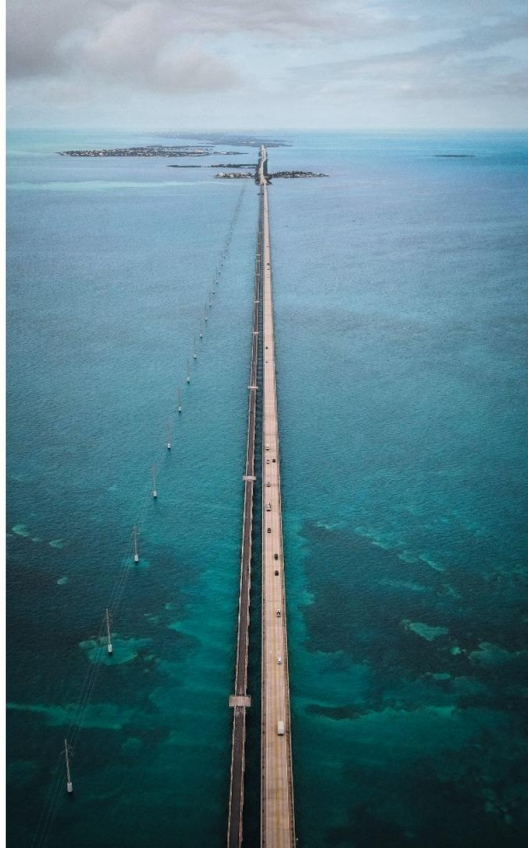




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Flood Risk Assessment AEG11599_BN6_Hassocks_01

Site Address: 6 Adastra Avenue
Hassocks
West Sussex
BN6 8DL

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

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Document Issue Record

Project: Flood Risk Assessment

Prepared for: Lorna Newbury

Reference: AEG11599_BN6_Hassocks_01

Site Location: 6 Adastra Avenue, Hassocks, West Sussex, BN6 8DL

Issue	Date	Author	Check	Auth.	Comments
1	15/09/2026	Nick Darling-Drewett	JA	NB	First Draft

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Summary

Development Description	Existing	Proposed
Development Type	Detached dwelling (Use Class C3).	Construction of a side and rear extension to provide greater habitable space to the existing dwelling.
Environment Agency (EA) Flood Risk Vulnerability Classification	More Vulnerable.	More Vulnerable.
Ground Floor Level (Finished Floor Level)	Estimated at 42.12m Above Ordnance Datum (m AOD), based on EA 1m LiDAR at the entrance threshold plus one step (75mm)	FFLs of proposed extension to be set no lower than existing in accordance with EA Standing Advice for Minor Developments.
Level of Sleeping Accommodation	First floor.	First floor. No change.
Impermeable Surface Area	Built footprint of approximately 78m ² .	Built footprint of approximately 117m ² , an increase of approximately 39m ² .
Surface Water Drainage	Assumed unrestricted into public sewer system	Small scale SuDS, such as rainwater planters, can be incorporated to provide betterment, with overflow to the existing arrangement.
Site Size	Redline boundary totals approximately 283m ² .	No change.
Risk to Development	Summary	Comment
EA Flood Zone	Flood Zones 1, 2 and 3.	Mapped Flood Zone 2 and 3 cover approximately 10% of the redline boundary and are confined to the rear. Both the existing dwelling and the proposed extension lie wholly within Flood Zone 1.

Development Description	Existing	Proposed
Flood Source	Fluvial and Pluvial	Fluvial risk is confined to the rear of the site. Surface water, assessed against the EA Flood Map for Planning – Surface Water (May 2026), is the governing source at the proposed extension.
Strategic Flood Risk Assessment (SFRA) Available	Yes.	Mid Sussex Strategic Flood Risk Assessment Level 1 (2024).
Management Measures	Summary	Comment
Ground floor level above extreme flood levels	Yes, for fluvial.	The estimated finished floor level of 42.12m AOD lies 1.48m above the modelled 1 in 100 year plus climate change fluvial level of 40.64m AOD, and above the modelled 1 in 1000 year level of 41.26m AOD. FFLs to be set no lower than existing as proposal is minor development, with flood resilience measures recommended in Section 5.
Safe Access/Egress Route	Yes	1 in 100 year +CC pluvial depths on Adastra Avenue modelled below 150mm as such safe access/ egress could be sought travelling southeast.
Flood Resilient Design	Yes	Flood resilience measures are recommended within the extension, given the mapped surface water depths in the design event.
Site Drainage Plan	No	Small scale SuDS, such as rainwater planters, can be incorporated to provide betterment, with overflow to the existing arrangement.

1.Introduction

- 1.1. Aegaea were commissioned by Lorna Newbury 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, August 2026)¹ and the associated Flood Risk and Coastal Change Planning Practice Guidance (PPG, 2025)².
- 1.2. This FRA is intended to support a householder 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 6 Adastra Avenue, Hassocks, West Sussex, BN6 8DL (Figure 1).

¹ National Planning Policy Framework. <https://www.gov.uk/government/publications/national-planning-policy-framework--2>. Ministry of Housing, Communities and Local Government, August 2026.

² Planning Practice Guidance — Flood Risk and Coastal Change. <https://www.gov.uk/guidance/flood-risk-and-coastal-change>. Ministry of Housing, Communities and Local Government, 2025.

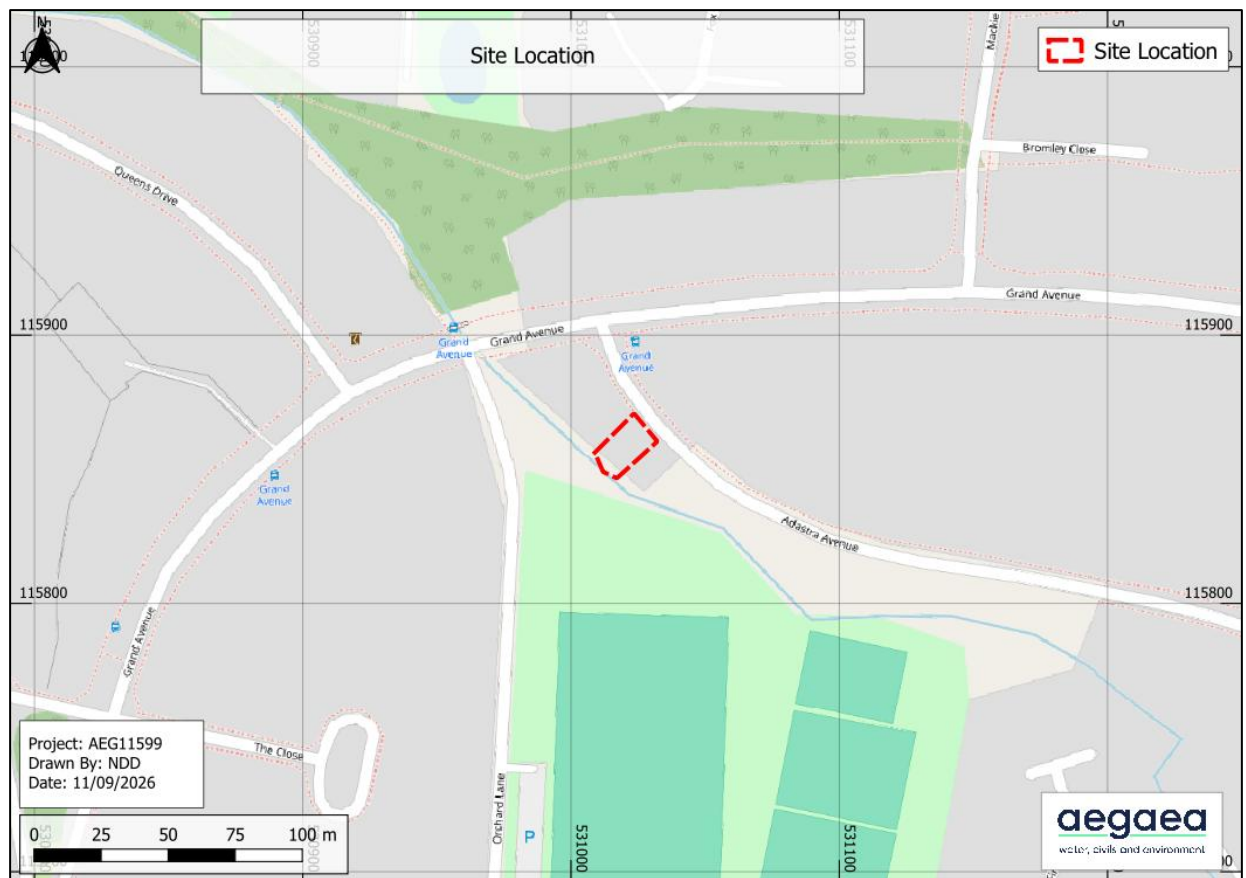


Figure 1: Site Location (Base mapping © OpenStreetMap contributors.)

- 1.4. It is understood that the proposed development comprises a side and rear extension to the existing dwelling, with an additional built footprint of approximately 39m². The proposed development plans are provided in Appendix A.
- 1.5. 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 site³. LiDAR data shows the ground elevation of the site varies between approximately 41.01m AOD (metres Above Ordnance Datum) and 42.26m AOD, falling towards the rear of the site (Figure 2).

³ Environment Agency National LiDAR Programme Composite Digital Terrain Model (1m).
<https://environment.data.gov.uk/dataset/13787b9a-26a4-4775-8523-806d13af58fc>. Environment Agency; accessed 11/09/2026.

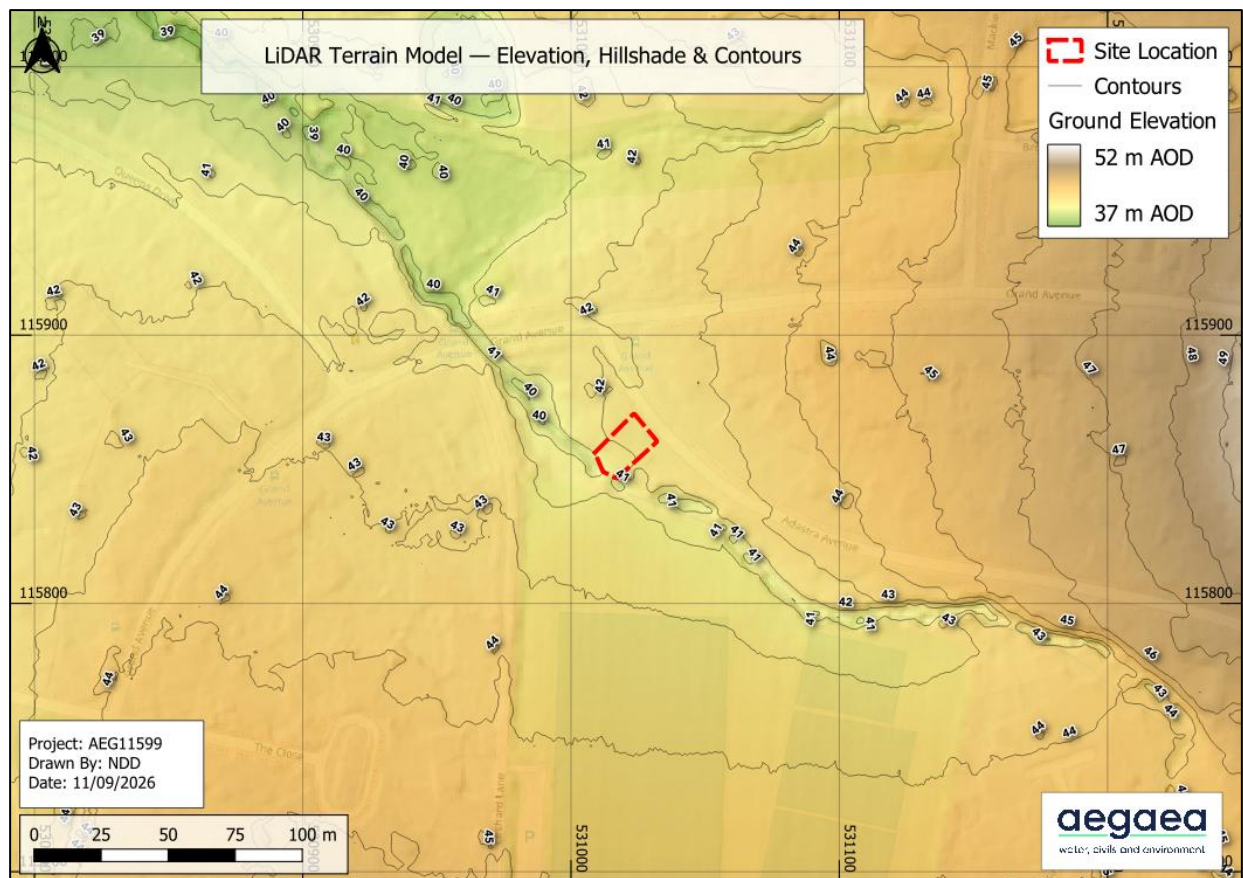


Figure 2: Site Topography — EA 1m LiDAR Composite Digital Terrain Model (Base mapping © OpenStreetMap contributors.)

- 1.6. The existing finished floor level (FFL) is estimated at approximately 42.12m AOD, taken from the LiDAR ground level at the entrance threshold (42.05m AOD) plus one step at 75mm. The proposed extension is to be constructed with finished floor levels matching the existing dwelling, as stated on the proposed layout drawing.
- 1.7. Mid Sussex 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. Policy F4 of the National Planning Policy Framework sets out when a site-specific flood risk assessment is required:

1. To inform the assessment of flood risk and, where relevant, appropriate mitigation, a site-specific flood risk assessment should accompany all development proposals in Flood Zones 2, 3a, and 3b as defined in Annex F, table 1.

2. In Flood Zone 1, a site-specific flood risk assessment should inform and accompany all development proposals involving:

- o a. Sites of one hectare or more;*
- o b. Land which has been identified by the Environment Agency as having critical drainage problems; and*
- o c. Land identified in a strategic flood risk assessment or the Flood Map for Planning as being at risk of flooding from any source, whether now or in the future.*

1.9. The site is located within Flood Zones 1, 2 and 3 therefore an FRA is required in accordance with the National Planning Policy Framework (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

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 NPPF (August 2026) which includes UK Government policy on development and flood risk states:
- 2.3. The objective of Chapter 18 (Managing flood risk and coastal change) is stated as:

The objective of the policies in this chapter is to minimise risks to development arising from all sources of flooding and coastal change, taking into account the impacts of climate change, by steering development away from areas of risk, ensuring that development will be safe for its lifetime without increasing flood risk elsewhere, and incorporating sustainable drainage systems where appropriate.

F4: Assessing flood risk for decision-making

3. Site-specific flood risk assessments should be appropriate to the scale, nature, and location of development and should, where relevant, support an assessment of whether a development proposal satisfies the sequential and exception tests set out in policies F5 and F6.

F7: Ensuring development is safe from flooding

1. Development proposals should not present a risk from flooding to potential occupiers, users, or visitors, and should not increase flood risk elsewhere.

2. Where development is proposed in a location known to be at risk from any form of flooding, now or in the future, it should be refused unless:

- a) *Within the site, the most vulnerable development is located in areas of lowest flood risk, unless there are overriding reasons which justify a different arrangement;*
- b) *The development will be safe throughout its lifetime taking account of the vulnerability of its users;*
- c) *Any residual risk can be safely managed, and safe access and escape routes are included where appropriate, as part of an agreed emergency plan;*
- d) *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; and*
- e) *It can be demonstrated that flood risk will not be increased elsewhere.*

F8: Sustainable drainage systems and watercourses

1. Development proposals which could affect drainage on or around the development site should incorporate sustainable drainage systems to control flow rates and reduce volumes of runoff, in ways which are proportionate to the nature and scale of the proposal. The systems employed should provide multifunctional benefits where possible, facilitating improvements in water quality, biodiversity and amenity.

2. Sustainable Drainage Systems should:

- o *a. Be designed in accordance with the National Standards for Sustainable Drainage Systems;*
- o *b. Have maintenance arrangements in place to ensure an acceptable standard of operation for the anticipated lifetime of the development; and*
- o *c. In the case of proposals for major development, take account of advice from the Lead Local Flood Authority.*

3. Development proposals should not enclose existing watercourses where this is not already the case, unless there are compelling reasons to do so; and should

where possible remove existing culverts and renaturalise existing river channels, unless to do so would increase flood risk, result in other environmental harm or cause harm to heritage assets.

2.4. Flood Zones in England are defined in Table 1.

Table 1: Flood Zone Definitions (NPPF Annex F, table 1)

Flood Zone	Definition
Zone 1 Low probability	Land having a less than 0.1% annual probability of river or sea flooding (all land outside Zones 2, 3a and 3b).
Zone 2 Medium probability	Land having between a 1% and 0.1% annual probability of river flooding; or land having between a 0.5% and 0.1% annual probability of sea flooding (land shown in light blue on the Flood Map for Planning).
Zone 3a High probability	Land having a 1% or greater annual probability of river flooding; or Land having a 0.5% or greater annual probability of sea flooding (land shown in dark blue on the Flood Map for Planning).
Zone 3b 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 their boundaries accordingly, in agreement with the Environment Agency (not separately distinguished from Zone 3a on the Flood Map).

Note: Flood Zones 2 and 3, shown on the Environment Agency's Flood Map for Planning, only account for river and sea flooding, and do not account for the benefits of flood defences or the possible effects of climate change. Reference should therefore also be made to the Environment Agency's other data on the

Flood Map for Planning, and any current strategic flood risk assessment(s), when considering potential future flood risks to developments and land uses.

- 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.

Local Plan

- 2.6. The Local Plan prepared by the Local Planning Authority, Mid Sussex District Council, sets out the policies for development in the local area.
- 2.7. Policy DP41 'Flood Risk and Drainage' of the Mid Sussex District Plan 2014-2031 (2018)⁴ outlines the requirements for new development within the District. It states:

Proposals for development will need to follow a sequential risk-based approach, ensure development is safe across its lifetime and not increase the risk of flooding elsewhere. The District Council's Strategic Flood Risk Assessment (SFRA) should be used to identify areas at present and future flood risk from a range of sources including fluvial (rivers and streams), surface water (pluvial), groundwater, infrastructure and reservoirs.

Particular attention will be paid to those areas of the District that have experienced flooding in the past and proposals for development should seek to reduce the risk of flooding by achieving a reduction from existing run-off rates.

Sustainable Drainage Systems (SuDS) should be implemented in all new developments of 10 dwellings or more, or equivalent non-residential or mixed development unless demonstrated to be inappropriate, to avoid any increase in flood risk and protect surface and ground water quality. Arrangements for the long term maintenance and management of SuDS should also be identified.

⁴ Mid Sussex District Plan 2014-2031. <https://www.midsussex.gov.uk/media/3406/mid-sussex-district-plan.pdf>. Mid Sussex District Council, adopted March 2018.

For the redevelopment of brownfield sites, any surface water draining to the foul sewer must be disconnected and managed through SuDS following the remediation of any previously contaminated land.

SuDS should be sensitively designed and located to promote improved biodiversity, an enhanced landscape and good quality spaces that improve public amenities in the area, where possible.

The preferred hierarchy of managing surface water drainage from any development is:

- *1. Infiltration Measures*
- *2. Attenuation and discharge to watercourses; and if these cannot be met,*
- *3. Discharge to surface water only sewers.*

Land that is considered to be required for current and future flood management will be safeguarded from development and proposals will have regard to relevant flood risk plans and strategies.

Sequential and Exception Tests

- 2.8. The Sequential and Exception Tests are applied in specific cases defined by UK Government policy. Their purpose is to drive development to areas of low flood risk and to support developments which improve flood risk for developments in areas at risk of flooding.
- 2.9. Under the NPPF all new planning applications should undergo a Sequential Test in accordance with Policy F5. This test should be implemented by local planning authorities with a view to take a risk-based approach when identifying suitable locations for development, taking into account all sources of flood risk and the current and future impacts of climate change.
- 2.10. Policy F5(2) of the NPPF states:

2. The sequential test should be used in areas known to be at risk now or in the future from any form of flooding, other than for:

- a. Sites which have been allocated in the development plan through the sequential test;
- b. Sites where a site-specific flood risk assessment demonstrates clearly that:
 - i. 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; or
 - ii. Where the site would be at risk of surface water flooding only, the proposed layout, design, and mitigation measures would ensure that occupiers and users would remain safe from current and future surface water flood risk for the lifetime of the development without increasing flood risk elsewhere in accordance with policy F7.
- c. For the following types of development:
 - i. **Householder development;**
 - ii. Small non-residential extensions (with a footprint of less than 250m²); and
 - iii. Changes of use, other than changes of use to a caravan, camping or chalet site, or to a mobile home or park home site.

2.11. Furthermore, Policy F6(2) of the NPPF states:

2. The exception test does not need to be applied:

- a. To those forms of development, or in those circumstances, where the sequential test is not required, as set out in policy F5; or
- b. Where the exception test was applied at plan-making stage, there has been no significant increase in flood risk since, and the development has not changed so as to introduce a more vulnerable use, having regard to Annex F, table 2.

2.12. Given the proposed development constitutes a 'minor development (Householder development)' in terms of flood risk, neither the Sequential nor Exception Tests are applicable in this instance in accordance with Policy F5(2) and F6(2) of the NPPF.

3. Consultation and Document Review

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.

Local Planning Authority

3.2. Mid Sussex District Council issued an invalid application notice for application DM/26/1936 on 5th August 2026, requiring a Flood Risk Assessment identifying and assessing the risks of all forms of flooding to and from the development, demonstrating how those risks will be managed taking climate change into account. This FRA has been prepared in response to that requirement.

Documents and Online Mapping

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

- Flood Map for Planning on the Environment Agency website⁵
- Flood Map for Planning – Surface Water (Spatial Planning Extents and Depths), published May 2026⁶
- Flood Map for Planning – Flood Zones plus Climate Change⁷
- Recorded Flood Outlines and Historic Flood Map on the Environment Agency website⁸

⁵ Flood Map for Planning on the Environment Agency website. <https://flood-map-for-planning.service.gov.uk/>. Environment Agency; accessed 11/09/2026.

⁶ Environment Agency Flood Map for Planning – Surface Water (Spatial Planning Extents and Depths). <https://environment.data.gov.uk/dataset/0f00c5a0-3a53-4a91-8b1b-97a2ba2b9b0f>. Environment Agency, published May 2026; accessed 11/09/2026.

⁷ Environment Agency Flood Map for Planning – Flood Zones plus Climate Change. <https://environment.data.gov.uk/dataset/8d57464f-d465-11e4-8790-f0def148f590>. Environment Agency; accessed 11/09/2026.

- Long Term Flood Risk Information on the Environment Agency website⁹
- Spatial Flood Defences (AIMS) on the Environment Agency website¹⁰
- Statutory Main River Map on the Environment Agency website¹¹
- Canal & River Trust maintained canal mapping¹²
- Geoindex Onshore (British Geological Survey, 2024)¹³
- Mid Sussex District Plan 2014-2031 (Mid Sussex District Council, 2018)
- Strategic Flood Risk Assessment Level 1 (Aegaea, 2024)¹⁴
- West Sussex Preliminary Flood Risk Assessment (West Sussex County Council, 2011)¹⁵
- West Sussex Local Flood Risk Management Strategy (West Sussex County Council, 2025)¹⁶
- Hassocks Modelling and Mapping Study (Environment Agency, 2013)

⁸ **Environment Agency Recorded Flood Outlines and Historic Flood Map.**

<https://environment.data.gov.uk/dataset/889885c6-d465-11e4-8cb4-f0def148f590>. Environment Agency; accessed 11/09/2026.

⁹ **Long Term Flood Risk Information (Risk of Flooding from Reservoirs) on the Environment Agency website.** <https://check-long-term-flood-risk.service.gov.uk/>. Environment Agency; accessed 11/09/2026.

¹⁰ **Environment Agency Spatial Flood Defences (including standardised attributes).** <https://environment.data.gov.uk/dataset/cc76738e-fc17-49f9-a216-977c61858dda>. Environment Agency; accessed 11/09/2026.

¹¹ **Environment Agency Statutory Main River Map.** <https://environment.data.gov.uk/dataset/b21ba6f5-cc7b-4e1b-bcb0-6b7b4b8b2d59>. Environment Agency; accessed 11/09/2026.

¹² **Canal & River Trust maintained canal mapping.** <https://canalrivertrust.org.uk/canals-and-rivers>. Canal & River Trust; accessed 11/09/2026.

¹³ **GeoIndex Onshore and onshore borehole records.** <https://www.bgs.ac.uk/map-viewers/geoindex-onshore/>. British Geological Survey; accessed 11/09/2026.

¹⁴ **Mid Sussex Strategic Flood Risk Assessment Level 1.** <https://www.midsussex.gov.uk/media/sl2jkh0z/env11-strategic-flood-risk-assessment-level-1-2024.pdf>. Aegaea for Mid Sussex District Council, 2024.

¹⁵ **West Sussex Preliminary Flood Risk Assessment.** https://www.westsussex.gov.uk/media/1626/west_sussex_pfra.pdf. West Sussex County Council, 2011.

¹⁶ **West Sussex Local Flood Risk Management Strategy.** https://www.westsussex.gov.uk/media/zxfdrox1/westsussex_lfrms.pdf. West Sussex County Council, 2025.

Preliminary Flood Risk Assessment (PFRA)

- 3.4. A Preliminary Flood Risk Assessment is the Lead Local Flood Authority's high-level assessment of local flood risk — surface water, groundwater and ordinary watercourses — prepared under the Flood Risk Regulations 2009 to identify any Flood Risk Areas. The West Sussex Preliminary Flood Risk Assessment (2011) was prepared by West Sussex County Council as the Lead Local Flood Authority for the county, which includes Hassocks.

Strategic Flood Risk Assessment (SFRA)

- 3.5. A Strategic Flood Risk Assessment is prepared by the Local Planning Authority to inform its Local Plan and to apply the Sequential Test, mapping flood risk from all sources across the district. The Mid Sussex Strategic Flood Risk Assessment Level 1 (Aegaea, 2024) was prepared for Mid Sussex District Council and reviewed by the Environment Agency and West Sussex County Council as Lead Local Flood Authority.

Local Flood Risk Management Strategy (LFRMS)

- 3.6. A Local Flood Risk Management Strategy is the Lead Local Flood Authority's strategy under section 9 of the Flood and Water Management Act 2010, setting out objectives and measures for managing local flood risk. The West Sussex Local Flood Risk Management Strategy (2025) takes a catchment-based approach to identifying and managing flood risk across the county.

4. Sources of Flood Risk

- 4.1. The following sources of flood risk have been assessed in relation to the site and proposed development.

Fluvial and Tidal

- 4.2. 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.
- 4.3. 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, where water may overtop the river bank or river defences when tide levels are high. The site lies approximately 12km inland from the nearest tidal waters and is not within any modelled tidal flood extent; the risk of tidal flooding to the site is considered negligible and this source is not addressed further.

Main Rivers and Ordinary Watercourses

- 4.4. The nearest EA main river is situated approximately 885m northwest of the western site boundary. An unnamed ordinary watercourse adjoins the south-western site boundary and is situated approximately 7m from the proposed extension. No further watercourses are mapped within 500m of the site on the EA Statutory Main River Map or OpenStreetMap.
- 4.5. As the adjoining channel is not designated EA main river, a Flood Risk Activity Permit is not required. The proposed extension will be approximately 7m from the adjacent ordinary watercourse. No impact is expected but the LLFA should be contacted to confirm if Ordinary Watercourse Consent (OWC) is required.

EA Flood Map for Planning

- 4.6. According to the EA Flood Map for Planning, the site falls across Flood Zone 1, Flood Zone 2 and Flood Zone 3 (Figure 3).

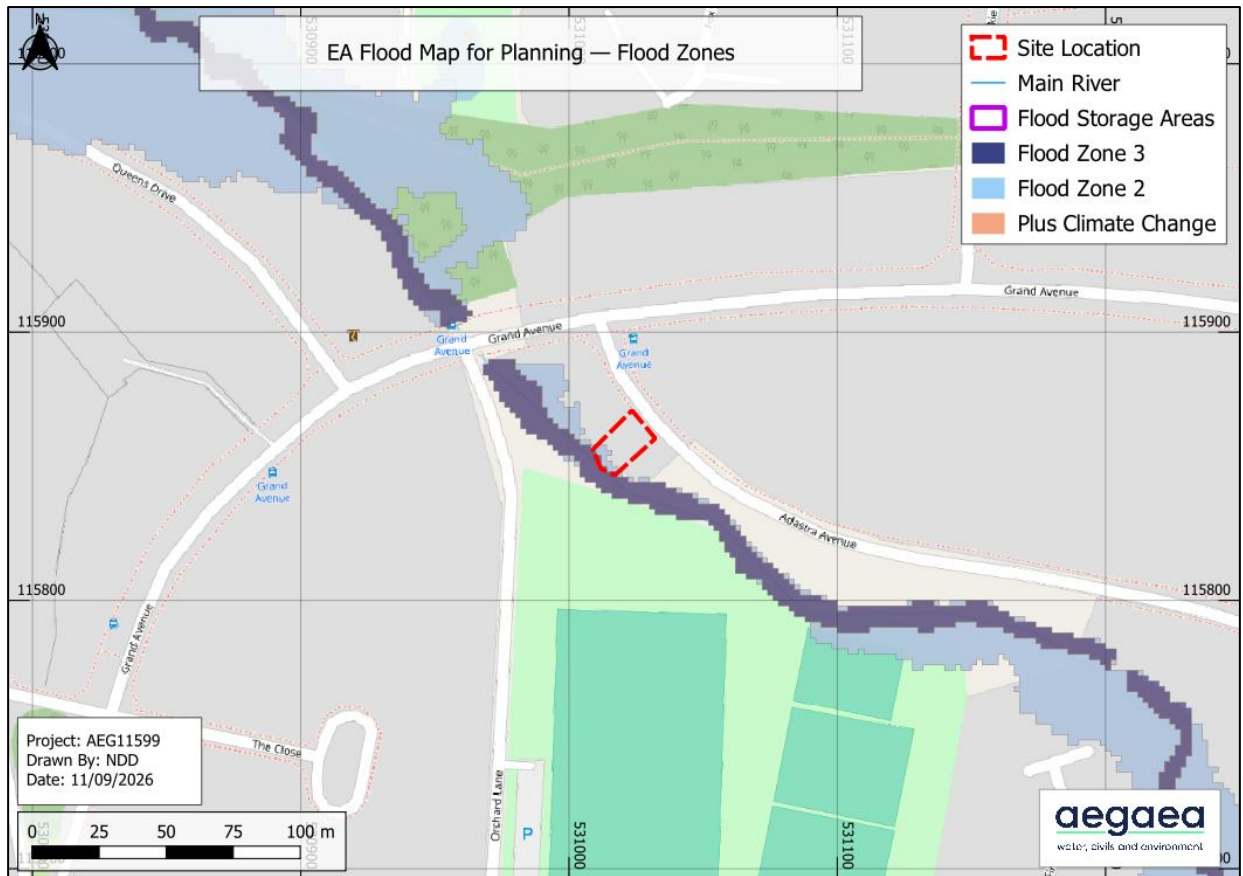


Figure 3: EA Flood Map for Planning (current release) (Base mapping © OpenStreetMap contributors.)

- 4.7. Mapped Flood Zone 2 (land having between a 1% and 0.1% annual probability of river flooding) and Flood Zone 3 (land having a 1% or greater annual probability of river flooding) together cover approximately 10% of the redline boundary and are confined to the south-western part of the site, associated with the adjoining ordinary watercourse. Both the existing dwelling and the proposed extension lie wholly within Flood Zone 1 (Land having a less than 0.1% annual probability of river or sea flooding (all land outside Zones 2, 3a and 3b).
- 4.8. Under the EA Flood Map for Planning – Flood Zones plus Climate Change dataset, the mapped extent remains confined to the south-western part of the site and does not reach either the existing dwelling or the proposed extension. Note, the climate change layer is

identical to the Flood Zone 3 outline so sits directly beneath – meaning it can't be seen extending beyond Flood Zone 3.

Historical Fluvial and Tidal Flooding

- 4.9. Based on the EA Recorded and Historical Flood Outlines dataset, there are no recorded flood outlines at or adjacent to the site (Figure 4).

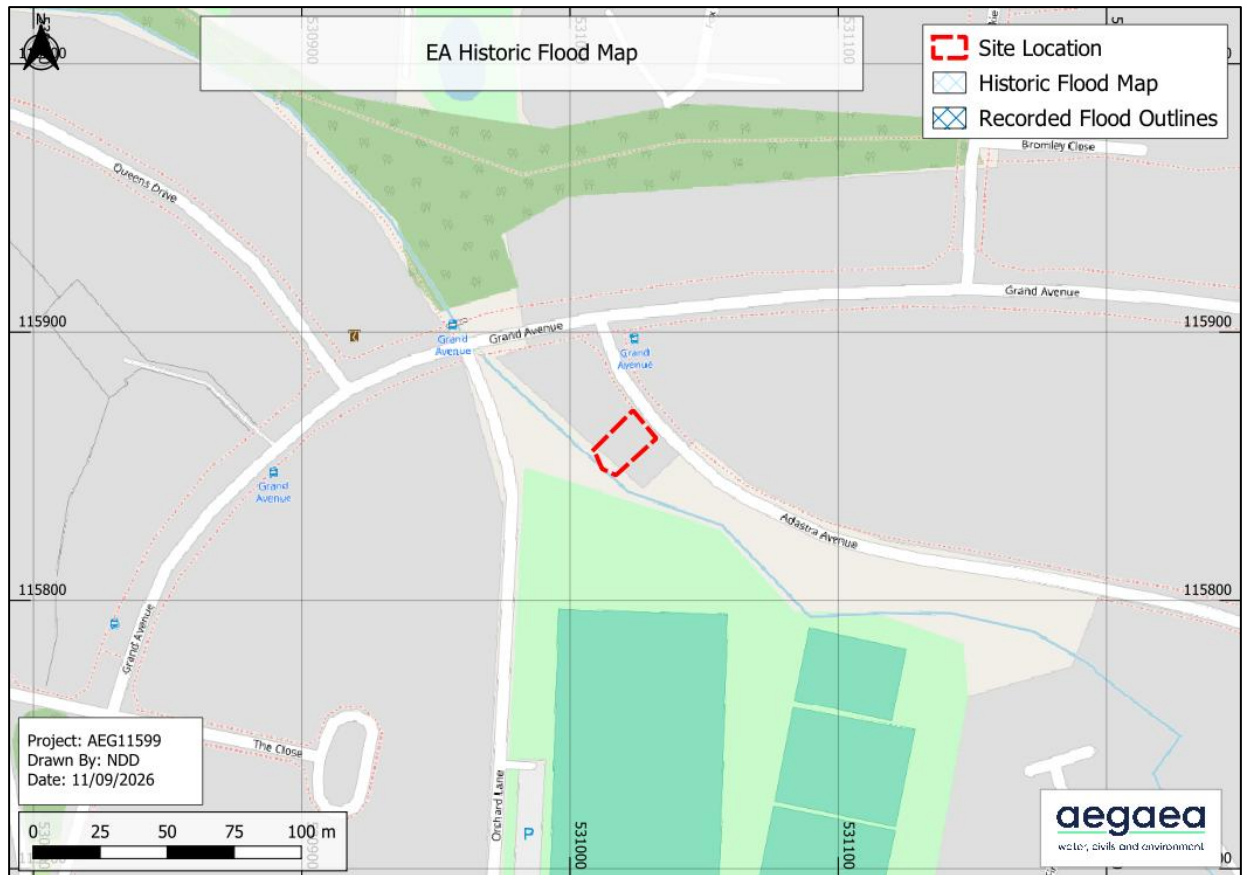


Figure 4: EA Recorded and Historical Flood Outlines (Base mapping © OpenStreetMap contributors.)

Flood Defences

- 4.10. According to the EA Spatial Flood Defences (AIMS) dataset, no EA-registered flood defence lies within 1,000m of the site; the site is therefore not shown as benefiting from a formal defence. The modelled defended and undefended extents at the site are consistent, and the assessment below is undertaken on an undefended basis.

Hassocks Modelling and Mapping Study (2013)

- 4.11. Aegaea hold the Environment Agency's Hassocks Modelling and Mapping Study (2013), an ISIS TUFLOW model covering the site and the adjoining watercourse. The model provides maximum water levels at 1m resolution for a full range of return periods, and its outputs have been sampled directly within the redline boundary and over the proposed extension footprint. Modelled flood levels have been compared against the estimated finished floor level of 42.12m AOD derived in Section 1. The modelled flood outlines can be found in Figure 5 below. Note, the 1 in 30 year, 1 in 100 year, and 1 in 100 year (20%CC) outlines are identical at the site hence only the 1 in 30 year and 1 in 1000 year are shown.

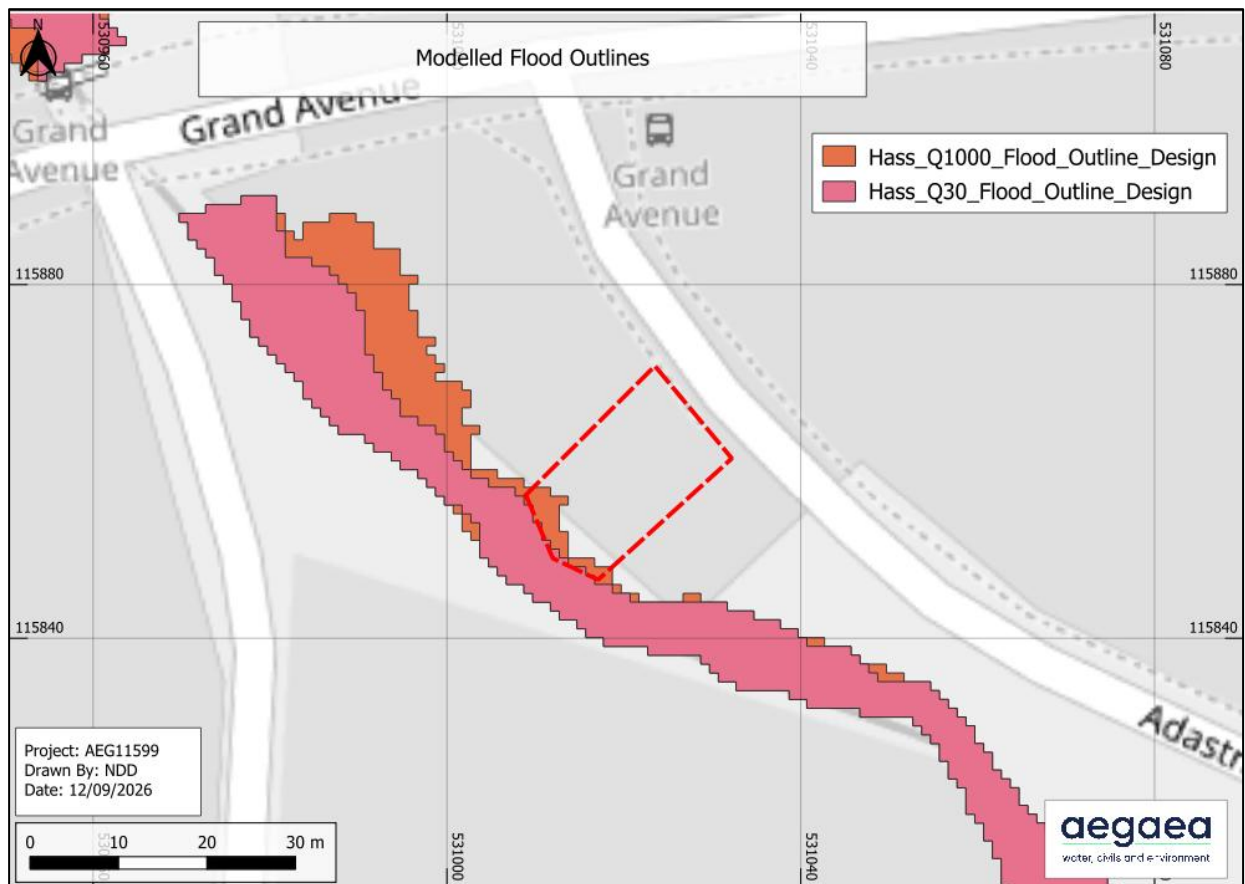


Figure 5: EA Modelled Flood Outlines – Hassocks (2013) Model (Base mapping © OpenStreetMap contributors.)

- 4.12. Climate change has been assessed using the EA peak river flow climate change allowances by management catchment for the Adur and Ouse catchment. For the More Vulnerable residential use the Central allowance of 37% applies, governing epoch 2080s; the Higher

Central allowance is 55%. The Hassocks 2013 model only includes a +20% allowance for climate change. A +37% level has been interpolated using the present day 1 in 100 year and the 1 in 100 year +CC (20%) level.

Table 2: Modelled fluvial flood levels at the site against the estimated finished floor level

Scenario	Modelled level (m AOD)	Est. FFL (m AOD)	Freeboard
1 in 30 year	40.41	42.12	+1.71m (FFL above flood level)
1 in 100 year	40.54	42.12	+1.58m (FFL above flood level)
1 in 100 year plus 20% climate change	40.64	42.12	+1.48m (FFL above flood level)
1 in 100 year plus 37% climate change (interpolated)	40.73	42.12	+1.39m (FFL above flood level)
1 in 1000 year	41.26	42.12	+0.86m (FFL above flood level)

- 4.13. As set out in Table 2, in every modelled scenario, including the 1 in 1000 year event, both the existing dwelling footprint and the proposed extension footprint are dry. Modelled flooding within the redline boundary is confined to approximately 2% of the site at the rear in events up to and including the 1 in 100 year plus climate change event, rising to approximately 7% in the 1 in 1000 year event.

Fluvial and Tidal Risk Summary

- 4.14. According to the Environment Agency Hassocks Modelling and Mapping Study (2013) and the Flood Map for Planning, the risk of fluvial flooding the proposed development is considered to be low.

Canals

- 4.15. 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.

- 4.16. According to Canal & River Trust mapping and a search of mapped waterways, there are no canals within 750m of the site; the nearest mapped canal lies more than 8km away.
- 4.17. The risk of flooding to this site from canals is considered to be low.

Pluvial (Surface Water)

- 4.18. 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.

EA Flood Map for Planning Service – Surface Water

- 4.19. The EA Flood Map for Planning Service in relation to Surface Water was published in May 2026, superseding the previous Risk of Flooding from Surface Water (RoFSW) mapping. The Surface Water Spatial Planning Extents and Depths (May 2026) have been used within this FRA to assess the surface water flood risk to the site and proposed development.
- 4.20. These datasets show the extent of land at risk of flooding from surface water to a defined annual exceedance probability (AEP) or chance of flooding each year, taking into account the possible effects of climate change. These datasets include the following scenarios:
- 0.1% AEP (1 in 1000); 1% AEP (1 in 100) and 3.3% AEP (1 in 30)
- 4.21. Alongside the following depth bands:
- Up to 150mm; 150 – 300mm; 300 – 600mm; 600 – 900mm; 900 – 1200mm; 1200 – 2300mm and over 2300mm.
- 4.22. Alongside the present day scenarios, climate change scenarios have been produced by the Environment Agency to indicate the predicted impacts of climate change on future flood risk. These published scenarios incorporate an uplift based on the latest UK Climate Projections (UKCP18) from the Met Office, using the Representative Concentration Pathway (RCP) 8.5, applying the 'Upper End' allowance for the 2070s epoch (2061-2125); the EA have chosen long-term epochs appropriate to support long-term planning and development decisions.

- 4.23. Under the climate change scenarios the site falls within all mapped surface water extent, with the mapped flow route running along the south-western boundary and the adjoining ordinary watercourse (Figure 6).

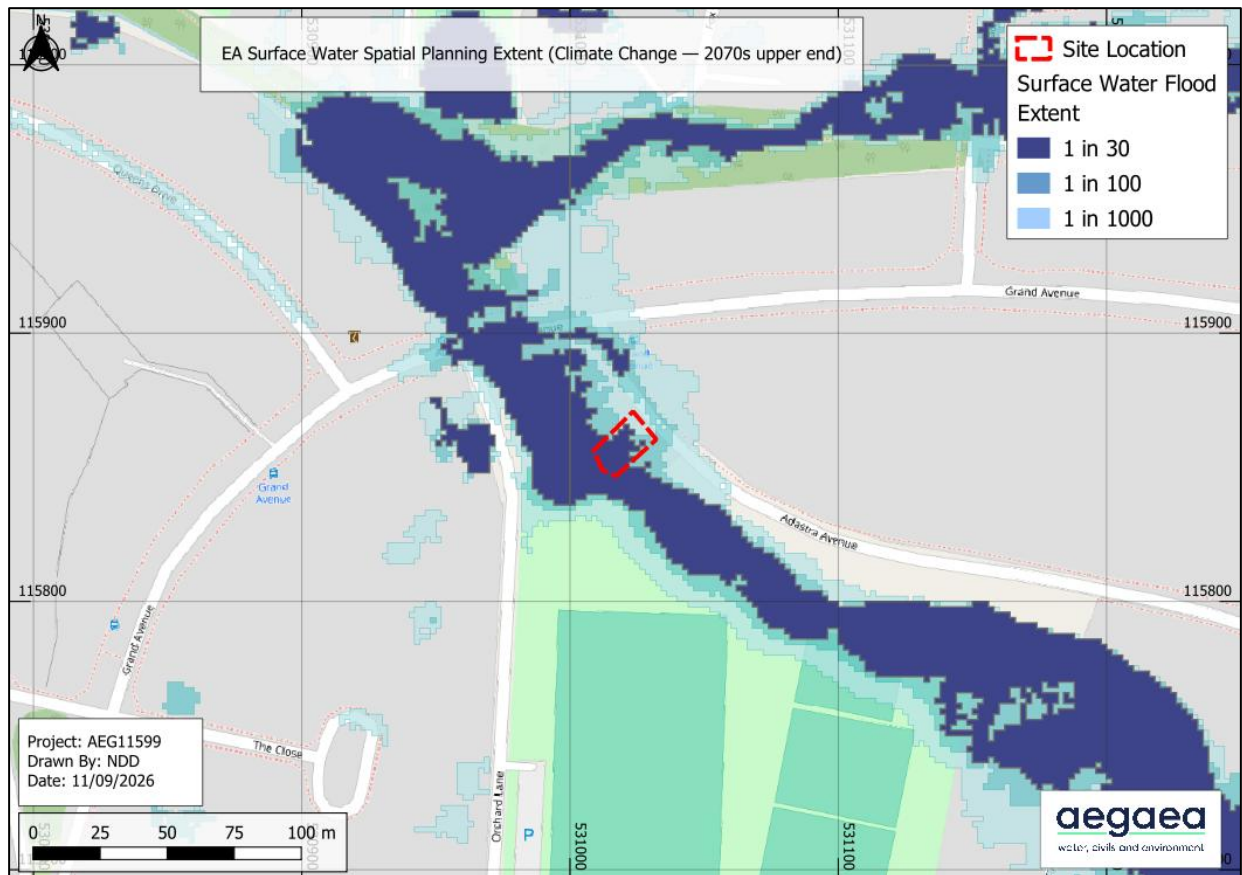


Figure 6: EA Surface Water Spatial Planning Extents, Climate Change (May 2026) (Aegaea ATLAS; base mapping © OpenStreetMap contributors.)

Surface Water Data Analysis

- 4.24. In the present day the proposed extension lies outside the 1 in 30 year surface water outline (Figure 7) and as such is considered to be outside Flood Zone 3b.

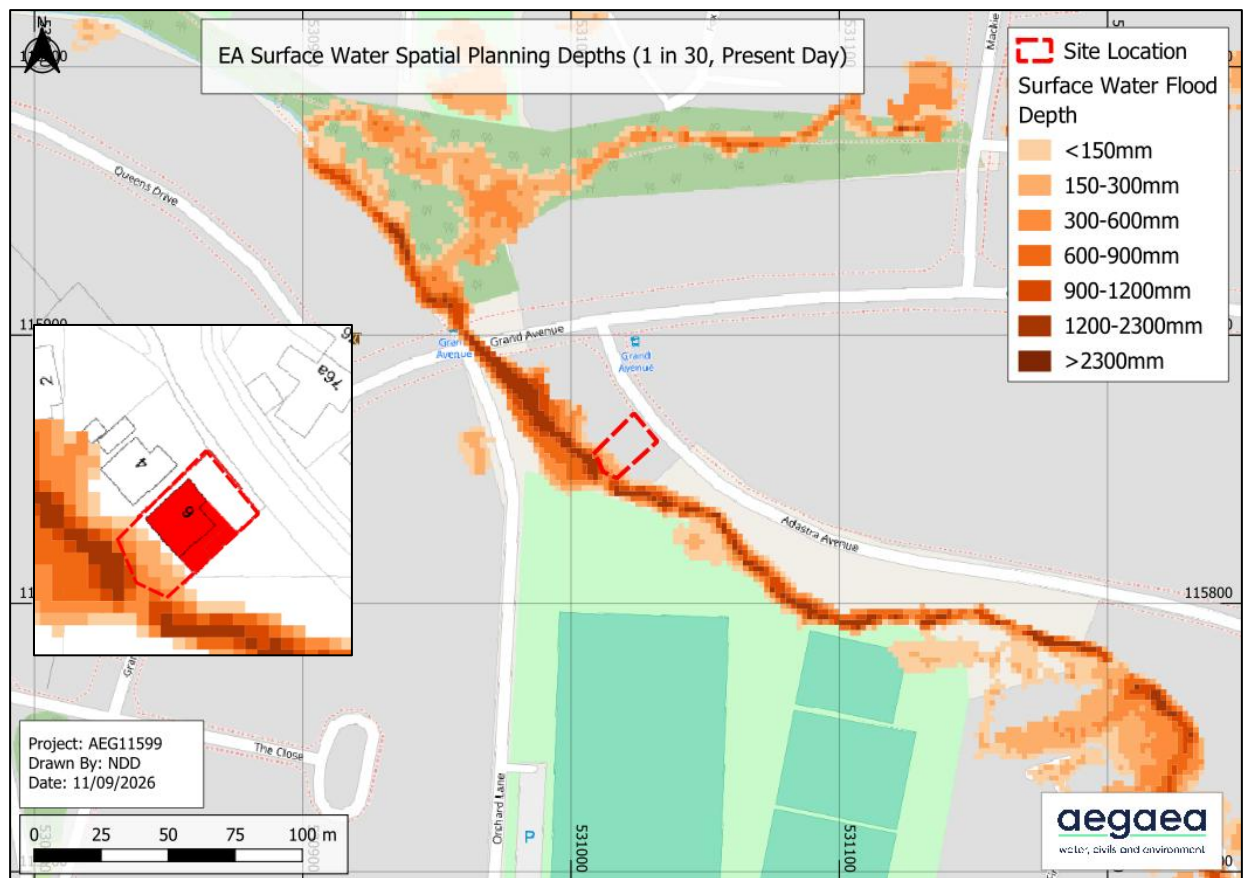


Figure 7: EA Surface Water Spatial Planning Depths, 1 in 30 year Present Day (May 2026) (Aegaea ATLAS; base mapping © OpenStreetMap contributors.)

Climate Change Scenario

- 4.25. The 1 in 100 year plus climate change scenario is the design event. Under this scenario, the mapped depth band of 300mm to 600mm covers approximately 42% of the redline boundary and reaches the site boundary, and covers approximately 72% of the proposed extension footprint (Figure 8).

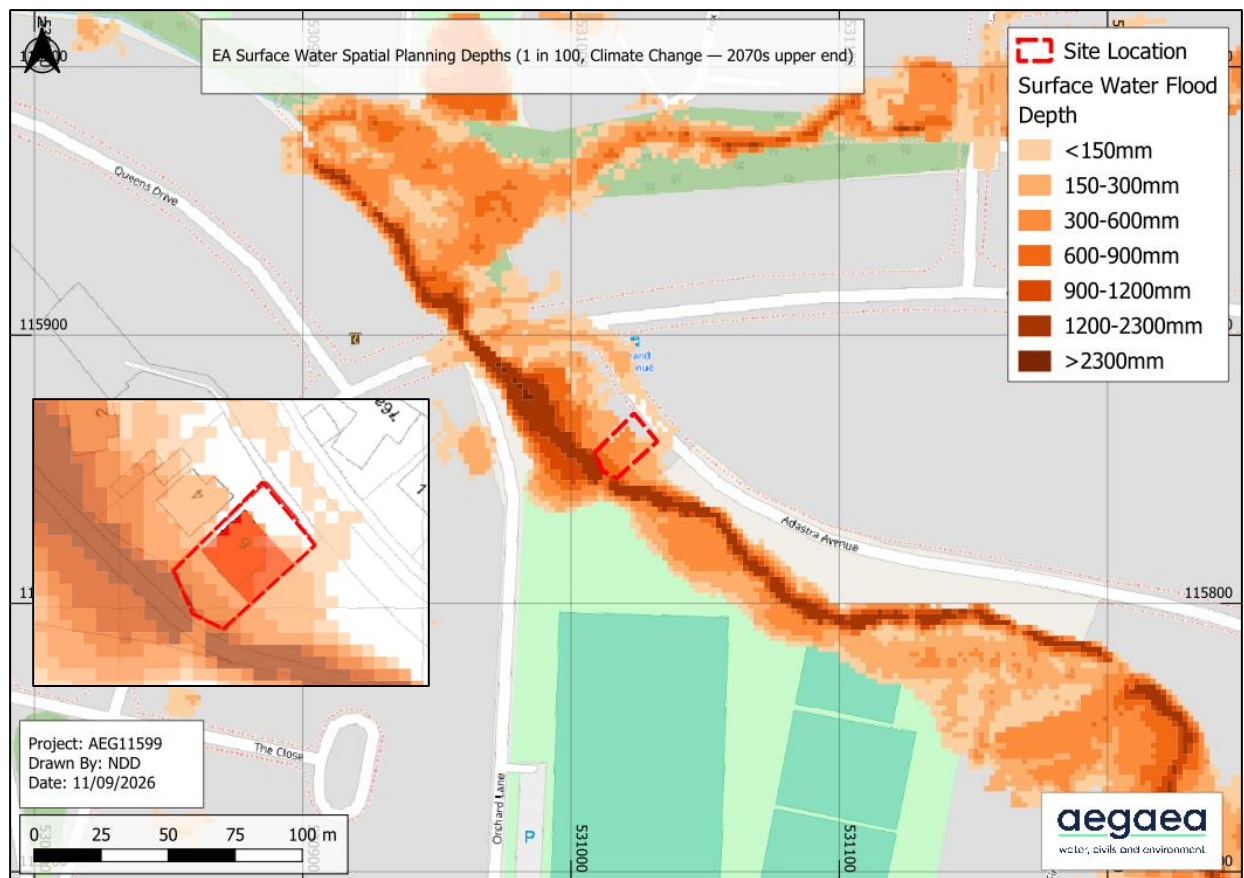


Figure 8: EA Surface Water Spatial Planning Depths, 1 in 100 year plus Climate Change (May 2026) (Base mapping © OpenStreetMap contributors.)

Mid Sussex Requirements

- 4.26. The Mid Sussex Strategic Flood Risk Assessment Level 1 (2024) identifies surface water as a significant source of flood risk within Hassocks and restricts new built development within the 1 in 30 year outline from either fluvial or surface water sources. The proposed extension lies outside both the 1 in 30 year fluvial extent and the 1 in 30 year surface water extent, and so accords with that restriction.

Pluvial Risk Summary

- 4.27. The proposed extension is not within the mapped surface water extent in the present day 1 in 30 year event. In the 1 in 100 year plus climate change design event the mapped depth band of 300mm to 600mm covers approximately 72% of the proposed extension footprint. As such,

the risk of surface water flooding to the proposed development is considered to be low in the present day and moderate under the climate change scenario, and given the proposal is for an extension, there is no scope of raise FFLs, thus is managed through the resilience measures set out in Section 5.

Reservoirs

- 4.28. Large waterbodies or reservoirs that have walls built above the surrounding ground level pose a risk of flooding. Walls could fail due to old age, accident, or because excess flood water has been added to the reservoir. Although a breach is unlikely the consequences would be significant, leading to rapid inundation of the downstream floodplain.
- 4.29. The Environment Agency's Risk of Flooding from Reservoirs dataset has been reviewed. The site is not within either the modelled reservoir Wet Day or Dry Day inundation extent (Figure 9). As such, the risk to the site from reservoir flooding is considered to be low.

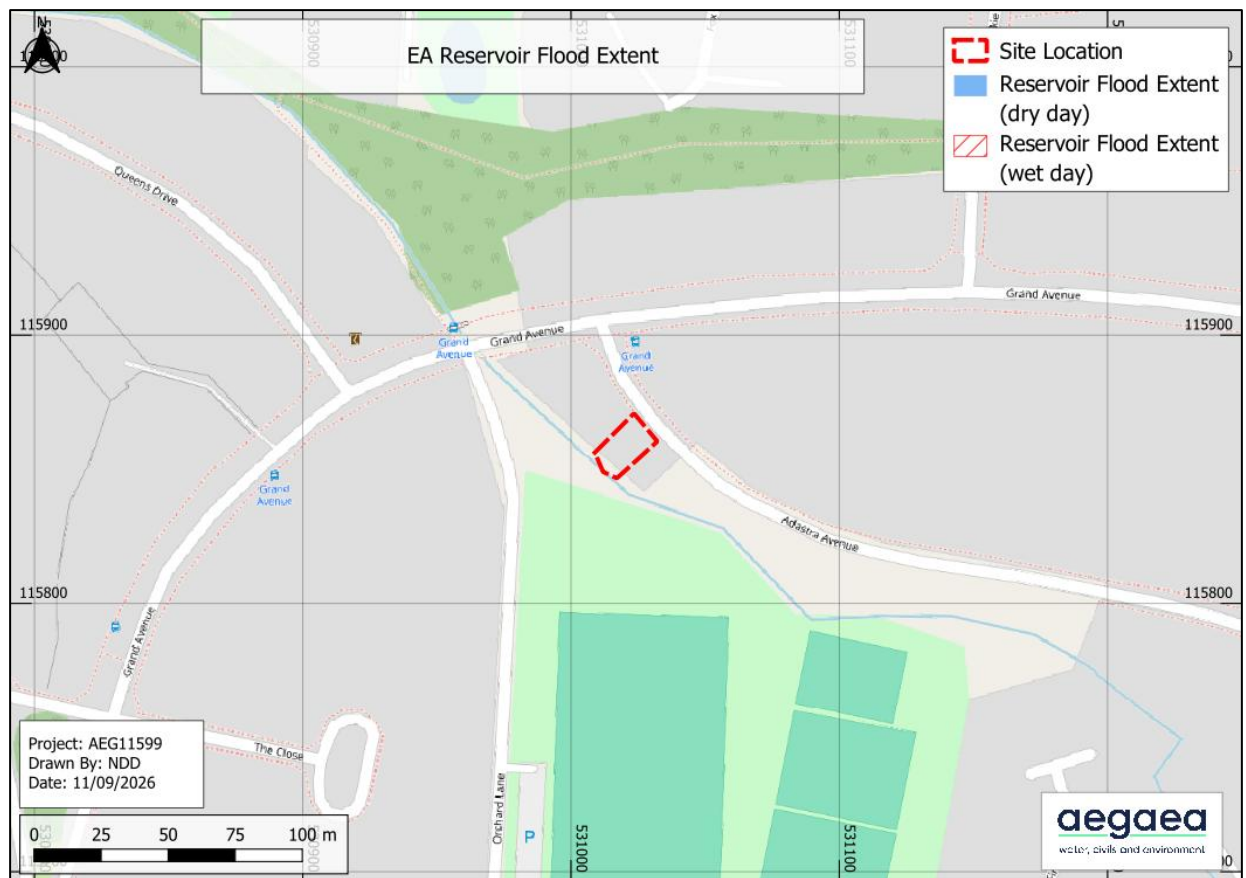


Figure 9: EA Risk of Flooding from Reservoirs (Base mapping © OpenStreetMap contributors.)

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 recorded at the site. The bedrock geology is mapped as the Lower Greensand Group, comprising silty sandstone.
- 4.32. No publicly available BGS borehole records are held within 250m of the site, so no local record of groundwater levels is available.
- 4.33. According to the 2024 SFRA, groundwater flooding in Hassocks is associated with the underlying permeable geology of the South Downs, where prolonged periods of rainfall can lead to elevated groundwater levels and localised emergence at the surface. While more

localised and less predictable than other sources, groundwater flooding is recognised as a contributing factor to flood risk within the area.

- 4.34. The 2024 SFRA does not identify or describe any specific historic groundwater flooding events within the study area. However, the earlier 2015 Mid Sussex SFRA has been reviewed, which indicates that approximately 0.164km² of the district is affected by groundwater flooding, representing around 0.049% of the total area, suggesting that the spatial extent of groundwater flood risk across the district is negligible.
- 4.35. Furthermore, the development proposals do not include any proposed basements, which are more vulnerable to groundwater ingress.
- 4.36. Considering the information above, and given that the development proposals do not include a basement or any below-ground habitable accommodation, the risk from groundwater flooding to the development is considered to be low.

Sewers

- 4.37. Foul or surface water sewers can be a cause of flooding if the drainage network becomes overwhelmed, either by blockage or due to local development beyond the designed capabilities of the drainage system.
- 4.38. The 2024 Strategic Flood Risk Assessment (SFRA) identifies sewer flooding as a potential source of flood risk based on records provided by sewerage undertakers; however, no specific historic sewer flooding events are described within Hassocks.
- 4.39. The SFRA presents Southern Water historic sewer flooding records (DG5 data) as external and internal incidents, and the site is not located within an area identified as having been impacted by either external or internal sewer flooding (Figure 10).

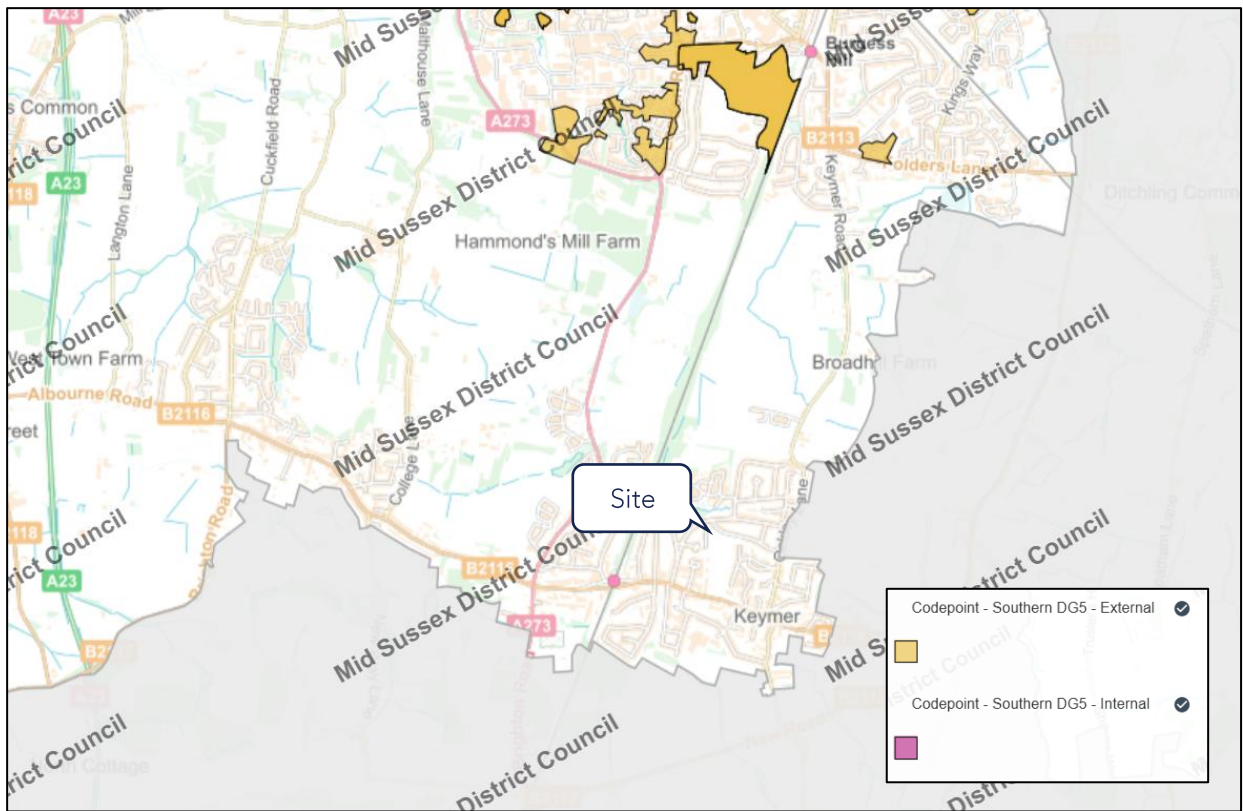


Figure 10: Mid Sussex SFRA (2024) – Southern Water DG5 records

- 4.40. Based on the information reviewed, the proposed site is considered to be at low risk of flooding from sewers.

5. Flood Risk Mitigation

- 5.1. The assessment in Section 4 identifies surface water flooding under the climate change scenario as the only source requiring mitigation at this site.

Surface Water

- 5.2. The mapped surface water depth band of 300mm to 600mm covers approximately 72% of the proposed extension footprint in the design event. Flood resilience measures are therefore recommended to be incorporated into the extension, so that in the event of a flood it could be quickly brought back into use without significant refurbishment. Such measures include, but are not limited to the following, where possible:

- *Raised wiring and power outlets at ground floor level should be raised as high as possible above FFLs of the proposed development.*
- *Flood doors should be utilised at all new ground floor doors.*
- *Units within the proposed development to be raised on legs above plinth and not sit directly onto the flooring.*
- *Non-return valves should be installed around the property. Maintenance of these valves is important to ensure their continued effectiveness so should be maintained in line with manufactures recommendations*
- *Any external cladding and internal finishes should be water-resistant; sacrificial linings can be used where appropriate to minimize flood damage.*
- *Insulation to be low adsorption board or semi rigid self-draining wool bats.*
- *Ground floor construction and finishes should incorporate flood-resilient materials that can be easily cleaned and dried following a flood event, such as solid floors with water-resistant finishes (e.g. tiles) and removable floor coverings, together with water-resistant or sacrificial skirting boards.*

Increase to Flood Risk Elsewhere

5.3. 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.*

5.4. As such, the proposed development in isolation should have a negligible impact on flood risk elsewhere.

5.5. Small scale SuDS, such as rainwater planters, can be incorporated to provide betterment, with overflow to the existing arrangement.

Access / Egress and Flood Warnings

5.6. The proposed development comprises a minor development under the NPPF and associated Planning Practice Guidance, as it involves an extension to an existing residential property without an increase to FFLs. As a result, existing access and egress arrangements will remain unchanged.

5.7. As per Figure 8, in the 1 in 100 year +CC event, pluvial depths on Adastra Avenue are modelled to be below 150mm; as such safe access/ egress could be sought travelling southeast.

Flood Warnings

5.8. The occupant of the dwelling should monitor Met Office Weather Warnings to be prepared for extreme weather events

5.9. The Met Office issues weather warnings up to 5 days in advance, through the national Severe Weather Warning Service, when severe weather has the potential to bring impacts to the UK. It

is also possible to stay up to date with weather warnings through the Met Office app (available on both Apple or Android devices), social media e.g. X and Facebook or email alerts.

6. Conclusions

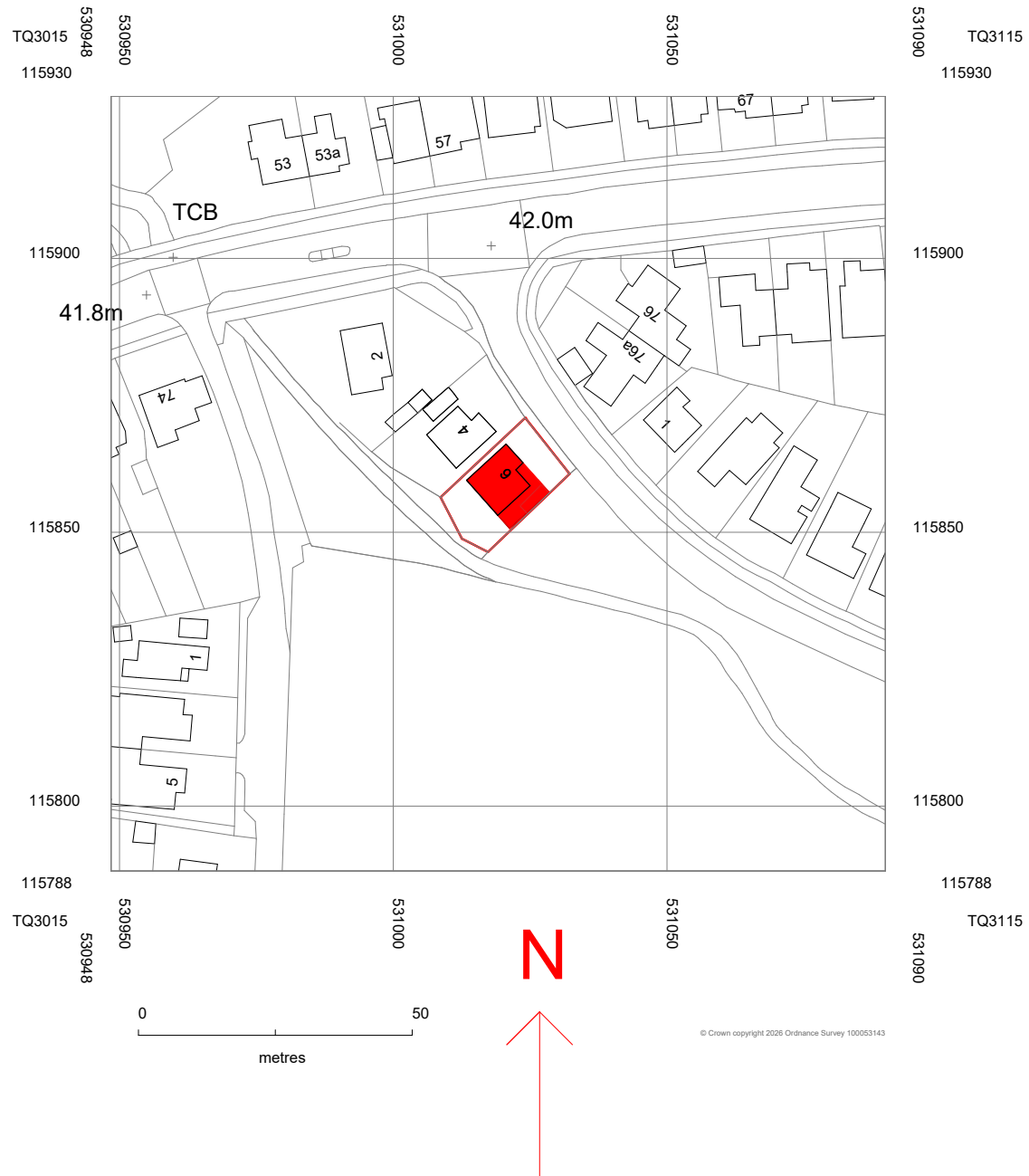
- 6.1. This FRA has been undertaken with reference to the requirements of NPPF and Planning Practice Guidance with respect to the development at 6 Adastra Avenue, Hassocks, West Sussex, BN6 8DL. It has been written to support a householder planning application and prepared with due consideration to the nature of the proposed side and rear extension.
- 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 existing dwelling and the proposed extension lie within Flood Zone 1 and are dry in every modelled event to the 1 in 1000 year, with 1.48m of freeboard above the design flood level.
Surface Water	The proposed extension lies outside the 1 in 30 year and present day 1 in 100 year extents. In the design event, depths of 300mm to 600mm are mapped over approximately 72% of the proposed extension footprint. The risk is considered low in the present day and moderate under the climate change scenario, managed through flood resilience measures.
Tidal / Reservoirs / Groundwater / Sewers / Canals	The site is considered to be at low risk from other sources.

- 6.3. The FRA supports the householder 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 householder planning application to satisfy the requirements under NPPF.

Appendix A – Development Proposals

Location Plan - 1-1250 - Extension



Client - Iorna Newbury

Address - 6 Adastra Ave
Hassocks
BN6 8DL



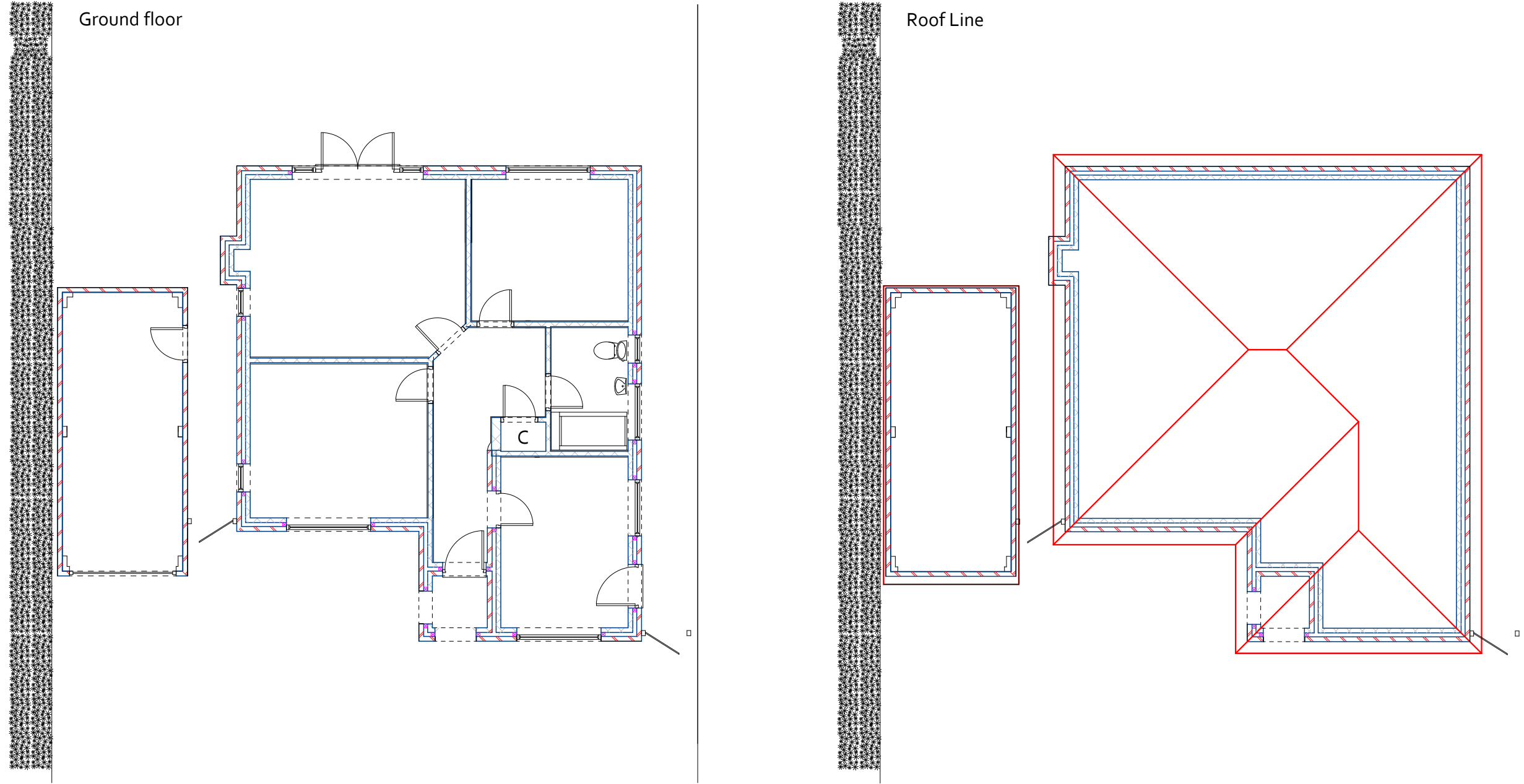
Planning Drawings

1. All Dimensions In Millimetres Unless Otherwise Stated
2. New Roof Tiles to match existing in type ,colour & face
3. New facing brickwork to match existing
4. The requirements of the party wall act should be observed
finished floor levels to match existing
- 5.No part of the existing extension ,including Foundations and gutters,
should encroach the property boundary

Existing Layout

Scale 1 : 100 

2000mm

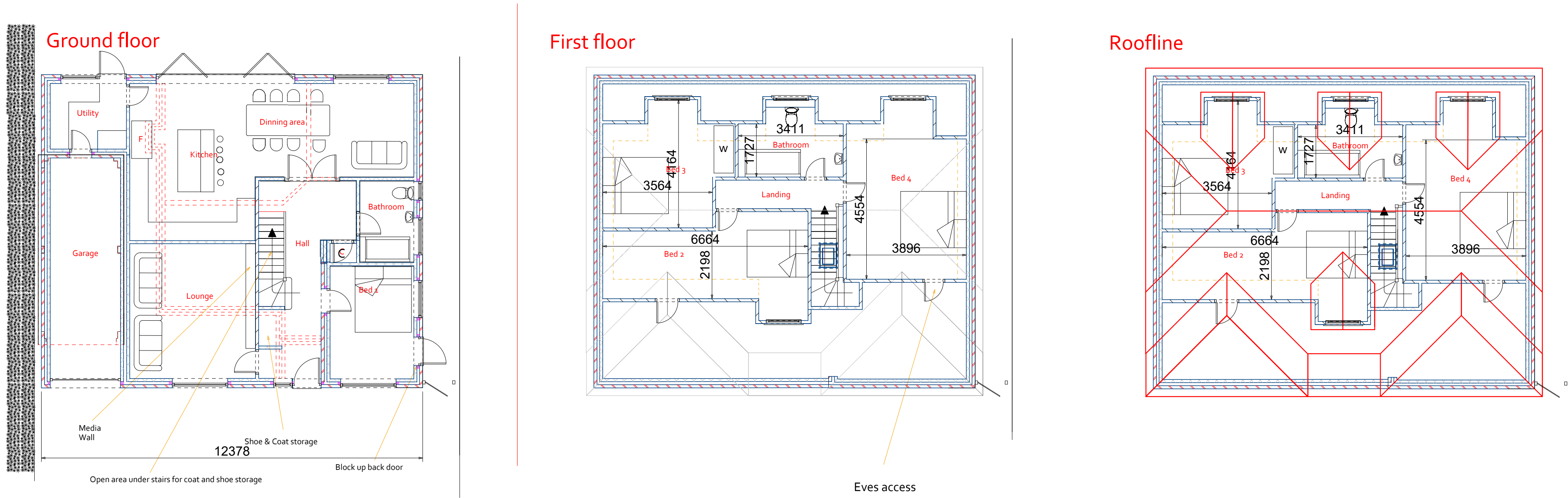


Proposed Layout

Scale 1 : 100

A horizontal scale bar with a double-headed arrow at the right end. Above the bar, the text "2000mm" is written. Below the bar, there are two tick marks: one at the left end and one at the right end.

2000mm



THIS IS NOT A WORKING DRAWING.

The information provided is either for client information, planning consideration or shows compliance under the building regulations. It does not purport to provide all the information necessary to carry out construction works and could be subject to variation in detail.

ALL MEASUREMENTS TO BE CHECKED ON SITE NOTE. FITMENT SUPPLIERS SHOULD TAKE SITE MEASUREMENTS

Prior to commencement of work on site, dimensions and particulars should be checked and any discrepancies reported immediately to Jones projects Architectural **DO NOT SCALE.**

Client - lorna newbury

Address - 6 Adastra Ave
Hassocks
BN6 8DL

Page Size - A1

2000mm

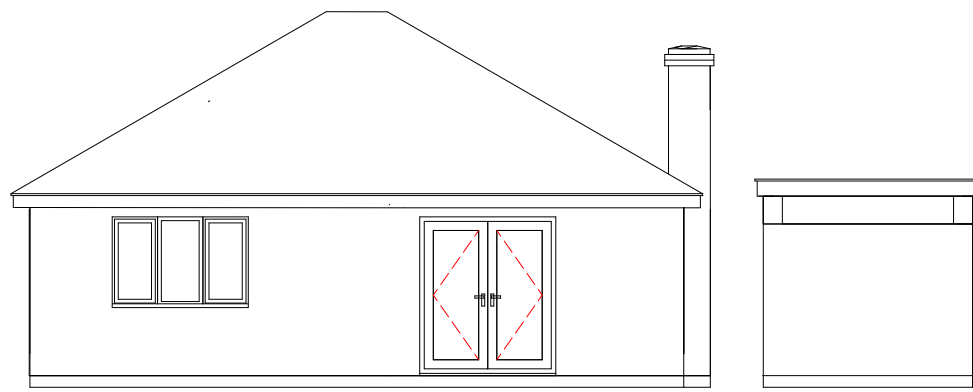
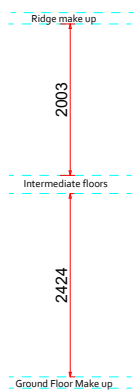
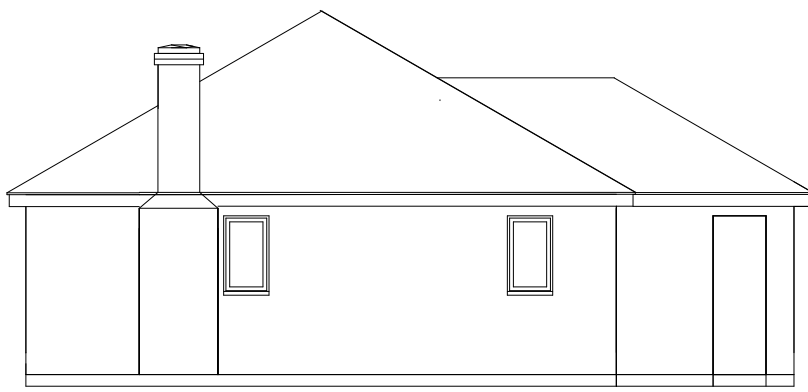
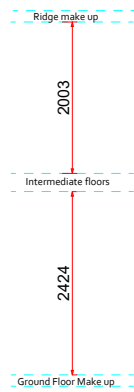


Planning Drawings

Elevations Existing

Scale 1 : 100 2000mm

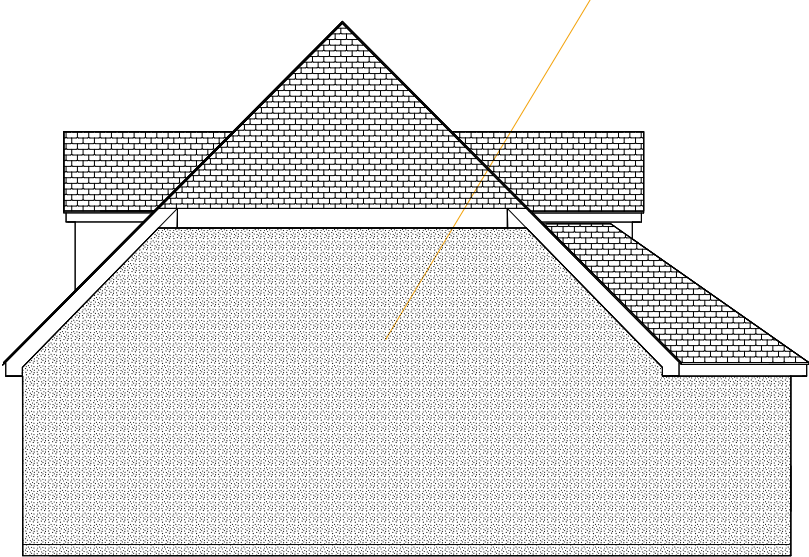
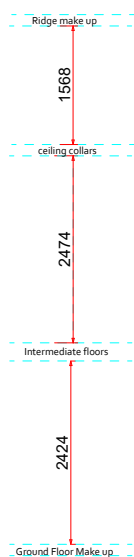
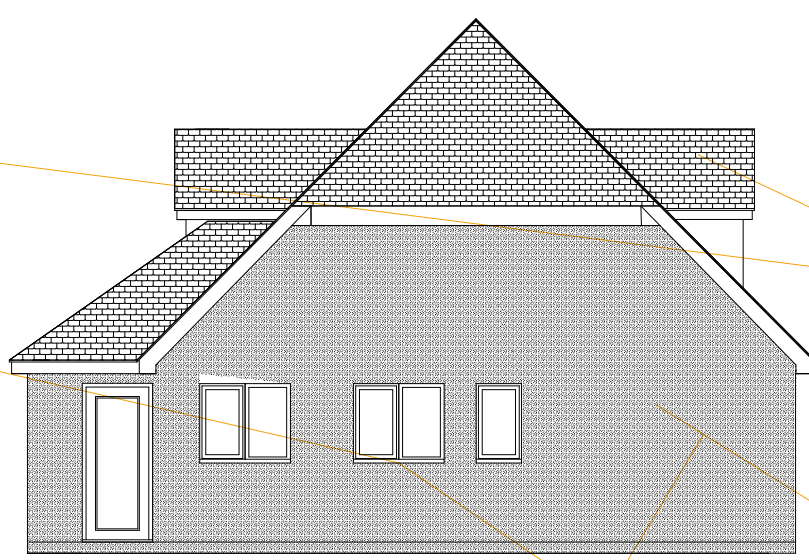
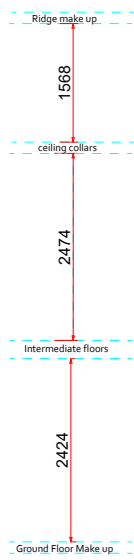
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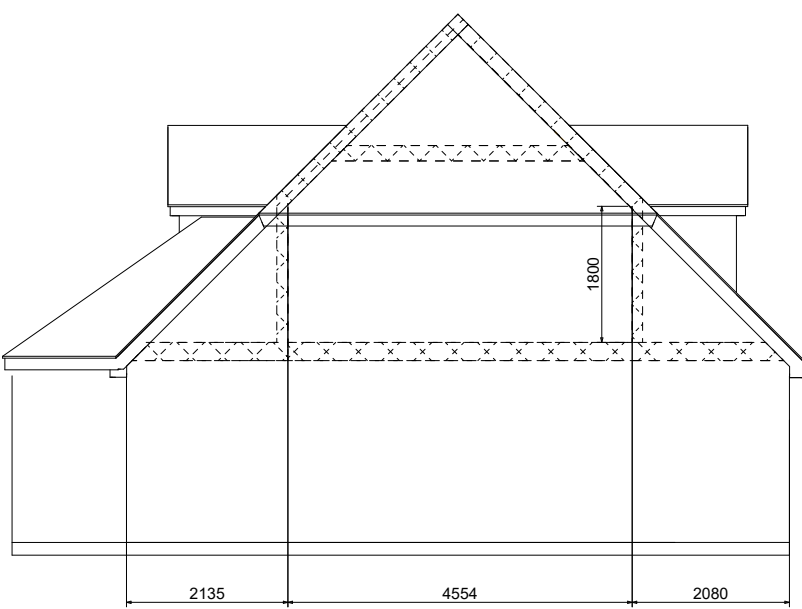
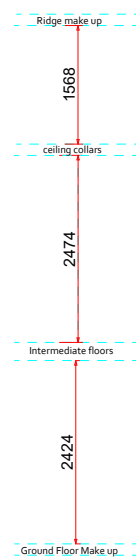
Photographic Survey

Elevations Proposed

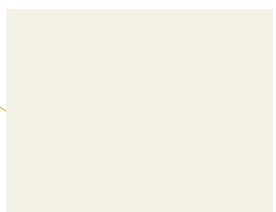
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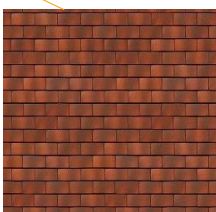
Section Drawing - 1st floor feasibility



Material Schedule



White render



Red / brown pan tile



Windows / doors

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The information provided is either for client information, planning consideration or shows compliance under the building regulations. It does not purport to provide all the information necessary to carry out construction works and could be subject to variation in detail.

ALL MEASUREMENTS TO BE CHECKED ON SITE NOTE. FITMENT SUPPLIERS SHOULD TAKE SITE MEASUREMENTS

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Client - lorna newbury

Address - 6 Adastra Ave
Hassocks
BN6 8DL

Page Size - A1

2000mm

