



degadea
water, civils and environment

Flood Risk Assessment AEG9206_BN16_Arun_01

Site Address: East Preston Depot
Station Road
Arun
West Sussex
BN16 3RE

UK Experts in Flood Modelling, Flood Risk
Assessments, and Surface Water Drainage Strategies

degadea
water, civils and environment

Document Issue Record

Project: Flood Risk Assessment

Prepared for: Oliver Bradley

Reference: AEG9206_BN16_Arun_01

Site Location: East Preston Depot, Station Road, Arun, West Sussex, BN16 3RE

Issue	Date	Author	Check	Auth.	Comments
1	19/11/2025	Mace Latham	JC	OH	First issue

Please Note:

This report has been prepared for the exclusive use of the commissioning party and may not be reproduced without prior written permission from Aegaea Limited. All work has been carried out within the terms of the brief using all reasonable skill, care, and diligence. No liability is accepted by Aegaea Limited for the accuracy of data or opinions provided by others in the preparation of this report, or for any use of this report other than for the purpose for which it was produced. Where reference has been made to probability events, or risk probability, it does not ensure that there is no risk or that there is no residual risk from an extreme, unlikely or unforeseen flood event over the lifetime of the development.

Table of Contents

Summary	1
1. Introduction	3
Site Overview.....	3
Planning Policy and Guidance.....	6
2. Planning Policy	7
National Planning Policy Framework (NPPF)	7
Local Plan.....	10
Sequential and Exception Tests	11
Summary	11
3. Document Review	12
Documents and Online Mapping.....	12
4. Sources of Flood Risk	14
Fluvial / Tidal	14
Canals	16
Pluvial.....	17
Reservoirs.....	21
Groundwater.....	22
Sewers.....	24
5. Flood Risk Mitigation	25
All Analysed Sources of Flooding	25
Increase to Flood Risk Elsewhere.....	25
Flood Warnings.....	25
6. Conclusions	26
Appendix A - Development Proposals	27

Summary

Development Description	Existing	Proposed
Development Type	Retail warehouse (A1 use)	Change of use of the whole site from A1 use to B8 use, for a self-storage premises. No external works to the building or yard or proposed. It is further noted that a mezzanine will be added internally.
EA Vulnerability Classification	Less Vulnerable	Less Vulnerable
Ground Floor Level	The EA LiDAR data shows the ground elevation of the site varies between approximately 6.15m AOD (metres Above Ordnance Datum) and 7.88m AOD.	No change.
Surface Water Drainage	N/A ¹	The building is positively drained via existing drainage infrastructure.
Site Size	Approximately 2,740m ²	No change
Risk to Development	Summary	Comment
EA Flood Zone	Flood Zone 1	Low risk from all analysed sources of flooding.
Flood Source	Pluvial	
SFRA Available	Level 1 and Level 2 Strategic Flood Risk Assessment (Arun District Council, 2016)	
Management Measures	Summary	Comment
Ground floor level above extreme flood levels	Yes	Proposed development is considered to be low risk from all analysed sources of flooding.
Safe Access/Egress Route	N/A ¹	Given the proposals consist of a change of use (alterations), the development remains commercial and less vulnerable, the access

		/ egress arrangements should remain as per the existing scenario.
Flood Resilient Design	Mitigation measures not required.	Low risk from all analysed sources of flooding.
Site Drainage Plan	N/A ¹	The building is positively drained via existing drainage infrastructure.
Flood Warning and Evacuation Plan	N/A ¹	Recommended that occupier monitor Met Office Weather Warnings for extreme weather events.
Offsite Impacts	Summary	Comment
Displacement of floodwater	No	Proposals do not increase the footprint of the building.
Increase in surface run-off generation	Negligible.	The development is to drain as per the existing drainage arrangement. However, small scale SuDS such as rainwater planters and water butts are recommended to be included at the end of downpipes to provide betterment over the existing scenario.
Impact on hydraulic performance of channels	No	There are no mapped watercourses within 1.0km of the site.

¹ not required for this assessment

² data not available.

1. Introduction

- 1.1. Aegaea were commissioned by Oliver Bradley to undertake a Flood Risk Assessment (FRA) to facilitate a planning application for the proposed development. This FRA has been prepared in accordance with the requirements set out in the National Planning Policy Framework (NPPF) and the associated Planning Practice Guidance.
- 1.2. This FRA is intended to support a full planning application and as such the level of detail included is commensurate and subject to the nature of the proposals.

Site Overview

- 1.3. The site of the proposed development is East Preston Depot, Station Road, Arun, West Sussex, BN16 3RE (Figure 1).

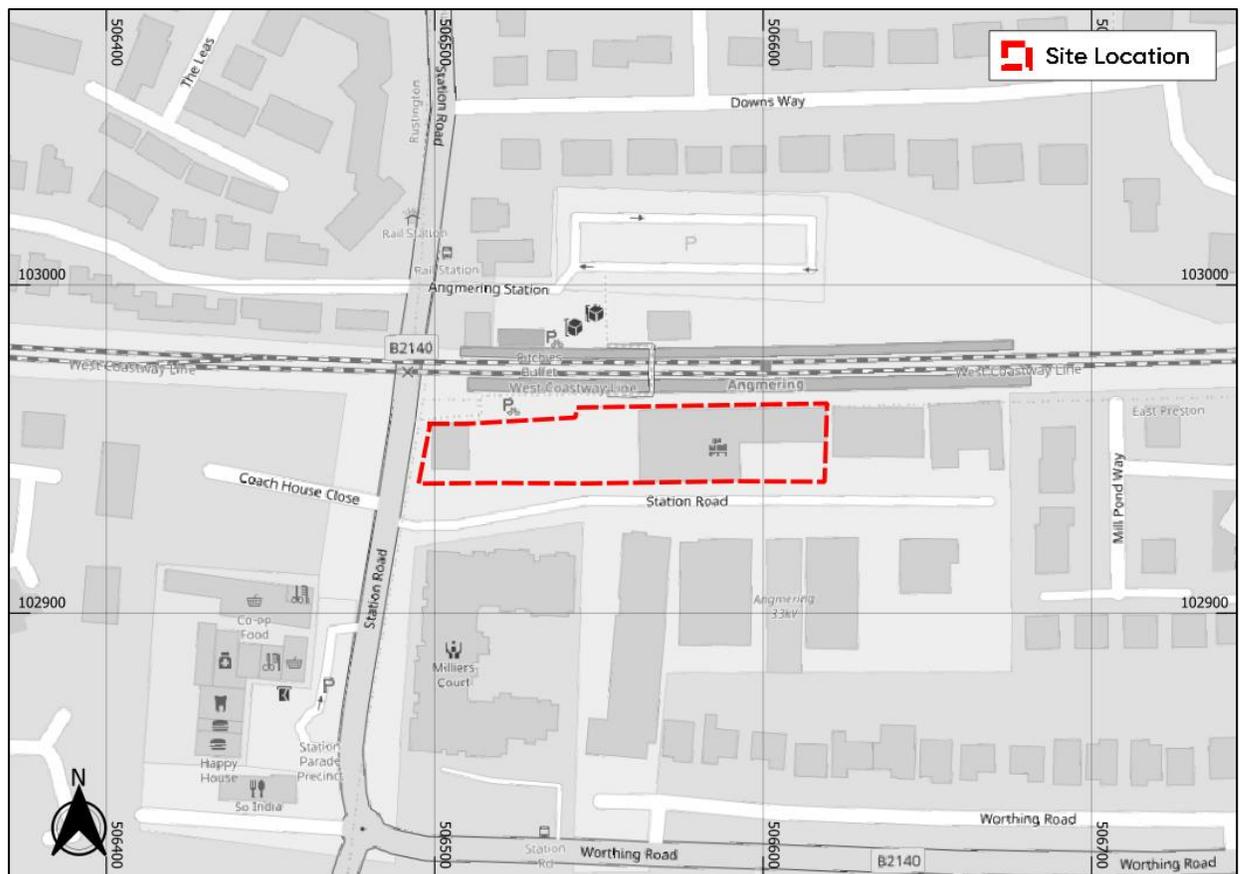


Figure 1: Site Location (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). © <https://www.openstreetmap.org> and contributors)

- 1.4. It is understood that the client is seeking planning permission for the change of use of the whole site from A1 use (commercial workshop) to B8 use (storage or distribution), for a self-storage premises. No external works to the building or yard or proposed – thus, there is no increase in additional built footprint. It is further noted that a mezzanine will be added internally.
- 1.5. All proposed plans that have been provided can be found in Appendix A of this report.
- 1.6. In the absence of a topographical survey, Environment Agency Light Detection and Ranging (LiDAR) data Digital Terrain Model has been used to review the topography of the site (Figure 2). The EA LiDAR data shows the ground elevation of the site varies between approximately 6.15m AOD (metres Above Ordnance Datum) and 7.88m AOD. Further interrogation into the ground levels on-site shows that the site generally slopes in the downward direction to the south.

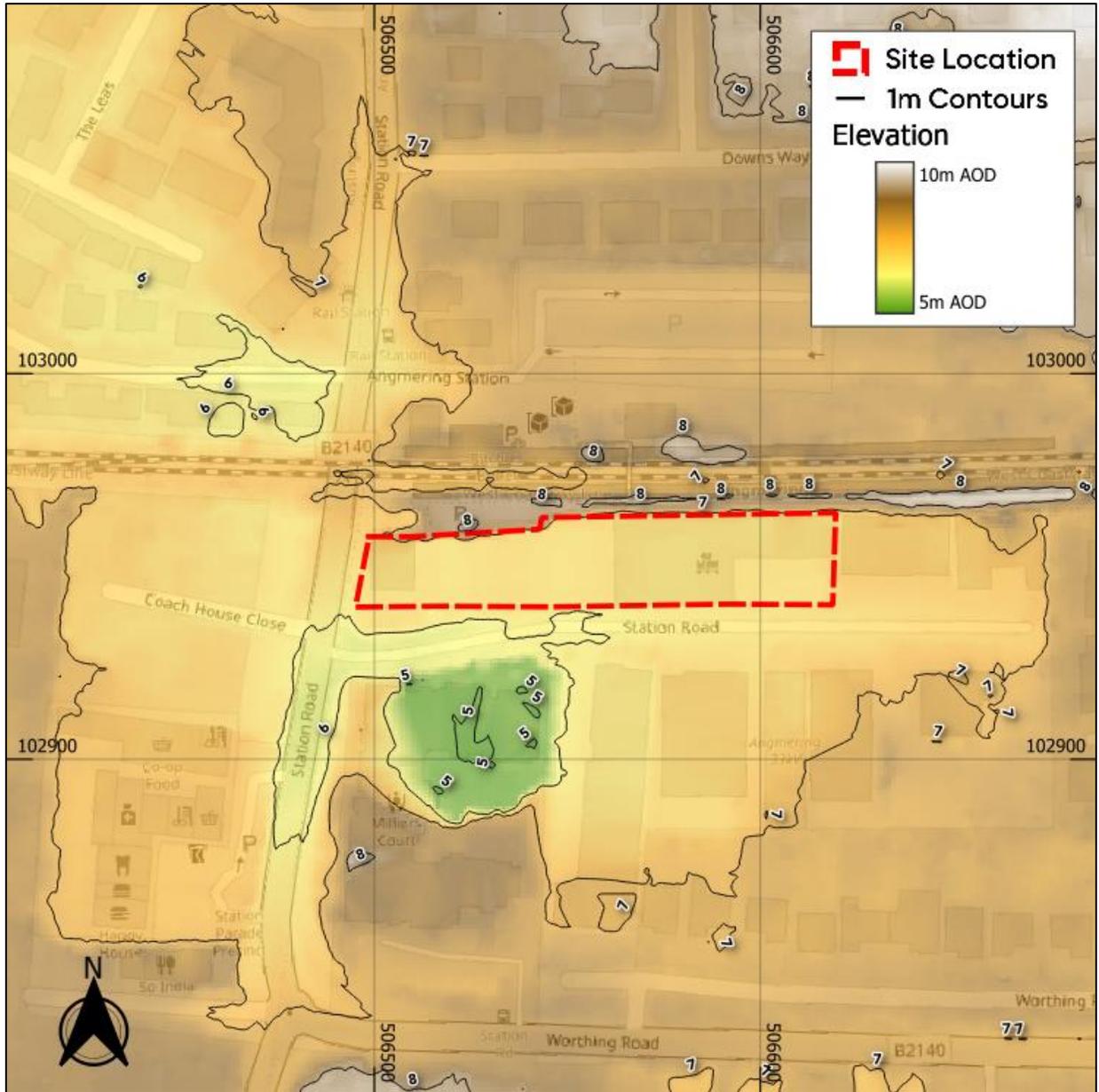


Figure 2: Site Topography (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). © <https://www.openstreetmap.org> and contributors. Contains public sector information licensed under the Open Government Licence v3.0)

- 1.7. Arun District Council is the Local Planning Authority (LPA) for the site and West Sussex County Council is the designated Lead Local Flood Authority (LLFA).

Planning Policy and Guidance

1.8. UK government planning guidance states¹ that an FRA is required for developments which are:

- *in flood zones 2 or 3 including minor development and change of use*
- *more than 1 hectare (ha) in flood zone 1*
- *less than 1 ha in flood zone 1, including a change of use in development type to a more vulnerable class (for example from commercial to residential), where they could be affected by sources of flooding other than rivers and the sea (for example surface water drains, reservoirs)*
- *in an area within flood zone 1 which has critical drainage problems as notified by the Environment Agency*

1.9. The total site area will be greater than 1,000m² and thus the Local Planning Authority (LPA) will require an FRA to accompany the planning application.

1.10. The objective of this FRA is to demonstrate that the proposals are acceptable in terms of flood risk. This report summarises the findings of the study and specifically addresses the following issues in the context of the current legislative regime:

- Fluvial/tidal flood risk
- Surface water flood risk
- Risk of flooding from other sources

¹ <https://www.gov.uk/guidance/flood-risk-assessment-for-planning-applications#when-you-need-an-assessment>

2. Planning Policy

2.1. Inappropriate development in a flood risk area could pose significant risk in terms of personal safety and damage to property for the occupiers of the development or for people elsewhere. The approach taken in the assessment of flood risk at the planning stage is set out in national, regional, and local planning policy and associated guidance. This section summarises the key policies and guidance relevant to the proposed development.

National Planning Policy Framework (NPPF)

2.2. The National Planning Policy Framework² (NPPF) (MHCLG, 2024) which includes UK Government policy on development and flood risk states:

170. Inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk (whether existing or future). Where development is necessary in such areas, the development should be made safe for its lifetime without increasing flood risk elsewhere.

176. Applications for some minor development and changes of use should also not be subject to the sequential test, nor the exception test [set out below], but should still meet the requirements for site-specific flood risk assessments set out in footnote 63.

181. When determining any planning applications, local planning authorities should ensure that flood risk is not increased elsewhere. Where appropriate, applications should be supported by a site-specific flood-risk assessment. Development should only be allowed in areas at risk of flooding where, in the light of this assessment (and the sequential and exception tests, as applicable) it can be demonstrated that:

a) within the site, the most vulnerable development is located in areas of lowest flood risk, unless there are overriding reasons to prefer a different location;

² <https://www.gov.uk/guidance/national-planning-policy-framework>, last updated Dec 2024

- b) the development is appropriately flood resistant and resilient such that, in the event of a flood, it could be quickly brought back into use without significant refurbishment;*
- c) it incorporates sustainable drainage systems, unless there is clear evidence that this would be inappropriate;*
- d) any residual risk can be safely managed; and*
- e) safe access and escape routes are included where appropriate, as part of an agreed emergency plan.*

2.3. Footnote 63 of the NPPF states:

A site-specific flood risk assessment should be provided for all development in Flood Zones 2 and 3. In Flood Zone 1, an assessment should accompany all proposals involving: sites of 1 hectare or more; land which has been identified by the Environment Agency as having critical drainage problems; land identified in a strategic flood risk assessment as being at increased flood risk in future; or land that may be subject to other sources of flooding, where its development would introduce a more vulnerable use.

2.4. Flood Zones in England are defined as follows:

Table 1: Flood Zone Definitions

Flood Zone	Definition
Zone 1 Low Probability	Land having less than 1 in 1,000 annual probability of river or sea flooding (all land outside Zones 2 and 3).
Zone 2 Medium Probability	Land having between a 1 in 100 and 1 in 1,000 annual probability of river flooding; or land having between a 1 in 200 and 1 in 1,000 annual probability of sea flooding.
Zone 3a High Probability	Land having a 1 in 100 or greater annual probability of river flooding; or Land having a 1 in 200 or greater annual probability of sea flooding.
Zone 3b The Functional Floodplain	<p>This zone comprises land where water from rivers or the sea has to flow or be stored in times of flood. The identification of functional floodplain should take account of local circumstances and not be defined solely on rigid probability parameters. Functional floodplain will normally comprise:</p> <p>land having a 3.3% or greater annual probability of flooding, with any existing flood risk management infrastructure operating effectively; or</p> <p>land that is designed to flood (such as a flood attenuation scheme), even if it would only flood in more extreme events (such as 0.1% annual probability of flooding).</p> <p>Local planning authorities should identify in their Strategic Flood Risk Assessments areas of functional floodplain and its boundaries accordingly, in agreement with the Environment Agency. (Not separately distinguished from Zone 3a on the Flood Map)</p>

- 2.5. An FRA should be appropriate to the scale, nature, and location of the development. It should identify and assess the risk from all sources of flooding to and from the development and demonstrate how any flood risks will be managed over the lifetime of the development.
- 2.6. An assessment of hydrological impacts should be undertaken, including to surface water runoff and impacts to drainage networks in order to demonstrate how flood risk to others will be managed following development and taking climate change into account.

Local Plan

- 2.7. The Local Plan prepared by the Local Planning Authority, Arun District Council, sets out the policies for development in the local area.
- 2.8. Policy W DM2 Flood risk outlines the requirements for new development within the area. It states:

Development in areas at risk from flooding, identified on the latest Environment Agency flood risk maps and the Council's Strategic Flood Risk Assessment (SFRA) , will only be permitted where all of the following criteria have been satisfied:

- a. The sequential test in accordance with the National Planning Policy Guidance has been met.*
- b. A site specific Flood Risk Assessment demonstrates that the development will be safe, including access and egress, without increasing flood risk elsewhere and reduce flood risk overall.*
- c. The sustainability benefits to the wider community are clearly identified.*
- d. The scheme identifies adaptation and mitigation measures.*
- e. Appropriate flood warning and evacuation plans are in place; and*
- f. New site drainage systems are designed to take account of events which exceed the normal design standard i.e. consideration of flood flow routing and utilising temporary storage areas.*

The reports prepared as part of the criteria above must take into account contingency allowances, taking climate change into account as set out in Flood Risk Assessments: climate change allowances section of the NPPG. In locations where strategic flood defence or resilient and resistant construction measures are necessary within the site itself, proposals will be required to demonstrate how measures have been incorporated as an intrinsic part of the scheme in a manner which is compatible with the latest Strategic Flood Risk Assessment. All development proposals must take account of relevant Surface Water Management Plans, Catchment Flood Management Plans and related Flood Defence Plans and strategies such as the Lower Tidal River Arun Strategy. The council may require financial contributions from development on sites where measures to address flood risk or to improve the

environmental quality of watercourses have been identified by these Plans and Strategies.

Sequential and Exception Tests

- 2.9. The Sequential and Exception Tests are applied in specific cases defined by UK Government policy. Their purpose is to drive development to areas of low flood risk and to support developments which improve flood risk for developments in areas at risk of flooding.
- 2.10. Under the NPPF, all new planning applications should undergo a Sequential Test in accordance with Paragraph 172. This test should be implemented by local planning authorities with a view to location; particularly vulnerable new developments outside of the floodplain.
- 2.11. However, Paragraph 176 of the NPPF states:

*176. Applications for some minor development and **change of use** should also not be subject to the sequential test but should still meet the requirements for site-specific flood risk assessments set out in footnote 63.*

- 2.12. As such, a site-specific Sequential and Exception Test for the proposed change of use is not considered necessary in line with the NPPF.

Summary

- 2.13. This flood risk assessment has been prepared with due consideration to the above local and national policy.

3. Document Review

Documents and Online Mapping

3.1. Local Governments and Lead Local Flood Authorities provide documents which contain data and policies on flood risk and new development in their areas. These documents are introduced and briefly summarised below. For the purposes of this FRA, these documents have been reviewed for relevant information and any relevant data is discussed within the appropriate sub heading of this report.

3.2. The following sources of information have been reviewed for this assessment:

- Flood Map for Planning on the Environment Agency website <https://flood-map-for-planning.service.gov.uk/>
- Long Term Flood Risk Information on the Environment Agency website <https://www.gov.uk/check-long-term-flood-risk>
- National Planning Policy Framework (NPPF) (Ministry of Housing, Communities and Local Government, 2024)
- Planning Practice Guidance - Flood Risk and Coastal Change (Ministry of Housing, Communities and Local Government, 2022)
- Geoindex Onshore (British Geological Survey, 2024)
- Arun Local Plan (Arun District Council, 2018)³
- Preliminary Flood Risk Assessment Addendum (West Sussex County Council, 2017)⁴ and West Sussex Preliminary Flood Risk Assessment (West Sussex County Council, 2011)⁵
- Level 1 Strategic Flood Risk Assessment (Arun District Council, 2016)⁶

³ <https://www.arun.gov.uk/download.cfm?doc=docm93jjjm4n12844.pdf&ver=12984>

⁴ https://assets.publishing.service.gov.uk/media/5acc9b9140f0b64ff0e694b0/PFRA_West_Sussex_County_Council_2017.pdf

⁵ https://www.westsussex.gov.uk/media/1626/west_sussex_pfra.pdf

⁶ <https://www.arun.gov.uk/download.cfm?doc=docm93jjjm4n9414.pdf&ver=9270>

- West Sussex Local Flood Risk Management Strategy (2013-2018) (West Sussex County Council, 2014)⁷

Preliminary Flood Risk Assessment (PFRA)

- 3.3. The PFRA, published in 2011 and 2017 (addendum), is a high-level appraisal of flood risk across Lead Local Flood Authority West Sussex County Council. The flood risk from all sources, including fluvial, surface water, groundwater, and surcharged sewers is evaluated. It is the basis upon which the Local Flood Risk Management Strategy is produced.
- 3.4. The PFRA summarises historical flood incidents in West Sussex County Council. The site is not recorded as having been affected by any flood event.

Strategic Flood Risk Assessment (SFRA)

- 3.5. The SFRA, published in 2016, provides the evidence base for the Local Planning Authority Arun District Council Local Plan and guidance for consideration when determining planning applications. The SFRA seeks to place new development into areas of lower flood risk taking into account current flood risk, future flood risk, and the effect a proposed development would have on the risk of flooding.
- 3.6. The SFRA mapping provided by Arun District Council has been used throughout production of this report as a source of information, particularly pertaining to historical flood incidents.

Local Flood Risk Management Strategy (LFRMS)

- 3.7. The Local Flood Risk Management Strategy sets out roles and responsibilities for flood risk management, assesses the risk of flooding in the area, where funding can be found to manage flood risk, and the policies, objectives, and actions of the Lead Local Flood Authority.
- 3.8. The West Sussex County Council LFRMS is used within this report to identify any flood management infrastructure and historical incidences of flooding.

⁷ https://www.westsussex.gov.uk/media/1595/local_flood_risk_management_strategy.pdf

4. Sources of Flood Risk

Fluvial / Tidal

- 4.1. Flooding from watercourses arises when flows exceed the capacity of the channel, or where a restrictive structure is encountered, resulting in water overtopping the banks into the floodplain.
- 4.2. Tidal flooding occurs when a high tide and high winds combine to elevate sea levels. An area behind coastal flood defences can still flood if waves overtop the defences or break through them. Tidal flooding can also occur a long way from the coast by raising river levels. Water may overtop the river bank or river defences when tide levels are high.

Main Rivers and Watercourses

- 4.3. There are no mapped watercourses within 1.0km of the site based on OS mapping.
- 4.4. It is also noted that the site is considered to be located at a great distance from the nearest coastline and is therefore considered to be above climate change tidal levels.

EA Flood Map for Planning

- 4.5. The entirety of the site is situated within Flood Zone 1 based on the latest EA Flood Map for Planning (Figure 3). Flood Zone 1 denotes land less than 1 in 1,000 annual probability of river or sea flooding (all land outside Zones 2 and 3).



Figure 4: EA Historic Flood Mapping (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). © <https://www.openstreetmap.org> and contributors. Contains public sector information licensed under the Open Government Licence v3.0)

Fluvial / Tidal Flood Risk Summary

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

Canals

- 4.8. The Canal and River Trust (CRT) generally maintains canal levels using reservoirs, feeders, and boreholes and manages water levels by transferring it within the canal system.

- 4.9. According to the UK CRT Network mapping⁸, there are no identified CRT maintained canals within a 1.0km radius of the site.
- 4.10. The risk of flooding to this site from canals is considered to be low.

Pluvial

- 4.11. 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

- 4.12. The National Flood Risk Assessment (NaFRA2), published in January 2025, has updated the Risks of Flooding from Surface Water (RoFSW) products which shows the chance of flooding from surface water to areas of land.
- 4.13. 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).
- 4.14. 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.
- 4.15. 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 and 1.2m).

⁸ <https://canalrivertrust.org.uk/canals-and-rivers>

- 4.16. 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.
- 4.17. Review of the pluvial (surface water) likelihood extents are similar between the present day and climate change scenarios. Given the minimal difference between the pluvial risk, the climate change scenario has been assessed below as a ‘worst-case’ scenario.

Climate Change Scenario

- 4.18. Examination of the EA's ‘Flood Risk from Surface Water – Climate Change’ mapping indicates that the majority of the site is at low risk to experience surface water flooding during the climate change scenario (Figure 5).
- 4.19. However, it is noted that the remaining areas of the site (confined to the north boundary), are at high risk of experience surface water flooding.
- 4.20. It is noted that the NaFRA2 model uses EA LiDAR data to model the accumulation of surface water. The final Digital Terrain Model (DTM) is a processed interpretation that filters out surface features like buildings and trees, and any subtle errors in this filtering or in the underlying LiDAR resolution can lead to misrepresentation of micro-topography. This can cause the model to incorrectly predict water accumulation and overland flow, potentially leading to the over- or underestimation of surface water flood risk in specific, localised areas compared to on-site observations or more detailed local models.
- 4.21. In this case, there is no change in topography at this location and thus, it is considered that the model is over-estimating the surface water flood risk at the north boundary of the site.

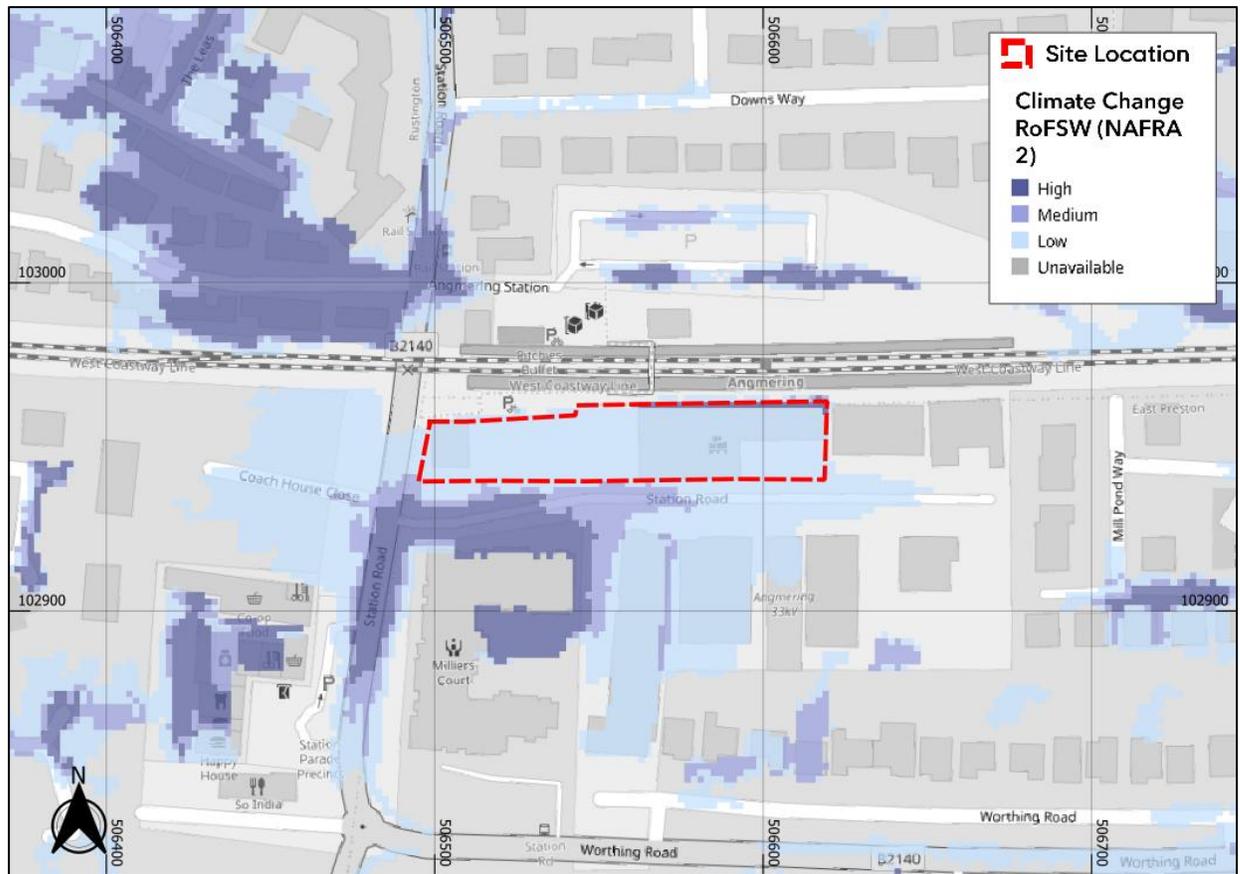


Figure 5: EA Surface Water Flood Risk Mapping – Climate Change (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). © <https://www.openstreetmap.org> and contributors. Contains public sector information licensed under the Open Government Licence v3.0)

- 4.22. The likelihood of flood depths exceeding 0.2m mapping shows that the majority of the site is located within the low risk extent (Figure 6).
- 4.23. As mentioned previously, a section of the north boundary is at high risk of flood depths exceeding 0.2m; however, it is considered that the model is over-estimating the surface water flood risk.

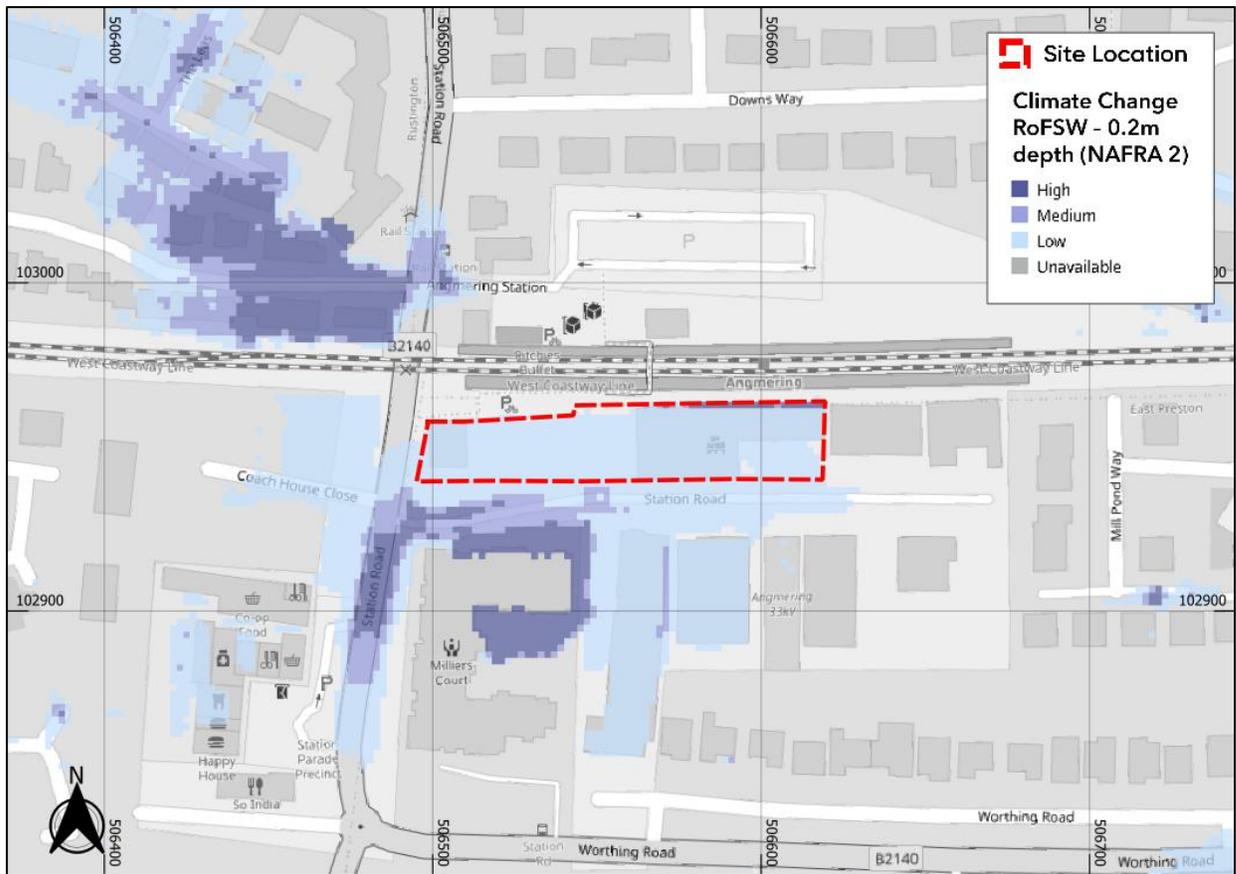


Figure 6: EA RoFSW Likelihood of Flood Depths >0.2m – Climate Change (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). © <https://www.openstreetmap.org> and contributors. Contains public sector information licensed under the Open Government Licence v3.0)

- 4.24. The likelihood of flood depths exceeding 0.3m mapping shows that the majority of the site is located within the low risk extent with some areas across the site outside the low, medium and high likelihood extents (Figure 7).
- 4.25. As mentioned previously, a section of the north boundary is at medium and pixels at high risk of flood depths exceeding 0.3m; however, it is considered that the model is over-estimating the surface water flood risk.

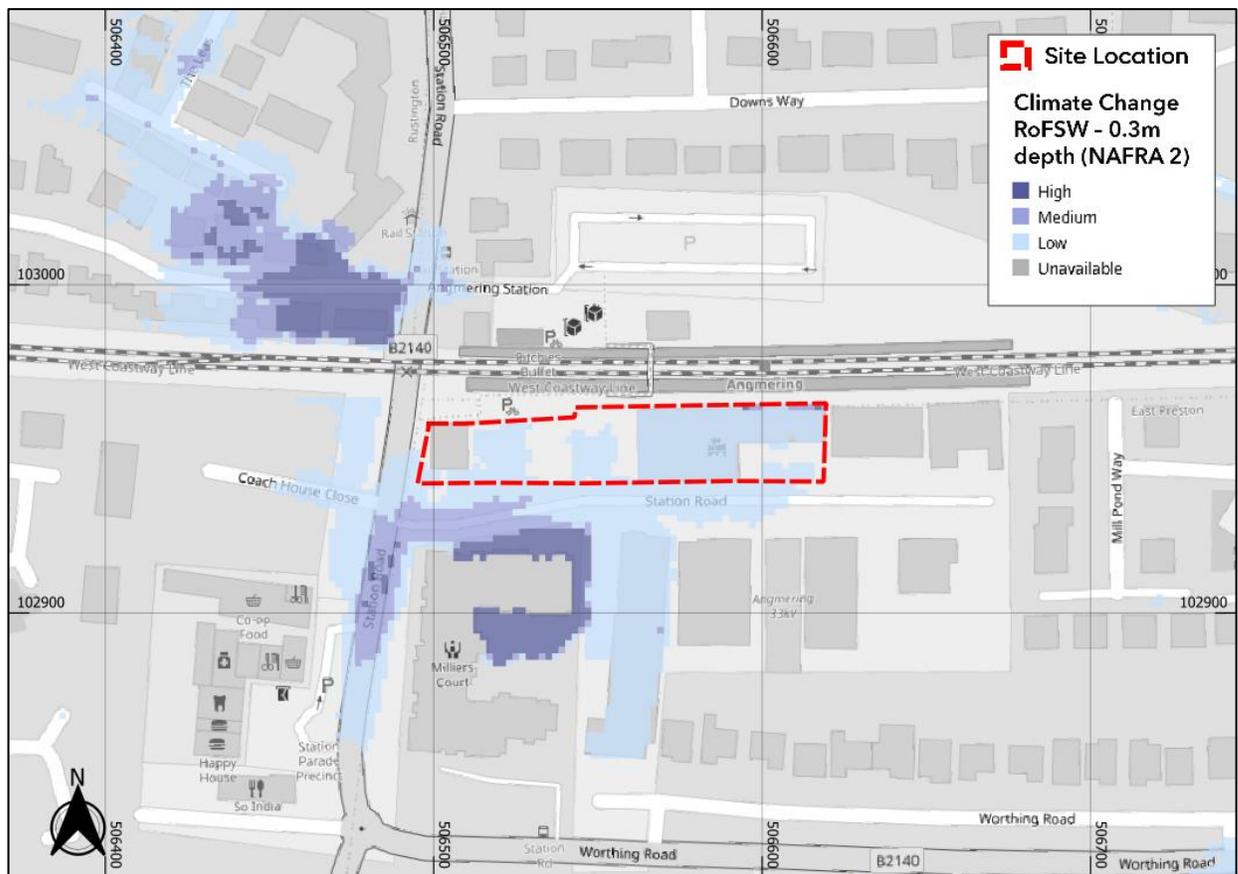


Figure 7: EA RoFSW Likelihood of Flood Depths >0.3m – Climate Change (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). © <https://www.openstreetmap.org> and contributors. Contains public sector information licensed under the Open Government Licence v3.0)

- 4.26. Review of the remaining flood depth intervals (0.6m, 0.9m and 1.2m) shows that the entirety of the site, including the proposed development, is located outside the modelled likelihood categories.

Pluvial Flood Risk Summary

- 4.27. Based on the above and taking into consideration the over-estimation of the NaFRA2 model, the proposed development is considered to be low risk from pluvial (Surface water) flooding.

Reservoirs

- 4.28. Large waterbodies or reservoirs that have walls built above the surrounding ground level pose a risk of flooding. Walls could fail due to old age, accident, or because excess flood water has been added to the reservoir. Although a breach is unlikely the consequences would be significant, leading to rapid inundation of the downstream floodplain.

4.29. According to the EA's Flood Risk from Reservoirs mapping the site is outside modelled flood extents in the event of reservoir flooding (Figure 8).

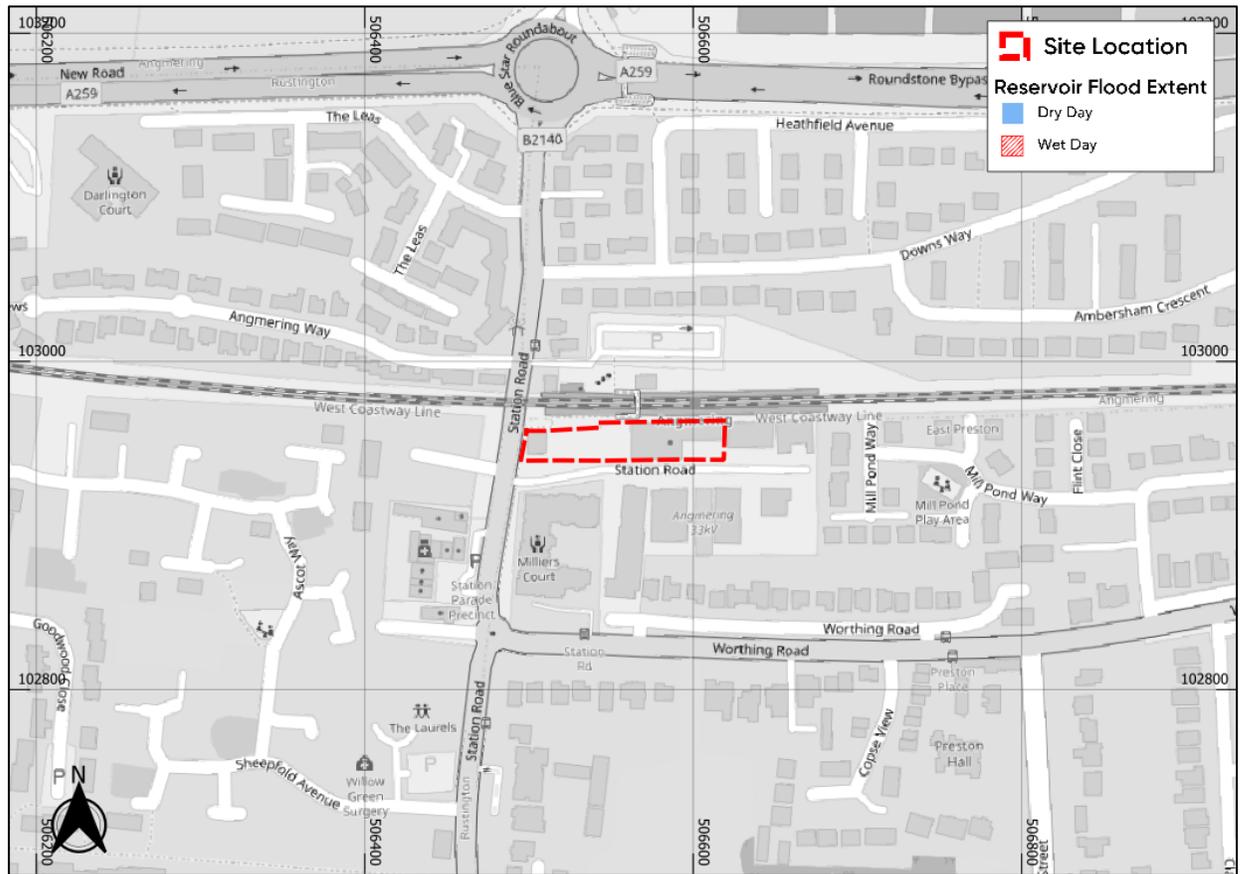


Figure 8: EA Reservoir Flood Risk Mapping (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). ©<https://www.openstreetmap.org> and contributors. Contains public sector information licensed under the Open Government Licence v3.0)

4.30. Thus, the site is considered to be low risk from reservoir flooding.

Groundwater

4.31. Groundwater flooding occurs in areas where underlying geology is permeable and water can rise within the strata sufficiently to breach the surface.

4.32. The British Geological Survey's (BGS) mapping shows superficial deposits of River Terrace Deposits (undifferentiated) comprised of sand, silt and clay underlying the site. The bedrock geology underlying the site is mapped as New Pit Chalk Formation comprised of chalk.

4.33. The historical BGS mapping suggests that there is a borehole approximately 50m north of the site (referenced TQ00SE27). Further interrogation into this borehole suggests that it was bored

to a total depth of 42.67m below ground level (bgl). The highest water level that was struck was 93 feet (28.35m) bgl.

- 4.34. The SFRA (2016) presents the EA's Areas Susceptible to Groundwater Flooding mapping (Figure 9). The site, represented by the red outline, is situated within a 1km grid square of which between $\geq 25\%$ $< 50\%$ is considered susceptible to groundwater flooding.

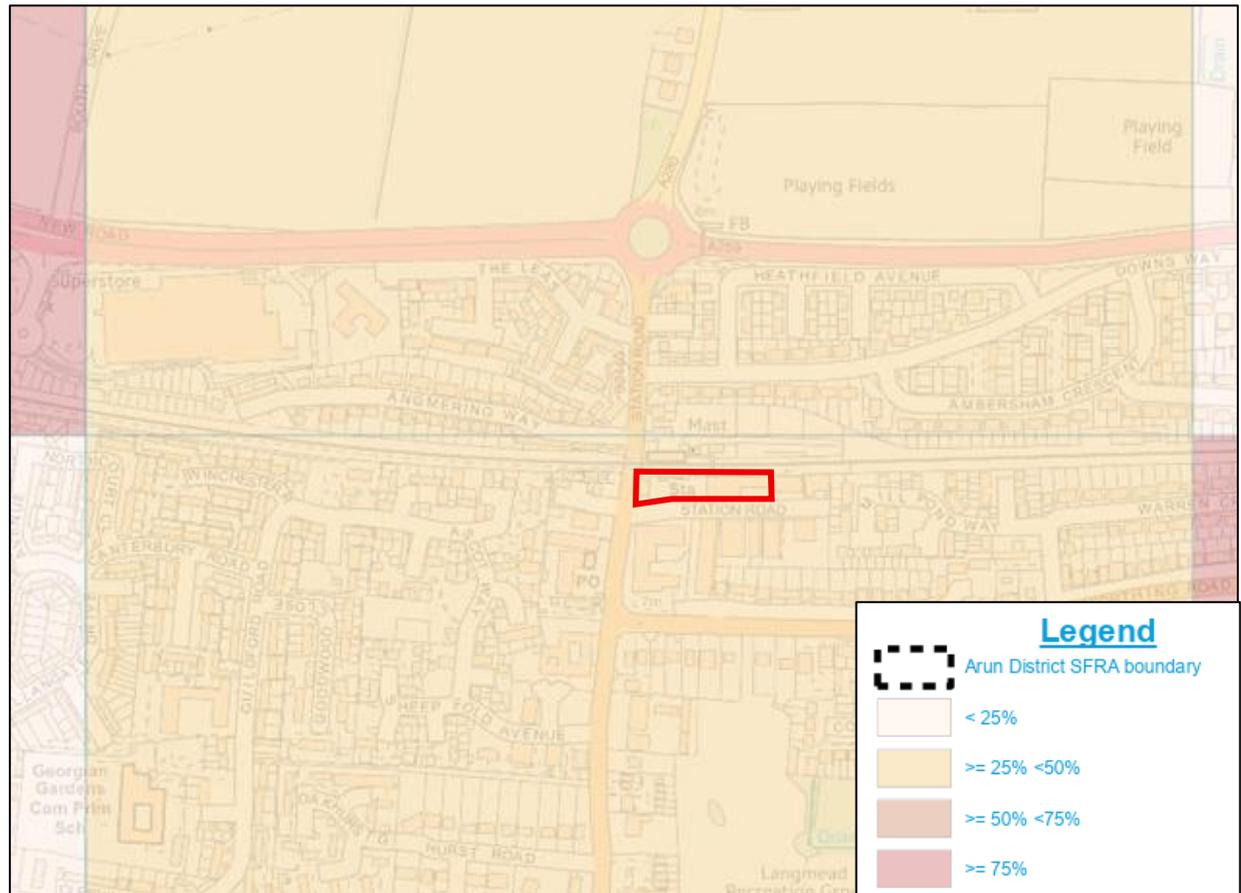


Figure 9: EA's Areas Susceptible to Groundwater Flooding (SFRA, 2016)

- 4.35. In summary, the SFRA (2016) shows the site to be within the second lowest category which is susceptible to groundwater flooding. This is also supported by the borehole analysis, where the nearest borehole struck water 28.35m bgl.
- 4.36. In addition, the proposals do not include any subterranean elements; thus, the risk of groundwater flooding to the development is considered to be low.

Sewers

- 4.37. 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.
- 4.38. The SFRA (2016) provides data regarding sewer flood incidents within the Arun District in which is provided by Southern Water. The SFRA (2016) states the following:

Data from the Sewer Incident Report Form data supplied by Southern Water indicates a total of 315 incidents in the district. Several post code areas have recorded incidents, with the two indicating the greatest number of entries being PO22 7 (36) and PO21 3 (30).

- 4.39. The site (within the BN16 3 post code area) is not within either of these named post code areas.
- 4.40. The development is therefore considered to be at low risk of flooding from sewers.

5. Flood Risk Mitigation

All Analysed Sources of Flooding

- 5.1. Based on Section 4 of this FRA, the proposed development is considered to be low risk from all analysed sources of flooding including fluvial, tidal, canal, pluvial, reservoir, groundwater and sewer.
- 5.2. Thus, there is no requirement for mitigation measures to be incorporated within the development.

Increase to Flood Risk Elsewhere

- 5.3. The proposed development includes the alteration of the existing building; thus, there is no increase in addition footprint within the proposals. Therefore, it is considered that the proposed development will not increase flood risk elsewhere through flood water displacement.

Flood Warnings

- 5.4. The site is not in an area where the EA provide specific flood alerts and warnings. The site managers should monitor Met Office Weather Warnings to be prepared for extreme weather events.
- 5.5. The Met Office issues weather warnings up to 5 days in advance, through the national Severe Weather Warning Service, when severe weather has the potential to bring impacts to the UK. It is also possible to stay up to date with weather warnings through the Met Office app (available on both Apple or Android devices), social media e.g. X and Facebook or email alerts.

6. Conclusions

- 6.1. This FRA has been undertaken with reference to the requirements of NPPF and Planning Practice Guidance with respect to the development at East Preston Depot, Station Road, Arun, West Sussex, BN16 3RE. It has been written to support a planning application and prepared with due consideration to the nature of the proposed development to provide the appropriate level of detail.
- 6.2. An assessment of the risk of flooding from all sources has been undertaken and is summarised in the table below:

Source of Flooding	Flood Risk Summary
Fluvial Pluvial Tidal Reservoirs Groundwater Sewers Canals	The proposed development is considered to be at low risk from all analysed sources of flooding.

- 6.3. The FRA supports the planning application and demonstrates that there is an acceptable level of flood risk to the site. The development does not increase flood risk off site or to the wider area.
- 6.4. This Flood Risk Assessment should be submitted as part of the planning application to satisfy the requirements under NPPF.

Appendix A - Development Proposals

