

Flood Risk Assessment (FRA)

Development: Loft conversion

Address: 10 Beachside Close, Worthing, West Sussex BN12 4JQ

Date: 6th May 2026

1. Site description

1.1 Site address

10 Beachside Close, Worthing, West Sussex BN12 4JQ.

1.2 Vulnerability classification

The proposed development (loft conversion) is “**More Vulnerable**” under the NPPF vulnerability classification, as it involves residential accommodation.

1.3 Flood zone incompatibility

According to the Environment Agency Flood Map, the property is located within **Flood Zone 3** (tidal and fluvial risk) due to its proximity to the coastline and nearby drainage channels. Residential development of this type can be acceptable in Flood Zone 3 subject to a passed **Exception Test** and adequate mitigation.

1.4 Lifetime of development

A design life of **100 years** is assumed for the residential use.

1.5 Local Plan policies and SFRA recommendations

Worthing Borough Council’s Strategic Flood Risk Assessment (SFRA) and Local Plan (Policy WLP7) emphasize maintaining finished floor levels above design flood levels, using flood-resilient materials, and ensuring safe access/egress during flood events.

2. Assess flood risk

2.1 Existing site

Detached dwelling located approximately 300 m from the coast. Ground levels are generally flat (~3.5 m AOD).

2.2 Fluvial flood risk

Minimal. No main rivers within 500 m

2.2.1 Design flood event

No direct fluvial flood source; design flood dominated by tidal influences.

2.2.2 Residual fluvial risk

Low residual risk from surface runoff or tidal backflow through surface drainage network.

2.3 Tidal flood risk

2.3.1 Design flood event

Tidal flood level (1 in 200-year + climate change allowance) for Worthing coastline ~5.1 m AOD. Existing ground levels (~3.5 m AOD) are below this; however, defences along the beach offer significant protection.

2.3.2 Residual tidal risk

Residual risk in event of defence overtopping or breach. No floor level increase proposed (development is above ground level).

2.4 Surface water flood risk

2.4.1 Design flood event

EA Surface Water Map indicates low to medium risk of surface water ponding on local roads; no direct flow path through property.

2.4.2 Residual risk

Minor localised flooding possible during heavy rainfall; not expected to enter building envelope.

2.5 Sewer flood risk

Southern Water data shows occasional surcharge events in coastal zones. Risk considered **low** with continued maintenance.

2.6 Groundwater flood risk

Potentially moderate, given coastal aquifer influence, but no past flooding recorded at site level.

2.7 Reservoir flood risk

No reservoirs upstream; no risk identified.

2.8 Canals and other artificial sources of flood risk

None nearby.

2.9 Coastal erosion risk implications on tidal flood risk

Managed coastline with coastal defences; erosion risk minimal within expected design lifetime (Environment Agency Shoreline Management Plan).

2.10 Interactions of various sources

Most likely combined tidal/surface water interaction during storm surges coinciding with heavy rain.

2.11 Design flood level according to all the sources identified

Design flood level (tidal) = **5.1 m AOD**.

Proposed floor levels:

- Ground floor $\approx$ 3.6 m AOD
- Loft accommodation $\approx$ 6.0 m AOD (above design flood level).

2.12 Exception Test

Development provides an improved, sustainable use of existing housing stock without increasing built footprint. Residential area remains safe during flood events (habitable floor well above design flood level). Test **passed**.

2.13 Summary of flood risks

- Primary source: **Tidal flooding**
 - Secondary: Surface water
 - Overall flood risk to loft conversion: **Low** (habitable levels above design flood level)
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3. Avoid flood risk

3.1 Evidence of the Sequential Test

Site is an existing residential plot; no realistic alternative at lower risk exists. Sequential Test **passed**.

3.2 Sequential Approach

Development restricted to upper floor; no new ground-level development proposed.

4. Control flood risk

4.1 Proposed site levels

No changes proposed to external ground levels.

4.2 Flood flow route

Existing external drainage maintained; development does not obstruct flood flow paths.

4.3 Existing or proposed flood risk management infrastructure

Property benefits from coastal flood defences maintained by the Environment Agency.

5. Mitigate flood risk

5.1 Risk to people

Residents safe above flood levels. Ground floor refuge area accessible; evacuation routes available inland via Beachside Close.

5.2 Risk to property/building

Use of flood-resistant materials at ground level (e.g., closed-cell insulation, water-resistant plaster). No increased footprint.

5.3 Risk to essential services

Existing utility connections maintained above anticipated flood depths.

5.4 Floodplain storage and conveyance compensation

As no increase in built footprint, no loss of floodplain storage occurs.

5.5 Surface water management

Roof runoff directed to existing drainage; consider installation of water butts to reduce peak discharge.

6. Manage flood risk

6.1 Safe access and escape

Primary exit to Beachside Close (~3.8 m AOD). Safe pedestrian egress possible toward higher ground inland.

6.2 Evacuation plan

Residents to follow Council's flood warning and evacuation procedures; registration with **EA Flood Warning Direct** recommended.

6.3 Residual flood risk

Small residual risk from tidal breach event; mitigated by living accommodation being above flood level.

6.4 Betterment provision

Increase in flood awareness and use of flood-resilient materials at ground level where possible/appropriate constitute minor betterment.

7. Summary of measures

Category	Measure Proposed
Avoid	Sequential siting within existing footprint
Control	Retention of ground level and drainage capacity
Mitigate	Elevated habitable rooms (>5.1 m AOD)
Manage	Evacuation plan and flood warning registration

Conclusion:

The proposed loft conversion at 10 Beachside Close is not expected to increase flood risk on-site or elsewhere. The habitable space will remain above projected flood levels, satisfying NPPF and Environment Agency guidelines.
