

aegaea
water, civils and environment

Flood Risk Assessment
AEG9323_PO22_Arun_01

Site Address: 25 Kingsmead
Felphem
Arun
West Sussex
PO22 7BD

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

aegaea
water, civils and environment

Document Issue Record

Project: Flood Risk Assessment

Prepared for: James Boyle & Sarah Vockins

Reference: AEG9323_PO22_Arun_01

Site Location: 25 Kingsmead, Felphem, Arun, West Sussex, PO22 7BD

Issue	Date	Author	Check	Auth.	Comments
1	20/11/2025	Daniel Cunningham	JC	NB	First issue
2	26/11/2025	Daniel Cunningham	NB		Second issue – client comments

Please Note:

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. Consultation and Review 12

Consultation 12

Documents and Online Mapping 12

4. Sources of Flood Risk 15

Fluvial/Tidal 15

Canals 30

Pluvial 30

Reservoirs 32

Groundwater 33

Sewers 35

5. Flood Risk Mitigation 36

Fluvial/Tidal 36

Canals, Pluvial, Reservoirs, Groundwater and Sewers 37

Increase to Flood Risk Elsewhere 37

Flood Warnings 38

aegaea

water, civils and environment

6. Conclusions.....39

Appendix A - Development Proposals.....41

Appendix B - EA Product 4.....42

Summary

Development Description	Existing	Proposed
Development Type	A residential dwelling	The demolition of the existing single storey extension to the rear of the existing property, and construction of a larger single storey extension.
EA Vulnerability Classification	More Vulnerable	More Vulnerable
Ground Floor Level	Based on the LiDAR data the existing dwelling has ground elevations of between 1.53m AOD and 1.19m AOD. Existing FFLs are at 2.04m AOD	No Change – FFLs no lower than existing (2.04m AOD)
Level of Sleeping Accommodation	First Floor	No change
Surface Water Drainage	N/A[1]	Runoff to be discharged via the existing system. Small scale SuDS such as rainwater planters and water butts could be installed in outdoor areas to provide betterment.
Site Size	c.260m²	No change
Risk to Development	**Summary**	**Comment**
EA Flood Zone	Flood Zones 3	Not affected in any defended fluvial flood events up to and included the 1 in 1000 year event. Only affected by 0.19m of flooding in the residual 1 in 1000 year tidal breach event.
Flood Source	Fluvial and Tidal	
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	Not affected in any defended fluvial flood events up to and included the 1 in 1000 year event. Only affected by 0.19m of

		flooding in the residual 1 in 1000 year tidal breach event.
Safe Access/Egress Route	N/A[1]	Proposals are considered a minor development (extension to existing dwelling) and as such, access/ egress arrangements will not change compared to the existing.
Flood Resilient Design	Yes	To take a precautionary approach, it is recommended that the proposed development incorporates flood resilient and resistance measures in accordance with *Improving the Flood Performance of New Buildings – Flood Resilient and Resistant Construction.*
Site Drainage Plan	N/A[1]	Runoff to be discharged via the existing system. Small scale SuDS such as rainwater planters and water butts could be installed in outdoor areas to provide betterment.
Flood Warning and Evacuation Plan	Yes	Recommended to sign up to the Bognor Environment Agency flood warning service.
Offsite Impacts	**Summary**	**Comment**
Displacement of floodwater	Negligible	Development is classified as minor development in terms of flood risk and therefore in isolation should not result in increase in flood risk elsewhere in accordance with Paragraph 051 of the NPPG.
Increase in surface run-off generation	Negligible	It is proposed to manage surface water from the extension via existing surface water drains on site. Small scale SuDS such as rainwater planters and water butts should be utilised the manage runoff.
Impact on hydraulic performance of channels	Negligible	The nearest watercourse is approximately 17m from the proposed development footprint.

[1] not required for this assessment [2] data not available.

1. Introduction

1.1. Aegaea were commissioned by James Boyle & Sarah Vockins 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 25 Kingsmead, Felpham, Arun, West Sussex, PO22 7BD (Figure 1)

Figure 1: Site Location (Base map and data from Google Hybrid ©)

1.4. It is understood that the proposed development includes the demolition of the existing single storey extension to the rear of the existing property, and construction of a larger single storey extension. The development proposals will be presented in Appendix A.

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 EA LiDAR data shows the ground elevation of the site varies between approximately 1.53m AOD (Above Ordnance Datum) and 1.91m AOD (Figure 2).

1.6. Based on the provided plans, the Finished Floor Levels (FFLs) of the existing building and extension is 200mm above ground level. Based on LiDAR data at the front the building, the ground levels are 1.84m AOD. As such, the calculated FFLs are 2.04m AOD.

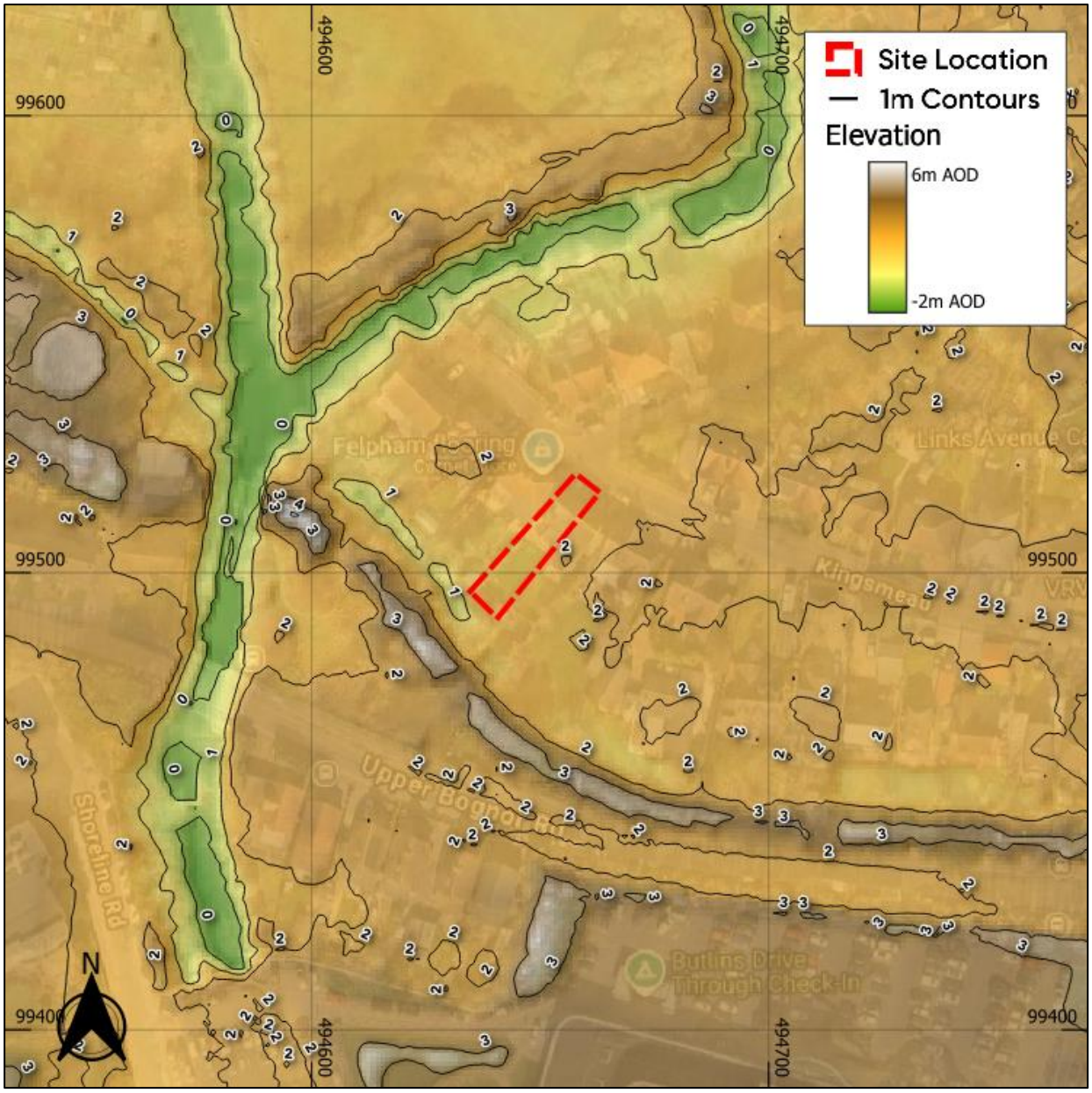


Figure 2: Site Topography (Base map and data from Google Hybrid © Contains public sector information licensed under the Open Government Licence v3.0)

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). The site sits within the Environment Agency's Solent and South Downs region.

Planning Policy and Guidance

1.8. UK government planning guidance states[1] 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*

1.9. The site is located within Flood Zone 3 and as such an FRA is required as per the NPPF.

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 Framework[2] (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. Paragraph 051 of the Flood Risk and Coastal Change Planning Practice Guidance (PPG) states:

Minor development means:

- *minor non-residential extensions (industrial/commercial/leisure etc): extensions with a floorspace not in excess of 250 square metres.*
- *alterations: development that does not increase the size of buildings, e.g. alterations to external appearance.*
- *householder development: for example, sheds, garages, games rooms etc within the curtilage of the existing dwelling,* ***in addition to physical extensions to the existing dwelling itself.*** *This definition excludes any proposed development that would create a separate dwelling within the curtilage of the existing dwelling (e.g. subdivision of houses into flats) or any other development with a purpose not incidental to the enjoyment of the dwelling.*

2.4. As such, the proposal would be considered a Minor Development under the PPG.

2.5. 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.

2.6. 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)

2.7. 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.

2.8. 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

2.9. The Local Plan prepared by the Local Planning Authority, Arun District Council, sets out the policies for development in the local area.

2.10. 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

2.11. 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.

2.12. 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.

2.13. Paragraph 176 of the NPPF states:

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

2.14. As such, a site-specific Sequential Test and Exception Test for the proposed development is not considered necessary in line with the NPPF given that the proposal is for a minor development.

Summary

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

3. Consultation and Review

Consultation

3.1. The EA have provided Aegaea with a Product 4 and Product 6 data sets for site. The outputs from two detailed flood models were provided given the fluvial and tidal flood risk present at the site.

3.2. The Aldingbourne Catchment Modelling 2015 flood model is used to assess fluvial flood risk and the Emsworth to Littlehampton Model - Arun to East Head (2016) is used to assess tidal flood risk at the site.

3.3. The Product 4 is presented in Appendix B of this report and the risk from fluvial and tidal sources using the provided models is discussed in Section 4.

Documents and Online Mapping

3.4. 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.

3.5. 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 and Level 2 Strategic Flood Risk Assessment (Arun District Council, 2016)[6]
- West Sussex Local Flood Risk Management Strategy (2013-2018) (West Sussex County Council, 2014)[7]

Preliminary Flood Risk Assessment (PFRA)

3.6. The PFRA and its Addendum, published in 2011 and 2017, 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.

3.7. 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)

3.8. 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.

3.9. 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.

---

[3] https://www.arun.gov.uk/download.cfm?doc=docm93jijm4n12844.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=docm93jijm4n9414.pdf&ver=9270

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

Local Flood Risk Management Strategy (LFRMS)

3.10. 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.

3.11. 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/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, Ordinary Watercourses and Waterbodies

4.3. The nearest EA Main River is the Albingbourne Rife that is located approximately 50m northwest of the site. There is an unnamed tributary of the Albingbourne Rife that is located on the southern boundary of the site. The English Channel is located approximately 400m south of the site based on OS Mapping.

EA Map for Planning

4.4. The site is located within Flood Zone 3 (Figure 3). Flood Zone 3 denotes a risk of flooding from fluvial sources greater than 1 in 100 (1%) or from tidal sources greater than 1 in 200 (0.5%) probability.

4.5. Review of the EA's Flood Zone dataset indicates that the flood zones are derived from fluvial and tidal models. Furthermore, the EA provided Aegaea with the outputs of both fluvial and tidal detailed flood models. As such the risk from both sources will be assessed further below.

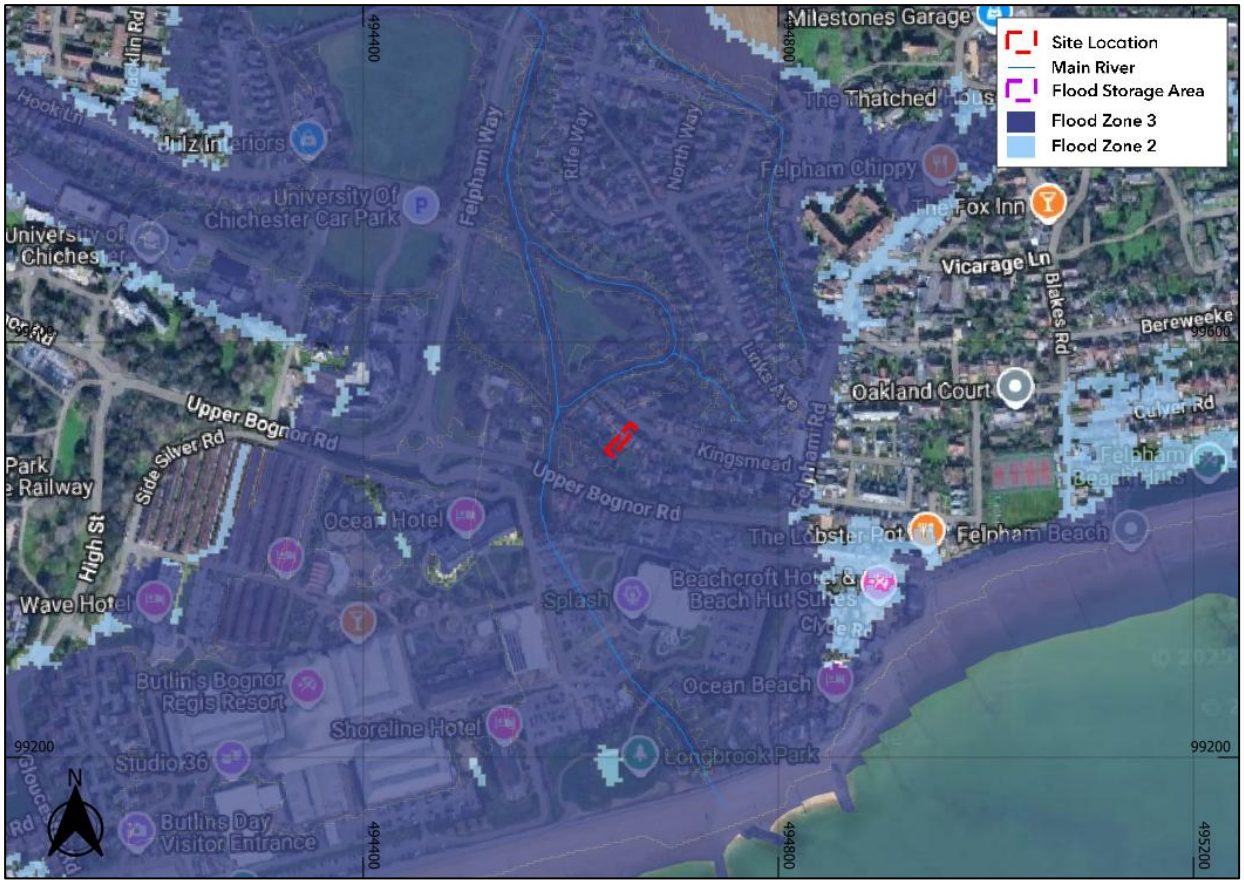


Figure 3: EA Flood Map for Planning (Base map and data from Google Hybrid © Contains public sector information licensed under the Open Government Licence v3.0)

Historical Fluvial Flooding

4.6. There is no record of historical fluvial flooding on-site based on the EA's Recorded Flood Outline dataset (Figure 4).

Figure 4: EA Historic Flood Mapping (Base map and data from Google Hybrid © Contains public sector information licensed under the Open Government Licence v3.0)

Defences

Fluvial

4.7. The Product 4 outlines that the site is within the vicinity of fluvial flood defences (as shown in Figure 5).

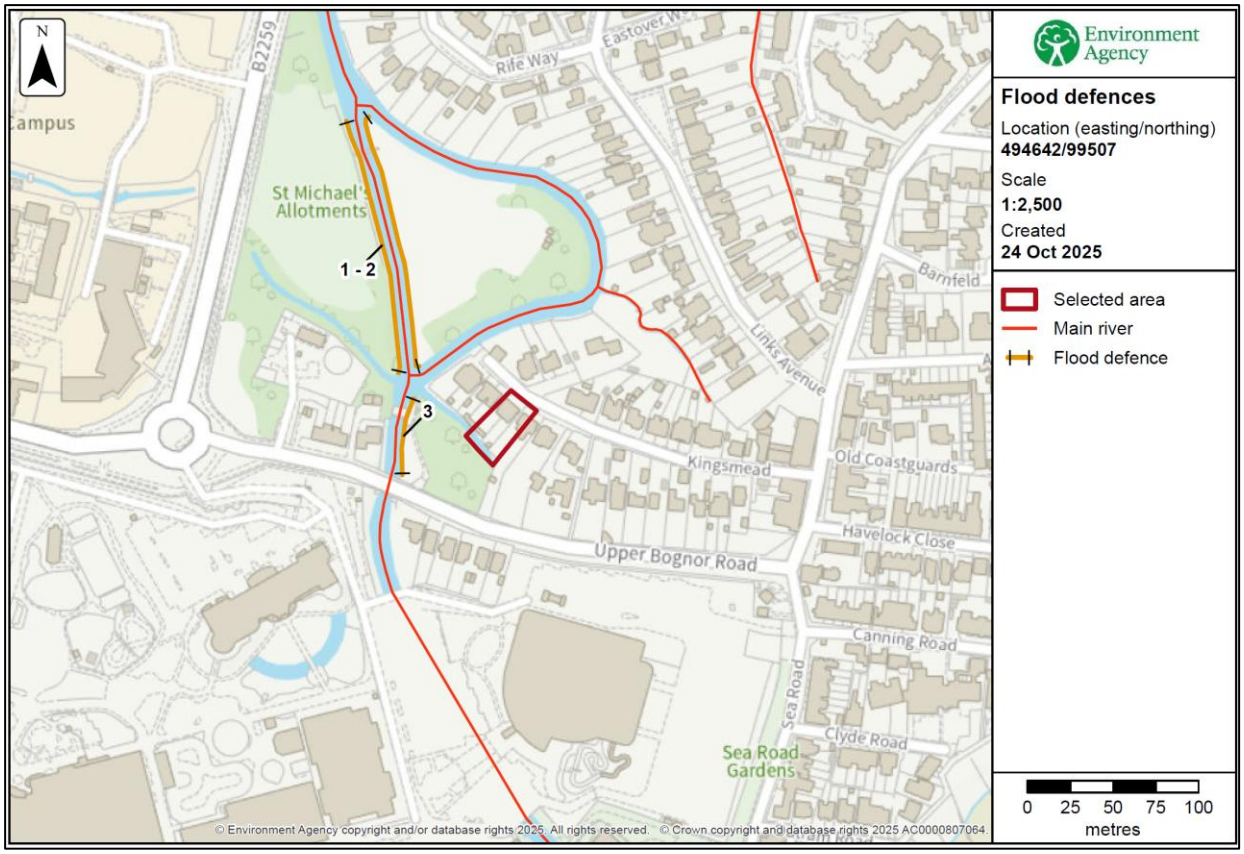


Figure 5: Location of Tidal Flood Defences (Contains public sector information licensed under the Open Government Licence v3.0)

4.8. Information is also provided by the EA regarding these defences (Table 2).

Table 2: Information on Fluvial Flood Defences

Label	Asset ID	Asset Type	Standard of Protection	Asset Condition
1	19551	Engineered High Ground	1 in 5 Year	Fair
2	19550	Engineered High Ground	1 in 5 Year	Fair
3	436039	Engineered High Ground	N/A*	Fair

* Information not available

Tidal

4.9. As shown in Figure 6, the site is benefitting from flood defences along the coast to the south.

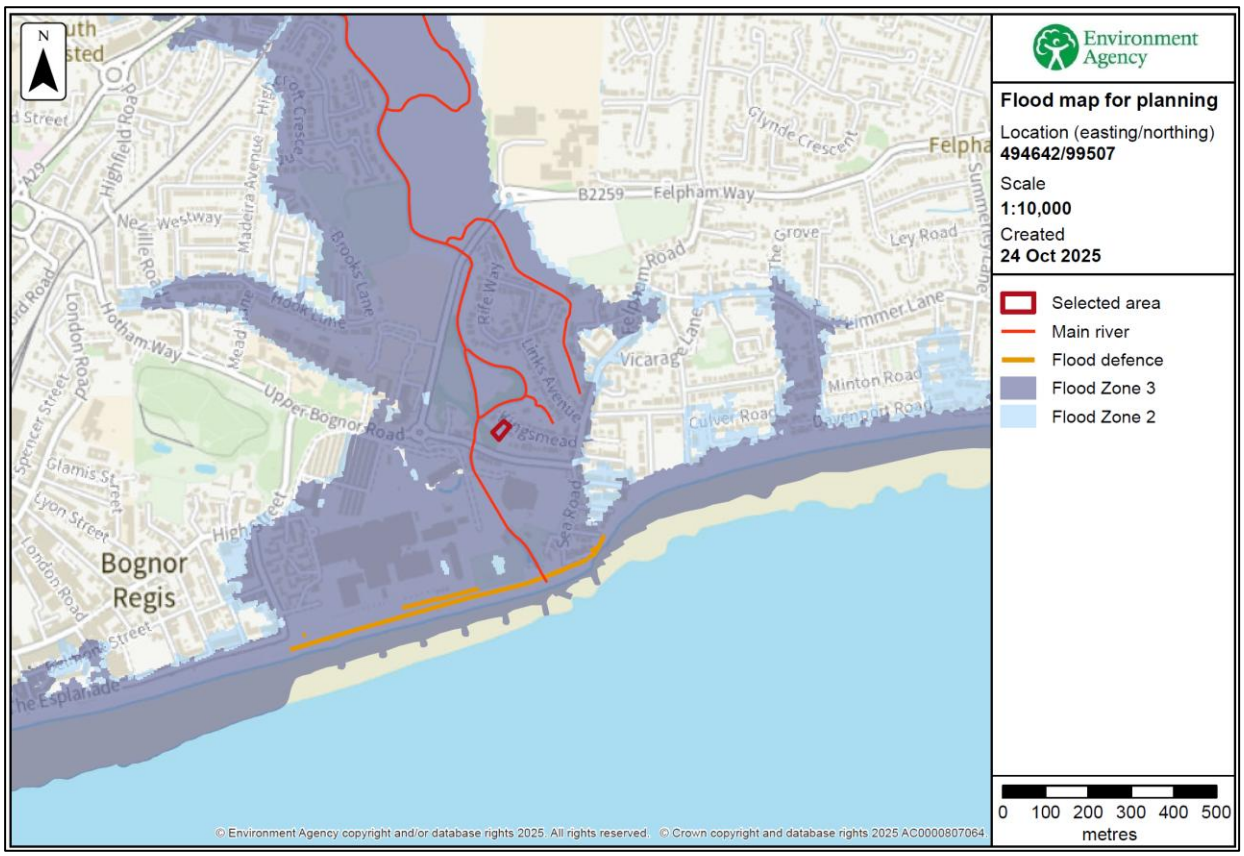


Figure 6: Location of Tidal Flood Defences (Contains public sector information licensed under the Open Government Licence v3.0)

Based on the EA AIMS data set[8] , there are three tidal defences south of the site. These are shown below (

[8] **https://environment.data.gov.uk/asset-management/index.html**

4.10. Table 3).

Table 3: Information on Tidal Flood Defences

Asset ID	Asset Type	Effective Crest Level	Standard of Protection	Asset Condition
149096	Embankment	5.64m AOD	1 in 200 Year	Good
149095	Wall	6.5m AOD	1 in 200 Year	Fair
149098	Wall	5.64m AOD	1 in 10 Year	Fair

4.11. The coastline south of the site is within the 'Felpham to Aldwick 4D23' Shoreline Management Plan Zone. The plan states that the present day, medium-term, and long-term plan for the site's area, is to hold the line, by providing continuous maintenance to defences and modification of the standard of protection overtime.

4.12. Therefore, it is considered that the development benefits from tidal flood defences and will continue to in the future. However given the location of tidal defences in the vicinity of the site, the residual risk of an extremely unlikely breach event will also be assessed below.

EA Modelled Flood Data

4.13. The EA have provided Aegaea with a Product 4 and Product 6 data sets for site. The outputs from two detailed flood models were provided given the fluvial and tidal flood risk present at the site.

4.14. The Aldingbourne Catchment Modelling 2015 flood model is used to assess fluvial flood risk and the Emsworth to Littlehampton Model - Arun to East Head (2016) is used to assess tidal flood risk at the site.

4.15. The models include multiple return periods including the 1 in 30 year, 1 in 100 year, 1 in 200 year and 1 in 1000 year scenarios along with climate change allowances to assess the fluvial and tidal flood risk to the site and proposed development. The Emsworth to Littlehampton Model - Arun to East Head (2016) also contains breach modelled flood data for the flood defences in the vicinity of the site.

Aldingbourne Catchment Modelling 2015 (Fluvial Model)

Present Day

4.16. As can be seen in Figure 7, the site is not affected in the fluvial modelled 1 in 30 year event. As such, the site is not considered to be within fluvial Flood Zone 3b.

Figure 7: 1 in 30 Year Depth (Base map and data from Google Hybrid © Contains public sector information licensed under the Open Government Licence v3.0)

4.17. As can be seen in Figure 8, the site is not within the modelled 1 in 100 year flood extent.

Figure 8: 1 in 100 Year Depth (Base map and data from Google Hybrid © Contains public sector information licensed under the Open Government Licence v3.0)

4.18. As can be seen in Figure 9, the site and part of the proposed development footprint is within the modelled 1 in 1000 year fluvial flood event (considered the 'worst case'). The maximum modelled flood level during this event is 1.96m AOD. Based on the calculated FFLs of the proposed development (2.04m AOD), the proposed development is a minimum of approximately 0.08m above the modelled flood level and as such is not affected.

Figure 9: 1 in 1000 Year Depth (Base map and data from Google Hybrid © Contains public sector information licensed under the Open Government Licence v3.0)

Climate Change

4.19. The site is located in the Arun and Western Streams Management Catchment, which has updated central peak flow river allowances of: 11% for the 2020s, 13% for the 2050s, and 25% for the 2080s. As the development consists of a 'More Vulnerable' use, the peak flow allowance of 25% for the 2080s would be required for fluvial flood flows.

4.20. It is noted that the Aldingbourne Catchment Modelling 2015 model does not include the 25% climate change (CC) scenario. To take a conservative approach, the 35%CC has been assessed.

4.21. As can be seen in Figure 10, the site is not within the modelled 1 in 100 +35%CC flood extent (conservative design flood model).

Figure 10: 1 in 100 +35%CC Depth (Base map and data from Google Hybrid © Contains public sector information licensed under the Open Government Licence v3.0)

Emsworth to Littlehampton Model - Arun to East Head (2016) (Tidal Model)

Present Day

4.22. As can be seen in Figure 11, the site is not affected in any of the present day defended tidal events up to and including the 1 in 1000 year 'worst case' scenario.

Figure 11: Present Day Outlines (Base map and data from Google Hybrid © Contains public sector information licensed under the Open Government Licence v3.0)

Climate Change

4.23. The Emsworth to Littlehampton Model - Arun to East Head (2016) flood model also contains climate change data.

4.24. The modelling study followed sea-level rise guidance in both NPPF and Adapting to Climate Change: Advice for FCERM Authorities 2016 using UKCP09 medium emissions 95th percentile. The NPPF scenarios have been utilised within the analysis as the total sea level rise is higher compared to the UKCP09 allowances.

4.25. The site is not affected in the defended 1 in 200 year 2115 event (Figure 12). However, the anticipated lifetime of any residential development is 100 years and therefore an additional allowance of 10 years (i.e to 2125) will need to be accounted for.

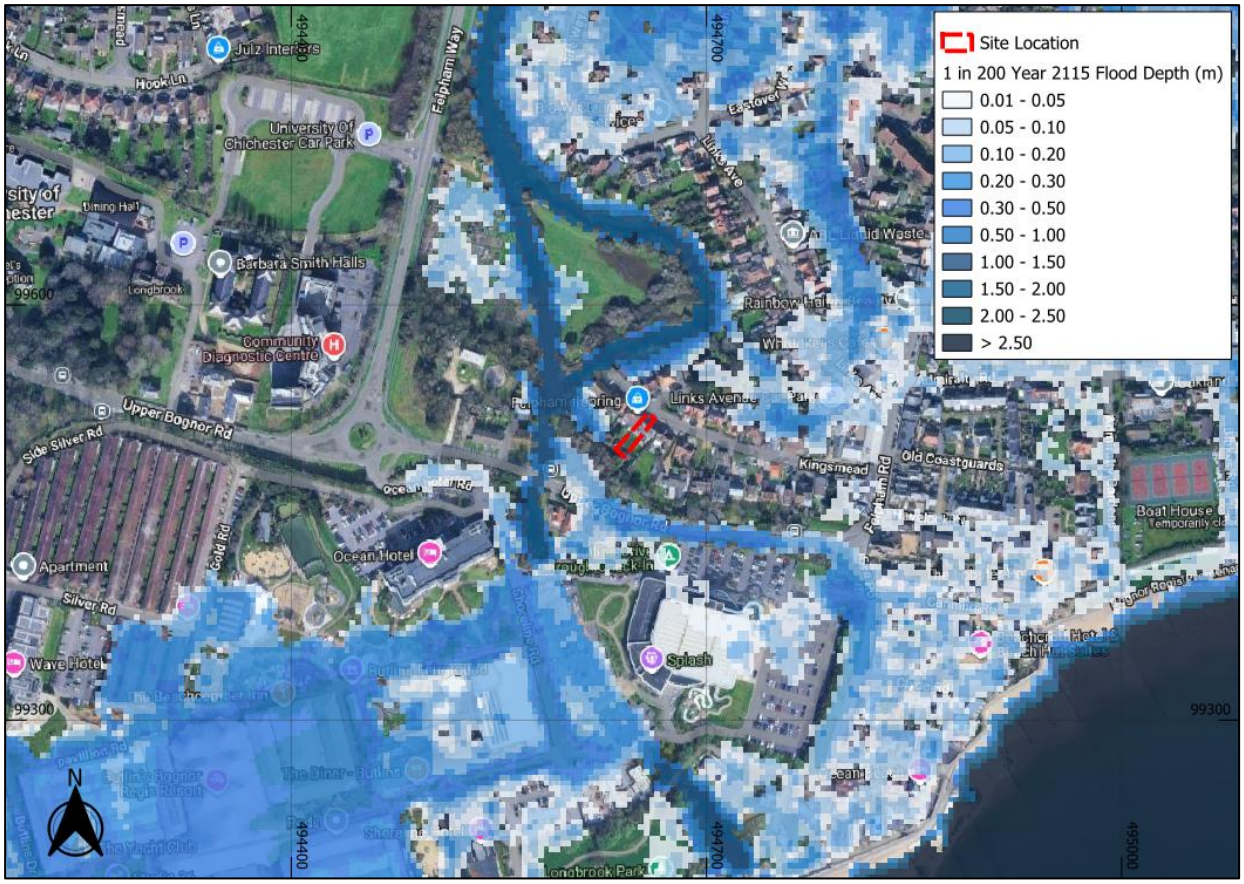


Figure 12: 1 in 200 Year 2115 Flod Depths (Base map and data from Google Hybrid © Contains public sector information licensed under the Open Government Licence v3.0)

4.26. To calculate epochs beyond 2100, the average incremental increase from the last 5 years of the dataset for the site location should be used (2094 to 2099) and multiply by the required number of years after 2100. The figures presented in Flood Risk Assessments: Climate change allowances (August 2022) Table 4 up to 2125 have been calculated using this methodology.

4.27. The average yearly incremental increase for the South East administrative area for 2094 to 2099 is 0.013m. Multiplying this value by 10 gives an increase in sea level rise of 0.13m over the 2115 level.

4.28. The nearest flood level to the site in the 1 in 200 year 2115 event is appropriately 1.50m AOD. Adding the additional 0.13m of sea level rise gives a 1 in 200 year 2125 flood level of 1.63m AOD.

4.29. As previously states, the calculated FFLs of the proposed development are 2.04m AOD, meaning the proposed development is a minimum of approximately 0.41m above the modelled flood level and as such is not affected.

Breach

4.30. For developments such as this, which rely on protection from flood defences, the NPPF requires a 'residual risk' of flooding, resulting from a failure or 'breach' of the defences being considered.

4.31. The Emsworth to Littlehampton Model - Arun to East Head (2016) flood model only contains the breach data for the 1 in 1000 year event, and as such this has been assessed.

4.32. As can be seen in Figure 13, the site and proposed development footprint is within the modelled 1 in 1000 year tidal breach flood event. The maximum modelled flood level during this event is 2.23m AOD. Based on the calculated FFLs of the proposed development (2.04m AOD), the proposed development is affected by a maximum flood depth of approximately 0.19m.

4.33. It is also noted that as part of the proposal there is no ground floor sleeping and all sleeping will remain on the first floor as per the existing scenario. The first floor is approximately 2.62m above the ground floor based on the proposed plans, and as such is considered to be at a level of 4.66m AOD (2.04m + 2.62m). Therefore, the sleeping accommodation remains 2.43m above the extreme breach flood event.

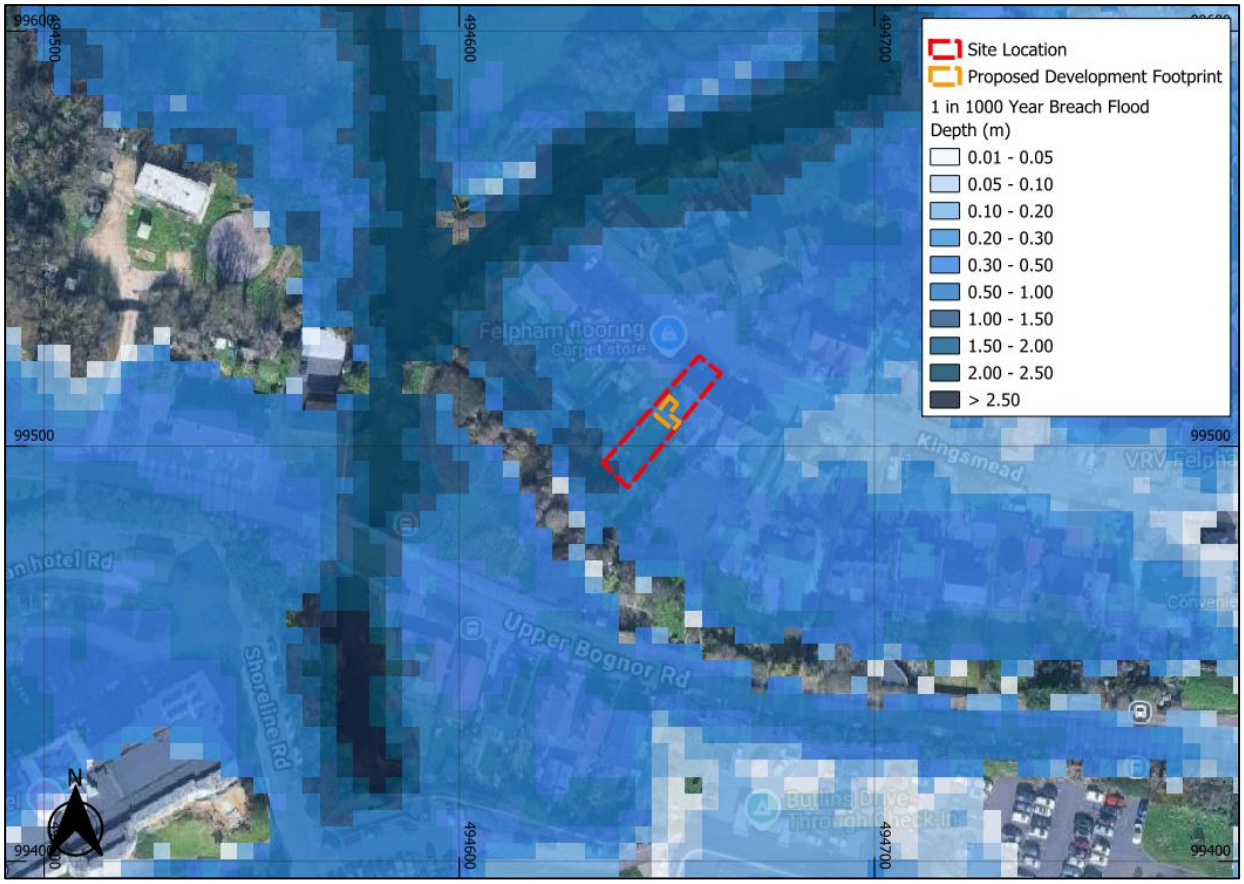


Figure 13: Climate Change Depths (Base map and data from Google Hybrid © Contains public sector information licensed under the Open Government Licence v3.0)

Fluvial/Tidal Flood Risk Summary

4.34. The site is located in Flood Zone 3, derived from both fluvial and tidal sources.

4.35. Based on the fluvial flood model provided by the EA, the proposed development footprint is above all the fluvial flood events, up to and including the 1 in 1000 year flood event.

4.36. As such, the risk to the proposed development from fluvial sources is considered low.

4.37. Review of the tidal flood model provided by the EA indicated that the proposed development footprint is above all the defended flood events, up to and including the 1 in 200 2125 climate change scenario. Therefore, the 'actual' defended risk of tidal flooding to the site is low given the presence of the defences.

4.38. The proposed development footprint is affected in the extremely unlikely residual 1 in 1000 year breach scenario, however the internal flood depths only reach 0.19m. All sleeping will remain

on the first floor as per the existing scenario. This is considered to be 2.43m above the residual breach event.

4.39. As such, the actual defended risk to the proposed development from tidal sources is considered low and In the residual breach scenario, the site is impacted by minimal flood depths (limited to 0.19m). All sleeping accommodation is on first floor only, which is 2.43m above the breach flood level. To take a precautionary approach mitigation measures will be recommended in Section 5 of this report.

Canals

4.40. 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.

4.41. The site is not located within the vicinity of any canals as per the UK CRT Network mapping[9].

4.42. The risk of flooding to this site from canals is considered to be low.

Pluvial

4.43. 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.

Risk of Flooding from Surface Water Mapping

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

4.45. 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).

[9] **https://canalrivertrust.org.uk/canals-and-rivers**

4.46. 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.

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

- 0.2m, 0.3m, 0.6m, 0.9m, 1.2m

4.48. 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.

4.49. Based on the EA Online 'Flood Risk from Surface Water' map indicates that the site is not within the low, medium, or high risk extents. As such, the surface water risk with added climate change will be assessed as a worst case scenario.

4.50. The EA Online 'Flood Risk from Surface Water Climate Change' map indicates that the site is not within the low, medium, or high risk extents (Figure 14).

Figure 14: EA Surface Water Flood Risk Mapping (Base map and data from Google Hybrid © Contains public sector information licensed under the Open Government Licence v3.0)

4.51. As such, the risk to the proposed development from surface water flooding is considered low.

Reservoirs

4.52. 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.

4.53. According to the EA's Flood Risk from Reservoirs mapping the site is outside flood extents in the event of reservoir flooding (Figure 15). This reservoir breach extent is located on the southern boundary, however this is considered to be restricted to the southern watercourse channel and not the site itself.

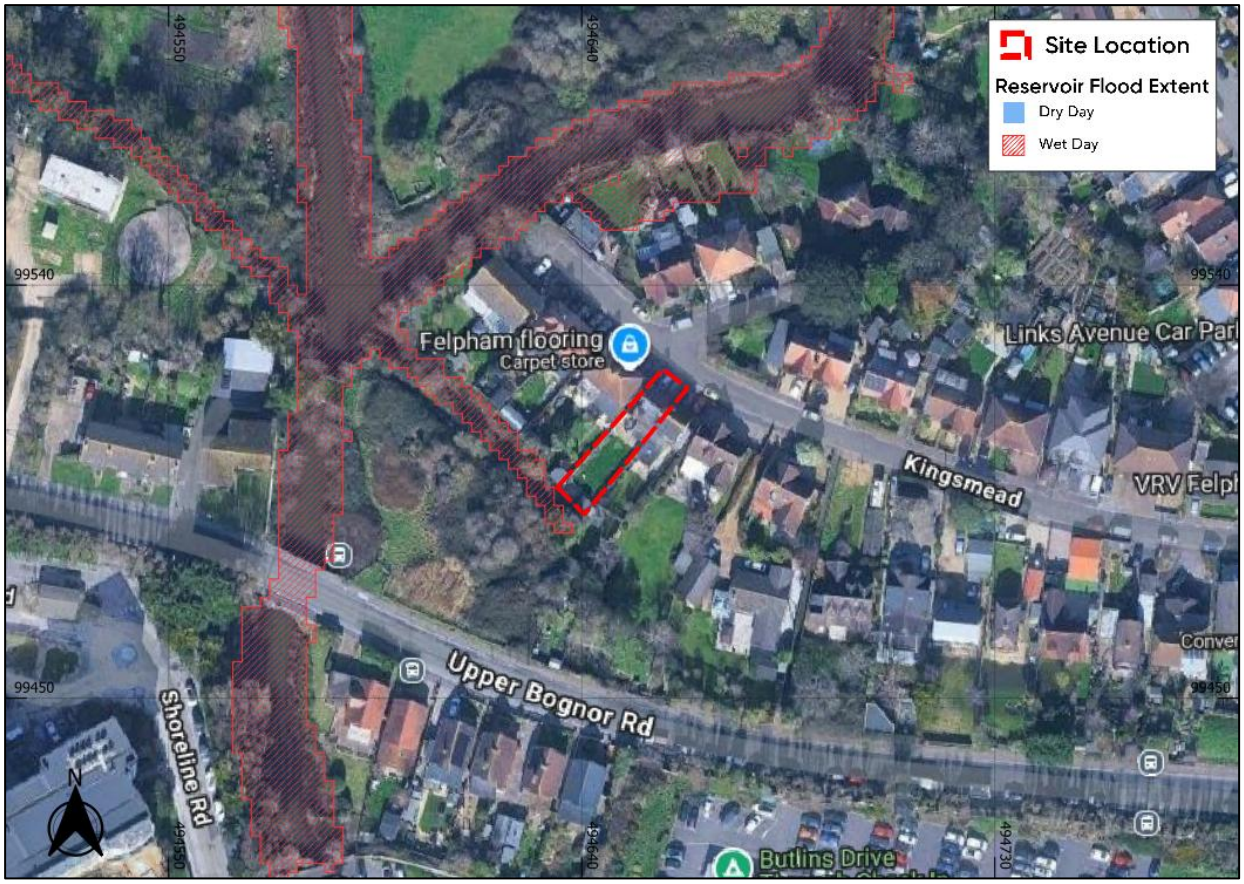


Figure 15: EA Reservoir Flood Risk Mapping (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). ©https://www.openstreetmap.org and contributors. Contains public sector information licensed under the Open Government Licence v3.0)

4.54. As such, the risk to the site from reservoir breach is considered low.

Groundwater

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

4.56. The British Geological Survey's (BGS) mapping shows superficial deposits of Raised marine and coastal zone deposits comprised of Clay, silt, sand and gravel underlying the site. The bedrock underlying the site is mapped as Lewes Nodular, Seaford, Newhaven, Culver and Portsdown Chalk Formations (Undifferentiated) comprised of chalk and Lambeth Group comprised of clay, silt and sand.

4.57. The SFRA presents the Areas Susceptible to Groundwater Flooding mapping. The site is within a 1km square of which >=50% <75% is considered to be susceptible to groundwater flooding (Figure 16).

Figure 16: Areas Suseptabel to Groundwater Flooding (Arun District Council SFRA, 2016)

4.58. The closest Historical BGS borehole SZ99NW25 was approximately 70m southwest of the site and was bored to a depth of 23.5m, and groundwater was encounter 6.80m below ground level (bgl). It is noted that this was performed in a winter month (November) that is considered to have higher average groundwater level.

4.59. Given the nearby borehole (that was dug during a highwater level winter month) did not encounter groundwater until 6.80m bgl, and the development does not include any subterranean elements, the risk from groundwater to the development is considered to be low.

Sewers

4.60. 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.

4.61. Table 5-2 of the SFRA provides data of historical sewer flood incident records kept by the local authority. Within the sites postcode 'PO22 7' there have been 36 recorded historical sewer flooding incidents. However, this covers a wide area and there is no evidence that suggests that the site has been affected.

4.62. As such, the development is considered to be at low risk of flooding from sewers.

5. Flood Risk Mitigation

Fluvial/Tidal

5.1. The site is located in Flood Zone 3, derived from both fluvial and tidal sources.

5.2. Based on the fluvial flood model provided by the EA, the proposed development footprint is above all the fluvial flood events, up to and including the 1 in 1000 year flood event.

5.3. **As such, the risk to the proposed development from fluvial sources is considered low.**

5.4. Review of the tidal flood model provided by the EA indicated that the proposed development footprint is above all the defended flood events, up to and including the 1 in 200 2125 climate change scenario. Therefore, the 'actual' defended risk of tidal flooding to the site is low given the presence of the defences.

5.5. The proposed development footprint is affected in the extremely unlikely residual 1 in 1000 year breach scenario, however the internal flood depths only reach 0.19m. All sleeping will remain on the first floor as per the existing scenario. This is considered to be 2.43m above the residual breach event.

5.6. **As such, the actual defended risk to the proposed development from tidal sources is considered low and In the residual breach scenario, the site is impacted by minimal flood depths (limited to 0.19m). All sleeping accommodation is on first floor only, which is 2.43m above the breach flood level so in the extremely unlikely event of a breach in the tidal flood defences, occupants can seek safe refuge at first floor. To take a precautionary approach mitigation measures will be recommended.**

5.7. Therefore, it is recommended that the proposed extension should be constructed in a flood resilient manner, in accordance with CLG Report *Improving the Flood Performance of New Buildings Flood Resilient Construction (2007)* (standards for the installation and retrofit of resistance measures are available in British Standard 851188-1:2019+A1:2021). The following mitigation measures are recommended:

- *Exterior ventilation outlets, utility points and air bricks to be fitted with removable waterproof covers.*
- *Damp Proof Membranes (d.p.m.) should be included in any design to minimise the passage of water through ground floors. Impermeable*

polythene membranes should be at least 1200 gauge to minimise ripping. Effective methods of joining membrane sections are overlaps of 300mm and also taping (mastic tape with an overlap of 50mm minimum).

- *External renders are effective barriers to water penetration and should be used with blocks (or bricks) to at least the predicted flood level (approx. 0.3m), ideally with an additional 0.3m freeboard. External cement renders with lime content (in addition to cement) can induce faster surface drying.*
- *Ground floor to be solid (i.e. concrete floors), with waterproof membrane/screed.*

5.8. Given the development is for an extension and level access is needed between the existing and proposed, the Finished Floor Levels (FFLs) cannot be raised, and they should be set no lower than existing.

Canals, Pluvial, Reservoirs, Groundwater and Sewers

5.9. Flood risk from these sources is deemed to be low, therefore mitigation is not required.

Increase to Flood Risk Elsewhere

5.10. It is understood that the proposed development includes the demolition of the existing single storey extension to the rear of the existing property, and construction of a larger single storey extension. As such, the proposal constitutes a Minor Development under the NPPF.

5.11. Paragraph 051 of the Flood Risk and Coastal Change Planning Practice Guidance (PPG) states:

Minor developments are unlikely to raise significant flood issues unless:

- *they would have an adverse effect on a watercourse, floodplain or its flood defences;*
- *they would impede access to flood defence and management facilities, or;*
- *where the cumulative impact of such developments would have a significant effect on local flood storage capacity or flood flows.*

5.12. As such, the proposed development in isolation should have a negligible impact on flood risk elsewhere. Furthermore, small scale SuDS such as rainwater planters and water butts could be installed in outdoor areas to provide betterment.

Flood Warnings

5.13. Due to the proposed being classed as a minor development in terms of flood risk, the access/egress arrangements will remain the same. However, to take a precautionary approach the occupant of the dwelling should sign up to the Environment Agency 'Bognor' flood warning service area. This service allows occupants to register an address along with contact details so that, in the event of a flood being forecast, they are sent an alert.

5.14. 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 alerts and warnings provide site managers with time to take necessary action, e.g. communication of the risk of flooding to occupants etc, evacuation of occupants offsite or to a safe level, removal of valuable items out of reach of flooding and the mounting of site-specific flood defences.

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 25 Kingsmead, Felphem, Arun, West Sussex, PO22 7BD. 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	The site is located in Flood Zone 3, derived from both fluvial and tidal sources. Based on the fluvial flood model provided by the EA, the proposed development footprint is above all the fluvial flood events, up to and including the 1 in 1000 year flood event. As such, the risk to the proposed development from fluvial sources is considered low.
Tidal	Review of the tidal flood model provided by the EA indicated that the proposed development footprint is above all the defended flood events, up to and including the 1 in 200 2125 climate change scenario. Therefore, the 'actual' defended risk of tidal flooding to the site is low given the presence of the defences. The proposed development footprint is affected in the extremely unlikely residual 1 in 1000 year breach scenario, however the internal flood depths only reach 0.19m. All sleeping will remain on the first floor as per the existing scenario. This is considered to be 2.43m above the residual breach event. As such, the actual defended risk to the proposed development from tidal sources is considered low and In the residual breach scenario, the site is impacted by minimal flood depths (limited to 0.19m). All sleeping accommodation is on first floor only, which is 2.43m above the breach flood level so in the extremely unlikely event of a breach in the tidal flood defences, occupants can seek safe refuge at first floor. To take a precautionary approach mitigation measures will be recommended
Canals, Pluvial,	The site is considered to be at low risk from other sources.

Reservoirs, Groundwater and Sewers	

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

Location Plan Scale 1:1000

0 20m 50m 100m

SCALE BAR 1:1000

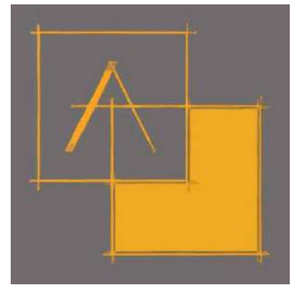
Notes

1. This drawing is the copyright of Atram Architecture
2. Do not scale from this drawing except for Local Authority Planning Purposes
3. All dimensions must be checked on site by the contractor prior to commencement of the works
4. Party wall agreements to be arranged by client with neighbours in accordance with the Party Wall Act

CIAT CHARTERED PRACTICE

Rev.	Revision Note	By	Date
-			

ATRAM ARCHITECTURE



24 Kyoto Court I Bognor Regis I West Sussex I PO21 2UL
t. 01243 820303
m. 07834 175378
e. joe@atramarchitecture.co.uk
w. www.atramarchitecture.co.uk

CIAT Chartered Practice - No F4642

Client: Jamie Boyle

Job title: Single Storey Extension
25 Kingsmead,
Felphem, PO22 7BD

Drawing title: Location Plan

Drawn	Date	Checked	Date	Scale at A3
JNG	14.10.25	JNG	14.10.25	1:1000

Job N°.	Drawing N°.	Rev.
25.11	01	.

Status: FOR PLANNING

Existing Site Block Plan Scale 1:100

Notes

1. This drawing is the copyright of Atram Architecture
2. Do not scale from this drawing except for Local Authority Planning Purposes
3. All dimensions must be checked on site by the contractor prior to commencement of the works
4. Party wall agreements to be arranged by client with neighbours in accordance with the Party Wall Act

CIAT CHARTERED PRACTICE

Rev.	Revision	By	Date
-			

ATRAM ARCHITECTURE

24 Kyoto Court I Bognor Regis I West Sussex I PO21 2UL
t. 01243 820303
m. 07834 175378
e. joe@atramarchitecture.co.uk
w. www.atramarchitecture.co.uk

CIAT Chartered Practice - No F4642

Client
Jamie Boyle

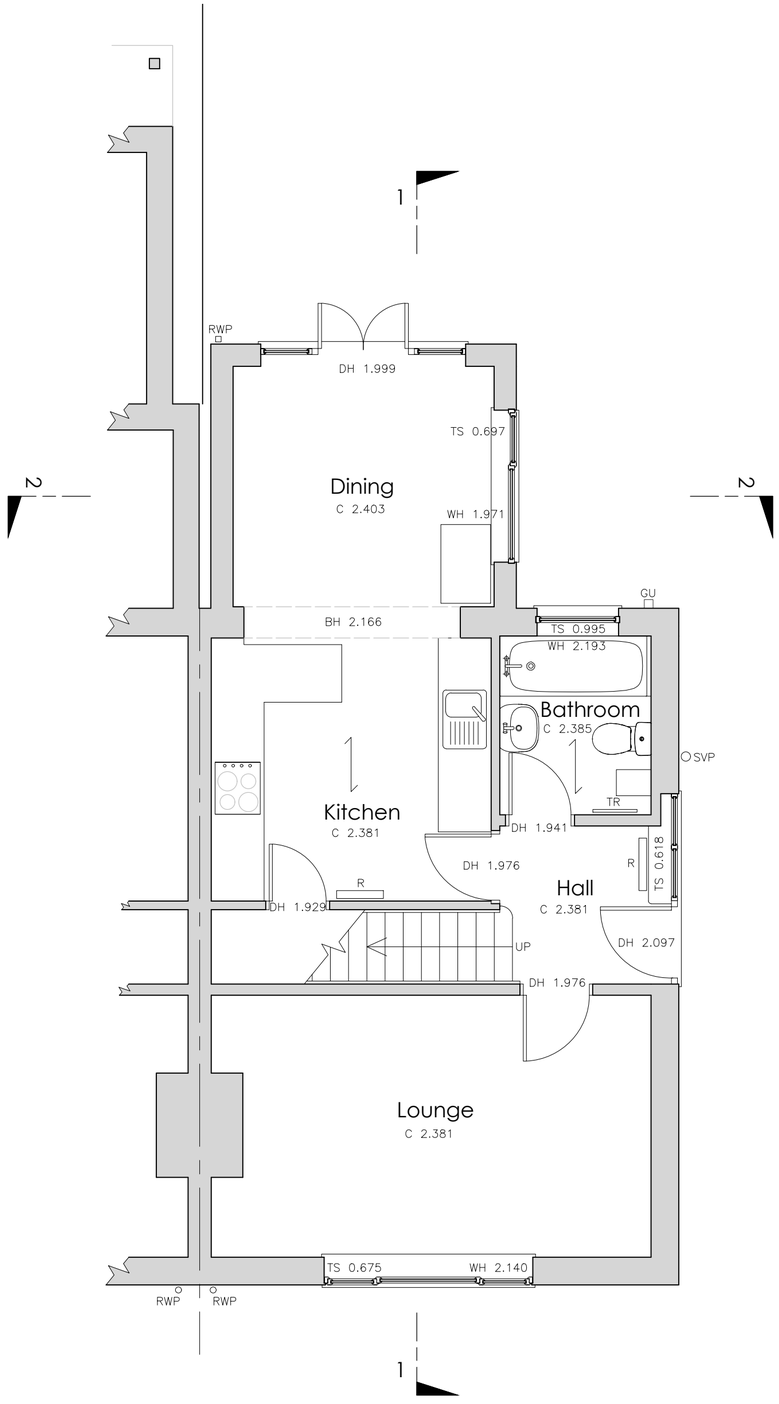
Job title
Single Storey Extension
25 Kingsmead,
Felphem, PO22 7BD

Drawing title
Existing Site Block Plan

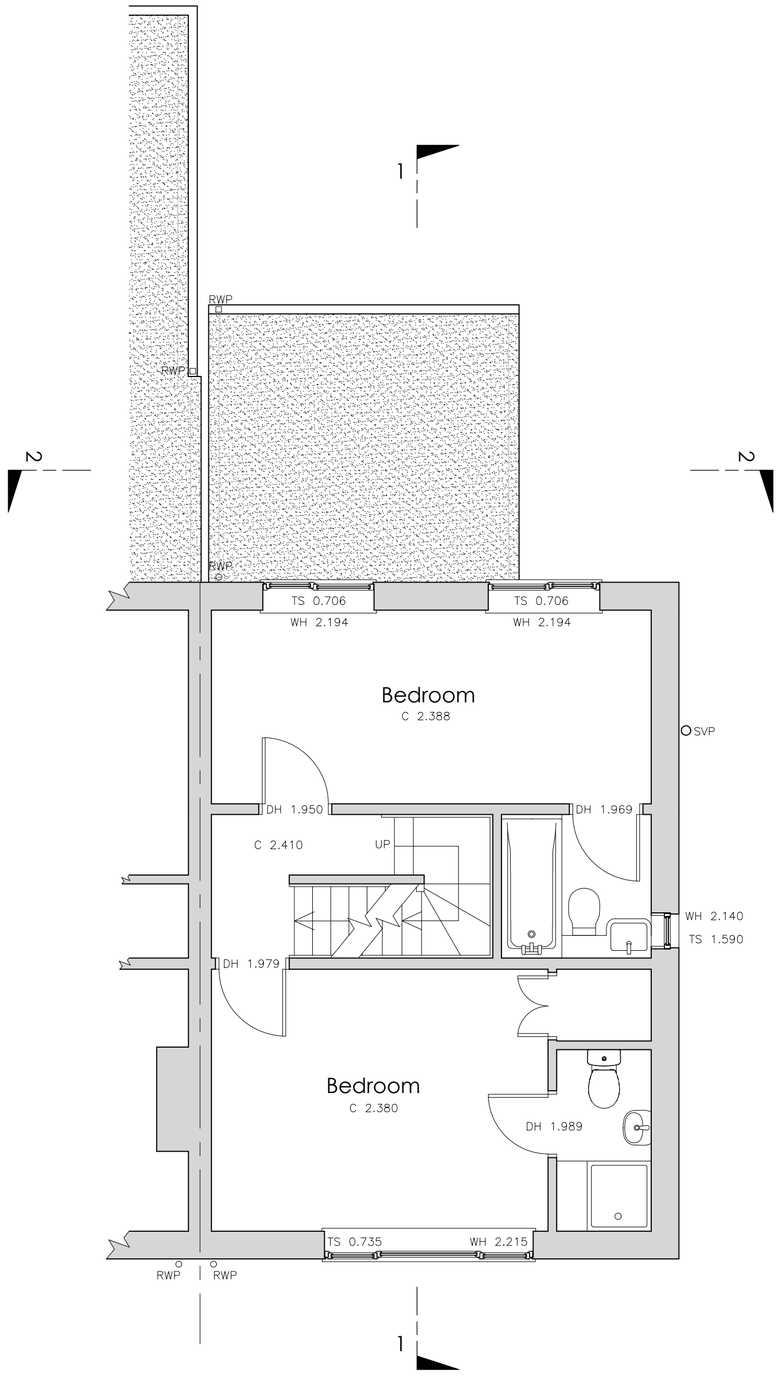
Drawn	Date	Checked	Date	Scale at A2
JNG	14.10.25	JNG	14.10.25	1:100

Job N°.	Drawing N°.	Rev.
25.11	02	.

Status
FOR PLANNING



Existing Ground Floor Plan Scale 1:50



Existing First Floor Plan Scale 1:50

SCALE BAR 1:50

Notes
1. This drawing is the copyright of Atram Architecture
2. Do not scale from this drawing except for Local Authority Planning Purposes
3. All dimensions must be checked on site by the contractor prior to commencement of the works
4. Party wall agreements to be arranged by client with neighbours in accordance with the Party Wall Act

CIAT CHARTERED PRACTICE

Rev.	Revision	By	Date
-			

Building Survey Key HEIGHTS LEVELS

Notes:
Heights are taken from finished floor level (FFL)
Heights are given in metres

B	Boiler
BH	Underside of Beam
C	Ceiling Height
CU	Consumer Unit
DH	Door Head
DS	Door Sill
E	Electric Meter
EP	External Plug Socket
FFL	Finished Floor
G	Gas Meter
GU	Gulley
IC	Inspection Cover
IV	Invert Level
PWL	Parapet Wall
R	Radiator
RE	Rodding Eye
RL	Rooflight
RG	Ridge
RWP	Rain Water Pipe
SC	Stopcock
SH	Skieling Height
SP	Soil Pipe
SVP	Soil Vent Pipe
TR	Towel Rail
TS	Top of Sill
TW	Top of Wall
UPE	Underside of Pelmet
WP	Waste Pipe
WH	Window Head

Assumed span of joists above (To be confirmed once ceilings / floors are opened up).

ATRAM ARCHITECTURE

24 Kyoto Court I Bognor Regis I West Sussex I PO21 2UL
t. 01243 820303
m. 07834 175378
e. joe@atramarchitecture.co.uk
w. www.atramarchitecture.co.uk

CIAT Chartered Practice - No F4642

Client
Jamie Boyle

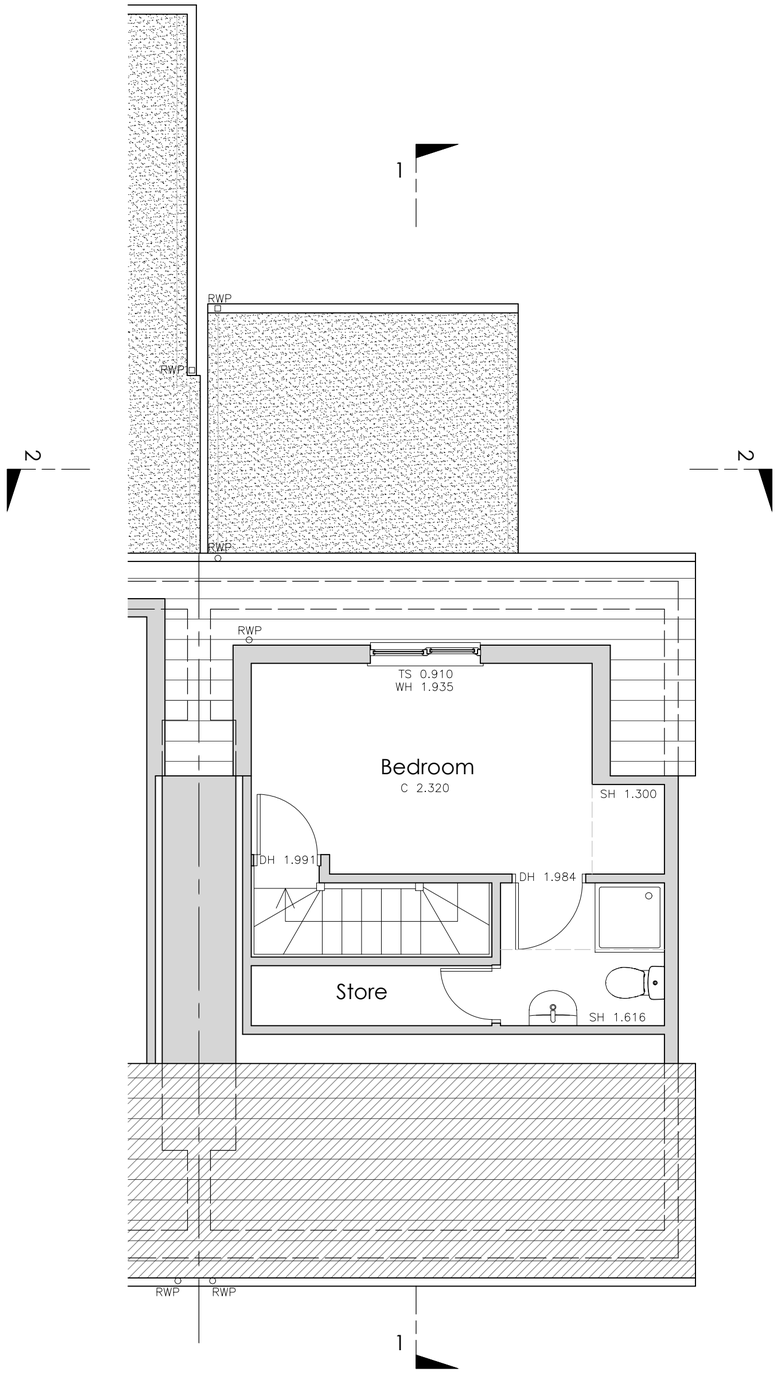
Job title
Single Storey Extension
25 Kingsmead,
Felphem, PO22 7BD

Drawing title
Existing Ground &
First Floor Plans

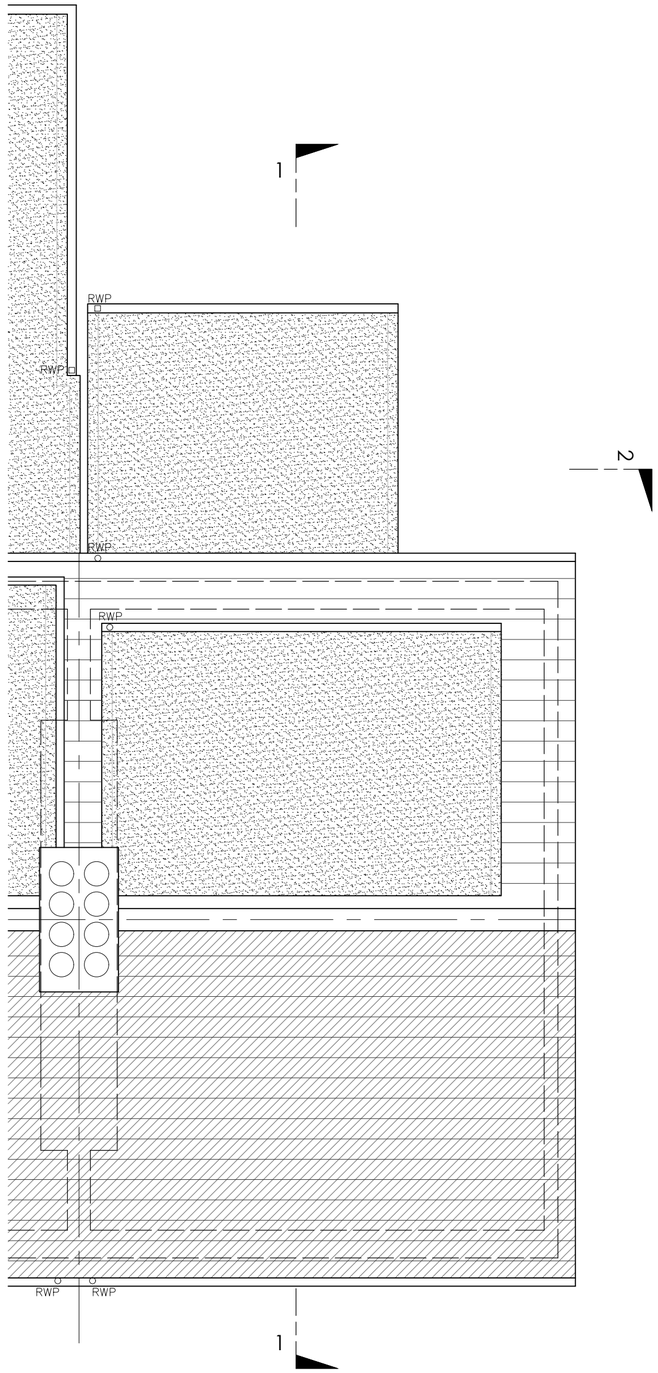
Drawn	Date	Checked	Date	Scale at A2
JNG	14.10.25	JNG	14.10.25	1:50

Job N°.	Drawing N°.	Rev.
25.11	03	.

Status
FOR PLANNING



Existing Second Floor Plan Scale 1:50



Existing Roof Plan Scale 1:50

SCALE BAR 1:50

Notes
1. This drawing is the copyright of Atram Architecture
2. Do not scale from this drawing except for Local Authority Planning Purposes
3. All dimensions must be checked on site by the contractor prior to commencement of the works
4. Party wall agreements to be arranged by client with neighbours in accordance with the Party Wall Act

CIAT CHARTERED PRACTICE

Rev.	Revision	By	Date
-			

Building Survey Key HEIGHTS LEVELS

Notes:
Heights are taken from finished floor level (FFL)
Heights are given in metres

B	Boiler
BH	Underside of Beam
C	Ceiling Height
CU	Consumer Unit
DH	Door Head
DS	Door Sill
E	Electric Meter
EP	External Plug Socket
FFL	Finished Floor
G	Gas Meter
GU	Gulley
IC	Inspection Cover
IV	Invert Level
PWL	Parapet Wall
R	Radiator
RE	Rodding Eye
RL	Rooflight
RG	Ridge
RWP	Rain Water Pipe
SC	Stopcock
SH	Skieling Height
SP	Soil Pipe
SVP	Soil Vent Pipe
TR	Towel Rail
TS	Top of Sill
TW	Top of Wall
UPE	Underside of Pelmet
WP	Waste Pipe
WH	Window Head

Assumed span of joists above (To be confirmed once ceilings / floors are opened up).

ATRAM ARCHITECTURE

24 Kyoto Court I Bognor Regis I West Sussex I PO21 2UL
t. 01243 820303
m. 07834 175378
e. joe@atramarchitecture.co.uk
w. www.atramarchitecture.co.uk

CIAT Chartered Practice - No F4642

Client
Jamie Boyle

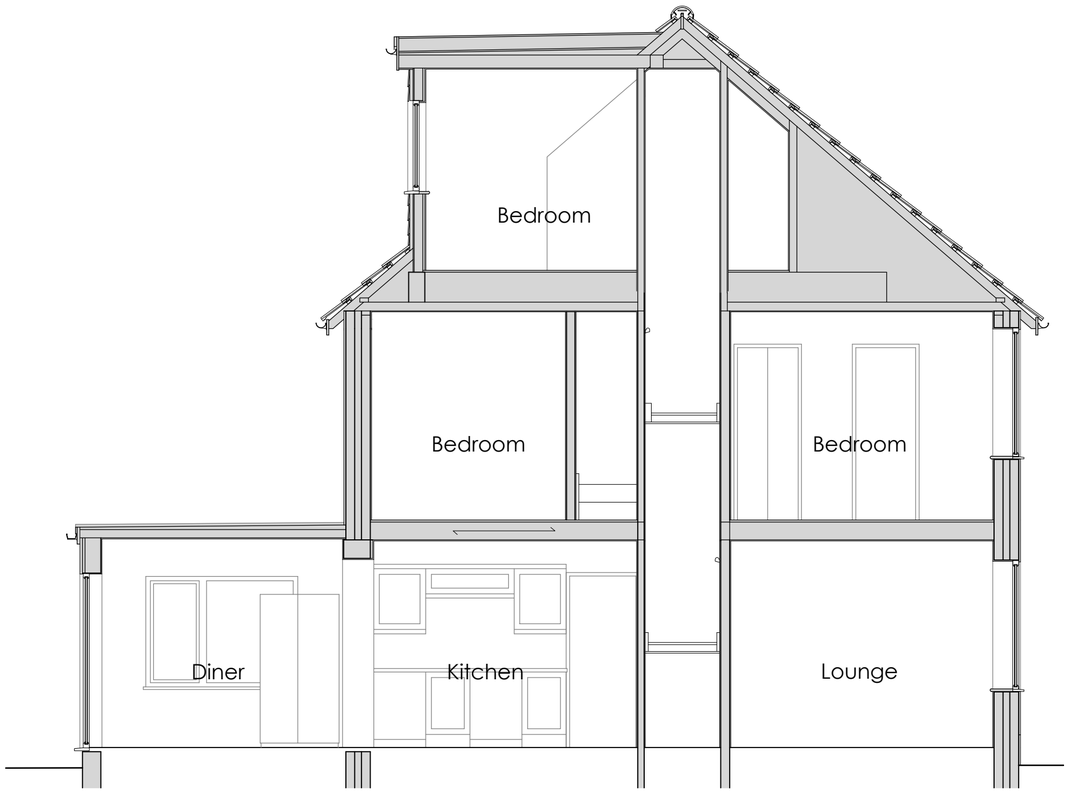
Job title
Single Storey Extension
25 Kingsmead,
Felphem, PO22 7BD

Drawing title
Existing Second Floor Plan & Roof Plan

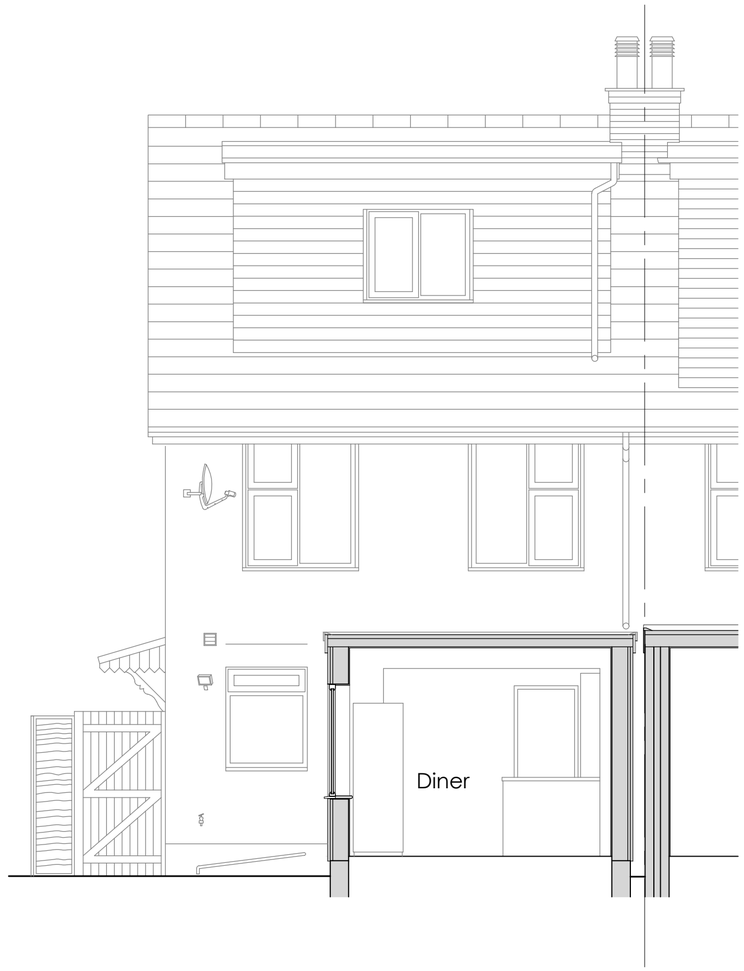
Drawn	Date	Checked	Date	Scale at A2
JNG	14.10.25	JNG	14.10.25	1:50

Job N°.	Drawing N°.	Rev.
25.11	04	.

Status
FOR PLANNING



Existing Section 1 Scale 1:50



Existing Section 2 Scale 1:50

0 1m 2m 3m 4m 5m

SCALE BAR 1:50

Notes

1. This drawing is the copyright of Atram Architecture
2. Do not scale from this drawing except for Local Authority Planning Purposes
3. All dimensions must be checked on site by the contractor prior to commencement of the works
4. Party wall agreements to be arranged by client with neighbours in accordance with the Party Wall Act

CIAT CHARTERED PRACTICE

Rev.	Revision	By	Date
-			

ATRAM ARCHITECTURE

24 Kyoto Court I Bognor Regis I West Sussex I PO21 2UL
t. 01243 820303
m. 07834 175378
e. joe@atramarchitecture.co.uk
w. www.atramarchitecture.co.uk

CIAT Chartered Practice - No F4642

Client: Jamie Boyle

Job title: Single Storey Extension
25 Kingsmead,
Felphem, PO22 7BD

Drawing title: Existing Sections

Drawn	Date	Checked	Date	Scale at A2
JNG	14.10.25	JNG	14.10.25	1:50

Job N°.	Drawing N°.	Rev.
25.11	05	.

Status: FOR PLANNING

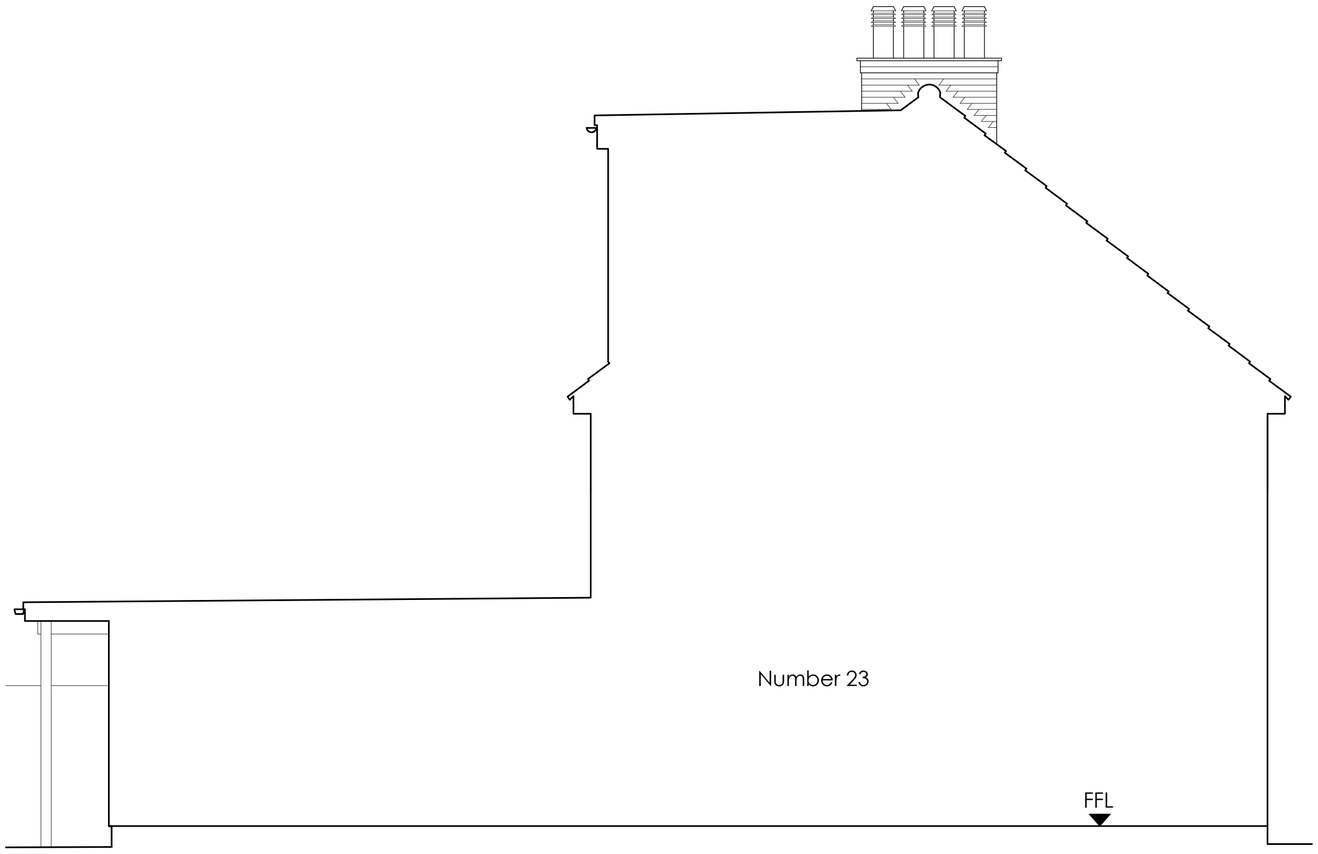
Notes

1. This drawing is the copyright of Atram Architecture
2. Do not scale from this drawing except for Local Authority Planning Purposes
3. All dimensions must be checked on site by the contractor prior to commencement of the works
4. Party wall agreements to be arranged by client with neighbours in accordance with the Party Wall Act

CIAT CHARTERED PRACTICE

Rev.	Revision	By	Date
-			

Existing North Elevation Scale 1:50



Existing East Elevation Scale 1:50

SCALE BAR 1:50

ATRAM ARCHITECTURE

24 Kyoto Court I Bognor Regis I West Sussex I PO21 2UL
t. 01243 820303
m. 07834 175378
e. joe@atramarchitecture.co.uk
w. www.atramarchitecture.co.uk

CIAT Chartered Practice - No F4642

Client
Jamie Boyle

Job title
Single Storey Extension
25 Kingsmead,
Felphem, PO22 7BD

Drawing title
Existing North & East Elevations

Drawn	Date	Checked	Date	Scale at A2
JNG	14.10.25	JNG	14.10.25	1:50

Job N°.	Drawing N°.	Rev.
25.11	06	.

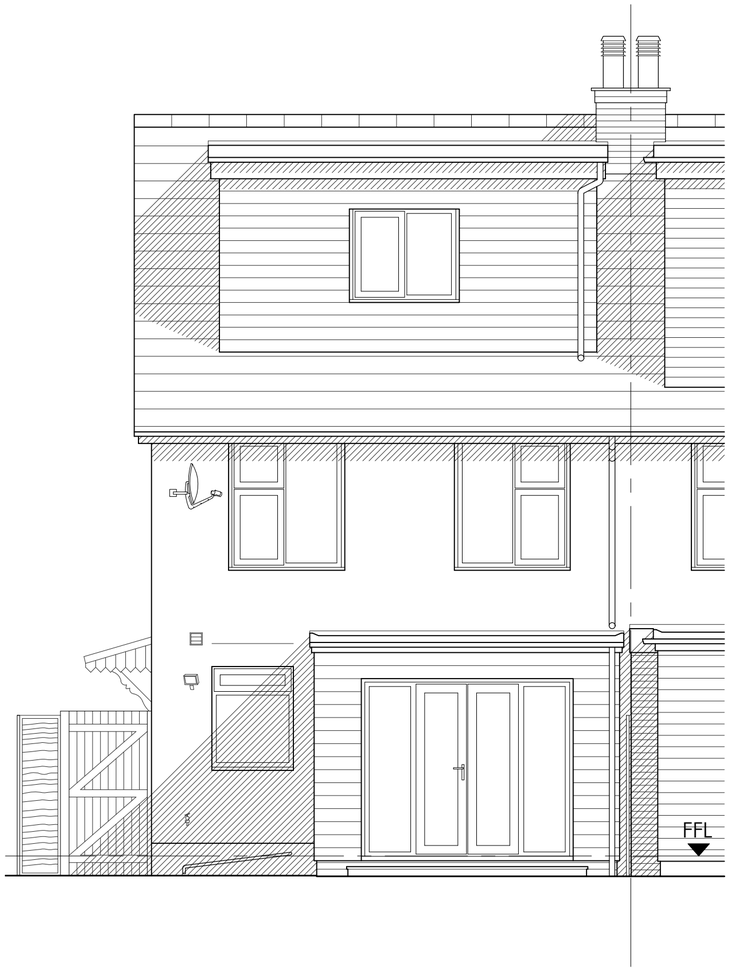
Status
FOR PLANNING

Notes

1. This drawing is the copyright of Atram Architecture
2. Do not scale from this drawing except for Local Authority Planning Purposes
3. All dimensions must be checked on site by the contractor prior to commencement of the works
4. Party wall agreements to be arranged by client with neighbours in accordance with the Party Wall Act

CIAT CHARTERED PRACTICE

Rev.	Revision	By	Date
-			



Existing South Elevation Scale 1:50

Existing West Elevation Scale 1:50

SCALE BAR 1:50

ATRAM ARCHITECTURE

24 Kyoto Court I Bognor Regis I West Sussex I PO21 2UL
t. 01243 820303
m. 07834 175378
e. joe@atramarchitecture.co.uk
w. www.atramarchitecture.co.uk

CIAT Chartered Practice - No F4642

Client
Jamie Boyle

Job title
Single Storey Extension
25 Kingsmead,
Felphem, PO22 7BD

Drawing title
Existing South & West Elevations

Drawn	Date	Checked	Date	Scale at A2
JNG	14.10.25	JNG	14.10.25	1:50

Job N°.	Drawing N°.	Rev.
25.11	07	.

Status
FOR PLANNING

Proposed Site Block Plan Scale 1:100

SCALE BAR 1:100

Notes

1. This drawing is the copyright of Atram Architecture
2. Do not scale from this drawing except for Local Authority Planning Purposes
3. All dimensions must be checked on site by the contractor prior to commencement of the works
4. Party wall agreements to be arranged by client with neighbours in accordance with the Party Wall Act

CIAT CHARTERED PRACTICE

Rev.	Revision	By	Date
-			

ATRAM ARCHITECTURE

24 Kyoto Court I Bognor Regis I West Sussex I PO21 2UL
t. 01243 820303
m. 07834 175378
e. joe@atramarchitecture.co.uk
w. www.atramarchitecture.co.uk

CIAT Chartered Practice - No F4642

Client: Jamie Boyle

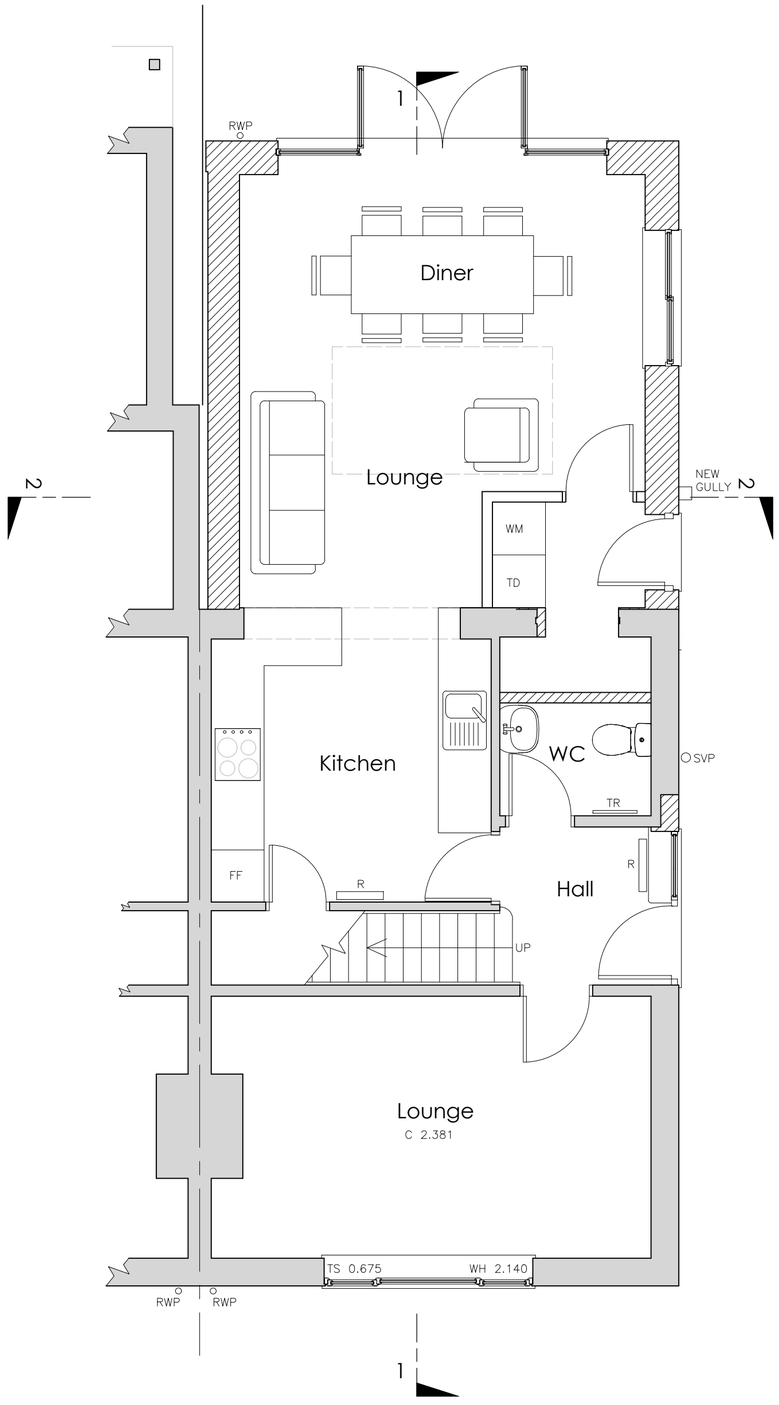
Job title: Single Storey Extension
25 Kingsmead,
Felphem, PO22 7BD

Drawing title: Proposed Site Block Plan

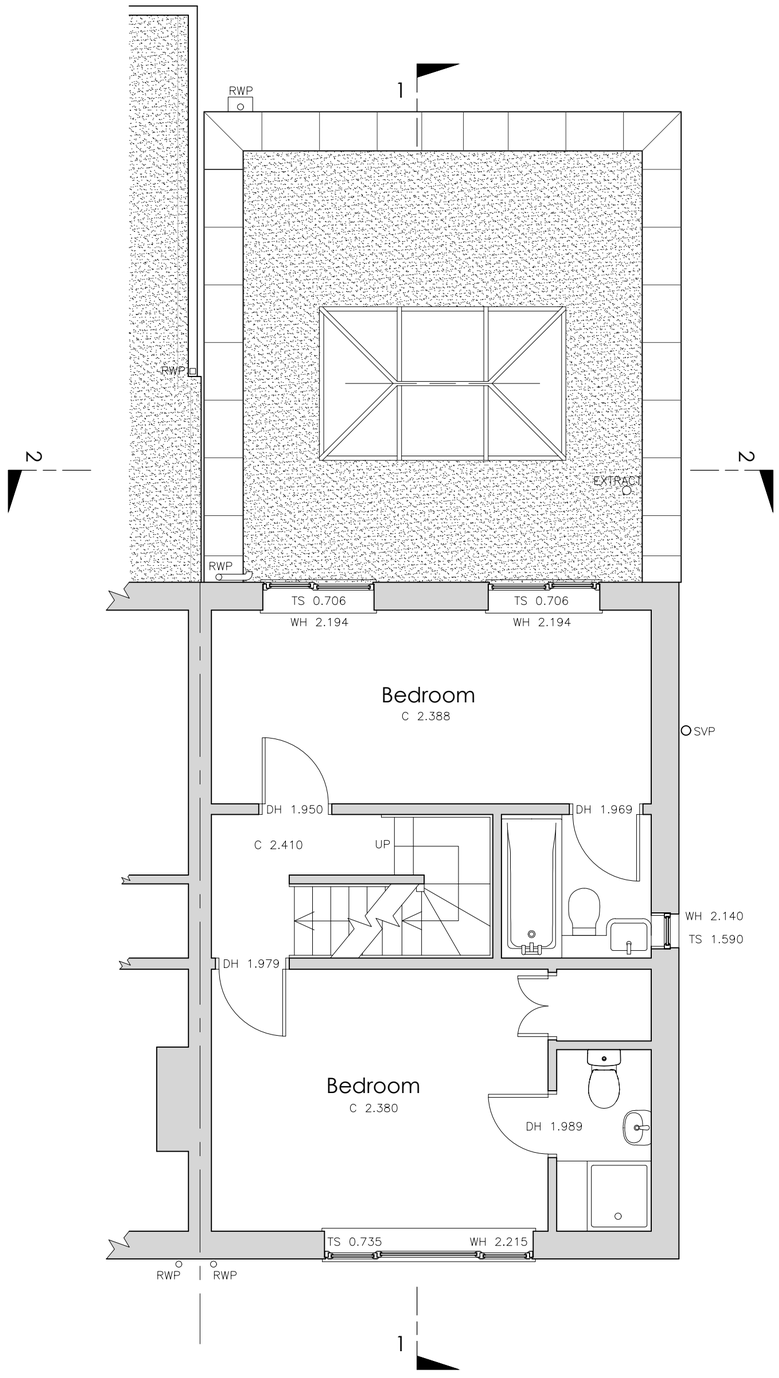
Drawn	Date	Checked	Date	Scale at A2
JNG	22.10.25	JNG	22.10.25	1:100

Job N°.	Drawing N°.	Rev.
25.11	10	.

Status: FOR PLANNING



Proposed Ground Floor Plan Scale 1:50



Proposed First Floor Plan Scale 1:50

SCALE BAR 1:50

Notes
1. This drawing is the copyright of Atram Architecture
2. Do not scale from this drawing except for Local Authority Planning Purposes
3. All dimensions must be checked on site by the contractor prior to commencement of the works
4. Party wall agreements to be arranged by client with neighbours in accordance with the Party Wall Act

CIAT CHARTERED PRACTICE

Rev.	Revision	By	Date
-			

Building Survey Key HEIGHTS LEVELS

Notes:
Heights are taken from finished floor level (FFL)
Heights are given in metres

B	Boiler
BH	Underside of Beam
C	Ceiling Height
CU	Consumer Unit
DH	Door Head
DS	Door Sill
E	Electric Meter
EP	External Plug Socket
FFL	Finished Floor
G	Gas Meter
GU	Gulley
IC	Inspection Cover
IV	Invert Level
PWL	Parapet Wall
R	Radiator
RE	Rodding Eye
RL	Rooflight
RG	Ridge
RWP	Rain Water Pipe
SC	Stopcock
SH	Skieling Height
SP	Soil Pipe
SVP	Soil Vent Pipe
TR	Towel Rail
TS	Top of Sill
TW	Top of Wall
UPE	Underside of Pelmet
WP	Waste Pipe
WH	Window Head

Assumed span of joists above (To be confirmed once ceilings / floors are opened up).

ATRAM ARCHITECTURE

24 Kyoto Court I Bognor Regis I West Sussex I PO21 2UL
t. 01243 820303
m. 07834 175378
e. joe@atramarchitecture.co.uk
w. www.atramarchitecture.co.uk

CIAT Chartered Practice - No F4642

Client
Jamie Boyle

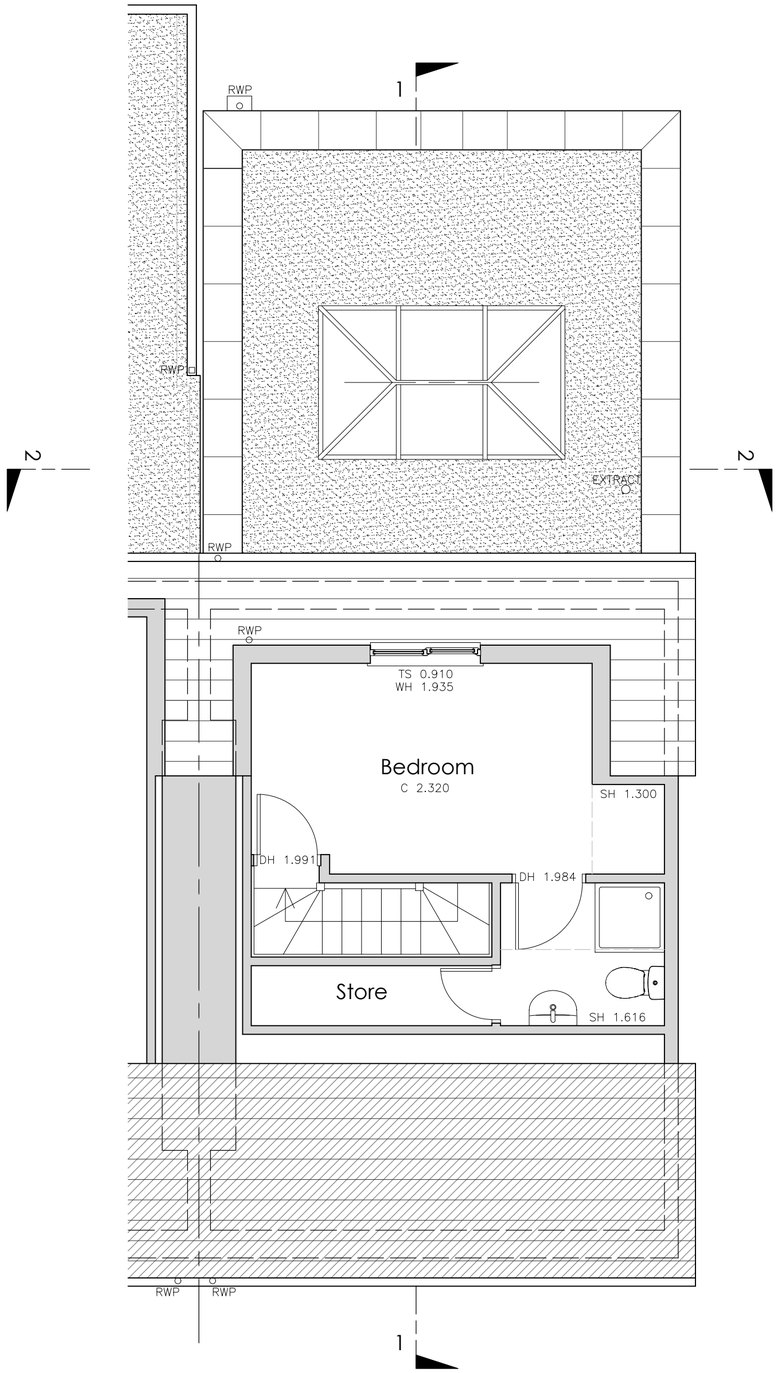
Job title
Single Storey Extension
25 Kingsmead,
Felphem, PO22 7BD

Drawing title
Proposed Ground &
First Floor Plans

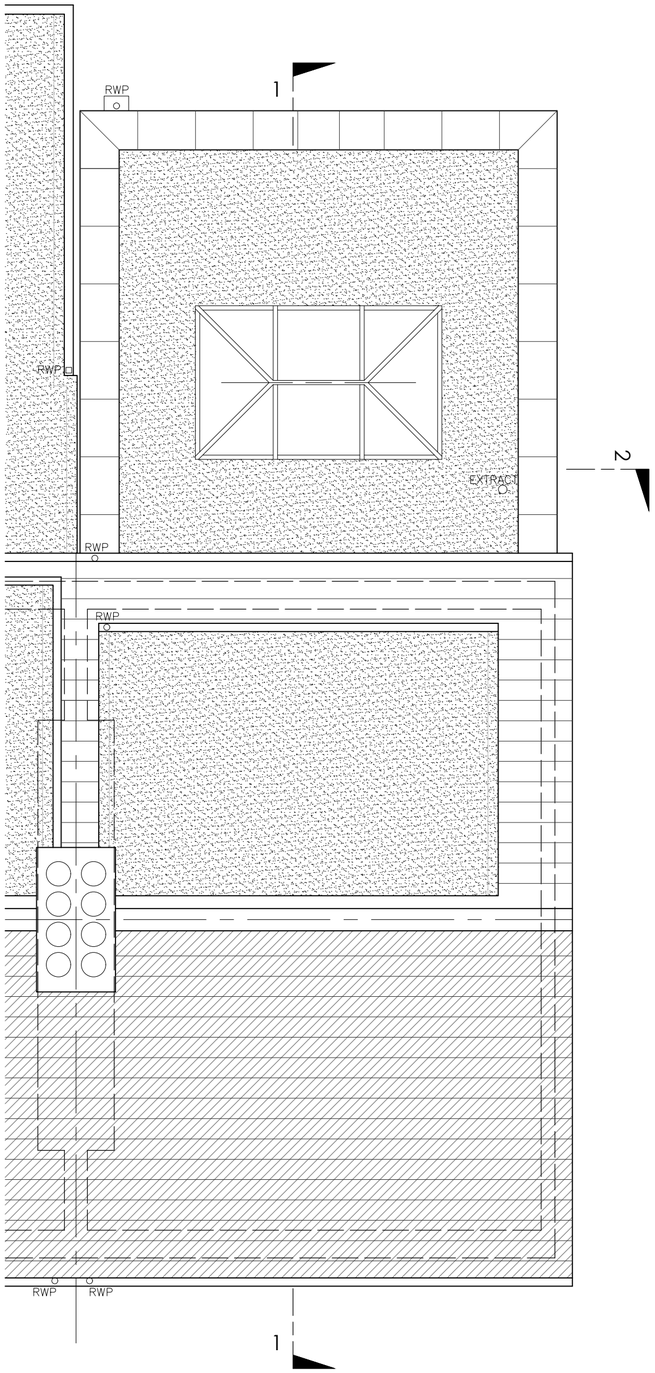
Drawn	Date	Checked	Date	Scale at A2
JNG	22.10.25	JNG	22.10.25	1:50

Job N°.	Drawing N°.	Rev.
25.11	11	.

Status
FOR PLANNING



Proposed Second Floor Plan Scale 1:50



Proposed Roof Plan Scale 1:50

SCALE BAR 1:50

Notes
1. This drawing is the copyright of Atram Architecture
2. Do not scale from this drawing except for Local Authority Planning Purposes
3. All dimensions must be checked on site by the contractor prior to commencement of the works
4. Party wall agreements to be arranged by client with neighbours in accordance with the Party Wall Act

CIAT CHARTERED PRACTICE

Rev.	Revision	By	Date
-			

Building Survey Key HEIGHTS LEVELS

Notes:
Heights are taken from finished floor level (FFL)
Heights are given in metres

B Boiler
BH Underside of Beam
C Ceiling Height
CU Consumer Unit
DH Door Head
DS Door Sill
E Electric Meter
EP External Plug Socket
FFL Finished Floor
G Gas Meter
GU Gulley
IC Inspection Cover
IV Invert Level
PWL Parapet Wall
R Radiator
RE Rodding Eye
RL Rooflight
RG Ridge
RWP Rain Water Pipe
SC Stopcock
SH Skieling Height
SP Soil Pipe
SVP Soil Vent Pipe
TR Towel Rail
TS Top of Sill
TW Top of Wall
UPE Underside of Pelmet
WP Waste Pipe
WH Window Head

Assumed span of joists above (To be confirmed once ceilings / floors are opened up).

ATRAM ARCHITECTURE

24 Kyoto Court I Bognor Regis I West Sussex I PO21 2UL
t. 01243 820303
m. 07834 175378
e. joe@atramarchitecture.co.uk
w. www.atramarchitecture.co.uk

CIAT Chartered Practice - No F4642

Client
Jamie Boyle

Job title
Single Storey Extension
25 Kingsmead,
Felpham, PO22 7BD

Drawing title
Proposed Second Floor Plan & Roof Plan

Drawn	Date	Checked	Date	Scale at A2
JNG	22.10.25	JNG	22.10.25	1:50

Job N°.	Drawing N°.	Rev.
25.11	12	.

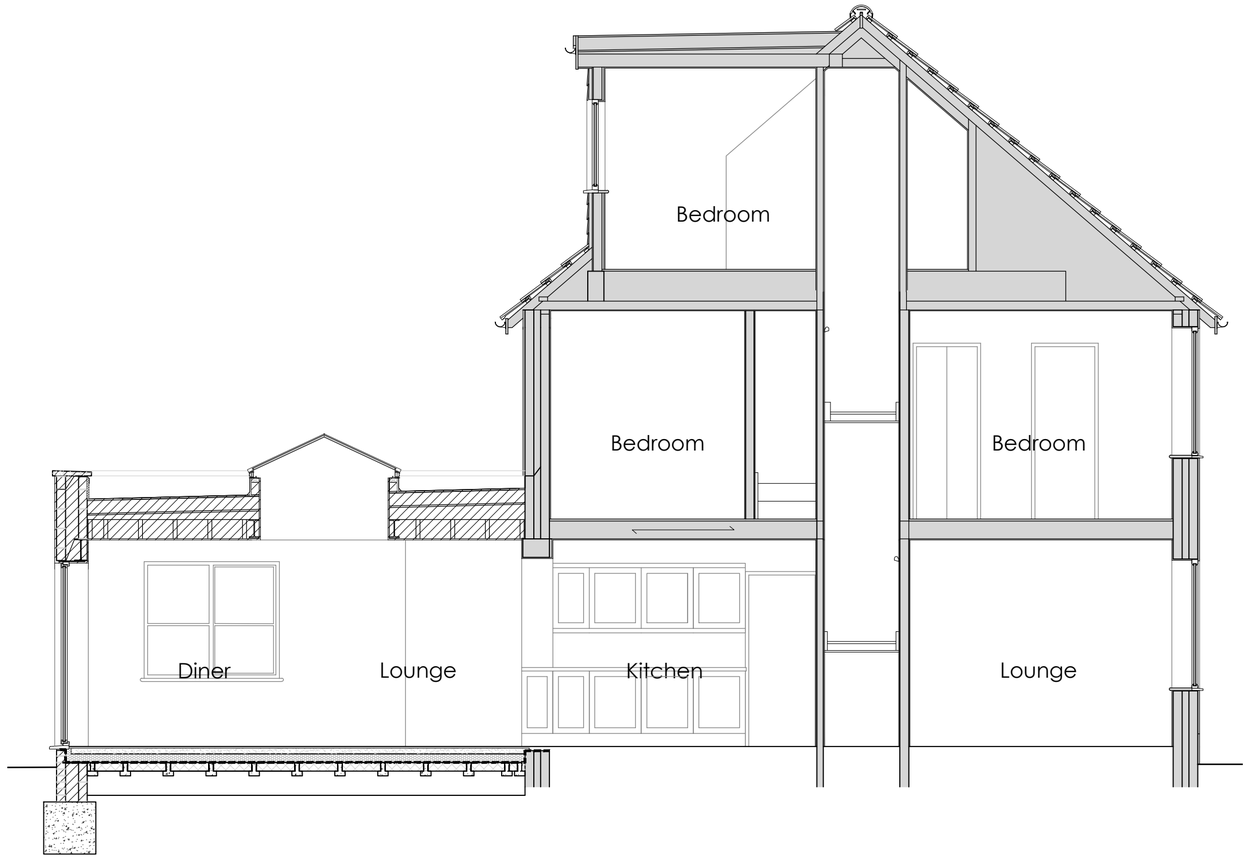
Status
FOR PLANNING

Notes

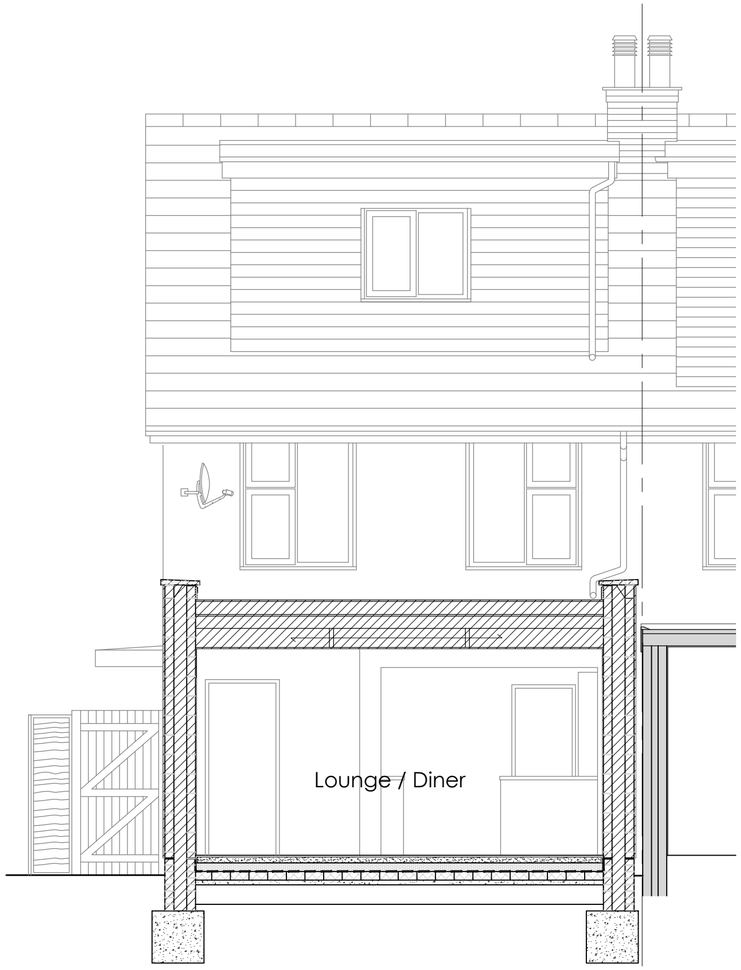
1. This drawing is the copyright of Atram Architecture
2. Do not scale from this drawing except for Local Authority Planning Purposes
3. All dimensions must be checked on site by the contractor prior to commencement of the works
4. Party wall agreements to be arranged by client with neighbours in accordance with the Party Wall Act

CIAT CHARTERED PRACTICE

Rev.	Revision	By	Date
-			



Proposed Section 1 Scale 1:50



Proposed Section 2 Scale 1:50

SCALE BAR 1:50

ATRAM ARCHITECTURE

24 Kyoto Court I Bognor Regis I West Sussex I PO21 2UL
t. 01243 820303
m. 07834 175378
e. joe@atramarchitecture.co.uk
w. www.atramarchitecture.co.uk

CIAT Chartered Practice - No F4642

Client
Jamie Boyle

Job title
Single Storey Extension
25 Kingsmead,
Felphem, PO22 7BD

Drawing title
Proposed Sections

Drawn	Date	Checked	Date	Scale at A2
JNG	22.10.25	JNG	22.10.25	1:50

Job N°.	Drawing N°.	Rev.
25.11	13	.

Status
FOR PLANNING

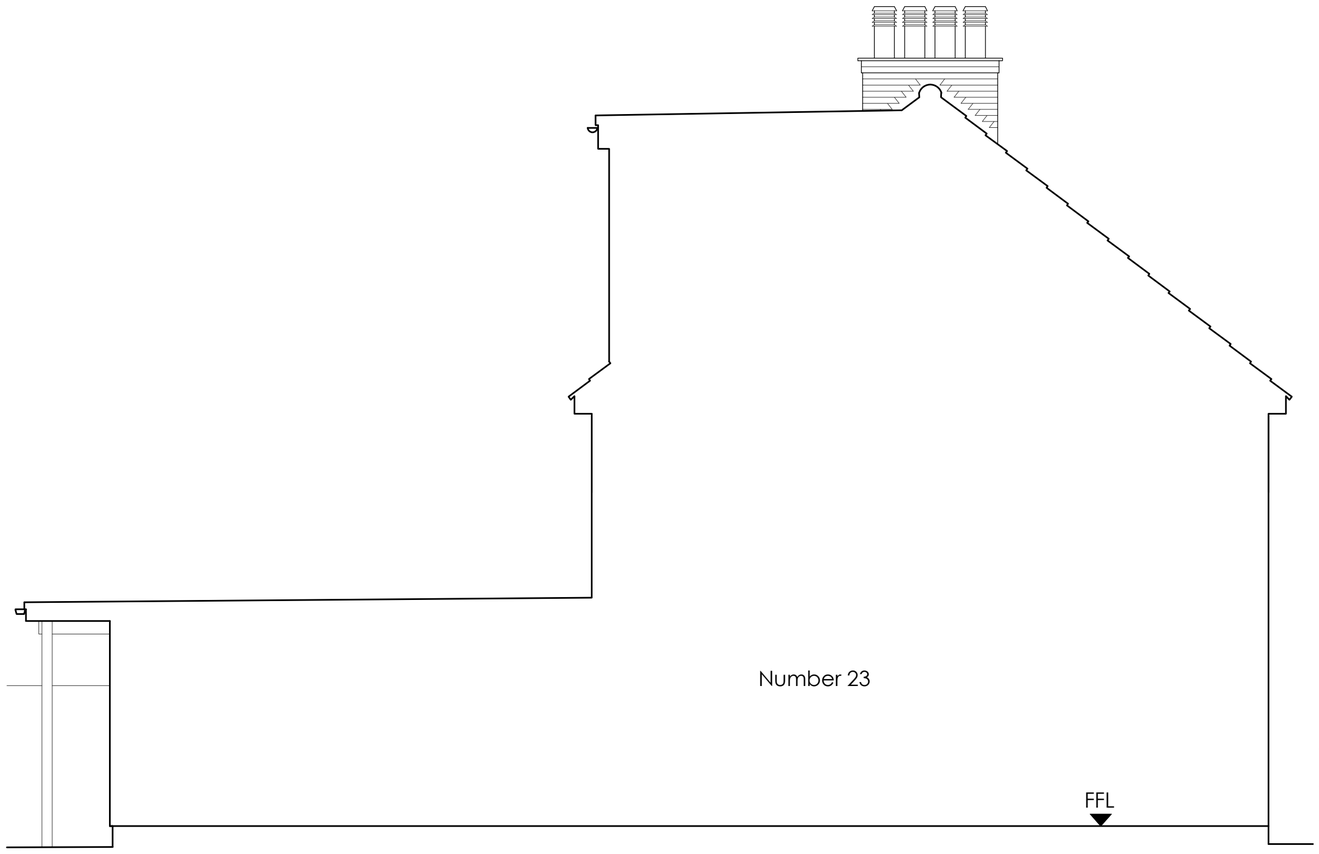
Notes

1. This drawing is the copyright of Atram Architecture
2. Do not scale from this drawing except for Local Authority Planning Purposes
3. All dimensions must be checked on site by the contractor prior to commencement of the works
4. Party wall agreements to be arranged by client with neighbours in accordance with the Party Wall Act

CIAT CHARTERED PRACTICE

Rev.	Revision	By	Date
-			

Proposed North Elevation Scale 1:50



Proposed East Elevation (No Change) Scale 1:50

Key;

1. Stone copping to top of parapet wall.
2. New Black UPVC rainwater goods to match existing.
3. New Aluminium heratage look windows and doors, colour: Black.
4. New glass roof lantern with PPC aluminium frame. Colour: Black.
5. New composite front door and UPVC / obscured glass side screen.
6. Facing brickwork pinth.
7. Painted render to match existing.
8. PPC Aluminium canopy. Colour: Grey.

SCALE BAR 1:50

ATRAM ARCHITECTURE

24 Kyoto Court I Bognor Regis I West Sussex I PO21 2UL
t. 01243 820303
m. 07834 175378
e. joe@atramarchitecture.co.uk
w. www.atramarchitecture.co.uk

CIAT Chartered Practice - No F4642

Client: Jamie Boyle

Job title: Single Storey Extension
25 Kingsmead,
Felphem, PO22 7BD

Drawing title: Proposed North & East Elevations

Drawn	Date	Checked	Date	Scale at A2
JNG	22.10.25	JNG	22.10.25	1:50

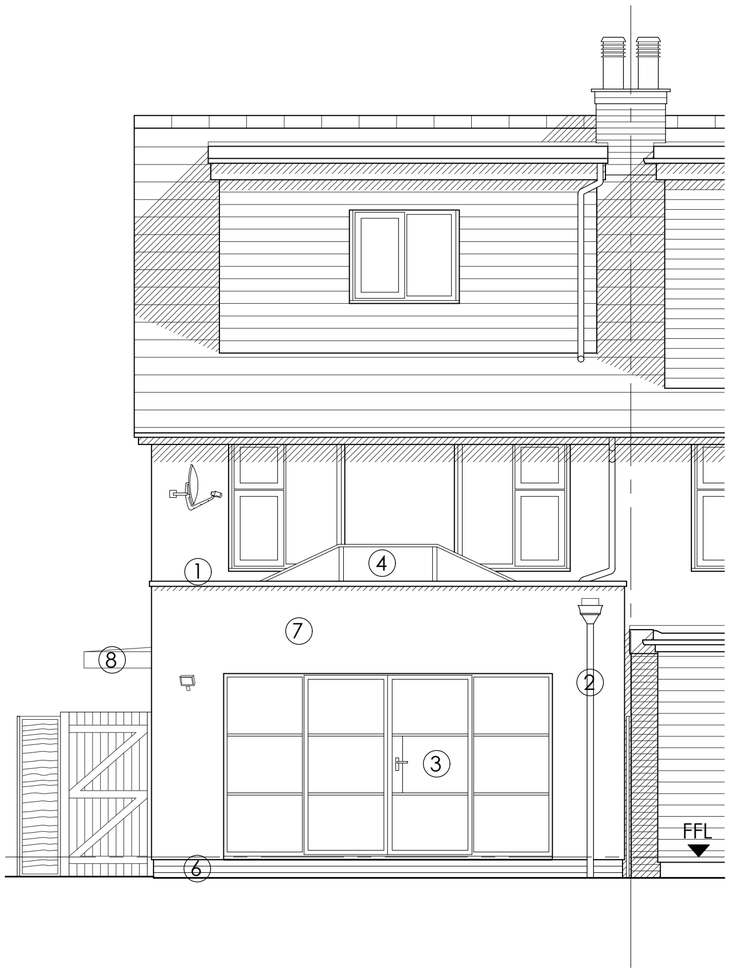
Job N°.	Drawing N°.	Rev.
25.11	14	.

Status: FOR PLANNING

Notes
1. This drawing is the copyright of Atram Architecture
2. Do not scale from this drawing except for Local Authority Planning Purposes
3. All dimensions must be checked on site by the contractor prior to commencement of the works
4. Party wall agreements to be arranged by client with neighbours in accordance with the Party Wall Act

CIAT CHARTERED PRACTICE

Rev.	Revision	By	Date
-			



Proposed South Elevation Scale 1:50

Proposed West Elevation Scale 1:50

Key;

1. Stone copping to top of parapet wall.
2. New Black UPVC rainwater goods to match existing.
3. New Aluminium heratage look windows and doors, colour: Black.
4. New glass roof lantern with PPC aluminium frame. Colour: Black.
5. New composite front door and UPVC / obscured glass side screen.
6. Facing brickwork pinth.
7. Painted render to match existing.
8. PPC Aluminium canopy. Colour: Grey.

SCALE BAR 1:50

ATRAM ARCHITECTURE

24 Kyoto Court I Bognor Regis I West Sussex I PO21 2UL
t. 01243 820303
m. 07834 175378
e. joe@atramarchitecture.co.uk
w. www.atramarchitecture.co.uk

CIAT Chartered Practice - No F4642

Client: Jamie Boyle

Job title: Single Storey Extension
25 Kingsmead,
Felphem, PO22 7BD

Drawing title: Proposed South & West Elevations

Drawn	Date	Checked	Date	Scale at A2
JNG	22.10.25	JNG	22.10.25	1:50

Job N°.	Drawing N°.	Rev.
25.11	15	.

Status: FOR PLANNING

Appendix B - EA Product 4

Flood risk assessment data

Location of site: 494642 / 99507 (shown as easting and northing coordinates)
Document created on: 24 October 2025
This information was previously known as a product 4.
Customer reference number: KJ43376R6KHU/ EIR2025/35581

Map showing the location that flood risk assessment data has been requested for.

How to use this information

You can use this information as part of a flood risk assessment for a planning application. To do this, you should include it in the appendix of your flood risk assessment.

We recommend that you work with a flood risk consultant to get your flood risk assessment.

Included in this document

In this document you'll find:

- how to find information about surface water and other sources of flooding
- information on the models used
- definitions for the terminology used throughout
- flood map for planning (rivers and the sea)
- flood defences and attributes
- information to help you assess if there is a reduced flood risk from rivers and the sea because of defences
- modelled data
- information about strategic flood risk assessments
- information about this data
- information about flood risk activity permits
- help and advice

Information that's unavailable

This document **does not** contain:

- past floods

We do not have past flooding data for this location.

Please note that:

- flooding may have occurred that we do not have records for
- flooding can come from a range of different sources
- we can only supply flood risk data relating to floodng from rivers or the sea

You can contact your Lead Local Flood Authority or Internal Drainage Board to see if they have other relevant local flood information. Please note that some areas do not have an Internal Drainage Board.

Surface water and other sources of flooding

When using the surface water map on the check your long term flood risk service the following considerations apply:

- surface water extents are suitable for use in planning
- surface water climate change scenarios may help to inform risk assessments, but the available data fall short of what is required to assess planned development
- surface water depth information should not be used for planning purposes

To find out about other factors that might affect the flood risk of this location, you should also check:

- reservoir flood risk
- groundwater flood risk - you could use the British Geological Survey groundwater flooding data, groundwater: current status and flood risk and the guide on mining and groundwater constraints for development - further information may be available from the lead local flood authority (LLFA)
- your local planning authority's SFRA, which includes future flood risk

Your Lead Local Flood Authority is West Sussex County.

For information about sewer flooding, contact the relevant water company for the area.

About the models used

Model name: Aldingbourne Catchment Modelling 2015
Scenario(s): Defended fluvial, defences removed fluvial, defended climate change fluvial
Date: 11 September 2015

Model name: Aldingbourne Updated Climate Change Allowances

Scenario(s): Defended climate change fluvial, Undefended climate change fluvial

Date: 2016

Model name: Emsworth to Littlehampton Model - Arun to East Head (2016)
Scenario(s): Defended tidal, defences removed tidal, defended climate change tidal, defences removed climate change tidal
Date: 9 April 2016

These models contain the most relevant data for your area of interest.

Terminology used

Annual exceedance probability (AEP)

This refers to the probability of a flood event occurring in any year. The probability is expressed as a percentage. For example, a large flood which is calculated to have a 1% chance of occuring in any one year, is described as 1% AEP.

Metres above ordnance datum (mAOD)

All flood levels are given in metres above ordnance datum which is defined as the mean sea level at Newlyn, Cornwall.

Flood map for planning (rivers and the sea)

Your selected location is in flood zone 3.

Flood zone 3 shows the area at risk of flooding for an undefended flood event with a:

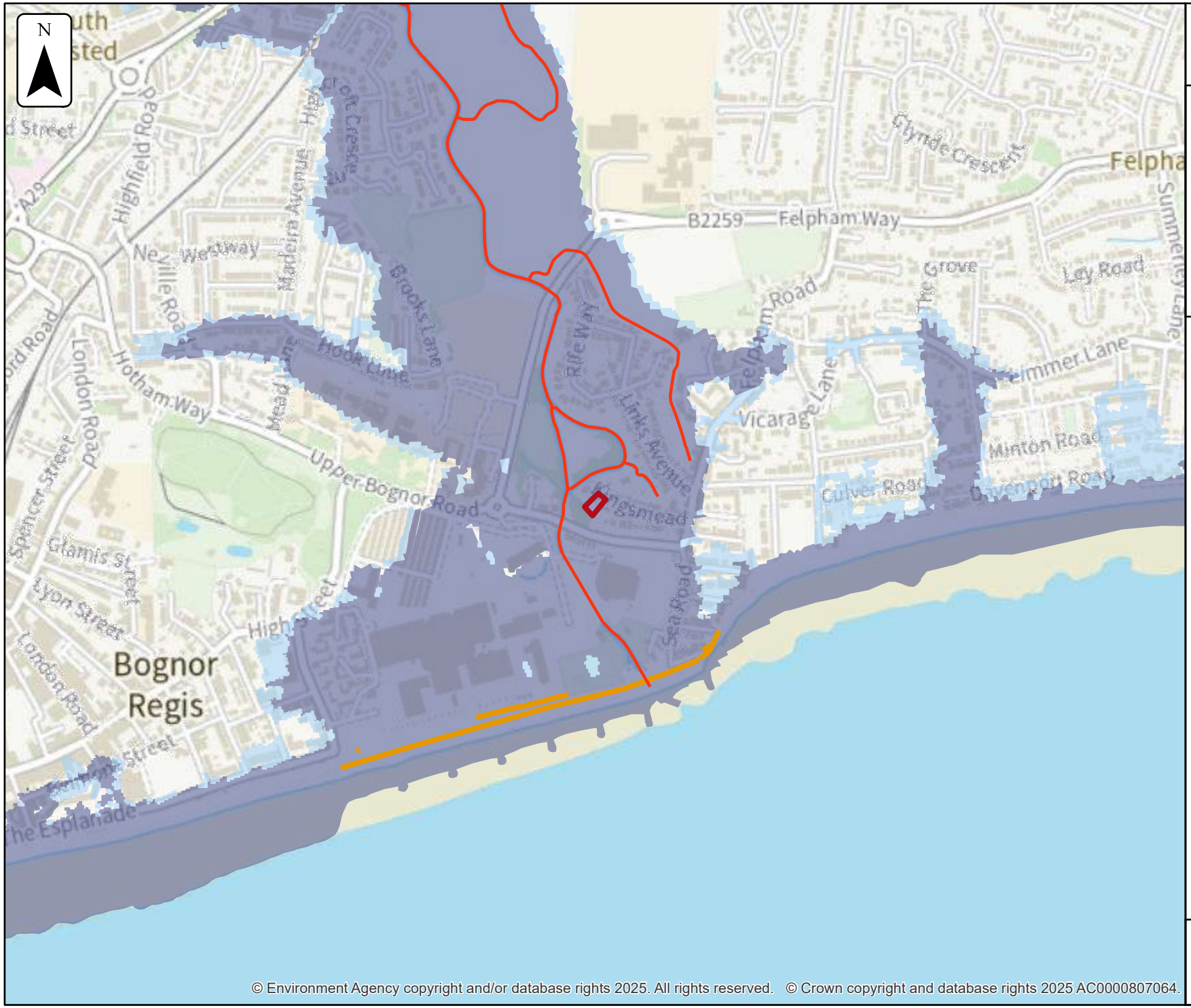
- 0.5% or greater probability of occurring in any year for flooding from the sea
- 1% or greater probability of occurring in any year for fluvial (river) flooding

Flood zone 2 shows the area at risk of flooding for an undefended flood event with:

- between a 0.1% and 0.5% probability of occurring in any year for flooding from the sea
- between a 0.1% and 1% probability of occurring in any year for fluvial (river) flooding

It's important to remember that the flood zones on this map:

- refer to the land at risk of flooding and do not refer to individual properties
- refer to the probability of river and sea flooding, ignoring the presence of defences
- do not take into account potential impacts of climate change



Environment Agency

Flood map for planning

Location (easting/northing)
494642/99507

Scale
1:10,000

Created
24 Oct 2025

- Selected area
- Main river
- Flood defence
- Flood Zone 3
- Flood Zone 2

0 100 200 300 400 500
metres

Flood defences and attributes

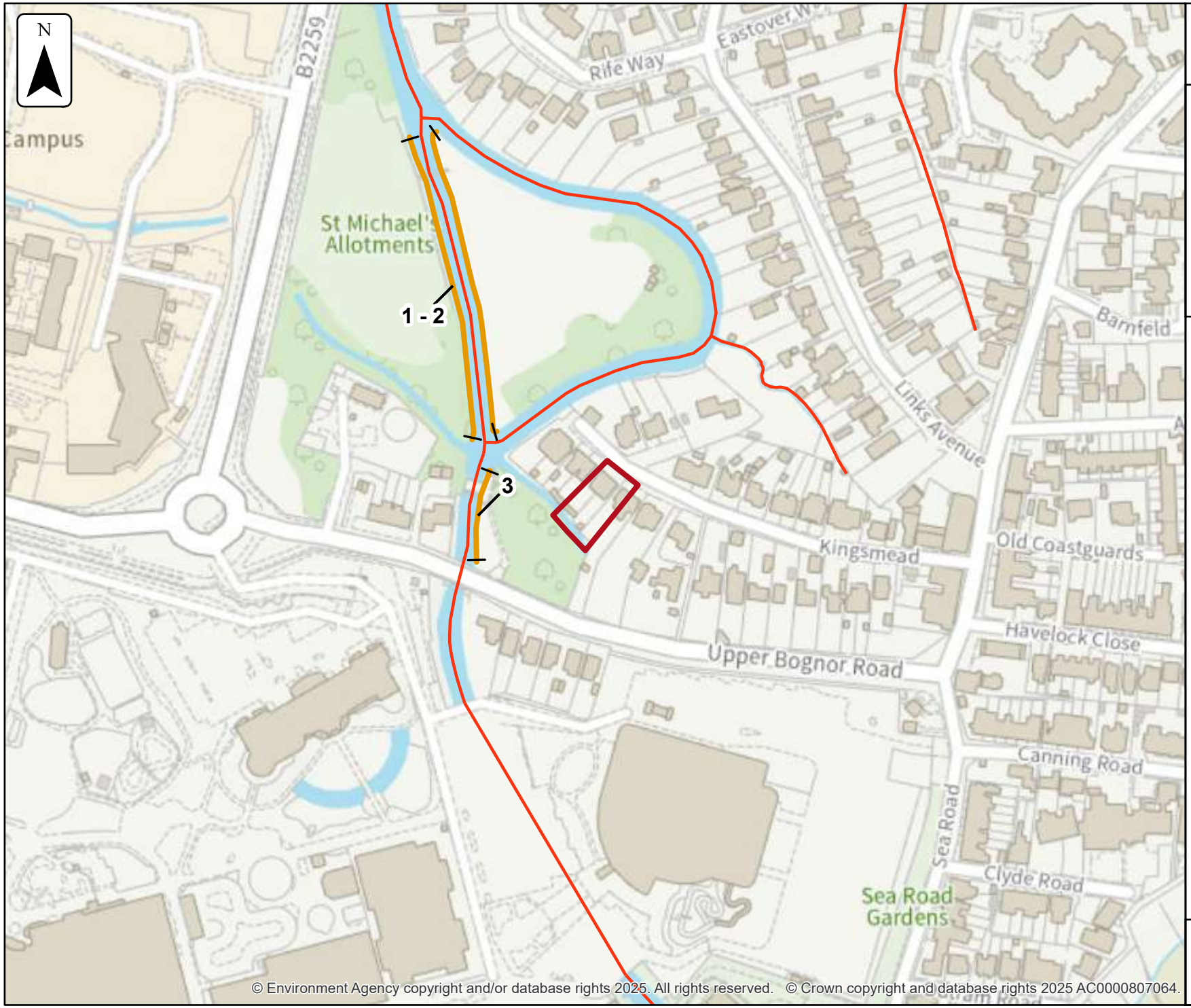
The flood defences map shows the location of the flood defences present.

The flood defences data table shows the type of defences, their condition and the standard of protection. It shows the height above sea level of the top of the flood defence (crest level). The height is In mAOD which is the metres above the mean sea level at Newlyn, Cornwall.

It's important to remember that flood defence data may not be updated on a regular basis. The information here is based on the best available data.

Use this information:

- to help you assess if there is a reduced flood risk for this location because of defences
- with any information in the modelled data section to find out the impact of defences on flood risk



Environment Agency

Flood defences

Location (easting/northing)
494642/99507

Scale
1:2,500

Created
24 Oct 2025

- Selected area
- Main river
- Flood defence

0 25 50 75 100
metres

Flood defences data

Label	Asset ID	Asset Type	Standard of protection (years)	Current condition	Downstream actual crest level (mAOD)	Upstream actual crest level (mAOD)	Effective crest level (mAOD)
1	19551	Engineered High Ground	5	Fair			
2	19550	Engineered High Ground	5	Fair			
3	436039	Engineered High Ground		Fair			

Any blank cells show where a particular value has not been recorded for an asset.

Modelled data

This section provides details of different scenarios we have modelled and includes the following (where available):

- outline maps showing the area at risk from flooding in different modelled scenarios
- modelled node point map(s) showing the points used to get the data to model the scenarios and table(s) providing details of the flood risk for different return periods
- map(s) showing the approximate water levels for the return period with the largest flood extent for a scenario and table(s) of sample points providing details of the flood risk for different return periods

Climate change

The climate change data included in the models may not include the latest flood risk assessment climate change allowances. Where the new allowances are not available you will need to consider this data and factor in the new allowances to demonstrate the development will be safe from flooding.

The Environment Agency will incorporate the new allowances into future modelling studies. For now, it's your responsibility to demonstrate that new developments will be safe in flood risk terms for their lifetime.

Modelled scenarios

The following scenarios are included:

- Defended modelled fluvial: risk of flooding from rivers where there are flood defences
- Defences removed modelled fluvial: risk of flooding from rivers where flood defences have been removed
- Defended modelled tidal: risk of flooding from the sea where there are flood defences
- Defences removed modelled tidal: risk of flooding from the sea where flood defences have been removed
- Defended climate change modelled fluvial: risk of flooding from rivers where there are flood defences, including estimated impact of climate change
- Defended climate change modelled tidal: risk of flooding from the sea where there are flood defences, including estimated impact of climate change
- Defences removed climate change modelled tidal: risk of flooding from the sea where flood defences have been removed, including estimated impact of climate change

Modelled Flood Outlines (Undefended Fluvial). Centred on PO22 7BD. Created 24/10/2025.

Environment Agency

N

Legend

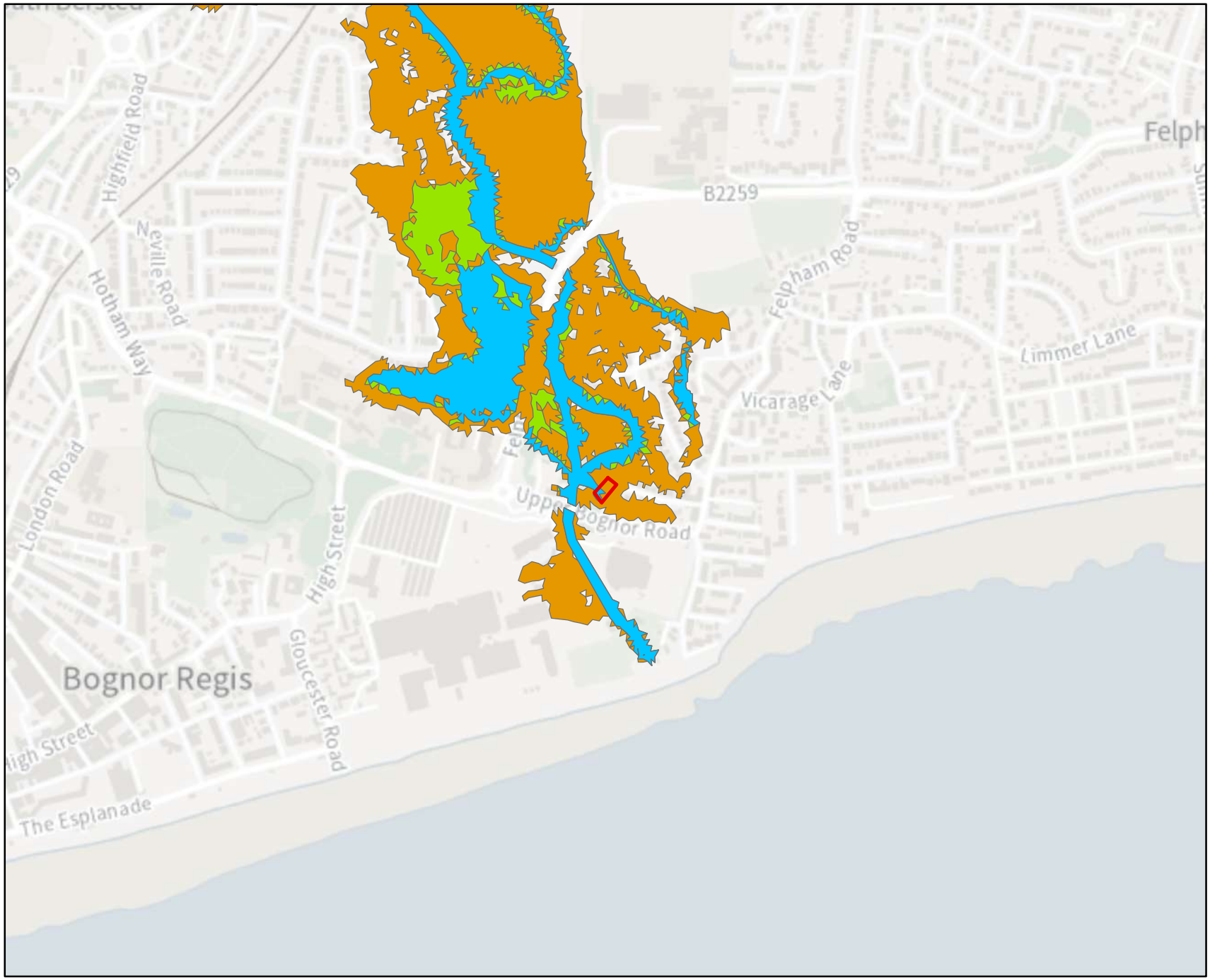
- Site Boundary
- 1% AEP (Undefended Fluvial)
- 0.1% AEP (Undefended Fluvial)

Annual Exceedance Probability (AEP) The probability of a flood of a particular magnitude, or greater occurring in any given year.

Scale: 1:10,000

0 0.225 0.45
Kilometers

Modelled Flood Outlines (Climate Change Undefended). Centred on PO22 7BD. Created 24/10/2025.



Environment Agency

N

Legend

- Site Boundary
- 1% AEP +CC Undefended Fluvial
- 1% AEP +CC 45% Undefended Fluvial
- 1% AEP +CC 105% Undefended Fluvial

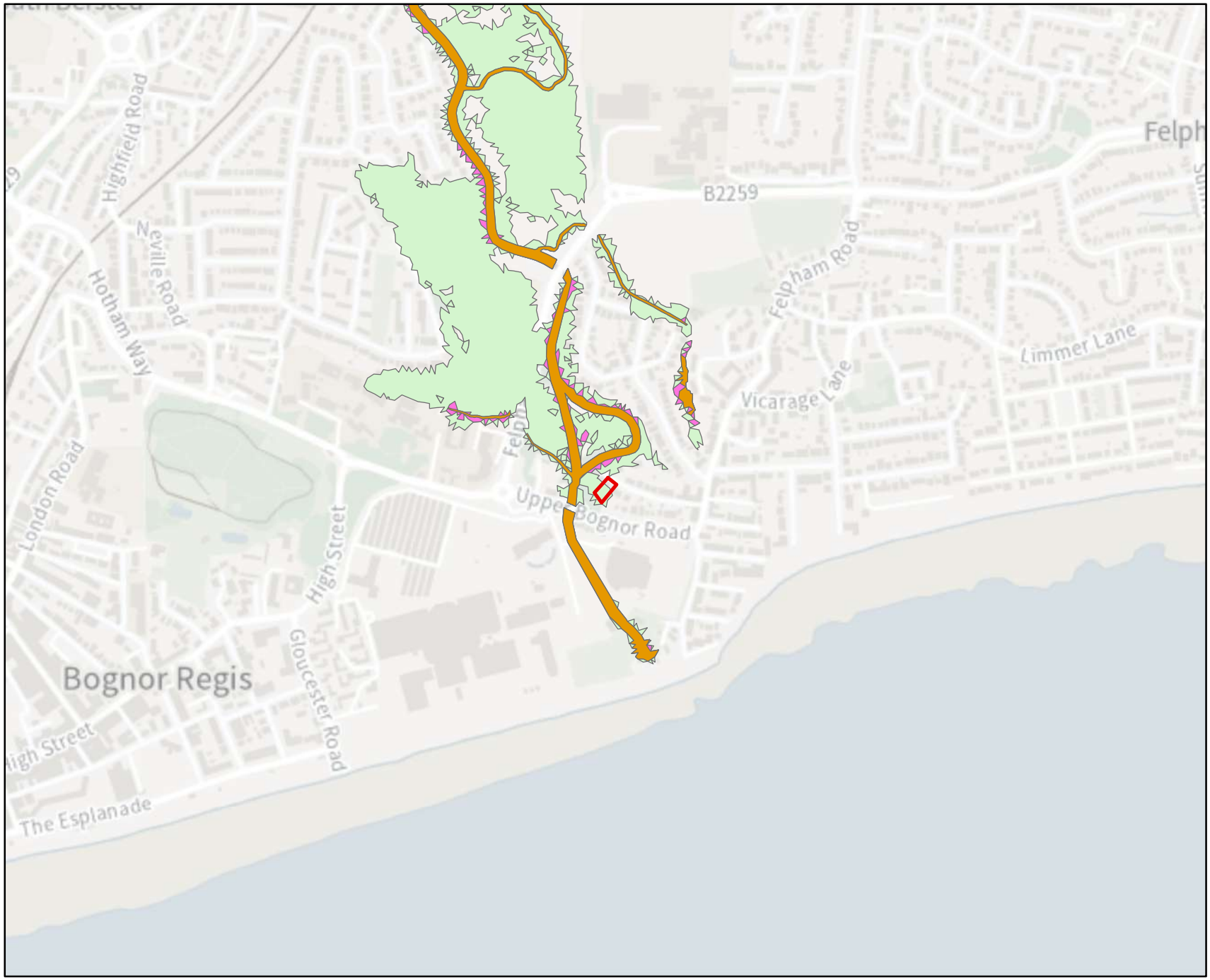
Annual Exceedance Probability (AEP) The probability of a flood of a particular magnitude, or greater occurring in any given year.

Scale: 1:10,000

0 0.225 0.45
Kilometers

Contact us: National Customer Contact Centre, PO Box 544, Rotherham, S60 1BY. Tel: 03708 506 506. Email:enquiries@environment-agency.gov.uk

Modelled Flood Outlines (Defended Fluvial). Centred on PO22 7BD. Created 24/10/2025.



Environment Agency

N

Legend

- Site Boundary
- 5% AEP (Defended Fluvial)
- 1% AEP (Defended Fluvial)
- 0.1% AEP (Defended Fluvial)

Annual Exceedance Probability (AEP) The probability of a flood of a particular magnitude, or greater occurring in any given year.

Scale: 1:10,000

0 0.225 0.45
Kilometers

Modelled Flood Outlines (Climate Change Defended). Centred on PO22 7BD. Created 24/10/2025.

Environment Agency

N

Legend

- Site Boundary
- 1% AEP +CC 35% Defended Fluvial
- 1% AEP +CC 45% Defended Fuvial
- 1% AEP +CC 105% Defended Fluvial

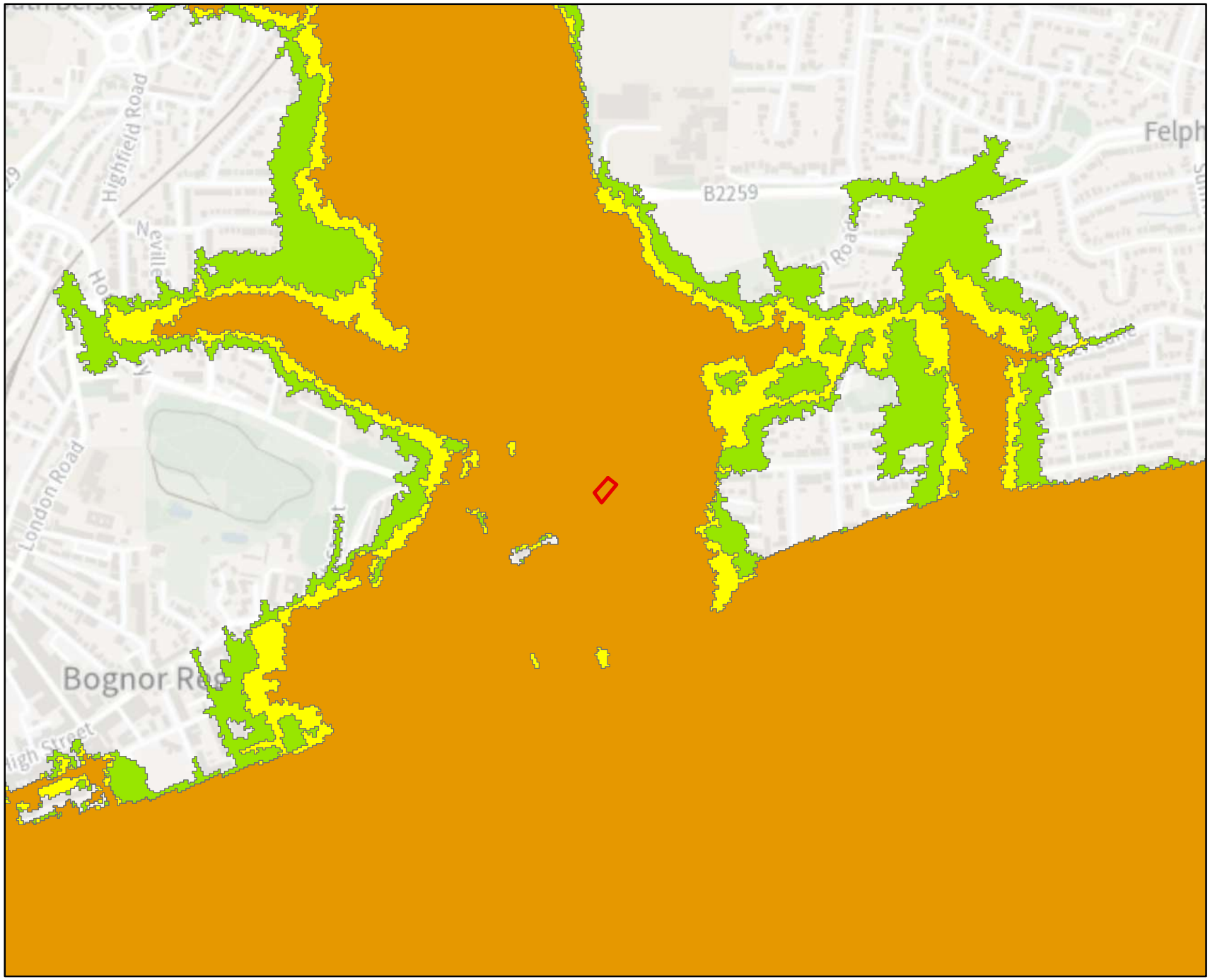
Annual Exceedance Probability (AEP) The probability of a flood of a particular magnitude, or greater occurring in any given year.

Scale: 1:10,000

0 0.225 0.45
Kilometers

Contact us: National Customer Contact Centre, PO Box 544, Rotherham, S60 1BY. Tel: 03708 506 506. Email:enquiries@environment-agency.gov.uk

Modelled Flood Outlines (Undefended Tidal). Centred on PO22 7BD. Created 24/10/2025.



Environment Agency

N

Legend

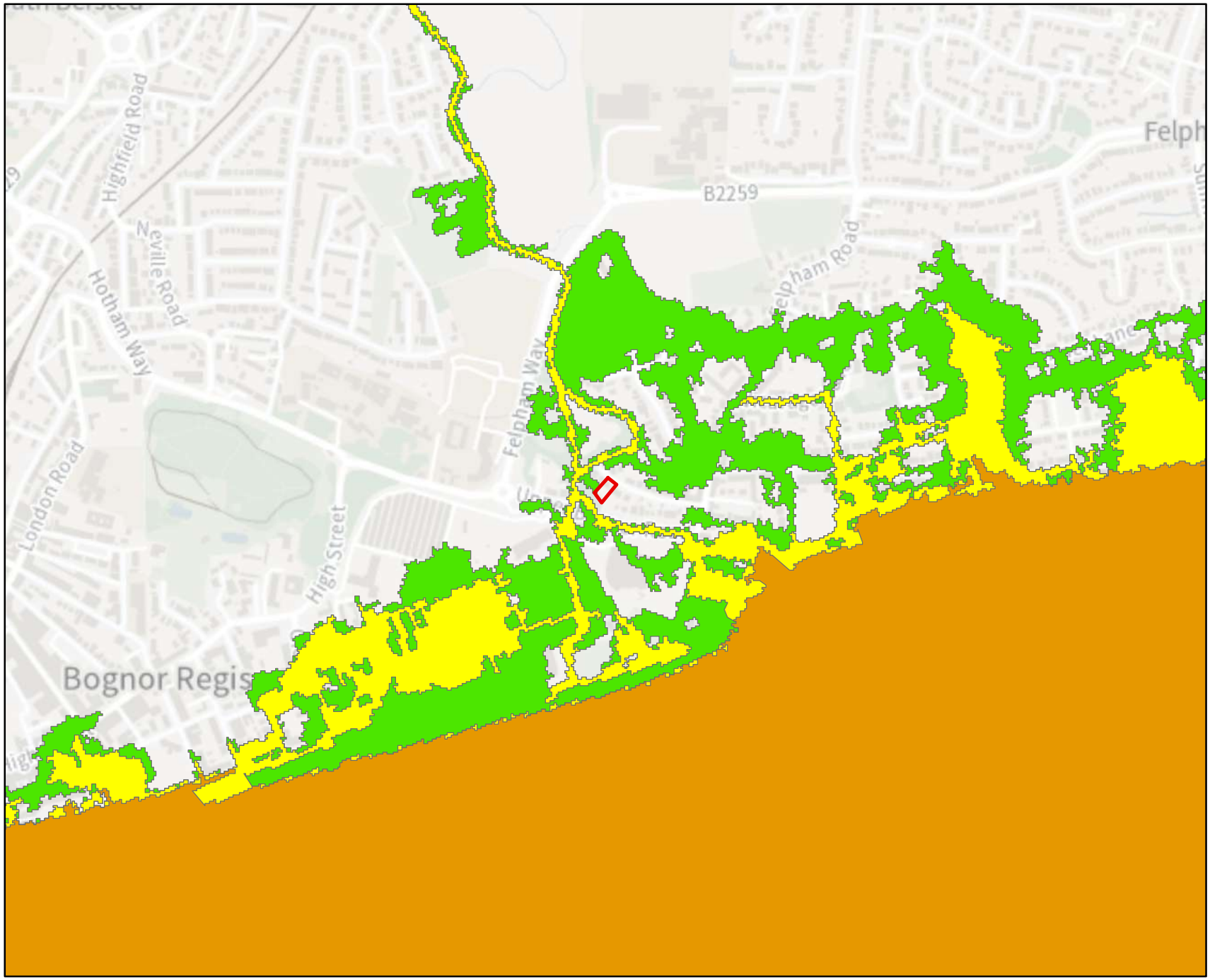
- Site Boundary
- 0.5% AEP (Undefended Tidal)
- 0.5% AEP (2070) NPPF (Undefended Tidal)
- 0.5% AEP (2115) NPPF (Undefended Tidal)
- 0.1% AEP (Undefended Tidal)

Annual Exceedance Probability (AEP) The probability of a flood of a particular magnitude, or greater occurring in any given year.

Scale: 1:10,000

0 0.225 0.45
Kilometers

Modelled Flood Outlines (Defended Tidal). Centred on PO22 7BD. Created 24/10/2025.



Environment Agency

N

Legend

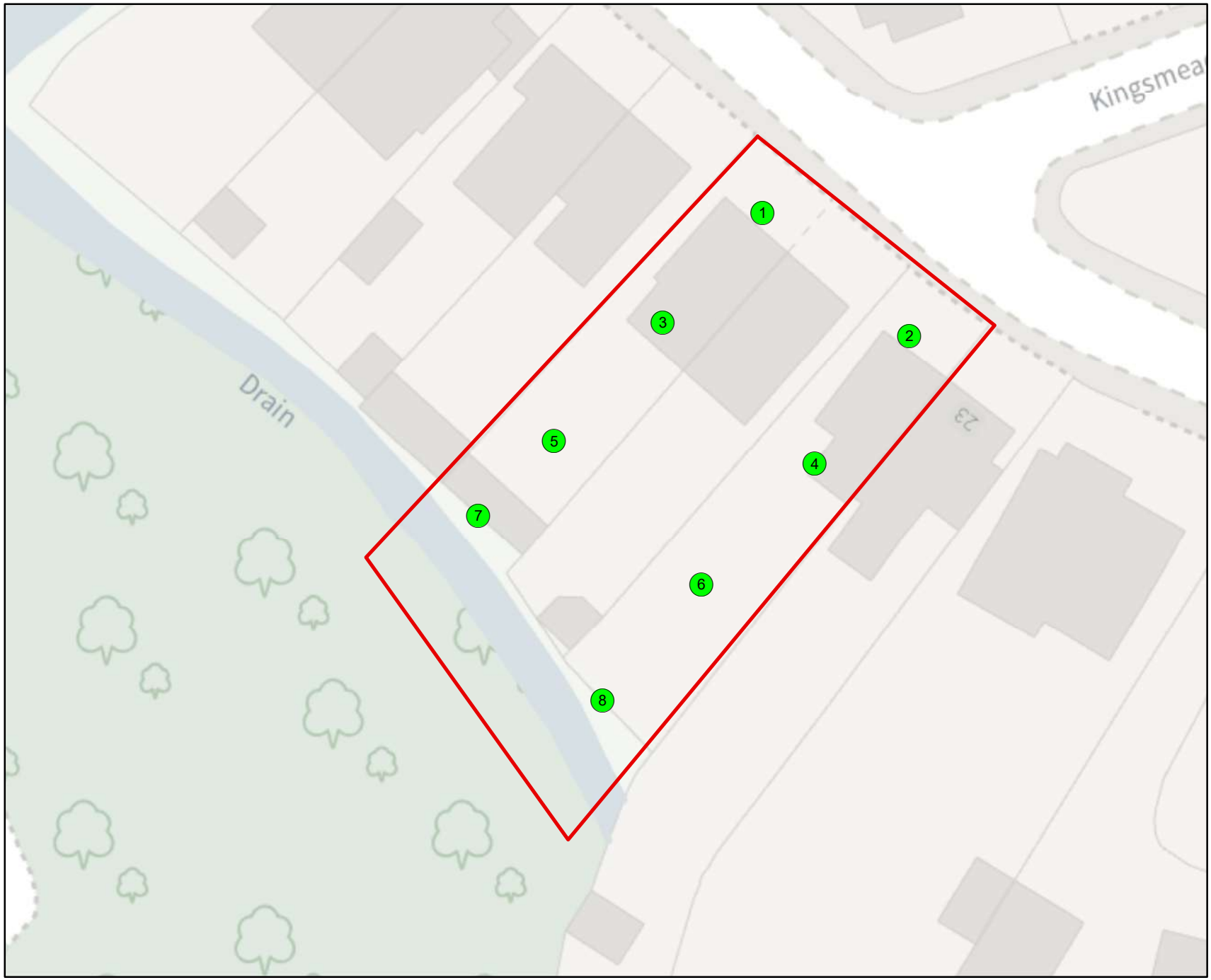
- Site Boundary
- 0.5% AEP (Defended Tidal)
- 0.5% AEP (2070) NPPF (Defended Tidal)
- 0.5% AEP (2115) NPPF (Defended Tidal)
- 0.1% AEP (Defended Tidal)

Annual Exceedance Probability (AEP) The probability of a flood of a particular magnitude, or greater occurring in any given year.

Scale: 1:10,000

0 0.225 0.45
Kilometers

FRA Site Boundary and Node Points. Centred on PO22 7BD. Created 24/10/2025.



Environment Agency

N

Legend

Site Boundary

Site Nodes

Annual Exceedance Probability (AEP) The probability of a flood of a particular magnitude, or greater occurring in any given year.

Scale: 1:350

0 0.0075 0.015

Kilometers

Product 4 Flood Risk Data Requested by: Lisa Slater

Site: 25 Kingsmead, Felphem, Arun, West Sussex, PO22 7BD.

Table 1: Water Levels: Fluvial Undefended

	NGR		Modelled Flood Levels in Metres AOD Undefended Annual Exceedance Probability					
Node Ref	Eastings	Northings	5%	1%	1% +CC (35%)	1% +CC (45%)	1% +CC (105%)	0.1%
1	494648	99524	-	-	-	-	2.19	-
2	494657	99516	-	-	-	-	2.19	-
3	494641	99517	-	-	-	-	2.20	1.14
4	494651	99507	-	-	-	-	2.20	1.16
5	494634	99509	-	-	-	-	2.20	1.17
6	494644	99500	-	-	-	-	2.20	1.14
7	494629	99504	-	1.68	1.71	1.73	2.20	1.44
8	494637	99492	-	-	-	-	2.20	1.21

Table 2: Water Levels: Fluvial Defended

	NGR		Modelled Flood Levels in Metres AOD Defended Annual Exceedance Probability					
Node Ref	Eastings	Northings	5%	1%	1% +CC (35%)	1% +CC (45%)	1% +CC (105%)	0.1%
1	494648	99524	-	-	-	-	-	-
2	494657	99516	-	-	-	-	-	-
3	494641	99517	-	-	-	-	1.95	1.95
4	494651	99507	-	-	-	-	1.95	1.95
5	494634	99509	-	-	-	-	1.95	1.95
6	494644	99500	-	-	-	-	1.95	1.95
7	494629	99504	1.69	-	1.69	1.69	1.95	1.95
8	494637	99492	-	-	-	-	1.95	1.95

Table 3: Water Levels: Tidal Undefended

	NGR		Modelled Flood Levels in Metres AOD			
			Undefended Annual Exceedance Probability			
Node Ref	Eastings	Northings	0.5%	0.5% (2070)**	0.5% (2115)**	0.1%
1	494648	99524	3.12	3.76	4.43	3.39
2	494657	99516	3.12	3.76	4.43	3.39
3	494641	99517	3.13	3.77	4.44	3.40
4	494651	99507	3.13	3.78	4.46	3.40
5	494634	99509	3.13	3.77	4.45	3.40
6	494644	99500	3.13	3.79	4.46	3.41
7	494629	99504	3.13	3.77	4.45	3.40
8	494637	99492	3.13	3.79	4.46	3.40

Table 5: Water Depths: Fluvial Undefended

	NGR		Modelled Flood Depths in Metres					
			Undefended Annual Exceedance Probability					
Node Ref	Eastings	Northings	5%	1%	1% +CC (35%)	1% +CC (45%)	1% +CC (105%)	0.1%
1	494648	99524	-	-	-	-	0.31	-
2	494657	99516	-	-	-	-	0.32	-
3	494641	99517	-	-	-	-	0.46	0.26
4	494651	99507	-	-	-	-	0.50	0.30
5	494634	99509	-	-	-	-	0.53	0.33
6	494644	99500	-	-	-	-	0.50	0.27
7	494629	99504	-	0.52	0.55	0.57	1.04	0.84
8	494637	99492	-	-	-	-	0.60	0.40

Table 6: Water Depths: Fluvial Defended

	NGR		Modelled Flood Depths in Metres					
			Defended Annual Exceedance Probability					
Node Ref	Eastings	Northings	5%	1%	1% +CC (35%)	1% +CC (45%)	1% +CC (105%)	0.1%
1	494648	99524	-	-	-	-	-	-
2	494657	99516	-	-	-	-	-	-
3	494641	99517	-	-	-	-	0.21	0.21
4	494651	99507	-	-	-	-	0.25	0.25
5	494634	99509	-	-	-	-	0.28	0.28
6	494644	99500	-	-	-	-	0.25	0.25
7	494629	99504	0.54	-	0.53	0.54	0.79	0.79
8	494637	99492	-	-	-	-	0.35	0.35

Table 7: Water Depths: Tidal Undefended

	NGR		Modelled Flood Depths in Metres			
			Undefended Annual Exceedance Probability			
Node Ref	**Eastings**	**Northings**	**0.5%**	**0.5% (2070)****	**0.5% (2115)****	**0.1%**
1	494648	99524	1.37	2.01	2.68	1.64
2	494657	99516	1.36	2.01	2.67	1.64
3	494641	99517	1.43	2.07	2.74	1.70
4	494651	99507	1.44	2.10	2.77	1.72
5	494634	99509	1.60	2.24	2.92	1.87
6	494644	99500	1.55	2.21	2.88	1.83
7	494629	99504	2.24	2.88	3.55	2.50
8	494637	99492	1.92	2.58	3.26	2.20

All levels taken from:
Fluvial: Aldingbourne Modelling Study (Defended Only) (2015) by JBA Consulting, plus updated climate change allowances (2016).
Tidal: River Arun to East Head Model (2016), by JBA Consulting.

Produced on: 24/10/2025

*** The flood risk data provided is based on existing EA hydraulic models with an allowance for climate change. Please note the climate change allowances provided are not up to date. These were updated on 27 July 2021.**

You should refer to 'Flood risk assessments: climate change allowances' for the most up to date allowances. You will need to undertake further assessment of future flood risk using different allowances to ensure your assessment of future flood risk is based on best available evidence.

There is no additional information or health warnings for these levels/depths or the model from which they have been produced.

Strategic flood risk assessments

We recommend that you check the relevant local authority's strategic flood risk assessment (SFRA) as part of your work to prepare a site specific flood risk assessment.

This should give you information about:

- the potential impacts of climate change in this catchment
- areas defined as functional floodplain
- flooding from other sources, such as surface water, ground water and reservoirs

Your Lead Local Flood Authority is West Sussex County.

About this data

This data has been generated by strategic scale flood models and is not intended for use at the individual property scale. If you're intending to use this data as part of a flood risk assessment, please include an appropriate modelling tolerance as part of your assessment. The Environment Agency regularly updates its modelling. We recommend that you check the data provided is the most recent, before submitting your flood risk assessment.

Flood risk activity permits

Under the Environmental Permitting (England and Wales) Regulations 2016 some developments may require an environmental permit for flood risk activities from the Environment Agency. This includes any permanent or temporary works that are in, over, under, or nearby a designated main river or flood defence structure.

Find out more about flood risk activity permits

Help and advice

Contact the Solent and South Downs Environment Agency team at ssdenquiries@environment-agency.gov.uk for:

- more information about getting a product 5, 6, 7 or 8
- general help and advice about the site you're requesting data for