

FLOOD RISK ASSESSMENT:

Project

Proposed changes to Summerhouse at Priory Farm Barn, Station Road, Arundel, BN18 9PH

Flood Zoning

The Summerhouse is located in Flood Zone 3
(Refer to Flood Risk Map appended below)

Cause of Flood Risk

The Flood Risk principally arises from tidal effects, with a possible contribution by fluvial effects at some times of the year. Being tidal, the duration of the risk would be short.

It is not clear from the Flood Zone map what level of flooding is being modelled, but typically in the area 1-in-200-year Flood levels are estimated as high as 5.3metres AOD near the river mouth, and 3.6metres AOD near Lymminster.

The site is noticeably higher than the railway line at the Arundel Railway Station, and while the railway line is on Zone 3 on the downstream side, it is shown outside the zone on the upstream side, suggesting that the River Bridge at Arundel and the railway bridge would both contribute to reducing the rate of rise, which would mean the rate of recession of the tide would be faster as there would be less water to return from upstream of the bridge.

Note also that while the Summerhouse is shown in Zone 3, there is no associated Zone 2 or Zone 1 between the Summerhouse and the bridge, on spite of there being no appreciable slope or any abrupt change of land level – which also indicates that modelling may not expect a gradual or lasting water flow from the flood plain towards the house as the tide reaches its highest level.

Risk to Person and Property

The proposed partial change of use would not result in permanent or long-term residential use, and the tidal occurrence that could cause flooding would occur at a predictable time (unless of course due to a sudden natural catastrophe) and so it should be possible to ensure the building is empty at high-risk times. There would be no heavy financial consequences if the building were damaged.

An escape route exists to high ground, the distance to the edge of Zone 3 being about 12 metres, with no other zones to pass through.

Possible Flood-Resilience Mitigation work if required

A small berm or dwarf wall could be formed to protect the Summerhouse and access.

