

Flood Risk Assessment (FRA) template

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1 Site description

1.1 Site address

4 Warwick Place, Worthing, West Sussex, BN11 3EU

1.2 Vulnerability classification

More vulnerable. The site comprises an existing residential dwelling with sleeping accommodation at first and second-floor levels. The proposal relates to external alterations and an ancillary single-bay solar car port and does not create any additional dwelling or intensify the residential use.

1.3 Flood zone incompatibility

The site is located within Flood Zone 1 and the proposed residential development is compatible with this flood zone. The site is not located within Flood Zone 2, Flood Zone 3a or the functional floodplain. The council has, however, identified current or future surface-water flood risk, which is considered separately within this assessment.

1.4 Lifetime of development

A development lifetime of 100 years has been assumed for the residential dwelling. The proposed works comprise alterations to an existing building and ancillary development and are intended to remain in place for the lifetime of the property.

1.5 Local Plan policies and SFRA recommendations

The assessment has regard to the current Adur and Worthing Strategic Flood Risk Assessment and relevant local and national planning policies concerning flood risk, climate change and surface-water management. The proposal does not increase the building footprint or materially increase impermeable area, and existing drainage arrangements will be retained. The development is therefore considered consistent with the objective of avoiding increased flood risk on or off the site.

2 Assess flood risk

2.1 Existing site

The application site comprises an existing mid-terrace dwelling and associated hardstanding parking land located opposite the property. The proposal consists of external alterations to the dwelling and erection of a lightweight single-bay solar car port on the existing hardstanding. No extension to the dwelling, land raising or material increase in impermeable surfacing is proposed. Existing ground levels, access arrangements and drainage infrastructure will remain substantially unchanged.

2.2 Fluvial flood risk

2.2.1 Design flood event

The site is located within Flood Zone 1 and is therefore at low risk of fluvial flooding. The proposed development comprises external alterations to an existing dwelling and the erection of a detached single-bay solar car port on existing hardstanding. No increase in flood risk from fluvial sources is anticipated.

2.2.2 Residual fluvial risk

Residual fluvial flood risk is considered to be very low. The proposal does not alter existing ground levels, watercourses or flow paths and will not increase flood risk on or off the site.

2.3 Tidal flood risk

2.3.1 Design flood event

The site is not identified as being at significant risk of tidal flooding. The proposed development does not increase vulnerability to tidal flood risk.

2.3.2 Residual tidal risk

Residual tidal flood risk is considered to be low. The proposal comprises alterations to an existing building only and does not increase flood risk.

2.4 Surface water flood risk

2.4.1 Design flood event

The Local Planning Authority has identified that the site is within an area of current or future surface water flood risk. The proposal comprises external alterations to an existing dwelling together with a detached single-bay solar car port on an existing hardstanding parking area. The proposal does not increase the building footprint, does not significantly

increase impermeable surfacing and retains the existing drainage arrangements. Surface water runoff characteristics are therefore expected to remain substantially unchanged.

2.4.2 Residual risk

The Local Planning Authority has identified that the site is within an area of current or future surface water flood risk. The proposal comprises external alterations to an existing dwelling together with a detached single-bay solar car port on an existing hardstanding parking area. The proposal does not increase the building footprint, does not significantly increase impermeable surfacing and retains the existing drainage arrangements. Surface water runoff characteristics are therefore expected to remain substantially unchanged.

2.5 Sewer flood risk

The property is connected to the existing public sewer network. The proposal retains the existing drainage arrangements and is not expected to increase foul or surface water discharge. The risk of sewer flooding is therefore not increased by the proposed development.

2.6 Groundwater flood risk

There is no evidence that groundwater flooding presents a significant constraint to the proposed development. The proposal does not involve excavation or changes to groundwater conditions.

2.7 Reservoir flood risk

The site is not considered to be significantly affected by reservoir flooding. The proposed development does not increase vulnerability to this source of flooding.

2.8 Canals and other artificial sources of flood risk

There are no canals or other artificial water bodies adjacent to the site that are considered likely to pose a significant flood risk. The proposal does not affect any artificial flood management infrastructure.

2.9 Coastal erosion risk implications on tidal flood risk

The proposal is not expected to be affected by coastal erosion. No changes are proposed that would alter tidal flood risk or coastal processes.

2.10 Interactions of various sources

The potential interactions between fluvial, tidal, surface water, sewer and groundwater flooding have been considered. Surface water flooding represents the principal source of potential flood risk identified by the Local Planning Authority. The proposed development

does not materially alter the existing site characteristics and is therefore not expected to increase the interaction between these flood sources.

2.11 Design flood level according to all the sources identified

Given the nature of the proposal and the low level of flood risk from all identified sources, no specific design flood level is required. The proposal comprises external alterations to an existing dwelling and does not introduce additional vulnerable accommodation or alter existing floor levels.

2.12 Exception Test

The Exception Test is not required. The site is located within Flood Zone 1 and the proposal comprises external alterations to an existing dwelling.

2.13 Summary of flood risks

The site lies within Flood Zone 1 and is at low risk of fluvial flooding. Although the site is identified as being within an area of current or future surface water flood risk, the proposal consists solely of external alterations to an existing dwelling together with a detached single-bay solar car port on an existing hardstanding area. The development does not increase the building footprint, impermeable area or runoff rates and retains the existing drainage arrangements. The proposal is therefore not expected to increase flood risk either on or off the site.

3 Avoid flood risk

3.1 Evidence of the Sequential Test

A Sequential Test is not required for this proposal. The development comprises external alterations to an existing dwelling and ancillary works on an existing residential site. The proposal cannot reasonably be located elsewhere.

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3.2 Sequential Approach

The proposal makes use of an existing developed site and does not extend the building footprint or introduce additional residential units. Existing drainage arrangements are retained and the development has been designed to avoid increasing flood risk. The proposal therefore follows the principles of the sequential approach by making efficient use of previously developed land without increasing flood risk.
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4 Control flood risk

4.1 Proposed site levels

The proposal does not involve any changes to existing ground levels or finished floor levels. The existing topography of the site will remain unchanged.

4.2 Flood flow route

The proposal will not obstruct existing overland surface water flow routes. No buildings or structures are proposed within identified flow paths that would divert flood water or increase flood risk elsewhere.

4.3 Existing or proposed flood risk management infrastructure

No existing flood defence infrastructure is affected by the proposed development and no new flood defence measures are required. Existing drainage arrangements will be retained.

5 Mitigate flood risk

5.1 Risk to people

The proposal comprises external alterations to an existing dwelling and does not introduce additional residential units or increase occupancy. The development therefore does not increase flood risk to people.

5.2 Risk to property/building

The proposal does not increase the building footprint or alter the existing floor levels. The risk to the property remains comparable with the existing situation and is not increased by the proposed development.

5.3 Risk to essential services

Existing utility connections and essential services will remain in their current locations. The proposal does not increase the vulnerability of essential services to flooding.

5.4 Floodplain storage and conveyance compensation

The proposal is located within Flood Zone 1 and does not affect floodplain storage or flood conveyance. No compensatory flood storage measures are required.

5.5 Surface water management

Existing surface water drainage arrangements will be retained. The proposal does not materially increase impermeable surfacing or surface water runoff. Rainwater will continue to discharge via the existing drainage system.

6. Manage flood risk

6.1 Safe access and escape

Existing pedestrian and vehicular access arrangements remain unchanged. The proposal does not alter the existing means of access or escape from the property.

6.2 Evacuation plan

A site-specific evacuation plan is not considered necessary due to the nature and scale of the proposal. Occupants would continue to follow Environment Agency flood warnings and emergency advice where appropriate.

6.3 Residual flood risk

Residual flood risk following completion of the development is considered to remain comparable with the existing situation. The proposal does not increase flood risk from any identified source.

6.4 Betterment provision

Although the proposal does not significantly alter flood risk, it represents a betterment over the existing situation through the refurbishment and long-term maintenance of the existing building. Existing drainage arrangements are retained, no increase in building footprint or impermeable area is proposed, and the development will not increase runoff or flood risk elsewhere.

7. Summary of measures

The proposed development comprises external alterations to an existing dwelling together with the erection of a detached single-bay solar car port on an existing hardstanding parking area. The site is located within Flood Zone 1. Although the Local Planning Authority has identified current or future surface water flood risk, the proposal does not increase the building footprint, alter existing ground levels, increase impermeable surfacing or affect existing drainage arrangements. The development will not obstruct overland flow routes or increase flood risk on or off the site. Existing access arrangements are retained and no additional flood mitigation measures are considered necessary. Overall, the proposal is considered acceptable in flood risk terms and complies with national planning policy and the Environment Agency's standing advice.