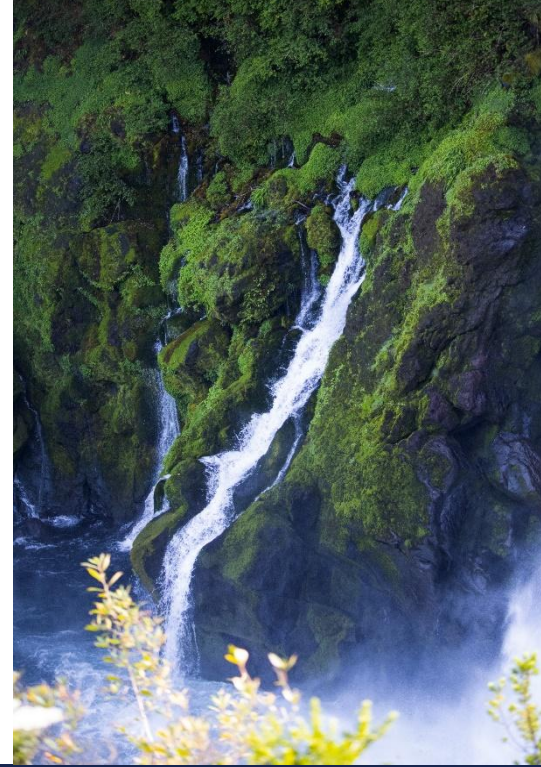




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Flood Risk Assessment AEG6835_SP2_Salisbury_01

Site Address: 42 - 44 York Road
Salisbury
Wiltshire
SP2 7AT

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

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water, civils and environment

Document Issue Record

Project: Flood Risk Assessment

Prepared for: J C Fulford Properties Ltd

Reference: AEG6835_SP2_Salisbury_01

Site Location: 42 - 44 York Road, Salisbury, Wiltshire, SP2 7AT

Issue	Date	Author	Check	Auth.	Comments
1	23/01/2025	Jacob Caddick	JA	DS	First issue
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Summary

Development Description	Existing	Proposed
Development Type	Mixed use residential and commercial	It is understood proposals include changes to 41 Meadow Road and 42-50 York Road for conversions and changes to residential dwellings. Full description in section 1.4.
EA Vulnerability Classification	More Vulnerable	More Vulnerable
Ground Floor Level	The LiDAR data shows the ground elevation of the site varies between approximately 48.1m AOD and 48.5m AOD.	No change
Level of Sleeping Accommodation	First Floor	Ground Floor
Site Size	167m ²	No change
Risk to Development	Summary	Comment
EA Flood Zone	Flood Zones 2 and 3	River Avon
Flood Source	Fluvial and Groundwater	
SFRA Available	Wiltshire Council Level 1 Strategic Flood Risk Assessment (Wiltshire Council, 2024)	
Management Measures	Summary	Comment
Ground floor level above extreme flood levels	Yes	Based on the modelling carried out to inform the design of the alleviation scheme, the proposed development site and large parts of the surrounding area are removed from the 1in100 year extent post-scheme.
Safe Access/Egress Route	Yes	Details in Section 5
Flood Resilient Design	Yes	Details in Section 5

Flood Warning and Evacuation Plan	N/A ¹	Occupants should sign up to EA flood warnings. The site is located within the 'Upper Hampshire Avon at St Pauls and City Centre, Salisbury' Flood Warning area.
Offsite Impacts	Summary	Comment
Displacement of floodwater	Negligible	Based on analysis, the site and proposed minor extension are considered to be outside the flood extent, therefore the development will have a negligible impact on flood risk elsewhere.
Increase in surface run-off generation	N/A ¹	Small scale SuDS are recommended to reduce run off rates and provided betterment.
Impact on hydraulic performance of channels	No	Site is c.170m away from closest watercourse

¹ not required for this assessment

² data not available.

1. Introduction

- 1.1. Aegaea were commissioned by J C Fulford Properties Ltd 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 41 Meadow Road and 42-50 York Road, Salisbury, Wiltshire, SP2 7AT (Figure 1).

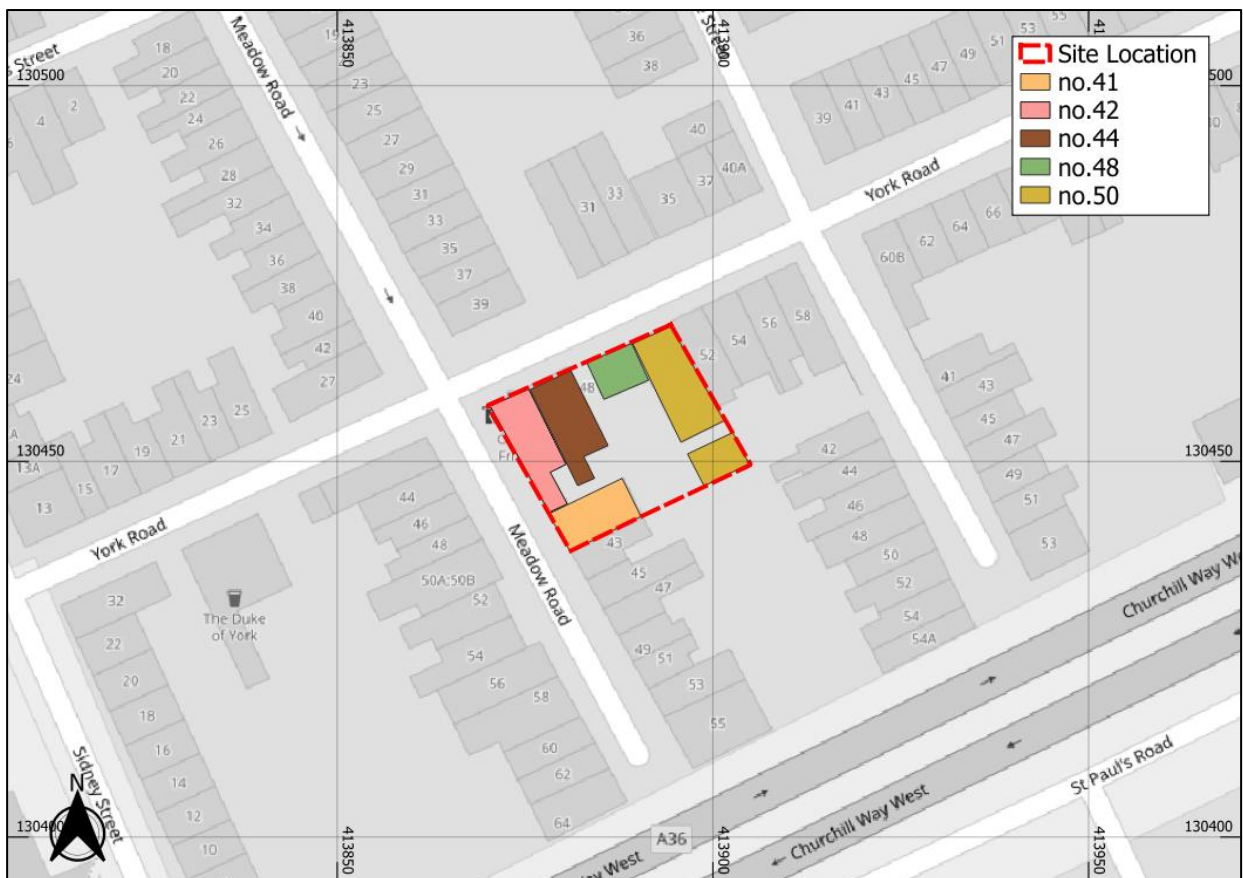


Figure 1: Site Location (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). © <https://www.openstreetmap.org> and contributors)

1.4. It is understood proposals at each address are as follows:

- 41 Meadow Road – (SP2 7BL) conversion of ground floor garage into 2 bed self-contained flat and development of existing second floor flat (2 bed).
- 42 York Rd - Loft Dormer (second floor) extension for 1 bedroom flat.
- 42a York Rd – Conversion of an existing commercial ground floor unit, back into residential to form part of the original house.
- 44 York Rd - Single storey rear extension (bedroom) and loft dormer, creating 6 bedrooms total.
- 48 York Rd
 - Flat 1 (ground floor 1 bed),
- 50 York Rd
 - Flat 2 (ground floor 2 bed), Flat 5 (first floor 2 bed), Flat 6 (first floor 1 bed), Flat 7 (second floor 1 bed)
 - House 1, two story 1 bed

1.5. 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. The LiDAR data shows the ground elevation of the site varies between approximately 48.0m AOD (metres Above Ordnance Datum) and 48.5m AOD (Figure 2).

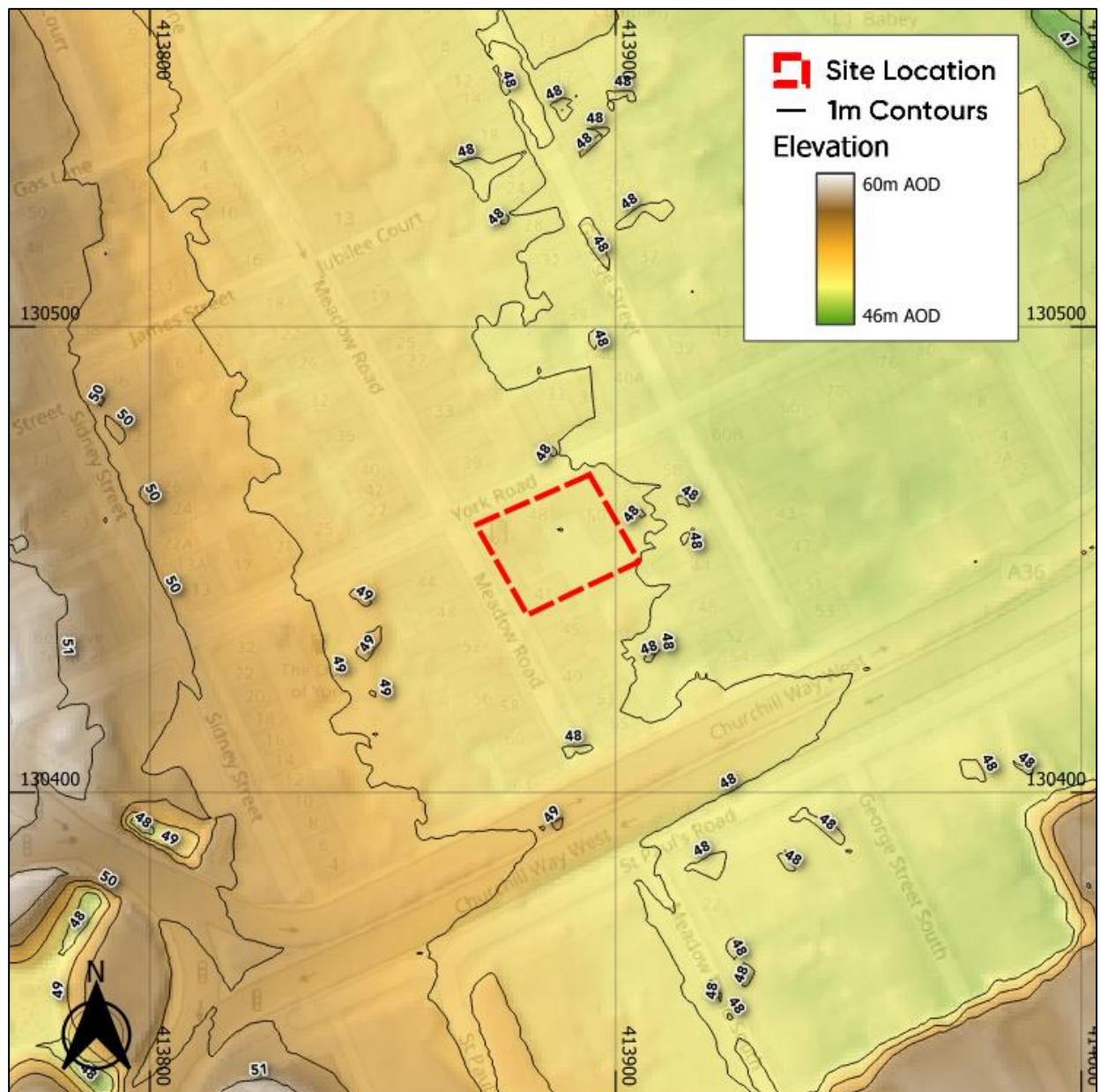


Figure 2: Site Topography (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). © <https://www.openstreetmap.org> and contributors. Contains public sector information licensed under the Open Government Licence v3.0)

- 1.6. Wiltshire Council is the Local Planning Authority (LPA) for the site and also the designated Lead Local Flood Authority (LLFA). The site sits within the Environment Agency's Wessex region.

Planning Policy and Guidance

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

- *in flood zone 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*

1.8. The site is located within Flood Zone 2 and 3 and therefore an FRA is required in accordance with the NPPF.

1.9. 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.

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;*
- 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;*

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

- 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.

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.

2.3. 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	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: land having a 3.3% or greater annual probability of flooding, with any existing flood risk management infrastructure operating effectively; or 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). 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)

- 2.4. 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.
- 2.5. 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.

Wiltshire Council Local Plan

- 2.6. The Core Strategy (2015) prepared by the Local Planning Authority, Wiltshire Council, sets out the policies for development in the local area.
- 2.7. Policy 67 Flood Risk outlines the requirements for new development within the area. It states:

Development proposed in Flood Zones 2 and 3 as identified within the Strategic Flood Risk Assessment will need to refer to the Strategic Housing Land Availability Assessment when providing evidence to the local planning authority in order to apply the sequential test in line with the requirements of national policy and established best practice.

All new development will include measures to reduce the rate of rainwater run-off and improve rainwater infiltration to soil and ground (sustainable urban drainage) unless site or environmental conditions make these measures unsuitable.

Sequential and Exception Tests

- 2.8. 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.
- 2.9. This FRA demonstrates that the site is not at risk of flooding now and in the future, therefore according to paragraph 175 of the NPPF the development is exempt from completing a Sequential Test.

- 2.10. The National Planning Policy Framework³ (NPPF) (DLUHC, 2024) which includes UK Government policy on development and flood risk states:

172. All plans should apply a sequential, risk-based approach to the location of development – taking into account all sources of flood risk and the current and future impacts of climate change – so as to avoid, where possible, flood risk to people and property.

173. A sequential risk-based approach should also be taken to individual applications in areas known to be at risk now or in future from any form of flooding, by following the steps set out below.

174. Within this context the aim of the sequential test is to steer new development to areas with the lowest risk of flooding from any source. Development should not be allocated or permitted if there are reasonably available sites appropriate for the proposed development in areas with a lower risk of flooding. The strategic flood risk assessment will provide the basis for applying this test.

175. The sequential test should be used in areas known to be at risk now or in the future from any form of flooding, except in situations where a site-specific flood risk assessment demonstrates that no built development within the site boundary, including access or escape routes, land raising or other potentially vulnerable elements, would be located on an area that would be at risk of flooding from any source, now and in the future (having regard to potential changes in flood risk).

- 2.11. The buildings proposed for development are located on land identified to be located outside of the modelled fluvial extents. Furthermore, the buildings are also shown to be located within an area at 'low' risk of flooding from surface water.
- 2.12. Therefore, as per paragraph 175 of the NPPF, a sequential approach to the site layout has been adopted and therefore there is no need to implement the Sequential Test.

³ <https://www.gov.uk/guidance/national-planning-policy-framework>, last updated Dec 2024

Exception Test

- 2.13. The Exception Test is applied to sites based on the Flood Zone and the nature of the development. As the proposed development consists of a number of residential dwellings it would be classed as 'More Vulnerable' in line with government development use classes.
- 2.14. The Flood Risk Vulnerability Classification table⁴ provided below in Table 2 shows which vulnerabilities are appropriate in each Flood Zone.
- 2.15. The proposed development sits within Flood Zone 2 and the proposed development is classified as 'More Vulnerable'. Table 2 shows that with the site considered to be in Flood Zone 3a, the exception is not required.

Table 2: Flood risk vulnerability and flood zone 'incompatibility'

Flood Zones	Flood Risk Vulnerability Classification				
	Essential Infrastructure	Highly Vulnerable	More Vulnerable	Less Vulnerable	Water Compatible
Zone 1	✓	✓	✓	✓	✓
Zone 2	✓	Exception Test required	✓	✓	✓
Zone 3a	Exception Test required	x	Exception Test required	✓	✓
Zone 3b	Exception Test required	x	x	x	✓

Summary

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

⁴ <https://www.gov.uk/guidance/flood-risk-and-coastal-change#table2>

3. Consultation and Review

Consultation

- 3.1. Aegaea hold on record a copy of the Product 6 data to inform this FRA. This dataset includes modelled flood level, depth and hazard grids for a range of return periods taken from the EA's Salisbury Model (2019).

Documents and Online Mapping

- 3.2. 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.
- 3.3. The following sources of information have been reviewed for this assessment:
- Flood Map for Planning on the Environment Agency website⁵
 - Long Term Flood Risk Information on the Environment Agency website⁶
 - National Planning Policy Framework (NPPF) (Department for Levelling Up, Housing and Communities, 2023)
 - Planning Practice Guidance - Flood Risk and Coastal Change (Department for Levelling Up, Housing and Communities, 2022)
 - Geoindex Onshore (British Geological Survey, 2023)⁷
 - Wiltshire Core Strategy (Wiltshire Council, 2015)⁸

⁵ <https://flood-map-for-planning.service.gov.uk/>

⁶ <https://www.gov.uk/check-long-term-flood-risk>

⁷ <https://www.epsom-ewell.gov.uk/sites/default/files/documents/residents/planning/planning-policy/Core%20Strategy%202007.pdf>

⁸ https://www.wiltshire.gov.uk/media/372/Wiltshire-Core-Strategy-adopted-2015/pdf/Wiltshire_Core_Strategy_2015.pdf?m=1735555642237

- Preliminary Flood Risk Assessment (Wiltshire Council, 2011)⁹ and Preliminary Flood Risk Assessment Addendum (Wiltshire Council, 2017)¹⁰
- Wiltshire Council Level 1 Strategic Flood Risk Assessment (Wiltshire Council, 2024)¹¹

- Wiltshire Local Flood Risk Management Strategy (Wiltshire Council, 2015)¹²

Preliminary Flood Risk Assessment (PFRA)

- 3.4. The PFRA, published in 2011 and 2017, is a high-level appraisal of flood risk across Lead Local Flood Authority Wiltshire 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.
- 3.5. The PFRA summarises historical flood incidents in Wiltshire Council. The site is not recorded as having been affected by any flood event.

Strategic Flood Risk Assessment (SFRA)

- 3.6. The SFRA, published in 2024, provides the evidence base for the Local Planning Authority Wiltshire 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.
- 3.7. The SFRA mapping provided by Wiltshire Council has been used throughout production of this report as a source of information, particularly pertaining to historical flood incidents.

⁹ <https://webarchive.nationalarchives.gov.uk/ukgwa/20140328094443/http://www.environment-agency.gov.uk/research/planning/135540.aspx#10>

¹⁰ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/698754/PFRA_Wiltshire__County_Council_2017.pdf

¹¹ https://www.wiltshire.gov.uk/media/14497/SD67-Wiltshire-Level-1-Strategic-Flood-Risk-Assessment-2024/pdf/SD67_Wiltshire_Level_1_Strategic_Flood_Risk_Assessment_2024.pdf?m=1733141632550

¹² <https://www.wiltshire.gov.uk/media/204/Wiltshire-local-flood-risk-management-strategy/pdf/Flood-risk-management-strategy-civil-emergencies.pdf>

Local Flood Risk Management Strategy (LFRMS)

- 3.8. 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.
- 3.9. The Wiltshire Council LFRMS is used within this report to identify any flood management infrastructure and historical incidences of flooding.

4. Sources of Flood Risk

Fluvial

- 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.

Main Rivers and Ordinary Watercourses

- 4.2. The nearest EA Main River is c. 380m east of the site (the River Avon).
- 4.3. The River Avon is fluvially influenced at this location in relation to the site.
- 4.4. A off-branch channel of the River Avon is shown to flow c.170m east of the site and is shown to be culverted running under the A36 at its closest point to the site.
- 4.5. No other mapped watercourses are within the vicinity of the site.

EA Flood Map for Planning

- 4.6. The EA Flood Map for Planning shows the site is located with Flood Zones 2 and 3 (Figure 3).
- 4.7. Flood Zone 3 denotes a risk of flooding from fluvial sources greater than 1 in 100 (1%). Flood Zone 2 indicates land having between a 1 in 100 (1%) and 1 in 1,000 (0.1%) annual probability of river flooding.
- 4.8. Flood Zone 2 is shown to impact the entire site, across all properties proposed for development.
- 4.9. The edge of the Flood Zone 3 is shown to impact no.50, including the proposed house in the southeast corner of the site.

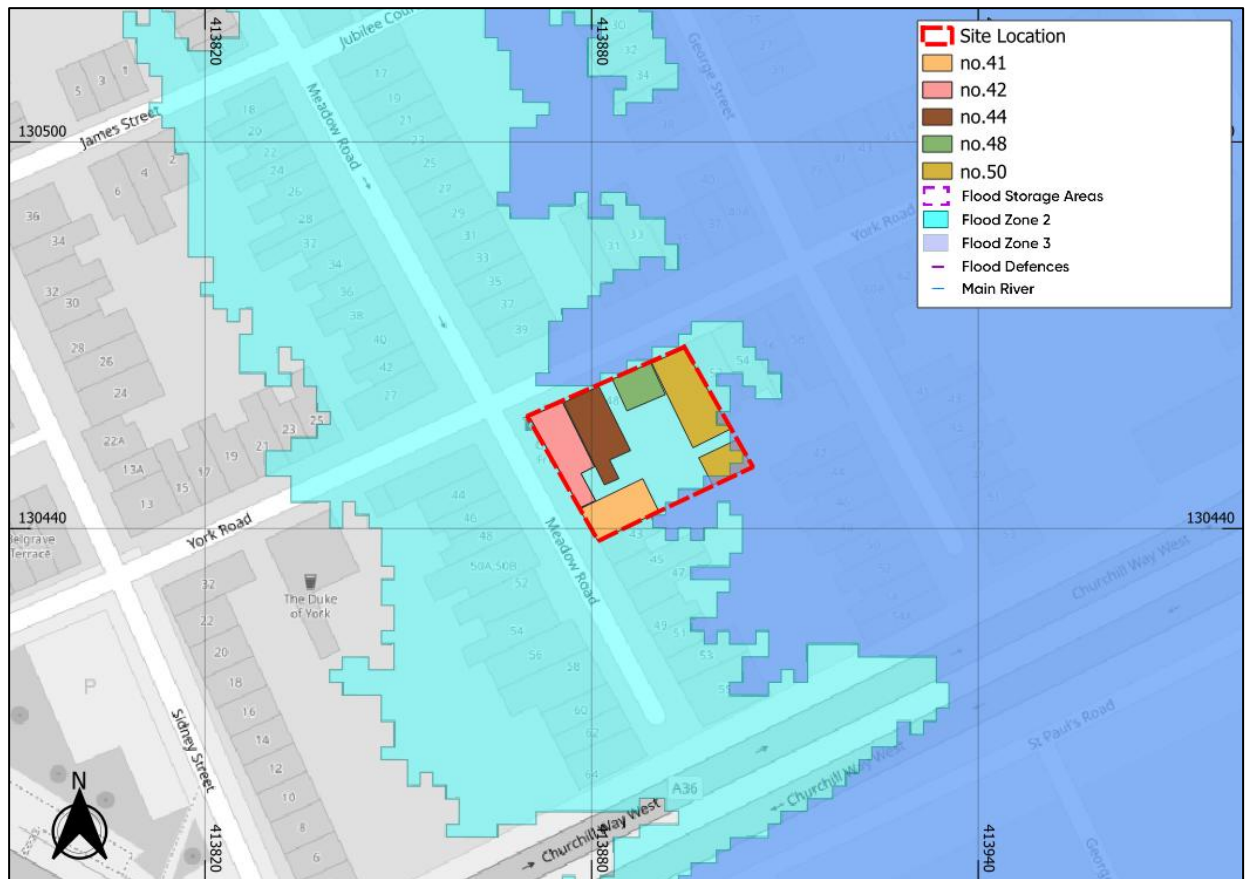


Figure 3: EA Flood Map for Planning (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). © <https://www.openstreetmap.org> and contributors. Contains public sector information licensed under the Open Government Licence v3.0)

Historical Fluvial Flooding

- 4.10. Based on the EA Recorded and Historical Flood Outlines, there is no record of historical tidal and/or fluvial flooding on-site, or within the vicinity of the site (Figure 4).

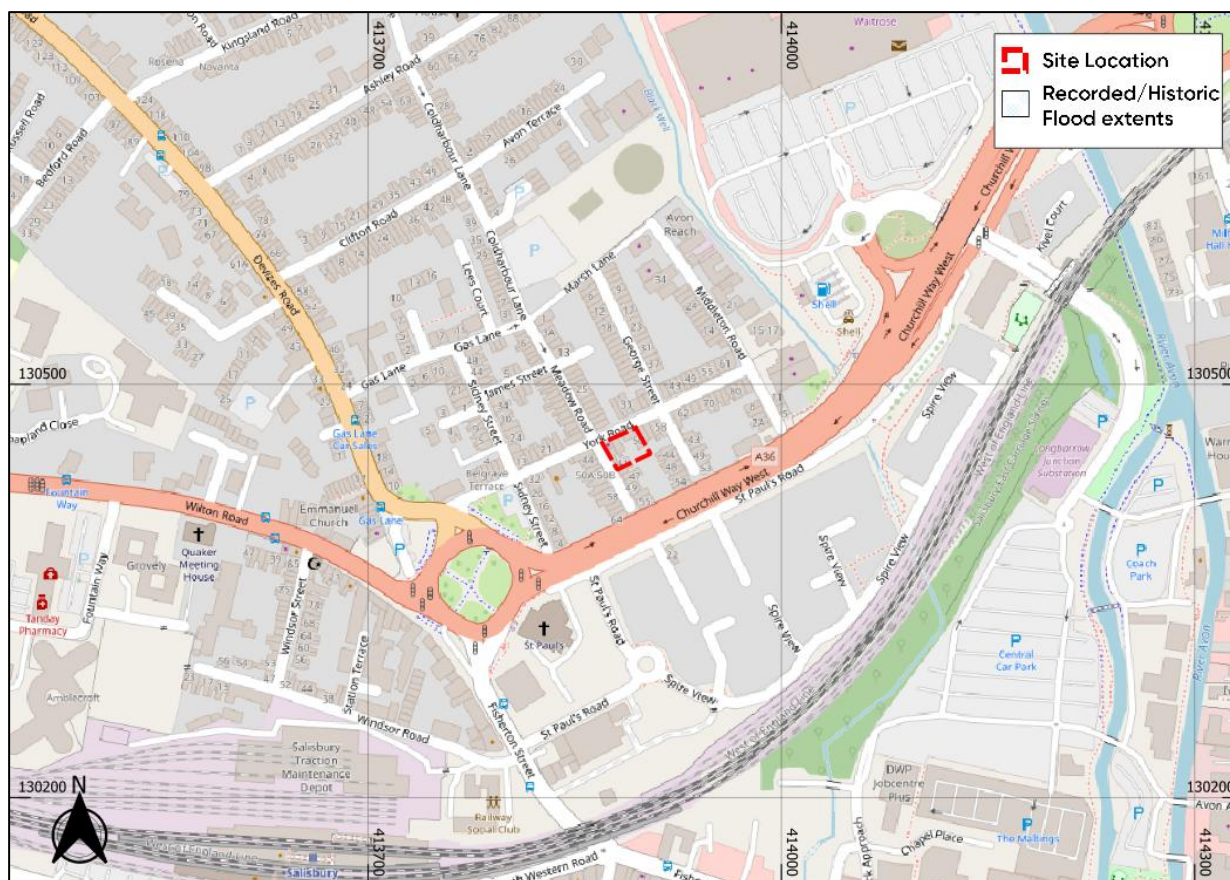


Figure 4: EA Historic Flood Mapping (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). © <https://www.openstreetmap.org> and contributors. Contains public sector information licensed under the Open Government Licence v3.0)

Flood Defences

4.11. As per the Salisbury River Park Phase 1 website¹³:

The Salisbury River Park scheme is a joint project developed by the Environment Agency, Wiltshire Council and Salisbury City Council that will reduce flood risk within Salisbury whilst enhancing habitats and public enjoyment, improving fish passage, reducing future liabilities and encouraging growth and regeneration. Wiltshire Council developed a masterplan for a river park along the River Avon through the centre of Salisbury, and phase 1 of this, which the Environmental Agency is leading

¹³ <https://www.salisburyriverparkphase1.com/the-scheme>

on, covers works at Fisherton Recreational Ground, Ashley Road Open Space, and the Maltings/Central Car Park area...

...The main construction works started June 2022, with the majority of the work being completed during Summer and Autumn 2022. Some work will continue over into next winter 2023, with additional works planned for Summer and Autumn 2023. Completion for all works is expected to be December 2023.

- 4.12. As per the Salisbury River Park Phase 1 News and Updates Page, work is currently ongoing as of December 2024 with the project heading towards completion¹⁴.
- 4.13. Mapping available from the Salisbury River Park Phase 1 website includes modelled pre- and post-scheme flood risk extents¹⁵ (Figure 5 and 6). The maps below are based on the projected flood risk in a 1 in 100 (1%) annual probability flood event.
- 4.14. It can be seen from Figure 6 and Figure 5 that based on the modelling carried out to inform the design of the alleviation scheme, the proposed development site is not shown to be impacted during the 1 in 100 year flood extent (post-scheme).

¹⁴ <https://www.salisburyriverparkphase1.com/1news-and-updates>

¹⁵ <https://www.salisburyriverparkphase1.com/frequently-asked-questions1?preview=true>

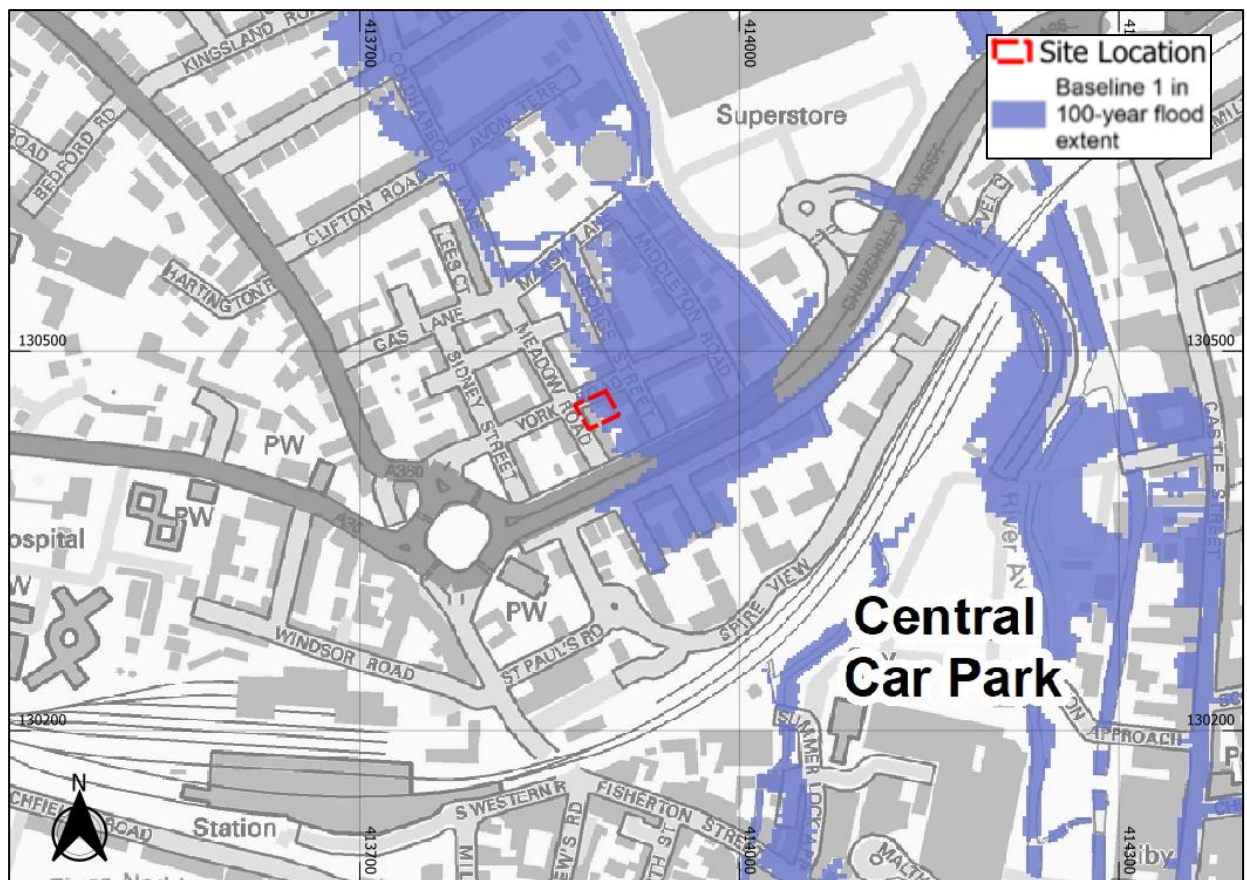


Figure 5: Existing Pre Salisbury-River Park Flood Alleviation Scheme Modelled 1:100 Year Flood Extent. (Source Salisbury River Park Phase 1 website)

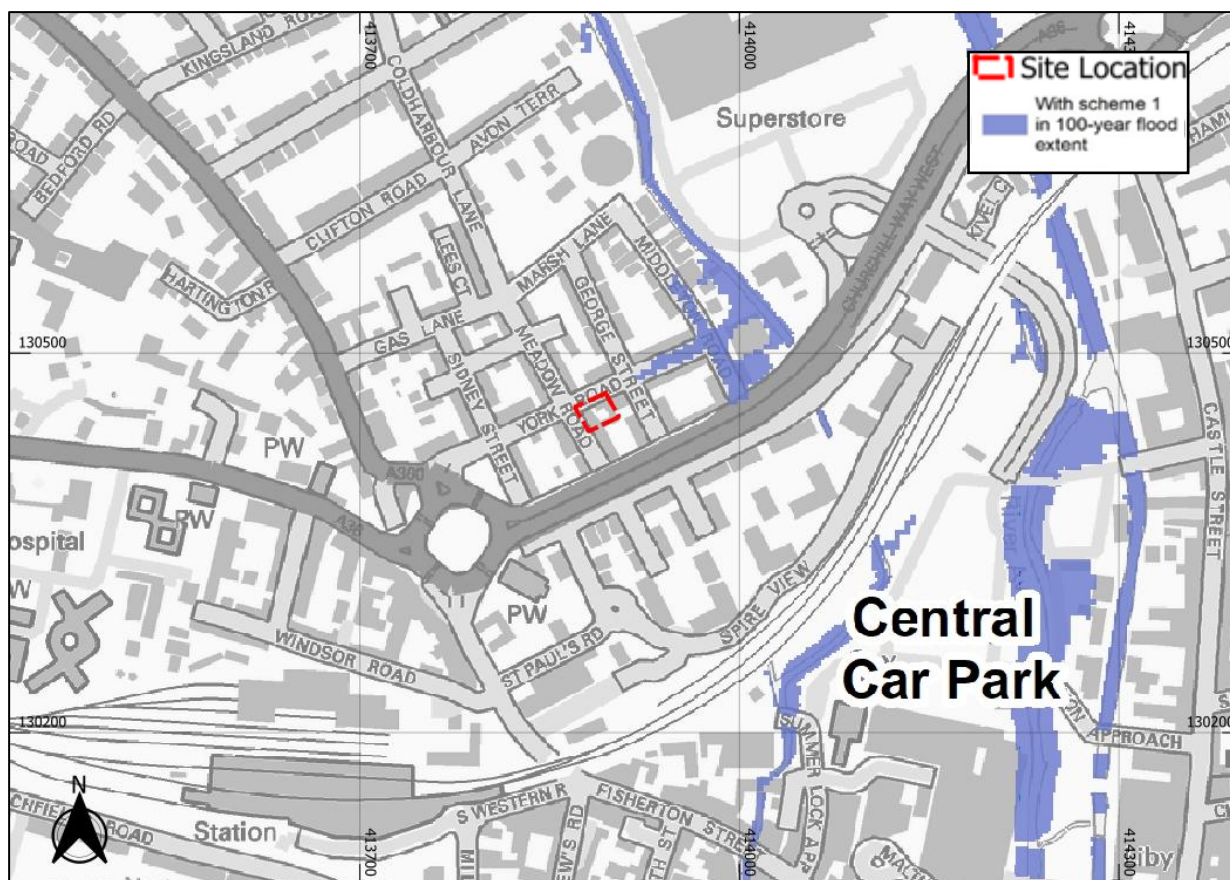


Figure 6: Post Salisbury River Park Flood Alleviation Scheme Modelled 1:100 Year Flood Extent. Source Salisbury River Park Phase 1 website)

- 4.15. As such, while the scheme has not yet been fully implemented, it is nearing completion as stated by the Salisbury River Park Phase 1 News and Updates Page, and the EA/LPA should take this into consideration when consulting on/ determining this application.
- 4.16. It is noted that irrespective of the ongoing flood alleviation works, when considering the proposals, the proposed development is located outside the 1 in 100year current scenario, therefore with improved defences and climate change allowance added, it can be said with a high certainty that the site will not be impacted.

Fluvial Risk Summary

- 4.17. Based on the modelling carried out to inform the design of the alleviation scheme, the proposed development site and large parts of the surrounding area are removed from the 1in100 year extent post-scheme. With a high degree of certainty it can be considered that the site with the presents of the new defences would not be impacted in the 1 in 100year plus climate change event.

- 4.18. In conclusion, the site is considered to be at a low risk of fluvial flooding.
- 4.19. Mitigation will be recommended to reduce any residual risk posed to the development.

Tidal

- 4.20. 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.
- 4.21. The site is a significant distance from any tidal source and above the anticipated extreme tidal levels, even when considering the impacts of climate change.
- 4.22. Therefore, the risk of flooding from tidal sources is considered to be low.

Canals

- 4.23. 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.
- 4.24. No canals were detected within a 1km radius as per the CRT Network mapping¹⁶.
- 4.25. Therefore, the risk of flooding to this site from canals is considered to be low.

Pluvial

- 4.26. 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.
- 4.27. The new National Flood Risk Assessment (NaFRA2), published in Jan 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.
- 4.28. 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

¹⁶ <https://canalrivertrust.org.uk/canals-and-rivers>

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).

4.29. 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.

4.30. The new 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

4.31. 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.

RoFSW Present Day Scenario

4.32. The EA Online ‘Flood Risk from Surface Water’ map (Jan 2025) indicates that the site is in a ‘Low’ risk flooding area ().

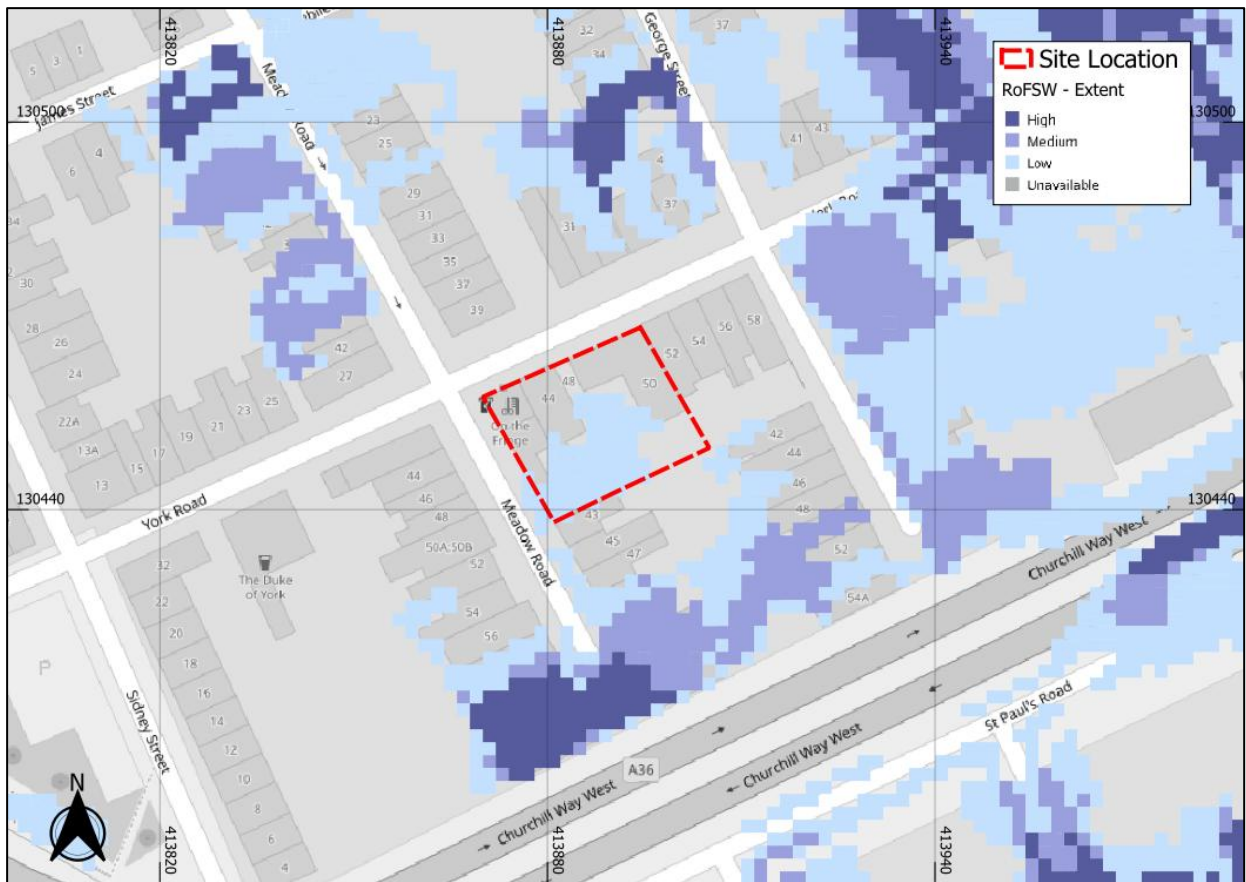


Figure 7: EA Surface Water Flood Risk Mapping (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). © <https://www.openstreetmap.org> and contributors. Contains public sector information licensed under the Open Government Licence v3.0)

RoFSW Present Day Scenario

- 4.33. Analysis of the present day RoFSW flood depth map for likelihood of flood depths exceeding 0.2m shows the site is not impacted {}.
- 4.34. Given that no flooding is shown on site that exceeds 0.2m, flood depths are not observed on site for the other intervals.

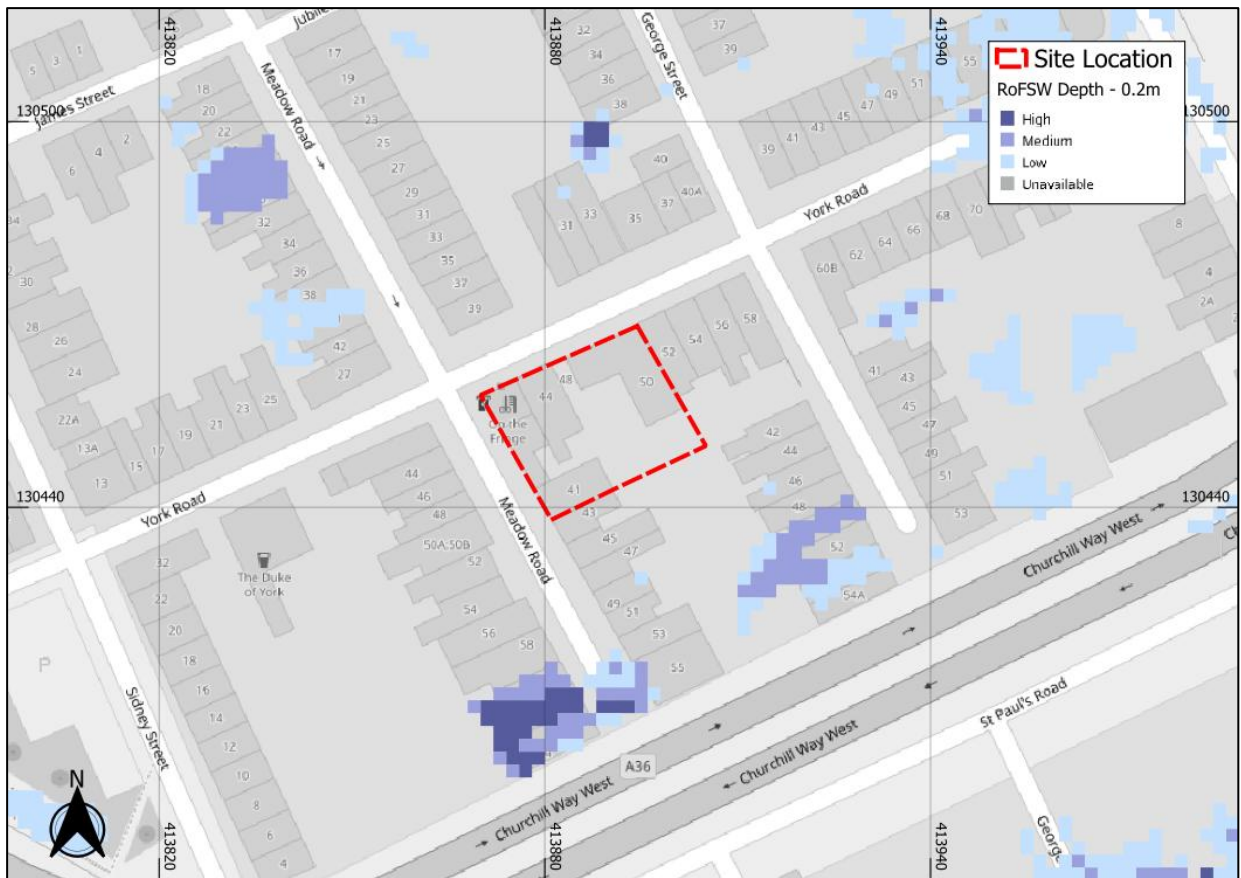


Figure 8: RoFSW Likelihood of Depths Exceeding 0.2m (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). © <https://www.openstreetmap.org> and contributors. Contains public sector information licensed under the Open Government Licence v3.0)

RoFSW Climate Change Scenario

- 4.35. The 'Flood Risk from Surface Water – Climate Change' map indicates that the central area of the site are located within a 'low' and 'medium' risk of flooding areas, the remaining parts of the site are shown to be unaffected by flooding, including the building footprint ().

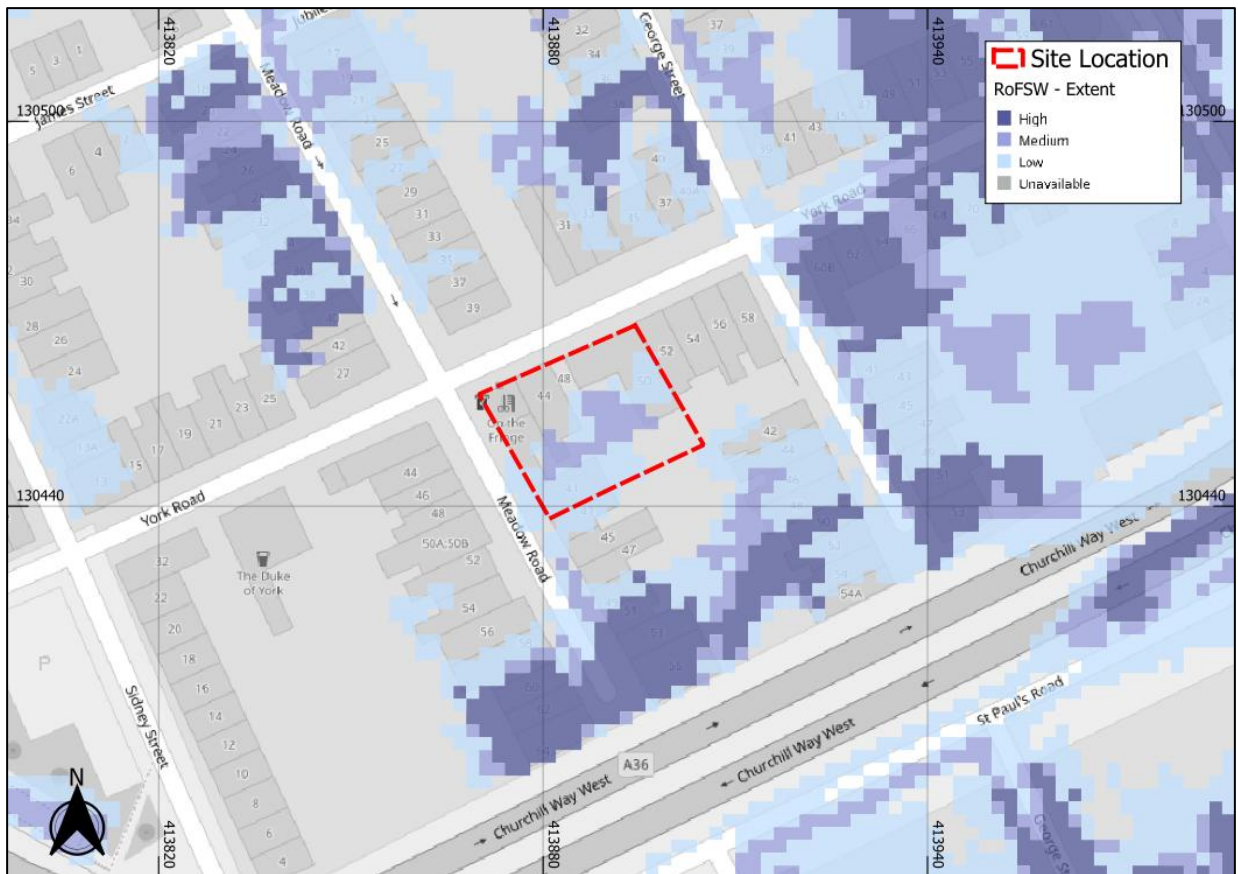


Figure 9: EA Surface Water Flood Risk with Climate Change Mapping (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). © <https://www.openstreetmap.org> and contributors. Contains public sector information licensed under the Open Government Licence v3.0)

- 4.36. Analysis of the climate change RoFSW flood depth map for likelihood of flood depths exceeding 0.2m shows the site doesn't experience any flood depths greater than 0.2m ().
- 4.37. Given that no flooding is shown on site that exceeds 0.2m, flood depths are not observed on site for the other intervals.

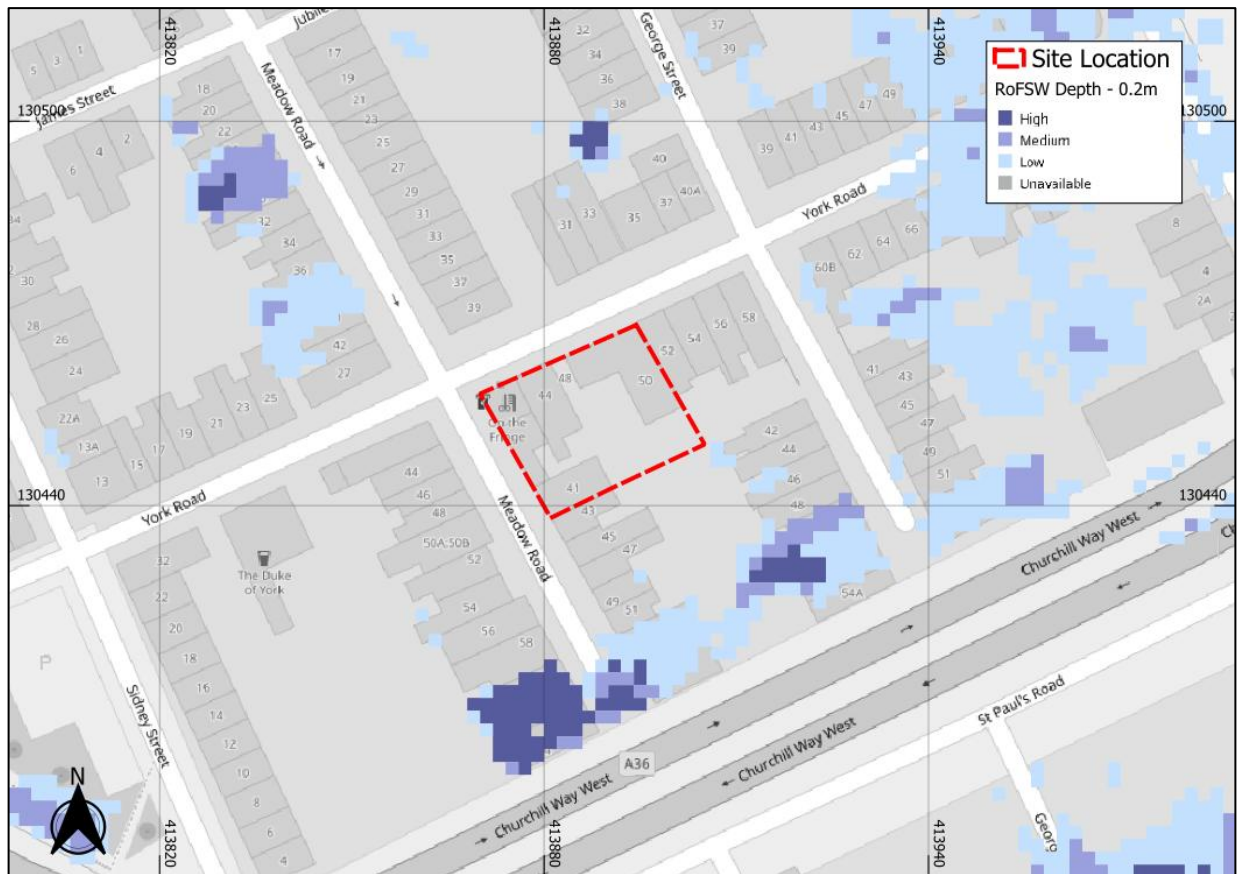


Figure 10: RoFSW Likelihood of Depths Exceeding 0.2m (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). © <https://www.openstreetmap.org> and contributors. Contains public sector information licensed under the Open Government Licence v3.0)

4.38. Overall, the risk of flooding from pluvial sources to the site can be considered low.

Reservoirs

4.39. 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.

4.40. According to the EA's Flood Risk from Reservoirs mapping the site is outside modelled flood extents in the event of reservoir flooding (Figure 11).

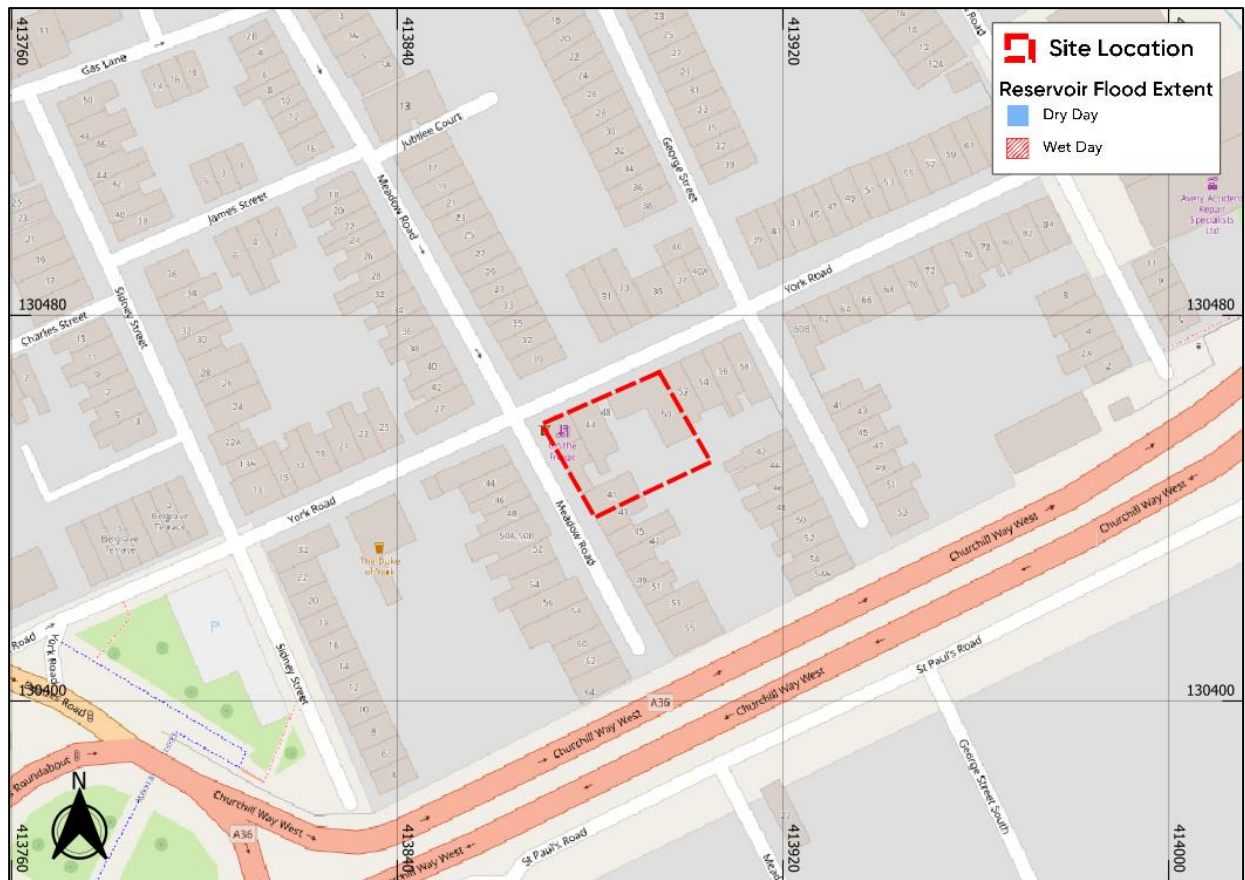


Figure 11: EA Reservoir Flood Risk Mapping (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). ©<https://www.openstreetmap.org> and contributors. Contains public sector information licensed under the Open Government Licence v3.0)

4.41. Therefore, the site is considered to be at a low risk of flooding following a reservoir failure.

Groundwater

- 4.42. Groundwater flooding occurs in areas where underlying geology is permeable and water can rise within the strata sufficiently to breach the surface.
- 4.43. The British Geological Survey's (BGS) mapping shows superficial deposits of Lluvium comprised of Clay, Sand and Gravel underlying the site. The bedrock underlying the site is Newhaven Chalk Formation comprised of Chalk.
- 4.44. Historical BGS borehole records show there are no available boreholes within 200m of the site.
- 4.45. The Wiltshire SFRA (2024) mapping indicates that the site is 'within a zone there is a risk of groundwater flooding to both surface and subsurface assets. Groundwater may emerge at

significant rates and has the capacity to flow overland and/or pond within any topographic low spots' (Figure 12).

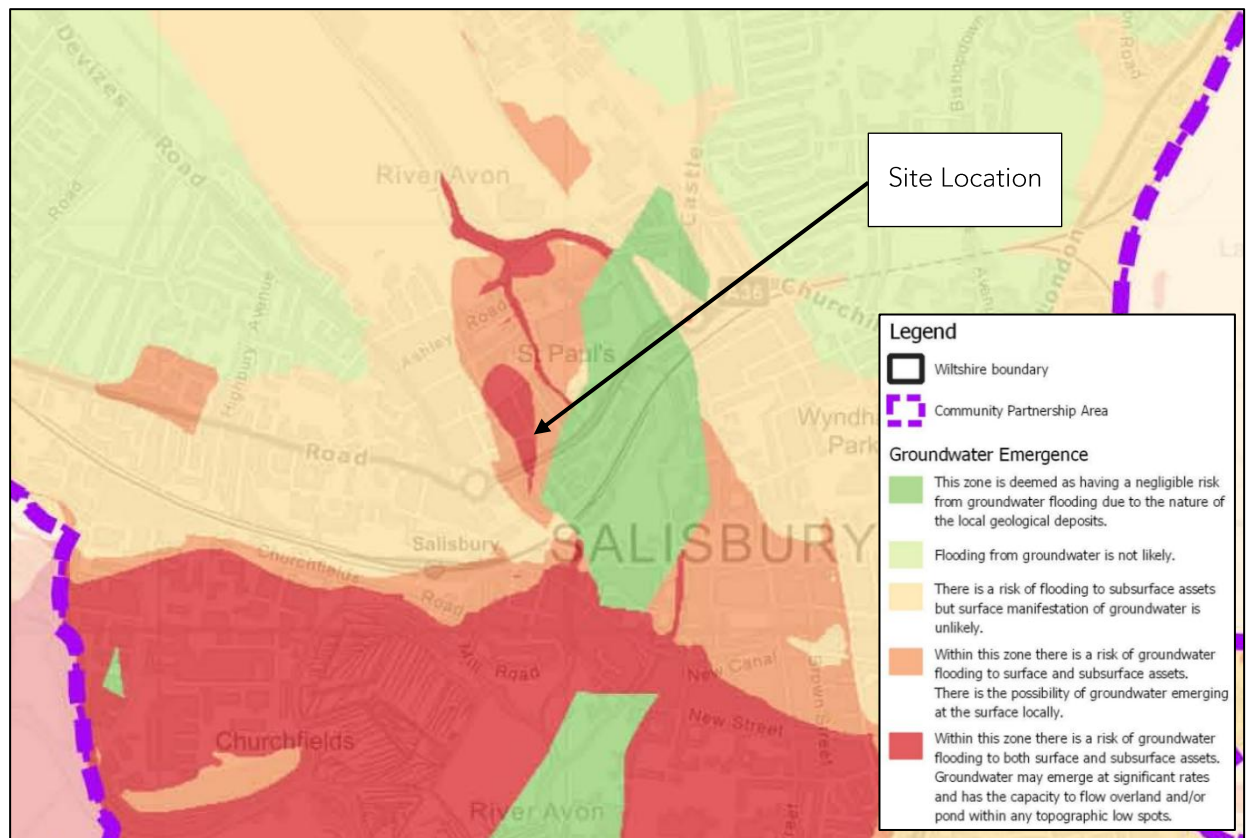


Figure 12: Groundwater Flood Risk (Wiltshire Council SFRA, 2024).

- 4.46. Although there is no sub-terranean development proposed as part of the provided plans, based on a regional level mapping the site is considered to be at a moderate to high level of groundwater flooding. Therefore, mitigation will be recommended to reduce the risk to the proposed development. Furthermore, a groundwater investigation could be undertaken to determine the depth of groundwater at site specific level to understand the risk at a greater detail. However, this is beyond the scope of this report.

Sewers

- 4.47. 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.

4.48. The Wiltshire SFRA (2024) provides mapping of postcode areas with a record of the number of historical sewer flood incident kept by the local authority and Wessex Water. With the 'SP2 7' postcode there has been 0 recorded incidents of sewer flooding.

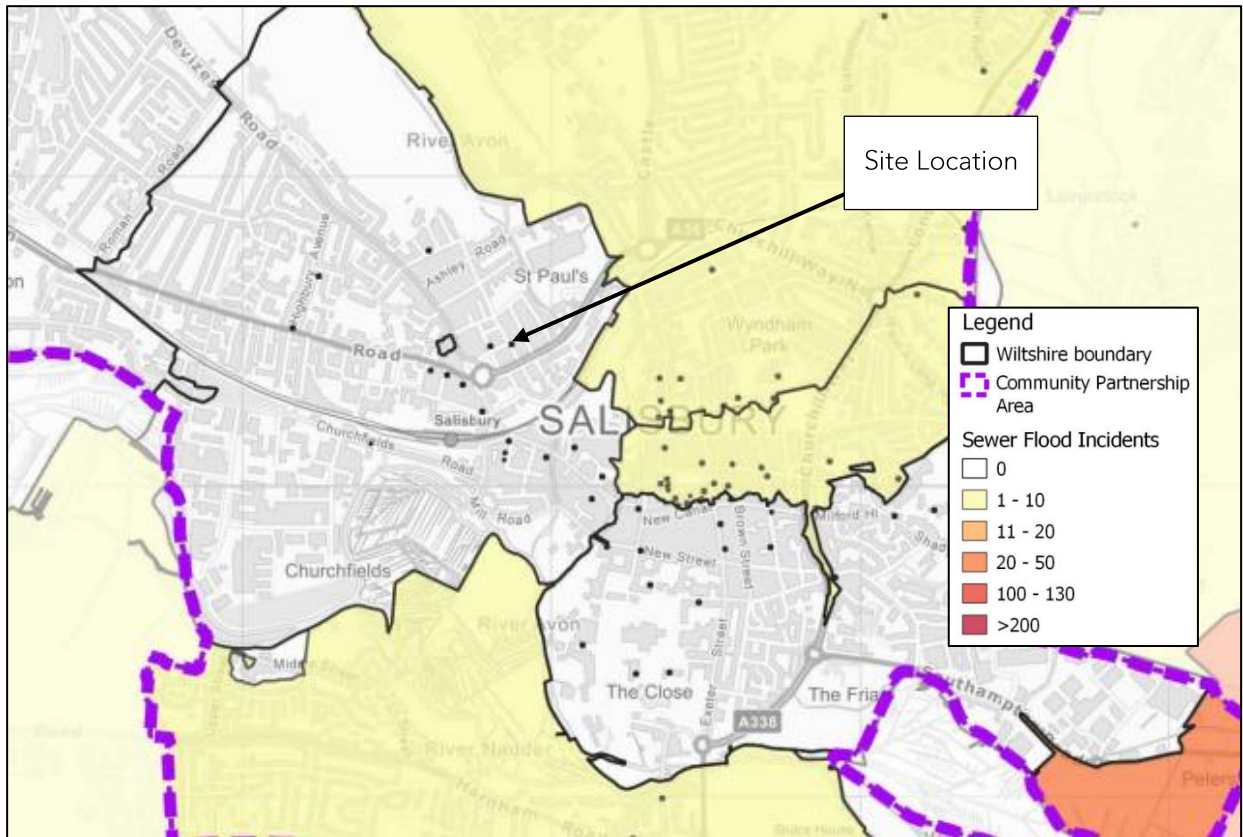


Figure 13: Sewer Flooding Incidents Recorded by Wessex Water

4.49. The development is therefore considered to be at low risk of flooding from sewers.

5. Flood Risk Mitigation

Fluvial and Groundwater

- 5.1. EA mapping shows the site and all buildings proposed for development are located within Flood Zone 2.
- 5.2. Based on the modelling carried out to inform the design of the alleviation scheme, the proposed development site and large parts of the surrounding area are removed from the 1in100 year extent post-scheme. With the implantation of the flood scheme the site can be considered to be at a reduce risk of fluvial flooding.
- 5.3. As the proposal comprises of changes to an existing buildings, raising floor levels is limited by the existing fabric of the building and in this instance, it is not possible to raise the finished floor whilst maintaining a habitable floor to ceiling height.
- 5.4. Groundwater is considered to be a moderate to high risk in the area of the site, therefore some of the following mitigation has been recommended to reduce the risk from groundwater flooding.
- 5.5. Flood resistance and resilience measures are recommended below as part of Improving the Flood Performance of New Building' Flood Resistant Construction (2007). Measures include;
 - The use of durable fittings that are not significantly affected by water and can be easily cleaned (e.g. use of plastic materials or stainless steel for worktop units).
 - Water, electricity and gas service entries including sockets should be sealed (e.g. with expanding foam or similar closed cell material)
 - Where possible wiring and power outlets should be raised 300mm above finish floor level.
 - Special care should be taken to ensure adequate sealing of any PVC window/door sills to the fabric of the dwelling.
 - Ensure adequate sealing of joints between internal fitting and surfaces to prevent any penetration of water behind fittings.
 - Damp Poof Membrane (d.p.m) should be included to minimise the passage of water through ground floors.

- A SMART Airbrick® (or similar) is to be installed to ensure water ingress does not occur into the buildings.

Other Sources

- 5.6. Flood risks from tidal, reservoirs and canals are considered to be low, therefore additional mitigation is not a requirement.

Increase to Flood Risk Elsewhere

- 5.7. Based on the analysis above, the site is shown to not be impacted in the modelled flood events (with presents of new defences), therefore the development will have a negligible impact on displacement of flood waters and not increase flood risk elsewhere.
- 5.8. Small scale SuDS such as rainwater planters and water butts are also recommended to provide betterment over existing situation.

Flood Warnings and Access/egress

- 5.9. Occupants should sign up to EA flood alerts and warnings. The site is located within the 'Upper Hampshire Avon at St Pauls and City Centre, Salisbury' Flood Warning area. This service allows residents to register an address along with contact details so that, in the event of a flood being forecast, they are sent an alert.
- 5.10. Flood warnings/alerts can be enforced at any time of the day or night. Signing up for this service provides occupants some notice before a flood event. The amount of time afforded before a flood occurs depends on the site-specific location (e.g. proximity to the source of flooding, topography of the surrounding area) and the flood mechanism (e.g. bank over topping versus a breach event). Flood warnings provide occupants with time to take necessary action, e.g. communication of the risk of flooding to occupants and evacuation of occupants offsite.
- 5.11. 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 android and apple), social media (X/twitter, Facebook) or email alerts.
- 5.12. With regards to access/egress, on receipt of flood warning the site should be evaluated to ensure a dry egress, especially for occupants within self-contained flats at a first floor level.

- 5.13. If a dry and safe egress is not possible, then safe refuge should be sought from the first floor above.

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 42 - 44 York Road, Salisbury, Salisbury, Wiltshire, SP2 7AT. 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	Based on the modelling carried out to inform the design of the alleviation scheme, the proposed development site and large parts of the surrounding area are removed from the 1in100 year extent post-scheme. In conclusion, the site is considered to be at a low risk of fluvial flooding.
Groundwater	Although there is no sub-terranean development proposed as part of the provided plans, based on a regional level mapping the site is considered to be at a moderate to high level of groundwater flooding. Therefore, mitigation will be recommended to reduce the risk to the proposed development. Furthermore, a groundwater investigation could be undertaken to determine the depth of groundwater at site specific level to understand the risk at a greater detail. However, this is beyond the scope of this report.
Tidal Pluvial Reservoirs Sewers Canals	The site is considered to be at low risk from other sources.

- 6.3. The FRA supports the planning application and demonstrates that there is an acceptable level of flood risk to the site if the mitigation strategies recommended are implemented in the scheme. 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