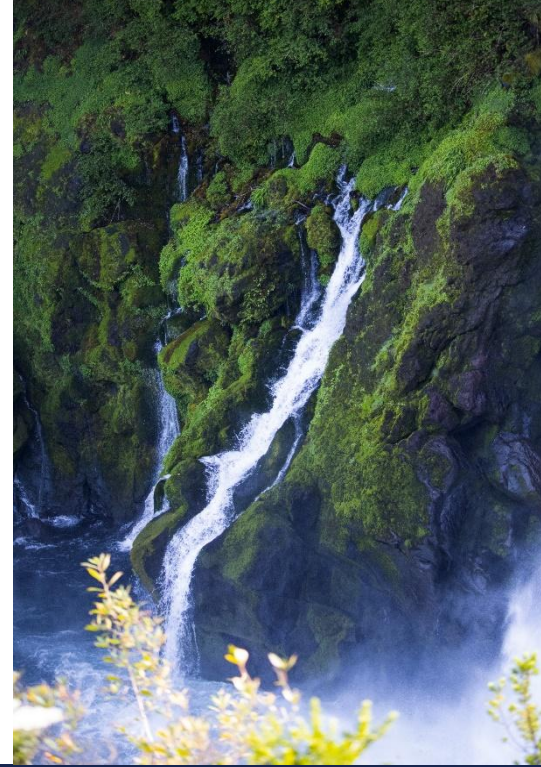




Flood Risk Assessment AEG10137_RH14_Five Oaks_01

Site Address: Woodland Close
Five Oaks
West Sussex
RH14 9AY

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



Document Issue Record

Project: Flood Risk Assessment

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Site Location: Woodland Close, Five Oaks, West Sussex, RH14 9AY

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Summary

Development Description	Existing	Proposed
Development Type	A number of residential dwellings	Educational facilities
EA Vulnerability Classification	More Vulnerable	More Vulnerable
Ground Floor Levels	The EA LiDAR data shows the ground elevation of the site varies between approximately 53.83m AOD (metres Above Ordnance Datum) and 57.59m AOD.	Finished Floor Levels (FFLs) are to be set at the following levels based on the proposed plans (Appendix A): - Phase 1: 56.50m AOD - Phase 2: 56.50m AOD - Phase 3: 56.50m AOD - Phase 4: 57.20m AOD.
Surface Water Drainage	N/A ¹	SuDS are recommended to be incorporated in line with SuDS standards.
Site Size	Approximately 10,420m ²	No change
Risk to Development	Summary	Comment
EA Flood Zone	Flood Zone 1	
Flood Source	Low risk from all analysed sources of flooding	
SFRA Available	Crawley Borough and Upper Mole Catchment Level 1 Strategic Flood Risk Assessment (Crawley Borough Council and Horsham District Council, 2020)	
Management Measures	Summary	Comment
Ground floor level above extreme flood levels	Yes	Proposed buildings are located outside all modelled pluvial likelihood categories even when considering the effects of climate change and are located in fluvial Flood Zone 1.
Safe Access/Egress Route	Yes	See details in Section 5.

Flood Resilient Design	Mitigation measures not required.	Low risk from all analysed sources of flooding.
Site Drainage Plan	N/A ¹	SuDS are recommended to be incorporated in line with SuDS standards.
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	Proposed buildings are located outside all modelled pluvial likelihood categories even when considering the effects of climate change and are located in fluvial Flood Zone 1.
Increase in surface run-off generation	Negligible	SuDS are recommended to be incorporated in line with SuDS standards.
Impact on hydraulic performance of channels	No	The nearest watercourse is situated approximately 90m from the site.

¹ not required for this assessment

² data not available.

1. Introduction

- 1.1. Aegaea were commissioned by Elmcroft Construction 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 Woodland Close, Five Oaks, West Sussex, RH14 9AY (Figure 1).

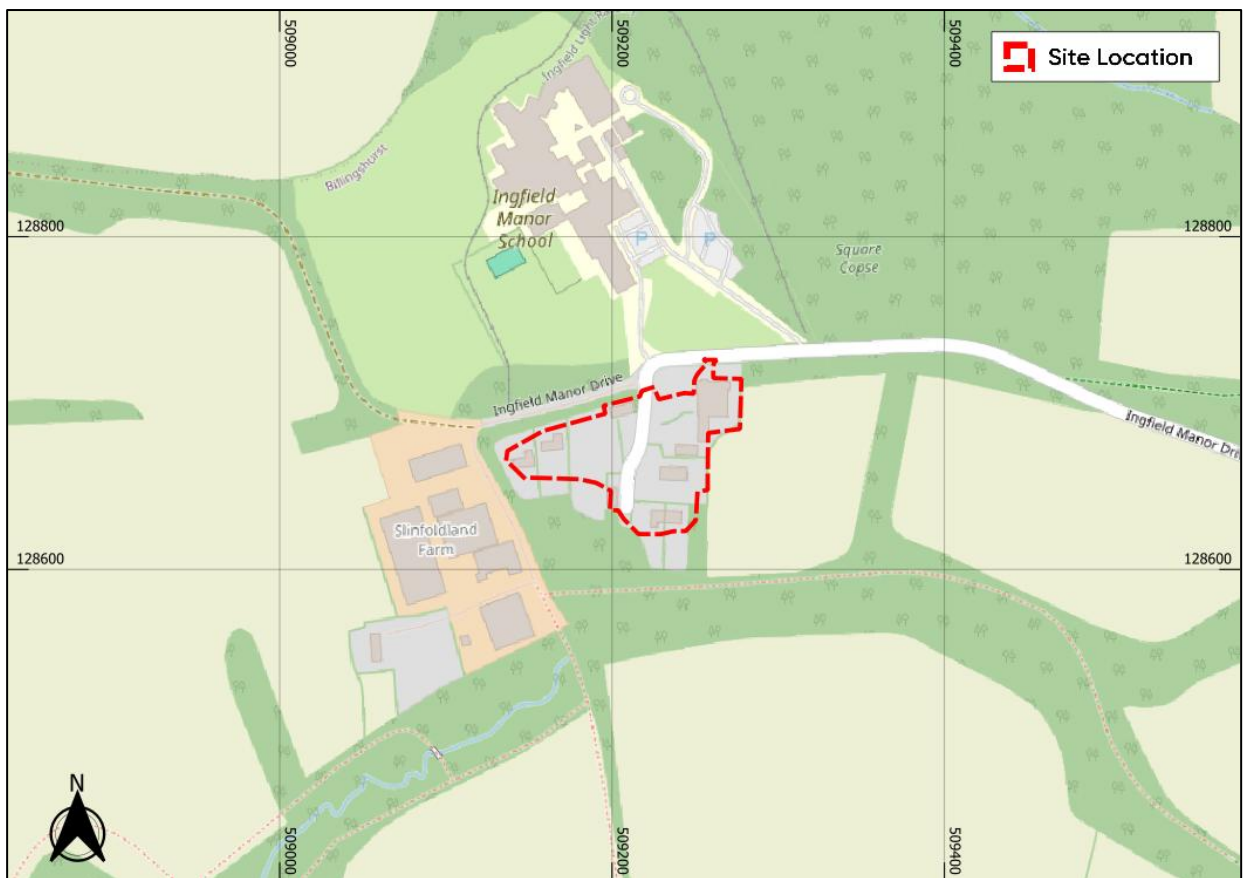


Figure 1: Site Location (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). © <https://www.openstreetmap.org> and contributors)

- 1.4. It is understood that the proposed development is for the redevelopment of the site to provide new educational facilities via a four-phased approach. The proposals include four proposed buildings (all part of the four-phased approach) along with associated access, an enclosed play area and car parking areas.
- 1.5. All plans that have been provided can be found in Appendix A – however, an extract of the proposed site layout has been visualised below in Figure 2.



Figure 2: Extract of Proposed Site Layout (Appendix A)

- 1.6. In the absence of a topographical survey, Environment Agency (EA) Light Detection and Ranging (LiDAR) data Digital Terrain Model has been used to review the topography of the site (Figure 3). The EA LiDAR data shows the ground elevation of the site varies between approximately 53.83m AOD (metres Above Ordnance Datum) and 57.59m AOD. Analysis of topographic levels indicates that the site generally slopes with a fall to the west.
- 1.7. Finished Floor Levels (FFLs) are to be set at the following levels based on the proposed plans (Appendix A):

- Phase 1: 56.50m AOD

- Phase 2: 56.50m AOD
- Phase 3: 56.50m AOD
- Phase 4: 57.20m AOD.

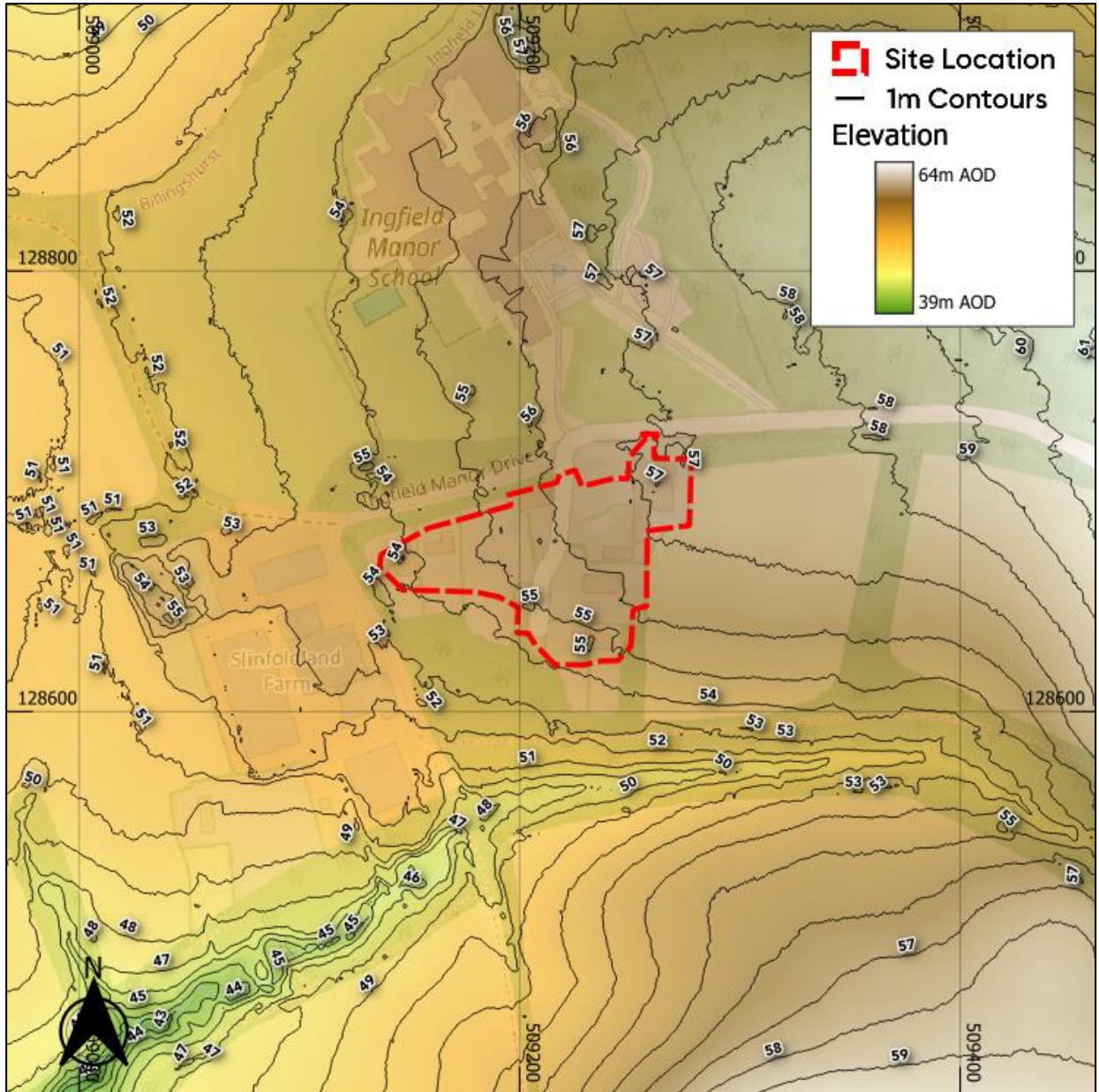


Figure 3: Site Topography (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). © <https://www.openstreetmap.org> and contributors. Contains public sector information licensed under the Open Government Licence v3.0)

- 1.8. Horsham District Council is the Local Planning Authority (LPA) for the site and West Sussex County Council is the designated Lead Local Flood Authority (LLFA). The site sits within the Environment Agency's Solent and South Downs region.

Planning Policy and Guidance

- 1.9. 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*

- 1.10. Based on the EA Flood Map for Planning, the site is situated in Flood Zone 1 only; however, is greater than 1 hectare (ha) which triggers the need for an FRA.

- 1.11. 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	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)

- 2.5. 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, Horsham District Council, sets out the policies for development in the local area.
- 2.8. Policy 38 Flooding outlines the requirements for new development within the area. It states:

1. Development proposals will follow a sequential approach to flood risk management, giving priority to development sites with the lowest risk of flooding and making required development safe without increasing flood risk elsewhere. Development proposals will;

- a. take a sequential approach to ensure most vulnerable uses are placed in the lowest risk areas.*
- b. avoid the functional floodplain (Flood zone 3b) except for water-compatible uses and essential infrastructure.*
- c. only be acceptable in Flood Zone 2 and 3 following completion of a sequential test and exceptions test if necessary.*
- d. require a site-specific Flood Risk Assessments for all developments over 1 hectare in Flood Zone 1 and all proposals in Flood Zone 2 and 3.*

2. Comply with the tests and recommendations set out in the Horsham District Strategic Flood Risk Assessment (SFRA).

3. Where there is the potential to increase flood risk, proposals must incorporate the use of sustainable drainage systems (SuDS) where technically feasible, or incorporate water management measures which reduce the risk of flooding and ensure flood risk is not increased elsewhere.

4. Consider the vulnerability and importance of local ecological resources such as water quality and biodiversity when determining the suitability of SuDS. New development should undertake more detailed assessments to consider the most appropriate SuDS methods for each site. Consideration should also be given to amenity value and green infrastructure.

5. *Utilise drainage techniques that mimic natural drainage patterns and manage surface water as close to its source as possible will be required where technically feasible.*
6. *Be in accordance with the objective of the Water Framework Directive, and accord with the findings of the Gatwick Sub Region Water Cycle Study in order to maintain water quality and water availability in rivers and wetlands and wastewater treatment requirements.*

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.

Sequential Test

- 2.10. Paragraph 175 of the NPPF states:

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 proposed development is located within the EA fluvial Flood Zone 1 and outside all modelled likelihood categories to experience surface water flooding based on the NaFRA2 data.
- 2.12. It is also considered that safe access / egress remains possible in all fluvial and pluvial scenarios. Thus, the sequential test is not considered to be necessary in line with Paragraph 175 of the NPPF.

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 other it would be classed as 'More Vulnerable' in line with government development use classes.

- 2.14. The Flood Risk Vulnerability Classification table³ provided below in Table 2 shows which vulnerabilities are appropriate in each Flood Zone.
- 2.15. The proposed development sits within Flood Zone 1, and the proposed development is considered to be 'More Vulnerable'. Table 2 shows Flood Zone 1 is an appropriate location for 'Less Vulnerable' uses without the need for an Exception Test.

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.

³ <https://www.gov.uk/guidance/flood-risk-and-coastal-change#table2>

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)
 - Horsham District Local Plan 2023 - 2040, Regulation 19 (Horsham District Council, emerging 2024)⁴ and Horsham District Planning Framework (Horsham District Council, 2015)⁵

⁴ <https://strategicplanning.horsham.gov.uk/gf2.ti/-/1583938/192184357.1/PDF/-/Horsham%20District%20Local%20Plan%20Regulation%2019.pdf>

⁵ https://www.horsham.gov.uk/__data/assets/pdf_file/0016/60190/Horsham-District-Planning-Framework-November-2015.pdf

- Preliminary Flood Risk Assessment Addendum (West Sussex County Council, 2017)⁶ and West Sussex Preliminary Flood Risk Assessment (West Sussex County Council, 2011)⁷
- Crawley Borough and Upper Mole Catchment Level 1 Strategic Flood Risk Assessment (Crawley Borough Council and Horsham District Council, 2020)⁸
- Local Flood Risk Management Strategy: 2025 - 2030 (West Sussex County Council, 2025)⁹

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 2010 and 2020, provides the evidence base for the Local Planning Authority Horsham 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 Horsham District Council has been used throughout production of this report as a source of information, particularly pertaining to historical flood incidents.

⁶ https://assets.publishing.service.gov.uk/media/5acc9b9140f0b64ff0e694b0/PFRA_West_Sussex_County_Council_2017.pdf

⁷ https://www.westsussex.gov.uk/media/1626/west_sussex_pfra.pdf

⁸ <https://crawley.gov.uk/sites/default/files/2020-09/Strategic%20Flood%20Risk%20Assessment.pdf>

⁹ https://www.westsussex.gov.uk/media/zxfdrox1/westsussex_lfrms.pdf

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.

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 Watercourses

- 4.2. The nearest watercourse in relation to the site is an unnamed small tributary which is located approximately 90m southwest. This watercourse flows in the southwestern direction to ultimately discharge into the nearest EA Main River, the River Arun, situated approximately 2.5km southwest of the site.
- 4.3. It is also noted that there is another identified tributary according to OS mapping located approximately 290m northeast of the site. This watercourse appears to flow in the western direction to ultimately discharge into the River Arun downstream.
- 4.4. There are no other identified watercourses within 500m of the site based on OS mapping.

EA Flood Map for Planning

- 4.5. The entirety of the site is situated within Flood Zone 1 according to the EA Flood Map for Planning (Figure 4). 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).

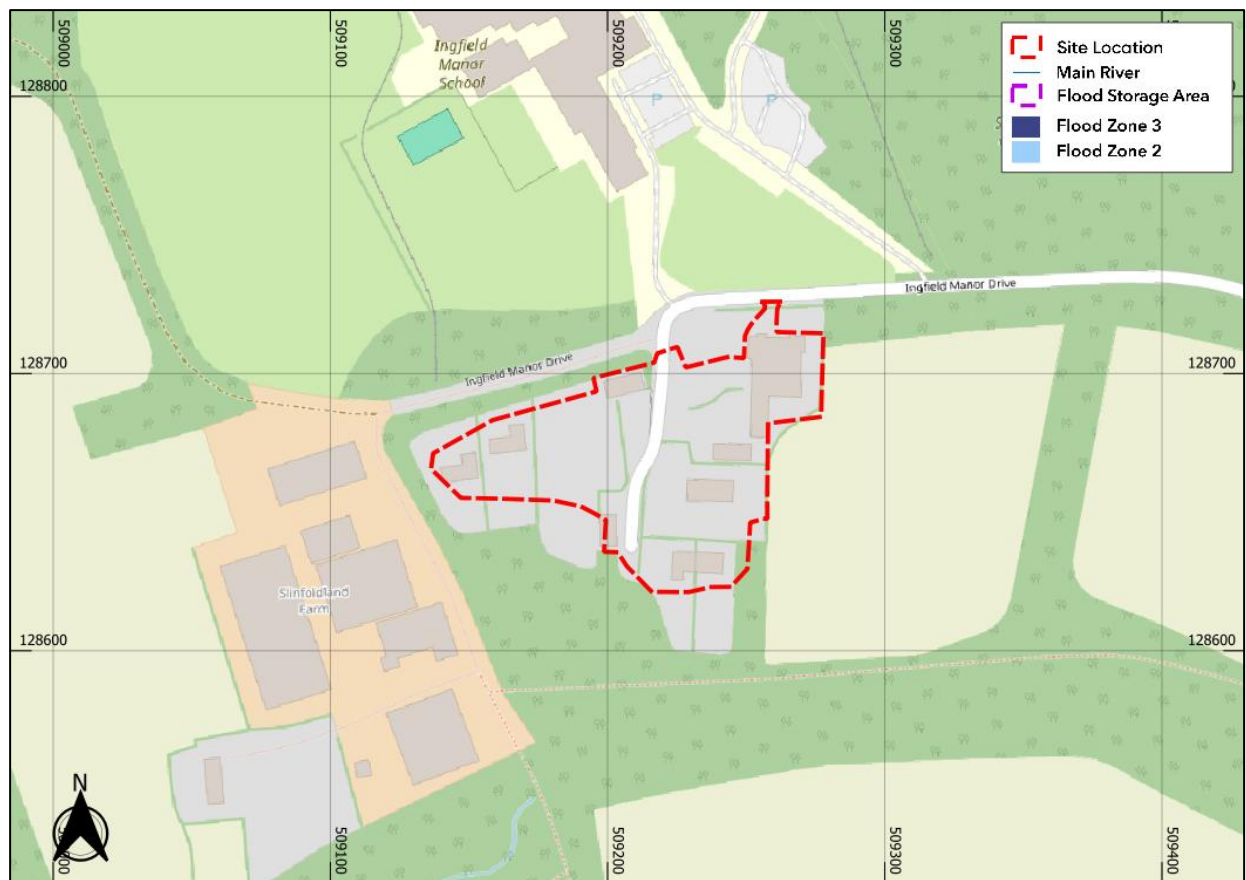


Figure 4: EA Flood Map for Planning (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). © <https://www.openstreetmap.org> and contributors. Contains public sector information licensed under the Open Government Licence v3.0)

Historical Fluvial Flooding

- 4.6. According to the EA's Recorded Historical Flood Outline dataset, the site not its vicinity (<500m) has experienced flooding previously (Figure 5).

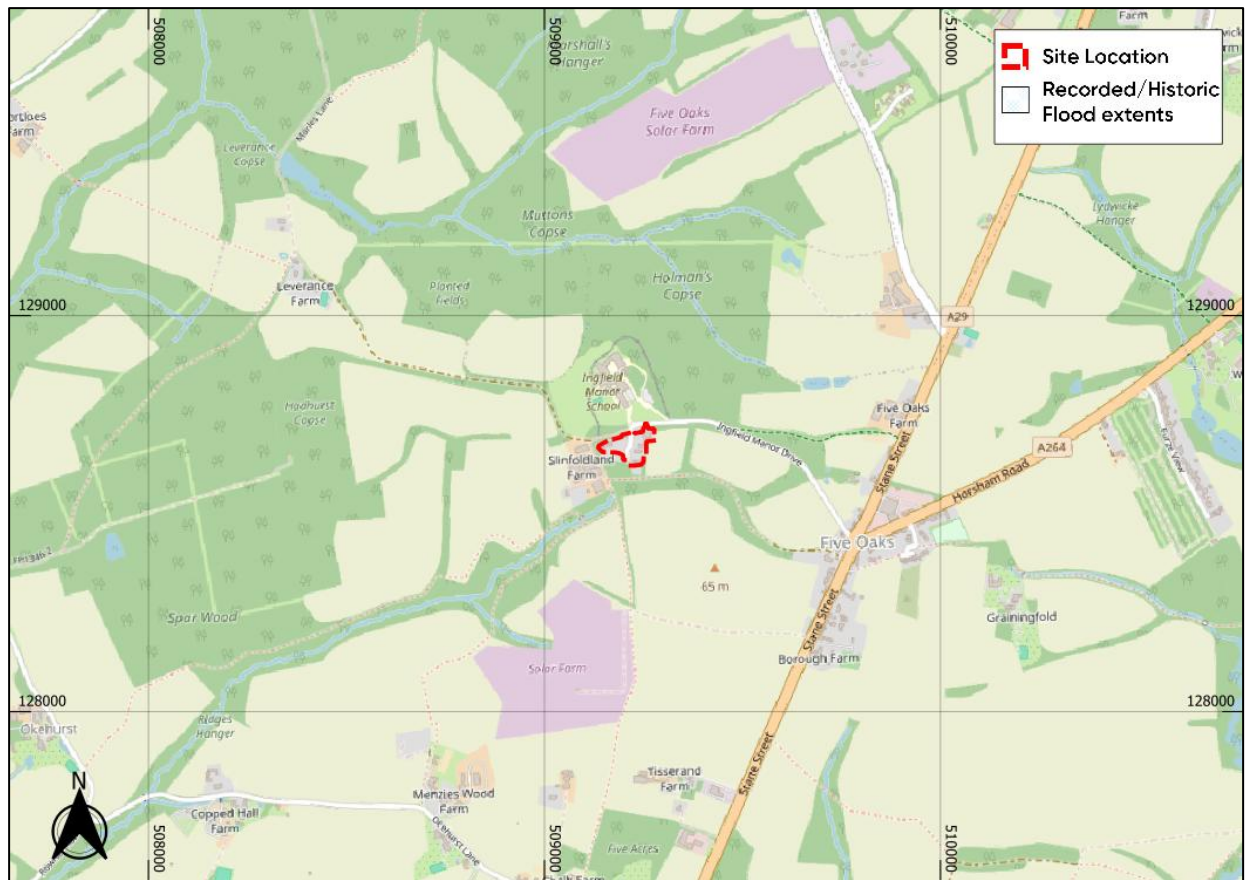


Figure 5: EA Historic Flood Mapping (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). © <https://www.openstreetmap.org> and contributors. Contains public sector information licensed under the Open Government Licence v3.0)

Fluvial Flood Risk Summary

- 4.7. Based on the EA data assessed above, the fluvial flood risk is considered to be low.

Tidal

- 4.8. 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.
- 4.9. 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.
- 4.10. Thus, the risk of flooding from tidal sources is considered to be low.

Canals

- 4.11. 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.
- 4.12. According to the UK CRT Network mapping¹⁰, there are no identified CRT maintained canals within 1.0km radius of the site.
- 4.13. The risk of flooding to this site from canals is considered to be low.

Pluvial

- 4.14. 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

- 4.15. The National Flood Risk Assessment (NaFRA2) has updated the Risks of Flooding from Surface Water (RoFSW) products which shows the chance of flooding from surface water to areas of land.
- 4.16. 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).
- 4.17. 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.

¹⁰ <https://canalrivertrust.org.uk/canals-and-rivers>

- 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.

- 4.18. 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).
- 4.19. 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.
- 4.20. Given the similarity between the present day and climate change scenarios, the climate change scenario has been assessed below as a ‘worst-case’ scenario.

Climate Change Scenario

- 4.21. Examination of the EA's ‘Flood Risk from Surface Water – Climate Change’ mapping indicates that approximately 99% of the site is outside the modelled low, medium and high likelihood categories (Figure 6).
- 4.22. It is noted that an area of low risk extends on-site at the north access with areas of medium and high risk bordering the redline boundary at this location. Further analysis of this area and the comparison between the EA LiDAR shows that this location is situated approximately 100mm lower than Infield Manor Drive to the north and the site to the south. Thus, it is considered that the NaFRA2 data is showing the surface water to ‘pool’ in this area. It is also noted that this is not an overland flow pathway.

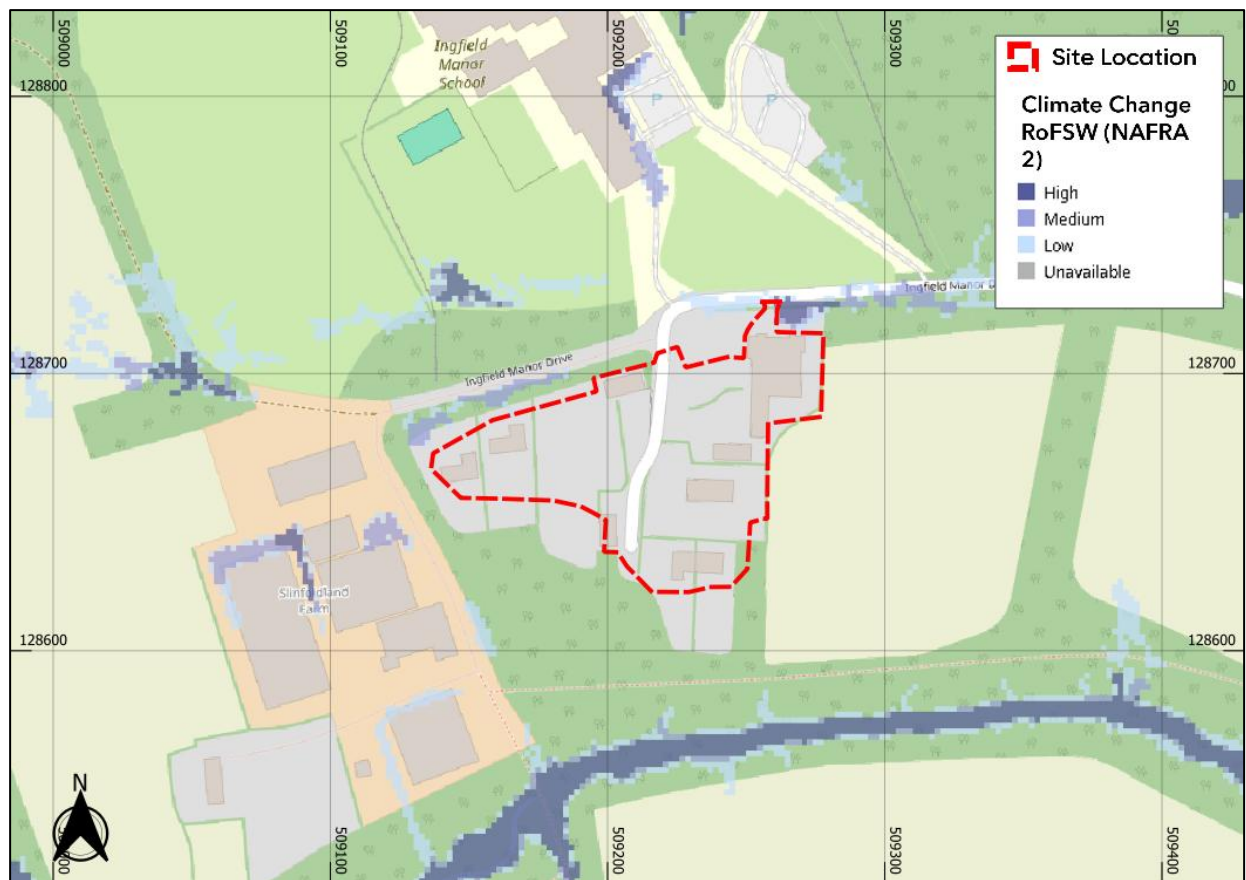


Figure 6: EA Surface Water Flood Risk Mapping – Climate Change Extent (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). © <https://www.openstreetmap.org> and contributors. Contains public sector information licensed under the Open Government Licence v3.0)

- 4.23. Analysis of the likelihood of flood depths exceeding 0.2m mapping shows that the site is outside all modelled likelihood categories with the northern area identified previously shown to be at low risk (Figure 7). However, as mentioned previously, this area is situated approximately 100mm lower than the area directly to the north and south and thus the NaFRA2 is showing the surface water to 'pool' in this area.

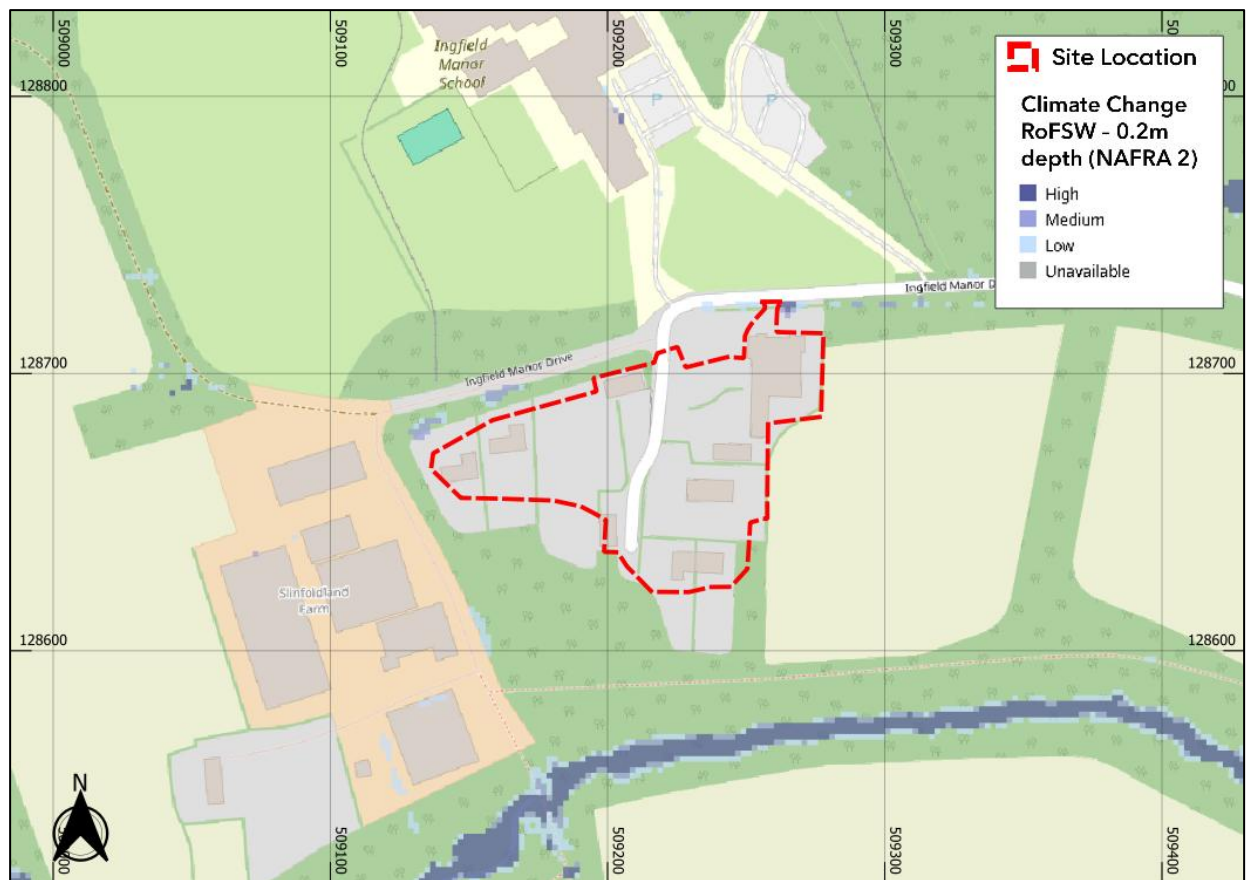


Figure 7: RoFSW Likelihoods of Flood Depths >0.2m (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). © <https://www.openstreetmap.org> and contributors. Contains public sector information licensed under the Open Government Licence v3.0)

- 4.24. Review of the remaining flood depth intervals (0.3m, 0.6m, 0.9m and 1.2m) shows that the entirety of the site is situated outside the modelled likelihood categories.

Pluvial Flood Risk Summary

- 4.25. Given the majority of the site, including all proposed building areas, is situated outside the modelled likelihood categories to experience surface water flooding – the pluvial (surface water) flood risk is considered to be low.
- 4.26. Further details regarding access / egress during a pluvial flood scenario is discussed in Section 5 of this report.

Reservoirs

- 4.27. 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.

- 4.28. 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).

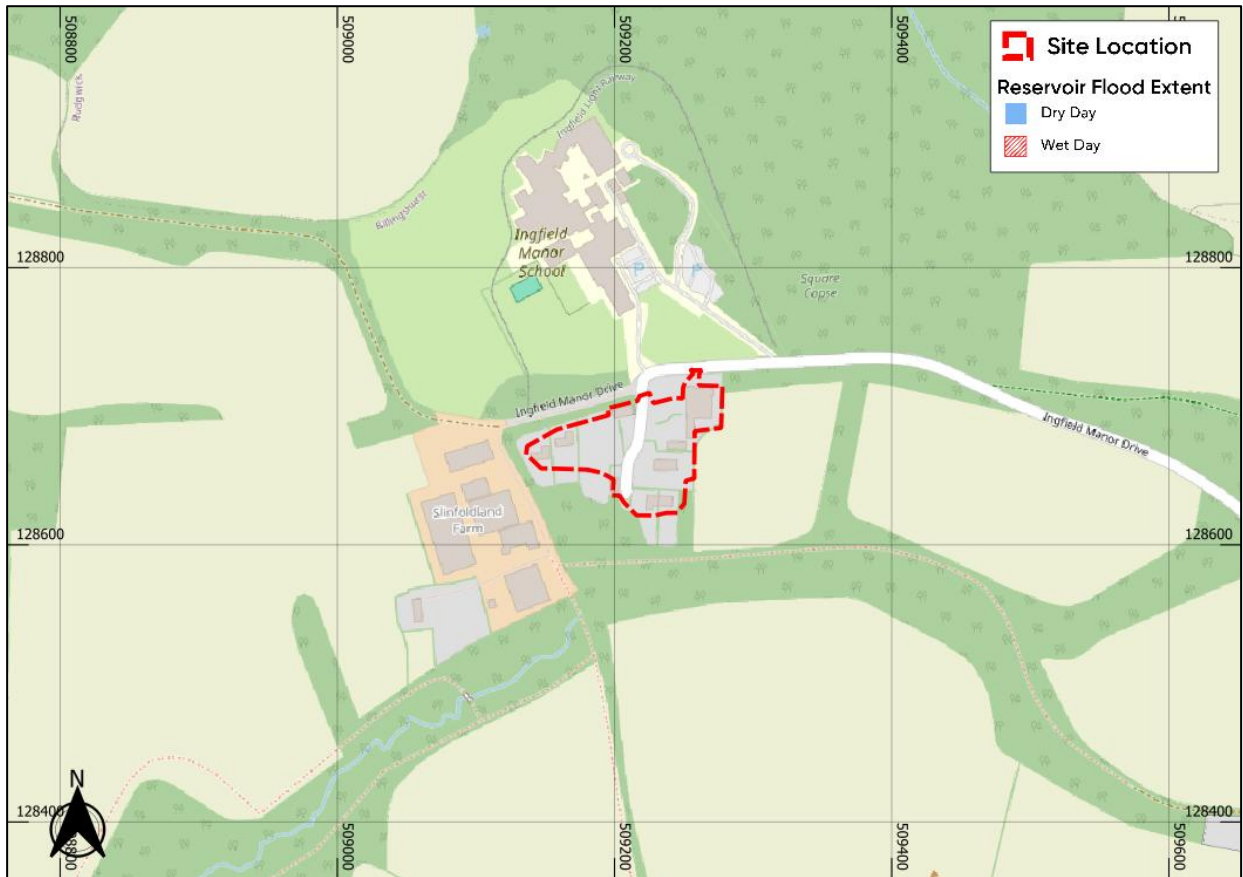


Figure 8: EA Reservoir Flood Risk Mapping (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). ©<https://www.openstreetmap.org> and contributors. Contains public sector information licensed under the Open Government Licence v3.0)

- 4.29. Thus, the site is considered to be low risk from reservoir flooding in the event of a breach.

Groundwater

- 4.30. Groundwater flooding occurs in areas where underlying geology is permeable and water can rise within the strata sufficiently to breach the surface.
- 4.31. The British Geological Survey's (BGS) mapping shows no superficial deposits underlying the site. The bedrock geology is mapped as Weald Clay Formation comprised of mudstone.
- 4.32. There are no identified BGS boreholes within 200m of the site.

- 4.33. The SFRA (2020) presents GeoSmart's Groundwater Flood Risk mapping which shows that the site, represented by the red circle, is situated within 'Class 4' (Figure 9). Class 4 is noted to be 'Negligible' in terms of groundwater flood risk.



Figure 9: GeoSmart Groundwater Flood Risk (SFRA, 2020)

- 4.34. Given the above, the groundwater flood risk is considered to be low.

Sewers

- 4.35. 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.
- 4.36. The SFRA (2020) provides mapping of historical sewer flood incident records kept by the local authority and provided by Southern Water. Figure 10 shows that the site, represented by the red circle, is situated within a 4-digit postcode area of which has recorded between 21 and 30 sewer incidents in the past 10 years.

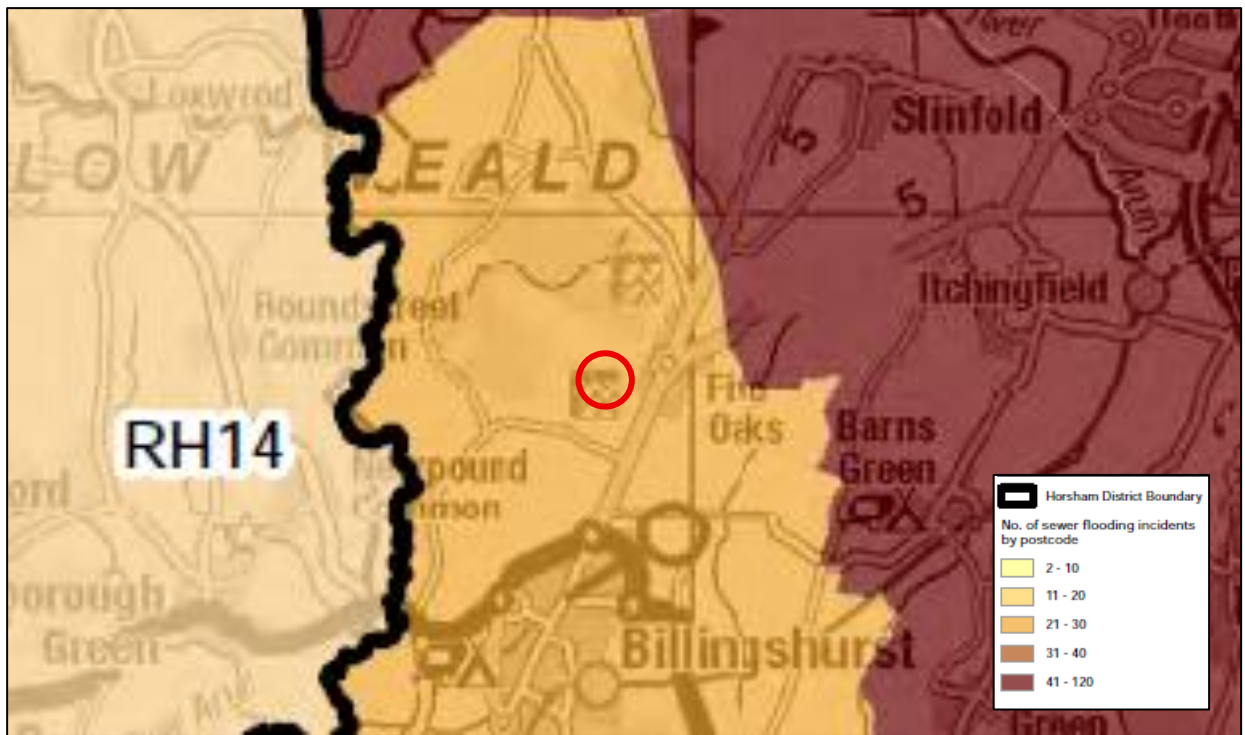


Figure 10: Southern Water Recorded Sewer Incidents (SFRA, 2020)

- 4.37. However, the specific location of these recorded incidents is unknown and there is no indication that the site has previously been affected by sewer flooding.
- 4.38. The development is therefore considered to be at low risk of flooding from sewers. However, as a precautionary approach, it is recommended that non-return valves are included in the design to limit the potential for backflow.

5. Flood Risk Mitigation

All Analysed Sources of Flooding

- 5.1. The proposed development is considered low risk from all analysed sources of flooding including fluvial, tidal, canal, pluvial, reservoir, groundwater and sewers.
- 5.2. Thus, mitigation measures are not considered a requirement for the proposed development.

Increase to Flood Risk Elsewhere

- 5.3. The proposed development footprint is situated in fluvial Flood Zone 1 and outside all modelled likelihood categories (i.e. low, medium and high) to experience surface water flooding.
- 5.4. Therefore, it is considered that the proposed development will not increase the flood risk elsewhere through floodwater displacement.
- 5.5. In addition, small scale SuDS are to be incorporated in external areas to provide a betterment over the existing scenario.

Access / Egress

- 5.6. Given the NaFRA2 hazard ratings are outside all modelled likelihood categories of exceeding 0.75 (which is considered safe as per the EA Hazard Rating Chart (FD2321)¹¹, it is considered that safe access / egress is achievable during pluvial flood events (Figure 11).

¹¹ https://assets.publishing.service.gov.uk/media/602d04a98fa8f5037d371a08/FLOOD_HAZARD_RATING_AND_THRESHOLDS_explanatory_note.pdf

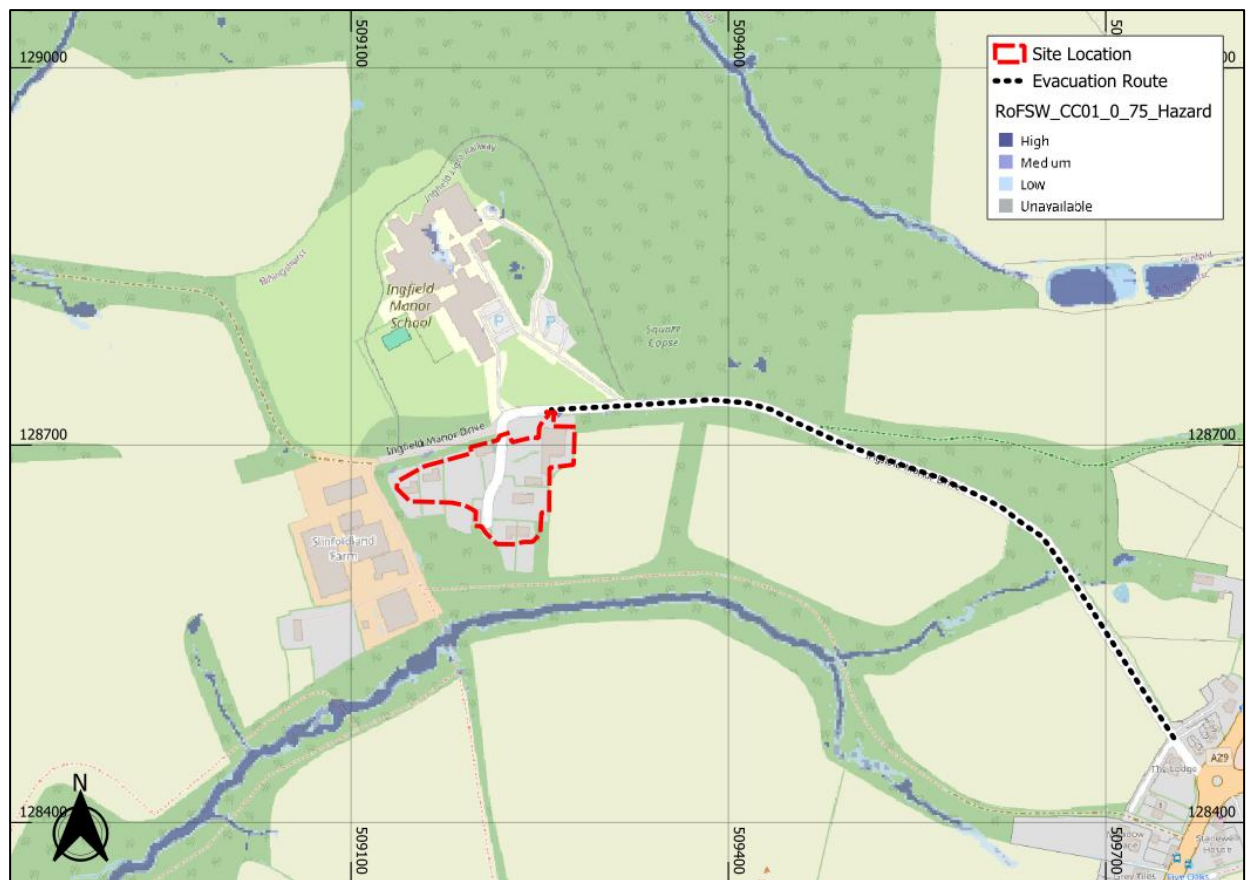


Figure 11: RoFSW Likelihood Mapping of the Pluvial Hazard Rating >0.75 (Safe Hazard) (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). ©<https://www.openstreetmap.org> and contributors. Contains public sector information licensed under the Open Government Licence v3.0)

The Met Office Weather Warnings

- 5.7. Higher authority occupants of the proposed education facility should monitor Met Office Weather Warnings to be prepared for extreme weather events as the site is not in an area where the EA provide specific flood alerts and warnings.
- 5.8. 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. These warnings are given a colour (yellow, amber or red) depending on a combination of both the impact the weather may have and the likelihood of those impacts occurring. This is shown through the 'Warning Impact Matrix'.
- 5.9. 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 Woodland Close, Five Oaks, West Sussex, RH14 9AY. 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 Tidal Pluvial 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



Note:
Do not scale this drawing. All levels and dimensions are to be checked on site. This drawing is to be read in conjunction with all relevant consultants' requirements, drawings and specifications. Any discrepancies between consultants' drawings to be reported to the Contract Administrator before any relevant work commences.

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Notes

Rev	Date	Description	Drawn	Checked	Status
P01	31.07.25	First Issue	SC	RM	
P02	29.10.25	Site boundary revised	JC	RM	

PLANNING APP

Ingfield Woodview School

Existing Site Plan

Scale: 1:1000 @ A3

Drawing Reference: 4908-MBA-XX-ZZ-D-A-0090

Rev: P02

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Notes

0 10m 20m 30m 40m 50m

Rev	Date	Description	Drawn	Checked	Status
P01	31.07.25	First Issue	SC	RM-1	
P02	29.10.25	Updated with additional detail added.	JC	RM-1	
P03	07.11.25	Site Boundary Line Amended	JC	RM-1	
P04	12.12.25	Trees amended to match tree survey information	JC	RM-1	

PLANNING APP

Ingfield Woodview School

Proposed Phases 1, 2, 3 & 4 Site Layout

Scale: 1:500 @ A3

Drawing Reference: 4908-MBA-ZZ-ZZ-D-A-0107

Rev: P04

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