the summer as water flows out into rivers. In very wet winters, rising water levels may emerge to the surface and lead to flooding of normally dry land. This is most likely to occur in low-lying areas underlain by permeable rock (aquifers).

Combined, foul or surface water sewers can surcharge due to insufficient capacity causing flooding of the surface depending upon the ground topography. Surface water sewers are now required to be designed not to flood for 1 in 30 year storm events but the older sewer networks may not have this level of capacity. Foul sewers can flood in periods of intense rainfall due to connection of surface water to the system.

Flooding due to infrastructure failure could be due to reservoirs, canals, industrial processes, burst water mains, blocked sewers or failed pumping stations.

The detailed site assessment is as follows:

Fluvial

The site is located within a Flood Zone 1 and therefore has a 'low probability' of flooding of less than at 0.1% (1 in 1000) in any year.

Tidal

The site is outside the influence of tidal flooding so there is a 'low probability' of flooding from this risk.

Surface Water Runoff

There is a 'low probability' of flooding by surface water runoff from the surrounding area.

Groundwater

There is a 'low probability' of flooding by groundwater.

Sewers

There is no knowledge of the site being flooded by any sewers in the locality so there is a 'low probability' of flooding caused by sewers.

Infrastructure Failure

No artificial sources of flooding have been identified i.e. reservoirs, canals etc.; therefore, there is a 'low probability' of flooding due to infrastructure failure.

This small site is located in Flood Zone 1 and has a 'low probability' of flooding.

The foul water demand can be met by the existing sewer serving the site as there is no alteration from the existing.

The existing surface water is unaffected by this internal alteration.