

Prepared on behalf of

1215 Heritage Homes Ltd

FLOOD RISK ASSESSMENT

**Proposed Residential Development
Southampton Road, Alderbury**

Flood Risk Assessment

Acknowledgements:

Disclaimer

The methodology adopted and the sources of information used by Sanderson Associates (Consulting Engineers) Ltd in providing its services are outlined within this Report.

Any information provided by third parties and referred to herein has not been checked or verified by Sanderson Associates (Consulting Engineers) Ltd, unless otherwise expressly stated within this report.

This report was checked and approved on the 14 November 2019 and the Report is therefore valid on this date, circumstances, regulations and professional standards do change which could subsequently affect the validity of this Report.

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Site Location Plan: 10631/001

Proposed Drained Areas: 10631/002B

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APPENDIX B

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1 Introduction

- 1.1 Sanderson Associates (Consulting Engineers) Ltd have been appointed to undertake a Flood Risk Assessment for a proposed residential development on land off Southampton Road, Alderbury, Wiltshire.
- 1.2 The assessment discusses the present and future flood risk to the site, using a risk based approach and reference to the Sequential and Exception Test where appropriate.
- 1.3 This assessment of flood risk has been undertaken taking into account the National Planning Policy Framework, 2021 (NPPF) and associated Planning Practice Guidance, 2014 (PPG).
- 1.4 The report also looks at the existing and proposed surface water drainage mechanism and considers drainage requirements to ensure a suitable and acceptable strategy for surface water discharge is pursued.
- 1.5 A formal consultation with the Environment Agency has not taken place as their generalised mapping data shows the site is located within Flood Zone 1. Environment Agency and local water authority mapping data has been reviewed and referred to during the production of this report.
- 1.6 This report has been updated to include reference to current flood data from an Envirocheck flood screen report (Appendix B) and to address comments raised by the drainage authority dated 10th May 2022 (Appendix B)

2 Existing Situation

2.1 *Existing Site Description*

- 2.1.1 The site is located within the village and Civil Parish of Alderbury, Wiltshire which is situated 5 km southeast of Salisbury. An O.S. Reference for the site is: 419078, 127045. A location plan, referenced 10631-001 included in Appendix A shows the sites location and surroundings.
- 2.1.2 The development is currently undeveloped land located to the north and to the rear of properties that front onto Southampton Road. A review of historical imagery does not suggest that the site has been previously developed. Therefore for the purposes of this assessment the development site is deemed to be Greenfield.
- 2.1.3 The site is bound to the north by sports pitches/recreational facilities. To the east, south and west by residential properties. Southampton Road is also located to the south of the development site.
- 2.1.4 There is currently no vehicular access to the site. Aerial imagery shows a number of footpaths crossing the site, but O.S. mapping does not record these as being formalised.
- 2.1.5 The closest watercourse to the site is an unnamed channel which is located approximately 250m to the northwest at its closest point and generally flows from southwest to northeast in the vicinity of the site. The watercourse appears to be a minor agricultural drain located at the perimeter of agricultural land.
- 2.1.6 The development site generally grades from southwest to northeast with levels ranging from approximately 77m AOD at its boundary with properties that front onto Southampton Road to 73m AOD at the northern boundary with the adjacent recreational facilities.
- 2.1.7 The site area is 12,521m² (1.252Ha) and as above is undeveloped Greenfield land. WinDES Source Control software has been used to calculate the existing Qbar surface water run off rate. The IH124 method has been used, which requires

calculations to be carried out for an area of 50Ha and proportioned down to the site area. The existing Greenfield Run Off rate (Q_{bar}) has been calculated at 0.616 l/s.

An existing runoff rate for a 1:100 year event has also been calculated at 1.97 l/s. WinDES calculations are contained in Appendix C of this report.

3 Proposed Development

3.1 Site Proposals

- 3.1.1 It is proposed that the site is re-developed for residential use with the construction of 32 detached and semi-detached residential dwellings. The development will also have associated access, hardstanding/parking facilities and open green/garden areas.
- 3.1.2 It is proposed that access/egress will be taken from the south via a formal access off Southampton Road that will be constructed as part of the development.
- 3.1.3 On assessing the proposed site layout, the overall site area remains at 12,521m² (1.252Ha). Drawing 10631-002B, contained in Appendix A, shows a take-off of potential drained/undrained surface to enable an initial assessment of the proposed surface water runoff rate. The areas equate to 2,305m² of buildings/positively drained areas, 3,404m² of permeable surfaced areas and 6,810m² of open green/undrained areas.
- 3.1.4 WinDES system 1 software has been used to calculate a proposed unrestricted 1 in 1 year surface water run-off rate, based on the take-off of areas of 2305m² of positive drainage (shown on Drawing 10631-002B). The unrestricted 1 in 1 year surface water run-off rate has been calculated at 26.3l/s (WinDES calculation contained in Appendix C).
- 3.1.5 As the existing Qbar runoff rate for the site is 0.616 l/s and the existing 1:100 year rate is 1.97 l/s it would be unacceptable to discharge surface water from the proposed development at the calculated unrestricted rate 26.3 l/s. As such, measures should be included in the drainage design to restrict and control the surface water flow to mimic the existing site discharge. Section 8 of this report will look at potential surface water management solutions at this location, in line with Part H3 of the Building Regulation, 2010.
- 3.1.6 The development's drainage should be designed and implemented in line with current guidance, advice and the requirements of the local authority and local

water authority to ensure suitable measures are introduced to restrict and manage surface water discharge.

4 Consultations

- 4.1 Environment Agency flood mapping confirms that the sites demise is located wholly within fluvial Flood Zone 1. Flood Zone 1 is land that has been assessed as having a less than 1 in 1000 (0.1%) annual probability of flooding from a fluvial source in any given year and is the lowest risk flood zone in line with National Planning Policy Framework delineation.
- 4.2 DEFRA groundwater mapping confirms the site is not located a receptor sensitive Groundwater Source Protection Zone. These are areas around a point of abstraction or an aquifer that is sensitive to the potential risk of leeching pollutants. The closest designated areas are located approximately 3.0km to the north in the vicinity of Laverstock and 2.0km to the southeast in the vicinity of Pepperbox Hill.
- 4.3 DEFRA geological mapping shows the sites underlying strata consists of an undesignated/unproductive superficial (drift) and a Secondary A bedrock aquifer. Undesignated/unproductive aquifer are layers that generally have a very low water bearing capacity/void ratio. Secondary A aquifers are described as strata that have a level of water storage/void capacity and may support base river flow on a local rather than strategic scale. Secondary A aquifers were previously designated as minor aquifers.
- 4.4 Wessex Water have provided apparatus plans for the area of the site, these are contained in Appendix B of this report.
- 4.5 Further mapping data has been reviewed and will be referred to in Section 5 of this report.
- 4.6 A consultation from the LLFA has been obtained dated May 2022 and is included in Appendix B. this report has been updated to address the comments raised in the consultation.

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- 4.7 An Envirocheck flood screen report has been obtained for the site (Appendix B) to provide current flood data. This indicates there has been no change in flood risk status since completion of the original report in 2019.

5 Assessment of Flood Risk

Information on flood risk has been obtained from an Envirocheck flood screen report (Appendix B) and is discussed in the following sections.

5.1 Surface Water

- 5.1.1 The main risk of flooding from overland flow comes from water channelled in the local highway network, impermeable areas within the vicinity of the site and land at a higher elevation.
- 5.1.2 Environment Agency surface water mapping has been reviewed which shows areas at an elevated risk of surface water flooding for different storm return periods.
- 5.1.3 The EA online surface water mapping shows that the area of the site, in general, is modelled to have a 'Very Low' risk of surface water flooding. A very low risk is land that has a less than 1 in 1000 annual probability of surface water flooding. A 'Very Low' risk area is the lowest risk classifications in line with surface water flood zone delineation.
- 5.1.4 A minor area, at an isolated location on the eastern boundary is shown to be at a 'Low Risk' (between a 1 in 100 and 1 in 1000 annual probability, 2nd lowest risk classification). This area appears to be a minor accumulation likely associated with a relative low point in the sites topography and does not form part of or contribute to extensive overland flow networks.
- 5.1.5 An area within proximity to the site is shown to be at a high risk of surface water flooding/accumulation. The area is located approximately 400m to the northeast in the vicinity of Alderbury and West Grimstead Primary School. A number of flow paths in the Alderbury area contribute to this at risk location. It should be noted that these do not emanate or pass through the development site, which is located at a higher elevation.

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- 5.1.6 The mitigation measures recommended in Section 7 should be implemented to ensure surface water localised to, and conveyed within the site would not affect developed property.

5.2 Fluvial/River

- 5.2.1 The closest watercourse to the site is an unnamed watercourse which is located approximately 250m to northwest at its closest point.
- 5.2.2 Environment Agency flood mapping confirms that the sites demise is located wholly within fluvial Flood Zone 1. Flood Zone 1 is land that has been assessed as having a less than 1 in 1000 (0.1%) annual probability of flooding from a fluvial source in any given year. Flood Zone 1 is the lowest risk classification of flood zone in line with planning policy delineation. No areas of higher probability flood zones (Flood Zone 2 & 3) are located within proximity to the development site.
- 5.2.3 Due to the scale of the development and the distribution of flood zones in the area. The development will not increase the flood risk to developed properties or the surrounding area.

5.3 Sewers

- 5.3.1 If any of the sewers/drainage apparatus adjacent to the site were to surcharge and flood, it is likely that any floodwaters would be shallow, relatively slow moving and constrained within the limits of the carriageway.
- 5.3.2 At the time of writing the report there was no evidence available to suggest the site has been directly affected from flooding from overloaded sewers/drainage apparatus in the past; therefore the risk of flooding from sewers would be considered low.
- 5.3.3 The mitigation measures proposed for the development as discussed in section 7 will also protect against any flooding from this source should the risk increase over the lifetime of the development.

5.4 *Groundwater*

- 5.4.1 The potential for groundwater flooding has been assessed with the aid of groundwater mapping from the Environment Agency, British Geological Survey records.
- 5.4.2 DEFRA (The Department for Environment, Food and Rural Affairs) groundwater mapping confirms that the site overlays a Secondary A bedrock aquifer, these are described as strata that have a level of intergranular and/or fracture permeability and usually provide a level of water storage. They may support water supply and/or river base flow on a local rather than strategic scale. In most cases, secondary aquifers are strata that were previously designated as minor aquifers.
- 5.4.3 The superficial/drift strata is classed as an unproductive aquifer. These are described as strata that have a predominantly low permeability/void ratio.
- 5.4.4 The British Geological Survey geological map of the UK has been reviewed and confirms an unrecorded superficial strata (suggesting limited deposits/shallow rockhead) and bedrock strata of the Wittering Formation consisting of sand, silt and clay.
- 5.4.5 The British Geological Survey hold a borehole record that was excavated 350m to the north of the site, as part of highway works associated with the A36 and is located in same geological region. The reviewed borehole records available show a superficial strata of loose sandy silt to a depth of 1.98m below ground level (bgl) underlain by firm to stiff silty, sandy clay. Groundwater was encountered during the excavation at a depth of 1.22m bgl, no reference is made to whether this was in the form of seepage or standing water. The British Geological Survey Groundwater Timeline confirms that at the time of excavation (July 1970) groundwater levels were in there normal range. (It should be noted that the borehole is remote from the site and can only give any idea of conditions within the vicinity of the site.)

5.4.6 From reviewed evidence it is unlikely that groundwater would be an issue at this location. It should also be noted that no subsurface structures are proposed as part of the development outside of drainage and foundation works.

5.4.7 The mitigation measures proposed for the development as discussed in section 7 will also protect against any flooding from this source should the risk increase over the lifetime of the development.

5.5 *Flooding from Reservoir Failure*

5.5.1 The site is shown on EA mapping to be outside and not within proximity to areas at risk of reservoir flooding. The maintenance, monitoring and safety of the reservoir is bound by the Reservoir Safety Act 1975 which sets out the safety regulations and legal responsibilities for this structure.

5.6 *Climate Change*

5.6.1 It is generally considered that the intensity of rainfall will increase by up to 40% by the year 2085 and that winter months will become proportionately wetter.

5.6.2 These factors have been considered in the assessment of flood risk from all sources including watercourses and within drainage calculations allowance for climate change/uncertainty.

6 Sequential and Exception Test

6.1 Sequential Approach

- 6.1.1 The site is considered to lie within Flood Zone 1 as confirmed by the Environment Agency mapping data.
- 6.1.2 The site is currently open green land and its current/last use is classed as being 'water compatible' in terms of flood risk vulnerability.
- 6.1.3 The proposed residential use of the site is classed by NPPF guidance as being 'More Vulnerable' in terms of flood risk vulnerability.
- 6.1.4 In accordance with NPPF guidance a 'More Vulnerable' development located in Flood Zone 1 is an appropriate development in terms of flood risk, therefore the Exception Test would not be required as part of a planning application for this development.
- 6.1.5 As the site is located in Flood Zone 1 there can be no other sites in the area with a lower risk from fluvial flooding

7 Mitigation Measures

- 7.1 It is important that any proposed development that has the potential to change the flood mechanisms on a site is designed such that there is no increased flood risk to the site itself, or sites in the vicinity. Mitigation Measures should be introduced into the development to ensure that the potential for flooding of property and the safety of the end user is reduced, the below section will propose a number of measures in response to the report risk:
- 7.2 A suitable drainage strategy should be implemented for the development that meets the requirement of local/national planning policy and meets with the requirements of all relevant stakeholders.
- 7.3 Any hard standing areas to the immediate outside of the buildings should fall away from entrance points to the building, wherever possible, with a minimum gradient of 1 in 100. If this is not possible then the introduction of linear drainage at the entrance points to the building will provide extra protection to the building in times of extreme rainfall events.
- 7.4 Where possible non-trafficked hardstanding and footway areas should be constructed to naturally fall into adjacent garden/green areas.
- 7.5 Properties should have a finished floor level higher than immediate development external areas to prevent potential surface water flooding of the dwellings, from localised surface water accumulations at the properties external interface.
- 7.6 Drains associated with the development should be cleared annually to ensure the risk of blockages is reduced.

8 Drainage Design Considerations

8.1 *Foul Drainage*

- 8.1.1 The sites foul system should be constructed in line with 'Sewers for adoption - a design and construction guide for developers' 6th edition. (Potentially superseded by 7th edition by the adopting authority).
- 8.1.2 Foul water from the site should connect into the local public sewer network based on an application to Wessex Water. An assessment should also be carried out to ascertain if the site can drain foul water by gravity or whether an element of pumping would be required in order to facilitate a direct connection.
- 8.1.3 The Wessex Water apparatus plans contained in Appendix B shows a combined sewer located to the south of the site in Southampton Road. A foul and combined sewer to the west of the site in Junction Road and a combined/foul sewer located to the east in Firs Road. Site levels suggests that a direct connection into Southampton Road would require foul pumping. A connection into Junction or Firs Road would potentially be feasible but would require easements and the crossing of third party land.

8.2 *Methods of Surface Water Disposal*

- 8.2.1 The current Building Regulations, Part H3, detail the favoured hierarchy of surface water disposal being in order of the following preference: to ground by infiltration, to watercourse and then to sewer.
- 8.2.2 A review on the viability of each of these hierarchy options is presented in section 8.3, 8.4 and 8.5

8.3 *Infiltration Drainage*

- 8.3.1 Infiltration methods of drainage such as soakaways and filter drains percolate surface water runoff allowing it to permeate into the subsoil at its natural rate, mimicking the natural process of drainage and as such are subject to the local ground conditions.
- 8.3.2 DEFRA (The Department for Environment, Food and Rural Affairs) groundwater mapping confirms that the site overlays a Secondary A bedrock aquifer, these are described as strata that have a level of intergranular and/or fracture permeability and usually provide a level of water storage. They may support water supply and/or river base flow on a local rather than strategic scale. In most cases, secondary aquifers are strata that were previously designated as minor aquifers.
- 8.3.3 The superficial/drift strata is classed as an unproductive aquifer. These are described as strata that have a predominantly low permeability/void ratio.
- 8.3.4 The British Geological Survey geological map of the UK has been reviewed and confirms an unrecorded superficial strata (suggesting limited deposits/shallow rockhead) and bedrock strata of the Wittering Formation consisting of sand, silt and clay.
- 8.3.5 The British Geological Survey hold a borehole record that was excavated 350m to the north as part of highway works associated with the A36 and is located in same geological region. The reviewed borehole records available show a superficial strata of loose sandy silt to a depth of 1.98m below ground level (bgl) underlain by firm to stiff silty, sandy clay. Groundwater was encountered during the excavation at a depth of 1.22m bgl, no reference is made to whether this was in the form of seepage or standing water. (it should be noted that the BGS borehole record is remote for the site and can only provide an idea of subsurface conditions in the sites general vicinity.)









- 8.3.6 As the geological records suggest that infiltration would potentially be feasible at this location, site specific infiltration testing to BRE 365 has been carried out, the results were provided by 1215 Heritage Homes are contained in Appendix C.

Testing was carried out at three locations on the site with three tests being carried out at each location over consecutive days in line with BRE 365. (the results are in Appendix C).

- 8.3.7 In accordance with good practise and general guidance the siting of any potential soakaway must be set a minimum of 6.0m distance away from developed properties and a minimum of 3.0m away from the site boundary.

- 8.3.8 In the current arrangement a mixture of shared and individual property soakaways would be required to accommodate this method of drainage on the site as well as the utilisation of permeable paving for roads and hardstanding areas. A permeable paving and subbase storage/infiltration system could also be oversized to accommodate roof and driveway areas.

- 8.3.9 For the purpose of the initial soakaway feasibility the worst case soakaway test result will be used to ensure a robust assessment. On the associated test results this is labelled Test Pit 1, which returned an infiltration coefficient of 0.05920m/hr.

- 8.3.10 WinDES calculations have been carried out based on the overall drained area of the site of 0.571Ha, this includes building roof areas and external areas denoted as permeable surfaces on the proposed drained area plan.

The calculations show the total footprint area of permeable surfaces required for variable depths of subbase to provide the necessary storage requirements.

From plan 10631-002B it can be seen that there is a potential maximum area of permeable surfaces of 3,406m², infiltration and storage calculations show that a subbase depth of between 0.2m and 0.3m would be required to provide the necessary storage volume to accommodate the 1 in 100 year + 40% storm event based on the infiltration characteristics of the site.

This type of system would be required to be installed to British Standard 7533. (WinDES calculations contained in Appendix C).

- 8.3.11 From the above it can be seen that the site would be suitable for surface water drainage by infiltration/soakaway apparatus.

8.4 *Discharge to Watercourse*

- 8.4.1 The closest watercourse to the site is an unnamed channel which is located approximately 250m to the northwest at its closest point and appears to be a minor agricultural drain located at the perimeter of agricultural land.

- 8.4.2 Due to the remote nature of the closest watercourse and the prevalence of third party land between the site and the watercourse, it is unlikely that connection directly to watercourse would be viable at this location.

8.5 *Discharge to Sewer*

- 8.5.1 Wessex Water require investigation into alternative methods of surface water disposal such as infiltration techniques or a discharge to a watercourse, in accordance with the surface water management hierarchy as outlined in Building Regulations Part H, prior to accepting a positive discharge to public sewer.
- 8.5.2 Based on the above evidence infiltration is a viable option at this location in terms of substrata permeability, therefore at this stage a surface water connection to public sewer would not be pursued. It is also understood that the site is remote from the public system.

8.6 SUDs Audit

A SuDS audit has been undertaken (**Table 1**) to determine suitable methods of surface water disposal. The following SuDS may be suitable for use and should be considered within the detailed drainage design:

- Surface water discharge to infiltration soakaway
- Treatment and storage to Porous paving
- Attenuation by pavement storage, Oversize pipework
- Treatment by filter strips
- Flow control device to restrict surface water discharge rate
- Provision of water butts to reduce potable water use to gardens

Table 1. SuDS Audit

SuDS Feature	Discussion	Conclusion
Soakaways	Infiltration drainage is viable	Include in the surface water design
Porous paving	Infiltration drainage is viable	Include within the surface water design to provide treatment and attenuation storage. Consider use of sealed system
Swales	- Cannot be easily integrated into landscaping areas - Improves water quality through filtration and phytoremediation - Landscaping areas would need to be of sufficient size	Not viable – landscaping areas are not of sufficient size for these features
Green roofs	Vegetated roofs that reduce runoff volume and rate	Unlikely to be viable within the proposed development
Attenuation ponds	- Can be easily integrated into landscaping areas and designed to provide aesthetic benefits - Landscaping areas would need to be of sufficient size	Not viable due to space restriction on site
Retention ponds	- Can be easily integrated into landscaping areas and designed to provide aesthetic benefits - Improves water quality through filtration and phytoremediation	Not viable due to space restriction on site
Geocellular storage	Able to solely provide the required attenuation volume	Could be viable within the proposed development but not preferable
Filter strips	- Can be easily integrated into landscaping areas and designed to provide aesthetic benefits - Landscaping areas would need to be of sufficient size	Filter strips could be accommodate to garden areas and landscaping
French drains	- Can be easily integrated into landscaping areas and designed to provide aesthetic benefits - Landscaping areas would need to be of sufficient size	French drains could be accommodate to garden areas and landscaping
Oversize pipework	- Can be easily integrated into landscaping areas and designed to provide aesthetic benefits - Able to solely provide the required attenuation volume	Viable within the proposed development and used for provision of additional attenuation storage
Rainwater harvesting	Reduces demand on mains water and is able to provide source control of surface water runoff	Should be included only as water butts to reduce potable water use to gardens
Flow control device	Able to control discharge flow to infiltration features	A flow control devise will be require to reduce the flow discharge to soakaways

9 Surface Water Drainage Strategy

9.1 The purpose of the Surface Water Drainage Strategy is to set the principle of a drainage strategy. The final details would be subject to detailed design and confirmed at the detailed design stage and following consultations with the Local Planning, Highway and Drainage Authority.

9.2 It is clear that there is an opportunity to provide a level of SUDs techniques appropriate for the new site which will contribute to a sustainable development and improve urban design, by balancing the different issues that influence the development.

9.3 In regards to proposed surface water discharge the following strategy is proposed.

The review of the H3 hierarchy indicates the surface water discharge to sewer or watercourse is not viable

The on site infiltration tests indicate that surface water discharge via infiltration is viable.

The SUD's Audit indicates the following methods of treatment and storage should be utilised in the detailed design.

- Surface water discharge to infiltration soakaway
- Treatment and storage to Porous paving
- Attenuation by pavement storage, Oversize pipework
- Treatment by filter strips
- Flow control device to restrict surface water discharge rate
- Provision of water butts to reduce potable water use to gardens

9.4 The assessment of the existing surface water discharge from the undeveloped site indicates a Qbar discharge rate of 0.616 l/s and 1:100 discharge rate of 1.97 l/s. The unrestricted surface water discharge from the developed site is calculated as

26.3 l/s and, as such, the discharge from the developed site will require restricting by flow control device to an agreed discharge rate with associated attenuation provided.

10 Conclusion

- 10.1 This report serves to review and assess the sources of potential flooding to the site, the impact of the proposed development on the flood mechanisms of the site and the impact on the surrounding area in accordance with NPPF.
- 10.2 Sequential and Exception Tests have been assessed in accordance with NPPF and it is concluded that the development is suitable for this location.
- 10.3 The flood risk to the site from a number of sources of flooding are not considered significant, suitable mitigation measures have been recommended in response to the assessed risk.
- 10.4 This report concludes that the site can be developed without increasing flood risk to the site itself and other sites in the vicinity with the implementation of suitable mitigation measures.

APPENDIX A

Site Location Plan: 10631/001

Proposed Drained Areas: 10631/002B

Received Layout Plan



O.S. Grid Reference
419078, 127045

Rev	Amendment	Drawn	Date	Checked



(consulting engineers) ltd
Highways | Traffic | Transportation | Water
T 01924 844080 mail@sandersonassociates.co.uk
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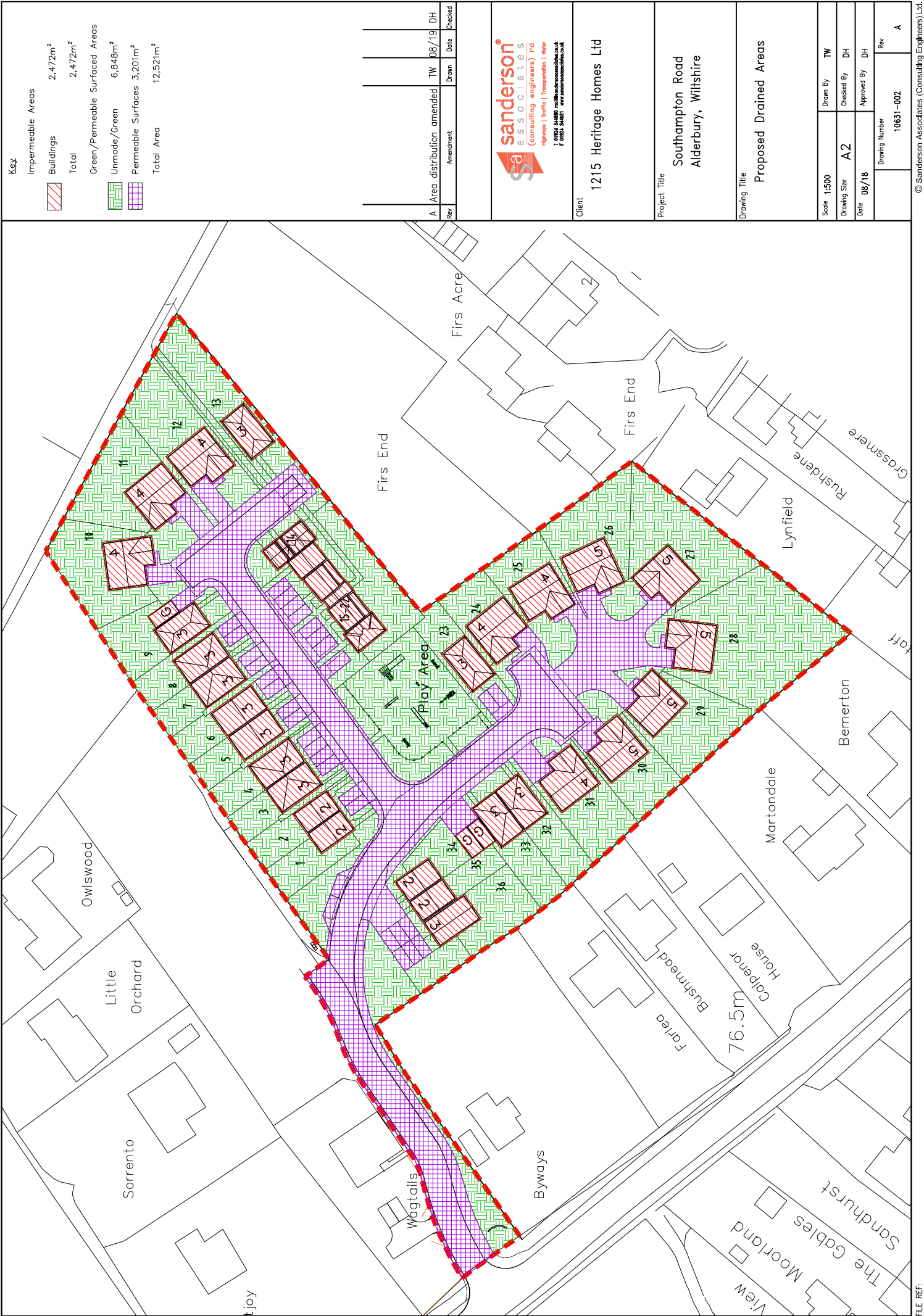
Project Name

Proposed Residential Development
Land off Southampton Road
Alderbury, Wiltshire

Drawing Title

Site Location Plan

Scale	N.T.S	Drawn By	TW
Drawing Size	A3	Checked By	DH
Date	08/18	Approved By	DH
Drawing Number		Rev	
10631-001			

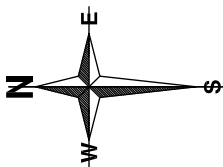


Day 10: Assessment are carried out through the design stage of the project, in accordance with the company procedures in the Health and Safety manual and the Approved Code of Practice for the Construction (Design) Regulations. It was found that the design team had taken account of the health and safety issues and it was possible to the design have been identified and noted for action on the Assessment Sheet, specific to this project. This drawing should be used in conjunction with the Risk Assessment. The information is to be provided to the Principal Designer to be included in the Health and Safety Plan.

GENERAL NOTES:

2. All drawings to be checked on site.
3. The contractor must verify all figured dimensions on site before commencing any work or making any shop drawings.
4. The drawings is the sole copyright of L219 Heritage Homes Limited and no part may be reproduced without written consent.

NOTES:

000
REVISION:
STATUS:

CLIENT: 11215HERTIAGEHOMES

PROJECT: MAINLAND DEVELOPMENT

DRAWING TITLE: SITE_LAYOUT

HERITAGE HOMES
TWELVE FIFTEEN

DATE:	11.11.2019	SCALE:	NTS @ A3
DRAWN BY:	CF	CHECKED BY:	
DRAWING NUMBER:		RETURN	02
1215_01			

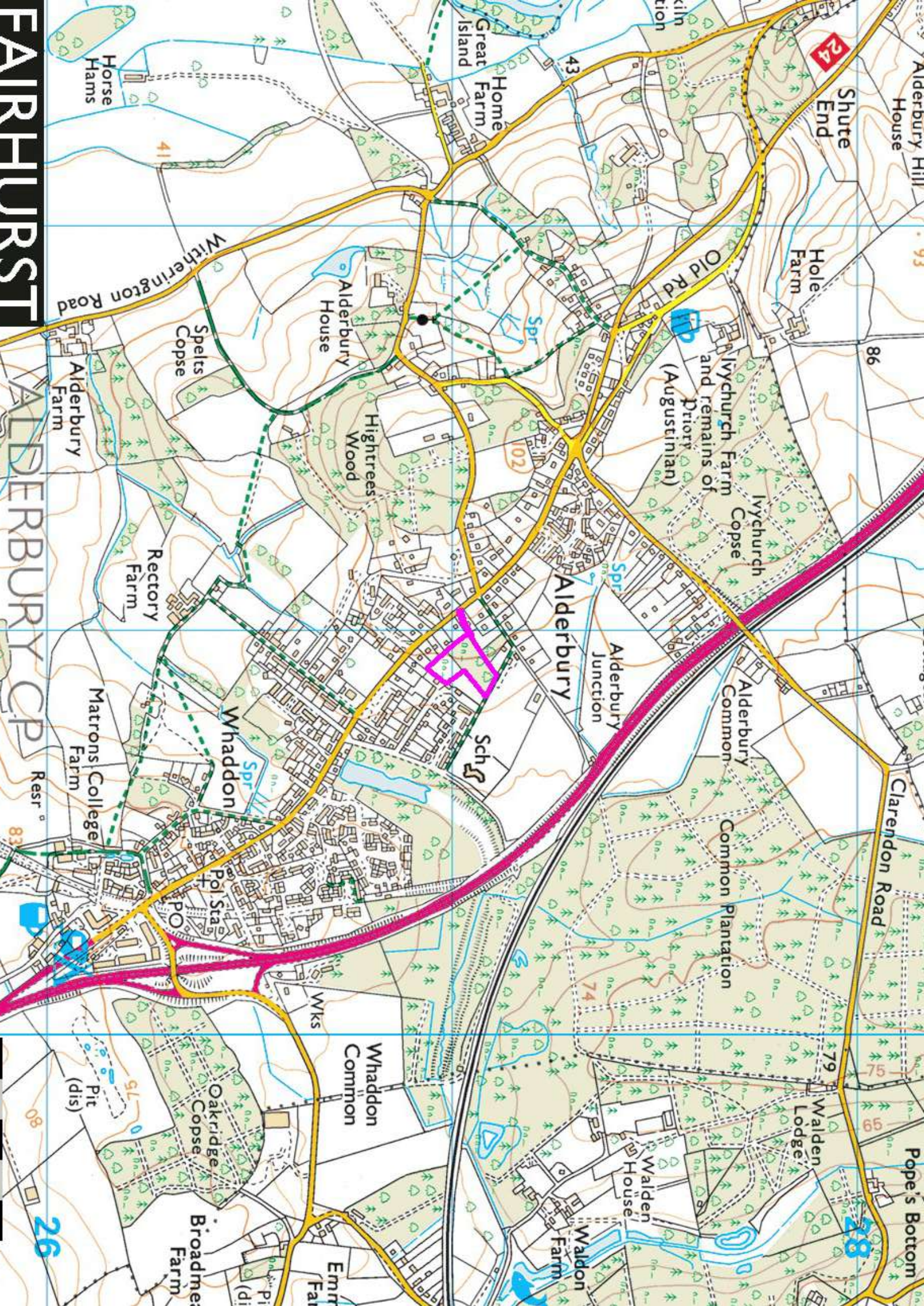


PRIVATE

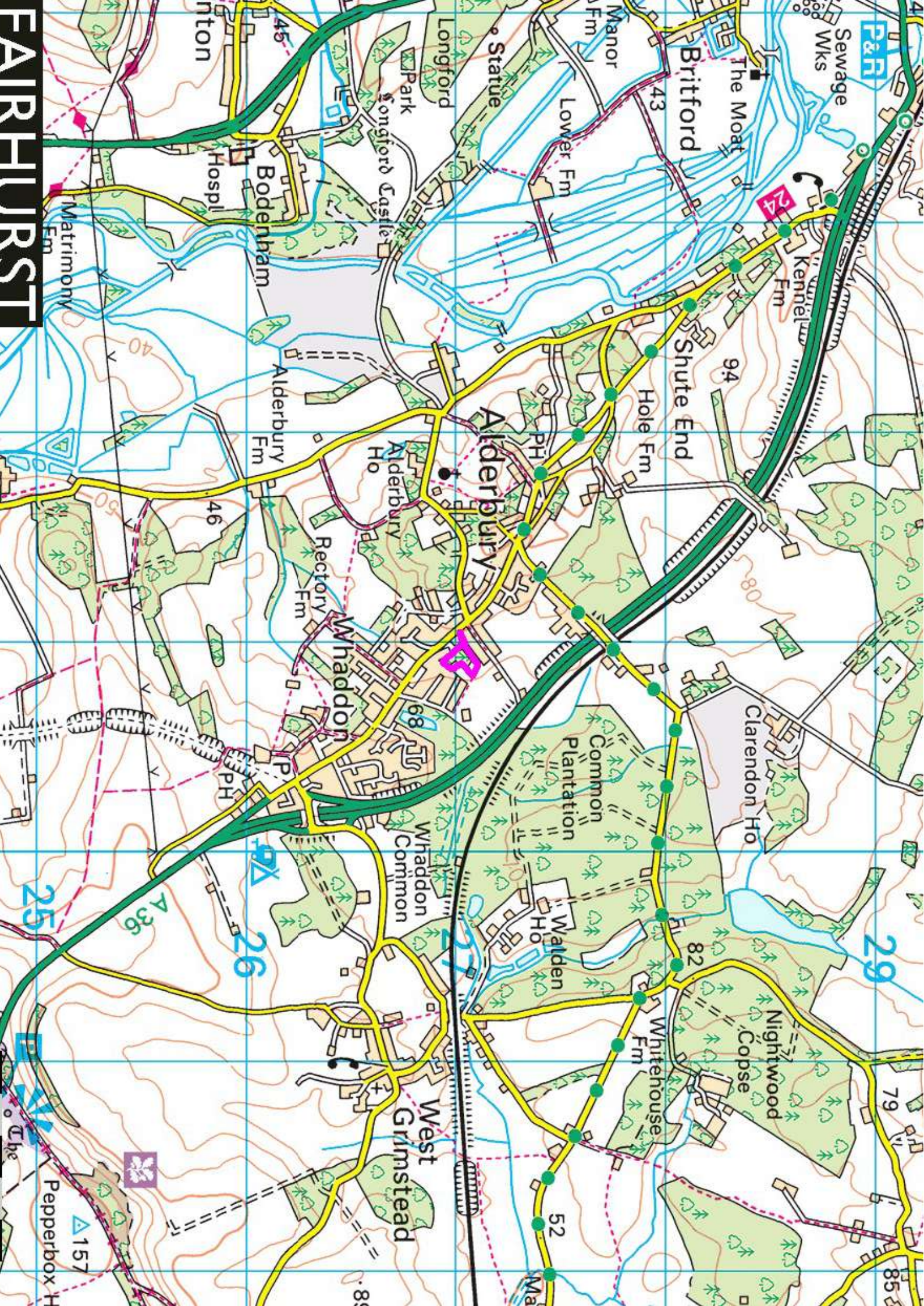
2 BED - 884SQFT / 906SQFT	- 3 DWELLINGS
3 BED - 1016SQFT / 1162SQFT	- 8 DWELLINGS
4 BED - 657SQFT / 1708SQFT	- 3 DWELLINGS
5 BED - 1995SQFT	- 5 DWELLINGS
TOTAL = 19 DWELLINGS	

AFFORDABLE/SHARED

1 BED - 470SQFT / 545SQFT - 2 DWELLINGS
2 BED - 801SQFT / 884SQFT - 6 DWELLINGS
3 BED - 1007SQFT / 1182SQFT - 5 DWELLINGS
TOTAL = 13 DWELLINGS

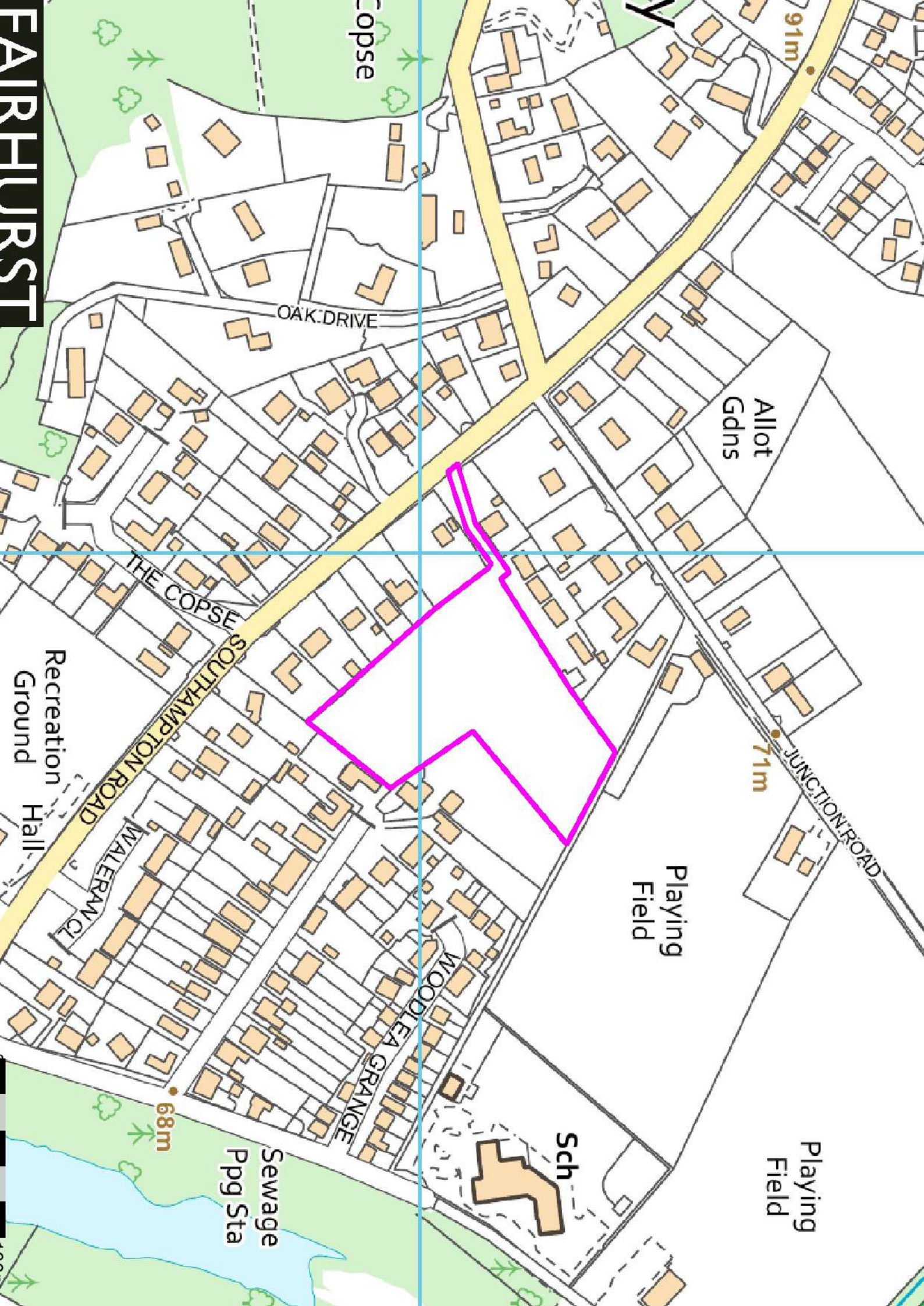


FAIRHURST





FAIRHURST



FAIRHURST

EA/NRW Flood Data Map (1:10,000)

General

- Specified Site
- Specified Barrier(s)
- Bearing Reference Point

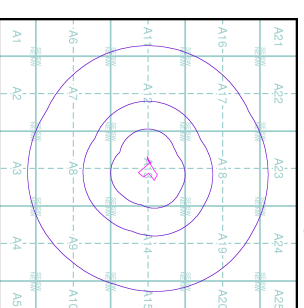
Flood Data

- Extreme Flooding from Rivers or Sea without Defences (Zone 2)
- Flooding from Rivers or Sea without Defences (Zone 3)
- Area Benefiting from Flood Defence
- Flood Water Storage Areas

Contours (height in metres)

- Standard Contour
- Master Contour
- Spot Height
- Mean Low Water
- Mean High Water

EA/NRW Flood Data Map - Slice A



Order Details

Order Number: 296679779_1_1
Customer Ref: 149596
National Grid Reference: 419070, 127030
Slice: A
Site Area (Ha): 1.24
Search Buffer (m): 1000
Site Details
Felix Vifa, Southampton Road, Alderbury, SALISBURY, SP5 3AF

FAIRHURST

JBA 75 Year Return Flood Map (Undefended) (1:10,000)

General

- Specialist Site
- Specified Buffer(s)
- Bearing Reference Point

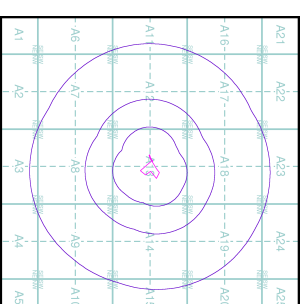
Modelled Flood Depth

Pluvial Depth	Fluvial Depth	Coastal Depth
0.1m	0.01m - 0.05m	0.01m - 0.05m
0.1m - 0.3m	0.05m - 0.1m	0.05m - 0.1m
0.3m - 1m	0.1m - 0.3m	0.1m - 0.3m
>1m	0.3m - 1m	0.3m - 1m
	>1m	>1m

Contours (height in metres)

- Standard Contour
- Master Contour
- Spot Height
- Mean Low Water
- Mean High Water

JBA 75 Year Return Flood Map (Undefended) - Slice A



Order Details

Order Number: 296679779_1_1
Customer Ref: 149596
National Grid Reference: 419070, 127030
Slice: A
Site Area (Ha): 1.24
Search Buffer (m): 1000
Site Details
Felix Vifa, Southampton Road, Alderbury, SALISBURY, SP5 3AF

JBA 100 Year Return Flood Map (Undefended) (1:10,000)

General

- Specialist Site
- Specialist Buffer(s)
- Bearing Reference Point

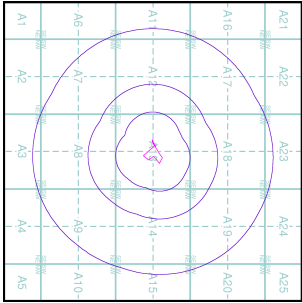
Modelled Flood Depth

Fluvial Depth	Coastal Depth
0.0m - 0.05m	0.0m - 0.05m
0.05m - 0.1m	0.05m - 0.1m
0.1m - 0.3m	0.1m - 0.3m
0.3m - 1m	0.3m - 1m
> 1m	> 1m

Contours (Height in metres)

- Standard Contour
- Master Contour
- Spot Height
- Mean Low Water
- Mean High Water

JBA 100 Year Return Flood Map (Undefended) - Slice A



Order Details

Order Number: 296679779_1_1
Customer Ref: 149596
National Grid Reference: 419070, 127030
Slice: A
Site Area (Ha): 1.24
Search Buffer (m): 1000
Site Details
Felix Vifa, Southampton Road, Alderbury, SALISBURY, SP5
3AF

FAIRHURST

JBA 200 Year Return Flood Map (Undefended) (1:10,000)

General

- Specialist Site
- Specified Buffer(s)
- Bearing Reference Point

Modelled Flood Depth

Fluvial Depth

Fluvial Depth

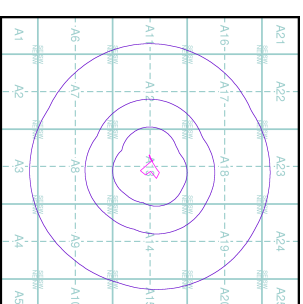
Coastal Depth

0.1m	0.01m - 0.05m	0.01m - 0.05m
0.1m - 0.3m	0.05m - 0.1m	0.05m - 0.1m
0.3m - 1m	0.1m - 0.3m	0.1m - 0.3m
>1m	0.3m - 1m	0.3m - 1m
	>1m	>1m

Contours (height in metres)

- Standard Contour
- Master Contour
- Spot Height
- Mean Low Water
- Mean High Water

JBA 200 Year Return Flood Map (Undefended) - Slice A



Order Details

Order Number: 296679779_1_1
Customer Ref: 149596
National Grid Reference: 419070, 127030
Slice: A
Site Area (Ha): 1.24
Search Buffer (m): 1000
Site Details
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FAIRHURST

JBA 1000 Year Return Flood Map (Undefended) (1:10,000)

General

- Specialist Site
- Specified Buffer(s)
- Bearing Reference Point

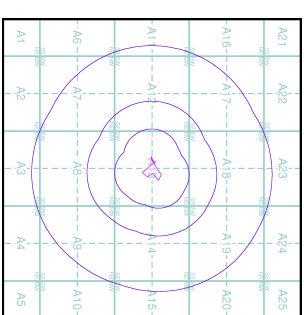
Modelled Flood Depth

Pluvial Depth	Fluvial Depth	Coastal Depth
0.1m	0.01m - 0.05m	0.01m - 0.05m
0.1m - 0.3m	0.05m - 0.1m	0.05m - 0.1m
0.3m - 1m	0.1m - 0.3m	0.1m - 0.3m
>1m	0.3m - 1m	0.3m - 1m
	>1m	>1m

Contours (height in metres)

- Standard Contour
- Master Contour
- Spot Height
- Mean Low Water
- Mean High Water

JBA 1000 Year Return Flood Map (Undefended) - Slice A



Order Details

Order Number: 296679779_1_1
Customer Ref: 149596
National Grid Reference: 419070, 127030
Slice: A
Site Area (Ha): 1.24
Search Buffer (m): 1000
Site Details
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JBA Canal Failure Map (1:10,000)

General

- Specified Site
- Specified Butte(s)
- Bearing Reference Point

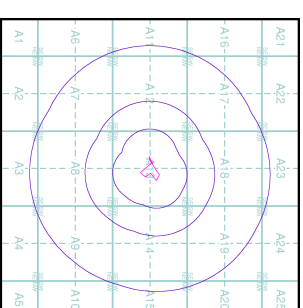
Flood Data

- Canal Failure
- Coverage

Contours (Height in metres)

- Standard Contour
- Master Contour
- Spot Height
- Mean Low Water
- Mean High Water

JBA Canal Failure Flood Map - Slice A

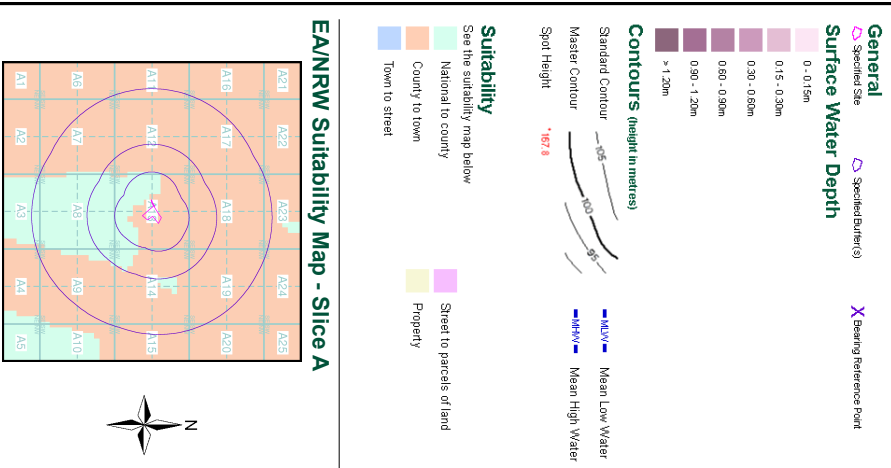


Order Details

Order Number: 296679779_1_1
Customer Ref: 149596
National Grid Reference: 419070, 127030
Slice: A
Site Area (Ha): 1.24
Search Buffer (m): 1000
Site Details
Felix Vifa, Southampton Road, Alderbury, SALISBURY, SP5 3AF

FAIRHURST

EANRW Surface Water 30 Year Return Depth Map (1:10,000)



Order Details

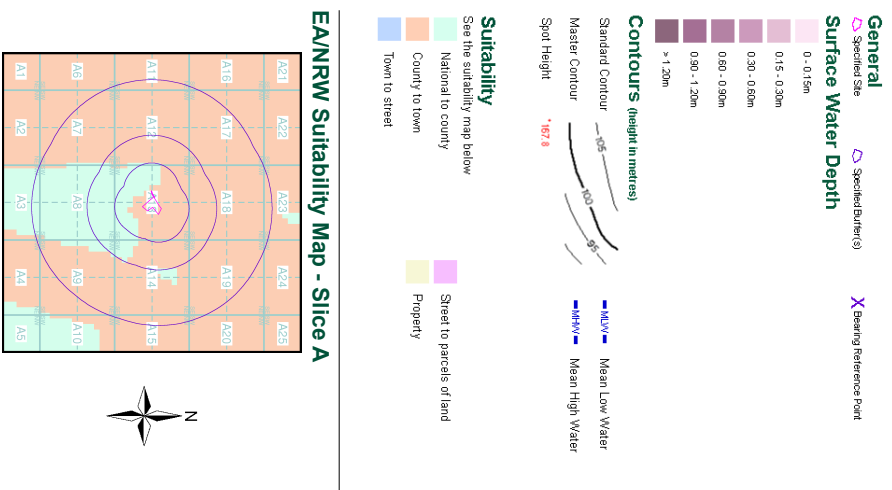
Order Number: 296679779_1_1
Customer Ref: 149596
National Grid Reference: 419070, 127030
Slice: A
Site Area (Ha): 1.24
Search Buffer (m): 1000

Site Details

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FAIRHURST

EA/NRW Surface Water 100 Year Return Depth Map



Order Details

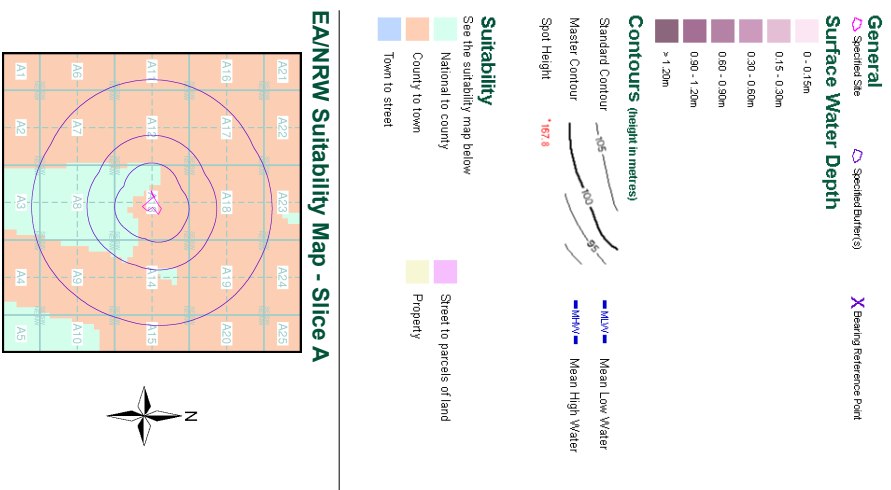
Order Number: 296679779_1_1
Customer Ref: 149596
National Grid Reference: 419070, 127030
Slice: A
Site Area (Ha): 1.24
Search Buffer (m): 1000

Site Details

Felix Vifa, Southampton Road, Alderbury, SALISBURY, SP5 3AF

FAIRHURST

EANRW Surface Water 1000 Year Return Depth Map (1:10,000)



Order Details

Order Number: 296679779_1_1
Customer Ref: 149596
National Grid Reference: 419070, 127030
Slice: A
Site Area (Ha): 1.24
Search Buffer (m): 1000
Site Details
Felix Vifa, Southampton Road, Alderbury, SALISBURY, SP5 3AF

Landmark
INFORMATION GROUP

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Web: www.environmental.co.uk

FAIRHURST

EANRW Surface Water 30 Year Return Velocity and Flow Direction Map (1:10,000)

General

- Specified Burner(s)
- Bearing Reference Point
- Surface Water Velocity and Direction
- Flow Direction at maximum velocity

- 0.00 - 0.25m/s
- 0.25 - 0.50m/s
- 0.50 - 1.00m/s
- 1.00 - 2.00m/s
- > 2.00m/s

Contours (height in metres)

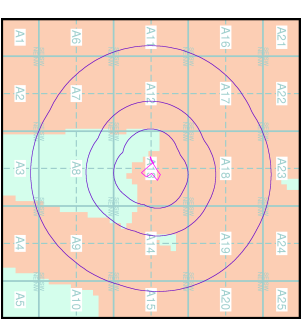
- Standard Contour
- Master Contour
- Spot Height
- Mean Low Water
- Mean High Water

Suitability

See the suitability map below

- National to county
- County to town
- Town to street
- Street to parcels of land
- Property

EANRW Suitability Map - Slice A



Order Details

Order Number: 296679779_1_1
Customer Ref: 149596
National Grid Reference: 419070, 127030
Slice: A
Site Area (Ha): 1.24
Search Buffer (m): 1000
Site Details
Felix Vifa, Southampton Road, Alderbury, SALISBURY, SP5 3AF

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EANRW Surface Water 100 Year Return Velocity and Flow Direction Map (1:10,000)

General

Specified Burner(s) X Bearing Reference Point

Surface Water Velocity and Direction

Flow Direction at maximum velocity



Contours (height in metres)

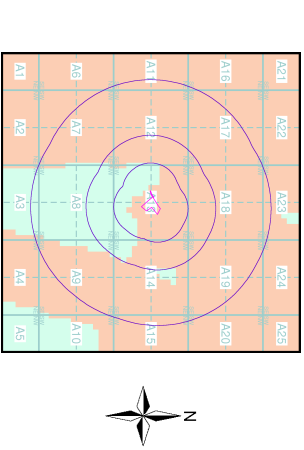


Suitability

See the suitability map below



EANRW Suitability Map - Slice A



Order Details

Order Number: 296679779_1_1
Customer Ref: 149596
National Grid Reference: 419070, 127030
Site: A
Site Area (Ha): 1.24
Search Buffer (m): 1000
Site Details
Felix Vifa, Southampton Road, Alderbury, SALISBURY, SP5 3AF

FAIRHURST

EANRW Surface Water 1000 Year Return Velocity and Flow Direction Map (1:10,000)

General

Specified Burner(s) X Bearing Reference Point
Surface Water Velocity and Direction
Flow Direction at maximum velocity

0.00 - 0.25m/s
0.25 - 0.50m/s
0.50 - 1.00m/s
1.00 - 2.00m/s
> 2.00m/s

Contours (height in metres)

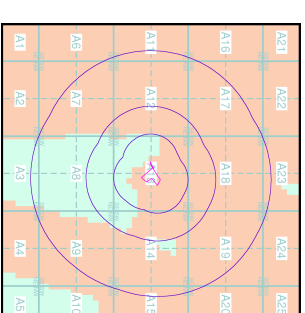
Standard Contour
Master Contour
Spot Height
Mean Low Water
Mean High Water

Suitability

See the suitability map below

National to county
County to town
Town to street
Street to parcels of land
Property

EANRW Suitability Map - Slice A



Order Details

Order Number: 296679779_1_1
Customer Ref: 149596
National Grid Reference: 419070, 127030
Slice: A
Site Area (Ha): 1.24
Search Buffer (m): 1000

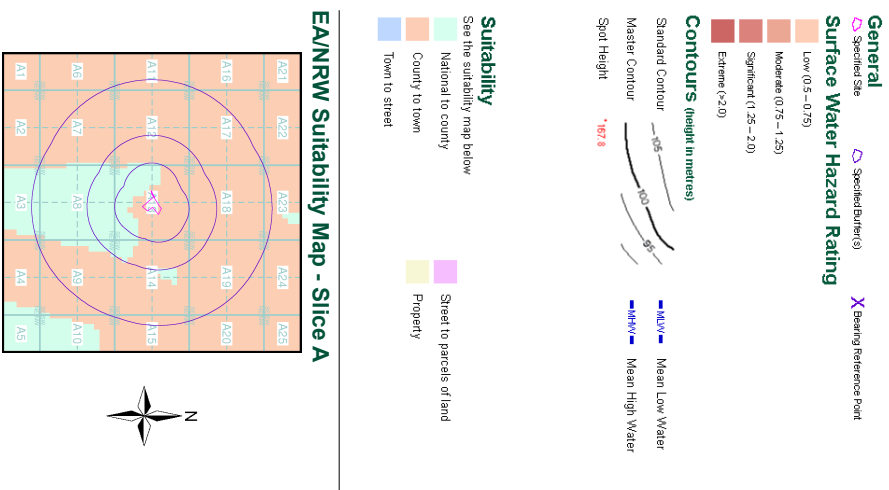
Site Details

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Landmark
INFORMATION GROUP

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Web: www.environment.co.uk

EANRW Surface Water 30 Year Return Hazard Rating Map (1:10,000)



Order Details

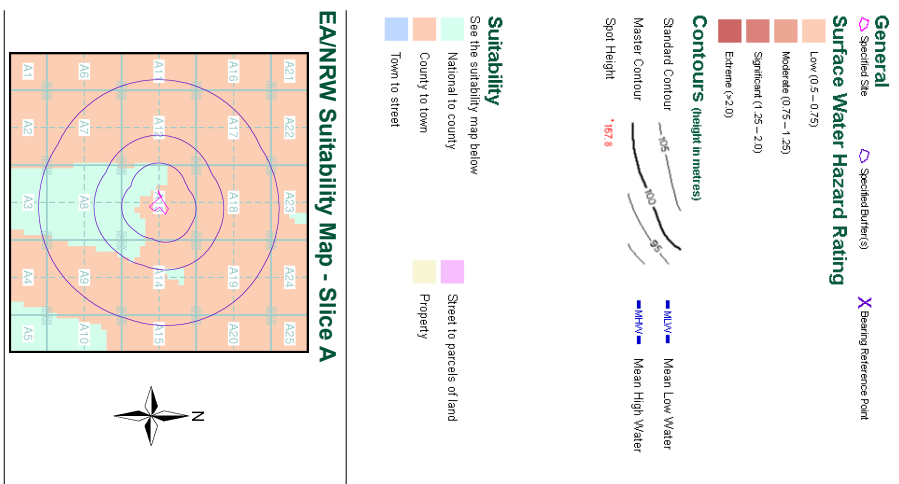
Order Number: 296679779_1_1
Customer Ref: 149596
National Grid Reference: 419070, 127030
Slice: A
Site Area (Ha): 1.24
Search Buffer (m): 1000

Site Details

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FAIRHURST

EANRW Surface Water 100 Year Return Hazard Rating Map (1:10,000)



Order Details

Order Number: 296679779_1_1
Customer Ref: 149596
National Grid Reference: 419070, 127030
Slice: A
Site Area (Ha): 1.24
Search Buffer (m): 1000

Site Details

Felix Vifa, Southampton Road, Alderbury, SALISBURY, SP5 3AF

EA/NRW Surface Water 1000 Year Return Hazard
Rating Map (1:10,000)

Moderate (0.75 – 1.25)

Significant (1.25 – 2.0)

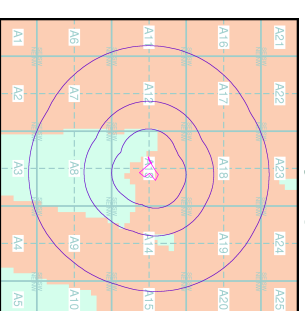
Extreme (≥ 2.0)



See the suitability map below



EA/NRW Suitability Map - Slice A



Order Details

Order Number:	296679779_1_1
Customer Ref:	149596
National Grid Reference:	419070, 127030
Slice:	A
Site Area (Ha):	1.24
Search Buffer (m):	1000

Site Details

Felix Vita, Southampton Road, Alderbury, SALISBURY, SP5
3AF

FAIRHURST

OS Water Network Lines Map (1:10,000)

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

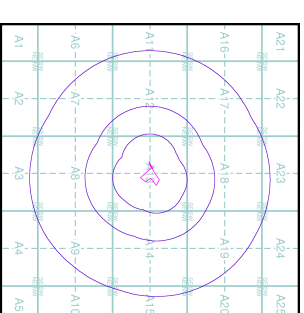
OS Water Network Data

- Canal
- Reservoir
- Foreshore
- Marsh
- Tidal River
- Inland River
- Junction
- Outlet
- Pseudo
- Drain
- Other
- Lake
- Transfer
- Lock Or Flight Of Locks
- Sea
- Source
- Other

Contours (height in meters)

- Standard Contour
- Master Contour
- Spot Height
- MLW Mean Low Water
- MHW Mean High Water

OS Water Network Map - Slice A



Order Details

Order Number: 296679779_1_1
Customer Ref: 149596
National Grid Reference: 419070, 127030
Slice: A
Site Area (Ha): 1.24
Search Buffer (m): 1000

Site Details

Felix Vifa, Southampton Road, Alderbury, SALISBURY, SP5 3AF



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EA/NRW Historic Flood Map (1:10,000)

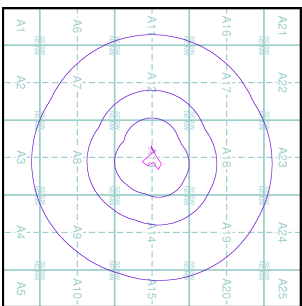
General

- Specified Site
- Specified Buffer(s)
- Bearing/Reference Point
- Map ID

Historic Flood Events Data

- Channel Capacity Exceeded (no raised defences)
- Channel Capacity Exceeded /Surface Water
- Groundwater/High Water Table
- Local Drainage/Surface Water
- Mechanical Failure
- Obstruction/Blockage - Bridge
- Obstruction/Blockage - Channel
- Historical Flood Liabilities
- Obstruction/Blockage - Culvert
- Obstruction/Blockage - Debris Screen
- Operational Failure/Breach of Defence
- Other
- Overtopping of Defences
- Surface Water
- Unknown
- Mean Low Water
- Mean High Water
- Spot Height

EA/NRW Historic Flood Map - Slice A



Order Details

Order Number: 296679779_1_1
 Customer Ref: 149596
 National Grid Reference: 419070, 127030
 Slice: A
 Site Area (Ha): 1.24
 Search Buffer (m): 1000
 Site Details
 Felix Vifa, Southampton Road, Alderbury, SALISBURY, SP5 3AF

BGS Flood Data (1:50,000)

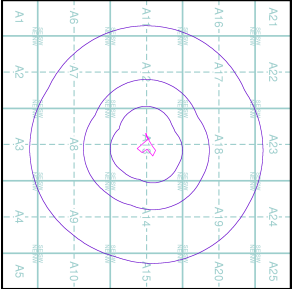
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Site
- Map ID

BGS Geological Indicators of Flooding

- Coastal
- Inland
- Bodies of Water

BGS Flood Data Map - Slice A

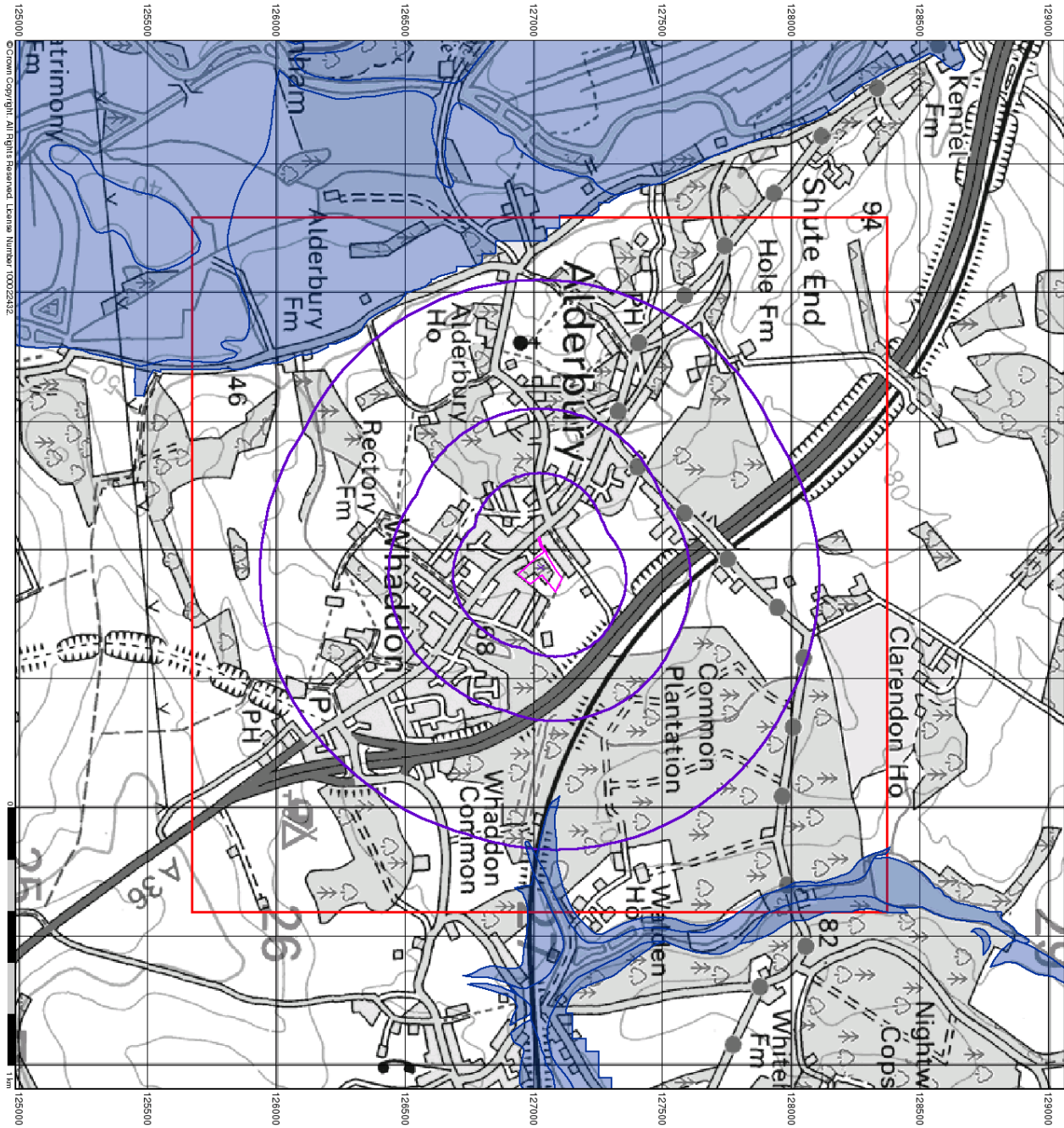


Order Details

Order Number: 29667979_1_1
Customer Ref: 149596
National Grid Reference: 419070, 127030
Site Area (Ha): A
Search Buffer (m): 124
1000

Site Details

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FAIRHURST

BGS Flood Data (1:50,000)

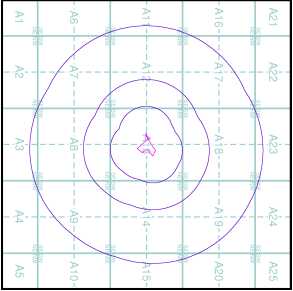
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Site
- Map ID

BGS Groundwater Flooding Susceptibility

- Potential for Groundwater Flooding to Occur at Surface
- Potential for Groundwater Flooding of Property
- Situated Below Ground Level
- Limited Potential for Groundwater Flooding to Occur

BGS Flood Data Map - Slice A



Order Details

Order Number: 29667979_1_1
Customer Ref: 149596
National Grid Reference: 419070, 127030
Site: A
Site Area (Ha): 1.24
Search Buffer (m): 1000

Site Details

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FAIRHURST

GeoSmart Information Groundwater Flood Map (1:50,000)

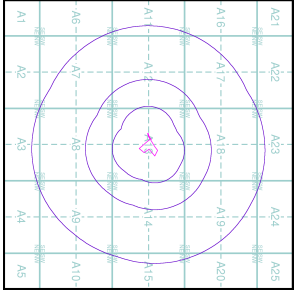
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

GeoSmart Information Groundwater Flooding Risk

- High Risk
- Moderate Risk
- Low Risk
- Negligible Risk

GeoSmart Information Groundwater Flood Map - Slice A



Order Details

Order Number: 29667979_1_1
Customer Ref: 149596
National Grid Reference: 419070, 127030
Site: A
Site Area (Ha): 1.24
Search Buffer (m): 1000

Site Details

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EA/NRW RoFRS Data (1:50,000)

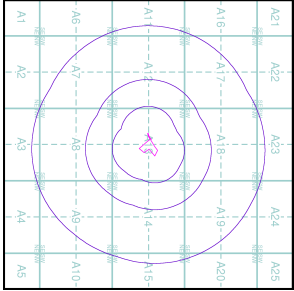
General

- Specified Site
- Specified Butters (S)
- Bearing Reference Point
- Site
- Map ID

Risk of Flooding from Rivers and Sea (RoFRS)

- High Risk
- Medium Risk
- Low Risk
- Very Low Risk

EA/NRW RoFRS Data Map - Slice A



Order Details

Order Number: 29667979_1_1
Customer Ref: 149596
National Grid Reference: 419070, 127030
Site: A
Site Area (Ha): 1.24
Search Buffer (m): 1000

Site Details

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Envirocheck[®] Report:

Flood Screening Report Datasheet

Order Details:

Order Number:

296679779_1_1

Customer Reference:

149596

National Grid Reference:

419070, 127030

Slice:

A

Site Area (Ha):

1.24

Search Buffer (m):

1000

Site Details:

Felix Vita, Southampton Road
Alderbury
SALISBURY
SP5 3AF

Client Details:

Mr J Blacker
Fairhurst Group LLP
51a St Pauls Street
Leeds
LS1 2TE

Report Section and Details	Page Number
Summary	-
The Summary section provides an overview of the data contained within the report, detailing the number of data set features or the existence of a data set in relation to the buffer(s) selected. For ease of reference, the report is broken down into seven sections of data.	
EA / NRW / CEH Flood Data	-
This section details data from the Environment Agency/Natural Resources Wales and the Centre for Ecology and Hydrology. The EA/NRW data is reported to a distance of 250m from the edge of the site polygon and details both Zone 2 (extreme) and Zone 3 flood extents, as well as flood defences, flood water storage areas and areas benefiting from flood defences. The CEH data is reported to a distance of 250m from the edge of the site polygon and covers flood data for Scotland, divided into levels based on the frequency and magnitude of a predicted 100 year term. All data sets within this section are plotted and feature on the EA / NRW / CEH Flood Data (1:10,000) map. For added value, OS Contour data is also plotted, detailing contours, spot heights and land water boundaries.	
JBA Flood Data	1
This section contains the Comprehensive Flood Map ("CFM") data from JBA Risk Management Limited. The data is based upon the likelihood of a flood occurrence for up to 4 flood return periods depending on the type of flooding; these being 75 years, 100 years, 200 years and 1000 years. Each layer being modelled at a 5m cell resolution. Each return period is depicted on a separate 1:10,000 scale map and reports features to a distance of 250m in the datasheet from the edge of the site polygon. For each return period the following three sources of flooding are identified, surface water or pluvial flooding, undefended river flooding or fluvial flooding and undefended coastal flooding. In each case the extent of the flooding source is displayed with the associated depth range. In addition, a 1:10,000 scale map depicting flooding from a Canal Failure and a coverage check for this dataset is included. Where coverage exists, information is reported in the datasheet where the site could be affected by flooding that results from a dam breach. For added value, OS Contour data is also plotted, detailing contours, spot heights and land water boundaries.	
BGS Flood Data	6
This section contains two BGS data sets; namely Geological Indicators of Flooding and Groundwater Flooding Susceptibility, both of which report features out to a possible 1000m, with coverage in England, Wales and Scotland. Each data set is plotted on a separate BGS Flood Data (1:50,000) map.	
GeoSmart Information Groundwater Flood Data	7
This section contains data provided by GeoSmart Information who, building on their expertise, have developed algorithms and calibrated predictions of the risk of groundwater flooding occurring in Great Britain. The resulting map, classifies groundwater flood risk for each 5m x 5m into four categories, negligible, low, moderate and high. These classifications are based on the level of risk, combining severity and uncertainty that a site will suffer groundwater flooding within a return period of about 200 years.	
OS Water Network Data	8
This section details the MasterMap Water Network data sourced from the Ordnance Survey. The OS MasterMap Water Network data details a network representing the watercourse within Great Britain. The OS Water Network Lines data set details the approximate central alignment of a watercourse, including rivers, lakes and canals. The OS Water Network Nodes data set details features that represent a river's source, end, a junction where three or more links meet, and places where the real world related attribution changes; for example a watercourse becoming tidal. The data sets within this section are plotted and feature on the OS Water Network Map (1:10,000) . For added value, OS Contour data is also plotted, detailing contours, spot heights and land water boundaries.	

EA/NRW Historic Flood Events Data	-
This section details Historic Flood data sourced from the Environment Agency/Natural Resources Wales and from data held by Landmark. The EA/NRW Historic Flood Events data is reported to a distance of 1000m from the edge of the site polygon and details recorded historic flood events from 1703 to October 2008. The data also contains information on the source and cause of the flood, and how the flood outline was established. Also included in this section is Landmark's Historical Flood Liabilities data set, which identifies areas that are liable to flood based on systematic analysis of historical mapping dating back to the mid 19th century. Both data sets within this section are plotted and feature on the EA/NRW Historical Flood (1:10,000) map. For added value, OS Contour data is also plotted, detailing contours, spot heights and land water boundaries.	
EA/NRW RoFRS Data	-
This section details the Risk of Flooding from Rivers and Sea (RoFRS) data sourced from the Environment Agency/Natural Resources Wales and is reported to a distance of 1000m from the edge of the site polygon. The RoFRS data provides an indication of areas of land at risk of flooding from rivers and the sea. These areas of land, called impacted cells, are represented as 50 metre squares, or smaller areas where a square is intersected by a river or coastline. The average height information of the impacted cell, modelled river and sea levels and information about over 200,000 flood defences are used as inputs to a computer flood model run by the Environment Agency/Natural Resources Wales. The model compares the probability that the flood defences will overtop or breach and the distance of the impact cell from the river or the sea for 40 scenarios for probabilities of between 100% to 0.1%. The results are then consolidated to calculate a single probability category for each impacted cell. These results have been validated by local staff using their local knowledge and expertise. RoFRS is a national flood risk assessment and does not contain information about property thresholds. Due to variations in the input data and the performance of the computer flood model at particular locations, the resulting category of an impacted cell should only be used at a specific study scale. In certain areas it would only be appropriate to compare risks between towns and counties whereas in other areas they would be more suitable for understanding risk at a street level. The level of suitability for a particular cell is indicated by the cell's suitability scale. The data within this section is plotted and feature on the EA/NRW RoFRS Data (1:50,000) map. This dataset is not available in Scotland.	
Flood Insurance Risk Data	23
This section contains flood risk data from Crawford and Company. This dataset is not plotted on any of the associated Flood maps. Crawford & Co have generated an Insurance Claims rating for Flood Risk. The risk is determined by comparing the number of flood insurance claims made to the number of properties in the postcode sector. The data will also include flood claims from domestic accidents or blocked drains, as well as flooding from river or tidal events. Flood insurance claim ratings are reported for the site only.	
Data Currency	24
Data Suppliers	27
Useful Contacts	28

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Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m
EA / NRW / CEH Flood Data					
Extreme Flooding from Rivers or Sea without Defences				n/a	n/a
Flooding from Rivers or Sea without Defences				n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
JBA Flood Data					
JBA 75 Year Return (undefended) - Pluvial	pg 1		16	n/a	n/a
JBA 75 Year Return (undefended) - Fluvial				n/a	n/a
JBA 75 Year Return (undefended) - Coastal				n/a	n/a
JBA 100 Year Return (undefended) - Fluvial				n/a	n/a
JBA 100 Year Return (undefended) - Coastal				n/a	n/a
JBA 200 Year Return (undefended) - Pluvial	pg 1		18	n/a	n/a
JBA 200 Year Return (undefended) - Fluvial				n/a	n/a
JBA 200 Year Return (undefended) - Coastal				n/a	n/a
JBA 1000 Year Return (undefended) - Pluvial	pg 2		47	n/a	n/a
JBA 1000 Year Return (undefended) - Fluvial				n/a	n/a
JBA 1000 Year Return (undefended) - Coastal				n/a	n/a
JBA Canal Failure					
JBA Dam Break					
BGS Flood Data					
BGS Geological Indicators of Flooding	pg 6				3
BGS Groundwater Flooding Susceptibility	pg 6	1	1	2	11
GeoSmart Information Groundwater Flood					
GeoSmart Information Groundwater Flood Risk	pg 7	1			1
OS Water Network Data					
OS Water Network Lines	pg 8		3	26	63
OS Water Network Nodes	pg 18		2	24	63
EA/NRW Historic Flood Events Data					
Historic Flood Events					
Historical Flood Liabilities					
EA/NRW RoFRS Data					
RoFRS - Risk of Flooding from Rivers and Sea					
Flood Insurance Risk Data					
Postcode Sector Flood Insurance Claim Ratings	pg 23	1	n/a	n/a	n/a

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Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.3m and Less than or equal to 1.0m	A13SW (SW)	16	1	419015 127005
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SW (SW)	19	1	419015 127000
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SE (E)	204	1	419350 127000
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SE (E)	205	1	419355 127010
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.3m and Less than or equal to 1.0m	A13SE (E)	207	1	419355 127005
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (E)	221	1	419380 127030
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (E)	225	1	419380 127025
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (E)	228	1	419385 127027
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (E)	230	1	419390 127040
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (E)	232	1	419390 127030
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A14NW (E)	238	1	419400 127055
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.3m and Less than or equal to 1.0m	A14NW (E)	240	1	419400 127040
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.3m and Less than or equal to 1.0m	A14NW (E)	243	1	419405 127060
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A14NW (E)	244	1	419405 127045
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A14NW (E)	247	1	419410 127065
	JBA 75 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.3m and Less than or equal to 1.0m	A14NW (E)	248	1	419410 127055
	JBA 75 Year Return (undefended) - Fluvial None				
	JBA 75 Year Return (undefended) - Coastal None				
	JBA 100 Year Return (undefended) - Fluvial None				
	JBA 100 Year Return (undefended) - Coastal None				
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.3m and Less than or equal to 1.0m	A13SW (SW)	16	1	419015 127005
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SW (SW)	19	1	419015 127000
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (E)	177	1	419330 127025

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SE (E)	204	1	419350 127000
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SE (E)	205	1	419355 127010
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.3m and Less than or equal to 1.0m	A13SE (E)	207	1	419355 127005
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (E)	217	1	419375 127030
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (E)	220	1	419375 127025
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (E)	224	1	419385 127045
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (E)	228	1	419385 127027
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (E)	230	1	419390 127040
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.3m and Less than or equal to 1.0m	A13NE (E)	232	1	419390 127030
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A14NW (E)	238	1	419400 127055
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.3m and Less than or equal to 1.0m	A14NW (E)	240	1	419400 127040
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.3m and Less than or equal to 1.0m	A14NW (E)	243	1	419405 127060
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A14NW (E)	244	1	419405 127045
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A14NW (E)	247	1	419410 127065
	JBA 200 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.3m and Less than or equal to 1.0m	A14NW (E)	248	1	419410 127055
	JBA 200 Year Return (undefended) - Fluvial None				
	JBA 200 Year Return (undefended) - Coastal None				
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.3m and Less than or equal to 1.0m	A13SW (SW)	16	1	419015 127005
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SW (SW)	17	1	419015 127000
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SW (SW)	156	1	418905 126865
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SW (SW)	162	1	418885 126870
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.3m and Less than or equal to 1.0m	A13SW (SW)	163	1	418895 126865
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.3m and Less than or equal to 1.0m	A13SW (SW)	164	1	418880 126870

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SW (SW)	165	1	418890 126865
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (NE)	166	1	419180 127260
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.3m and Less than or equal to 1.0m	A13SW (SW)	167	1	418885 126865
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 1.0m	A13SW (SW)	169	1	418880 126865
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (E)	170	1	419325 127027
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (N)	172	1	419155 127275
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (NE)	173	1	419185 127265
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SW (SW)	173	1	418880 126860
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (E)	177	1	419330 127025
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (N)	183	1	419067 127290
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.3m and Less than or equal to 1.0m	A13SE (E)	194	1	419345 127015
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (NE)	197	1	419210 127280
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SE (E)	200	1	419345 127000
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (NE)	204	1	419215 127285
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.3m and Less than or equal to 1.0m	A13SE (E)	204	1	419350 127000
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SE (E)	208	1	419360 127015
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SE (E)	209	1	419345 126980
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (E)	210	1	419365 127025
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (NE)	211	1	419220 127290
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NE (E)	215	1	419370 127140
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SE (E)	216	1	419360 126995
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13NW (N)	219	1	419015 127305

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SE (E)	219	1	419370 127010
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A13SE (E)	223	1	419375 127015
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.3m and Less than or equal to 1.0m	A13NE (E)	226	1	419385 127035
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.3m and Less than or equal to 1.0m	A14NW (E)	231	1	419395 127100
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A14NW (E)	232	1	419395 127095
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.3m and Less than or equal to 1.0m	A13NE (E)	232	1	419390 127030
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.3m and Less than or equal to 1.0m	A14NW (E)	236	1	419395 127035
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A14NW (E)	237	1	419400 127090
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A14NW (E)	238	1	419400 127060
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.3m and Less than or equal to 1.0m	A14NW (E)	238	1	419400 127055
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A14NW (E)	239	1	419400 127045
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.3m and Less than or equal to 1.0m	A14NW (E)	240	1	419400 127040
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A14NW (E)	241	1	419400 127035
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A14NW (E)	242	1	419405 127080
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.3m and Less than or equal to 1.0m	A14NW (E)	243	1	419405 127060
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A14NW (E)	247	1	419410 127075
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.3m and Less than or equal to 1.0m	A14NW (E)	247	1	419410 127065
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.1m and Less than or equal to 0.3m	A14NW (E)	248	1	419410 127060
	JBA 1000 Year Return (undefended) - Pluvial Flood Depth: Greater than 0.3m and Less than or equal to 1.0m	A14NW (E)	248	1	419410 127055
	JBA 1000 Year Return (undefended) - Fluvial None				
	JBA 1000 Year Return (undefended) - Coastal None				
	JBA Canal Failure Coverage Coverage: This area has not been mapped for risk of flooding from canal or aqueduct failure or breach.	A13NE (NE)	0	1	419067 127027
	JBA Canal Failure None				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	JBA Dam Break Coverage Coverage: This area has been mapped for flooding from dam or reservoir embankment failure or breach.	A13NE (NE)	0	1	419067 127027
	JBA Dam Break None				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Geological Indicators of Flooding Flooding Type: Inland Flooding Flood Potential: Lower flood potential from rivers: areas affected by secondary flooding in extreme cases as a result of a prolonged flood event. Code:	A14NE (E)	794	2	419957 127098
	BGS Geological Indicators of Flooding Flooding Type: Inland Flooding Flood Potential: Lower flood potential from rivers: areas affected by secondary flooding in extreme cases as a result of a prolonged flood event. Code:	A14NE (E)	837	2	420000 127059
	BGS Geological Indicators of Flooding Flooding Type: Inland Flooding Flood Potential: Higher flood potential from rivers: the first areas to experience the effects of inland flooding in a river catchment. Code:	A15SW (E)	977	2	420134 126974
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (NE)	0	2	419067 127027
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13SE (SE)	188	2	419300 126900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NE (W)	251	2	418700 127027
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A14SW (E)	281	2	419400 126900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A7NE (SW)	652	2	418550 126500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14NE (E)	687	2	419850 127050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14NE (E)	688	2	419850 127027
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A7NE (SW)	727	2	418500 126450
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A7NE (SW)	766	2	418500 126400
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A7NE (SW)	836	2	418450 126350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14NE (E)	837	2	420000 127027
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14NE (E)	837	2	420000 127100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A14SE (E)	841	2	420000 127000
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14SE (E)	847	2	420000 126950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A7NW (SW)	974	2	418200 126400

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	GeoSmart Information Groundwater Flood Data Risk: Negligible Risk Risk Details: There is a negligible risk of groundwater flooding in this area and any groundwater flooding incidence has a chance of less than 1 in 100 (<1%) probability of occurrence.	A13NE (NE)	0	1	419067 127027
	GeoSmart Information Groundwater Flood Data Risk: High Risk Risk Details: There is a high risk of groundwater flooding in this area with a chance of greater than 1 in 100 (>1%) probability of occurrence or more frequent.	A7SW (SW)	999	1	418215 126345

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 340.5 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A13NE (N)	214	3	419094 127325
2	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 2.4 Watercourse Level: Underground Primacy: 1 Permanent: True Catchment Name: Test	A13NE (NE)	226	3	419206 127314
3	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 126.0 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A13NE (NE)	227	3	419209 127314
4	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 303.7 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Avon Hampshire	A8NW (S)	273	3	419006 126679
5	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 61.2 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A13NW (NW)	285	3	418861 127292
6	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 288.8 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A13NE (NE)	310	3	419357 127325
7	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 59.5 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A18SE (NE)	320	3	419313 127365
8	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 21.1 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A13NW (NW)	325	3	418885 127348
9	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 57.7 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A14NW (NE)	351	3	419403 127339

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
10	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 83.7 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A14NW (NE)	362	3	419448 127306
11	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 195.5 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A14NW (NE)	362	3	419448 127306
12	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 64.7 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A18SE (NE)	374	3	419362 127399
13	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 290.6 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A19SW (NE)	378	3	419414 127364
14	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 1.8 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A14NW (E)	396	3	419558 127118
15	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 38.1 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A14NW (E)	396	3	419558 127116
16	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 50.7 Watercourse Level: Not Supplied Primacy: 1 Permanent: True Catchment Name: Test	A14NW (E)	415	3	419578 127086
17	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 23.0 Watercourse Level: Underground Primacy: 1 Permanent: True Catchment Name: Test	A14NW (E)	430	3	419584 127172
18	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 8.2 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A14NW (E)	441	3	419598 127154

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
19	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 23.6 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A14NW (E)	441	3	419600 127143
20	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 50.7 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A14NW (E)	444	3	419602 127147
21	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 234.0 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Avon Hampshire	A8NE (SE)	453	3	419319 126544
22	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 3.5 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A14NW (E)	463	3	419626 127101
23	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 58.3 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Avon Hampshire	A8NE (SE)	466	3	419391 126578
24	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 31.2 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A14NW (E)	466	3	419629 127104
25	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 231.6 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Avon Hampshire	A7NE (SW)	470	3	418679 126636
26	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 23.5 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Avon Hampshire	A8NE (SE)	486	3	419359 126529
27	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 801.5 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A14NW (E)	487	3	419650 127081

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
28	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 492.1 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A14NW (E)	487	3	419650 127081
29	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 54.2 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Avon Hampshire	A9NW (SE)	488	3	419411 126566
30	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 49.3 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Avon Hampshire	A9NW (SE)	503	3	419422 126556
31	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 13.7 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Avon Hampshire	A8NE (SE)	505	3	419380 126521
32	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Marsh Watercourse Length: 110.6 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Avon Hampshire	A8NE (S)	515	3	419182 126430
33	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 16.5 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Avon Hampshire	A8NE (SE)	517	3	419393 126516
34	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 47.1 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Avon Hampshire	A9NW (SE)	519	3	419437 126547
35	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 5.6 Watercourse Level: Not Supplied Primacy: 1 Permanent: True Catchment Name: Test	A18SE (N)	527	3	419301 127601
36	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 189.8 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A18SE (N)	527	3	419288 127606

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
37	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 17.5 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Avon Hampshire	A9NW (SE)	531	3	419409 126510
38	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 45.5 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Avon Hampshire	A9NW (SE)	535	3	419453 126540
39	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 42.9 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A18SE (N)	536	3	419086 127644
40	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 24.1 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Avon Hampshire	A9NW (SE)	546	3	419425 126503
41	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 219.3 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A14SW (E)	547	3	419700 126979
42	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 361.6 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Avon Hampshire	A8NW (SW)	553	3	418818 126459
43	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 98.1 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A18SE (N)	563	3	419119 127672
44	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Marsh Watercourse Length: 5.9 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Avon Hampshire	A8SE (S)	596	3	419115 126342
45	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 331.4 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Avon Hampshire	A8SE (S)	599	3	419110 126339

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
46	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 91.8 Watercourse Level: Not Supplied Primacy: 1 Permanent: True Catchment Name: Test	A18NW (N)	610	3	419032 127713
47	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 82.4 Watercourse Level: Not Supplied Primacy: 1 Permanent: True Catchment Name: Test	A18NW (N)	610	3	419032 127713
48	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 58.2 Watercourse Level: Not Supplied Primacy: 1 Permanent: True Catchment Name: Test	A18NW (N)	610	3	419032 127713
49	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 320.7 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A18NW (N)	636	3	418950 127724
50	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 70.7 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A14NE (E)	656	3	419811 127184
51	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Lake Watercourse Length: 4.6 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A14NE (E)	656	3	419811 127184
52	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 408.1 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A18NW (N)	658	3	418993 127756
53	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 89.2 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Avon Hampshire	A12NW (W)	684	3	418284 127170
54	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 83.1 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A18NE (N)	690	3	419070 127797

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
55	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 53.2 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Avon Hampshire	A12NW (W)	712	3	418253 127166
56	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 176.8 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Avon Hampshire	A12NW (W)	733	3	418225 127123
57	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 11.5 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Avon Hampshire	A12NW (W)	733	3	418225 127123
58	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 46.0 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Avon Hampshire	A12NW (W)	736	3	418229 127164
59	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Lake Watercourse Length: 2.3 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Avon Hampshire	A12NW (W)	736	3	418230 127170
60	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 11.8 Watercourse Level: Underground Primacy: 1 Permanent: True Catchment Name: Test	A18NE (N)	744	3	419132 127852
61	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 12.4 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A18NE (N)	752	3	419141 127860
62	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 17.6 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A14SE (E)	763	3	419913 126942
63	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 226.1 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A14SE (E)	767	3	419920 126958

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
64	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 10.3 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A14NE (E)	792	3	419953 127121
65	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 144.6 Watercourse Level: On ground surface Primacy: 2 Permanent: True Catchment Name: Test	A14NE (E)	800	3	419962 127120
66	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 125.0 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A14NE (E)	801	3	419963 127119
67	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 393.2 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Avon Hampshire	A8SW (S)	817	3	418736 126196
68	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 4.0 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Avon Hampshire	A8SW (S)	824	3	418965 126124
69	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 38.0 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Avon Hampshire	A8SW (S)	827	3	418967 126120
70	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 77.6 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Avon Hampshire	A12NW (W)	842	3	418112 127082
71	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 6.3 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A14NE (E)	843	3	419990 127244
72	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 60.9 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Avon Hampshire	A7NW (SW)	844	3	418280 126509

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
73	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 202.8 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A14NE (E)	844	3	419993 127238
74	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 25.5 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Avon Hampshire	A12SW (W)	846	3	418106 127002
75	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 78.1 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Avon Hampshire	A12NW (W)	867	3	418088 127107
76	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 15.1 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Avon Hampshire	A12SW (W)	869	3	418082 127012
77	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 25.7 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Avon Hampshire	A12SW (W)	869	3	418082 127012
78	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 306.4 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Avon Hampshire	A12SW (W)	871	3	418081 126997
79	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 435.8 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A19NW (NE)	872	3	419642 127810
80	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 217.7 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A19NW (NE)	872	3	419642 127810
81	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 4.0 Watercourse Level: Underground Primacy: 1 Permanent: True Catchment Name: Avon Hampshire	A7NW (SW)	883	3	418221 126524

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
82	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 23.5 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Avon Hampshire	A7NW (SW)	885	3	418217 126525
83	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 226.6 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Avon Hampshire	A7SE (SW)	901	3	418608 126180
84	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 41.8 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A18NW (N)	914	3	418766 127954
85	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 302.7 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A9NE (SE)	915	3	419911 126506
86	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 197.2 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A15NW (E)	920	3	420083 127081
87	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 262.5 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Avon Hampshire	A11NE (W)	930	3	418031 127161
88	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 22.6 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A18NW (N)	939	3	418759 127979
89	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 108.9 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A15SW (E)	952	3	420108 126971
90	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 15.8 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A18NW (N)	961	3	418744 127996

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
91	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 87.6 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A18NW (N)	961	3	418744 127996
92	OS Water Network Lines Watercourse Name: Not Supplied Watercourse Form: Inland river Watercourse Length: 408.3 Watercourse Level: On ground surface Primacy: 1 Permanent: True Catchment Name: Test	A15SW (E)	979	3	420121 126880
93	OS Water Network Nodes Hydrone Node: Pseudo Category:	A13NE (NE)	226	3	419206 127314
94	OS Water Network Nodes Hydrone Node: Pseudo Category:	A13NE (NE)	227	3	419209 127314
95	OS Water Network Nodes Hydrone Node: Source Category:	A8NW (S)	273	3	419006 126679
96	OS Water Network Nodes Hydrone Node: Source Category:	A13NW (NW)	285	3	418861 127292
97	OS Water Network Nodes Hydrone Node: Source Category:	A13NE (NE)	311	3	419357 127325
98	OS Water Network Nodes Hydrone Node: Pseudo Category:	A18SE (NE)	320	3	419313 127365
99	OS Water Network Nodes Hydrone Node: Junction Category:	A13NW (NW)	325	3	418885 127348
100	OS Water Network Nodes Hydrone Node: Source Category:	A13NW (NW)	334	3	418864 127350
101	OS Water Network Nodes Hydrone Node: Source Category:	A14NW (NE)	351	3	419403 127339
102	OS Water Network Nodes Hydrone Node: Junction Category:	A14NW (NE)	362	3	419448 127306
103	OS Water Network Nodes Hydrone Node: Pseudo Category:	A18SE (NE)	375	3	419361 127400
104	OS Water Network Nodes Hydrone Node: Junction Category:	A19SW (NE)	378	3	419414 127364
105	OS Water Network Nodes Hydrone Node: Junction Category:	A14NW (E)	396	3	419558 127118
106	OS Water Network Nodes Hydrone Node: Source Category:	A14NW (E)	398	3	419559 127119
107	OS Water Network Nodes Hydrone Node: Pseudo Category:	A14NW (E)	415	3	419578 127086
108	OS Water Network Nodes Hydrone Node: Pseudo Category:	A14NW (E)	430	3	419584 127172

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
109	OS Water Network Nodes Hydronode Pseudo Category:	A14NW (E)	441	3	419598 127154
110	OS Water Network Nodes Hydronode Junction Category:	A14NW (E)	444	3	419602 127147
111	OS Water Network Nodes Hydronode Source Category:	A14NW (E)	447	3	419608 127125
112	OS Water Network Nodes Hydronode Pseudo Category:	A14NW (E)	463	3	419626 127101
113	OS Water Network Nodes Hydronode Junction Category:	A14NW (E)	466	3	419629 127104
114	OS Water Network Nodes Hydronode Source Category:	A8NE (SE)	466	3	419391 126578
115	OS Water Network Nodes Hydronode Source Category:	A7NE (SW)	470	3	418679 126636
116	OS Water Network Nodes Hydronode Junction Category:	A8NE (SE)	486	3	419359 126529
117	OS Water Network Nodes Hydronode Junction Category:	A14NW (E)	487	3	419650 127081
118	OS Water Network Nodes Hydronode Source Category:	A9NW (SE)	488	3	419411 126566
119	OS Water Network Nodes Hydronode Source Category:	A9NW (SE)	503	3	419422 126556
120	OS Water Network Nodes Hydronode Junction Category:	A8NE (SE)	505	3	419380 126521
121	OS Water Network Nodes Hydronode Pseudo Category:	A8NE (S)	515	3	419182 126430
122	OS Water Network Nodes Hydronode Junction Category:	A8NE (SE)	517	3	419393 126516
123	OS Water Network Nodes Hydronode Source Category:	A9NW (SE)	519	3	419437 126547
124	OS Water Network Nodes Hydronode Pseudo Category:	A18SE (N)	527	3	419301 127601
125	OS Water Network Nodes Hydronode Pseudo Category:	A18SE (N)	527	3	419296 127603
126	OS Water Network Nodes Hydronode Junction Category:	A9NW (SE)	531	3	419409 126510
127	OS Water Network Nodes Hydronode Source Category:	A9NW (SE)	535	3	419453 126540
128	OS Water Network Nodes Hydronode Source Category:	A18SE (N)	536	3	419086 127644

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
129	OS Water Network Nodes Hydronode Junction Category:	A9NW (SE)	546	3	419425 126503
130	OS Water Network Nodes Hydronode Source Category:	A14SW (E)	547	3	419700 126979
131	OS Water Network Nodes Hydronode Junction Category:	A8NW (SW)	553	3	418818 126459
132	OS Water Network Nodes Hydronode Junction Category:	A18SE (N)	563	3	419119 127672
133	OS Water Network Nodes Hydronode Source Category:	A9NW (SE)	566	3	419447 126495
134	OS Water Network Nodes Hydronode Pseudo Category:	A8SE (S)	596	3	419115 126342
135	OS Water Network Nodes Hydronode Pseudo Category:	A8SE (S)	599	3	419110 126339
136	OS Water Network Nodes Hydronode Junction Category:	A18NW (N)	610	3	419032 127713
137	OS Water Network Nodes Hydronode Pseudo Category:	A18NW (N)	637	3	418951 127725
138	OS Water Network Nodes Hydronode Pseudo Category:	A14NE (E)	656	3	419811 127184
139	OS Water Network Nodes Hydronode Outlet Category:	A14NE (E)	657	3	419813 127180
140	OS Water Network Nodes Hydronode Pseudo Category:	A18NW (N)	658	3	418993 127756
141	OS Water Network Nodes Hydronode Source Category:	A14NE (E)	666	3	419807 127250
142	OS Water Network Nodes Hydronode Outlet Category:	A14SE (E)	677	3	419793 126836
143	OS Water Network Nodes Hydronode Source Category:	A12NW (W)	684	3	418284 127170
144	OS Water Network Nodes Hydronode Pseudo Category:	A18NE (N)	690	3	419070 127797
145	OS Water Network Nodes Hydronode Source Category:	A12NW (W)	712	3	418253 127166
146	OS Water Network Nodes Hydronode Junction Category:	A12NW (W)	733	3	418225 127123
147	OS Water Network Nodes Hydronode Pseudo Category:	A12NW (W)	736	3	418230 127170
148	OS Water Network Nodes Hydronode Source Category:	A12NW (W)	737	3	418229 127172

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
149	OS Water Network Nodes Hydronode Junction Category:	A12NW (W)	743	3	418216 127130
150	OS Water Network Nodes Hydronode Pseudo Category:	A18NE (N)	744	3	419132 127852
151	OS Water Network Nodes Hydronode Pseudo Category:	A18NE (N)	752	3	419141 127860
152	OS Water Network Nodes Hydronode Source Category:	A18NE (N)	761	3	419150 127869
153	OS Water Network Nodes Hydronode Source Category:	A14SE (E)	763	3	419913 126942
154	OS Water Network Nodes Hydronode Pseudo Category:	A14SE (E)	767	3	419920 126958
155	OS Water Network Nodes Hydronode Source Category:	A14NE (E)	792	3	419953 127121
156	OS Water Network Nodes Hydronode Junction Category:	A14NE (E)	801	3	419963 127119
157	OS Water Network Nodes Hydronode Pseudo Category:	A8SW (S)	824	3	418965 126124
158	OS Water Network Nodes Hydronode Junction Category:	A8SW (S)	827	3	418967 126120
159	OS Water Network Nodes Hydronode Source Category:	A12NW (W)	842	3	418112 127082
160	OS Water Network Nodes Hydronode Source Category:	A14NE (E)	843	3	419990 127244
161	OS Water Network Nodes Hydronode Junction Category:	A14NE (E)	844	3	419993 127238
162	OS Water Network Nodes Hydronode Source Category:	A7NW (SW)	844	3	418280 126509
163	OS Water Network Nodes Hydronode Pseudo Category:	A12SW (W)	846	3	418106 127002
164	OS Water Network Nodes Hydronode Source Category:	A8SW (S)	860	3	418982 126085
165	OS Water Network Nodes Hydronode Source Category:	A12NW (W)	867	3	418088 127107
166	OS Water Network Nodes Hydronode Junction Category:	A12SW (W)	869	3	418082 127012
167	OS Water Network Nodes Hydronode Junction Category:	A12SW (W)	871	3	418081 126997
168	OS Water Network Nodes Hydronode Junction Category:	A19NW (NE)	872	3	419642 127810

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
169	OS Water Network Nodes Hydronode Pseudo Category:	A7NW (SW)	883	3	418221 126524
170	OS Water Network Nodes Hydronode Pseudo Category:	A12NW (W)	884	3	418067 127032
171	OS Water Network Nodes Hydronode Pseudo Category:	A7NW (SW)	885	3	418217 126525
172	OS Water Network Nodes Hydronode Junction Category:	A7SE (SW)	901	3	418608 126180
173	OS Water Network Nodes Hydronode Outlet Category:	A7NW (SW)	902	3	418194 126530
174	OS Water Network Nodes Hydronode Source Category:	A18NW (N)	914	3	418773 127957
175	OS Water Network Nodes Hydronode Source Category:	A9NE (SE)	915	3	419911 126506
176	OS Water Network Nodes Hydronode Junction Category:	A15NW (E)	920	3	420083 127081
177	OS Water Network Nodes Hydronode Source Category:	A11NE (W)	930	3	418031 127161
178	OS Water Network Nodes Hydronode Junction Category:	A18NW (N)	939	3	418759 127979
179	OS Water Network Nodes Hydronode Junction Category:	A15SW (E)	952	3	420108 126971
180	OS Water Network Nodes Hydronode Junction Category:	A18NW (N)	961	3	418744 127996
181	OS Water Network Nodes Hydronode Source Category:	A18NW (N)	967	3	418728 127997

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Postcode Sector Flood Insurance Claim Ratings Insurance Rating: Low Flood Insurance Claim Rating Postcode Sector: SP5 3	A13NE (NE)	0	1	419067 127027

EA / NRW / CEH Flood Data	Version	Update Cycle
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	February 2022	Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	February 2022	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	February 2022	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	February 2022	Quarterly
Flood Defences Environment Agency - Head Office	February 2022	Quarterly
EA / NRW Surface Water Flood Data	Version	Update Cycle
Surface Water 1 in 30 year Flood Depth Environment Agency - Head Office	May 2018	Annually
Surface Water 1 in 100 year Flood Depth Environment Agency - Head Office	May 2018	Annually
Surface Water 1 in 1000 year Flood Depth Environment Agency - Head Office	May 2018	Annually
Surface Water 1 in 30 year Flood Velocity Environment Agency - Head Office	May 2018	Annually
Surface Water 1 in 100 year Flood Velocity Environment Agency - Head Office	May 2018	Annually
Surface Water 1 in 1000 year Flood Velocity Environment Agency - Head Office	May 2018	Annually
Surface Water 1 in 30 year Flood Flow Direction 25m Environment Agency - Head Office	May 2018	Annually
Surface Water 1 in 100 year Flood Flow Direction 25m Environment Agency - Head Office	May 2018	Annually
Surface Water 1 in 1000 year Flood Flow Direction 25m Environment Agency - Head Office	May 2018	Annually
Surface Water 1 in 30 year Flood Hazard Environment Agency - Head Office	May 2018	Annually
Surface Water 1 in 100 year Flood Hazard Environment Agency - Head Office	May 2018	Annually
Surface Water 1 in 1000 year Flood Hazard Environment Agency - Head Office	May 2018	Annually
Surface Water Suitability Environment Agency - Head Office	February 2016	Annually

JBA Flood Data	Version	Update Cycle
JBA 75 Year Return (undefended) - Pluvial JBA Risk Management Limited	November 2020	As notified
JBA 75 Year Return (undefended) - Fluvial JBA Risk Management Limited	November 2020	As notified
JBA 75 Year Return (undefended) - Coastal JBA Risk Management Limited	November 2021	As notified
JBA 100 Year Return (undefended) - Fluvial JBA Risk Management Limited	November 2020	As notified
JBA 100 Year Return (undefended) - Coastal JBA Risk Management Limited	November 2021	As notified
JBA 200 Year Return (undefended) - Pluvial JBA Risk Management Limited	November 2020	As notified
JBA 200 Year Return (undefended) - Fluvial JBA Risk Management Limited	November 2020	As notified
JBA 200 Year Return (undefended) - Coastal JBA Risk Management Limited	November 2021	As notified
JBA 1000 Year Return (undefended) - Pluvial JBA Risk Management Limited	November 2020	As notified
JBA 1000 Year Return (undefended) - Fluvial JBA Risk Management Limited	November 2020	As notified
JBA 1000 Year Return (undefended) - Coastal JBA Risk Management Limited	November 2021	As notified
JBA Canal Failure JBA Risk Management Limited	October 2017	As notified
JBA Dam Break JBA Risk Management Limited	October 2017	As notified
BGS Flood Data	Version	Update Cycle
BGS Geological Indicators of Flooding British Geological Survey - National Geoscience Information Service	October 2013	As notified
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	As notified
GeoSmart Information Groundwater Flooding Data	Version	Update Cycle
GeoSmart Information Groundwater Flood Risk GeoSmart Information Ltd	October 2020	As notified
OS Water Network Data	Version	Update Cycle
OS Water Network Lines Ordnance Survey	April 2022	Quarterly
OS Water Network Nodes Ordnance Survey	April 2022	Quarterly
EA/NRW Historic Flood Events Data	Version	Update Cycle
Historic Flood Events Environment Agency - Head Office	February 2022	Quarterly
Historical Flood Liabilities Landmark Information Group Limited	December 1999	Not Applicable

EA/NRW Risk of Flooding from Rivers and Sea (RoFRS)	Version	Update Cycle
RoFRS - Risk of Flooding from Rivers and Sea Environment Agency - Head Office	March 2022	Annually
Flood Insurance Risk Data	Version	Update Cycle
Postcode Sector Flood Insurance Claim Ratings Crawford and Company	May 2022	Quarterly

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Natural Resources Wales	
Centre for Ecology and Hydrology	
British Geological Survey	
GeoSmart Information	
JBA Risk Management	

Contact	Name and Address	Contact Details
1	Landmark Information Group Limited Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9966 Fax: 0844 844 9951 Email: helpdesk@landmark.co.uk Website: www.landmark.co.uk
2	British Geological Survey - Enquiry Service British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
3	Ordnance Survey Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
4	Environment Agency - National Customer Contact Centre (NCCC) PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
5	Environment Agency - Head Office Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	Telephone: 01454 624400 Fax: 01454 624409

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JBA Flood Data Information

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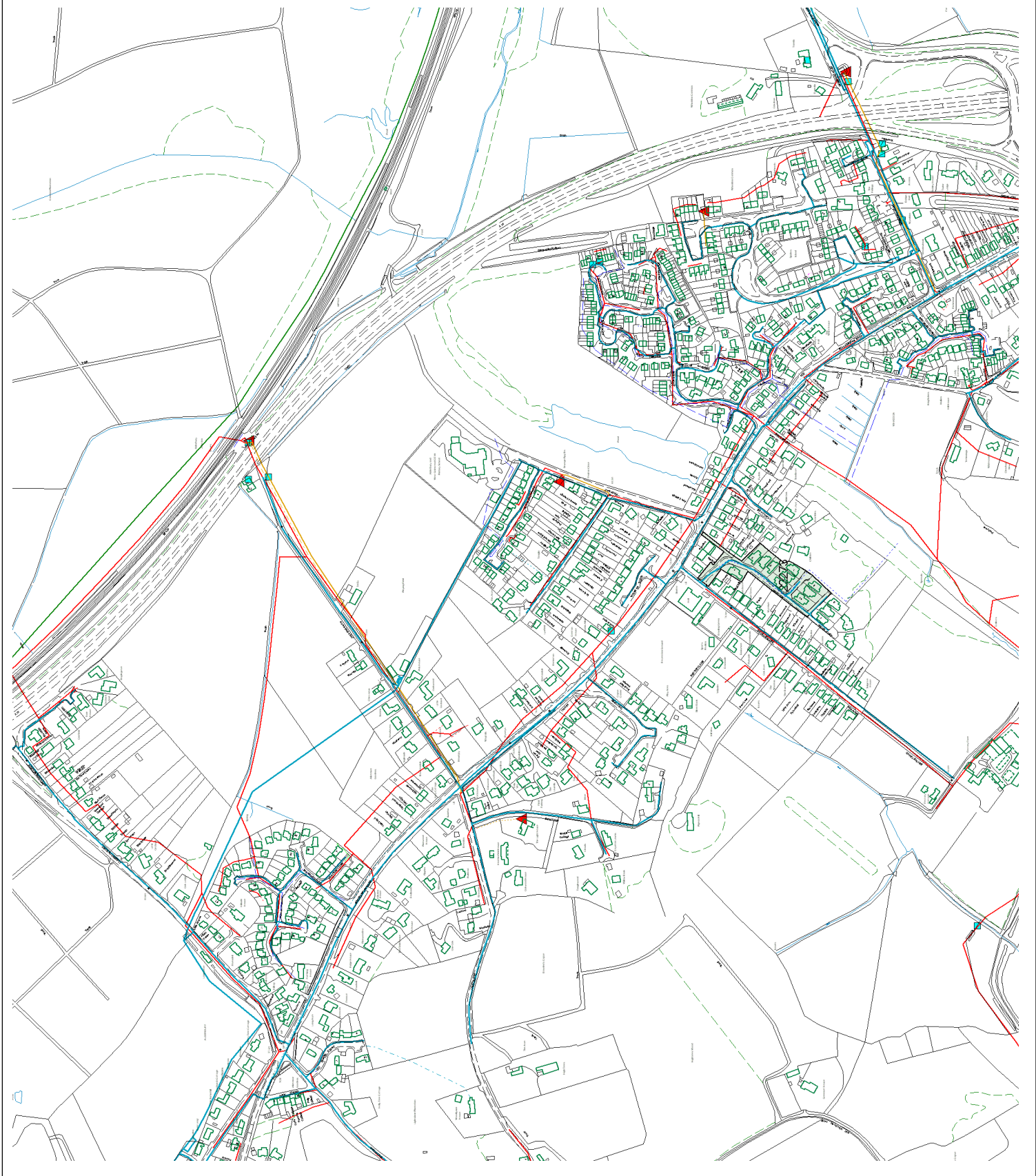
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APPENDIX B

Consultation



Land off Southampton

Printed on : 13/08/2018 14:06

- | | | |
|---------------------------|---------------------------------------|----------------|
| WATER MAINS | Public | Private |
| Raw Water | — | — |
| Abandoned | --- | --- |
| Valve | ● | ● |
| Hydrant | ■ | ■ |
| PRV | ▲ | ▲ |
| Meter | □ | □ |
| SEWERS | Public - Section 104 - Private | |
| Foul | — | — |
| Combined | --- | --- |
| Surface | --- | --- |
| Abandoned sewers | --- | --- |
| OTHER WESSEX PIPES | | |
| Rising Mains | — | — |
| Effluent Disposal Main | --- | --- |
| Overflow | --- | --- |
| NON-WESSEX PIPES | | |
| Private Rising Mains | --- | --- |
| Culverted Water Course | --- | --- |
| Highway Drain | --- | --- |

Information in this plan is provided for identification purposes only. No warranty as to accuracy is given or implied. The precise route of pipe work may not exactly match that shown. Wessex Water does not accept liability for inaccuracies.

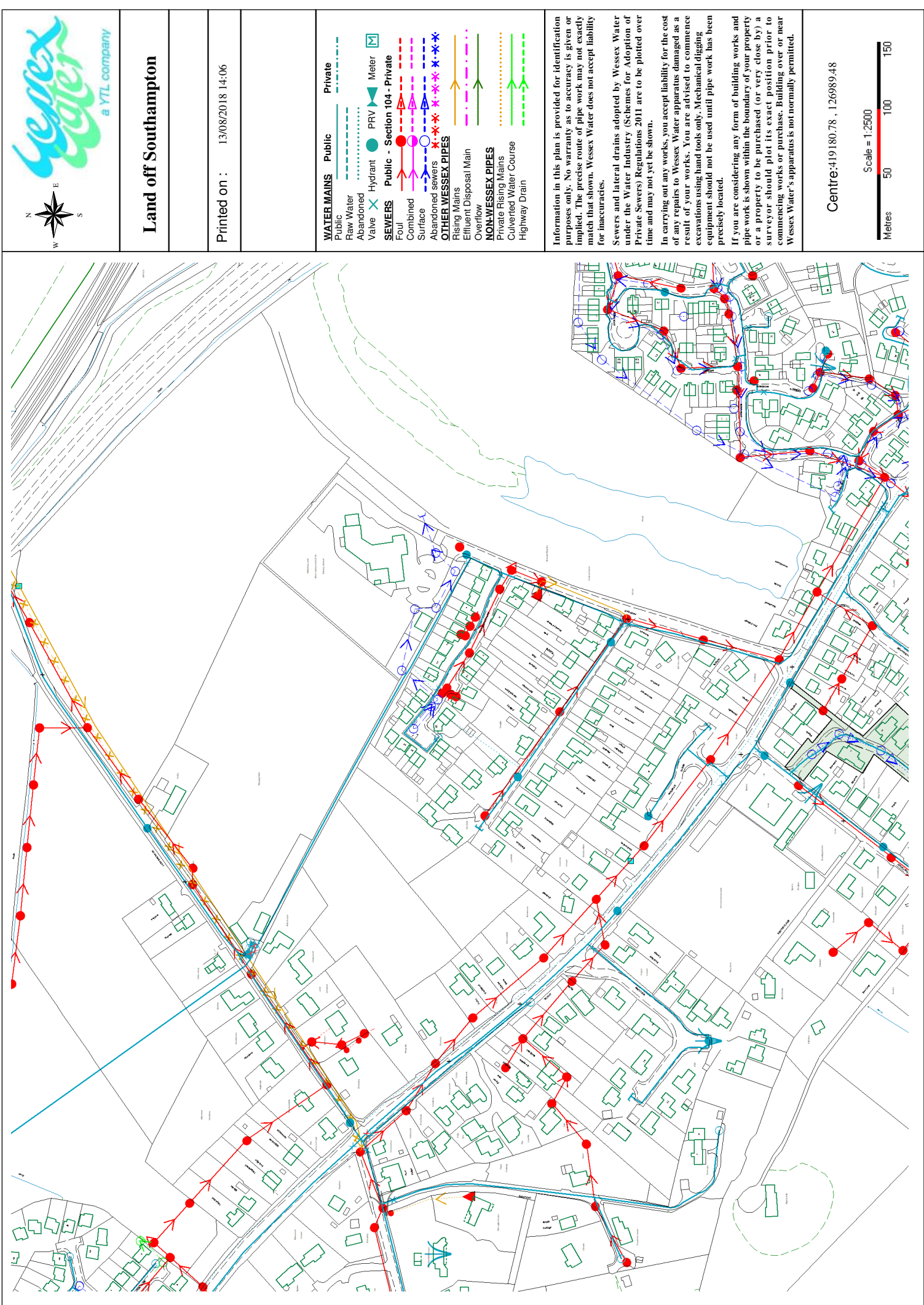
Sewers and lateral drains adopted by Wessex Water under the Water Industry (Schemes for Adoption of Private Sewers) Regulations 2011 are to be plotted over time and may not yet be shown.

In carrying out any works, you accept liability for the cost of any repairs to Wessex Water apparatus damaged as a result of your works. You are advised to commence excavations using hand tools only. Mechanical digging equipment should not be used until pipe work has been precisely located.

If you are considering any form of building works and pipe work is shown within the boundary of your property or a property to be purchased (or very close by) a surveyor should plot its exact position prior to commencing works or purchase. Building over or near Wessex Water's apparatus is not normally permitted.

Centre: 419180.78 , 126989.48





Land off Southampton

Printed on : 13/08/2018 14:06

- | | | |
|---------------------------|---------------------------------------|----------------|
| WATER MAINS | Public | Private |
| Raw Water | — | — |
| Abandoned | - - - | - - - |
| Valve | ⊗ | ⊗ |
| Hydrant | ● | ● |
| PRV | ⊗ | ⊗ |
| Meter | ⊗ | ⊗ |
| SEWERS | Public - Section 104 - Private | |
| Foul | — | — |
| Combined | — | — |
| Surface | — | — |
| Abandoned sewers | - - - | - - - |
| OTHER WESSEX PIPES | | |
| Rising Mains | — | — |
| Effluent Disposal Main | — | — |
| Overflow | — | — |
| NON-WESSEX PIPES | | |
| Private Rising Mains | — | — |
| Culverted Water Course | — | — |
| Highway Drain | — | — |

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Centre: 419180.78 , 126989.48

Scale = 1:2500

Metres 50 100 150

Anthony Simmons

Subject: RE: 1215 heritage homes

----- Forwarded message -----

From: Harvey Euridge <harvey7702@yahoo.com>

To: peter.maurice@sandersons.co.uk <peter.maurice@sandersons.co.uk>

Sent: Thursday, 12 May 2022, 09:08:59 BST

Subject: 1215 heritage homes

Hi Paul

As per our tell call a few minutes ago

Regards Harvey

Comments

Drainage's comment

Comment Number

WC-22-05-234401

Text

Thank you for consulting LLFA on the above application we have the following comments to make based on submitted FRA by Sanderson Associates dated November 2019:

The FRA is poorly written and includes contradicting and confusing information.

It should be noted that NPPF has been updated in 2021 and any FRA should reflect the changes included in the latest NPPF.

Point 1.3 states that the FRA is based on NPPF of 2012. This is nearly a decade out of date.

Point 2.1.7 states that Q_{bar} for the site has been calculated as $Q_{bar} = 0.616 \text{ l/s}$. However point 3.1.4 states that 1 in 1 year rates has been calculated as 26.3 l/s . This para misses to add that this rate has been calculated based on 50ha site and NOT site area. The applicant is reminded that the rate must be calculated for the site, so the received rate should be prorate as per point 2.1.7. Wiltshire Council would accept that the development discharge at greenfield runoff rate for that site $Q_{bar} = 0.616 \text{ l/s}$. It should be noted that MicroDrainage (Windes) allows to calculate the rate for the actual site without interpolation.

Point 8.2.2 states that greenfield runoff rate will have to be limited to 5l/s it is unclear where this figure came from? The FRA discusses the sources of flooding and information obtained from various sources, yet no mapping has been included in this FRA as an evidence According to point 3.1.3 only 0.5709ha will be impermeable and the 0.7111ha will be permeable. applicant is required to provide a plan with permeable and impermeable areas and calculations.

It is unclear where the distances quoted in point 8.3.7 are taken from as the position of the buildings / structures would depend from underlying strata.

It is unclear what SUDS selection has been included in the proposed drainage strategy. We can only assume that is preambled paving as only this feature was discussed in the FRA. The current legislation requires multiple suds techniques with multiple benefits with emphasise on soft SUDS.

We expect the discharge hierarchy to be adopted for surface water discharge from the site. Water reuse is at the top of the surface water discharge hierarchy and a commitment to the use of rainwater harvesting across the development should be explored at this stage and designed into the layout and building design. The use of source control features is a fundamental part of an effective Sustainable Drainage System therefore the use of these features must be committed to early in the development of the drainage scheme. Source control measures are required as per the SuDS management train (green roofs, blue roofs, bioretention, raingardens, permeable paving) as well as distributing infiltration or attenuation storage throughout the drainage catchment.

Percolation test was carried out in June 2018.

It is not only 4 years ago but also the test is taken during summer period , therefore do not allow for annual variability.

The FRA and Drainage Strategy should be updated in line with the current national and local legislative requirements.

Date Created

10/05/2022

Kind regards,

Nigel Knighton

PSK Knighton

APPENDIX C

Drainage Information and WinDES Calculations

Sanderson Associates		Page 1
Sanderson House Jubilee Way Huddersfield, WF4 4TD		
Proposed 1 in 1 year SW run off rate (unrestricted)	Designed by thomas.walker Checked by	
Micro Drainage	Network 2019.1	

STORM SEWER DESIGN by the Modified Rational Method

Design Criteria for Storm

Pipe Sizes STANDARD Manhole Sizes STANDARD

FSR Rainfall Model - England and Wales

Return Period (years)	1	PIMP (%)	100
M5-60 (mm)	18.700	Add Flow / Climate Change (%)	0
Ratio R	0.350	Minimum Backdrop Height (m)	0.200
Maximum Rainfall (mm/hr)	50	Maximum Backdrop Height (m)	1.500
Maximum Time of Concentration (mins)	30	Min Design Depth for Optimisation (m)	1.200
Foul Sewage (l/s/ha)	0.000	Min Vel for Auto Design only (m/s)	1.00
Volumetric Runoff Coeff.	0.750	Min Slope for Optimisation (1:X)	500

Designed with Level Soffits

Network Design Table for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
1.000	10.000	0.100	100.0	0.247	5.00	0.0	0.600	o	225	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
1.000	47.40	5.13	0.000	0.247	0.0	0.0	0.0	1.31	52.0	31.7

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Sanderson Associates		Page 1
Sanderson House Jubilee Way Huddersfield, WF4 4TD		
Existing Greenfield SW run off rate	Designed by thomas.walker Checked by	
Micro Drainage	Source Control 2018.1	

IH 124 Mean Annual Flood

Input

Return Period (years)	1	Soil	0.150
Area (ha)	50.000	Urban	0.000
SAAR (mm)	828	Region Number	Region 7

Results l/s

QBAR Rural	24.6
QBAR Urban	24.6
Q1 year	20.9
Q1 year	20.9
Q2 years	21.7
Q5 years	31.5
Q10 years	39.9
Q20 years	49.4
Q25 years	52.9
Q30 years	55.9
Q50 years	64.6
Q100 years	78.6
Q200 years	92.4
Q250 years	96.9
Q1000 years	127.2

$$\frac{24.6}{50} \times 1.252 = 0.616\text{l/s}$$

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PERCOLATION TEST RESULTS SHEET JUNE 2018

SITE NAME: LAND AT WAGTAILS

LOCATION: SOUTHAMPTON ROAD, ALDERBURY, SP5 3AF

(Once development has been completed) Roof area.....m2 Hard Standing.....m2

Test Pit 1 (nearest site hut)	LAT 51.04267	LONG 1.73001
Width/m 0.3	Length/m 1.6	Depth/m 1.62
Percolation Test (Date/Start Time)		Time taken to drain from 75%-25%
1. 21/06/2018 14:10hrs		2hrs 20 min
2. 22/06/2018 09:35hrs		3hrs 50 min
3. 23/06/2018 12:02 hrs		4hrs 10 min

Test Pit 2 (Far corner of site near footpath)	LAT 51.04275	LONG 1.72841
Width/m 0.3	Length/m 1.3	Depth/m 1.470
Percolation Test (Date/Start Time)		Time taken to drain from 75%-25%
1. 25/06/2018 09:15hrs		1hr 15 min
2. 26/06/2018 14:15hrs		1hr
3. 27/06/2018 11:47hrs		1hr 53 min

Test Pit 3 (In between above)	LAT 51.04256	LONG 1.72876
Width/m 0.3	Length/m 1.6	Depth/m 1.3
Percolation Test (Date/Start Time)		Time taken to drain from 75%-25%
1. 28/06/2018 12:10hrs		3hrs 20 min
2. 29/06/2018 11:50hrs		3hrs 30 min
3. 30/06/2018 10:30hrs		3hrs 45 min

L O N D O N . W I N D S O R . S A L I S B U R Y

Quick Design : Infiltration Systems

Micro Drainage

Variables

Rainfall and Runoff

FSR Rainfall ▼

Return Period (years)

Region England and Wales ▼

Map

Ratio R

Infiltration Structure

Cellular Storage ▼

Infiltration Coefficient Base (m/hr)

Infiltration Coefficient Side (m/hr)

Safety Factor

Porosity

Cv (Summer)

Cv (Winter)

Impermeable Area (ha)

Climate Change (%)

☒ With Outflow

Maximum Discharge (l/s)

Analyse OK Cancel Help

Enter Safety Factor between 1.0 and 50.0

Quick Design : Infiltration Systems

Micro Drainage

Results

Results are presented in paired rows. These represent maximum and minimum storage requirements for each size of structure.

Depth (m)	Net Vol (m³)	Surface Area (m²)	Ex/Fill Vol (m³)	Half Drain (mins)
0.2	125.8	662.2	132.4	253
	113.0	594.8	119.0	253
0.3	129.5	454.5	136.4	339
	121.7	426.9	128.1	339
0.4	134.4	353.7	141.5	426
	128.4	338.0	135.2	426
0.6	144.2	253.0	151.8	598
	139.6	244.9	146.9	597
1.0	158.5	166.8	166.8	914
	155.0	163.1	163.1	913
1.5	171.8	120.6	180.9	1258

Analyse OK Cancel Help

Enter Safety Factor between 1.0 and 50.0