	Strategic Flood Risk Assessment **Detailed Site Summary Tables** **Fishermans Wharf**	

Site details	
Site Code	**SH/012/18**
Address	Fishermans Wharf
Area	1.1ha
Current land use	Brownfield - Commercial
Proposed land use	Residential
Flood Risk Vulnerability	More Vulnerable
Sources of flood risk	
Location of the site within the administrative area	The site is located to the east of Shoreham-by-Sea, directly north of the River Adur. The site currently consists of commercial land-use and vehicle storage, accessed via Brighton Road to the north.
Topography	The Environment Agency's 1m resolution 2022 Composite LiDAR shows that the topography of the site is relatively flat, declining from approximately 4.5mAOD in the west to approximately 4.2mAOD in the east. Small areas of higher land are located in the south west of the site. *Fishermans Wharf - Topography*
Existing drainage features	The River Adur is situated directly south of the site, flowing in an easterly direction. Existing drainage features will already be present at the site.
Flood Map for Planning (Rivers and Sea)	**Available data and mapping:** Environment Agency Flood Map for Planning for Rivers and Sea. *Fishermans Wharf - FMfP* **Data analysis:** Details of the sites location within each Flood Zone are provided within the SFRA Site Screening Appendix. **Flood characteristics:** The south of the site is located within Flood Zone 3 of the Flood Map for Planning for rivers and sea. Small areas in the centre and the north-east are located in Flood Zone 2 with the remainder of the site located in Flood Zone 1. • Flood Zone 1 represents areas which have less than a 1 in 1000 (0.1%) chance of river or tidal flooding in a given year. • Flood Zone 2 represents areas which have less than 1 in 100 (1%) but greater than 1 in 1000 (0.1%) chance of river flooding or less than 1 in 200 (0.5%) but greater than 1 in 1000 (0.1%) chance of tidal flooding in a given year. • Flood Zone 3 representing an area greater than 1 in 100 (1%) chance of river flooding in a given year or greater than 1 in 200 (0.5%) chance of tidal flooding. Surface Water flooding should be considered. It is understood that additional Surface Water datasets will be published in 2025.

	Strategic Flood Risk Assessment **Detailed Site Summary Tables** **Fishermans Wharf**	

Tidal

Available data and mapping: 2025 Arun-Adur modelling – defended scenario.

Depth
Fishermans Wharf – Tidal – Present Day – 3.3%
Fishermans Wharf – Tidal – Present Day – 0.5%
Fishermans Wharf – Tidal – Present Day – 0.1%
Hazard
Fishermans Wharf – Tidal – Present Day – 3.3%
Fishermans Wharf – Tidal – Present Day – 0.5%
Fishermans Wharf – Tidal – Present Day – 0.1%
Velocity
Fishermans Wharf – Tidal – Present Day – 3.3%
Fishermans Wharf – Tidal – Present Day – 0.5%
Fishermans Wharf – Tidal – Present Day – 0.1%

Data analysis: Details of the site's location within the 2025 Arun-Adur modelling are provided within the Level 2 SFRA Site Screening Appendix.

0.5% AEP (1 in 200 year) event:

Proportion – 19%

Max Depth – 0.28m	Mean Depth – 0.10m
Max Velocity – 0.34m/s	Mean Velocity – 0.08m/s
Max Hazard – 1.14 (danger to some)	Mean Hazard – 0.57 (very low hazard)

0.1% AEP (1 in 1000 year) event:

Proportion – 28%

Max Depth – 0.46m	Mean Depth – 0.20m
Max Velocity – 0.46m/s	Mean Velocity – 0.11m/s
Max Hazard – 1.24 (danger to some)	Mean Hazard – 0.79 (very low hazard)

Flood characteristics: The site is not shown to flood in the 3.3%AEP.

During the 0.5% AEP event, floodwater is shown to encroach on the south and east of the site.

During the 0.1% AEP event, a flow path is shown across the east of the site, with the flood extent reaching Brighton Road to the north of the site. The mean depth, velocity and hazard are shown to be 0.420m, 0.11m/s and 0.79 (a 'danger to some') for the 0.1% AEP tidal event, respectively.

For analysis of this site. The site southern site boundary was adjusted due to overlap with the River Adur channel.

Tidal with Climate Change

Available data and mapping: Arun-Adur modelling – defended. The Environment Agency guidance recommends that the Higher Central (55%) and Upper End (107%) allowance is considered.

Depth – 70th percentile (higher central)
Fishermans Wharf – Tidal – Future – 3.3%
Fishermans Wharf – Tidal – Future – 0.5%
Hazard - 70th percentile (higher central)

Fishermans Wharf – Tidal – Future – 3.3%
Fishermans Wharf – Tidal – Future – 0.5%
Velocity -70th percentile (higher central)
Fishermans Wharf – Tidal – Future – 3.3%
Fishermans Wharf – Tidal – Future – 0.5%
Depth – 95th percentile (upper end)
Fishermans Wharf – Tidal – Future – 3.3%
Fishermans Wharf – Tidal – Future – 0.5%
Hazard - 95th percentile (upper end)
Fishermans Wharf – Tidal – Future – 3.3%
Fishermans Wharf – Tidal – Future – 0.5%
Velocity -95th percentile (upper end)
Fishermans Wharf – Tidal – Future – 3.3%
Fishermans Wharf – Tidal – Future – 0.5%

Data analysis: Details of the site's location within the 2025 Arun-Adur modelling are provided within the Level 2 SFRA Site Screening Appendix

3.3% AEP (1 in 30 year) + Higher Central Climate Change event:

Proportion – 90%

Max Depth – 0.95m	Mean Depth – 0.42m
Max Velocity – 1.08 m/s	Mean Velocity – 0.14m/s
Max Hazard – 1.77 (danger to most)	Mean Hazard – 1.17 (danger to some)

3.3% AEP (1 in 30 year) + Upper End Climate Change event:

Proportion – 93%

Max Depth – 1.22m	Mean Depth – 0.65m
Max Velocity – 0.79m/s	Mean Velocity – 0.19m/s
Max Hazard – 2.14 (danger to all)	Mean Hazard – 1.41 (danger to most)

0.5% AEP (1 in 200 year) + Higher Central Climate Change event:

Proportion – 92%

Max Depth – 1.12m	Mean Depth – 0.57m
Max Velocity – 0.70m/s	Mean Velocity – 0.16m/s
Max Hazard – 2.01 (danger to all)	Mean Hazard – 1.33 (danger to most)

0.5% AEP (1 in 200 year) + Upper End Climate Change event:

Proportion – 93%

Max Depth – 1.37m	Mean Depth – 0.80m
Max Velocity – 0.81m/s	Mean Velocity – 0.22m/s
Max Hazard – 2.38 (danger to all)	Mean Hazard – 1.54 (danger to most)

Flood characteristics: The site is shown to flood in all climate change tidal events, with all events showing a coverage above 90%. For all events a small area in the south west of the site is no affected, this area corresponds with higher ground levels, as seen in the LiDAR. The hazard rating for all events across the site is 'danger to most' or above.

	Strategic Flood Risk Assessment **Detailed Site Summary Tables** **Fishermans Wharf**	
Surface Water	**Available data and mapping:** Environment Agency Risk of Surface Water flooding for the 3.3%, 1% and 0.1% AEP events. It should be noted that the data discussed below relates to the available surface water data prior to March 2025, as the newly released data does not include depth, hazard and velocity information. A comparison of the two surface water flooding datasets is discussed below and are detailed within the Site Screening document undertaken as part of the Level 2 SFRA**.** *Fishermans Wharf – Surface Water Depth – Present Day – 3.3%* *Fishermans Wharf – Surface Water Depth – Present Day – 1%* *Fishermans Wharf – Surface Water Depth – Present Day – 0.1%* *Fishermans Wharf – Surface Water Hazard – Present Day – 3.3%* *Fishermans Wharf – Surface Water Hazard – Present Day – 1%* *Fishermans Wharf – Surface Water Hazard – Present Day – 0.1%* *Fishermans Wharf – Surface Water Velocity – Present Day – 3.3%* *Fishermans Wharf – Surface Water Velocity – Present Day – 1%* *Fishermans Wharf – Surface Water Velocity – Present Day – 0.1%* *Fishermans Wharf – Surface Water – Present Day – NAFRA2* **Data analysis:0.1% AEP (1 in 1000 year) event:** Proportion – 4% Max Depth – 0.26m Mean Depth – 0.16m Max Velocity – 0.96m/s Mean Velocity – 0.24m/s Max Hazard – 1.19 (danger to some) Mean Hazard – 0.61 (caution) **NAFRA2 - 3% AEP (1 in 30 year) event:** Proportion – 3% **NAFRA2 - 1% AEP (1 in 100 year) event:** Proportion – 6% **NAFRA2 - 0.1% AEP (1 in 1000 year) event:** Proportion – 10% **Description of surface water flow paths:** The site is not shown to flood in the 3.3% or 1%AEP events**.** The site is shown to flood during the 0.1% AEP event, with localised areas of surface water flooding observed in the west and across the eastern site boundary. The mean depth, velocity and hazard are shown to be 0.16m, 0.24m/s and 0.61 (a 'caution'), respectively. The NAFRA2 shows a greater extent of surface water flooding. In all three scenarios of the March 2025 dataset, flooding is limited to the east and west boundary of the site.
Surface Water with Climate Change	**Available data and mapping:** Surface Water flooding for the 3.3%, 1% and 0.1% AEP events with climate change, using data available prior to March 2025. The Environment Agency guidance recommends that the Upper End allowance is considered for both the 3.3% and 1% AEPs for the 2070's epoch, unless the allowance for the 2050's epoch is higher, in which case this should be used. The recommended uplift on peak rainfall intensity for the 3.3% AEP is 40% and for the 1% AEP is 45%. *Depth* *Fishermans Wharf – Surface Water – Future – 3.3%+20CC*

Fishermans Wharf – Surface Water – Future – 3.3%+40CC
Fishermans Wharf – Surface Water – Future – 1%+25CC
Fishermans Wharf – Surface Water – Future – 1%+45CC
Fishermans Wharf – Surface Water – Future – 0.1%+25CC
Fishermans Wharf – Surface Water – Future – 0.1%+45CC
Hazard
Fishermans Wharf – Surface Water – Future – 3.3%+20CC
Fishermans Wharf – Surface Water – Future – 3.3%+40CC
Fishermans Wharf – Surface Water – Future – 1%+25CC
Fishermans Wharf – Surface Water – Future – 1%+45CC
Fishermans Wharf – Surface Water – Future – 0.1%+25CC
Fishermans Wharf – Surface Water – Future – 0.1%+45CC
Velocity
Fishermans Wharf – Surface Water – Future – 3.3%+20CC
Fishermans Wharf – Surface Water – Future – 3.3%+40CC
Fishermans Wharf – Surface Water – Future – 1% +25CC
Fishermans Wharf – Surface Water – Future – 1% +45CC
Fishermans Wharf – Surface Water – Future – 0.1%+25CC
Fishermans Wharf – Surface Water – Future – 0.1%+45CC

Data analysis:1% AEP (1 in 100 year) + 25% Climate Change event:

Proportion – 4%
Max Depth – 0.26m
Mean Depth – 0.16m
Max Velocity – 0.95m/s
Mean Velocity – 0.23m/s
Max Hazard – 1.18 (danger to some)
Mean Hazard – 0.61 (caution)

1% AEP (1 in 100 year) + 45% Climate Change event:

Proportion – 6%
Max Depth – 0.27m
Mean Depth – 0.16m
Max Velocity – 1.03m/s
Mean Velocity – 0.24m/s
Max Hazard – 1.21 (danger to some)
Mean Hazard – 0.62 (caution)

0.1% AEP (1 in 1000 year) + 25% Climate Change event:

Proportion – 15%
Max Depth – 0.32m
Mean Depth – 0.16m
Max Velocity – 1.14m/s
Mean Velocity – 0.31m/s
Max Hazard – 1.29 (danger to most)
Mean Hazard – 0.66 (caution)

0.1% AEP (1 in 1000 year) + 45% Climate Change event:

Proportion – 18%
Max Depth – 0.34m
Mean Depth – 0.17m
Max Velocity – 1.18m/s
Mean Velocity – 0.33m/s
Max Hazard – 1.32 (danger to most)
Mean Hazard – 0.69 (caution)

Description of surface water flow paths: The site is shown to flood during the 1% and 0.1% AEP climate change events, covering up to 18% of the site. A surface water flow path occurs along the eastern boundary, of the site, flowing in a southerly direction, and pools to the west of the

	site. The mean depth of the water is 0.16m. This coverage increases in the 0.1%AEP scenario, with an additional flow path running through the centre of the site. A small proportion of the site is considered to be 'danger to most' in the hazard rating, these areas are limited to the site boundaries.
Tidally influenced Surface Water Risk Zone	**Available data and mapping:** JBA's Tidally influenced Surface Water Risk Zones derived using the RoFSW data, the Present day 1% AEP extreme tidal level, LiDAR data and the Environment Agency's climate change sea level uplift allowance for South East England. *Fishermans Wharf – Tidal Drainage Risk Zones* **Flood characteristics:** The majority of the site is shown to be located within SW1 within the Surface Water Risk Zone mapping. A small, localised patch in the north-west of the site is located in SW2, along with the area across the southern site boundary, with a small, localised patch in the south-east also localised in SW3. • SW0 - Above the future tidal level. • SW1 - Not at risk of SW flooding and above the current tidal level but below the future tidal level. • SW2 - Not at risk of SW flooding but below the present-day tidal level OR at risk of SW flooding from climate change only and above the current day tidal level but below future tidal level. • SW3 - At risk of SW flooding from climate change only and below the present-day tidal level OR At risk of SW flooding without climate change and above current day tidal level but below future tidal level. • SW4 - At risk of SW flooding without climate change and below present-day tidal level.
Groundwater	**Available data and mapping:** The JBA Groundwater Flood Data Map (GW5) is provided as a 5m resolution grid. *Fishermans Wharf – Groundwater Flood Risk* **Flood characteristics:** During a 1% AEP groundwater flood event, groundwater levels are predominantly shown to be 'low risk'.
Tidally influenced Groundwater Risk Zone	**Available data and mapping:** JBA's Tidally influenced Groundwater Risk Zones derived using the JBA Groundwater data, the British Geological Society 50k bedrock mapping, the Present day 1% AEP extreme tidal level, LiDAR data and the Environment Agency's climate change sea level uplift allowance for South East England. *Fishermans Wharf – Groundwater Risk Zones* **Flood characteristics:** The majority of the site is located within GW1 of the Groundwater Risk Zone mapping. Only small southern and eastern areas of the site are shown to be located within GW2, with raised patches of land shown to be located above the future tidal level. • GW0 - Above the future tidal level.

	• GW1 - Groundwater level more than 0.5m below the surface and region is above the current tidal level but below the future tidal level. • GW2 - Groundwater level more than 0.5m below the surface and region is below the present-day tidal level OR groundwater level between 0.025m and 0.5m below the surface and region is above the current tidal level but below the future tidal level. • GW3 - Groundwater level between 0.025m and 0.5m below the surface and region is below the present-day tidal level OR Groundwater level within 0.025m of the surface and region is above the current tidal level but below the future tidal level. • GW4 Groundwater level within 0.025m of the surface and region is below the present day tidal level.
Sewers	**Available data and mapping:** Drainage and Wastewater Management Plan (DWMP) Overview of the Adur and Ouse River Basin Catchment and Southern Water's Sewer Incident Report Form data (SIRF) at a five digit post code level. **Flood characteristics:** 28 reportable sewer incidents have occurred since 1990 within the five-digit postcode area of the proposed development site. Thes incidents have been attributed to hydraulic overload following rainfall.
Flood history	The site is not shown to be located within the Environment Agency's Recorded Flood Outlines or West Sussex County Council's flood database extent. *Fisherman Wharf – Historic Flooding*
Flood risk management infrastructure	
Existing Defences	The Environment Agency's AIMS dataset identifies one formal flood defence located directly south of the site, comprising of natural high ground. Previous developments in close proximity to this site have included private defences as part of the site design. Any defences considered will need to be discussed with the Environment Agency and Lead Local Flood Authority. *Fishermans Wharf – Defences*
Residual risk	**Available data and mapping:** 2025 Arun-Adur modelling – breach scenario. *Depth* *Fishermans Wharf – Breach A–3.3%* *Fishermans Wharf – Breach A – 0.5%* *Fishermans Wharf – Breach A – 0.1%* *Fishermans Wharf – Breach B–3.3%* *Fishermans Wharf – Breach B – 0.5%* *Fishermans Wharf – Breach B – 0.1%* *Fishermans Wharf – Breach C–3.3%* *Fishermans Wharf – Breach C – 0.5%*

	Fishermans Wharf – Breach C – 0.1% *Fishermans Wharf – Breach D –3.3%* *Fishermans Wharf – Breach D – 0.5%* *Fishermans Wharf – Breach D – 0.1%* *Fishermans Wharf – Breach E–3.3%* *Fishermans Wharf – Breach E – 0.5%* *Fishermans Wharf – Breach E – 0.1%* *Hazard* *Fishermans Wharf – Breach A–3.3%* *Fishermans Wharf – Breach A – 0.5%* *Fishermans Wharf – Breach A – 0.1%* *Fishermans Wharf – Breach B–3.3%* *Fishermans Wharf – Breach B – 0.5%* *Fishermans Wharf – Breach B – 0.1%* *Fishermans Wharf – Breach C–3.3%* *Fishermans Wharf – Breach C – 0.5%* *Fishermans Wharf – Breach C – 0.1%* *Fishermans Wharf – Breach D –3.3%* *Fishermans Wharf – Breach D – 0.5%* *Fishermans Wharf – Breach D – 0.1%* *Fishermans Wharf – Breach E–3.3%* *Fishermans Wharf – Breach E – 0.5%* *Fishermans Wharf – Breach E – 0.1%* *Velocity* *Fishermans Wharf – Breach A–3.3%* *Fishermans Wharf – Breach A – 0.5%* *Fishermans Wharf – Breach A – 0.1%* *Fishermans Wharf – Breach B–3.3%* *Fishermans Wharf – Breach B – 0.5%* *Fishermans Wharf – Breach B – 0.1%* *Fishermans Wharf – Breach C–3.3%* *Fishermans Wharf – Breach C – 0.5%* *Fishermans Wharf – Breach C – 0.1%* *Fishermans Wharf – Breach D –3.3%* *Fishermans Wharf – Breach D – 0.5%* *Fishermans Wharf – Breach D – 0.1%* *Fishermans Wharf – Breach E–3.3%* *Fishermans Wharf – Breach E – 0.5%* *Fishermans Wharf – Breach E – 0.1%* **Flood characteristics:** The site is not considered to be at risk in the breach scenarios tested; flooding at the site is not exacerbated by the breach scenarios.
Emergency planning	
Flood warning	The site is located within one Flood Alert, 'Tidal Areas of Shoreham Harbour' (065WAC408) and one Flood Warning, 'Shoreham Harbour' (065FWC3001). *Fishermans Wharf – Flood Warning*

	Future residents should be encouraged to sign up to Environment Agency flood alerts and warnings.
Access and egress	**Tidal 0.5% AEP plus 55% climate change (higher central allowance)** Access and egress across the entire site and surrounding area is limited. The hazard rating for the site and adjacent roads is rated as 'hazard for most' during the 0.5%AEP plus climate change tidal events. Depths along Brighton Road exceed 600mm. **Surface Water 1% AEP plus 45% climate change (upper end allowance)** Access and egress are shown to be affected during the 1% AEP plus climate change surface water modelling events. Access via Brighton Road, directly north of the site, is shown to be limited with depths exceeding 300mm, with a hazard rating of 'danger for some'.
Requirements for drainage control and impact mitigation	
Broad-scale assessment of possible SuDS	**Geology & Soils** The geology consists of White Chalk Subgroup comprised of chalk. The superficial deposits consist of sand and gravel. The soils are shown be loamy and clayey soils of coastal flats that can limit infiltration. The geology of the Adur District is complex; areas of chalk are often capped with small sections of clay. This can result in groundwater being trapped beneath the clay layer and surface water pooling at the surface unable to infiltrate. Groundwater may find a fissure in the clay and rise to the surface resulting in flooding that is difficult to predict in terms of location and scale. **SuDS** Implementation of SuDS at the site could provide opportunities to deliver multiple benefits including volume control, water quality, amenity and biodiversity. Evidence should be given where multiple benefits are not provided to show that this is not possible. Preference should be given to multi-functional sustainable drainage systems, and to solutions that allow surface water to be discharged according to the hierarchy of drainage options listed in the PPG Flood Risk and Coastal Change paragraph 056. The layout and function of drainage systems needs to be considered at the start of the design process for new development, as integration with road networks and other infrastructure can maximise the availability of developable land. **Suitability and considerations for sustainable drainage** In line with Defra's National Standards for Sustainable Drainage Systems, runoff from the development shall be discharged to the following final destinations, to the maximum extent practicable, in accordance with the below hierarchy: • Priority 1: collected for non-potable use

- Priority 2: infiltrated to ground
- Priority 3: discharged to an above ground surface water body
- Priority 4: discharged to a surface water sewer, or another piped surface water drainage system
- Priority 5: discharged to a combined sewer

SuDS measures should follow West Sussex County Council's discharge hierarchy, and if it is proposed to discharge runoff to a watercourse or sewer system, the condition and capacity of the receiving watercourse or asset should be confirmed through surveys and the discharge rate agreed with the asset owner based on the National Standards for SuDS.

Surface water discharge rates should not exceed pre-development discharge rates and aim to be restricted to Greenfield Qbar. If that is not possible; flow should be restricted to as close to Qbar as is achievable. A relaxation factor shall be applied to the target 50% and 1% AEP greenfield runoff rates, this relaxation factor should be no greater than five times the greenfield runoff rate. This should be done in consultation with the LLFA.

It may be possible to reduce site runoff by maximising the permeable surfaces on site using a combination of permeable surfacing and soft landscaping techniques.

The majority of the site is not considered to be susceptible to groundwater flooding (low risk), therefore infiltration is likely to be feasible. Site investigation work and additional groundwater monitoring is recommended to determine the seasonal variability of groundwater levels, as this may affect the design of the surface water drainage system. The infiltration potential of the site should be confirmed through infiltration testing, in line with BRE 365 or similar.

Groundwater levels are shown to be influenced by tide levels. The capacity for infiltration needs to take into account the impact of future sea levels. The influence of tide levels on groundwater levels should be investigated through groundwater monitoring.

The topography of the site is unlikely to affect any proposed SuDS features. Any water not intercepted via infiltration is likely to drain towards the River Adur. It is therefore recommended that the LLFA and the EA are consulted about viable discharge locations for surface water from the site and their attenuation potential.

The site is located within a Nitrate Vulnerable Zone. Therefore, early engagement with the LLFA and the EA is recommended to determine requirements for the site to manage the impact to surrounding watercourses. Consideration of water quality is likely to be of high importance and demonstrated through the use of the Simple Index Approach.

The site has not been identified to be located within a historic landfill site or a groundwater Source Protection Zone.

Opportunities for wider sustainability benefits and integrated flood risk management	• Implementation of SuDS at the site could provide opportunities to deliver multiple benefits including volume control, water quality, amenity and biodiversity. This could also provide wider sustainability benefits to the site and surrounding area. Proposals to use SuDS techniques should be discussed with relevant stakeholders (LPA, LLFA and EA) at an early stage to understand possible constraints. • The design of the surface water management proposals should take into account the impacts of future climate change over the projected lifetime of the development. • Opportunities to incorporate source control techniques such as green roofs, permeable surfaces and rainwater harvesting must be considered in the design of the site. • SuDS are to be designed so that they are easy to maintain, and it should be set out who will maintain the system, how the maintenance will be funded and should be supported by an appropriately detailed maintenance and operation manual. • SuDS should be designed with a holistic approach, combining ecology, landscape and drainage requirements specific to the site, and incorporating Biodiversity Net Gain requirements. • Opportunities to incorporate filtration techniques such as filter strips, filter drains and bioretention areas must be considered. Consideration should be made to the existing condition of receiving waterbodies and their Water Framework Directive objectives for water quality. The use of multistage SuDS treatment will improve water quality of surface water runoff discharged from the site and reduce the impact on receiving water bodies. • The potential to utilise conveyance features such as swales to intercept and convey surface water runoff should be considered. Conveyance features should be located on common land or public open space to facilitate ease of access. • SuDS should be designed in line with the National Standards for Sustainable Drainage Systems.
NPPF and planning implications	
Exception Test requirements **(Local Authority considerations)**	The Local Authority will need to confirm that the Sequential Test has been carried out in line with national guidelines. The Sequential Test will need to be passed before the Exception Test is applied. In addition, once the sequential test has been passed, a sequential approach to development should still be undertaken. The site is located partially within Flood Zone 3 according to the Environment Agency's Flood Map for Planning and also shown to be at tidal risk in the 2025 Arun-Adur detailed modelling and surface water flood risk. The NPPF classifies the usage as "More Vulnerable". The Exception Test is therefore required for this site due to the severity of flooding. A site specific FRA will be required for this site.
Requirements and guidance for site-specific Flood Risk Assessment	**Flood Risk Assessment:** The Level 1 SFRA has more guidance on this section and any relevant policies and information applicable to development within Adur District. • All sources of flooding should be included as part of the site specific FRA.

(Developer considerations)	• The most recent risk of Flooding from Surface Water dataset should be used. • Consultation with Adur and Worthing Councils, West Sussex County Council, and where relevant the Environment Agency and Southern Water should be undertaken at an early stage. • Development within 16m of a tidal main river, a tidal river flood defence or culvert or a sea defence is likely to require a flood risk activities permit: https://www.gov.uk/guidance/flood-risk-activities-environmental-permits. If development is within 20m of a main river, flood defence or flow control structure the developer will need to check with the Environment Agency if a separate permit or consent is needed. • Development plans should consider the Level 1 and 2 SFRA for Adur, as well as the Local Flood Risk Management Strategies to identify cumulative flood risk issues. The Cumulative Impact Assessment (CIA) completed as part of the Level 1 SFRA, highlights that the East Adur catchment, is at a high risk of cumulative impacts. The risk of cumulative impacts of this development and others in the local area on flood risk should be considered within the site-specific flood risk assessment. It should also promote an integrated approach to water management. • The site is included within the Shoreham Harbour Joint Area Action Plan. Policies outlined within this strategy document should be followed and relevant stakeholders consulted. • Applicants are expected to provide fully detailed plans of the site's existing surface water drainage arrangements, including impermeable areas, gullies, outfalls, pipes & diameters, manholes, etc., to prove the extent of the existing positively drained areas and their associated points of discharge. **Guidance for site design and making development safe:** • The developer will need to show, through an FRA, that future users of the development will not be placed in danger from flood hazards throughout its lifetime. It is for the applicant to show that the development meets the objectives of the NPPF's policy on flood risk. For example, how the operation of any mitigation measures can be safeguarded and maintained effectively through the lifetime of the development. (Para 048 Flood Risk and Coastal Change PPG). • The risk from surface water flow routes should be quantified as part of a site-specific FRA, including a drainage strategy, so runoff magnitudes from the development are not increased by development across any ephemeral surface water flow routes (temporary/seasonal surface water flow paths). • Development design should prioritise avoiding development within surface water flow paths, including off-site flow paths. Any loss in surface water flood storage will require on-site level for level compensatory storage, so that any displaced volumes of water do not increase surface water flood risk within the site or elsewhere. • The site is located within a surface water risk zone and therefore surface water drainage systems are likely to be influenced by tide levels. The drainage strategy should consider the risk of tide locking.

- A drainage strategy should be prepared to understand infiltration capacity at the site given the underlying chalk geology and risk of groundwater emergence.
- Following groundwater monitoring, development should be directed away from areas of high groundwater risk.
- Arrangements for safe access and egress are unlikely to be possible due to the severity of flooding and will need to be considered further within a site-specific FRA for the tidal and surface water events with an appropriate allowance for climate change, using the depth, velocity, and hazard outputs. This will need to accompany a Flood Response Plan for the site and its users.
- The Flood Response Plan should consider arrangements for safe use, access and egress of the site in a breach event due to the speed of onset and maximum flood depths recorded.
- The design and layout of development at the site will need to consider the impact of tidal and surface water flow paths. A sequential approach to development should be undertaken with development located in the areas of lowest risk within the site boundary. The site layout should make space for water and seek to avoid obstructing offsite flow paths and avoid off site detriment.
- As outlined in the PPG, the Finished Floor Levels of the development should be raised to a minimum of whichever is higher of 600mm above the:
    - Average ground level of the site
    - Adjacent road level to the building
    - Estimated river or sea flood level

It is suggested that flood resilient design is adopted in the construction of development. The PPG sets out that flood resistant material that have low permeability should be used to at least 600mm above the estimated flood level; flood resilient materials to at least 600mm above the estimated flood level and raising of electrical equipment at least 600mm above the estimated flood level.

Key messages

The site is identified to be at high risk of flooding. According to the 2025 Arun-Adur modelling, the site is situated 3% in Flood Zone 3b, 16% in Flood Zone 3a and 9% in Flood Zone 2. 92% of the site is shown to flood during the tidal design event (0.5% AEP plus 55% climate change allowance).

The site is a low risk of surface water flooding. 6% of the site is shown to flood during the surface water design event (1% AEP plus 45% climate change allowance).

The key access route to the site is via Brighton Road. During both the tidal and surface water design events, flooding is predicted along this access routes. Detailed consideration into site access and egress will be required.

Given the high flood risk posed to the site, development will only be able to progress if:

- The Exception Test is satisfied.
- A sequential approach to development is undertaken. Layout and design should aim to avoid developing in the areas of greatest flood risk.
- Mitigation measures are incorporated to reduce the risk of flooding to the development. Early consultation should be held with the Environment Agency to discuss this.
- A site-specific Flood Risk Assessment, including detailed modelling, is undertaken to assess the risk of tidal and surface water flooding in relation to the proposed development, and the access and egress arrangements.
- Infiltration rates and groundwater levels are assessed on site as part of a drainage strategy, including consideration of the impact of tide levels on infiltration.
- Consideration is given to the safe access and egress to the site during the design flood event. A Flood Response Plan should be prepared in line with ADEPT guidance.
- Finished floor levels are raised to a minimum of whichever is higher of 600mm above the average ground level of the site, the adjacent road level to the building or the estimated river or sea flood level. The flood level is for the design event (tidal flood level plus higher central climate change allowance, surface water flood level plus upper end)

Sources of information

National Planning Policy Framework (NPPF)

https://assets.publishing.service.gov.uk/media/67aafe8f3b41f783cca46251/NPPF_December_2024.pdf

Planning Practice Guidance (PPG), Flood Risk and Coastal Change

https://www.gov.uk/guidance/flood-risk-and-coastal-change

Flood Map for Planning (NaFRA2 2025)

https://www.data.gov.uk/dataset/104434b0-5263-4c90-9b1e-e43b1d57c750/flood-map-for-planning-flood-zones1

Long Term Flood Risk

Where do you want to check? - Check your long term flood risk - GOV.UK

Shoreham Harbour Joint Area Action Plan

https://www.adur-worthing.gov.uk/media/Media,156282,smxx.pdf

British Geological Survey (BGS) Geology Viewer

https://geologyviewer.bgs.ac.uk/

Southern Water's Drainage and Wastewater Management Plan

https://www.southernwater.co.uk/about-us/our-plans/drainage-and-wastewater-management-plans/

National standards for sustainable drainage systems (SuDS)

https://www.gov.uk/government/publications/national-standards-for-sustainable-drainage-systems/national-standards-for-sustainable-drainage-systems-suds

Flood Warning sign up

https://www.gov.uk/sign-up-for-flood-warnings