



BRIGHT PLAN CIVILS

**FISCAL HOUSE (PHASE 3), 2 HAVANT
ROAD, EMSWORTH PO10 7JE**

**CONVERSION & (FIRST FLOOR)
EXTENSION OF EXISTING OFFICES TO
RESIDENTIAL ACCOMMODATION**

Flood Risk Assessment & Drainage Strategy
Report

Prepared on Behalf of

Paul & Elaine Munday Property Rentals

D2253/FRA2.0

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1 INTRODUCTION

1.1 Background

- 1.1.1 Bright Plan Civils is instructed by Paul & Elaine Munday Property Rentals to prepare a Flood Risk Assessment & Preliminary Drainage Strategy Report to support a planning application for the Conversion & (First Floor) Extension of Existing Offices to Residential Accommodation at Fiscal House (Phase 3), 2 Havant Road, Emsworth PO10 7JE, Emsworth.
- 1.1.2 This report has been undertaken in accordance with National Planning Policy Framework (NPPF) and The Planning Practice Guidance on the use of SuDS for achieving sustainable development.
- 1.1.3 The proposed development will involve the conversion of an existing office building into a residential property, with no increase in ground floor footprint and a first floor extension above the existing ground floor footprint - as demonstrated within the preliminary site layout, contained within **Appendix A** of this report.
- 1.1.4 This report follows the principles of the previous flood risk assessment for approved application APP/21/01120, which also proposed a change of use from offices to residential development at this site.
- 1.1.5 In preparing this report, Bright Plan Civils has referred to the following documents and information:
- Environment Agency Product 4 Response
 - Environment Agency Flood Maps for Planning
 - Long Term Flood Risk Information; Flood Risk Maps
 - Southern Water and Local Authority Drainage Records
 - Local Planning Authority and Lead Local Flood Authority Strategic Flood Risk Assessments
 - British Geological Survey & Records
- 1.1.6 This document has been prepared to propose assess drainage constraints and propose a drainage strategy that is appropriate for the design life of the development, without causing offsite impacts from runoff in a design event.
- 1.1.7 This report has been prepared for the benefit of the named Client only.

1.2 Site Location and Description

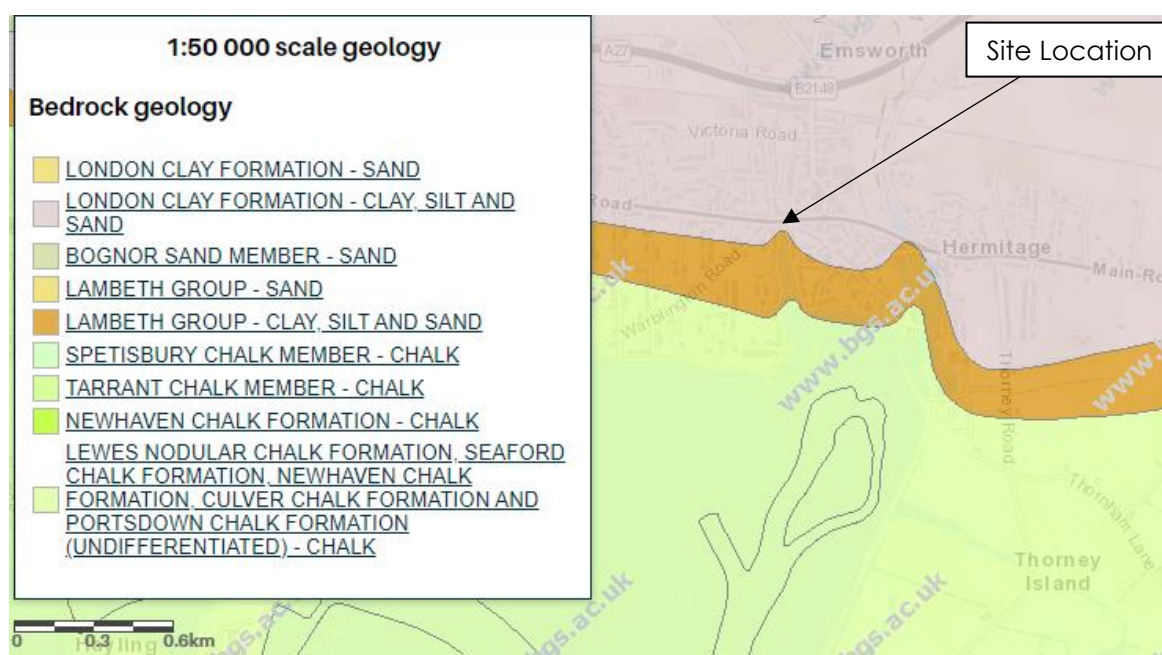
- 1.2.1 The property is in a residential area of Emsworth, within the Borough of Havant. It is bordered by residential Warblington Road to the west, approved residential property conversion (APP/21/01120) to the north, residential property to the south, and a church to the east.
- 1.2.2 A topographical survey of the site has been undertaken and provided by the client. It is included in **Appendix B** of this report. The topographical survey shows that the site levels fall from 3.87mAOD in the south west corner of the site to the north with a low point of 3.35mAOD within the courtyard.
- 1.2.3 The existing site buildings are drained by gully and pipe drainage, presumed to connect into the existing public surface water drainage system.
- 1.2.4 The nearest watercourse is the Main River (unknown name) that discharges into Slipper Mill Pond

opposite Bath Road from the site (approx. 20 metres from the site boundary). In addition, the River Ems which runs south into coastal Chichester Harbour approximately 275m east of the site.

- 1.2.5 The nearest surface water feature is Slipper Mill Pond which runs adjacent to the site, approximately 20m to the east.
- 1.2.6 The existing site has a total area of approximately 675m (0.068 Ha), and consists of entirely hardstanding impermeable areas – as demonstrated in the topographic survey.

1.3 Ground Conditions

- 1.3.1 In the absence of a site-specific geotechnical investigation, reference has been made to the British Geological Survey (BGS) website.



- 1.3.2 The BGS geology viewer states that the bedrock geology is likely to consist of 'London Clay Formation – Clay, Silt and Sand', as seen in **Figure 1**.

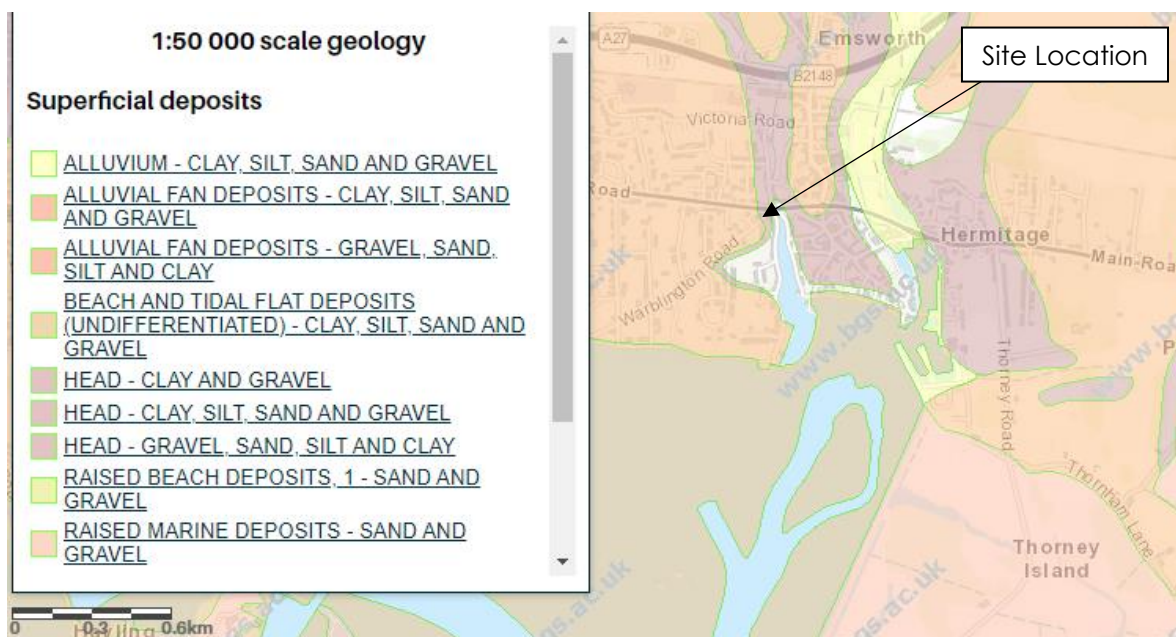


Figure 2. BGS website superficial deposits

1.3.3 Superficial Deposits are recorded as 'Head – Clay and Gravel', as seen in **Figure 2**.

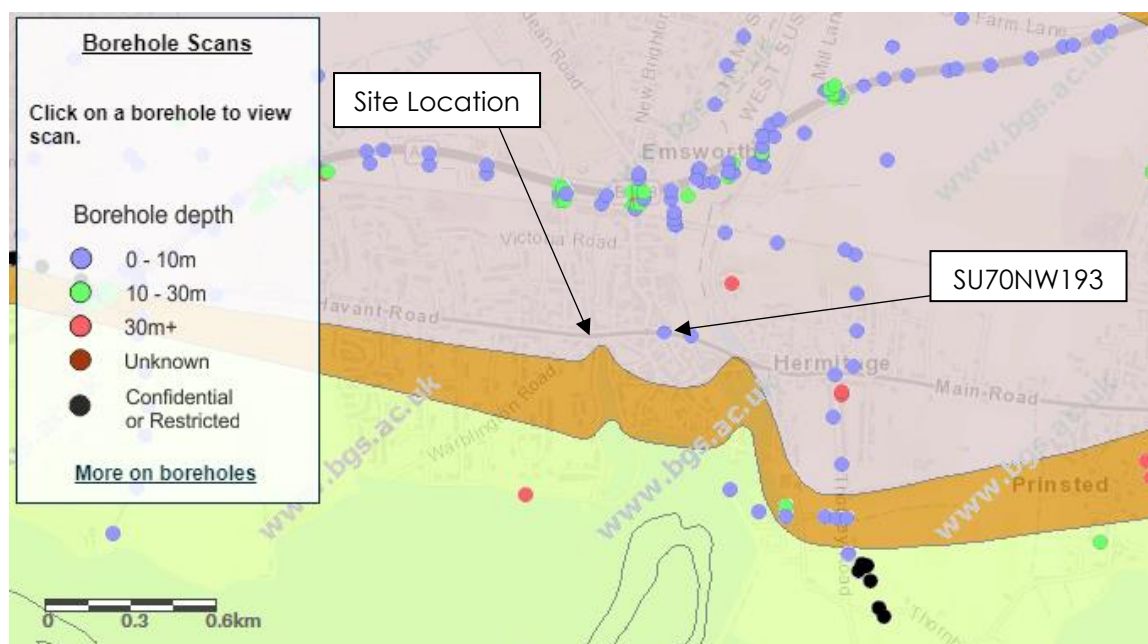


Figure 3. BGS website borehole locations

- 1.3.4 Historic borehole records from the Single Onshore Boreholes Index (SOBI) on the BGS website have also been reviewed in the absence of a site-specific geotechnical investigation, as depicted in **Figure 3**.
- 1.3.5 A borehole at the Emsworth New Bridge, 270m east of the site was assessed in comparison to the site, as seen in **Figure 3**. This borehole has similar geotechnical strata according to the BGS online mapping.
- 1.3.6 The borehole has a recorded depth of 5.9m and confirms the presence of 'stiff brown CLAY' to a depth of 4.0metres, underlain by further layers of MUDSTONE and CLAY.
- 1.3.7 A copy of the BGS records reviewed can be found within **Appendix C** of this report.

1.4 Groundwater

- 1.4.1 The recorded BGS borehole at Emsworth New Bridge recorded groundwater at 1.2mbgl.
- 1.4.2 The Urban South Hampshire PUSH SFRA indicates that areas at risk of groundwater flooding are north of the borough where highly permeable geology meets lower permeability geology and is reflected by historical incident records. The PUSH SFRA Flood Mapping indicated no recorded groundwater flood incidents in the vicinity of the site. Extracts from the SFRA can be found within **Appendix D**.
- 1.4.3 Mapping managed by MAGIC (magic.defra.gov.uk) provides geographic information concerning the natural environment from across government. This mapping tool has been referred to in order to confirm whether the site is located within either any groundwater source protection zones or groundwater vulnerability zones.
- 1.4.4 The site is situated within an 'Unproductive' Aquifer for Bedrock stratum and a 'Secondary A' Aquifer for Superficial Drift stratum, as seen in **Figure 4**. This refers to drift deposits only that exhibit variable permeability and may provide groundwater storage or supply at a local or strategic level.

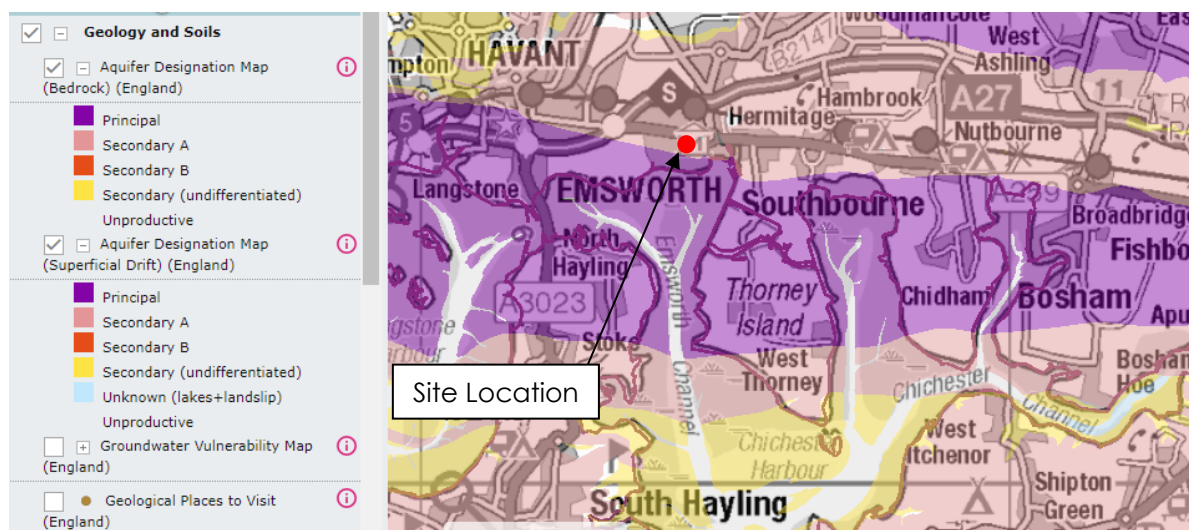


Figure 4. DEFRA Aquifer Designation Map

- 1.4.5 The Groundwater Vulnerability Map (**Figure 5**) confirms that the site falls within a 'Medium-High' and 'Medium-Low' groundwater vulnerability zone with Soluble Rock Risk.

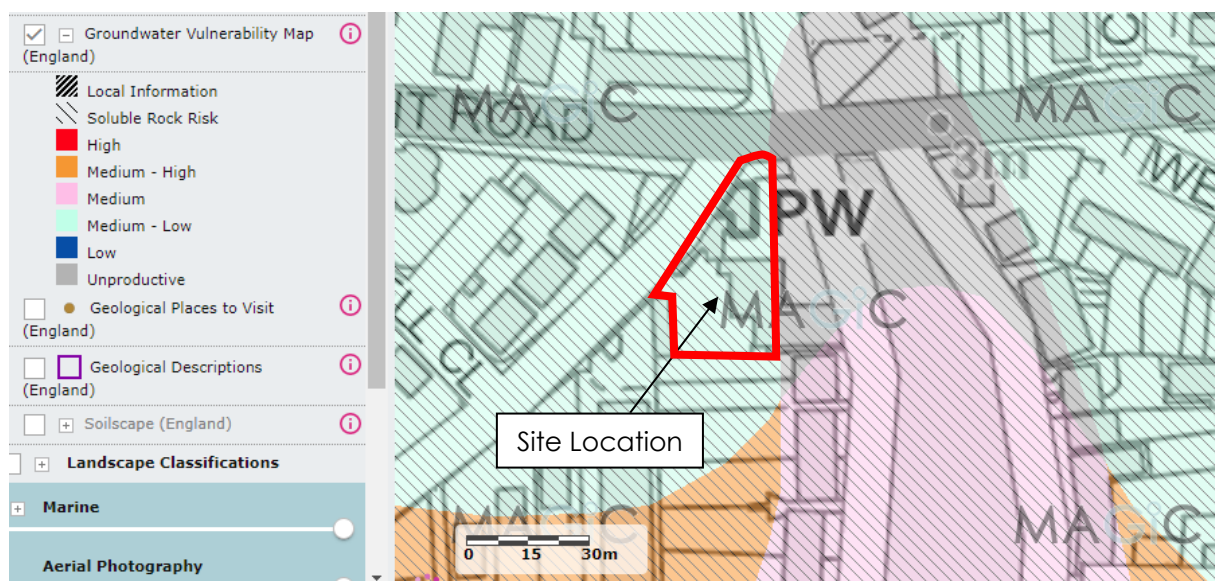


Figure 5. DEFRA Groundwater Vulnerability Map

1.4.6 The site is not indicated as within or in the vicinity of any Drinking Water Safeguard Zone or a Source Protection Zone.

1.5 Existing Drainage

1.5.1 The local Water Authority is Southern Water, who provide sewerage services within the area. Public sewer records have been obtained from Southern Water, as contained within this report in **Appendix E**.

1.5.2 Surface Water:

- (a) The Southern Water public sewer records (**Appendix E**) show public surface water sewers along Warblington Road adjacent to the site.
- (b) An existing public surface water manhole (6851) on Warblington Road is adjacent to the site frontage, and demonstrates cover level as 4.28mAOD.
- (c) The existing building is drained by rainwater pipes. The connection route of this drainage is not confirmed.
- (d) The nearest surface water feature is Slipper Mill Pond which runs adjacent to the site, approximately 20m to the east.
- (e) The nearest watercourse appears is an ordinary watercourse 330m northwest of the site, the River Ems which runs south into coastal Chichester Harbour 400m southeast of the site.

1.5.3 Foul Water:

- The Southern Water public sewer records (**Appendix E**) show public foul water sewers along Warblington Road adjacent to the site

- It is expected that there is an existing connection into the foul water sewer network adjacent to the site.

1.5.4 Highway Drainage:

- (f) Warblington Road appears to be drained by highway gullies.

2 PROBABILITY

2.1 Sources of Information

- 2.1.1 The NPPF requires that all sources of flooding are considered being Tidal, Fluvial, Pluvial, Groundwater, Sewers and Man-made reservoirs/canals.
- 2.1.2 The likelihood of the site flooding has been established by reviewing the following information:
- Environment Agency Flood Maps for Planning
 - Long Term Flood Risk Assessment Surface Water Flood Risk Maps
 - Long Term Flood Risk Assessment Reservoir Flood Risk Maps
 - Local Authorities Strategic Flood Risk Assessment
 - Consultation with Local Authority/Lead Local Flood Authority

2.2 Flood Maps and Modelling

- 2.2.1 The Environment Agency's revised Product 4 Response provided flood maps for rivers, sea and surface water as seen in **Appendix F**. The Product 4 shows the site location within Flood Zones 1 and 2.
- 2.2.2 Flood levels for 3 No. nodes on the site (Nodes 4, 5 and 6 are located in/near the Phase 3 development area) have been taken from the Fluvial Levels Map, completed by The Environment Agency. It states there is no fluvial levels regarding 1% AEP (1 in 100 year), however fluvial levels for the 0.1% (1 in 1000 year) event are shown, with a maximum level of **3.43mAOD in a 0.1% AEP fluvial flood event**.

Water Levels: Fluvial undefended

Point	Modelled Flood Levels in Metres AOD			
	5%	1%	1% + CC	0.1%
4	-	-	-	-
5	-	-	-	3.43
6	-	-	-	-

- 2.2.3 The existing building levels for Phase 3 are 3.67mAOD, with external levels of between 3.65m at the building entrance to 3.80m at the site access point, with higher levels to the southwest for access and egress. The proposed Phase 3 development area is therefore considered above fluvial flood levels, existing and future predicted.

- 2.2.4 In addition, tidal flood levels have been provided by The Environment Agency for tidal undefended and tidal defended scenarios.

Water Levels: Tidal Undefended

		Modelled Flood Levels in Metres AOD	
Point	0.5%	0.5% (2121)	0.1%
4	3.35	4.74	3.52
5	-	4.74	-
6	-	4.74	-

Water Levels: Tidal Defended

		Modelled Flood Levels in Metres AOD	
Point	0.5%	0.5% (2121)	0.1%
4	-	4.74	3.48
5	-	4.74	-
6	-	4.74	-

- 2.2.5 As noted, site levels of the proposed development area are between 3.65m and 3.80m AOD. Modelled flood levels demonstrate the site is elevated above existing scenarios, however there is a future modelled risk of flooding of up to **4.74mAOD** at the site.
- 2.2.6 As agreed by the Environment Agency for the flood risk assessment for the previous application at this site (APP/21/01120), the design flood level for future flood risk an allowance for climate change was 4.50mAOD. A copy of the Environment Agency's previous response is included in **Appendix D**.
- 2.2.7 However, given the increased flood level data as a result of updated modelling, it is recommended that a revised design flood level is used in accordance with the data – of 4.74mAOD.
- 2.2.8 The Environment Agency's on-line Flood Maps for Planning (rivers and sea) show that the site is located within Flood Zones 2 and 3a. The flood zones are also confirmed by information and mapping obtained from The Environment Agency following consultation, which is consistent within other flood risk mapping reviewed.

Flood Zone	Definition
Zone 1 Low Probability	Land having a less than 1 in 1,000 annual probability of river or sea flooding. (Shown as 'clear' on the Flood Map – 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. (Land shown in light blue on the Flood Map)
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. (Land shown in dark blue on the Flood Map)
Zone 3b The Functional Floodplain	This zone comprises land where water has to flow or be stored in times of flood. 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)

- 2.2.9 **Figure 6** also shows that the site is at 'low' to 'high' risk of flooding from rivers or sea.



Figure 6. Long Term Flood Risk Map; Flood risk from rivers or the sea

2.2.10 **Figure 7** shows that the north of the site is at low risk of surface water flooding, with much of the rest of the site at very low risk of surface water flooding. There is however medium to high risk of surface water flooding within the adjacent highways, although this would appear to be less than 300mm in a low risk flood scenario, which would not inhibit access or egress from the site.



Figure 7. Long Term Flood Risk Map; Flood risk from surface water

2.2.11 **Figure 8** shows that the site is not at risk of flooding from reservoirs.

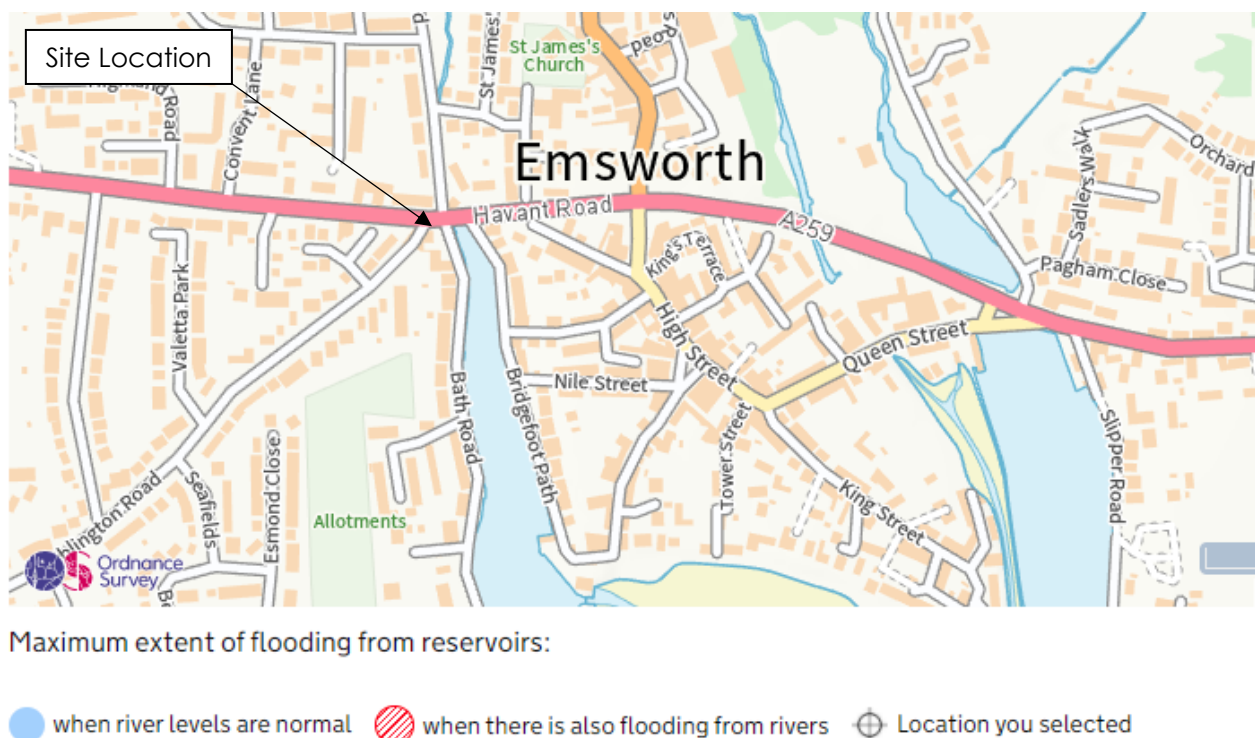


Figure 8. Long Term Flood Risk Map; Flood risk from reservoirs

2.3 Strategic Flood Risk Assessment

- 2.3.1 The Urban South Hampshire PUSH SFRA identified the site location as at high susceptibility to groundwater, located within Flood Zones 1 and 2, and located wholly within a Flood Warning Area.
- 2.3.2 The site is shown to have a 'low risk' rating for Flood Zone 2 Undefended Hazards, at very low risk of surface water flooding (small isolated area at low risk within the site, low to high risk within the adjacent highway), outside of the Climate Change (Year 2115) Fluvial Flood Zone 3 but within the Climate Change (Year 2115) Tidal Flood Zones 2 & 3.
- 2.3.3 Extracts are included in **Appendix D**.
- 2.3.4 As this development is only for a change of use, a Sequential Test and Exception Test would not be required.

2.4 Historic Flooding

- 2.4.1 The Environment Agency were consulted regarding historic flooding at the site, and online information from Department for Environment, Food & Rural Affairs (DEFRA), Hampshire County Council and Havant Borough Council was investigated for details of historic flooding in the vicinity of the site.
- 2.4.2 The DEFRA recorded flood outlines on environment.data.gov.uk demonstrate a recorded flood outline along the watercourse corridor of the main river to the east of the site, including along the length of Bridge Road to the north and Bath Road to the east, and across the adjacent Havant Road where the watercourse passes under the road. This was shown to affect the site frontage, however the flood extents do not indicate flooding within the site area.
- 2.4.3 The PUSH SFRA Flood Mapping indicated no records of Southern Water observed flooding in the vicinity

of the site, and no recorded groundwater flood incidents in the vicinity of the site.

2.4.4 Extracts are included in **Appendix D**.

2.5 Summary of Flood Risk

2.5.1 The potential sources of flooding are:

Source of Flooding	Level of Risk
Rivers and Coastal	Low (Residual Risk: High) The site is within Flood Zones 1 and 2, and the proposed development area is elevated above existing modelled flood levels. The site is shown to be at increased risk of tidal flooding for the lifetime of the development however, as a result of climate change and rising tidal levels.
Surface Water	Low-Very low The long-term flood risk for surface water is classified as 'Low' to the north of the site with much of the rest at 'very low' risk. Surface water flooding within the adjacent highway is 'high'.
Groundwater	Medium BGS records found the site to be situated above variable permeability strata. Nearby borehole logs found presence of groundwater 1.2mbgl. The PUSH SFRA did not indicate the site area as susceptible to groundwater flooding.
Sewers	Medium There are surface water sewers within the area, and no reports of sewer flooding found. The high risk of surface water flooding within the adjacent highway could indicate areas of highway drainage at risk of being surcharged, however.
Artificial Sources	None The site is not shown to be at risk of flooding due to artificial sources.

3 PROPOSED DEVELOPMENT

3.1 Description of Development

- 3.1.1 The proposed development will involve the conversion of an existing office building into a residential property, with no increase in ground floor footprint and a first floor extension above the existing ground floor footprint as demonstrated within **Appendix A**.
- 3.1.2 The existing use of 'Building used for financial, professional, offices etc' is classified as 'less vulnerable' development whilst 'Buildings used for dwelling houses, student halls of residence, drinking establishments, nightclubs and hotels' is classified as 'more vulnerable' development to the classification (Flood Risk and Coastal Change Table 2) and is appropriate within Flood Zones 1 and 2 (Flood Risk and Coastal Change Table 3).
- 3.1.3 When including an allowance for climate change to assess Sequential requirements, the site is liable to an Exception Test. However, as the proposals are for a change of use and first floor extension, a Sequential test is not required. This Flood Risk Assessment will provide flood mitigation measures to address the future flood risk to the development.

Flood Zones	Flood Risk Vulnerability Classification				
	Essential Infrastructure	Highly Vulnerable	More Vulnerable	Less Vulnerable	Water Compatible
Flood Zone 1	✓	✓	✓	✓	✓
Flood Zone 2	✓	Exception Test Required	✓	✓	✓
Flood Zone 3a†	Exception Test Required †	✗	Exception Test Required	✓	✓
Flood Zone 3b*	Exceptions Test Required *	✗	✗	✗	✓*
✓ = Development is appropriate ✗ = Development should not be permitted					

- 3.1.4 The extension is at first floor only, elevated above all existing and future flood levels.
- 3.1.5 The proposed development will decrease the hardstanding area of the site; reducing the rate of run-off generated by the site, with an area of existing building and hardstanding converted into soft landscaping garden areas. The surface water drainage of the site will follow existing principles as the proposals are only for a change of use and first floor extension to the existing buildings.

4 SEQUENTIAL AND EXCEPTION TESTS

4.1 Sequential Test

- 4.1.1 The Flood Maps for Planning show that the development area is within Flood Zones 1 and 2, however is at increased risk of flooding as a result of climate change. Exception Test assessment is therefore made in the context of future flood risk.
- 4.1.2 The local planning authority will however consider what changes of use are acceptable with regards to the National Planning Policy Framework and taking into account the Strategic Flood Risk Assessment. This is likely to depend on whether development can be designed to be safe and that there is safe access and egress.

4.2 Exception Test

- 4.2.1 Although the proposals are only for Change Of Use and First Floor Extension and do not require an Exception Test, the principles of NPPF have been considered with respect to safe site use, access and egress.
- 4.2.2 Table 3 within Paragraph 067 of Flood Risk and Coastal Change confirms that developments classified as "More Vulnerable" require an Exception Test for Flood Zone 3a. The proposed development is in Flood Zone 3a due to the risk of flooding from the culverted river.
- 4.2.3 In order to demonstrate the requirements are met with reference to Paragraphs 102 & 103 of NPPG Flood Risk and Coastal Change we summarise as follows:
- 4.2.4 Paragraph 102 quotes 'If, following application of the Sequential Test, it is not possible, consistent with wider sustainability objectives, for the development to be located in zones with a lower probability of flooding, the Exception Test can be applied if appropriate. For the Exception Test to be passed:
- *it must be demonstrated that the development provides wider sustainability benefits to the community that outweigh flood risk, informed by a Strategic Flood Risk Assessment where one has been prepared*
- 4.2.5 The proposals will not increase flood risk to or from the development, and mitigation measures will reduce flood risk to occupants. The development will benefit the community by providing housing at a disused former office space. On review the local area would appear to be predominantly residential and so the proposals would match the existing character.
- *a site-specific flood risk assessment must demonstrate that the development will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall*
- 4.2.6 The Flood Risk Assessment demonstrates that the proposed development will reduce the site impermeable area and does not increase the rate or volume of run off generated by the site. This ensures that the development has a beneficial impact on surface water flood risk to and from the proposals. There is no proposed construction that would impact on fluvial or tidal flood risk to or from the development.
- 4.2.7 Flood Mitigation measures will be proposed to ensure that the Change of Use is safe for its lifetime for the proposed residential occupants.

- 4.2.8 Paragraph 103 states 'When determining planning applications, local planning authorities should ensure flood risk is not increased elsewhere and only consider development appropriate in areas at risk of flooding where, informed by a site-specific flood risk assessment following the Sequential Test, and if required the Exception Test, it can be demonstrated that:'
- *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.*
- 4.2.9 The proposals are for a Change of use to an existing building and therefore this will not increase flood risk elsewhere, and is not subject to sequential assessment.
- *development is appropriately flood resilient and resistant, including safe access and escape routes where required, and that any residual risk can be safely managed, including by emergency planning; and it gives priority to the use of sustainable drainage systems.'*
- 4.2.10 As discussed in **Section 6**, Flood Mitigation measures will be proposed that reduce risk to users and ensure the development is appropriately flood resilient. In addition, safe access and egress routes will be provided where necessary so that any residual risk to future residents can be safely managed. A Flood Evacuation Plan (FEP) template is provided in **Appendix G**.
- 4.2.11 As the development is partially within Zone 2, it is therefore recommended that the occupants of the development are subscribed to the Environment Agency's flood warning scheme and there is provision of a Flood Evacuation Plan to determine what actions occupants should take leading up to and during a nearby flood event. The Flood Plan would consider further the specific requirements with regard to access and egress.
- 4.2.12 The development does not consider use of sustainable drainage systems, as there is only a Change of Use of an existing building and no new hardstanding areas. The proposals will reduce site runoff however by proposing new areas of soft landscaping.

5 PROPOSED DRAINAGE STRATEGY

5.1 Surface Water

- 5.1.1 The proposed Change of Use will not introduce any new buildings or areas of hardstanding, so no new surface water drainage proposals are required.
- 5.1.2 The site will continue to utilise the existing surface water drainage infrastructure, which is understood to be conventional gully and pipe drainage to the public surface water sewer network.
- 5.1.3 It is worth noting that the proposals will reduce site runoff by introducing a new area of soft landscaping where an area of building and hardstanding currently exists.
- 5.1.4 First floor extension areas, above areas of existing ground floor office space, will utilise the same drainage connections and will not introduce new areas of runoff.

5.2 Foul Water Drainage

- 5.2.1 The proposed foul drainage will utilise the existing site foul infrastructure, and as such there are no proposed changes to the foul drainage strategy.
- 5.2.2 Post development, there will be an estimated increase in peak foul water flows as a result of the Change in Use, with 0.05 l/s from the proposed residential unit (based on Design & Construction Guidance). This is likely to be offset by the reduction in surface water runoff from the site.
- 5.2.3 It is not expected that any marginal increase in foul discharge will impact the foul sewer network capacity, however, the infrastructure and connection charges (OFWAT Charging Rules) place the onus on the sewerage undertaker to reinforce their network should there no longer be sufficient capacity to serve the new development. Funding for this is provided by revised charging arrangements for infrastructure and connection charges for each dwelling constructed comprising a Network Reinforcement Charge and Site-Specific Charges. The revised charging arrangement (funded by the developer) covers alterations to the Existing Sewer Network and the sewerage undertaker remains responsible for the cost of reinforcing their Strategic Assets. The developer is responsible for connecting the development to the public sewer network.

6 RESIDUAL RISK AND MITIGATION

6.1 Residual Risk

6.1.1 The following residual risks have been identified in relation to the proposed development:

- i. Flooding of buildings within flood zone.
- ii. Increased flood risk as a result of climate change.

6.2 Mitigation

6.2.1 Consideration has been taken to the residual risks stated in Section 6.1, and the following mitigation measures are proposed:

- i. Proposed building access and egress to be via higher ground. Accordingly, the proposed building access is to the south, with existing external elevation of 3.80mAOD, above existing modelled flood levels. Safe access and egress is set out in Section 5.
- ii. The Environment Agency Product 4 response indicates the site is subject to existing 1 in 1000 year flood levels of between 3.43 and 3.52mAOD. The existing floor levels are approximately 3.67mAOD. The architect has confirmed that these can be altered within the Change of Use development, and it is recommended that **ground floor finished floor levels are raised to minimum 3.82mAOD** – to provide a 300mm freeboard above 1 in 1000 year flood levels.
- iii. The impact of climate change is predicted to result in an increase to design flood levels over the lifetime of the development, to 4.74mAOD. This could result in flooding to the property of up to 920mm. Further mitigation measures are required to ensure that the site is safe for use for the lifetime of the development. In accordance with "Improving the Flood Performance of New Buildings – Flood Resilient Construction", produced for Communities and Local Government and the Environment Agency, May 2007, as well as in accordance with standing advice and Flood Resilient Construction guidance (<https://www.gov.uk/government/publications/flood-resilient-construction-of-new-buildings>) (<https://www.gov.uk/guidance/flood-risk-assessment-standing-advice#extra-flood-resistance-and-resilience-measures>), the following mitigation measures are proposed accordingly:
 - a. Flood resistance measures; which look to keep water out of the building when flood depths are up to 300mm. This includes tanking and waterproof construction, to be considered as retrofit measures to the building as part of the Change of Use, as well as the use of impermeable building materials to at least 300mm. This will look to keep water out of the building in a future flood scenario, and would result in minimal damage or deformation. People could also leave their house and follow the evacuation plan in this scenario.
 - b. Flood resistance measures; in addition, use of floodgates across doors could prevent flood ingress to entrances.
 - c. Flood resilience measures; where flood depths exceed 300mm, impacts could be minimised by use of flood resilient materials such as lime plaster, raising air bricks, positioning NRVs and services at 1.0m height from FFL, raising potential hazards and/or damage above modelled flood levels, and design of the proposed building layout to allow access to all spaces to

permit drying and cleaning. This would minimise damage to building in an extreme future modelled flood event.

- d. Installation of a sump and pump, to allow draining away of internal flooding in coordination with flood gates.
- e. All proposed bedrooms to be located on the higher floors of the property, within the first floor extension of the proposed development.
- f. Installation of non-return valves of all soil pipes to prevent back-flow.
- g. Development of an emergency escape plan, inclusive of recommendations on seeking refuge at higher levels and of when and how to utilise a safe route of access and escape to ground above the estimated flood level, which connects the site to an area away from flood risk. This is to include provision of a Flood Warning and Flood Alert System. A Flood Evacuation Plan (FEP) template is provided in **Appendix G**.

7 FLOOD RISK MANAGEMENT

7.1 Safe Access and Egress

- 7.1.1 The proposed site development falls within Flood Zones 1 and 2, however the access to the site is from Warblington Road, which is within Flood Zone 1. Access to the proposed development is via the south of the building, with external levels of 3.8mAOD, above existing modelled flood levels.
- 7.1.2 Due to the potential of increased flood levels, access and egress to the site could continue via the existing access point on Warblington Road, which is elevated at 3.8mAOD – above existing modelled flood levels. Access to higher ground, should climate change flood levels exceed this, is available by leaving the site via the Warblington Road access and headed due southwest, where levels quickly exceed the predicted future flood level of 4.74mAOD.
- 7.1.3 Should residents need to seek refuge within the property, the upper storeys of the building will remain elevated above all predicted flood levels for the lifetime of the development.

7.2 Flood Warning

- 7.2.1 The site is at risk of fluvial and tidal flooding therefore there is a need for a Flood Evacuation Plan (FEP). This should consider the provision of a Flood Warning and Flood Alert System. A Flood Evacuation Plan (FEP) template is provided in **Appendix G**.

8 OFFSITE IMPACTS

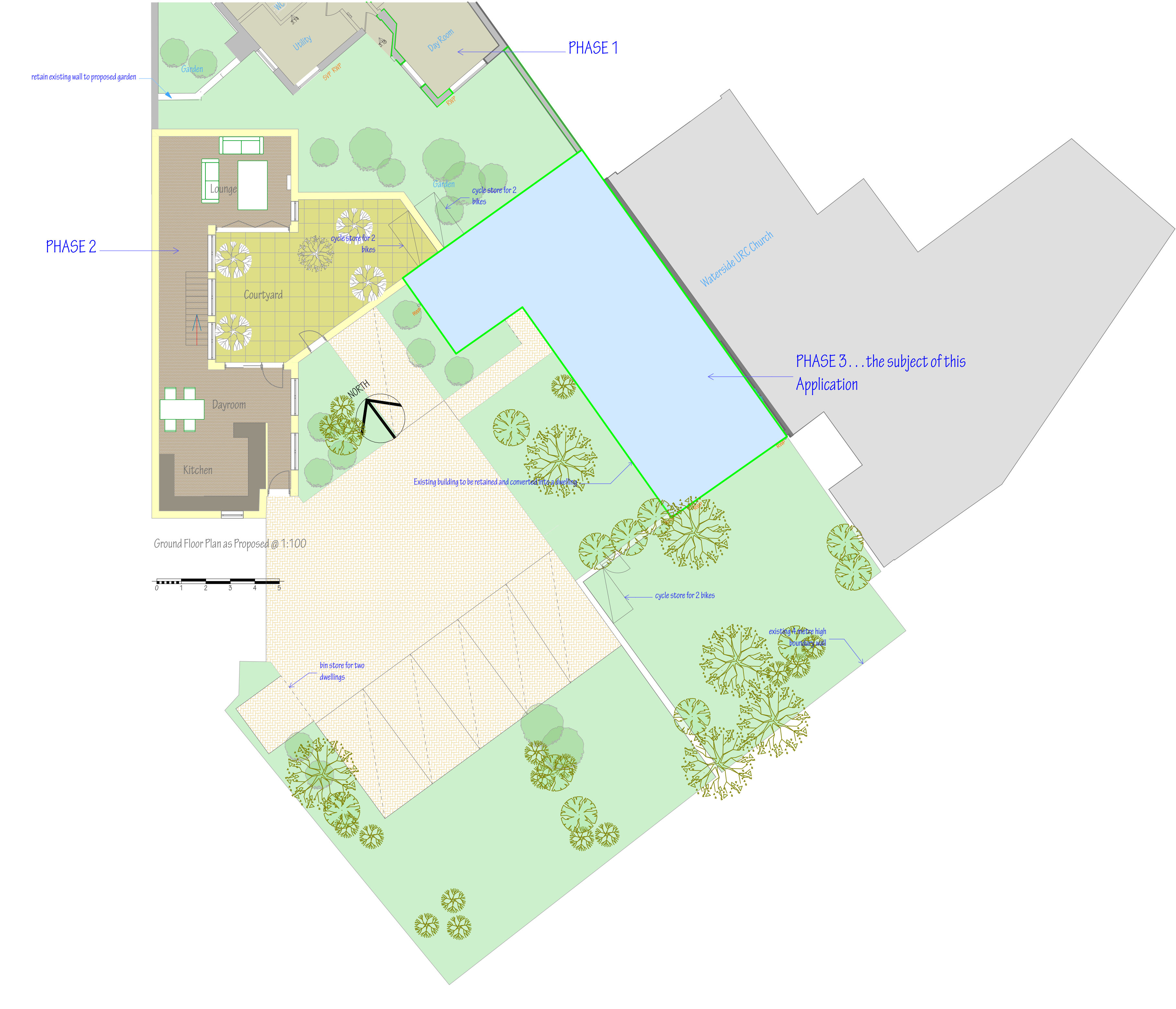
- 8.1.1 The proposed development will not result in any increase in runoff from the site, and therefore will not cause an increase in flood risk offsite.
- 8.1.2 Post development foul water flows will contribute a negligible increase to the sewer network compared to the previous use – it is expected that the foul sewer flow from the proposed residential property will be 0.05l/s.

9 SUMMARY

- 9.1.1 This site-specific report is based on the EA Product 4 Response, Flood Maps, Public Sewer Records, BGS records, and the local SFRA mapping and guidance.
- 9.1.2 The existing site consists of residential offices.
- 9.1.3 The topographical survey shows that the existing site levels fall from 3.87mAOD in the south west corner of the site to the north with a low point of 3.65mAOD at the building access.
- 9.1.4 The existing site buildings are drained by gully and pipe drainage, presumed to connect into the existing public surface water drainage system.
- 9.1.5 The nearest watercourse is the Main River (unknown name) that discharges into Slipper Mill Pond opposite Bath Road from the site (approx. 20 metres from the site boundary). In addition, the River Ems which runs south into coastal Chichester Harbour approximately 275m east of the site.
- 9.1.6 The proposed development comprises the Change of Use of an office building into a residential property, as well as demolition of areas of existing ground floor development, and a first floor extension above other areas of existing ground floor development.
- 9.1.7 The development lies within Flood Zones 1 and 2. Proposed internal development levels will be raised to a minimum of 3.82mAOD, above existing modelled flood levels. The site is subject to increased future tidal flood risk. Flood mitigation measures and the consideration of safe access and egress have been considered in order to address the safe use of the development for its lifetime. A Flood Evacuation Plan (FEP) template is provided within the appendices.
- 9.1.8 The wastewater from the proposed development will discharge to the public foul sewer network, with connection arrangement to be confirmed subject to site investigation.
- 9.1.9 The completion of the development will not increase flood risk on or off the site, and appropriate flood mitigation has been proposed to ensure the site is safe for use, access and egress for the lifetime of the development.

APPENDICES

Appendix A Preliminary Site Layout



NOTES:
This drawing is the copyright of
EDWARD CAUSH + ASSOCIATES
All dimensions must be checked on site prior to the commencement of construction
and the Architect notified of any discrepancy. Figured dimensions are to be used in
preference to scaled dimensions. The Local Planning Authority may scale from this
drawing as the only exception. No deviation from the drawing will be permitted without
the written consent of the Architect.

Transmittal Set ID	Revision ID	Change Name	Date
10	A	Planning 02.04.2024	02/04/2024

PURPOSE OF ISSUE
INFORMATION
DESIGN
TENDER
CONSTRUCTION

EDWARD CAUSH + ASSOCIATES
ARCHITECTS
11 SOUTHDOWN ROAD COSHAM PORTSMOUTH
PO6 2EB
phone 023 92 384477
fax 023 92 381582
email: eca@south-down.demon.co.uk

CLIENT
Mr & Mrs P A Munday

JOB TITLE
Fiscal House
2 Havant Road
Emsworth
Hampshire
PO10 7JE

DRAWING TITLE
Site Plan as Proposed
Conversion Two
PHASE 3

SCALE
1:100 @ A2

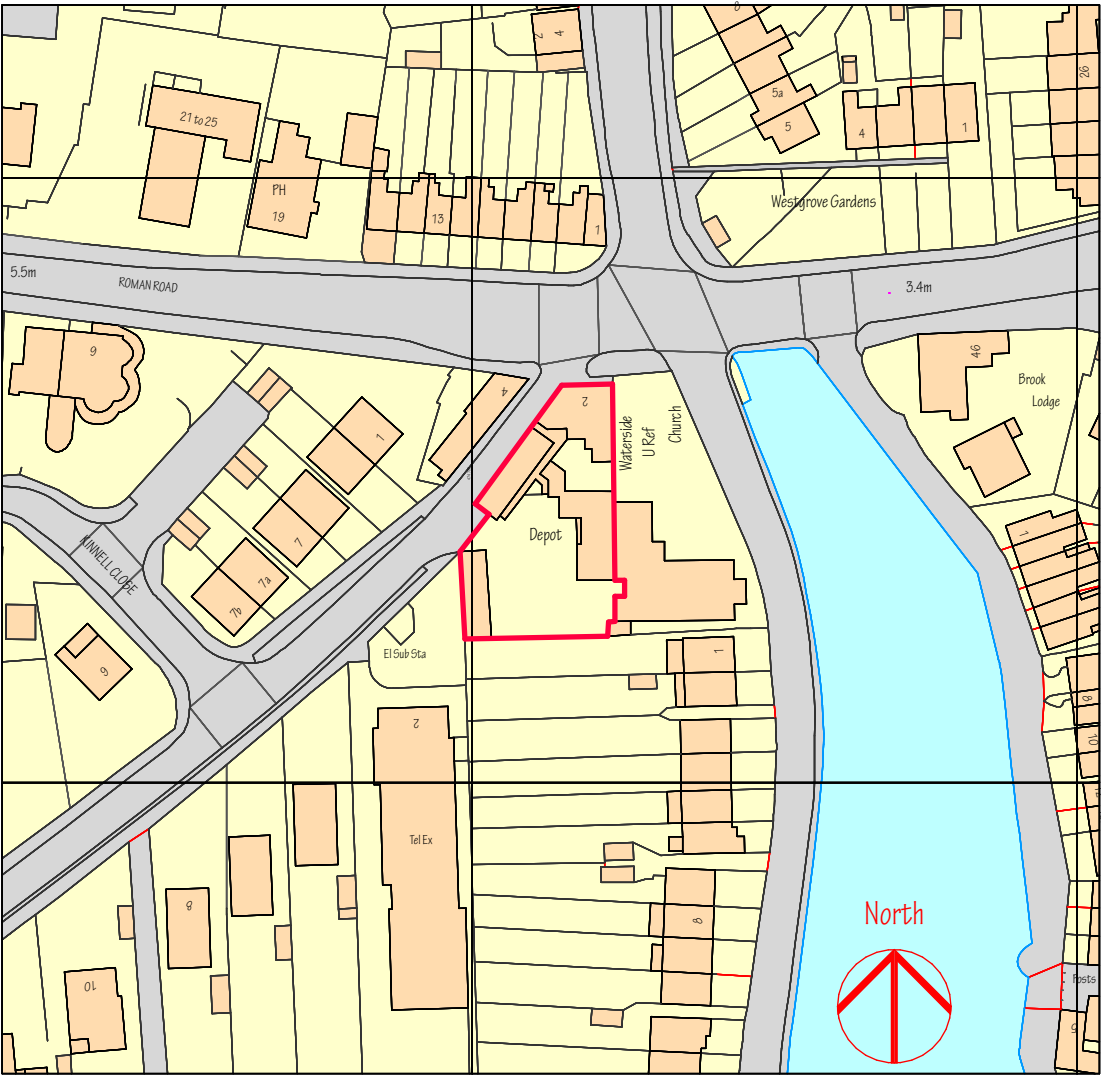
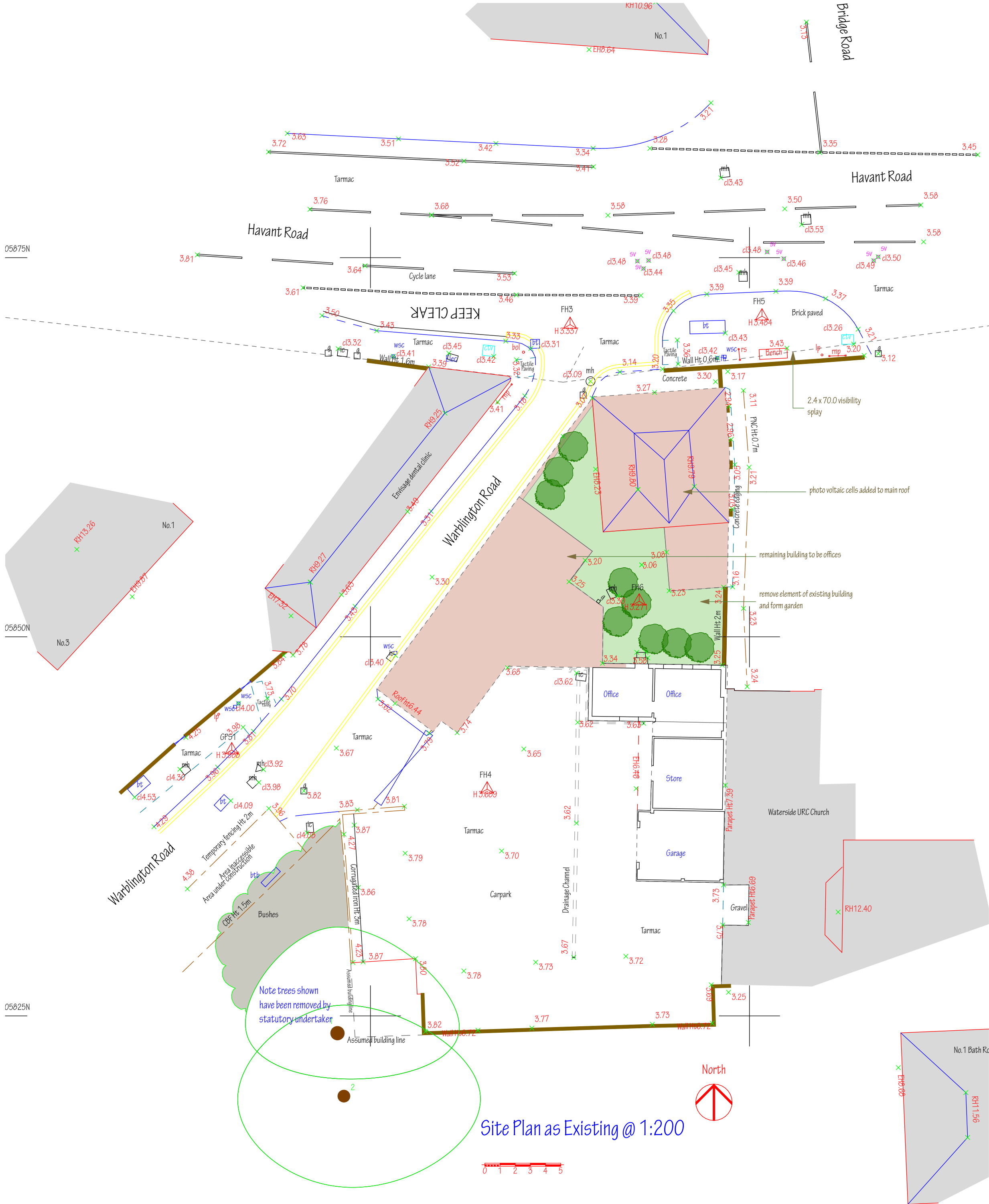
DATE
06.11.2023

DRAWN BY
EC

CHECKED BY

DRAWING NUMBER	LAYOUT ISSUE	DRWG REVISION
12:1089:L(2-)504	11	A

Appendix B Topographic Survey



Fiscal House, 2 Havant Road, Emsworth P010 7JE
Location Plan @ 1:1250

NOTES:
This drawing is the copyright of
EDWARD CAUSH + ASSOCIATES
All dimensions must be checked on site prior to the commencement of construction
and the Architect notified of any discrepancy. Figured dimensions are to be used in
preference to scaled dimensions. The Local Planning Authority may scale from this
drawing as the only exception. No deviation from the drawing will be permitted without
the written consent of the Architect.

REVISIONS				
Transmittal Set ID	Revision ID	Change Name		Date
03	01			16/08/2022
05	A	Planning Nov 22		12/12/2022

PURPOSE OF ISSUE

INFORMATION

DESIGN

TENDER

CONSTRUCTION

EDWARD CAUSH + ASSOCIATES

ARCHITECTS

11 SOUTHDOWN ROAD COSHAM PORTSMOUTH

PO6 2EB

phone 023 92 384477

fax 023 92 381582

email: eca@south-down.demon.co.uk

CLIENT
Mr & Mrs P A Munday

JOB TITLE
Fiscal House
2 Havant Road
Emsworth
Hampshire
P010 7JE

DRAWING TITLE
Site Plan as Existing

SCALE
1:1250 & 200 @ A2

DATE
16/08/2022

DRAWN BY
EC

CHECKED BY

DRAWING NUMBER	LAYOUT ISSUE	DRWG REVISION
12:1089:L(2-)-301	06	A

Appendix C Geotechnical Information

CONTRACT No. 4277

BOPEHOLE RECORD

CONTRACT EMSWORTH.

DATE STARTED 2/1/68 FINISHED 5/1/68

BOREHOLE No.

OPERATOR

ORDNANCE DATUM LEVEL 22.74

TYPE OF PENETRATION TEST

TYPE OF BORING Shell & Auger

WEIGHT _____ DROP _____

DIAMETER OF BORING 6'

STANDING WATER LEVEL 4.0"

REMARKS

Depth Feet	O.D. Level	Type & No. of Sample	Boring Details			Legend	Description of Material and Observations
			Penetration	Lining	Water		
							Full material with tarmac surface
5					S.W.L.		Stiff brown clay.
10		U4/5Lo					Stiff brown sandy clay.
15		U4/10Lo					Hard grey mudstone
20		U4/18Lo					Hard grey clay.
		Borehole terminated.					mapping suggests some Drift over

Appendix D LLFA & LPA Consultation and Extracts

Havant Borough Council
Development Control
Civic Offices Civic Centre Road
Havant
Hampshire
PO9 2AX

Our ref: HA/2021/123668/02-L01
Your ref: APP/21/01120

Date: 16 March 2022

Dear Planning Team,

AMENDED FLOOD RISK ASSESSMENT - CHANGE OF USE FROM EXISTING TWO STOREY BUILDING FROM B1A TO RESIDENTIAL INCLUDING PART DEMOLITION OF EXISTING BUILDING AND FORMATION OF A NEW RESIDENTIAL GARDEN, RE-ALLOCATION OF PARKING.

FISCAL HOUSE, 2 HAVANT ROAD, EMSWORTH, PO10 7JE

Thank you for consulting the Environment Agency on the above application.

Environment Agency position

We have reviewed the amended Flood Risk Assessment (FLOOD_RISK_ASSESSMENT_FRA-1576623, dated 23 February 2022) and consider that it satisfactorily addresses our earlier concerns.

The proposed development will only meet the National Planning Policy Framework's requirements if the following planning condition is included. Without this condition, the proposed development on this site poses an unacceptable risk and we would object to the application.

Condition

The development permitted by this planning permission shall be carried out in accordance with the amended Flood Risk Assessment (FLOOD_RISK_ASSESSMENT_FRA-1576623) dated 23 February 2022 and the measures it details, including the following conditions:

1. As proposed in Section 6 Mitigation subsection 6.2.1 ii. b. - all proposed bedrooms to be located on the higher floors of the property. Therefore, no sleeping accommodation should be allowed on the ground floor due to the severe risk of flooding.
2. As proposed in Section 6 Mitigation subsections 6.2.1 i. and 6.2.1 ii. – as the existing ground floor levels can't be changed, all flood resistance and resilient measures proposed must be installed prior to occupation for the 1 in 200-year tidal flood levels including climate change for the lifetime of the development of 4.5mAOD.
3. As proposed in Section 6 Mitigation subsections 6.2.1 ii. d. – a Flood Evacuation Plan must be developed and agreed by the LPA. The occupants

must also sign up to the Environment Agency's Flood Warning System.

Reason

To reduce the risk of flooding to the proposed development and future occupants.

The condition is in line with the Planning Practice Guidance (PPG) to the National Planning Policy Framework (NPPF) for Flood Risk and Coastal Change.

Advice to Local Planning Authority

The following issues are not within our direct remit or expertise, but nevertheless are important considerations for managing flood risk for this development. Prior to deciding this application, we recommend that consideration is given to the issues below. Where necessary, the advice of relevant experts should be sought.

- Details and adequacy of flood proofing and other building level resistance and resilience measures
- Ensure flood risk mitigation measures for the lifetime of the development are adequate and resilient to all extreme flood levels
- Safe access and egress routes have been shown in the FRA, but we would recommend the occupants sign up to the Environment Agency Flood Warning System.
- Details and adequacy of an emergency plan
- Provision of and adequacy of a temporary refuge
- Details and calculations relating to the structural stability of buildings during a flood
- Whether insurance can be gained or not

Advice to Applicant

Environmental Permit

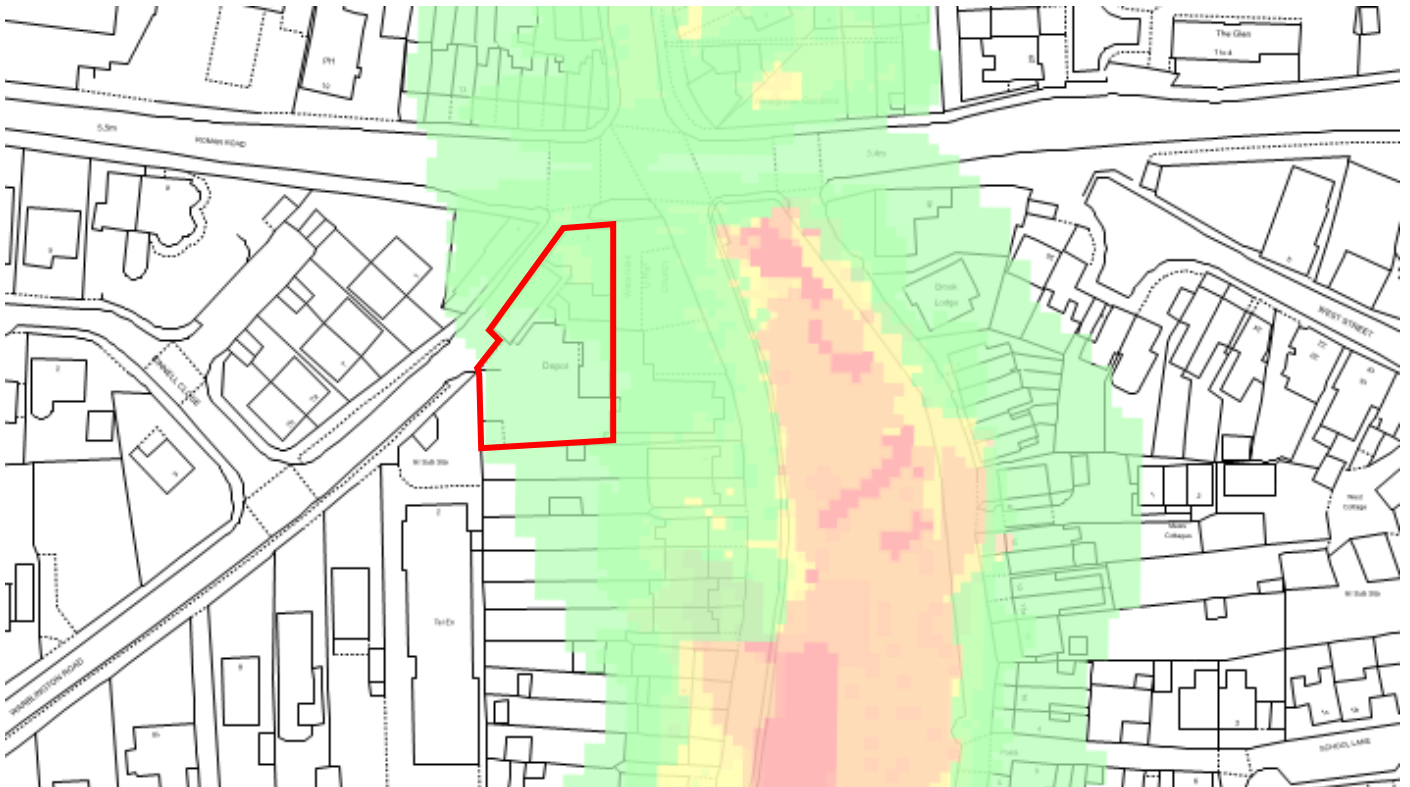
The Environmental Permitting (England and Wales) Regulations 2016 require a permit to be obtained for any activities which will take place:

- on or within 8 metres of a main river (16 metres if tidal)
- on or within 8 metres of a flood defence structure or culvert (16 metres if tidal)
- on or within 16 metres of a sea defence
- involving quarrying or excavation within 16 metres of any main river, flood defence (including a remote defence) or culvert
- in a floodplain more than 8 metres from the river bank, culvert or flood defence structure (16 metres if it's a tidal main river) and you don't already have planning permission.

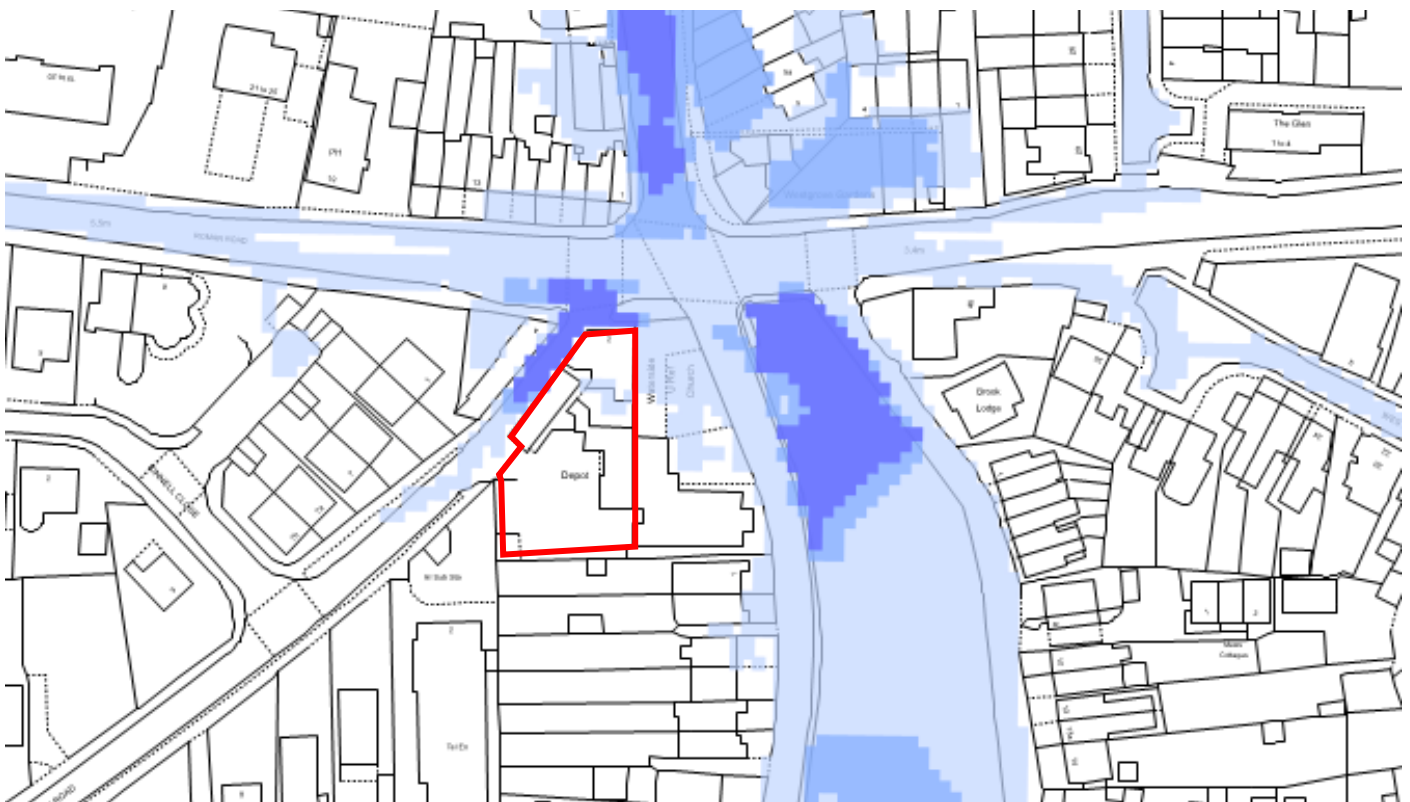
For further guidance please visit <https://www.gov.uk/guidance/flood-risk-activities-environmental-permits> or contact our National Customer Contact Centre on 03702 422 549. The applicant should not assume that a permit will automatically be forthcoming once planning permission has been granted, and we advise them to consult with us at the earliest opportunity.

Please do not hesitate to contact me using the contact details shown below should you have any queries regarding the above information.

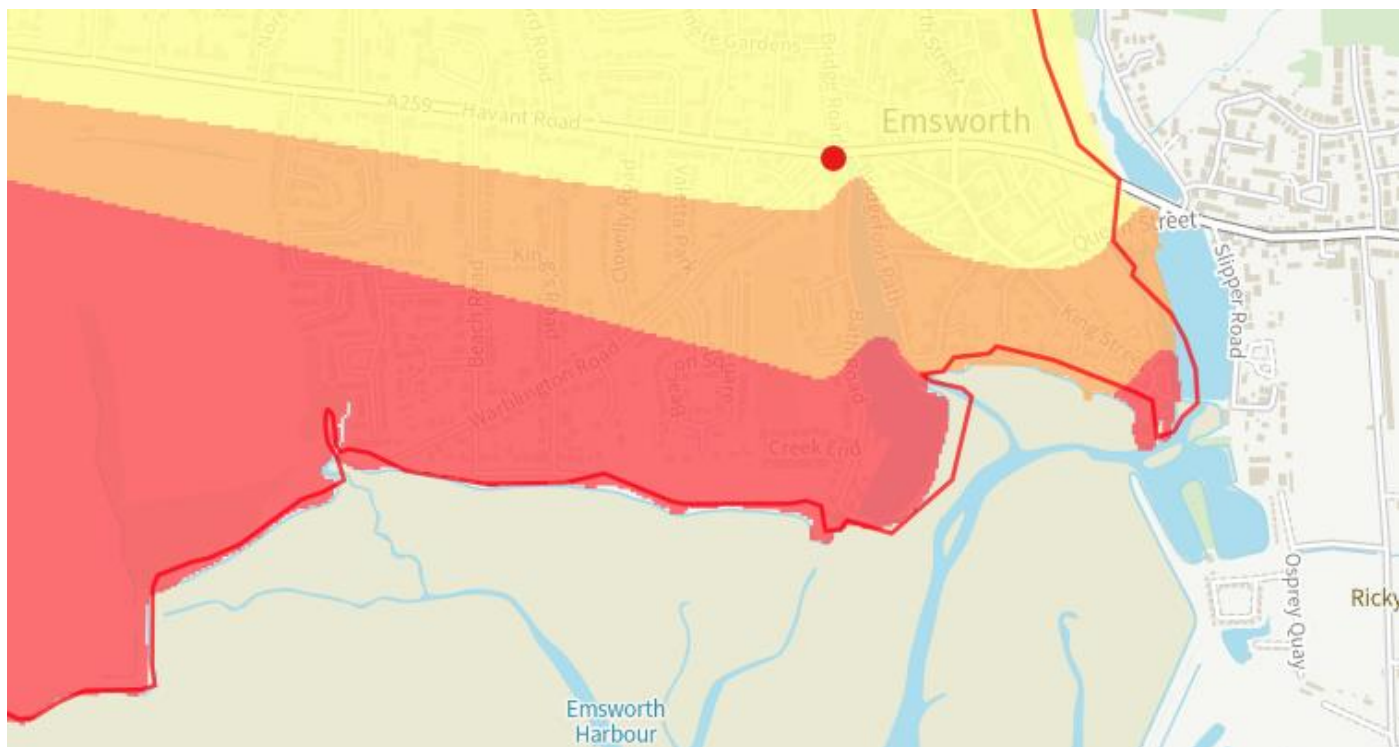
Yours faithfully,



Flood Hazard Map (Low)

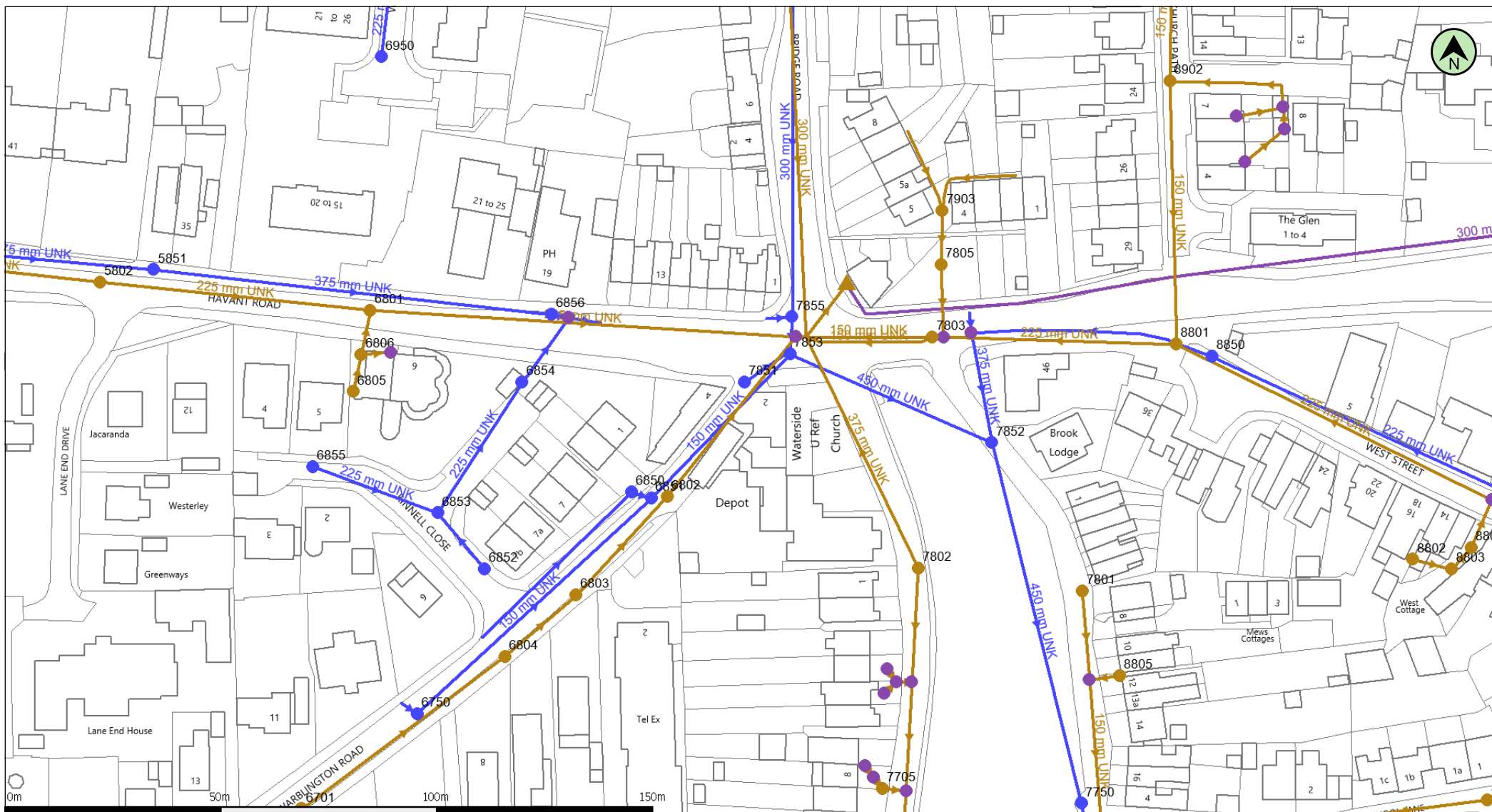


Surface Water Flood Risk (very Low to Low)



Bedrock Permeability (Low)

Appendix E Public Sewer Records



(c) Crown copyright and database rights 2022 Ordnance Survey 100031673

Date: 21/02/22

Scale: 1:1250

Map Centre: 474716,105861

Data updated: 17/01/22

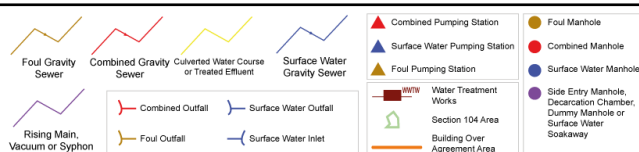
Our Ref: 787401 - 1

Wastewater Plan A4

The positions of pipes shown on this plan are believed to be correct, but Southern Water Services Ltd accept no responsibility in the event of inaccuracy. The actual positions should be determined on site. This plan is produced by Southern Water Services Ltd (c) Crown copyright and database rights 2022 Ordnance Survey 100031673. This map is to be used for the purposes of viewing the location of Southern Water plant only. Any other uses of the map data or further copies is not permitted.

WARNING: BAC pipes are constructed of Bonded Asbestos Cement.

WARNING: Unknown (UNK) materials may include Bonded Asbestos Cement.



searches@bpcivils.co.uk

D2043



Appendix F EA Flood Modelling Data

Flood risk assessment data

Location of site: Fiscal House, 2 Havant Road, Emsworth, PO10 7JE

Document created on: 29 April 2024

This information was previously known as a product 4.

Customer reference number: SSD356733

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)
- historic flooding
- 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
- climate change modelled data
- information about strategic flood risk assessments
- information about this data
- information about flood risk activity permits
- help and advice

Surface water and other sources of flooding

Use the [long term flood risk service](#) to find out about the risk of flooding from:

- surface water
- ordinary watercourses
- reservoirs

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

About the models used

Model name: West Sussex JFLOW Improvements
Scenario(s): Undefined Fluvial
Date: 2009

Model name: Chichester SFRA Coastal Modelling (Chi Harbour)
Scenario(s): Defended Tidal, Undefined Tidal
Date: 2022

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 occurring 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

The flood zones are not currently being updated. The last update was in November 2023. Some of the flood zones may have changed, however all source data is included in the models below.



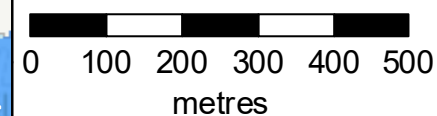
Flood map for planning

Location (easting/northing)
474712/105841

Scale
1:10,000

Created
29 Apr 2024

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



Historic flooding

This map is an indicative outline of areas that have previously flooded. Remember that:

- our records are incomplete, so the information here is based on the best available data
- it is possible not all properties within this area will have flooded
- other 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 flooding from rivers or the sea

You can also 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.

[Download recorded flood outlines in GIS format](#)



Historic flood map

Location (easting/northing)
474712/105841

Scale
1:10,000

Created
29 Apr 2024

-  Selected area
-  Main river
- Date of flood event
-  November, 2010
 -  March, 2008
 -  November, 2000
 -  December, 1989
 -  October, 1976



Historic flood event data

Start date	End date	Source of flood	Cause of flood	Affects location
9 November 2010	9 November 2010	main river	other	Yes
10 March 2008	10 March 2008	sea	other	No
1 November 2000	1 November 2000	ordinary watercourse	groundwater/high water table	No
14 December 1989	14 December 1989	ordinary watercourse	unknown	No
14 October 1976	14 October 1976	unknown	unknown	No

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



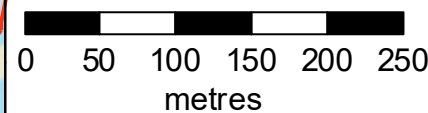
Flood defences

Location (easting/northing)
474712/105841

Scale
1:5,000

Created
29 Apr 2024

- Selected area
- Main river
- Flood defence



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
- 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

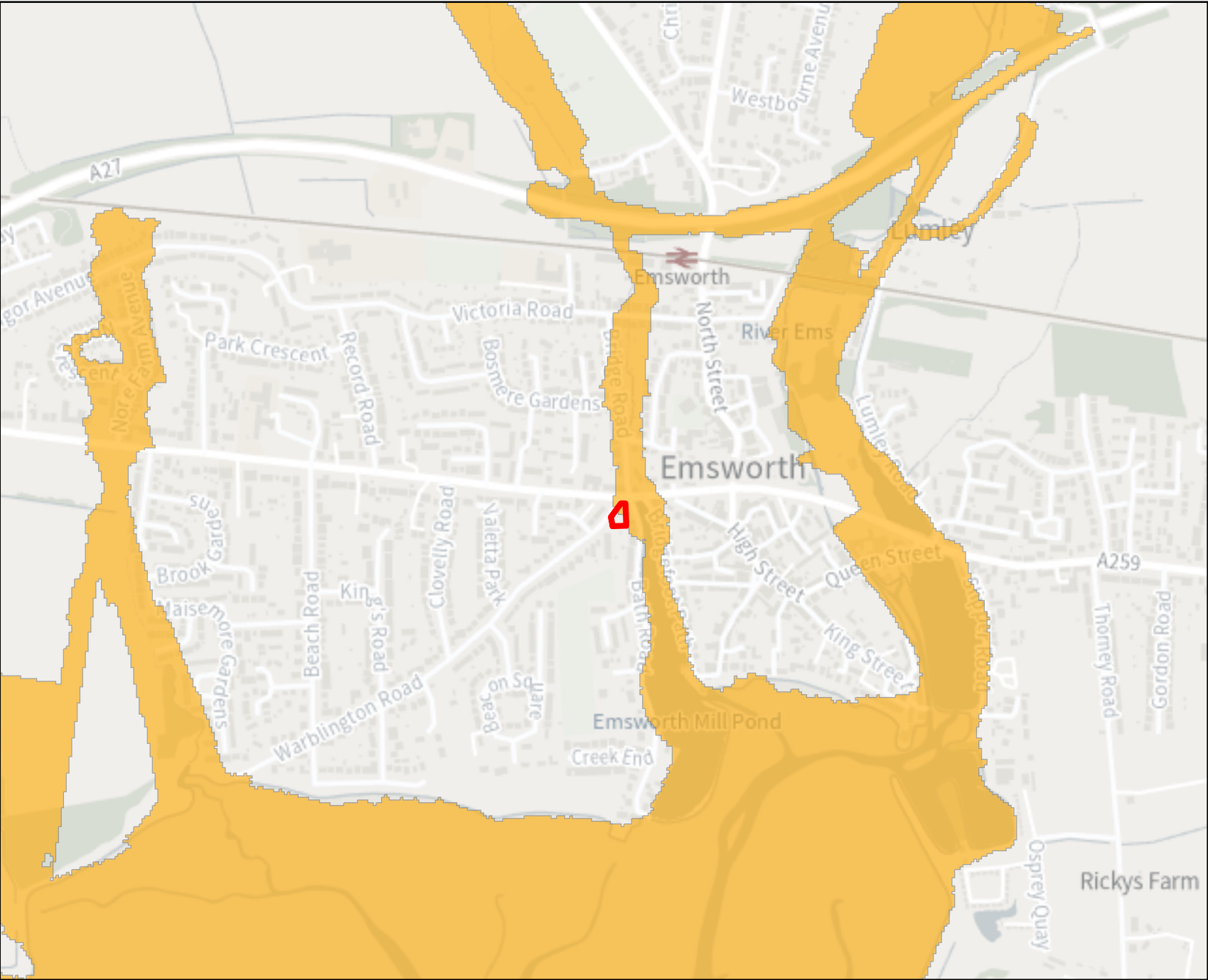
The climate change data included in the models may not include the latest [flood risk assessment climate change allowances](#). Where the new allowances are not available you will need to consider this data and factor in the new allowances to demonstrate the development will be safe from flooding.

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 tidal: risk of flooding from the sea where there are flood defences
- Undefended tidal: risk of flooding from the sea where flood defences have been removed
- Undefended modelled fluvial: risk of flooding from rivers where there are no flood defences



Environment Agency



Legend

 Site Boundary

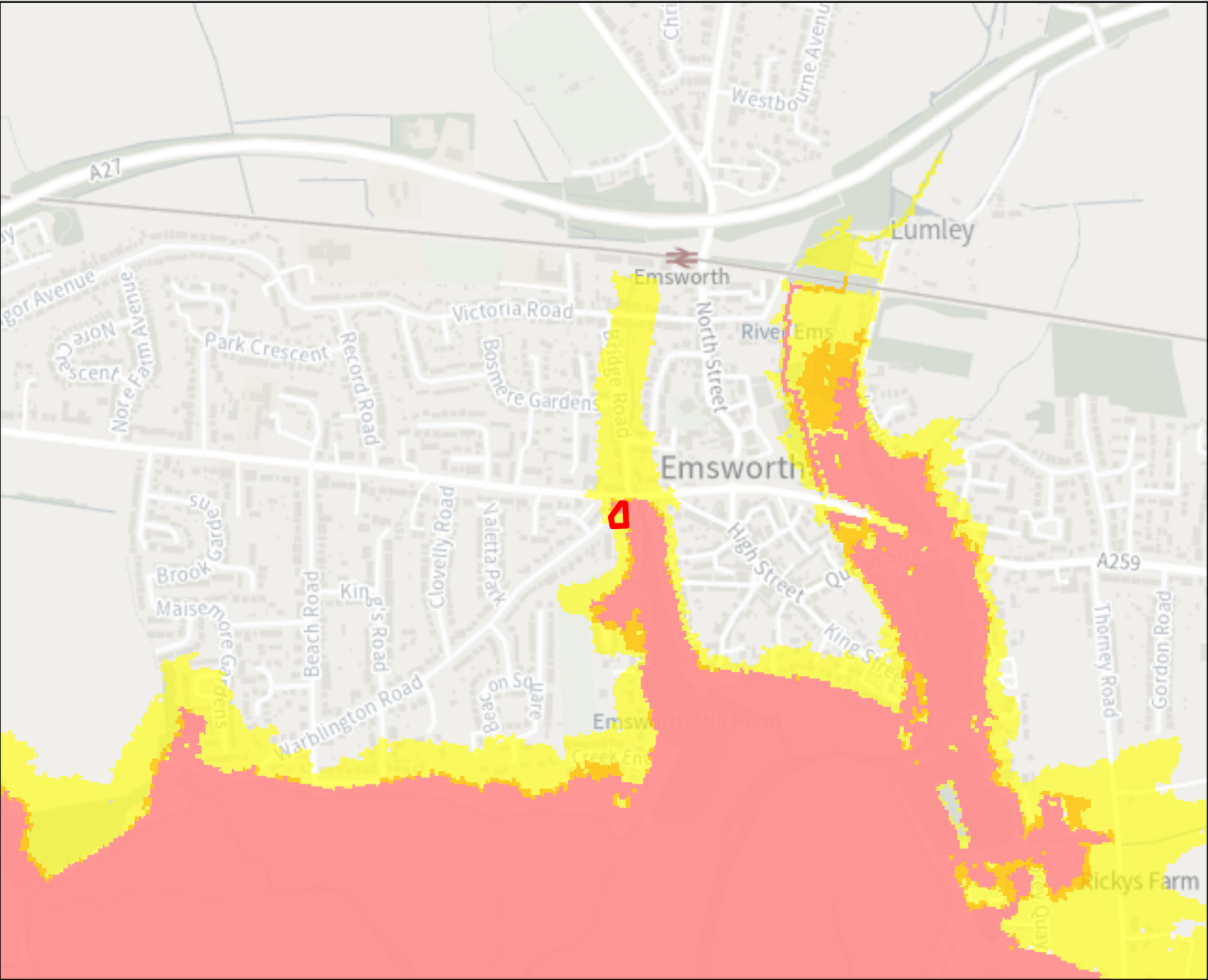
 0.1% AEP (Un defended Fluvial)

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





Environment
Agency

N
▲

Legend



Site Boundary

0.5% AEP (Undefended Tidal)


0.1% AEP (Undefended Tidal)

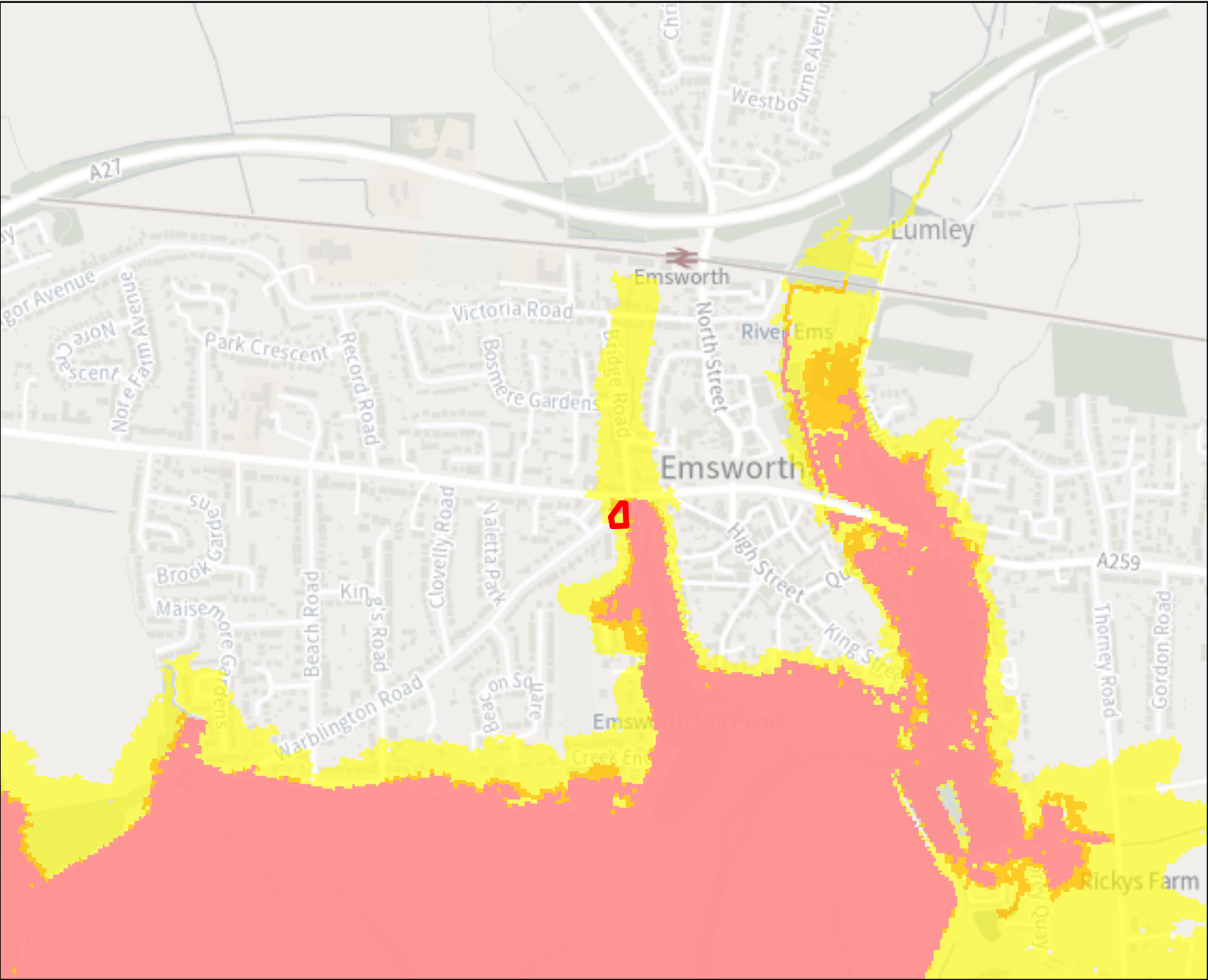

0.5% AEP (2121) (Undefended Tidal)


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

Scale: 1:10,000

00.2250.45

Kilometers





Environment
Agency



Legend

 Site Boundary

**0.1% AEP (Defended Tidal)**

**0.5% AEP (2121) (Defended Tidal)**

**0.5% 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



00.2250.45
Kilometers



Legend

 Site Nodes

 Site Boundary

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: Dan Lytton

Site: Fiscal House, 2 Havant Road, Emsworth PO10 7JE

Table 1: Water Levels: Fluvial Undefended

Node Ref	NGR		Modelled Flood Levels in Metres AOD			
			Undefended Annual Exceedance Probability			
	Eastings	Northings	5%	1%	1% +CC*	0.1%
1	474718	105863	-	-	-	3.19
2	474705	105848	-	-	-	-
3	474701	105826	-	-	-	-
4	474722	105826	-	-	-	-
5	474722	105844	-	-	-	3.43
6	474711	105835	-	-	-	-

Table 2: Water Levels: Tidal Undefended

Node Ref	NGR		Modelled Flood Levels in Metres AOD		
			Undefended Annual Exceedance Probability		
	Eastings	Northings	0.5%	0.5% (2121)	0.1%
1	474718	105863	3.35	4.74	3.52
2	474705	105848	-	4.74	-
3	474701	105826	-	4.74	-
4	474722	105826	3.35	4.74	3.52
5	474722	105844	-	4.74	-
6	474711	105835	-	4.74	-

Table 3: Water Levels: Tidal Defended

Node Ref	NGR		Modelled Flood Levels in Metres AOD		
			Defended Annual Exceedance Probability		
	Eastings	Northings	0.5%	0.5% (2121)	0.1%
1	474718	105863	3.31	4.74	3.48
2	474705	105848	3.31	4.74	3.48
3	474701	105826	-	4.74	-
4	474722	105826	-	4.74	3.48
5	474722	105844	-	4.74	-
6	474711	105835	-	4.74	-

Table 4: Water Depths: Fluvial Undefended

Node Ref	NGR		Modelled Flood Depths in Metres			
			Undefended Annual Exceedance Probability			
	Eastings	Northings	5%	1%	1% +CC*	0.1%
1	474718	105863	-	-	-	0.02
2	474705	105848	-	-	-	-
3	474701	105826	-	-	-	-
4	474722	105826	-	-	-	-
5	474722	105844	-	-	-	0.01
6	474711	105835	-	-	-	-

Table 5: Water Depths: Tidal Undefended

Node Ref	NGR		Modelled Flood Depths in Metres		
			Undefended Annual Exceedance Probability		
	Eastings	Northings	0.5%	0.5% (2121)	0.1%
1	474718	105863	0.23	1.61	0.40
2	474705	105848	0.01	1.24	0.06
3	474701	105826	-	0.48	-
4	474722	105826	0.02	1.19	0.09
5	474722	105844	-	1.41	-
6	474711	105835	-	1.05	-

Table 6: Water Depths: Tidal Defended

Node Ref	NGR		Modelled Flood Depths in Metres		
			Defended Annual Exceedance Probability		
	Eastings	Northings	0.5%	0.5% (2121)	0.1%
1	474718	105863	0.19	1.61	0.36
2	474705	105848	-	1.11	-
3	474701	105826	-	0.48	-
4	474722	105826	-	1.19	0.07
5	474722	105844	-	1.21	-
6	474711	105835	-	1.04	-

All levels taken from: West Sussex JFLOW Improvements, 2009 and Chichester SFRA Coastal Modelling (Chi Harbour) 2022

Produced on: 29/04/2024

*** The flood risk data provided is based on existing EA hydraulic models for existing 0.5% annual probability events with an allowance for climate change. Please note the climate change allowances provided are not up to date. These were updated on 17 December 2019.**

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

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](#)

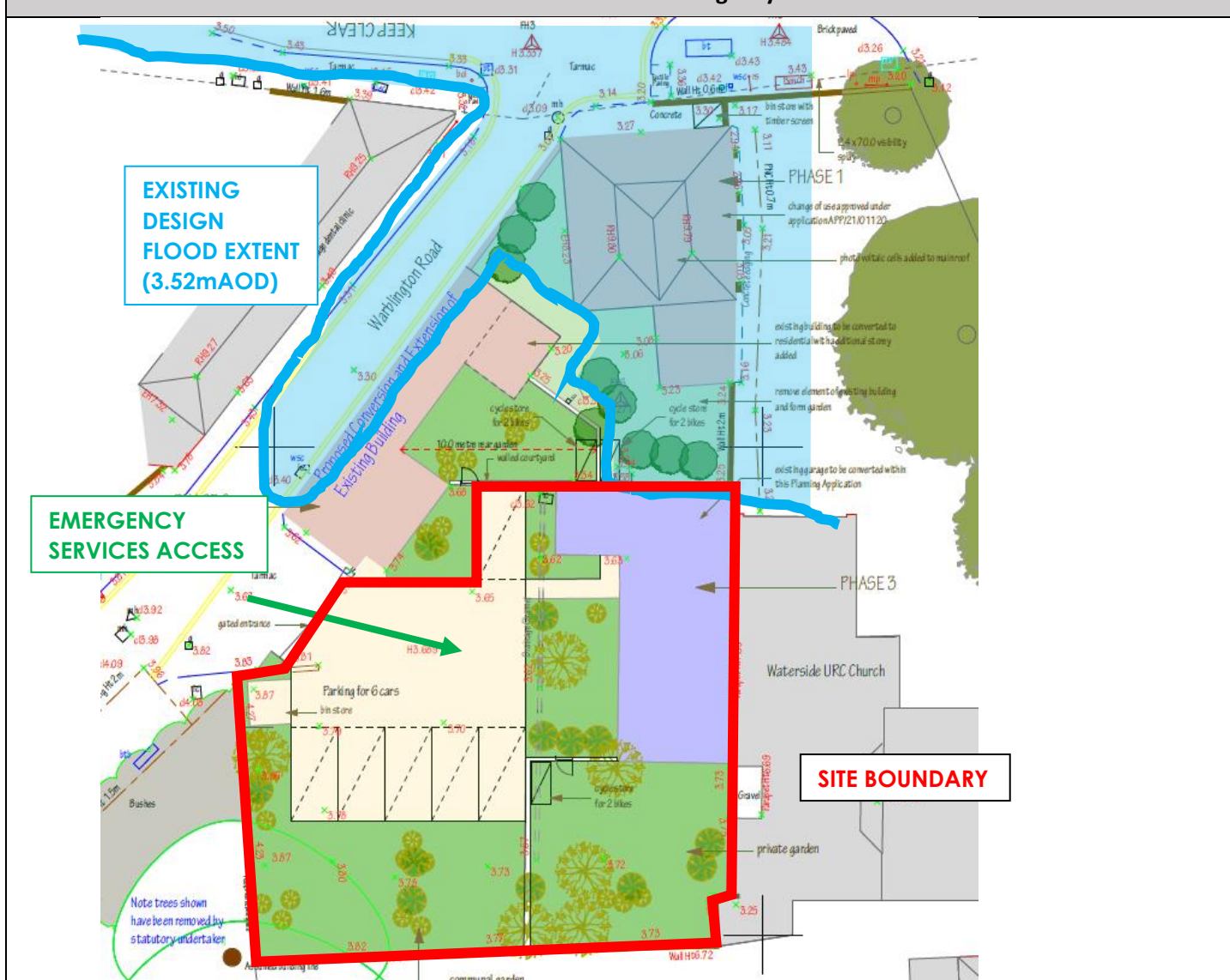
Help and advice

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

Appendix G Flood Evacuation Plan Template

Predicted Flood Extents & Emergency Services Access



Flood Risk Assessment & Flood Preparation

The site lies within Flood Zones 1 and 2. Mitigation measures raise the finished floor levels above modelled flood levels, however the site is also at potential increased flood risk as a result of climate change.

The proposed upper floor extension of the building will be above future flood levels, however ground levels are liable to future flood risk. Access and egress is viable from the southern building entrance, to the south of the site or off site via Warblington road.

During a future flood event, access and egress could be restricted and it is recommended that evacuation were to be followed prior to flood levels reaching unsafe levels.

It is recommended that evacuation of the building takes place prior to a predicted flood event but should you find yourself in the building, on the upper floors, during a flood event you should decide if it is safe for you to enter the flood water. It may be more appropriate for you to remain in the building.

It is also recommended that the ground floor benefits from a flood warning alarm attached to a drain within a ground floor well – this would inform evacuation or other necessary actions such as contact of emergency services.

Protection: Flood barriers are to be installed on the buildings at risk from flooding to allow some protection, intended to prevent internal flooding in some events, and allow extra time for evacuation in an extreme flood scenario. Although flood barriers should be installed at all times of flood warning or expected flooding, the site should also be evacuated as a precaution whenever it is apparent that flooding is imminent (i.e. seen on the lower Havant Road adjacent the proposed residential property).

Preparation: Subscription to the EA Flood Warning & Flood Alert Service will allow occupants to be aware of possible expected flood events, in order to have flood barriers ready for deployment and be prepared in advance for any necessary evacuation.

Flood Warnings

The Environment agency flood risk early warning system contacts the primary designated number. Should they be unavailable, the secondary number is contacted.

Contact Name (1st): _____ Number: _____
 Contact Name (2nd): _____ Number: _____

The property can be signed up the Environment Agency Flood Warning Scheme (<https://fwd.environment-agency.gov.uk/app/olr/home>) 0845 988 1188.

Warning	Message	Timing	Action on Alert
 FLOOD ALERT	Flooding is possible. Be prepared.	2 hours to 2 days in advance of flooding.	■ Be prepared for flooding. ■ Prepare a flood kit. ■ Check flood barriers are ready for deployment.
 FLOOD WARNING	Flooding is expected. Immediate action required.	Half an hour to 1 day in advance of flooding.	■ Act now to protect your property. ■ Block doors with flood barriers, and cover airbricks and other ventilation holes. ■ Move pets and valuables to a safe place. ■ Keep a flood kit ready. ■ Move any critical equipment and information to a safe location.
 SEVERE FLOOD WARNING	Severe flooding. Danger to life.	When flooding poses a significant threat to life and different actions are required.	■ Be ready should you need to evacuate from the property. ■ Co-operate with the emergency services and call 999 if you are in immediate danger.

Warning Removed	No further flooding is currently expected for your area.	Issued when a flood warning is no longer in force.	▪ Flood water may still be around and could be contaminated. ▪ If you've been flooded, ring your buildings and contents insurance company as soon as possible.
Action On Alert			
Flood Alert	• Person(s) responsible for receiving flood warnings to keep up to date with the situation by watching local television news or tuning in to your local radio station on a portable radio • Decide how flood alerts and the decision to evacuate will be communicated and obtain help and equipment to do this if required • Keep a list of important contacts to hand or store them on your mobile phone • Consider who will need extra support during a flood event • Think about if there is anything that you want to keep particularly safe (high value) that you can move now to a safer location (as high as possible in your property) • Know how to turn off the gas, water and electricity • Prepare a Flood Kit, which could contain warm and waterproof clothing, a torch, a portable radio (battery or wind up), rubber gloves, a first aid kit (containing all important medication), food, bottled water and blankets together with a copy of important documents		
Flood Warning	• Keep up to date with the situation by tuning in to your local radio station on a portable radio • Keep your Flood Kit close to hand • Move important items to a safe place (high shelf if possible) • Move people and vehicles to higher ground and Fit flood protection items (door barriers) • Do not assume that the emergency services will be able to assist, they may be helping more vulnerable people • Switch off gas, water and electricity supplies (do not touch electrical item if they are wet or if you are standing in water) • Listen to and act upon the advice given by Emergency Services and evacuate if instructed • Avoid walking or driving through floodwater. 150mm (6 inches) depth of fast flowing water is enough to knock over an adult and 600mm (2 foot) of water can move a car		
Warning Removed	• Make sure it is safe to re-enter your property. Wait for the Environment Agency to state that no flood warning is in force and for the Emergency Services to confirm that it is safe to re-enter.		

	- Floodwater can contain bacteria and harmful substances including sewage so protect yourself by wearing rubber gloves, eye protection, waterproof boots and waterproof over-clothes before entering any areas affected by floodwater. - If your property was damaged by floodwater, contact your insurance company. You may be covered if you incur accommodation costs due to not being able to stay in your property - Take photographs to record any damage to pass on to your insurance company - Get a qualified electrician to check your electrics and a qualified engineer to check your heating system before switching them back on
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Utilities Contacts				
Company/Type	Contact No.	Account No.	Switched Off (Y/N)	Notes (e.g. location of cut-off)
Electricity				
Gas				
Water				
Southern Water				
Telephone				
Insurance				
Landlord				

Documentation Control
This document is to be completed and kept up-to-date by the building owner and provided to all occupants for consideration, further completion and guidance. This document is to be reviewed on January 1st every three years

Version Control					
Version No.		Issued on (Date)		Valid Until (Date)	
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Conditions and Limitations

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