

FLOOD RISK ASSESSMENT & DRAINAGE STRATEGY

Proposed Residential Development on Land North of
Seagry Road, Great Somerford, Wiltshire on Behalf of
Nick Davies & Emma Turtle

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3919.P.101 Rev A

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1.0 INTRODUCTION

- 1.1 This *Flood Risk Assessment & Drainage Strategy* has been prepared by Cole Easdon Consultants Limited (CE) on behalf of Nick Davies & Emma Turtle in support of proposed residential development on Land North of Seagry Road, Great Somerford, Wiltshire, SN15 5EQ. Refer to CE Figure 10524/500 Figure 1 [*Site Location Plan*] in Appendix 1.

Development Proposals

- 1.2 The development proposals for the site comprise the construction of 8 self-built residential dwellings, with associated landscaping, parking and access. The proposed layout is shown on Drawing Ref 3919.P.101 Rev.A [*Illustrative Site Layout*] by BHPH Architects in Appendix 2.

Need for Study

- 1.3 The purpose of this assessment is to demonstrate that the development proposal outlined above can be satisfactorily accommodated without worsening flood risk for the area and without placing the development itself at risk of flooding, as per National guidance provided within the National Planning Policy Framework document (NPPF) and its associated Planning Practice Guidance (PPG). A suitable drainage strategy discussing surface and foul water runoff disposal solutions for the development are also included.
- 1.4 Accordingly, this study has been prepared to:
- assess flood risk to the development from fluvial sources;
 - assess flood risk to the development from other potential sources, including ditches, sewers, groundwater and overland flows;
 - ensure that the proposed development will fully comply with the requirements of the Environment Agency's (EA's) policy on the safeguarding of floodplains;
 - assess a surface water drainage strategy for the proposed development; and
 - assess a foul water drainage strategy for the proposed development.

Local Policy

- 1.5 This assessment demonstrates that the proposals meet the requirements of Core Policy 67: Flood Risk within *Wiltshire Council's Core Strategy (Wiltshire Council, January 2015)*. The surface water drainage proposals on site have been prepared in accordance with the *Drainage and Betterment Strategy* (Wiltshire Council, June 2024).

Scope of Study

- 1.6 In Section 2.0, we describe the characteristics of the proposed development site and surrounding area. In Section 3.0, we assess flood risk issues. The proposed surface water drainage strategy is outlined in Section 4.0. The proposed foul water drainage strategy is outlined in Section 5.0. Conclusions are presented in Section 6.0.
- 1.7 The following resources have been used for this study:
- Defra's Multi-Agency Geographic Information for the Countryside (MAGIC) Map (EA, accessed July 2025);
 - Flood Map for Planning – Environment Agency (EA, accessed January 2026);
 - Flood Map for Surface Water – Environment Agency (EA, accessed January 2026);
 - Geological Map - British Geological Survey (BGS, accessed January 2026);
 - Public Sewer Records (Wessex Water, January 2026); and
 - Revised Climate Change Allowances (EA, May 2022).
- 1.8 The following publicly available documents have also been reviewed as part of this assessment:
- *Building Regulations 2015 – Approved Document H (Drainage and Waste Disposal)*;
 - *CIRIA C753 The SuDS Manual (November 2015)*;
 - *National Planning Policy Framework (February 2025)*;
 - *Non-Statutory Technical Standards for Sustainable Drainage Systems (Defra, June 2025)*;
 - *Planning Practice Guidance – Flood Risk and Coastal Change (September 2025)*;
 - *Rainfall Runoff Management for Developments (R&D Technical Report W5-074/A/TR/1 Revision E, Defra, June 2012)*;
 - *Sewerage Sector Guidance Appendix C – Design and Construction Guidance V2*;
 - *Wiltshire Council Core Strategy (Wiltshire Council (WC), January 2015)*;
 - *Wiltshire Council Drainage and Betterment Strategy (WC, June 2024)*;
 - *Wiltshire Council Local Flood Risk Management Strategy (WC, April 2015)*;
 - *Wiltshire Council Level 1 Strategic Flood Risk Assessment (WC, November 2024)*;
 - *Wiltshire Council Surface Water Management Strategy (WC, May 2013)*; and
 - *Wiltshire Council Groundwater Management Strategy 2016 (WC, October 2015)*.
- 1.9 The following abbreviations have been used in this Report:
- AOD - Above Ordnance Datum;
 - BGL- Below Ground Level;
 - BGS – British Geological Survey;
 - CC – Climate Change;
 - EA – Environment Agency;

-
- FEH – Flood Estimation Handbook;
 - LFRMS - Local Flood Risk Management Strategy;
 - NPPF – National Planning Policy Framework;
 - PPG - Planning Practice Guidance;
 - QBAR - Annual flood flow (return period of approximately 1:2.3 years);
 - SFRA – Strategic Flood Risk Assessment;
 - SuDS – Sustainable Drainage Systems;
 - WW – Wessex Water; and
 - WC – Wiltshire Council.

2.0 THE EXISTING SITE

- 2.1 The development site is located to the southwest of the village of Great Somerford, approximately 10.3km away from Chippenham town centre. Refer to CE Figure 10524/500 Figure 1 [*Site Location Plan*] in Appendix 1.
- 2.2 The site covers an area of 0.5hectares (Ha) and compromises a parcel of undeveloped greenfield land.
- 2.3 The site is bound to the north by greenfield land with existing residential development fronting West Street beyond, to the east by the public house 'The Volunteer' and further residential dwellings fronting Seagry Road, to the south by Seagry Road and to the west by greenfield land. Further residential development is located to the southeast and northwest of the site.
- 2.4 Land use in the vicinity of the site comprises of residential and agricultural uses.

Existing Topography

- 2.5 Topographical survey for the site indicates that the existing ground is generally flat with a gentle falls in a southeasterly direction. Levels along the northern boundary vary between 62.97 – 63.44m AOD. Levels along the southern boundary vary between 61.51 – 62.53 m AOD. Survey indicates an existing a ditch bounding the southern site boundary between the site and Seagry Road. Refer to Drawing Ref PITMAN-Great Somerford-Seagry-Rd (Sheet 1 to 3) [Topographic Survey] (by D&H Surveys Ltd.) in Appendix 2.

Existing Sewers

- 2.6 Asset records obtained from Wessex Water (WW) indicate the presence of an existing 150mm diameter public foul water sewer within Seagry Road to the east of the site. This sewer flows north-easterly direction away from the site. Refer to WW Sewer Records within Appendix 4.

Nearby Watercourses

- 2.7 An existing ditch bounds the site to the south. This ditch flows in a south-westerly direction, parallel to Seagry Road.
- 2.8 The River Avon, a main river as defined by the EA, is located some 420 m north of the site at its closest point. The River Avon flows in an easterly direction away from the site.

- 2.9 Two unnamed lakes are located some 260m and 490m southeast of the site respectively. Both of these lakes are fed by an unnamed watercourse located some 500m southeast of the site.

Existing Ground Conditions

- 2.10 British Geological Survey (BGS) records indicate that the site is underlain by bedrock comprising Kellaways Sand Member – sandstone. No superficial geology has been identified. Refer to Figure 2.1 below.
- 2.11 Defra’s Multi-Agency Geographic Information for the Countryside (MAGIC) map indicates that the geology underlying the site is classified as a “Secondary A” aquifer. The site is located within a “Zone I – Subsurface Activity” Groundwater Source Protection Zone.

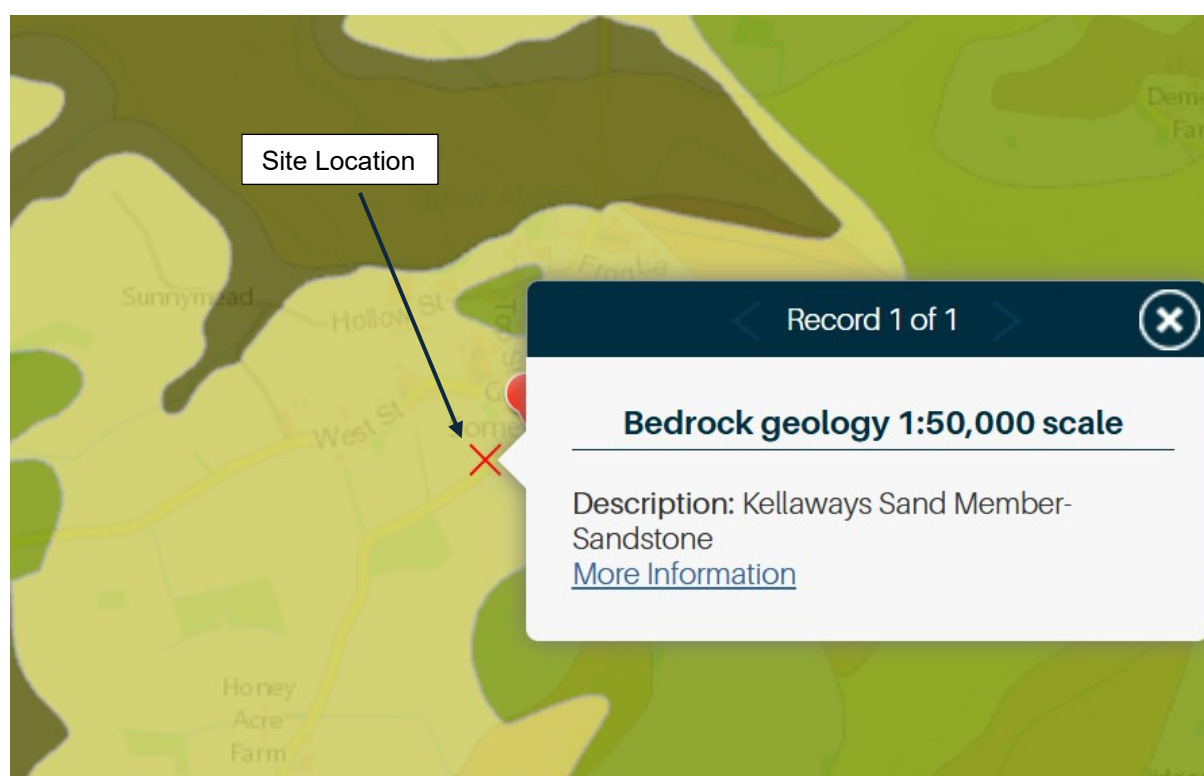


Figure 2.1: Bedrock Geology Map (Extract from British Geological Survey Geoindex)

Source: Geology of Britain viewer - British Geological Survey (bgs.ac.uk)

- 2.12 An intrusive investigation comprising infiltration testing in accordance with BRE DG365:2016 Digest has been undertaken on site by Paddock Geo Engineering in August 2025. Five trial pits were machine excavated at locations across the site (SA1 to SA5) to depths between 0.80m-2.20m bgl. Subsequent to the infiltration testing, SA4 was extended to the maximum depth achievable of 2.50m bgl, allowing geology assessment and installation of standpipe for future

groundwater monitoring should this be required. It should be noted that only SA3 and SA4 lie within the site application boundary.

- 2.13 The investigation encountered Topsoil made of sandy silt and organic clay, to depths 0.40m. Underlying these strata in SA2 and SA4 was silty clay to depths of approx. 1m. Clayey silty sand was encountered in all trial pits to depths between 0.80m to 2.20m. Groundwater was not encountered within any test pit. Refer to Report within Appendix 6.
- 2.14 Infiltration testing was undertaken in trial pits (SA1 to SA5), at depths between 0.90m and 2.20m bgl, in accordance with the BRE365 Soakaway Design Digest (2016).
- 2.15 Three successful cycles were completed in SA5. Only a single infiltration test was performed in SA1. Due to the slow rate of infiltration, the subsequent two cycles were not undertaken and the test was terminated. Therefore, an indicative calculation for SA1 has been provided for informational purposes only in the Report and Table 2.1 below.
- 2.16 Tests in SA2 to SA4 were terminated part way through the first cycle of tests due to slow infiltration rate and lack of water level movement after several hours.

Table 2.1: Summary of Tested Infiltration Rates Onsite

Test Pit	Test Depth (mbgl)	Test 1	Test 2	Test 3
SA1	1.50	2.45×10^{-6}	-	-
SA2	1.20	Test Failed $<10^{-7}$	-	-
SA3	2.20	Test Failed $<10^{-7}$	-	-
SA4	1.70	Test Failed $<10^{-7}$	-	-
SA5	0.80	1.13×10^{-5}	1.01×10^{-5}	1.21×10^{-5}

Existing Site Drainage

- 2.17 The site is an area of undeveloped greenfield land with no formal drainage regime. It is assumed that runoff generated within the site infiltrates into the underlying strata or drains towards the existing boundary ditch to the south. Equivalent greenfield runoff rates for the proposed impermeable areas (1727m²) have been calculated using the FEH Statistical Method. Refer to Appendix 5 and Table 2.2 below.

Table 2.2: Summary of Greenfield Runoff Rates

Scenario	Storm Event			
	1:1 year	QBAR	1:30 year	1:100 year
Greenfield	0.56l/s	0.72l/s	1.4l/s	1.74l/s

3.0 FLOOD RISK ISSUES

- 3.1 This Section presents an assessment of flood risk to the development and includes recommended flood risk mitigation measures appropriate to the level of perceived risk. Flood risk issues and proposed mitigation measures are summarised in Table 3.1 below.

Historic Flooding

- 3.2 The SFRA for Wiltshire (May 2019), the Strategic Flood Risk Assessment Data Explorer and the LFRMS for Wiltshire (April 2015) were reviewed to determine if any historic instances of flooding had occurred at the site. The Strategic Flood Risk Assessment Data Explorer indicates that the site has not experienced significant historical flooding.

Assessment of Flood Risk from Fluvial/Tidal Sources

- 3.3 The Flood Map for Planning (FMP) for the locality as produced by the EA is shown on Figure 3.1 below. According to the FMP, it can be seen that the site lies within Flood Zone 1 (Low Risk).



Figure 3.1: EA Flood Map for Planning
Source: <https://flood-map-for-planning.service.gov.uk/>

- 3.4 *NPPF Annex 3: Flood Risk Vulnerability Classification* classifies the proposed site usage 'Buildings used for dwelling' as 'More Vulnerable' development. In accordance with the *NPPF Practice Guidance Table 2 (Flood Risk Vulnerability and Flood Zone 'incompatibility')*, More Vulnerable Development is appropriate within Flood Zone 1. Flood risk from this source is therefore considered to be low.

Fluvial/Tidal Flood Risk Mitigation Measures

- 3.5 No mitigation is required.

Assessment of Flood Risk from Existing Sewers/Drains

- 3.6 Asset records obtained from Wessex Water (WW) indicate the presence of an existing 150mm diameter public foul water sewer within Seagry Road to the east of the site. This sewer flows north-easterly direction away from the site. Refer to WW Sewer Records within Appendix 4.
- 3.7 Should flooding of the sewer occur, floodwaters would flow in a south easterly direction along Seagry Road, past the site contained within the highway corridor. The site entrance is elevated relative to Seagry Road and therefore would not be impacted by potential flooding. Therefore, flood risk from this source is considered to be low.

Sewer/Drain Flood Risk Mitigation Measures

- 3.8 No mitigation is required

Assessment of Flood Risk from Overland Flow (Pluvial)

- 3.9 The EA Map 'Risk of Flooding from Surface Water' includes pluvial flood mapping for the present day and 2040-2060 epoch. Mapping indicates that during the climate change scenario (2040-2060 epoch) the majority of the site is at a "very low risk" of surface water flooding. This means that the probability of surface water flooding occurring is lower than 0.1% each year. A narrow flood flow path is identified on site, running parallel to the western boundary of the site. The flow path is at "low risk", meaning that the probability of the surface water flooding occurring is between 0.1% and 1% chance each year in this area. Refer to Figure 3.2 below.

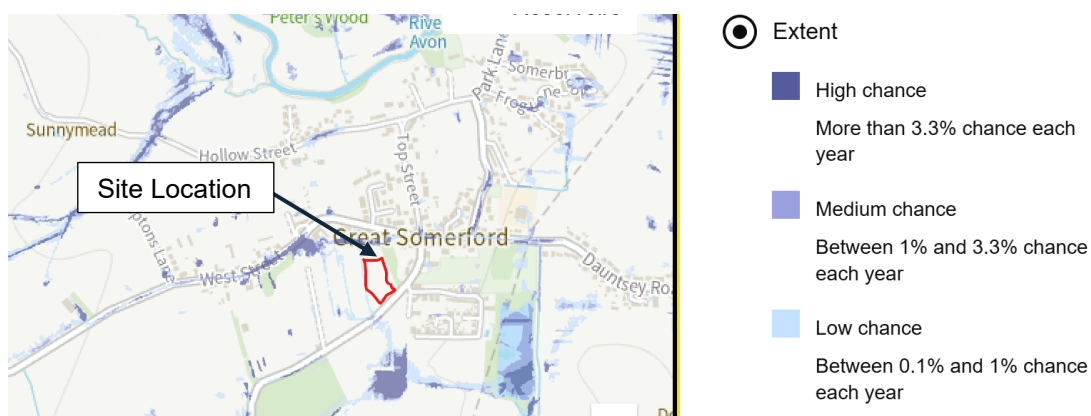


Figure 3.2: EA Yearly chance of surface water flooding between 2040 and 2060 Map-Extent

Source: <https://check-long-term-flood-risk.service.gov.uk/map>

- 3.10 The EA also publishes 'Depth of surface water flooding' mapping for both the present day and climate change scenarios. Flood Depth mapping does not show flood depths of less than 75mm. All pluvial flooding adjacent to the site boundary shown on the extent mapping is not mapped on the depth mapping; therefore, indicating flood depths are anticipated to be less than 75mm in this area. Refer to Figure 3.3 below.

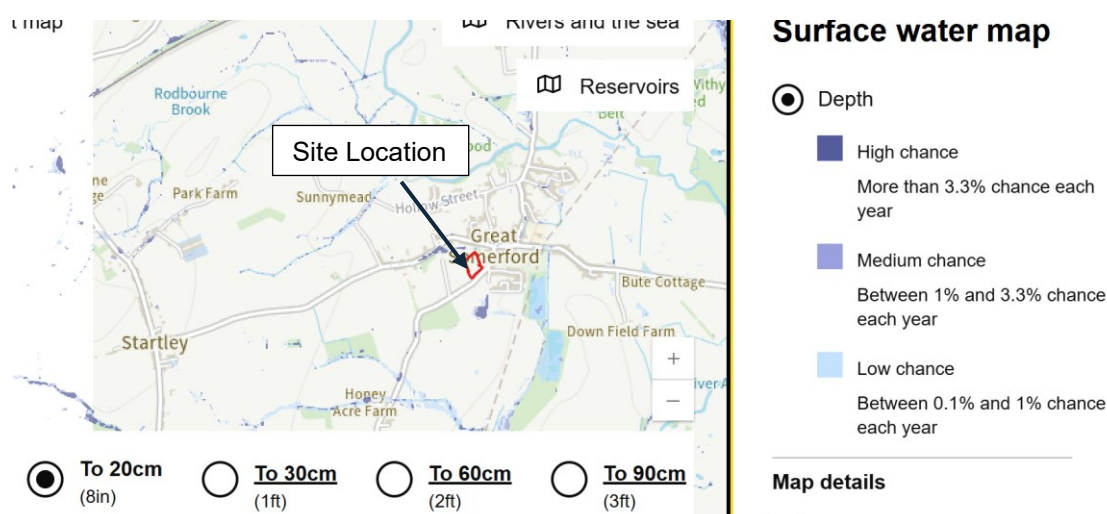


Figure 3.3: EA Depth of Surface Water Flooding Map-Depth (up to 20cm)

Source: <https://check-long-term-flood-risk.service.gov.uk/map>

- 3.11 Flood risk from this source is considered to be low.

Overland Flow Flood Risk Mitigation Measures

- 3.12 No mitigation measures are necessary; however Sustainable Drainage Systems (SuDS) will be incorporated within the proposals to reduce flood risk from surface water runoff generated within the new development. Further details are included in Section 4.0 of this Report.

Assessment of Flood Risk from Groundwater

- 3.13 BGS records indicate the site is underlain by geology comprising of sandstone. BGS borehole logs located in the vicinity of the site within Great Somerford indicate varying groundwater levels. Borehole ref ST98SE26, some 380m west of the site, indicates that groundwater was struck at 119 feet (36m) below ground level. A second borehole, borehole ref ST98SE25 located some 530m east of the site indicates that groundwater was encountered at 193 feet (58m) below ground level. Refer to BGS borehole records within Appendix 5.
- 3.14 As mentioned in Section 2 of this report, groundwater was not encountered in any of the five trial pits on the site. Refer to Ground investigation report in Appendix 6.

3.15 The WC Strategic Flood Risk Assessment Data Explorer indicates that the site is located within an area that is “*deemed as having a negligible risk from groundwater flooding*”.

3.16 Flood risk from groundwater is considered to be low.

Groundwater Flood Risk Mitigation Measures

3.17 No mitigation is required.

Assessment of Flood Risk from Reservoirs

3.18 The EA Risk of Flooding from Reservoirs map shows the site is not at risk of reservoir flooding. Refer to Figure 3.4 below. Therefore, flood risk is considered to be low.



Figure 3.4: EA Risk of Flooding from Reservoirs
Source: <https://flood-map-for-planning.service.gov.uk/>

Reservoirs Flood Risk Mitigation Measures

3.19 No mitigation is required.

Table 3.1: Assessment of Flood Risk to the Development Site Arising from External Sources

Source of Potential Flooding to the Development Site	Flood Risk	Mitigation/Comments
Fluvial/Tidal	Low	- The site is located within Flood Zone 1 (Low Risk). - No mitigation is required
Overland Flow (Pluvial)	Low	- Majority of the site is indicated to have a very low chance of surface water flooding occurring during the 2040 – 2060 epoch - Existing flood flow path identified by the EA mapping, running in a southerly direction along the western boundary - EA mapping indicates that anticipated depths of the flood flow paths are less than 75mm - No mitigation is required.
Groundwater	Low	- The Strategic Flood Risk Assessment Data Explorer indicates that the site is located in an area of Wiltshire were <i>“this zone is deemed as having a negligible risk from groundwater flooding”</i> - Intrusive soil investigation performed in August 2025 did not encounter groundwater in any of the trial pits (up to 2.5m bgl). - No mitigation is required.
Public Sewer	Low	- If surcharging of sewer were to occur flows would be contained within the highway corridor without impacting on the proposed development site - No mitigation required
Artificial Sources	Low	No mitigation is required.

4.0 SURFACE WATER DRAINAGE STRATEGY

Refer to CE Drawing 10524/501 [*Proposed Drainage Strategy*] in Appendix 1.

- 4.1 In order to mitigate flood risk posed by post development runoff, adequate control measures will be provided within the site. This will ensure that flood risk is not increased elsewhere as a result of the development, in line with national and local guidance.

Drainage Hierarchy

- 4.2 The proposed drainage strategy for the site has been prepared according to the surface water drainage hierarchy set out in National Standards for Sustainable Drainage Systems (DEFRA, June 2025), as follows. Also, refer to Table 4.1 below.
1. Collected for non-potable uses;
 2. Infiltration to ground;
 3. Discharged to an above ground surface water body;
 4. Discharged to a surface water sewer, or another piped surface water drainage system;
 5. Discharged to a combined sewer.

Non-potable Uses

- 4.3 The development is for self-build units only. Rainwater harvesting has not been considered at this stage, however, could be considered during detailed design of individual units.

Infiltration Potential

- 4.4 Intrusive site investigation indicated that of the five trial pits tested, infiltration was only successful in SA5, which is located outside of the site boundary. Testing within SA4, within the site boundary, failed. Therefore, an attenuation-based drainage strategy has been proposed.

Discharge Location

- 4.5 It is proposed to discharge surface water from the site to the existing drainage ditch located to the south of the site.

Discharge Rate

- 4.6 It is proposed to discharge surface water from the site for all events up to and including the 1:100 year + 45% climate change event to the QBAR rate of 0.7l/s.

Urban Creep

- 4.7 In accordance with LASOO guidance, urban creep has been considered in the drainage calculations for the proposed roof areas.

Table 4.1: Review of SuDS Components in accordance with the Drainage Hierarchy

SuDS Technique	Proposed	Not proposed	Reason
Store rainwater for later use		X	To be examined at detailed design
Infiltration to ground		X	Infiltration not achievable. Testing within the site boundary failed
Discharged to an above ground surface water body	X		Surface water to be discharged to existing boundary ditch
Discharged to a surface water sewer, or another piped surface water drainage system		X	Connection not sought
Discharge to a combined sewer		X	Connection not sought

Proposed Sustainable Drainage Systems (SuDS)

- 4.8 On site storage will be provided within sub-base storage located below the access road and driveways. The sub-base will discharge to a proposed attenuation basin before discharging to the boundary ditch.
- 4.9 Preliminary calculations indicate 909m² of sub-base to a total depth of 0.45m including surfacing is sufficient to attenuate surface water from the development up to the 1:100+CC storm event. The sub-base provides 97m³ of storage and discharged to the attenuation basin via a 300mm diameter pipe. The attenuation basin is to have a bed area of 170m², be 0.5m deep and have side slopes at 1 in 3. Calculations indicate that 84.2m³ of storage is required within the basin resulting in a maximum water depth of 0.407m, therefore providing 0.1m freeboard. The basin will discharge at the QBAR rate of 0.7l/s to the boundary ditch. Refer to Table 4.2 below.
- 4.10 All surface water drainage design calculations have been undertaken using InfoDrainage software, CV values of 0.9 and FEH22 rainfall data. Refer to Appendix 3.

Table 4.2: Summary of Existing and Proposed Surface Water Discharge Rates

Developable area (ha)		Discharge Point	Calculation Method	Discharge Rate (l/s)				Volume required (m ³)
				QB AR	1:30 yr	1:100 yr	1:100yr +45%	
Existing (Greenfield)	0.173	To ground/ditch	FEH Statistical Method	0.72	1.4	1.74	-	-
Proposed	0.181 *	To ditch	Info Drainage	0.7	0.7	0.7	0.7	181.2

* Includes an allowance for urban creep

Design Exceedance

- 4.11 If design exceedance was to occur, flows would follow the existing topography of the site and flow in a southerly direction towards the boundary ditch. Refer to CE Plan 10524/501 [*Proposed Drainage Strategy*] in Appendix 1.

Water Quality

- 4.12 Water quality has been assessed in line with the Simple Index approach from Chapter 26 of CIRIA C753 *The SuDS Manual*:
- Step 1 – Allocate suitable pollution hazard indices for the proposed land use.
 - Step 2 – Select SuDS with a total pollution mitigation index that equals or exceeds the pollution hazard index.
- 4.13 The highest pollution hazard level for the proposed land use is Low (residential car parks and low traffic roads). The pollution hazard indices for the proposed land uses are shown in Table 4.3 below.

**Table 4.3: Pollution Hazard Indices for the Proposed Site
(from Table 26.2 of CIRIA C753 The SuDS Manual)**

Land use	Pollution hazard level	Total suspended solids (TSS)	Metals	Hydrocarbons
Residential car parks	Low	0.5	0.4	0.4

- 4.14 The Pollution Mitigation Indices for permeable sub-base are greater than the Pollution Hazard Indices for residential car parks and low traffic roads. Refer to Table 4.4 below. Therefore, the proposed drainage strategy will provide sufficient water quality treatment to runoff. Additional treatment will also be provided to runoff by the proposed basin.

**Table 4.4: Pollution Mitigation Indices for Discharge to Surface Water from the Proposed Site
(from Table 26.3 of CIRIA C753 The SuDS Manual)**

SuDS Feature	Total suspended solids (TSS)	Metals	Hydrocarbons
Sub-base	0.7	0.6	0.7

Adoption and Maintenance

- 4.15 The proposed attenuation basin, permeable paving and associated drainage network will be maintained by the site owner(s) or a private maintenance company acting on the owner's behalf. A draft Maintenance Schedule is outlined below and summarised in Table 4.5.

Sub-base Storage

- 4.16 Permeable surfaces need to be regularly cleaned of silt and other sediments to preserve their infiltration capability. A brush and suction cleaner, which can be a lorry-mounted device or a smaller precinct sweeper, should be used and the sweeping regime should be as follows:
1. End of winter (April) – to collect winter debris.
 2. Mid-summer (July/August) – to collect dust, flower and grass-type deposits.
 3. After autumn leaf fall (November).
- 4.17 If reconstruction is necessary, the following procedure should be followed:
1. Lift surface layer and laying course.
 2. Remove any geotextile filter layer.
 3. Inspect sub-base and remove, wash and replace if required.
 4. Renew any geotextile layer.
 5. Renew laying course, jointing material and concrete block paving.
- 4.18 Materials removed from the voids or the layers below the surface of the paving may contain hazardous substances such as heavy metals and hydrocarbons which may need to be disposed of as controlled waste.

Attenuation Basin

- 4.19 It is anticipated that the basin will be dry except during rainfall events, and will be grassed, and used as part of the landscaping and amenity area on site when dry. It is not anticipated that the attenuation basin will require a rigorous maintenance regime as long as silt is removed from the basin on a regular basis. Notwithstanding this, a suitable maintenance regime for the attenuation basin would be as follows:
1. Monthly – removal of litter, mowing grass and check inlet pipe for blockages.
 2. Annually – sediment removal and tidy dead plant growth.
 3. As required – repair inlets and outlets and reinstate design levels.

Pipework, catchpits and flow control

- 4.20 It is not envisaged that silt build up within the pipework systems will require a rigorous maintenance regime so long as silt is removed from upstream catch pits on a regular basis. Notwithstanding this, a suitable maintenance regime for the systems will comprise of routine inspection (every six months) and silt removal (as necessary).

Table 4.5: Draft Maintenance Schedule for Proposed Drainage Infrastructure

Drainage Element	Schedule	Maintenance Requirement	Frequency
Sub-base Storage	Regular	Brushing and vacuuming over whole surface	Once a year, after autumn leaf fall
	Occasional	Removal of weeds	As required
	Remedial	- Remedial work to any depressions or cracked or broken blocks considered a hazard to end users or detrimental to performance - Rehabilitation of surface and upper sub-structure by replacement	- As required - Every 10 – 15 years, or as required
	Monitoring	- Initial inspection - Inspect for evidence of weed growth or poor operation - Inspect silt accumulation rates - Monitor inspection chambers	- Monthly for 3 months after installation - Three monthly, 48 hours after large storms in first six months - Annually - Annually
Attenuation Basin	Regular	- Remove litter and debris - Mow grass - Manage other vegetation and manage nuisance plants	- Monthly - Monthly, or as required - Monthly at start, then as required
	Occasional	- Reseed areas of poor vegetation growth - Prune and trim trees - Remove sediment from pre-treatment system when 50% full	As required
	Remedial	- Repair erosion or other damage by reseeded - Realign the rip-rap - Repair or rehabilitate inlets, outlets and overflows - Reinstate uneven surface and design levels	As required
	Monitoring	- Inspect inlets, outlets, and overflows for blockages - Inspect banksides, structures, pipework etc. for evidence of damage - Inspect inlets and pre-treatment systems for silt accumulation - Inspect infiltration surfaces for ponding and compacting	- Monthly - Monthly - Half yearly - Monthly
Pipework, Catchpits & Flow Control	Regular	- Inspect for accumulation of silt - Inspect inlets, outlets and overflows for blockages - Inspect for debris and litter	Every six months
	Occasional	- Remove debris and litter - Remove silt	As required

Note: In addition to the above maintenance requirements, it is recommended that all drainage elements are inspected:

- Following the first storm event
- Monthly for the first 3 months following commissioning

5.0 FOUL WATER DRAINAGE STRATEGY

Refer to CE Drawing 10524/501 [*Proposed Drainage Strategy*] in Appendix 1.

- 5.1 Wessex Water sewer records indicate the presence of a 150mm diameter public foul water sewer within Seagry Road to the east of the development site.
- 5.2 It is proposed to discharge foul water from the proposed development site into existing foul sewer manhole reference 3501, subject to approval from Wessex Water. Refer to CE Drawing 10524/501 [*Proposed Drainage Strategy*] in Appendix 1.
- 5.3 A capacity check has been submitted to Wessex Water, to which they have confirmed that capacity exists within the public sewer network with a connection to be made to MH3501, subject to application and agreement. Refer to the Capacity Check response in Appendix 7.

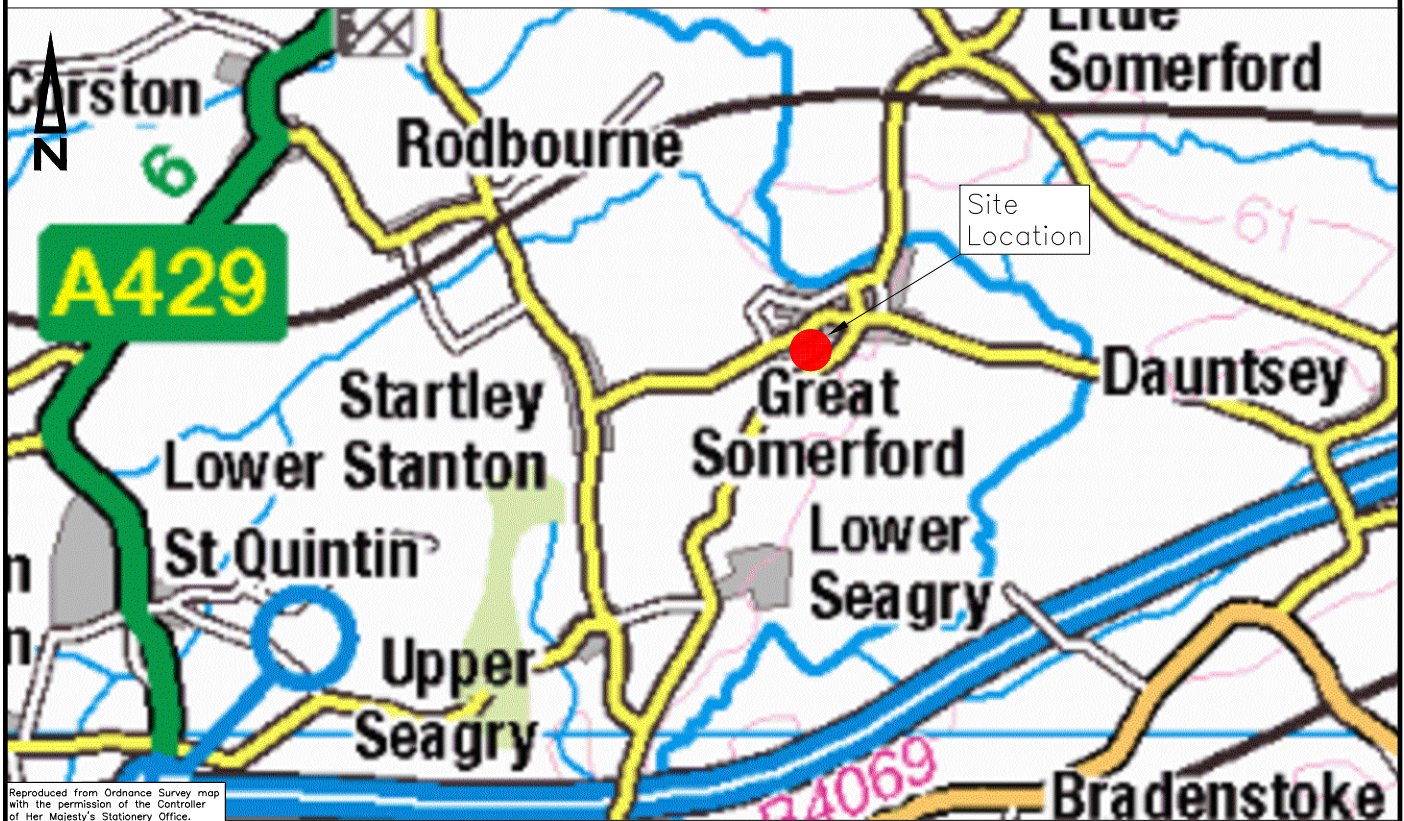
6.0 DISCUSSION AND CONCLUSIONS

- 6.1 Flood risk to the proposed development from various sources, such as fluvial, sewers, groundwater, reservoirs and overland flow has been considered in this study. Flood risk from all sources is considered to be low.
- 6.2 The surface water drainage strategy for the site has been prepared according to the drainage discharge hierarchy set out in *CIRIA C753 The SuDS Manual*. The site is underlain by clayey silty sand, which would prevent the operation of infiltration-based SuDS as corroborated by infiltration test results. Therefore, in accordance with the drainage hierarchy, an attenuation-based surface water drainage strategy, with disposal to the existing ditch is proposed.
- 6.3 On site storage will be provided within sub-base storage located below the access road and driveways. The sub-base will discharge via 300mm pipe to a proposed attenuation basin before discharging to the boundary ditch. The proposed attenuation basin will discharge post development runoff at a rate of 0.7l/s to the existing boundary ditch located to the south of the site.
- 6.4 Water quality has been assessed in line with the Simple Index approach from Chapter 26 of *CIRIA C753 The SuDS Manual*. The proposed SuDS will provide effective pollutant removal prior to discharge.
- 6.5 The proposed SuDS has been designed to accommodate the 1 in 100 year + 45% storm event. If design exceedance was to occur, flows would follow the existing topography of the site and flow in a southerly direction towards the boundary ditch.
- 6.6 All on site surface water drainage systems will remain private and will be the responsibility of the site owner(s) or a private maintenance company acting on the owner's behalf.
- 6.7 Foul water is proposed to be discharged to the existing public foul sewer, via MH3501 within Seagry Road. Wessex Water have confirmed that this is their preferred point of connection for post development discharge.
- 6.8 This study has been undertaken in accordance with the principles set out in NPPF. We can conclude that providing the development adheres to the conditions advised in this Report, the said development proposals can be accommodated without increasing flood risk within the locality in accordance with objectives set by Central Government and the EA.

Appendix 1



Scale: 1:5,000



Scale: 1:50,000

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Job Title:

Proposed Residential Development
Land North of Seagry Road
Great Somerford
SN15 5EQ

Drawing Title:

Site Location Plan

Client:

Nick Davies &
Emma Turtle

Drawn By

AW

Checked By

JP

Date Drawn

January 2026

Drawing No.

10524/500 Figure 1

Drawing Status:

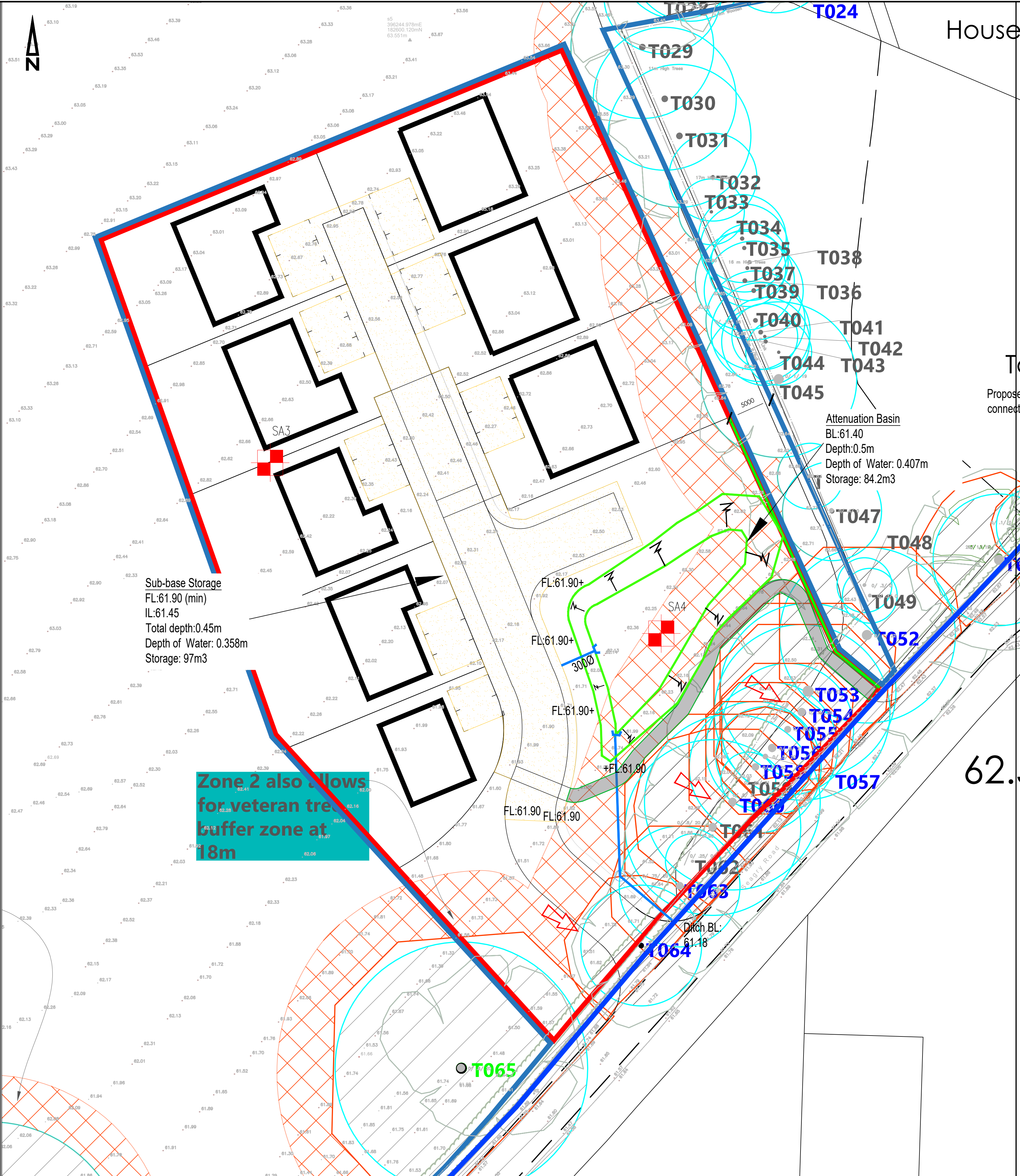
CONSTRUCTION AT CLIENT AND/OR CONTRACTOR RISK	FOR COMMENT	
	FOR PLANNING	
	FOR TENDER	
	FOR APPROVAL	
	FOR CONSTRUCTION AS BUILT	

Scale

As Shown (A4)

Revision

-



Key

- Site Boundary
- Existing ditch
- Proposed Impermeable Area
- Attenuation Basin
- Sub-base Storage
- Proposed Surface Water Pipework
- SA4 Trial Pit Location
- Design Exceedance route
- Existing Foul Water Sewer

Notes

1. All measurements are in meters unless specified otherwise
2. All levels are in meters above ordnance datum
3. Drainage is indicative and subject to detailed design

REFERENCE DRAWINGS:

Drawing No.	Drawing Title	Revision	Date	Company
3918.P.101	Site Plan	-	Jan 2026	BHPI Architects

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Client: Nick Davies & Emma Turtle

Job Title: Proposed Development North of Seagry Road Great Somerford

Drawing Title: Proposed Drainage Strategy

Drawing Status:

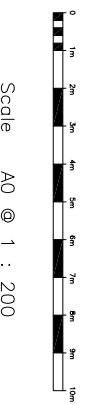
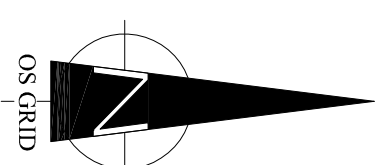
FOR COMMENT	FOR PLANNING	FOR TENDER	FOR APPROVAL	FOR CONSTRUCTION	AS BUILT

Designed by: NJ Drawn by: NJ Checked by: JP

Date: January 2026 Scale: 1:250 @ A1

Dwg. No. 10524/501 Rev.

Appendix 2



SHEET LAYOUT

2

D&H
Ltd
Surveys

Email: admin@dhaur-ey.com
 Website: www.dhaur-ey.com
 Tel (01249) 720545
 Fax (01249) 721124

Elevation Surveys	Co-ordination Of Site Layouts
Floor Plan Surveys	Rectified Photo Elevations
Volumetric Surveys	CAD Plotting Routines

Project Name: _____
 _____ and North of Seaver Rd

Great Somerford, Chippingham

Drawing Title:

Topographic Survey

Pitman Building Ltd

Agent:
Vision Planning

Date: June 2025

Scale: A0 @ 1:500

Drawn	Surveyor	Dwg No	Revision
-------	----------	--------	----------

KJH	SCB	Sheet 2 of 3	Rev A
-----	-----	--------------	-------

Site Datum	OSBM Ref
	OS Geoid 15

Grid Orientation	Sheet ID
Ordinance Survey	

Ordinance Survey
PTTMAN-Gravel Somerset-Seaggy-Rd

Disclaimer
D & H Surveys will guarantee that this

Survey Data & Station Coordinates are correct to the indicated Scale ONLY



NOTES:
NO DIMENSIONS TO BE SCALED FROM THIS DRAWING
ALL DIMENSIONS ARE TO BE CHECKED AGAINST SITE
DIMENSIONS BEFORE ANY WORK IS BEGAN. IT IS THE
CONTRACTOR'S RESPONSIBILITY TO ENSURE COMPLIANCE WITH
BUILDING REGULATIONS.

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EXPLICIT PERMISSION OF BHP ARCHITECTS

REVISIONS		
Rev.	Date	Description
A	27.01.26	Updated

Client :
Mr N Davies &
Ms E Turtle

Job :
North of Seagry
Road,
Great Somerford

Drawing Title:
Illustrative Site Layout

Scale:
1:500 @ A1

Date: Jan 2026 Drawn By: RN/ES Checked: RN

Drawing No: 3919.P.101 Revision: A

PLANNING

BHPH
architects

info@bhparchitects.com
www.bhparchitects.com

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SN13 8AA
T: 01223 969385

Boston House Business Centre, Downview
Road, Warrington, CH12 9FF
T: 01233 765322

Appendix 3

FEH Statistical Method: Catchment Descriptor Equation (InfoDrainage)

Area (m2)	1727	Area(Km2)	0.001727
SAAR	736	1000/SAAR	1.358696
FARL	1		
BFIHOST19	0.705	BFIHOST2	0.497025
Region	8		

QMED	x 1.07 =	QBAR
m3/s	l/s	l/s
0.000628	0.628418	0.716397

1yr	0.56
2yr	0.67
QBAR	0.72
10yr	1.07
30yr	1.40
100yr	1.74
200yr	1.99

Job: 10524 -Self build

Project:	Date: 02/09/2025		
	Designed by: njackson	Checked by:	Approved By:
Report Details: Type: Inflows Storm Phase: Phase	Company Address:		



Catchment Area (1)

Type : Catchment Area

Area (ha)	0.091
-----------	-------

Preliminary Sizing

Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.900
Winter Volumetric Runoff	0.900
Time of Concentration (mins)	5
Percentage Impervious (%)	100
Urban Creep (%)	0



Catchment Area

Type : Catchment Area

Area (ha)	0.082
-----------	-------

Preliminary Sizing

Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.900
Winter Volumetric Runoff	0.900
Time of Concentration (mins)	5
Percentage Impervious (%)	100
Urban Creep (%)	10

Project:	Date: 02/09/2025		
	Designed by: njackson	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Storm Phase: Phase	Company Address:		





Pond

Type : Pond

Dimensions

Exceedance Level (m)	61.900
Depth (m)	0.500
Base Level (m)	61.400
Freeboard (mm)	0
Initial Depth (m)	0.000
Porosity (%)	100
Average Slope (1:X)	3.656
Total Volume (m³)	107.875

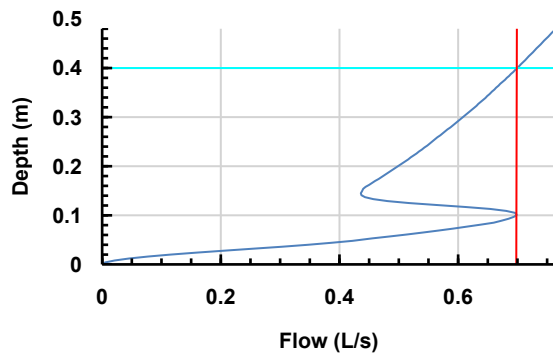
Depth (m)	Area (m²)	Volume (m³)
0.000	170.00	0.000
0.500	265.00	107.875

Outlets

Outlet

Outgoing Connection	(None)
Outlet Type	Hydro-Brake®
Invert Level (m)	61.400
Design Depth (m)	0.400
Design Flow (L/s)	0.7
Objective	Minimise Upstream Storage Requirements
Application	Surface Water Only
Sump Available	☐

Unit Reference	CHE-0047-7000-0400-7000
----------------	-------------------------



Advanced

Perimeter	Circular
Length (m)	25.886
Friction Scheme	Manning's n
n	0.03

Project:	Date: 02/09/2025		
	Designed by: njackson	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Storm Phase: Phase	Company Address:		





Porous Paving

Type : Porous Paving

Dimensions	
Exceedance Level (m)	61.900
Depth (m)	0.450
Base Level (m)	61.450
Paving Layer Depth (mm)	50
Membrane Percolation (m/hr)	2.5
Porosity (%)	30
Length (m)	5.000
Long. Slope (1:X)	1000.00
Width (m)	181.800
Total Volume (m³)	109.080

Outlets	
Outlet	
Outgoing Connection	Pipe
Outlet Type	Orifice
Diameter (m)	0.280
Coefficient of Discharge	0.600
Invert Level (m)	61.450

Advanced	
Conductivity (m/hr)	400.0

Project:	Date: 02/09/2025		
	Designed by: njackson	Checked by:	Approved By:
Report Details: Type: Connections Storm Phase: Phase	Company Address:		



Name	Length (m)	Connection Type	Slope (1:X)	Manning's n	Colebrook-White Roughness (mm)	Diameter / Base Width (mm)	Cross Section	Upstream Cover Level (m)
Pipe	3.117	Pipe	62.331		0.6	300		61.905

Name	Upstream Invert Level (m)	Downstream Cover Level (m)	Downstream Invert Level (m)	Part Family	Lock	Flow Restriction (L/s)	Culvert Type	Culvert Entrance
Pipe	61.450	61.900	61.400		None	83.5	(None)	(None)

Name	Wall Thickness (mm)	Material	Trench Width (mm)	Bedding Material	Surrounding Material
Pipe	0		0		

Project:	Date: 02/09/2025		
	Designed by: njackson	Checked by:	Approved By:
Report Details: Type: Inflow Summary Storm Phase: Phase		Company Address:	



Inflow Label	Connected To	Flow (L/s)	Runoff Method	Area (ha)	Percentage Impervious (%)	Urban Creep (%)	Adjusted Percentage Impervious (%)	Area Analysed (ha)
Catchment Area	Porous Paving		Time of Concentration	0.082	100	10	110	0.090
Catchment Area (1)	Porous Paving		Time of Concentration	0.091	100	0	100	0.091
TOTAL		0.0		0.173				0.181

Project:	Date: 02/09/2025			
	Designed by: njackson	Checked by:	Approved By:	
Report Title: Rainfall Analysis Criteria	Company Address:			

Runoff Type	Dynamic
Output Interval (mins)	5
Time Step	Shortest
Urban Creep	Use Catchment Values
Junction Flood Risk Margin (mm)	300
Perform No Discharge Analysis	☐

Rainfall

FEH		Type: FEH
Site Location	GB 396800 182400 ST 96800 82400	
Rainfall Version	2022	
Summer	☒	
Winter	☒	

Return Period

Return Period (years)	Increase Rainfall (%)
100.0	45.000

Storm Durations

Duration (mins)	Run Time (mins)
15	30
30	60
60	120
120	240
180	360
240	480
360	720
480	960
600	1200
720	1440
960	1920
1440	2880
2160	4320
2880	5760
4320	8640
5760	11520
7200	14400
8640	17280
10080	20160

Project:	Date: 02/09/2025		
	Designed by: njackson	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Company Address:	





Critical Storm Per Item: Rank By: Max. Resident Volume

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Percentage Available (%)	Status
Pond	FEH: 100 years: +45 %: 1440 mins: Winter	61.807	61.807	0.407	0.407	3.1	84.199	0.000	0.000	0.7	101.323	21.948	OK
Porous Paving	FEH: 100 years: +45 %: 1440 mins: Winter	61.808	61.808	0.353	0.358	6.8	96.913	0.000	0.000	9.1	326.911	11.154	OK

Appendix 4

WATER MAINS	SEWERS	STRATEGIC PUBLIC PRIVATE SECTION 104 OTHER WESSEX PIPES NON-WESSEX / UNKNOWN	
Distribution	Foul	Rising Mains	Private Rising Mains
Washout	Surface	Standby Rising Mains	Culverted Watercourse
Raw Water	Combined	Effluent Disposal	Highway Drain
Abandoned	Abandoned	Overflow	Use Unknown
Private		Syphon	Status Unknown
FITTINGS	STRUCTURES	OTHER STRUCTURES	
Hydrant	Manhole - Foul	Chamber	
Other	Manhole - Surface	Attenuation Tank	Tunnel
	Manhole - Combined	Storage Tank	Interceptor
	Inlet		
	Outfall		
	Lamphole		
	Bifurcation - Foul		
	Bifurcation - Surface		
	Bifurcation - Combined		
	Combined Sewage Overflow		
	Pumping Station - Surface		
	Pumping Stn - Foul/Combined		
	Gully		
	Vent Column		
	Rodding Eye		
	Catchpit		
	Flushing Chamber		
	Soakaway		
	Non Return Valve		
	Air Valve		
	Hatch Box		
	Washout		
Information in this map 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. If you are proposing to build over or near Wessex Water's apparatus you should contact the Developer Services Team, tel: 01225 526333 or e-mail: developer.enquiries@wessexwater.co.uk to discuss your proposals. Details of assets within Wessex Water's land ownership are unavailable through this service.			
Date: 16/01/2026		Centre: 396158E, 182565N	
Scale: 1:1,250 (when printed at A2 size)			