

Project:	AEG9742_BN14_Worthing_01		
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Flood Risk and Surface Water Drainage Statement

Introduction

Aegaea were commissioned by Dan MacLeod to undertake a Flood Risk and Surface Water Drainage Statement for the development at 132b Pavillion Road, Worthing, West Sussex, BN14 7EL. Worthing Borough Council team for Flood Risk and Drainage matters have outsources to WSP.

The Sustainable Water Management Office on behalf of WSP provided a letter (dated 16/09/2025) stating:

A Flood Risk Assessment and review of surface water from the site in a range of rainfall event and ensuring the SuDS proposed operates as designed for the lifetime of the development.

This report is intended to support the planning application and as such the level of detail included is commensurate and subject to the nature of the proposals.

Site Overview

The site of the proposed development is 132 Pavillion Road, Worthing, West Sussex, BN14 7EL (Figure 1).

It is understood that the existing site consists of a commercial space at the ground floor with two residential flats (132a and 132b) above spanning across the first and second floor/roof level.

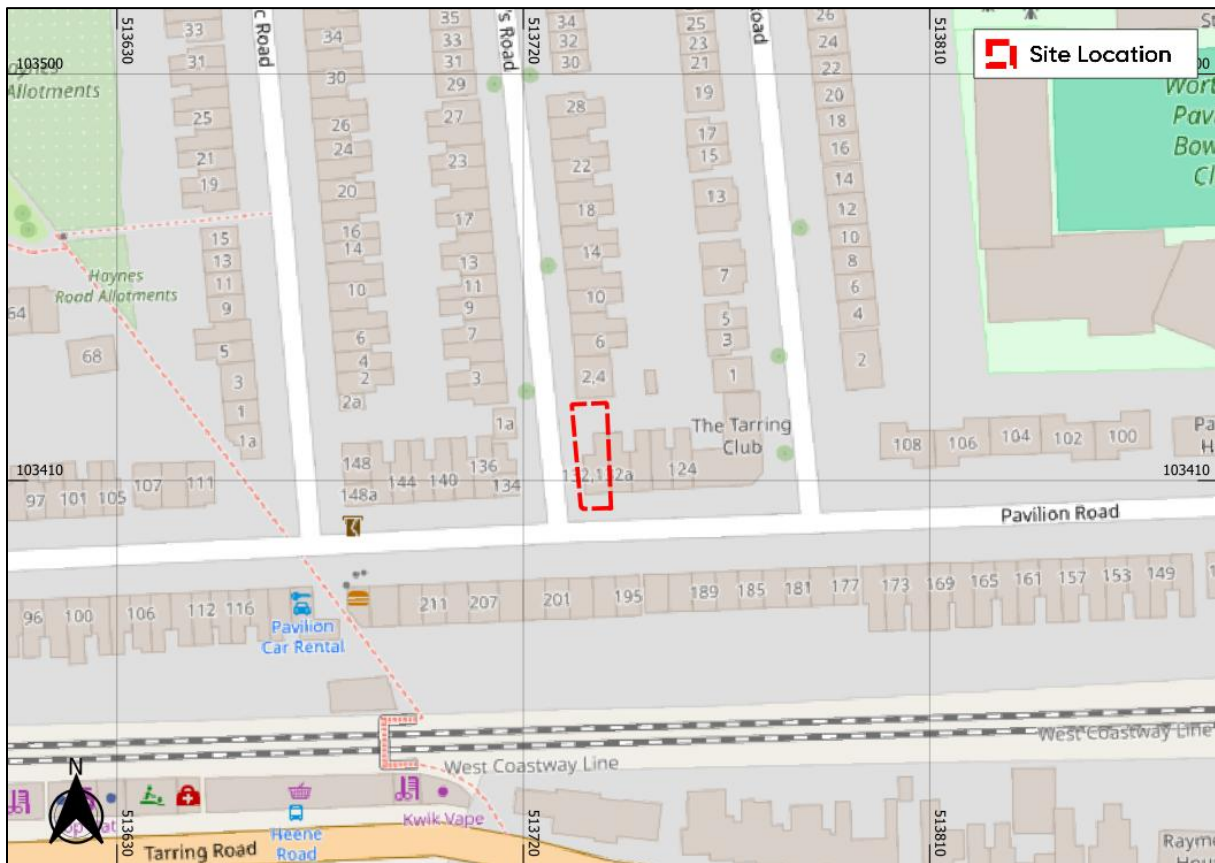


Figure 1: Site Location (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). © <https://www.openstreetmap.org> and contributors)

The proposals include the conversion of the loft space with an extension of a new rear dormer to create a self-contained residential dwelling.

It is important to note that the ground and first floors are not included within the proposals and therefore will remain as per the existing scenario, post-development. All provided plans can be found in Appendix A of this report.

Flood Risk Review

Following the comments from WSP (dated 16/09/2025), this report will assess the fluvial, tidal, canal, pluvial, reservoir, groundwater and sewer flood sources to provide an illustrative assessment of flood risk to the proposed development.

Fluvial and Tidal

The nearest watercourse in relation to the site is approximately 2.9km east. This watercourse is identified as an EA Main River and is referenced to as the Teville Stream. It is further noted that the site is approximately 1.3km from the coastline in the south direction.

The entirety of the site is located within Flood Zone 1. Flood Zone 1 denotes land having less than 1 in 1,000 annual probability of river or sea flooding (all land outside Zones 2 and 3).

In addition, according to the EA Historical Flood Outline dataset, the site nor its vicinity (<500m) has experienced flood events previously.

Based on the above, the site and proposed development is considered to be low risk from fluvial and tidal flooding.

Surface Water Flood Risk

Pluvial flooding can occur during prolonged or intense storm events when the infiltration potential of soils, or the capacity of drainage infrastructure is overwhelmed leading to the accumulation of surface water and the generation of overland flow routes.

RoFSW Data Analysis

The National Flood Risk Assessment (NaFRA2), published in January 2025, has updated the Risk of Flooding from Surface Water (RoFSW) products which show the chance of flooding from surface water to areas of land.

The RoFSW products are an assessment of where surface water flooding may occur when rainwater does not drain away through the normal drainage systems or soak into the ground but lies on or flows over the ground instead. It includes information about flooding extents and depths including the potential impact of climate change on flood risk, based on the latest UK Climate Projections (UKCP18).

Risk is displayed as one of three likelihood categories:

- High - greater than or equal to 1 in 30 (3.3%) chance of flooding in any year.
- Medium - Less than 1 in 30 (3.3%) but greater than or equal to 1 in 100 (1%) chance of flooding in any given year.
- Low - Less than 1 in 100 (1%) but greater than or equal to 1 in 1000 (0.1%) chance of flooding in any given year.

The RoFSW depth mapping shows the annual chance of flooding (based on the three risk categories listed above) beyond a specific depth, for depths at the following intervals from 20cm to 120cm: 0.2m, 0.3m, 0.6m, 0.9m, 1.2m.

As well as present day risk of flooding from surface water, climate change scenarios have been produced to indicate the predicted impacts of climate change on future flood risk. The climate change allowances are based on the latest UK Climate Projections (UKCP18) from the Met Office, using the Representative Concentration Pathway (RCP) 8.5. A near-term epoch (2040 – 2060 “2050s” epoch) and central allowances are being used initially, to support short and medium-term decisions informed by the highest flood likelihood projections.

The ‘present day’ and ‘climate change’ scenarios show similar results; therefore, the climate change scenario has been assessed below to present the worst-case conditions.

Climate Change Scenario

According to the EA’s ‘Flood Risk from Surface Water – Climate Change’ mapping, the entirety of the site is at low risk of experiencing surface water flooding (Figure 2).

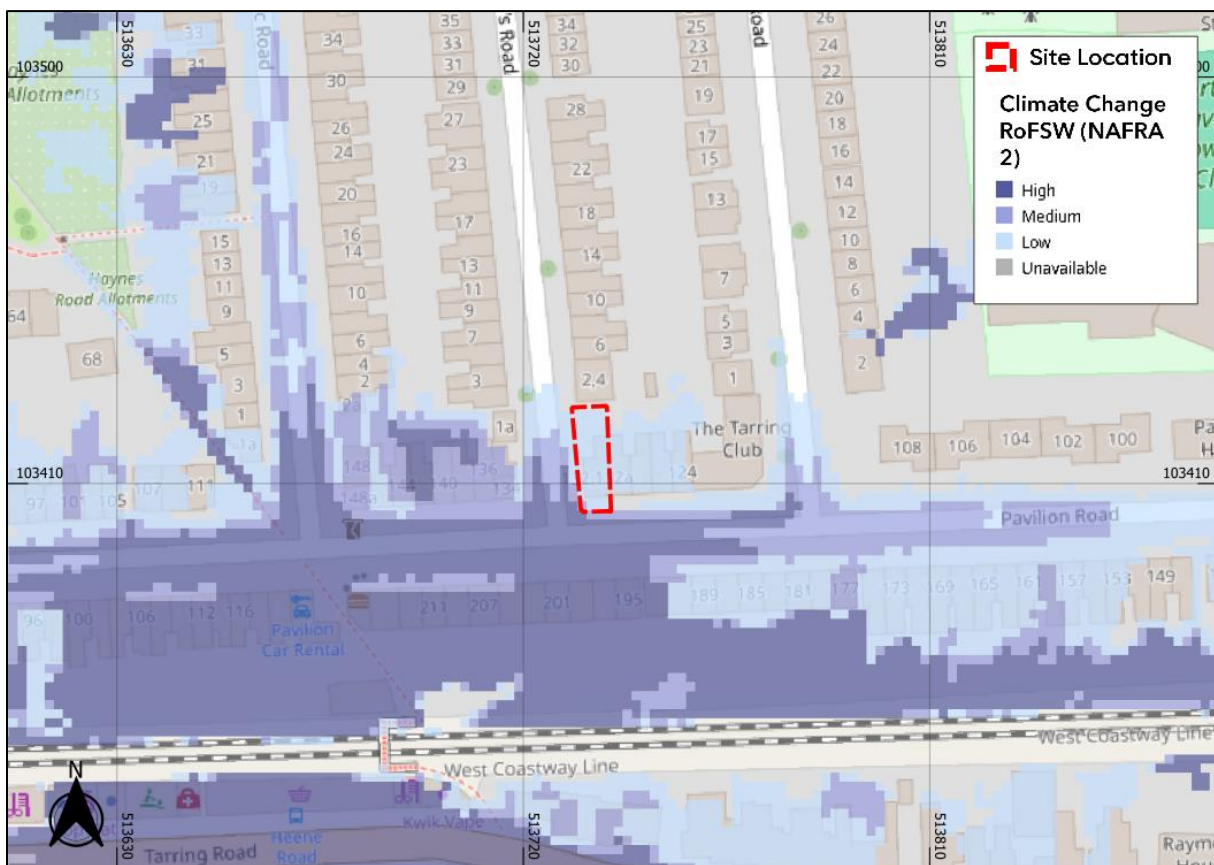


Figure 2: EA Surface Water Flood Risk Mapping Climate Change Extent (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). © <https://www.openstreetmap.org> and contributors)

The British Geological Survey's (BGS) mapping shows superficial deposits of River Terrace Deposits (undifferentiated) comprised of sand, silt and clay. The bedrock geology is mapped as Lambeth Group along with London Clay Formation both comprising of clay, silt and sands.

The SFRA (2024)¹ provides JBA Groundwater Mapping which assesses the groundwater levels throughout the Adur and Worthing Boroughs. The site is within an area that is identified as having *'Groundwater levels between 0.025m and 0.5m below the ground surface'*.

However, given the proposals are located at the second floor / roof level, it is considered that the groundwater flood risk is low.

Sewer

Foul or surface water sewers can be a cause of flooding if the drainage network becomes overwhelmed, either by blockage or due to local development beyond the designed capabilities of the drainage system.

The SFRA (2024) provides Table 6-4 which shows the number of recorded flood incidents per postcode area (limited to 5-digit due to confidentiality). The site is situated within the postcode area of 'BN14 7' and is not included within the table. Thus, it is considered that the data has not been presented within the SFRA for this postcode at the time of writing.

Given the nature of the proposals being situated at the second floor / roof level, the proposed development is considered to be low risk from sewer flooding.

Reservoir and Canals

According to the EA's Flood Risk from Reservoirs mapping the site is outside the modelled flood extents of a reservoir breach. Thus, the risk of reservoir flooding to the site and proposed development is considered to be low.

There are no canals located within the site (<1km) based on CRT mapping² therefore the risk of canal flooding is considered to be low.

¹ <https://www.adur-worthing.gov.uk/planning-policy/joint-aw/adur-and-worthing-background-studies-and-info/flood-risk/#sfra2024>

² <https://canalrivertrust.org.uk/canals-and-rivers>

Surface Water Drainage Review

The WSP report (dated 16/09/2025) stated:

...and ensuring the SuDS proposed operates as designed for the lifetime of the development.

However, Paragraph 181, item C states:

It incorporates sustainable drainage systems, unless there is clear evidence that this would be inappropriate

Given the nature of the proposals are located on the second floor / roof level and are to be constructed atop of existing footprint, there is not increase in built footprint or impermeable area and therefore no increase in runoff.

Thus, based on the above, SuDS are not considered appropriate to be incorporated within the development.

Conclusion

The flood risk to the proposed development from all analysed sources including fluvial, tidal, pluvial, groundwater, sewer, reservoir and canal has been assessed in detail utilising publicly available datasets, supplemented by the finding from the SFRA (2024).

Given the proposed development is located at the second floor / roof level of the property, it is considered that the development is above all modelled surface water flood extents and depths. Therefore, mitigation measures are not required to be incorporated within the development.

With regards to surface water drainage arrangements, it is considered appropriate that the proposed development will drain as per the existing arrangements of the site given there is not increase in built footprint or impermeable area and therefore no increase in runoff., it is not considered appropriate to recommended SuDS that can be incorporated at this level.