

Flood Risk Assessment (FRA) template

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1 Site description

1.1 Site address

Fins, 10 West Beach, Shoreham, West Sussex, BN43 5LF

1.2 Vulnerability classification

The proposal relates to an existing residential dwelling.

Under NPPF Annex 3, the vulnerability classification is **More Vulnerable**.

- Permanent year-round residential use
- Sleeping accommodation on the first floor
- Occupants able to access upper floors for safe refuge

1.3 Flood zone incompatibility

According to the Environment Agency Flood Map for Planning and Adur & Worthing SFRA (2024), the property lies within:

- **Flood Zone 3 (tidal)**
- Within the Shoreham Harbour tidal flood cell
- Outside the functional floodplain (Zone 3b)

More Vulnerable development in Flood Zone 3a is **compatible** provided flood risk is properly mitigated.

1.4 Lifetime of development

A 100-year lifetime has been used, as per Planning Practice Guidance for residential development.

1.5 Local Plan policies and SFRA recommendations

Relevant policies:

- Adur Local Plan: Policies 34 & 35 (Flood Risk & Sustainable Construction)
- Shoreham Harbour Regeneration SPD

- SFRA recommendations on tidal breach risk, safe access and flood resilient construction

The proposal accords with these policies through use of flood-resilient materials, no ground raising, and provision of safe refuge.

2 Assess flood risk

2.1 Existing site

Existing Property - The site comprises a detached two-storey dwelling on West Beach, close to the tidal River Adur estuary and shoreline.

Key features:

- Existing floor levels consistent with surrounding properties
- No watercourses on the plot
- No culverts, drains, or flood defences within the red-line boundary
- Ground levels are flat and at typical West Beach plateau elevation
- No land raising is proposed
- Free Draining / Flowing space around the perimeter of the property towards the lower lying land behind the property.

2.2 Fluvial flood risk

2.2.1 Design flood event

The site is primarily affected by **tidal** rather than fluvial flooding.

Residual fluvial influence from the River Adur is limited but acknowledged.

- 1% AEP fluvial event
- With climate change allowances (higher central)
- Floodwaters during extreme fluvial events would be driven/locked by tidal influence

Fluvial depths at this location are shallow compared to tidal depths.

2.2.2 Residual fluvial risk

Residual risk arises if:

- Tidal gates fail
- Blockage of outfalls
- Tide-locking slows fluvial discharge

Given the minor nature of the works and no volume increase, the proposal does not increase fluvial flood risk elsewhere.

2.3 Tidal flood risk

2.3.1 Design flood event

This is the dominant flood source.

Flood Zone 3 (tidal) corresponds to a **0.5% AEP tidal flood**.

Based on Adur SFRA:

- Depths in extreme events can exceed 1.0m externally
- Speed of onset may be rapid in breach scenarios
- Standard of Protection relates to Shoreham tidal defences, but residual risk remains

Development does not obstruct tidal flow nor reduce storage.

2.3.2 Residual tidal risk

Residual risk includes:

- Overtopping
- Breach of tidal defences
- Extreme 0.1% AEP + climate change scenario

The dwelling provides a safe refuge on the first floor and flat roof above predicted breach flood levels.

2.4 Surface water flood risk

2.4.1 Design flood event

According to the Long-Term Flood Risk Map:

- The site is at **low risk** from surface water flooding
- Any flows originate from the surrounding road network
- Depths are typically <300 mm in the area

2.4.2 Residual risk

Residual surface water risk remains low.

The proposal does not alter ground levels or flow paths.

2.5 Sewer flood risk

Southern Water data identifies no sewer flooding incidents for West Beach.

No increased impermeable area is proposed

Fins Is at the top (highest point) of the sewer run, so unlikely to backflow / flood,

2.6 Groundwater flood risk

The SFRA notes some tidal-groundwater interaction in the wider Shoreham Harbour cell.

For this site, risk is low. No basements or below-ground structures are present or proposed.

2.7 Reservoir flood risk

No reservoir flood risk affects this location.

2.8 Canals and other artificial sources of flood risk

No canals, pumps, docks, or industrial water storage structures nearby that affect the site.

2.9 Coastal erosion risk implications on tidal flood risk

West Beach is defended and within a managed coastal frontage under the Shoreline Management Plan (SMP).

The proposal does not impact erosion management.

2.10 Interactions of various sources

Interaction may occur between:

- Tidal flooding
- Surface water
- Tide-locking of fluvial discharge

These interactions do not materially change the minor nature of the proposal.

2.11 Design flood level according to all the sources identified

Using SFRA tidal breach levels for Shoreham:

- **Design flood level:** approx. 4.6–5.0 m AOD (location-specific)
- **Residual 0.1% event:** potentially up to 5.5–6.0 m AOD

First-floor and Roof refuge level typically exceed these levels.

2.12 Exception Test

The proposal **does not** require the Exception Test because:

- It is minor development to an existing dwelling
- It does not introduce new dwellings or intensification

2.13 Summary of flood risks

Flood Source	Design Flood Level	Residual Risk Level	Notes
Tidal	High	High	Main source
Fluvial	Low–Moderate	Moderate	Influenced by tidal locking
Surface water	Low	Low	No impact from works
Groundwater	Low	Low	No basements
Sewer	Very Low	Very Low	

3 Avoid flood risk

3.1 Evidence of the Sequential Test

As minor householder development, the Sequential Test **does not apply** (NPPF paragraph 175).

3.2 Sequential Approach

All works occur within the footprint of the existing dwelling.

No alternative layout is possible or required.

4 Control flood risk

4.1 Proposed site levels

- No land raising
- No changes to ground levels
- Finished floor levels remain unchanged

4.2 Flood flow route

The proposal does not obstruct overland flow; wall insulation does not project significantly into any flow route. Both sides of the property provide free flowing access to lower lying land.

4.3 Existing or proposed flood risk management infrastructure

The development does not rely on new infrastructure.

Shoreham tidal defences provide the area's baseline protection.

5 Mitigate flood risk

5.1 Risk to people

Mitigation measures include:

- First-floor safe refuge above predicted flood levels
- Registration for EA Flood Warnings
- A household flood plan
- Awareness of evacuation routes toward high ground inland

5.2 Risk to property/building

The works improve resilience by:

- Installing flood-resistant external insulation and render
- Upgrading glazing to modern, more resilient systems
- Avoiding internal level changes
- Ensuring ventilation, insulation boards, adhesives, and render systems are flood-resilient where practically feasible

5.3 Risk to essential services

Key services (electric sockets, boiler, consumer unit) will remain above ground-floor flood-risk thresholds.

5.4 Floodplain storage and conveyance compensation

The works **do not reduce floodplain storage** because:

- No ground raising
- No increase in building footprint
- Insulation thickness is negligible in hydraulic terms

5.5 Surface water management

No additional impermeable area is created.

Downpipes and drainage remain unchanged.

6. Manage flood risk

6.1 Safe access and escape

Dry access cannot be guaranteed during extreme tidal events.

A safe refuge is available on the first floor.

6.2 Evacuation plan

Before a forecast flood:

- Monitor EA Flood Warnings
- Evacuate early toward A259 corridor and higher inland areas
- Do not rely on emergency services during peak events

6.3 Residual flood risk

Residual tidal breach risk remains high.

Managed by:

- Flood warnings
- First-floor refuge
- Flood-resilient materials
- Emergency plan

6.4 Betterment provision

The proposal improves resilience through:

- Modern flood-resistant façade materials
- Upgraded windows and seals
- No negative impact on neighbours or floodplain behaviour

7. Summary of measures

- **Avoid:** No new footprint; minor alterations only
- **Control:** No ground raising; no change to flow routes
- **Mitigate:** Resilient materials, safe refuge, improved façade, raised services
- **Manage:** Flood warnings, evacuation plan, first-floor safety