

Flood Risk Assessment & Drainage Strategy 60 Sea Way, Middleton-on-Sea

Mr. G Vlad

Ref: D2295/FRA2.0

May 2026



DOCUMENT CONTROL

Project: 60 Sea Way, Middleton-on-Sea
Erection of 1 No. detached dwelling, following demolition of existing dwelling with associated parking and landscaping

Document: Flood Risk Assessment, Drainage Strategy & Lidsey Drainage Impact Assessment

Client: Mr. G Vlad

Reference: D2295/FRA2.0

Document Checking:

Author: S Burnett **Date:** 08/05/2026

Checked by: M Akmenkalns **Date:** 08/05/2026

Approved by: M Akmenkalns **Date:** 08/05/2026

Status:

Issue	Date	Status	Issued by
1.0	08/08/2024	FIRST ISSUE	SPB
1.1	15/08/2024	SECOND ISSUE	SPB
1.2	22/08/2024	THIRD ISSUE	SPB
2.0	08/05/2026	FINAL	SPB

© Copyright BP Civils 2026

No part of this publication may be reproduced by any means without the prior permission of BP Civils.

CONTENTS

1	INTRODUCTION	6
1.1	Background	6
2	SITE LOCATION AND DESCRIPTION	7
3	GROUND CONDITIONS	8
3.2	Groundwater.....	10
4	EXISTING DRAINAGE	13
4.1	Surface Water	13
4.2	Foul Water.....	13
4.3	Highway Drainage.....	14
5	PROBABILITY	15
5.1	Sources of Information	15
5.2	Flood Maps and Modelling	15
5.3	Strategic Flood Risk Assessment	19
5.4	Historic Flooding.....	19
5.5	Summary of Flood Risk.....	20
6	PROPOSED DEVELOPMENT	22
6.1	Description of Development	22
7	SEQUENTIAL AND EXCEPTION TESTS	23
7.1	Sequential Test	23
7.2	Exception Test	23
8	PROPOSED SURFACE WATER DRAINAGE STRATEGY	24
8.2	Standard 1: Run-off Destinations.....	24
8.3	Standard 2: Management of Everyday Run-off (Interception)	28
8.4	Standard 3: Management of Extreme Rainfall and Flooding	29
8.5	Standard 4: Water Quality	30
8.6	Standard 5: Amenity	31
8.7	Standard 6: Biodiversity	32
8.8	Standard 7: Design of Drainage for Construction, Operation, Maintenance, Decommissioning and Structural Integrity	32
8.9	Permeable Pavements & Diffuser Units	33
8.10	Remedial/Repair Actions.....	34
8.11	Accidental Spillages.....	34
8.12	Construction Phase	34
8.13	Future Alterations to the Development	34

9	PROPOSED FOUL WATER DRAINAGE STRATEGY	35
10	LIDSEY DRAINAGE IMPACT ASSESSMENT: LIDSEY WASTEWATER TREATMENT WORKS CATCHMENT AREA	36
11	RESIDUAL RISK AND MITIGATION	39
11.1	Residual Risk.....	39
11.2	Mitigation.....	39
12	FLOOD RISK MANAGEMENT	41
12.1	Safe Access and Egress	41
12.2	Flood Warning	41
13	OFFSITE IMPACTS	42
14	SUMMARY.....	43

DRAWINGS

- PL100** Site Location Plan
- PL200** Existing Topography
- PL300** Flood Map for Planning Output
- PL301** Flood Map for Planning Surface Water
- PL400** Impermeable Areas Comparison
- PL500** Preliminary Levels & Drainage

APPENDICES

- Appendix A** Architectural Development Proposals
- Appendix B** Topographic Survey
- Appendix C** Albury S.I. Ltd Ground Investigation and BGS Records
- Appendix D** Arun District Council Strategic Flood Risk Assessment (SFRA) & Lidsey Surface Water Management Plan (SWMP) Extracts
- Appendix E** Arun District Council Drainage Assets & Southern Water Public Sewer Records
- Appendix F** Abacus Drainage Investigation
- Appendix G** Wallingford Greenfield Run-off Calculations
- Appendix H** Environment Agency Flood Risk Assessment Data
- Appendix I** Causeway Flow Hydraulic Calculations

1 INTRODUCTION

1.1 Background

- 1.1.1 BP Civils is instructed by Mr. G Vlad to prepare a flood risk assessment and drainage strategy to accompany a planning application for the erection of 1 No. detached dwelling following demolition of existing dwelling with associated parking and landscaping at 60 Sea Way, Middleton-on-Sea, West Sussex PO22 7SA.
- 1.1.2 This report has been undertaken in accordance with National Planning Policy Framework (NPPF) and The Planning Practice Guidance Flood Risk and Coastal Change.
- 1.1.3 The surface water drainage strategy has been developed in view of the National Standards for Sustainable Drainage System (June 2025) and The SuDS Manual (CIRIA C753).
- 1.1.4 The proposed development will involve demolition of the existing dwelling which is to be replaced by a new dwelling, as demonstrated by the development proposals contained within **Appendix A**.
- 1.1.5 In preparing this report, BP Civils has referred to the following documents and information:
- Albury S.I. Ltd Ground Investigation
 - Arun District Council Strategic Flood Risk Assessment
 - British Geological Survey (BGS) Information and Records
 - Environment Agency Flood Maps for Planning
 - Environment Agency Flood Risk Assessment Data
 - Long-term Flood Risk Maps for Rivers or the Sea, Surface Water and Reservoirs
 - Lidsey Surface Water Management Plan
 - Southern Water Public Sewer Records
- 1.1.6 This report has been prepared to assess flood risk at the site, and to advise of any mitigation which may be required in order to ensure that the proposed development remains safe for its design life in accordance with current design standards.
- 1.1.7 This report has been prepared for the benefit of the named client only.

2 SITE LOCATION AND DESCRIPTION

- 2.1.1 A site location plan has been prepared (**PL100**) and is included within this report.
- 2.1.2 60 Sea Way is located at the western extent of Sea Way, which is a private road accessible off of Sea Lane, Middleton-on-Sea. The National Grid Reference for the site is SZ 96819 99812.
- 2.1.3 The site measures c. 2,043m² (0.20Ha) and is located in a residential setting, bound to the north, south and west by existing residential properties. Access to the beach is c. 120m south of the site.
- 2.1.4 The existing dwelling is to be demolished, and replaced with a new dwelling of an increased footprint.
- 2.1.5 A topographical survey has been undertaken by Geopoint, dated February 2022. The survey is contained within **Appendix B**.
- 2.1.6 The topographical survey identifies levels in the range of 4.33m and 5.22m AOD.
- 2.1.7 Drawing **PL200** (Existing Topography) has been prepared to demonstrate the general trends in topography at the site.

3 GROUND CONDITIONS

- 3.1.1 Albury S.I. Ltd has undertaken intrusive works at the site. Site works were undertaken on 23rd May 2023.
- 3.1.2 The works comprised the excavation of 6 No. boreholes (WS/DP1, WS2, WS/DP3 and WS/DP4, WS5 and WS6) to depths in the range of 3.10m below ground level (WS/DP1, WS2, WS/DP3 and WS6) and 4.10m below ground level (WS/DP4 and WS5).
- 3.1.3 Made ground in the form of brown to dark brown clayey loam, becoming silty clay with occasional roots was encountered at depths up to 0.20m – 0.40m below ground level.
- 3.1.4 Brown friable slightly sandy (fine) silty to very silty clay with rare gravel was exposed beneath the made ground, and was encountered to the completed depths of boreholes WS/DP1, WS2 AND WS6.
- 3.1.5 Variations to the above general conditions were noted within WS/DP3 and WS/DP4 and WS5.
- 3.1.6 Pale brown becoming grey slightly gravelly to gravelly silty sand was encountered below 1.70m within WS/DP4; these granular soils were proved to the conclusion of this position at 4.10m below ground level.
- 3.1.7 Further alternating granular horizons were noted between 1.30m to 1.90m and 2.90m to 3.80m within WS5.
- 3.1.8 Light grey and orangish brown clayey silt was encountered below 2.20m at WS/DP3, with gravelly silt (structureless chalk) noted from 2.80m to the concluding depth of 3.10m below ground level.
- 3.1.9 Albury S.I. Ltd has stated that, collectively, these soil are believed to be associated with River Terrace Deposits.
- 3.1.10 Full borehole logs are contained within **Appendix C**.
- 3.1.11 BP Civils has previously prepared a Flood Risk Assessment and Drainage Strategy for 43 Sea Way, c. 20m south-east of the site. Ground Investigation was undertaken at 43 Sea Way by Ashdown Site Investigation Ltd in February 2024. The Flood Risk Assessment and Drainage Strategy, which contains information from Ashdown Site Investigation Ltd's investigation is available on the ADC Planning Portal under M/38/24/PL.
- 3.1.12 Infiltration testing has not been undertaken at 60 Sea Way by Albury S.I. Ltd as part of their site investigation works, however Ashdown Site Investigation Ltd undertook infiltration tests at 43 Sea Way. Slow rates of infiltration were encountered, meaning compliant BRE365 testing could not be completed. A rate of infiltration was established of 7.56×10^{-7} in relation to the single test cycle completed. Arun District Council Drainage Engineers accepted that infiltration is/was not a viable means of dealing with post-development surface water run-off as part of the proposals at 43 Sea Way.
- 3.1.13 The geology encountered and recorded at 43 Sea Way is comparable with that established at 60 Sea Way, as such, it is considered that infiltration is not viable in view of the drainage potential and characteristics of the soils, whilst groundwater is also a restrictive factor where potential infiltration is concerned.
- 3.1.14 In addition to Albury S.I. Ltd's intrusive site works, reference has been made to the BGS Geology of Britain Viewer to validate the findings of the investigation.
- 3.1.15 The BGS Geology of Britain Viewer identifies a bedrock geology consisting of 'Lewes Nodular Chalk, Seaford Chalk, Newhaven Chalk, Culver Chalk and Portsdown Chalk Formations - Chalk'.

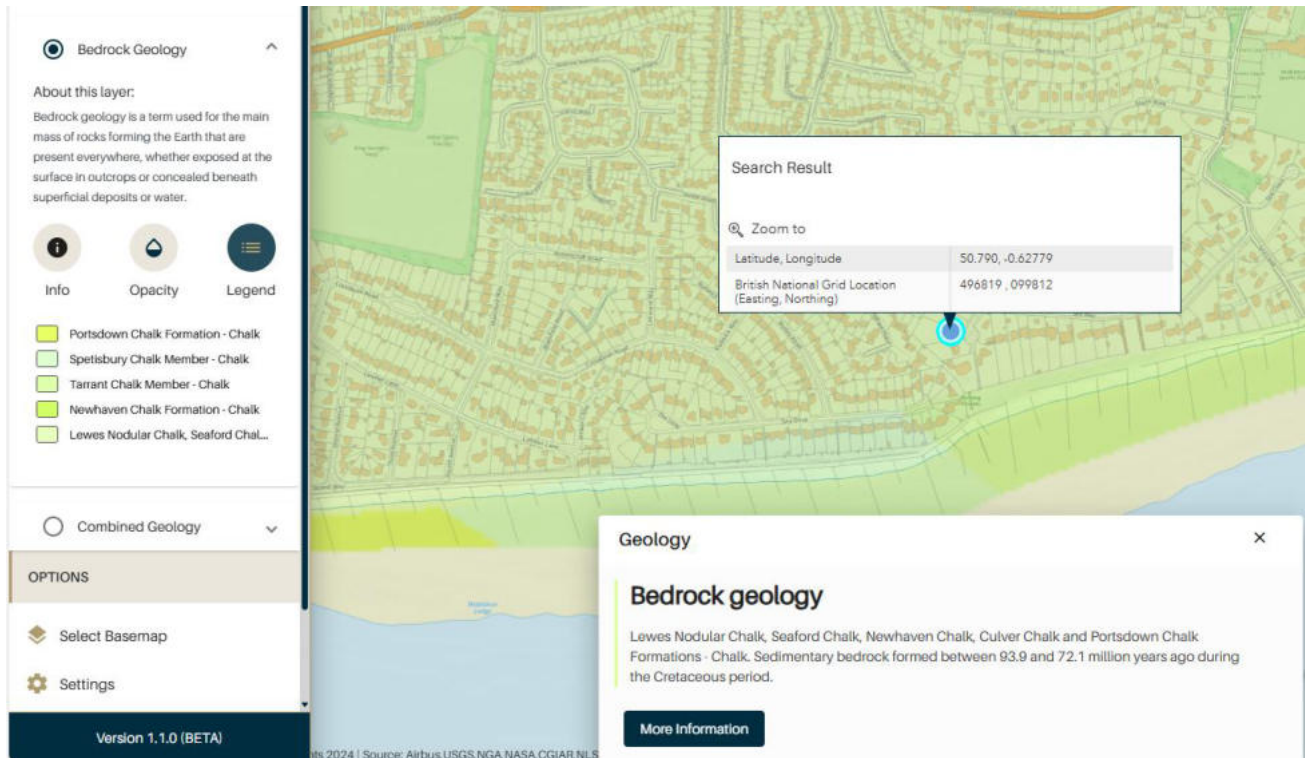


Figure 1. Geology of Britain Viewer – Bedrock Geology (BGS)

- 3.1.16 The BGS Geology of Britain Viewer identifies superficial deposits consisting of 'River Terrace Deposits - Sand, silt and clay'.

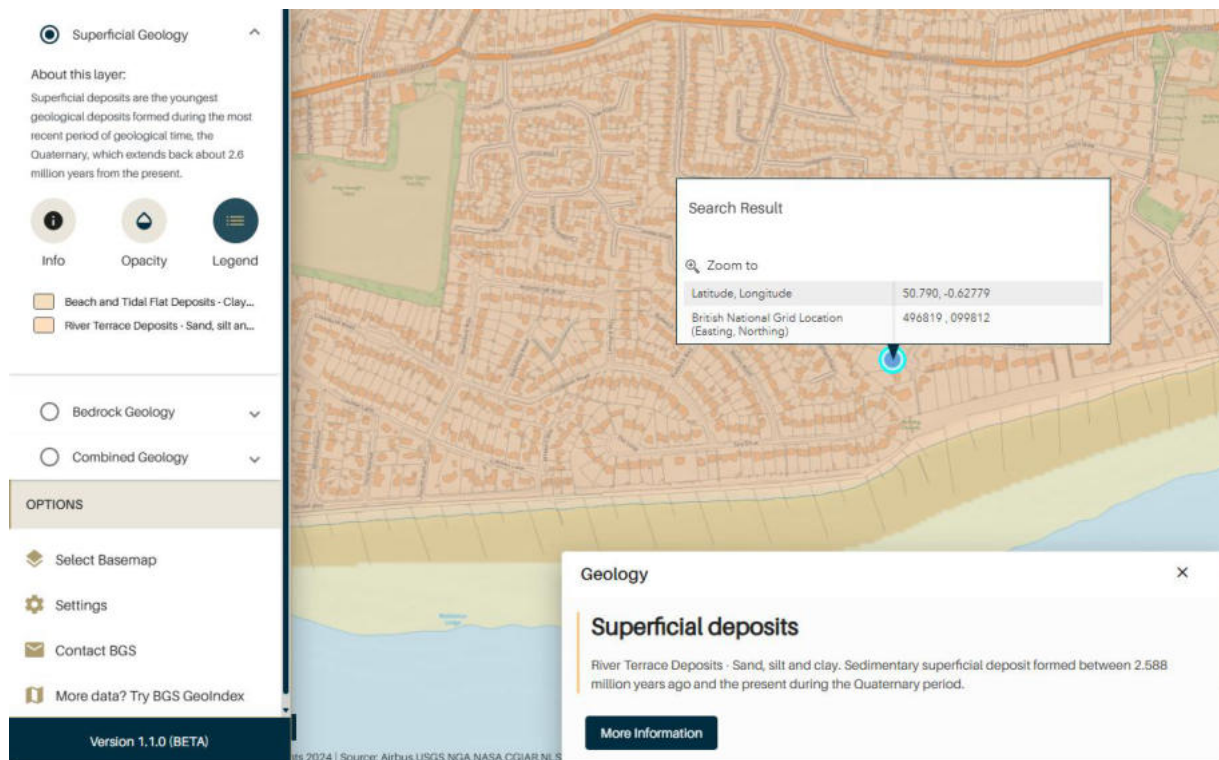


Figure 2. Geology of Britain Viewer – Superficial Deposits (BGS)

- 3.1.17 Historic borehole records from the Single Onshore Boreholes Index (SOBI) on the BGS website have also been reviewed in the absence of site-specific intrusive geotechnical investigation. There are no historic boreholes within the immediate vicinity of the site, with the nearest being approximately 830m north-

east of the site.

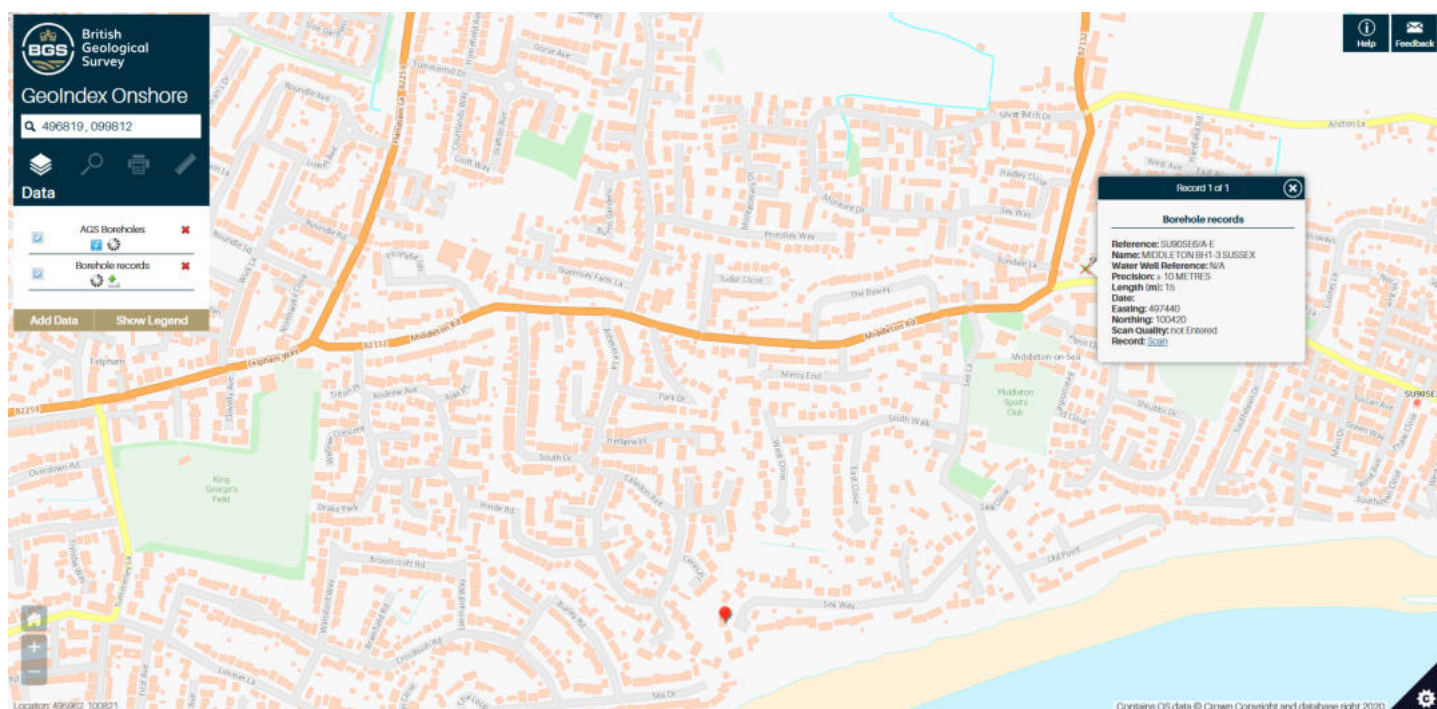


Figure 3. Historic Borehole Locations (BGS)

3.1.18 Records relating to borehole SU90SE6 have been reviewed. A summary of the encountered geology is provided below;

Description	Depth (m)
FILL: Brick Rubble on CLAY	0.00m to 0.50m
CLAY, silty, slightly sandy	0.50m to 2.00m
SAND, fine, variably clayey	2.00m to 3.20m
CLAY, very sandy & silty	3.20m to 7.20m
CHALK, clayey at top becoming variably clayey and rubbly	7.20m to 10.00m

3.1.19 The findings in relation to borehole SU90SE6 are consistent with the expectations as established in relation to the BGS Geology of Britain mapping reviewed.

3.1.20 A copy of the BGS borehole records reviewed can be found within **Appendix C**.

3.2 Groundwater

3.2.1 The borehole records in relation to SU90SE6 state that groundwater was encountered at 2.3m depth.

- 3.2.2 Albury S.I. Ltd's report confirms that groundwater was encountered during excavation of the boreholes at between 1.70m and 2.90m below ground level.
- 3.2.3 Short-term standing water levels upon completion of the boreholes of between 0.95m and 3.00m below ground level were recorded.
- 3.2.4 The water level at WS5 was observed to have risen to 1.00m below ground level after 3 hours.
- 3.2.5 The above groundwater observations indicate groundwater at relatively shallow depths during summer months, which will likely be present at shallower depths during winter months.
- 3.2.6 Groundwater monitoring undertaken at 43 Sea Way identified 'peak' groundwater levels at 0.22m below ground level during monitoring between 15th February and 28th March 2024.
- 3.2.7 The Arun District Council Strategic Flood Risk Assessment provides mapping identifying Susceptibility to Groundwater Flooding. This mapping identifies a < 25% risk of groundwater flooding. Extracts from the Arun District Council Strategic Flood Risk Assessment can be found within **Appendix D**.
- 3.2.8 Mapping managed by MAGIC (magic.defra.gov.uk) provides geographic information concerning the natural environment from across government. This mapping tool has been referred to in order to confirm aquifer designations, as well as whether the site is located within any groundwater source protection zones, groundwater vulnerability zones, drinking water protected areas or drinking water safeguard zones.
- 3.2.9 The site falls within an area designated as a 'Principal' bedrock aquifer, as well as a 'Secondary A' superficial drift aquifer.

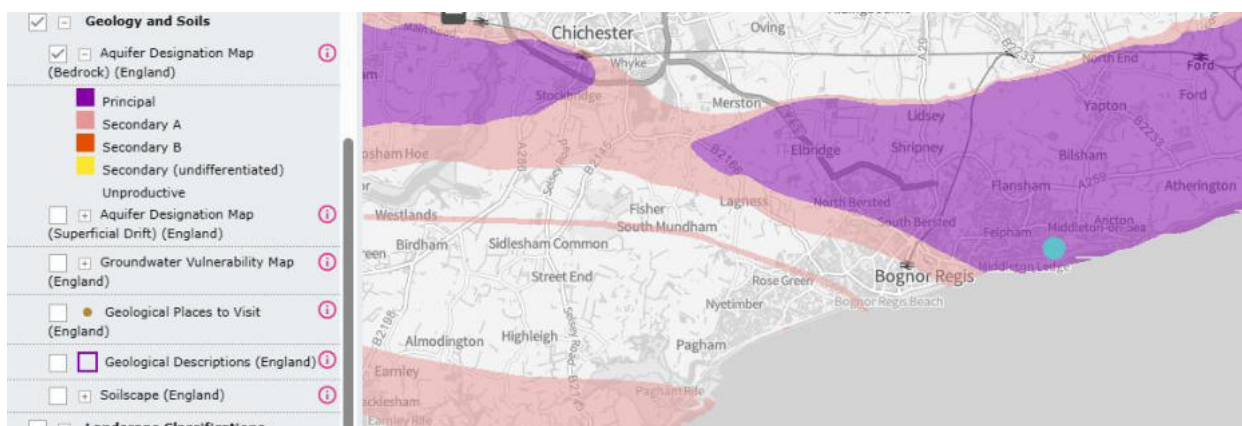


Figure 4. Bedrock Aquifer Designation Map (DEFRA)

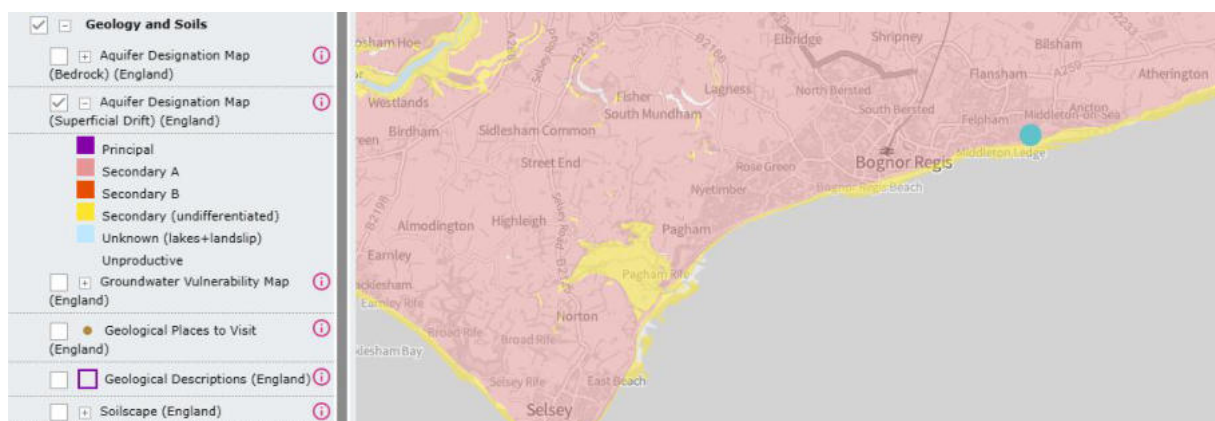


Figure 5. Superficial Drift Aquifer Designation Map (DEFRA)

3.2.10 The site in falls within a 'Medium-High' groundwater vulnerability zone.

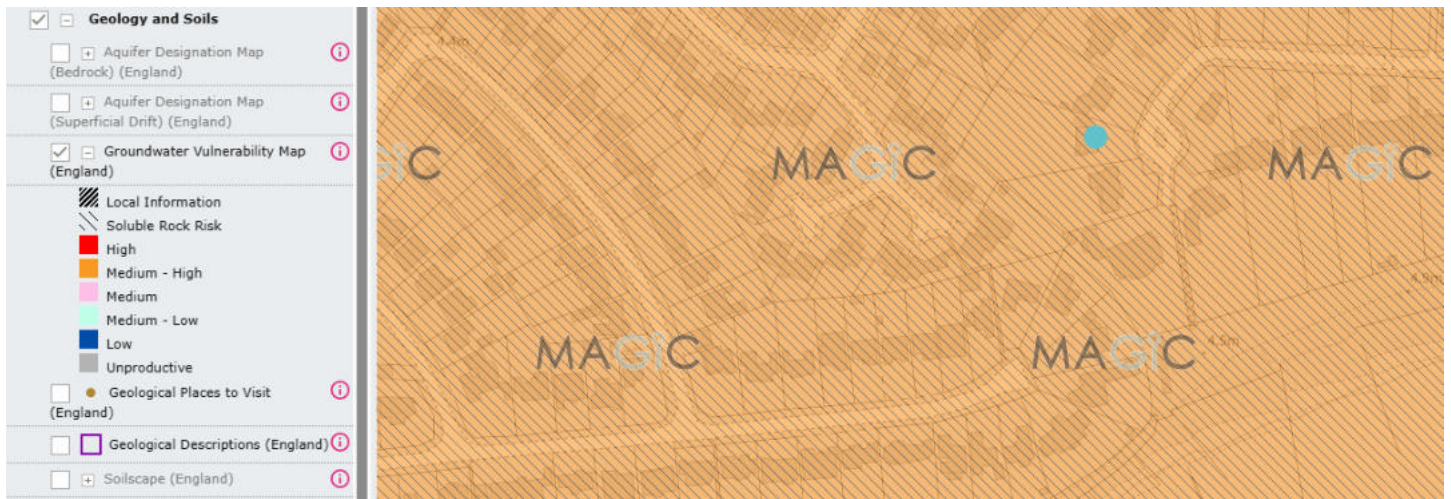


Figure 6. Groundwater Vulnerability Map (DEFRA)

3.2.11 The site is not identified as being in or within the vicinity of any drinking water protected areas.



Figure 7. Drinking Water Protected Areas and Drinking Water Safeguard Zone Map (DEFRA)

3.2.12 The site is not identified as being located within any Source Protection Zones.

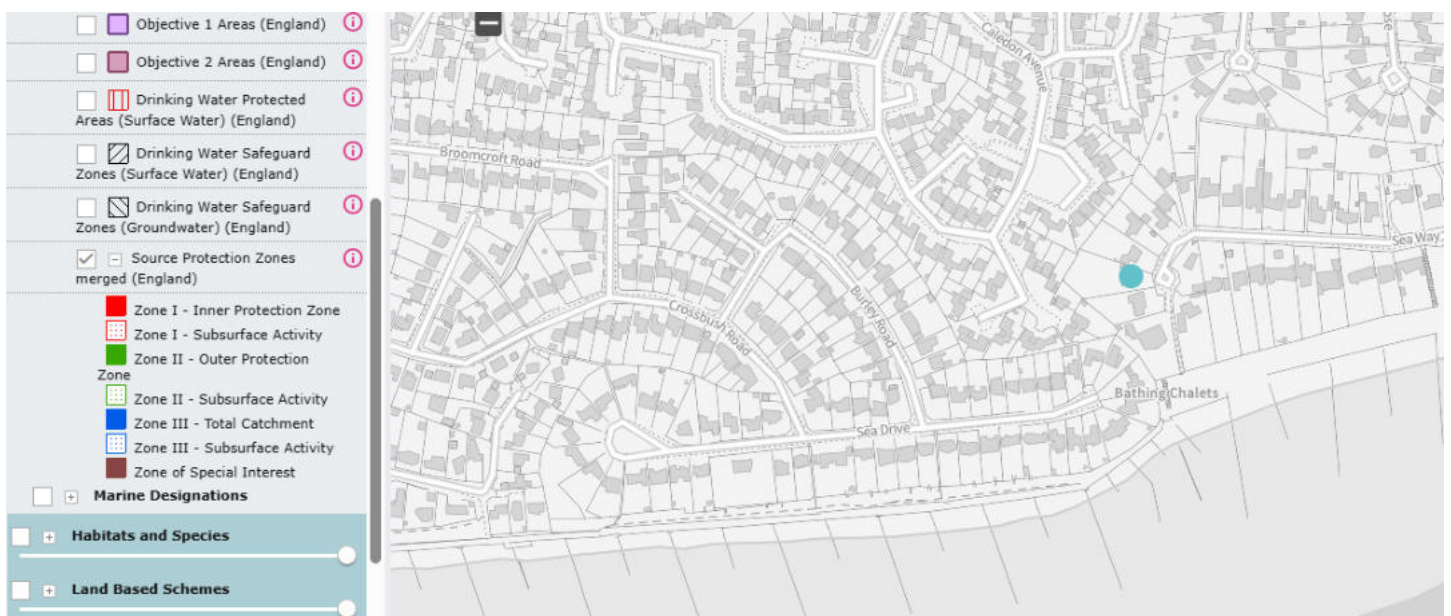


Figure 8. Source Protection Zone Map (DEFRA)

4 EXISTING DRAINAGE

4.1 Surface Water

- 4.1.1 The existing building is drained by rainwater pipes which discharge to a below ground piped system.
- 4.1.2 The site topographic survey suggests that the on site piped system carries combined flows (foul and surface water) and is therefore likely to discharge to the public foul water sewer located in Sea Way (refer to Section 4.2 – Foul Drainage).
- 4.1.3 The existing driveway is of gravel construction and is free-draining.
- 4.1.4 The paved area(s) to the rear of the property allows run-off to drain freely to the adjacent soft landscaping (grass).
- 4.1.5 Arun District Council has provided drainage asset records and information (**Appendix E**) with regard to surface water in the vicinity of the site:
- A culverted watercourse runs north to south through Sea Way, to the sea, c. 150 metres east of the site.
 - Highway drainage from Sea Way would appear to discharge to the culverted watercourse in the vicinity of the culverted watercourse, however the remainder of the road's surface water drainage function is unknown.
 - Existing land drainage on the estate outfalls to the sea also, however there have been existing drainage/flooding issues due to foul sewer inundation from surface water and groundwater.
- 4.1.6 Public sewer records from Southern Water (**Appendix E**) show a 300mm dia. public surface water sewer running parallel to the western boundary of the site. This sewer is indicated as flowing in a south-westerly direction.
- 4.1.7 Abacus Drainage has undertaken investigative works on site in order to locate and trace the 300mm dia. public surface water sewer which runs parallel to the western boundary of the site. It has been established that this sewer is c. 3.20m deep. Details of the investigative works undertaken are contained within **Appendix F**.
- 4.1.8 The Southern Water public sewer records also show a 675mm surface water sewer downstream of the 300mm dia. public surface water sewer. The 675mm dia. public surface water sewer discharges to the sea, and is known as 'Hannah's Outfall'.
- 4.1.9 A greenfield run-off rate has been established in relation to the site area (0.20Ha) using HR Wallingford's 'Greenfield run-off rate estimation' tool, included in **Appendix G**. The rate has been established as 0.59l/s.
- 4.1.10 However, the site currently has 137m² of existing impermeable area that appears to discharge to a positive drainage system without attenuation. Based on an assumed 50mm/hr peak annual rainfall, the existing peak average annual runoff rate for the site is 1.90l/s. These flows are understood to discharge to Southern Water's public foul water sewer in Sea Way.

4.2 Foul Water

- 4.2.1 Southern Water's public sewer records identify a 175mm dia. public foul water sewer in Sea Way, with the nearest manhole being manhole 8802. This indicates a cover level of 5.04m AOD and an invert level of 3.60m AOD.

4.2.2 The site is understood to discharge to the existing Southern Water public foul water sewer in Sea Way.

4.3 Highway Drainage

4.3.1 As noted by Arun District Council, highway drainage from Sea Way would appear to discharge to the culverted watercourse (c. 150m east), however the remainder of the road's surface water drainage is unknown.

5 PROBABILITY

5.1 Sources of Information

- 5.1.1 The NPPF requires that all sources of flooding are considered being tidal, fluvial, pluvial, groundwater, sewers and man-made reservoirs/canals.
- 5.1.2 The likelihood of the site flooding has been established by reviewing the following information:
- Arun District Council Strategic Flood Risk Assessment
 - Arun District Council Local Flood Risk Management Strategy
 - Consultation with the Environment Agency (Flood Risk Assessment Data “Product 4”)
 - Environment Agency Flood Map for Planning
 - Long-Term Flood Risk Service (Gov.uk)

5.2 Flood Maps and Modelling

- 5.2.1 Flood Map for Planning identifies that the site lies within Flood Zones 1 (present day).

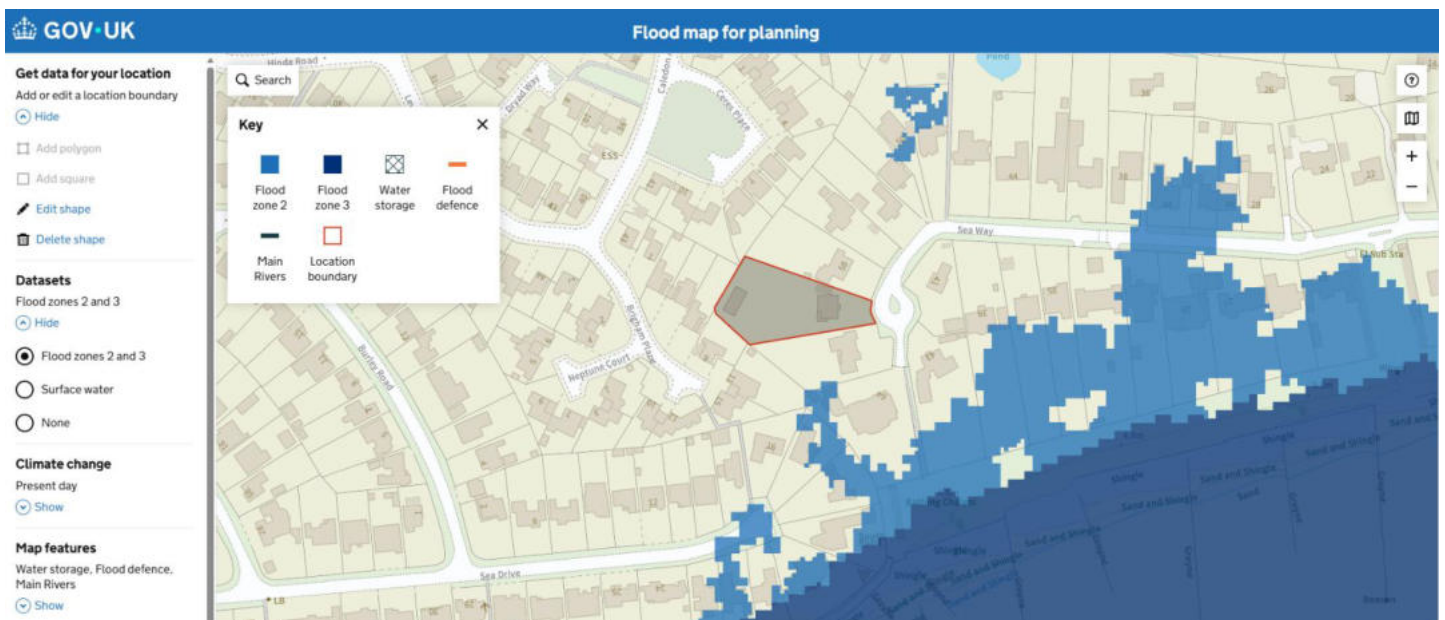


Figure 9. Flood Map for Planning – Present Day (Gov.uk)

5.2.2 In respect of climate change (2070 – 2125) the site is identified as being at risk of flooding from rivers and/or the sea.

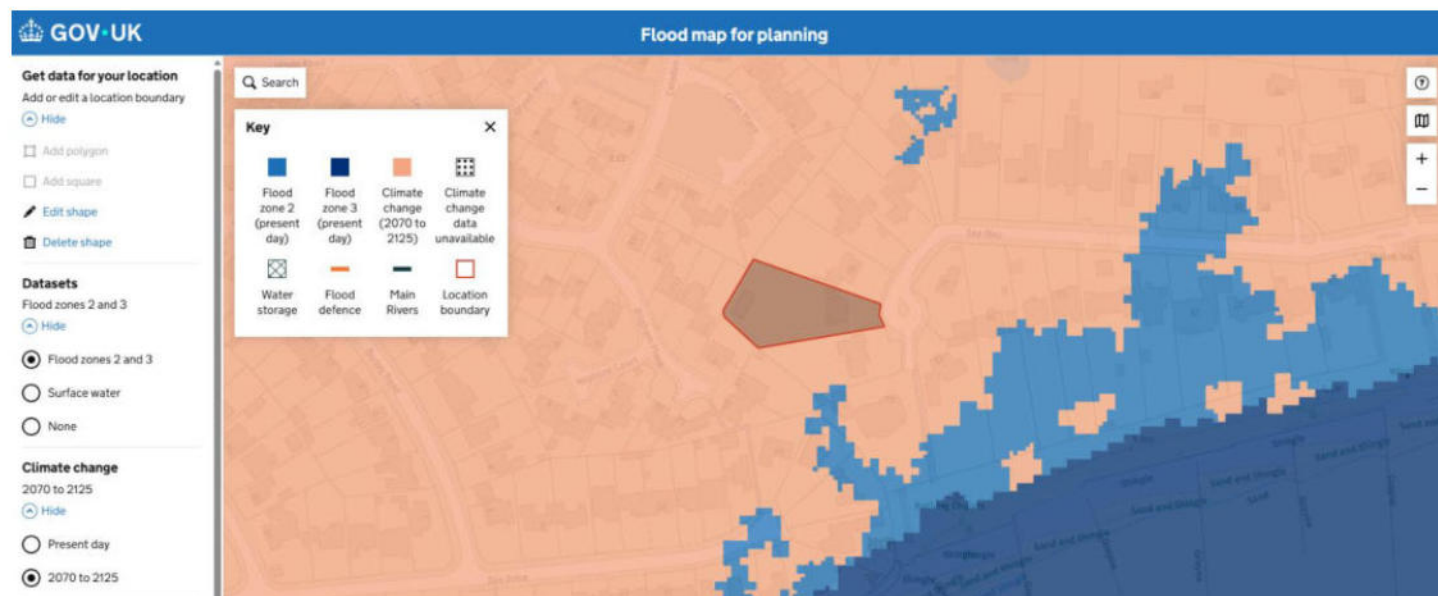


Figure 10. Flood Map for Planning – Climate Change (Gov.uk)

Flood Zone	Definition
Zone 1 Low Probability	Land having a less than 0.1% annual probability of river or sea flooding. (Shown as 'clear' on the Flood Map for Planning – all land outside Zones 2, 3a and 3b).
Zone 2 Medium Probability	Land having between a 1% and 0.1% annual probability of river flooding; or land having between a 0.5% and 0.1% annual probability of sea flooding. (Land shown in light blue on the Flood Map).
Zone 3a High Probability	Land having a 1% or greater annual probability of river flooding; or land having a 0.5% or greater annual probability of sea. (Land shown in dark blue on the Flood Map).
Zone 3b The Functional Floodplain	This zone comprises land where water from rivers or the sea has to flow or be stored in times of flood. The identification of function floodplain should take account of local circumstances and not be defined solely on rigid probability parameters. Functional floodplain will normally comprise: - Land having a 3.3% or greater annual probability of flooding, with any existing flood management infrastructure operating effectively; or - Land that is designed to flood (such as a flood attenuation scheme), even if it would only flood in more extreme events (such as 0.1% annual probability flooding). Local planning authorities should identify in their Strategic Flood Risk Assessments areas of functional

floodplain and its boundaries accordingly, in agreement with the Environment Agency. (Not separately distinguished from Zone 3a on the Flood Map).

5.2.3 The site is, largely, identified as being at 'Very Low' risk of surface water flooding. Areas at the western/south-western extents of the site are identified as being at risk of surface water flooding in the 1 in 30 and 1 in 100 annual exceedance probability events. In the 1 in 1000 annual exceedance probability event, wider extents of the site are identified as being susceptible to surface water flooding, although the extents identified in all events do not demonstrate wider surface water flow paths, instead suggesting localised low points on site which do not pose a wider risk of flooding.

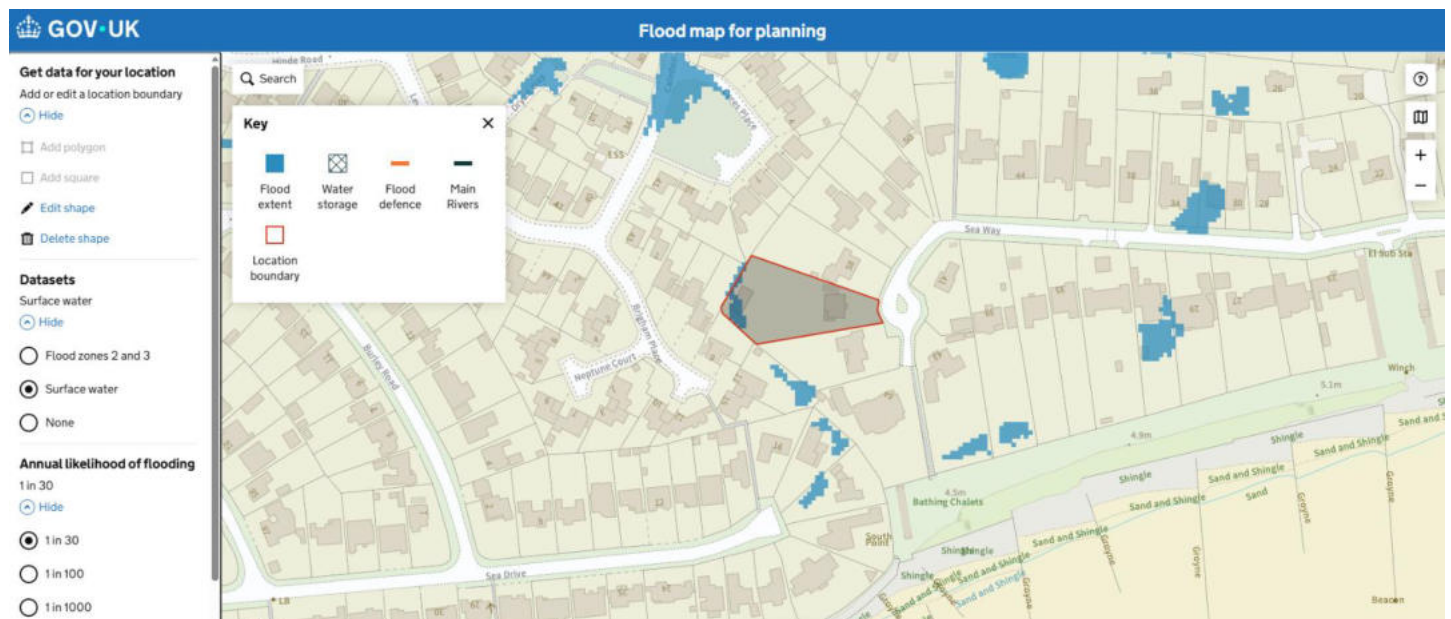


Figure 11. Flood Map for Planning – Surface Water 1:30 (Gov.uk)

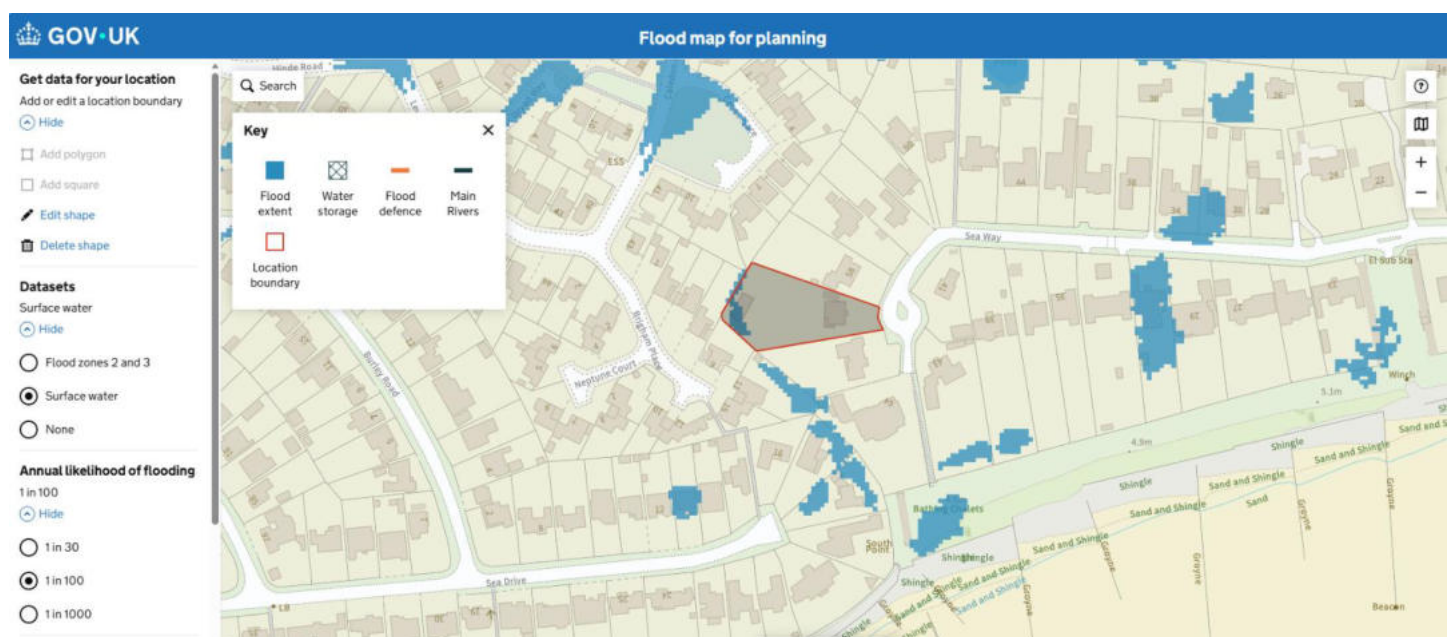


Figure 12. Flood Map for Planning – Surface Water 1:100 (Gov.uk)

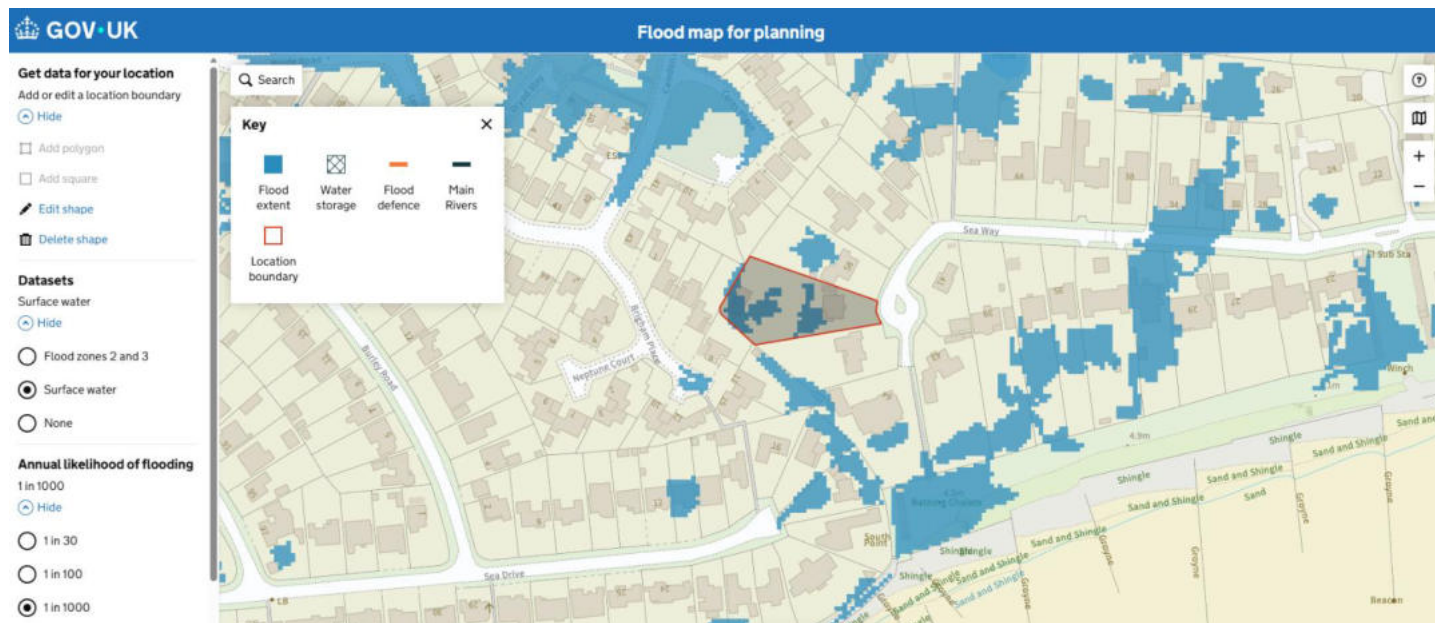


Figure 13. Flood Map for Planning - Surface Water 1:1000 (Gov.uk)

- 5.2.4 The Long-term Flood Risk Service indicates that the site is outside of groundwater flood alert areas and that flooding from reservoirs is 'unlikely' in this area.
- 5.2.5 BP Civils has requested Flood Risk Assessment Data (formerly 'Product 4') from the Environment Agency.
- 5.2.6 The Environment Agency Flood Risk Assessment Data confirms that the site is located in Flood Zone 1.
- 5.2.7 Modelled flood level data has been provided, taken from the Arun to East Head Coastal Model (2016).
- 5.2.8 The site is identified as being at risk of flooding in relation to the 'Defended Tidal' scenario (0.5% AEP 2070 & 2115) and the 'Undefended Tidal' scenario (0.5% AEP 2115).
- 5.2.9 Modelled flood levels for the 'Undefended Tidal' and 'Defended Tidal' scenarios are provided, below:

Table 1: Water Levels: Tidal Undefended

Node Ref	NGR		Modelled Flood Levels in Metres AOD			
	Eastings	Northings	Undefended Annual Exceedance Probability			
			0.5%	0.5% (2070)*	0.5% (2115)*	0.1%
1	496778	99829	-	-	4.82	-
2	496767	99811	-	-	4.83	-
3	496794	99813	-	-	4.84	-
4	496817	99813	-	-	4.83	-
5	496785	99797	-	-	4.87	-
6	496810	99801	-	-	4.84	-
7	496834	99805	-	-	4.85	-

Figure 14. Flood Risk Assessment Data (Product 4) – 'Undefended Tidal'

Table 2: Water Levels: Tidal Defended

Node Ref	NGR		Modelled Flood Levels in Metres AOD			
	Eastings	Northings	Defended Annual Exceedance Probability			
			0.5%	0.5% (2070)*	0.5% (2115)*	0.1%
1	496778	99829	-	-	4.95	-
2	496767	99811	-	4.64	4.95	-
3	496794	99813	-	4.64	4.95	-
4	496817	99813	-	-	4.95	-
5	496785	99797	-	4.66	4.95	-
6	496810	99801	-	4.65	4.95	-
7	496834	99805	-	-	4.95	-

Figure 15. Flood Risk Assessment Data (Product 4) – 'Defended Tidal'

- 5.2.10 The 'peak' modelled flood level provided by the Environment Agency at the site is for the 'Tidal Defended' 0.5% - 2115 AEP, and is stated to be 4.95m AOD.
- 5.2.11 Existing driveway levels are in the range of 4.60m AOD and 4.97m AOD, falling to the west. The existing finished floor level is believed to be approximately 4.85m AOD based on topographic survey levels.
- 5.2.12 Wider site levels, specifically to the rear of the existing property, are broadly within the range of 4.40m AOD and 5.00m AOD. The upper limit(s) of the levels stated would not be impacted in view of the 'peak' modelled flood level of 4.95m AOD, whilst to the lower limit(s) of the levels stated, flood depths of up to 550mm at the south-western extent of the site could be experienced.

5.3 Strategic Flood Risk Assessment

- 5.3.1 Arun District Council has a published Strategic Flood Risk Assessment (March 2026).
- 5.3.2 The site is not specifically referenced within the Strategic Flood Risk Assessment.
- 5.3.3 The Arun District Council Strategic Flood Risk Assessment confirms that mapping is no longer hosted on Arun District Council's website, and instead signposts online data hosted on the Defra Data Services platform.

5.4 Historic Flooding

- 5.4.1 No records of historic flooding have been identified which have directly impacted upon the site, from the sources of information assessed in the undertaking of this flood risk assessment.

5.5 Summary of Flood Risk

5.5.1 The potential sources of flooding are:

Source of Flooding	Level of Risk
Rivers and Coastal	Low The site is located in Flood Zone 1 (present day) however, is identified as being at risk in respect of current climate change projections (2070-2125) as per Flood Map for Planning. Although the site is located in Flood Zone 1, modelled flood level data has been provided by the Environment Agency, confirming a peak modelled flood level of 4.95m AOD (0.5% Tidal Defended AEP). No modelled flood level data is available in respect of the extents identified as being susceptible to future flood risk in respect of climate change. The site is protected by existing sea defences, in the form of a raised shingle beach and timber groynes, although these defences are not maintained by the Environment Agency.
Surface Water	Very Low to High Areas to the west/south-west of the site are identified as being susceptible to surface water flooding in the 1:30 and 1:100 annual exceedance probabilities. Wider extents are identified as being susceptible in the 1:1000 annual exceedance probability. The areas identified as potentially being susceptible to surface water flooding do not demonstrate a wider surface water flow path, instead demonstrating localised low points in the topography on site which can be managed through development.

Groundwater	Low Ground investigation undertaken on site confirmed groundwater strikes at depths in the range of 1.70m and 2.90m below ground level. Short-term standing levels were recorded in the range of 0.95m and 3.00m below ground level. At WS5, the water level rose to 1.00m below ground level after three hours. BP Civils prepared a Flood Risk Assessment and Drainage Strategy for 43 Sea Way (D2239/FRA 1.1) which is available on the ADC planning portal (M/38/24/PL). Groundwater investigation was undertaken between 15th February and 28th March 2024, with groundwater peaking at 0.22m below ground level. Site works at 60 Sea Way were undertaken in June 2023 – during summer months when ordinarily groundwater would be expected to be at lower lying levels, rather than 'peak' winter levels. Groundwater was still recorded at relatively shallow depths for the time of year (0.95m and 1.00m below ground level).
Sewers	Low No instances of historic sewer flooding have been identified following review of the sources of information assessed in the undertaking of this flood risk assessment. Arun District Council has advised of issues relating to surface water and ground water inundation within the public foul sewer network in Sea Way, although the site has not been identified as having been impacted.
Artificial Sources	None The site is not shown to be at risk of flooding due to artificial sources.

- 5.5.2 The surface water drainage system for the proposed new dwelling shall be designed in order to provide capacity up to the design event and provide consideration of potential exceedance routes, so as to not increase the risk of surface water flooding on or off the site.
- 5.5.3 Mitigation shall be afforded to ensure that the proposed development remains safe for its design life, in view of current day information available.

6 PROPOSED DEVELOPMENT

6.1 Description of Development

- 6.1.1 The proposed development will involve the erection of 1 No. detached dwelling following demolition of existing dwelling with associated parking and landscaping as demonstrated by the development proposals contained within **Appendix A**.
- 6.1.2 The type of development proposed falls within the "More Vulnerable" flood risk vulnerability classification (Annex 3: Flood risk vulnerability classification, NPPF) and is appropriate in Flood Zone 1 (Flood Risk and Coastal Change Table 2).

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

- 6.1.3 The proposed development will result in the introduction of new impermeable areas at the site; however permeable pavement will be utilised to capture, treat and slow run-off from the driveway and a new surface water drainage network will re-direct surface water run-off from the public foul sewer network to the public surface water sewer to the rear of the site.
- 6.1.4 The post-development impermeable/hardstanding area has been determined to be 546m² (0.05Ha), an increase of 147%, although c. 229m² of this total will be permeable paving.
- 6.1.5 The use of SuDS methods and techniques, where site conditions and constraints allow, will be utilised to assist in the management of surface water run-off generated by the proposed development, whilst adhering to the principles and standards contained within the National Standard for Sustainable Drainage Systems (June 2025).
- 6.1.6 The specific surface water and foul water drainage proposals are detailed in **Section 8** of this report.

7 SEQUENTIAL AND EXCEPTION TESTS

7.1 Sequential Test

- 7.1.1 Paragraph 024 of Flood Risk and Coastal Change confirms that 'The Sequential Test ensures that a sequential, risk-based approach is followed to steer new development to areas with the lowest risk of flooding, taking all sources of flood risk and climate change into account. Where it is not possible to locate development in low-risk areas, the Sequential Test should go on to compare reasonably available sites; within medium risk areas; and then, only where there are no reasonably available sites in low and medium risk areas, within high-risk areas.'
- 7.1.2 Paragraph 175 of the National Planning Policy Framework (NPPF) states that 'The sequential test should be used in areas known to be at risk now or in the future from any form of flooding, except in situations where a site-specific flood risk assessment demonstrates that no built development within the site boundary, including access or escape routes, land raising or other potentially vulnerable elements, would be located on an area that would be at risk of flooding from any source, now and in the future (having regard to potential changes in flood risk).'
- 7.1.3 The site is located within Flood Zone 1 and has been assessed as being at 'Very Low' or 'Low' risk of flooding from all of the potential risks of flooding considered in the undertaking of this flood risk assessment, with the exception of surface water flooding ('Very Low' to 'High'). As the earlier commentary confirms, the extents identified as being at elevated risk of surface water flooding are located on the western/south-western boundary of the site – the lowest lying area(s) on the site, and away from the existing, and proposed replacement, dwelling.
- 7.1.4 The mitigation proposed in view of the potential risks of flooding at the site will ensure that the development will remain safe for its design life based on the information currently available at the time of undertaking this flood risk assessment.

7.2 Exception Test

- 7.2.1 Paragraph 031 of Flood Risk and Coastal Change states 'The Exception Test requires two additional elements to be satisfied (as set out in paragraph 164 of the National Planning Policy Framework) before allowing development to be located or permitted in situations where suitable sites at lower risk of flooding are not available following application of the sequential test. It should be demonstrated that; development that has to be in a flood risk area will provide wider sustainability benefits to the community that outweigh flood risk; and the development will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall.'
- 7.2.2 As detailed in 6.1.2, "More Vulnerable" development is appropriate in Flood Zones 1 and therefore application of the exception test is not required.

8 PROPOSED SURFACE WATER DRAINAGE STRATEGY

8.1.1 The National Standards for Sustainable Drainage Systems (June 2025) detail principles and standards for the management of surface water run-off for new infrastructure and development.

8.1.2 There are two types of standards:

- i. The hierarchy standard (Standard 1) gives criteria for prioritising the choice of final run-off destination
- ii. Fixed standards (Standards 2 to 7) state the minimum design criteria that all surface water drainage systems should satisfy and how they should be built, maintained and operated.

Both types of standards have accompanying requirements which provide details on how to interpret, deliver and evaluate each standard.

8.1.3 The seven standards are complementary, and the delivery of each standard should support delivery of the other standards. A surface water drainage system design that delivers multiple benefits will include a range of features and each of these should contribute to the delivery of several, if not all, of the standards.

8.1.4 There may be specific circumstances or constraints, such as the type or size of a development that mean it is not possible to deliver one or more of the standards. In these circumstances the opportunity to meet the standard shall be maximised and justification be developed in consultation with the approving body, who may agree to a departure unless regulatory controls prohibit such a departure.

8.1.5 The National Standards for Sustainable Drainage Systems can be viewed at <https://www.gov.uk/government/publications/national-standards-for-sustainable-drainage-systems/national-standards-for-sustainable-drainage-systems-suds>

8.2 Standard 1: Run-off Destinations

A 'SuDS approach' shall be adopted to address the management of surface water by the development and where it should be discharged. Runoff shall be treated as a resource and managed in a way that avoids negative impacts of the development on flood risk, the morphology and water quality of receiving waters and the associated ecology.

Runoff from the development shall be discharged to the following final destinations, to the maximum extent practicable, in accordance with the below hierarchy:

- Collected for non-potable use
- Infiltrated to ground
- Discharged to an above ground surface water body
- Discharged to a surface water sewer, or another piped surface water drainage system
- Discharged to a combined sewer
- To utilise a lesser priority final destination, appropriate evidence shall be provided that demonstrates all higher priority final destinations have been utilised to the maximum extent practicable.

Note 1: priority 1 is the highest priority and priority 5 is the lowest.

Note 2: for the purposes of this standard, a combined sewer is a sewer intended to receive both foul sewage and surface runoff and does not include a sewer intended to receive only foul sewage, even if it has the capacity to accommodate additional flows or has an element of surface water in it already.

To utilise a lesser priority final destination, appropriate evidence shall be provided that demonstrates all higher priority final destinations have been utilised to the maximum extent practicable. Higher cost alone shall not be a reason to utilise lower priority final destinations.

Where more than one final destination is utilised, each final destination's ability to accept runoff shall be maximised in order of priority.

8.2.1 Potential run-off destinations have been considered, in accordance with the hierarchy detailed within the National Standards for Sustainable Drainage Systems (June 2025), in respect of the proposed development:

Run-off Destination	Viable?	Justification
Collected for non-potable use	Yes	The client is proposing to install rainwater harvesting tanks providing a capacity of 20,000 litres.
Infiltrated to ground	No	Groundwater at shallow depths and anticipated poor rates of infiltration / poor drainage properties of the underlying soils as established through previous testing BP Civils has been involved with on Sea Way restrict the implementation of such features.
Discharged to an above ground surface water body	Yes* (Indirectly)	There are no ordinary watercourses within the immediate vicinity of the site or its boundaries to which surface water could discharge to. It is proposed that the site will drain to the sea (via 'Hannah's Outfall') via Southern Water's public surface water sewer which passes through the site, parallel to the western boundary.
Discharged to a surface water sewer, or another piped surface water drainage system	Yes*	It is proposed that the site will drain to Southern Water's public surface water sewer which is located on site, parallel to the

		western boundary of the site.
Discharged to a combined sewer	No	No combined sewers exist within the vicinity of the site.

8.2.2 As detailed within the table above, and justified, post-development run-off will discharge to the sea, via 'Hannah's Outfall', utilising Southern Water's public surface water sewer.

8.2.3 Consideration has also been afforded as to the SuDS methods and techniques which can be introduced to support the development:

SuDS Method / Technique	Suitable	Comments
Green roofs or walls	No	Not appropriate in view of development proposals.
Rainwater harvesting systems	Yes	Rainwater harvesting tanks are to be installed, totalling a capacity of 20,000 litres.
Soakaway or infiltrations systems	No	Groundwater at shallow depths and anticipated poor rates of infiltration / poor drainage properties of the underlying soils as established through previous testing BP Civils has been involved with on Sea Way restrict the implementation of such features.
Permeable surfaces	Yes	Permeable paving is appropriate to provide attenuated storage in addition to water quality benefits.
Swales and filter strips	No	Groundwater at shallow depths and anticipated poor rates of infiltration / poor drainage properties of the underlying soils as established through previous testing BP Civils has been involved with on Sea Way restrict the implementation of such features. Additionally, the development proposal (single dwelling replacement) does not lend itself to the use and/or implementation of such features.
Basins and ponds (such as wetlands, balancing ponds, detention basins, retention ponds)	Yes	Peak groundwater levels are anticipated as being very shallow based on on-site investigation during summer months, in addition to local knowledge relating to groundwater investigation undertaken within the immediate vicinity of the site, and this would therefore not allow use of open

		SuDS features due to viability of designing against flotation. Additionally, such features are disproportionate and inappropriate in view of the size and scale of the proposed development (single dwelling replacement).
Tanked systems	Yes	Unlikely to be required in view of proposals to discharge to the sea (via Southern Water's public surface water sewers on site and within the immediate vicinity of the site), however should Southern Water dictate a maximum discharge rate to the surface water sewer, tanked attenuation and a flow control could be utilised, although design against flotation would be required. The client has expressed a desire to include rainwater harvesting for future re-use on site as part of the surface water drainage system on-site, post development.

- 8.2.4 The proposed development consists of the erection of 1 No. detached dwelling following demolition of existing dwelling with associated parking and landscaping.
- 8.2.5 Although infiltration testing has not been undertaken on site, BP Civils has been involved in previous testing undertaken on Sea Way which confirmed poor rates of infiltration (7.56×10^{-7}) whilst BRE365 compliant testing could not be completed owing to the slow rates of infiltration encountered. Only a single test cycle could be completed.
- 8.2.6 Groundwater was encountered on site during site-specific investigation at relatively shallow depths for the time of the year that the works were undertaken. Groundwater was struck in the range of 1.70m and 2.90m below ground level, whilst short-term standing levels were recorded in the range of 0.95m and 3.00m below ground level. At WS5, the water level rose to 1.00m below ground level after three hours. BP Civils is aware that ground monitoring undertaken between 15th February 2024 and 28th March 2024 established a 'peak' groundwater level of 0.22m below ground level at a neighbouring site on Sea Way (43).
- 8.2.7 Comparable ground conditions were recorded on-site as with the nearby testing undertaken, therefore infiltration is not deemed a viable means of dealing with surface water, post-development.
- 8.2.8 The existing gravel driveway will be replaced with a permeable block paved construction. This will be 'tanked' to prevent conflict with shallow groundwater levels, and will provide storage for the site. The permeable paving extents total c. 229m². With a 450mm sub-base and 30% voids, this provides a volume of storage of 30.915m³.
- 8.2.9 The client has previously obtained planning approval for the construction of a detached ancillary annexe within the grounds of the site, near the western boundary (M/103/22/HH). Rainwater harvesting has been incorporated on-site in support of the annexe, and this is something which the client is eager to incorporate for the replacement dwelling, too.

- 8.2.10 Rainwater collected by rainwater pipes from the proposed dwelling's roof area will discharge to a below ground piped system, which will utilise the rainwater harvesting system. The permeable paving will also discharge to a below ground piped system.
- 8.2.11 It is proposed that, flows which exceed the rainwater harvesting system, and from the permeable paving, will discharge to the 300mm dia. Southern Water public surface water sewer which passes through the site, parallel to the western boundary. This surface water sewer increases in size (675mm dia.) downstream of the site beyond the south-western / southern boundary of the site which discharges to the sea ('Hannah's Outfall').
- 8.2.12 It is proposed that exceedance flows from the site's rainwater harvesting system will discharge to the Southern Water public surface water sewer without restriction, given that the downstream sewer discharges to the sea. A S106 application will need to be lodged with Southern Water with approval required before any connection can be made.
- 8.2.13 With Southern Water serving as a statutory consultee, if there are discharge rate constraints then an attenuation tank and flow control manhole could be utilised within the rear garden.
- 8.2.14 The proposed surface water drainage arrangement is shown on drawing **PL500**.
- 8.2.15 The existing building is drained by rainwater pipes which discharge to a below ground piped system. The site topographic survey suggests that the on site piped system carries combined flows (foul and surface water) and is therefore likely to discharge to the public foul water sewer located in Sea Way. The above proposed surface water drainage strategy will remove surface water flows from the public foul water sewer network – which Arun District Council has confirmed has suffered from surface and groundwater inundation in the past.
- 8.2.16 The above proposed surface water drainage strategy will therefore provide significant betterment and improvement when compared with the existing drainage arrangement by removing reliance upon the public foul water sewer network where surface water is concerned.

8.3 Standard 2: Management of Everyday Run-off (Interception)

Apply a 'SuDS approach' so that at least the first 5mm of rainfall for the majority of rainfall events does not result in run-off from the site to surface waters or piped drainage systems.

Evidence shall be provided that the approach to managing run-off from 'everyday' rainfall has been developed alongside and in support of the management of run-off quality (Standard 4) and the delivery of amenity and biodiversity benefits (Standards 5 and 6).

- 8.3.1 The client proposes to install rainwater harvesting tanks providing a total capacity of 20,000 litres. This system will serve run-off collected from the roof of the dwelling.
- 8.3.2 Permeable paving is proposed in respect of the proposed driveway. The National Standards for SuDS confirm that '*All permeable surfaces, whether lined or not, shall be assumed to comply provided there is no additional area drained to the permeable pavement.*'
- 8.3.3 With reference to the above methods, interception drainage is provided in respect of both elements of the proposed development – the proposed roof catchment and the areas of hardstanding at ground level (proposed driveway).

8.4 Standard 3: Management of Extreme Rainfall and Flooding

A 'SuDS approach' shall be adopted to address the management of development run-off during extreme rainfall, including allowances for climate change and urban creep to:

- protect people and property on the development from flooding of the surface water drainage system
- mitigate any increased flood risk to people and property adjacent to or downstream of the development
- protect the receiving water body from morphological damage or minimise the impact on sewer capacity

When discharging to an infiltration feature, the system shall be appropriately sized to accommodate the design event based on ground conditions and contributing areas.

When discharging to an above ground surface water body, sewer or other piped drainage system, the surface water run-off (rate and volume) for the 1% annual exceedance probability (AEP) event shall be controlled to ensure the run-off from the development does not increase flood risk elsewhere.

When discharging to an above ground surface water body, sewer or other piped drainage system, the surface water run-off rate for the 50% AEP event shall be controlled to ensure development run-off from an event of this magnitude has no negative impact.

Any flooding from the surface water drainage system for events up to the 1% AEP event shall be managed within the development.

Any flooding from off-site sources for the 1% AEP event should be managed on site or safely routed through the site, ensuring any downstream risks are not increased compared to the pre-development scenario.

The risks (both on and off the development) associated with flooding from the surface water drainage system for exceedance events greater than the 1% AEP event shall be appropriately managed.

- 8.4.1 It is proposed that, flows which exceed the rainwater harvesting system, and from the permeable paving, will discharge to the 300mm dia. Southern Water public surface water sewer which passes through the site, parallel to the western boundary. This surface water sewer increases in size (675mm dia.) downstream of the site beyond the south-western / southern boundary of the site which discharges to the sea (Hannah's Outfall).
- 8.4.2 It is proposed that exceedance flows from the site's rainwater harvesting system will discharge to the Southern Water public surface water sewer without restriction, given that the downstream sewer discharges to the sea. A S106 application will need to be lodged with Southern Water with approval required before any connection can be made.
- 8.4.3 With Southern Water serving as a statutory consultee, if there are discharge rate constraints then an attenuation tank and flow control manhole could be utilised within the rear garden.
- 8.4.4 The existing building is drained by rainwater pipes which discharge to a below ground piped system. The site topographic survey suggests that the on site piped system carries combined flows (foul and surface water) and is therefore likely to discharge to the public foul water sewer located in Sea Way. The above proposed surface water drainage strategy will remove surface water flows from the public foul water sewer network – which Arun District Council has confirmed has suffered from surface and groundwater inundation in the past.

- 8.4.5 The above proposed surface water drainage strategy will therefore provide significant betterment and improvement when compared with the existing drainage arrangement by removing reliance upon the public foul water sewer network where surface water is concerned.
- 8.4.6 The surface water drainage system for the proposed replacement building has been designed to accommodate a 1 in 100-year storm event, inclusive of allowances for climate change and urban creep.
- 8.4.7 In respect of climate change, Gov.uk provides guidance for local planning authorities preparing strategic flood risk assessments and developers and their agents preparing flood risk assessments for planning applications, and development consent orders for nationally significant infrastructure projects.
- 8.4.8 Climate change allowances are predictions of anticipated change for peak river flow, peak rainfall intensity, sea level rise and offshore wind speed and extreme wave height.
- 8.4.9 Allowance for climate change shall be provided in the undertaking of site-specific flood risk assessments where new development is proposed to minimise vulnerability and provide resilience to flooding and coastal change.
- 8.4.10 The 'Peak Rainfall Allowances Map' shows anticipated changes in peak rainfall intensity.
- 8.4.11 Based on the latest allowances, for the 3.3% annual exceedance rainfall event, an increase of 40% should be applied to peak rainfall in relation to the proposed development.
- 8.4.12 For the 1% annual exceedance rainfall event, an increase of 45% should be applied to peak rainfall in relation to the proposed development.

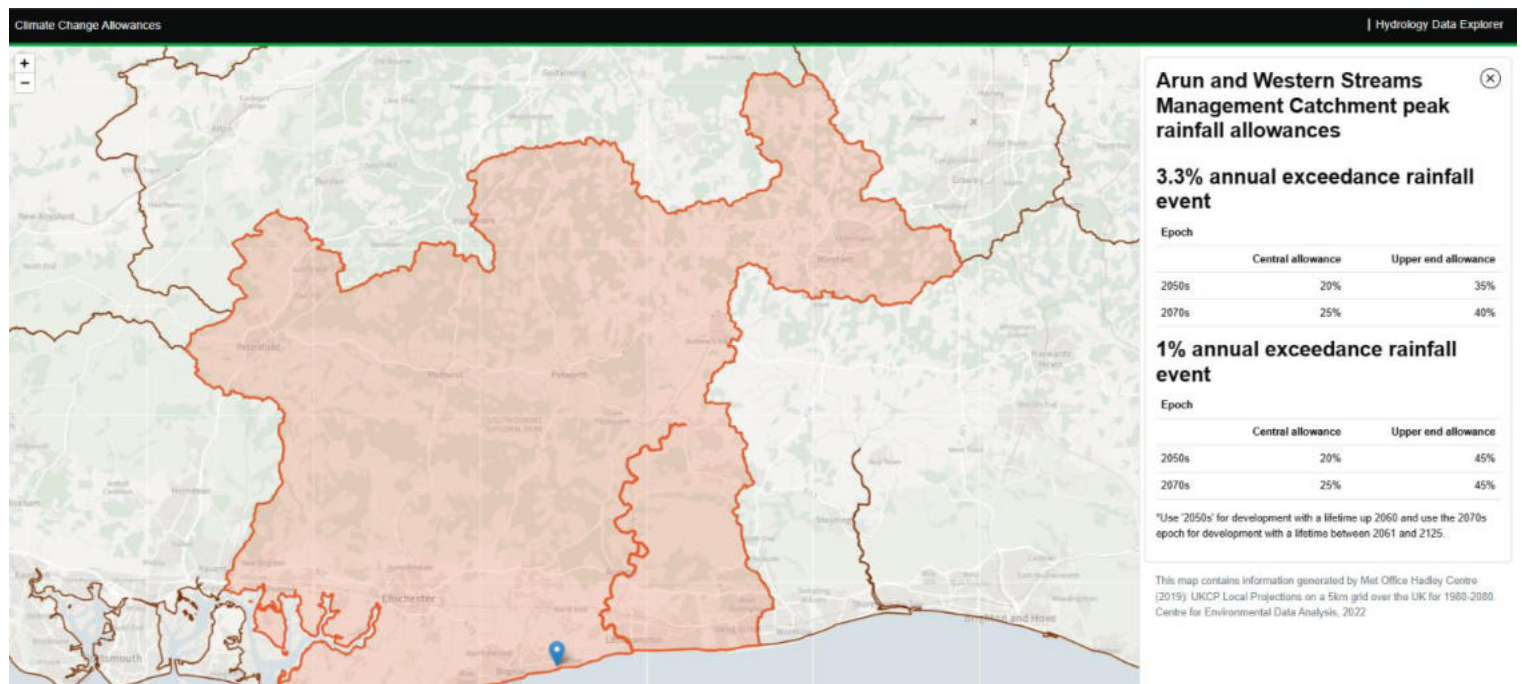


Figure 16. Climate Change Allowances – Peak Rainfall Allowances (Gov.uk)

- 8.4.13 An allowance has been made in respect of urban creep. This allowance amounts to a 10% in impermeable area, applied to the surface water drainage calculations prepared.

8.5 Standard 4: Water Quality

Apply a 'SuDS approach' that protects surface waters, groundwater and coastal waters by managing the

quality of the surface water run-off to adequately address water quality risks from development.

The proposed SuDS management train(s) shall be based on robust water quality risk assessment, appropriate to the pollution hazard and sensitivity of receiving waters, reflecting industry recognised guidance or other quantitative assessment as agreed with the approving body and permitting requirements.

- 8.5.1 The use of permeable paving will ensure that run-off from the driveway receives a level of treatment required by the SuDS manual, with hydrocarbons being filtered by the aggregate and geotextile layers.
- 8.5.2 In accordance with the CIRIA SuDS Manual C753 regarding methods for managing pollution risks, the risk posed by surface water runoff to the receiving environment depends on the pollution hazard at the site (the source), SuDS treatment techniques (the pathway), and the sensitivity of the environment (the receptor).
- 8.5.3 The simple index approach considers whether SuDS techniques are appropriate for the site. The states that for SuDS components to deliver adequate treatment, the total pollution mitigation index for each contaminant type should equal or exceed the pollution hazard index.
- 8.5.4 The SuDS Manual outlines three categories of pollution hazard identification, which vary depending on proposed land use, which are as follows:
- Total Suspended Solids (TSS).
 - Metals (M).
 - Hydrocarbons (H).
- 8.5.5 In accordance with C753 Table 26.2, the proposed land uses at the site are categorised as follows:
- Individual property driveways – low/TSS=0.5/M=0.4/H=0.4
- 8.5.6 In accordance with C753 Table 26.3, the values of SuDS Mitigation indices are provided for permeable paving:
- Permeable Pavement – TSS=0.7/M=0.6/H=0.7
- 8.5.7 As the pollution hazard index does not exceed any pollution mitigation index for any contaminant type, the proposed SuDS methods will provide sufficient treatment for the proposed development.

8.6 Standard 5: Amenity

A 'SuDS approach' shall be adopted that maximises benefits for amenity through the creation of multi-functional places and landscapes.

- 8.6.1 Given the size and scale of the site, and the proposed development, there are limited opportunities for the surface water drainage system to provide amenity benefit.
- 8.6.2 In terms of the development itself, amenity is provided in the form of the private areas within the curtilage of the property, for example the frontage and rear garden areas.

- 8.6.3 The proposed driveway will be of a permeable construction and forms part of the site's surface water drainage arrangement. As such, in respect of the surface water drainage system, this can be considered to provide amenity benefits as this is a multi-functional surface.
- 8.6.4 In view of the above, it is demonstrated that the proposed surface water drainage design provides amenity benefits, whilst also serving its primary purposing of providing a means and method of draining the site.

8.7 Standard 6: Biodiversity

A 'SuDS approach' shall be adopted to ensure the surface water drainage system maximises biodiversity benefits throughout the development lifecycle.

The surface water drainage system shall add biodiversity value by:

- creating diverse, self-sustaining, resilient local ecosystems which contribute to net gains in biodiversity
- supporting and promoting natural local habitat and species, for example, through local nature recovery strategies
- contributing to the delivery of local biodiversity strategies
- contributing to habitat connectivity

- 8.7.1 Given the size and scale of the site, and the proposed development, there are limited opportunities for the surface water drainage system to provide biodiversity benefit.
- 8.7.2 The consideration and inclusion of biodiversity in respect of the proposed surface water drainage system must be proportionate to the scale and ecological sensitivity of the site, and also consider site constraints and opportunities.
- 8.7.3 It is proposed that SuDS Planters / Pods will be incorporated, subject to detailed design, to ensure that the surface water drainage system provides biodiversity benefits.

8.8 Standard 7: Design of Drainage for Construction, Operation, Maintenance, Decommissioning and Structural Integrity

A 'SuDS approach' shall be adopted to ensure that surface water drainage systems are designed so they can be easily and safely constructed, operated and maintained taking account of the need to minimise negative impacts on natural resources and the environment.

The designer shall provide a management and maintenance plan that supports the design objectives detailed in standards 1 to 6 and ensures the performance of the surface water drainage system with regards to run-off destinations, everyday and extreme rainfall, water quality, amenity and biodiversity is maintained throughout the lifetime of the development.

Surface water drainage design shall examine for the likelihood and consequences of potential failure scenarios that may occur during the operation phase and safely manage the associated risks.

The surface water drainage system shall be designed to ensure structural integrity of all components under anticipated loading conditions for the design life of the development so that it does not affect the structural integrity of any existing or proposed components within, or adjacent to, the development.

8.8.1 Maintenance plays an important part in the long-term performance of a surface water drainage system and will be required to ensure that it remains fully operational.

8.8.2 The drainage system has been designed to minimise maintenance requirements; however, a number of key tasks will need to be undertaken so that the system remains effective. These operations are summarised in the table below, along with the required frequency of works. The frequencies given below are a minimum, and in order to establish an effective regime, the level of siltation in each of the components should be monitored in the early stages to inform the long term management and maintenance strategy.

Drainage System feature	Proposed maintenance / remedial works	Required frequency of works
Catch pits, gully sumps and drains	Inspection and additional cleansing as required.	Every 6 months
	Desilting	Year 1, Year 3, then every 5 years
Pipework	Jetting to clear blockages	As required

8.8.3 The responsibility of the proposed drainage infrastructure supporting the replacement dwelling will be the sole responsibility of the owner/occupier of the property.

8.9 Permeable Pavements & Diffuser Units

8.9.1 The driveway which is to be of a permeable construction is designed to allow surface water run-off to percolate through the joints in the block paving surface course and into the sub-base below. This provides a volume of storage (as it is proposed that the permeable paving will be tanked in view of site constraints) before collected run-off is discharged to the receiving outfall.

8.9.2 As part of the permeable paving system, diffuser units will allow the conveyance of flows from the permeable paving sub-base to the piped system and, ultimately, the outfall.

8.9.3 The areas of permeable paving will require additional maintenance measures to ensure they operate as designed. Failure in carrying out this maintenance, could increase the risk of flooding. The additional measures are as follows:

Drainage System feature	Proposed maintenance / remedial works	Required frequency of works
Permeable Pavement	Surface sweeping to reduce silt and debris accumulation.	Every 8 to 12 weeks
	Replace uneven/loose/broken blocks	As required
	Removal / management of weed growth	At least once a year
	Silt removal from permeable surfaces, possibly involving raking out of joints, redressing, removal and remedial works.	As required / to be specified by manufacturer
Diffuser units	Inspection and additional cleansing as required.	Annual
	Desilting.	Year 1, Year 3, then every 5 years

8.10 Remedial/Repair Actions

- 8.10.1 Significant storm events may cause considerable damage to SuDS and their associated components. As such, it may be necessary to inspect and carry out essential recovery works to return the feature to full working order.

8.11 Accidental Spillages

- 8.11.1 It is not envisaged that any materials are to be stored onsite once the development has been completed, which could cause major spills and potential pollution issues within the drainage system. If this situation alters in the future consultation with a specialist will be required in order to confirm if any upgrades to the existing system are necessary.
- 8.11.2 In the event of a serious spillage, either by volume or of unknown or toxic compounds, the spillage should be isolated with the use of soil, turf or fabric with outlet pipes from chambers downstream of the spillage blocked with a bung/bungs.
- 8.11.3 Minor spillages of fuels and oils from motor vehicles will be dealt with by the permeable pavement, by collecting and biodegrading the hydrocarbons.
- 8.11.4 In the event of localised private spillage, the responsibility lies with the private resident to clear up any spillage before it enters the drainage network. The primary method of dealing with any spillage of hydrocarbons should be using sand (or equivalent) to soak up the leak and mitigate pollution migration. Any contaminated waste shall be disposed of by a licensed contractor.
- 8.11.5 The Environment Agency should then be contacted immediately on their incident hotline; **0800 807060**.

8.12 Construction Phase

- 8.12.1 The main contractor is responsible for dealing with all occurrences of groundwater during the construction period.
- 8.12.2 The main contractor is responsible for dealing with all occurrences of surface water run-off and siltation during the construction period.
- 8.12.3 The proposed drainage systems will need a complete maintenance check upon completion of the development and any required remedial tasks undertaken.

8.13 Future Alterations to the Development

- 8.13.1 Any future alterations to the drainage installations should be confirmed by a specialist.

9 PROPOSED FOUL WATER DRAINAGE STRATEGY

- 9.1.1 It is proposed that the replacement dwelling will discharge to the public foul sewer utilising the existing connection.
- 9.1.2 A S106 application will need to be submitted to Southern Water.

10 LIDSEY DRAINAGE IMPACT ASSESSMENT: LIDSEY WASTEWATER TREATMENT WORKS CATCHMENT AREA

- 10.1.1 The proposal is for a replacement dwelling, and there will be no change in the number of properties connected to the foul sewer network as a result of the development associated with this planning application.
- 10.1.2 It is understood that the existing on-site piped drainage system discharges surface water run-off from the roof area(s) to the foul sewer network. It is proposed that, post development, surface water flows will be removed from the existing system and managed independently; discharging to the existing public surface water sewer network which discharges to the sea. This proposed arrangement will provide betterment when compared with the existing drainage arrangement and will reduce the impact on the existing public foul water sewer network.
- 10.1.3 **Appendix D** (Lidsey Treatment Catchment Area) demonstrates that the site is not located within the Lidsey Wastewater Treatment Works Catchment Area.
- 10.1.4 The site falls just outside of the Local Flood Risk Zone LFRZ_015 (Sea Way, Middleton on Sea).
- 10.1.5 It is noted that the assessment of flood risk in **Section 5** of this report is based on flood modelling data that is more recent than the data that has informed the LFRZ or the Lidsey Surface Water Management Plan (SWMP), and will inform the site development and flood mitigation, however in accordance with the planning validation requirements, consideration of the Lidsey SWMP has been made below:
- The site is considered in or in proximity to area LFRZ_015 within Figure i – Local Flood Risk Zones
 - The site is within the Ford SWS Wastewater Catchment Area
 - The site is located behind the Middleton Frontage coastal defence strategy area. *Regardless of the long term flood defence policy, the proposed dwelling and access is located outside of and elevated above existing and future modelled flood levels.*
 - Detailed assessment of LFRZ_015 shows the site is outside the boundary of this LFRZ area, as seen in **Appendix D** as well as below in **Figure 17** and **Figure 18**. The site is not shown to have any identified flood risk or flood hazard within the Lidsey SWMP that requires further attention in addition to the flood risk assessment in **Section 5**.
 - The development proposals will provide a betterment to the drainage mentioned in the flood mechanism assessment of LFRZ_015, namely that:
 - surface water drainage will be diverted to the sea, therefore reducing the site impact on the pluvial flood risk and foul sewer flood risk to Sea Way to the east of the site.
 - Soakaway systems are not proposed, therefore drainage will not be compromised by high groundwater mentioned.
 - It is noted that a new storm system has been installed along Sea Way (private system on private highway) that has improved surface water flood risk on the highway to the east of the site.

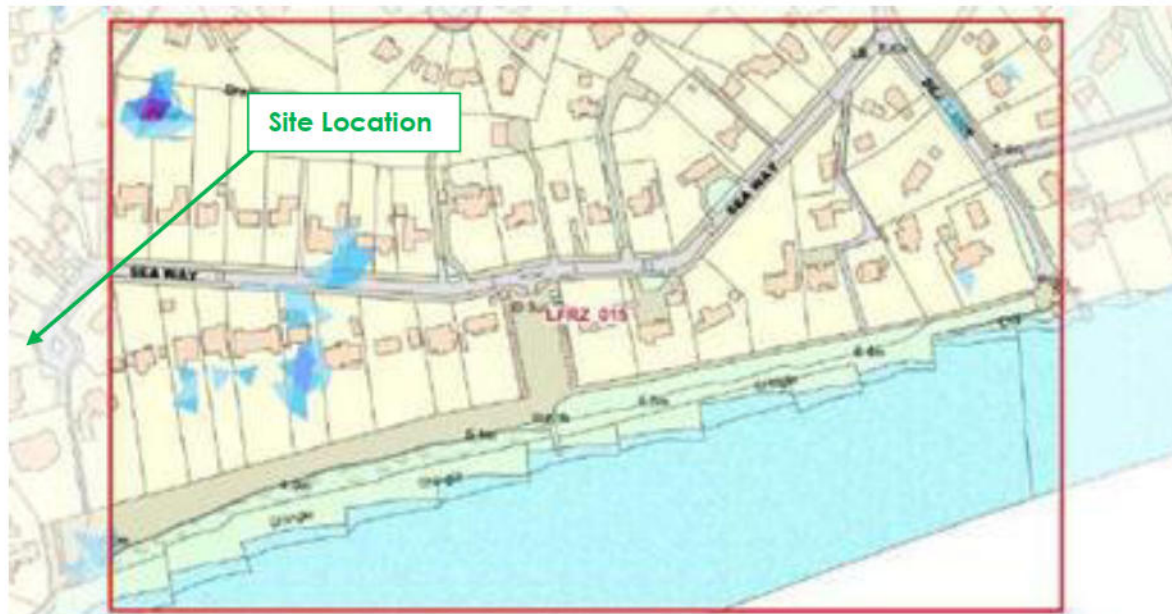


Figure 17. Flood Risk LFRZ_015 (1 in 100 year storm event) – Lidsey SWMP



Figure 18. Flood Hazard LFRZ_015 (1 in 100 year storm event) – Lidsey SWMP

10.1.6 The LFRZ_015 flood risk sources identify the following flood risks, with commentary related to this site included by BPC:

- i. Pluvial flood risk; high – this is shown to the east of the site only. The proposals to separate and redirect surface water run-off from the site to the sea (via Southern Water's public surface water sewer) will improve the situation to the east of the site.
- ii. Fluvial flood risk; low – no comment
- iii. Groundwater flood risk; medium – the proposals include a raised finished floor level for the proposed development. Permeable pavement will also ensure the driveway surface run-off is captured, treated and diverted to the sea also.
- iv. Public sewer flood risk; high – the proposals will reduce the development impact on the public foul sewer by removing existing (pre-redevelopment) surface water run-off contribution to the network, thus improving this flood risk issue for properties to the east of the development

v. Tidal flood risk; low – as covered by **Section 5**.

10.1.7 The measures above cover how flood risk within LFRZ_015 does not sufficiently impact the development, and the flood risk to the east of the site will be improved by the proposals through sustainable drainage measures, separating foul and surface water run-off.

10.1.8 The Lidsey SWMP intervention options (*Table 8-1 of the Lidsey SWMP, included in **Appendix D***) that have been included as part of this flood risk assessment and drainage strategy are as follows:

- i. Option 3; Source; Permeable Paving
- ii. Option 5; Source; Rainwater Harvesting
- iii. Option 12; Pathway; Increased Capacity in Drainage System
- iv. Option 19; Pathway; Separation of foul and surface water
- v. Option 21; Receptor, Improve resilience to flooding
- vi. Option 23; Receptor; Raising doorway / access threshold

11 RESIDUAL RISK AND MITIGATION

11.1 Residual Risk

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

- i. Flooding of buildings as a result of tidal flooding, including increased tidal flood risk as a result of climate change.
- ii. Extreme rainfall events that exceed the design criteria used for the drainage system causing surface water flooding.
- iii. Blockage/failure of the proposed drainage system causing flooding to the site.
- iv. Groundwater flooding to the site caused by groundwater levels exceeding the ground surface level.
- v. Surface water flooding to the site.
- vi. Flooding of the proposed basement as a result of flooding at the site, for example, as a result of potential tidal flooding associated with climate change events.

11.2 Mitigation

11.2.1 Consideration has been taken to the residual risks stated in Section 11.1, and the following mitigation measures are proposed:

- i. The site is located fully within Flood Zone 1, however Flood Risk Assessment Data provided by the Environment Agency identifies a risk of tidal flooding at the site (Tidal Defended, 0.5% 2115 AEP). A future flood risk in respect of climate change is also identified, although not data is available from the Environment Agency in respect of that dataset. The proposed development concerns the replacement of an existing dwelling, and will be located in Flood Zone 1 (present day). Modelled flood levels, provided by the Environment Agency, have been assessed, and the 'peak' 0.5% (2115) Tidal Defended modelled flood level is 4.95m AOD. The finished floor level of the property will be set at a level of at least **5.25m AOD**; 300mm above the design flood level, in accordance with Environment Agency Guidance, which states that a 300mm freeboard allowance is suitable where there is certainty with regard to the design flood level. The finished floor level cannot be raised to the recommended 600mm freeboard above the future design flood level due to site constraints, however additional flood resistance and resilience measures are proposed to at least 600mm above the design flood level. This will include:
 - o Flood resistance measures; which look to keep water out of the building when flood depths are up to 300mm. This includes tanking and waterproof construction, as well as the use of impermeable building materials to at least 300mm. This will look to keep water out of the building in a extreme flood scenario, and would result in minimal damage or deformation.
 - o Flood resilience measures; where flood depths exceed 300mm, impacts could be minimised by use of flood resilient materials such as lime plaster, raising air bricks, positioning NRVs and services at 0.6m height from FFL, raising potential hazards and/or

damage above modelled flood levels, and design of the proposed building layout to allow access to all spaces to permit drying and cleaning. This would minimise damage to building in an extreme future modelled flood event.

- ii. The surface water drainage system proposed has been designed to accommodate a 1-in-100-year storm event, inclusive of an allowance for the potential impacts of climate change (45%). Should an event occur which exceeds this design criteria, exceedance flows would follow the natural topography of the site, which broadly falls towards the south-western extent of the rear garden, and the central low point in the rear garden. Where existing levels demonstrate little to no fall, surface water flooding may occur. The proposed dwelling will have a finished floor level 850mm above the site low point within the rear garden.
- iii. Maintenance plays a vital role in managing and reducing flood risk, and the owner of the proposed dwelling will be required to undertake maintenance in relation to the proposed drainage system to prevent future flooding caused by blockages or failure, as detailed in **Section 8.8**.
- iv. Groundwater investigation on site and within the immediate vicinity of the site found peak winter groundwater levels at shallow depths. Should groundwater flooding occur, flood water would mimic the behaviour of potential surface water flooding. The raised finished floor level will assist in mitigating any potential risk of flooding from this source to the proposed replacement dwelling.
- v. There is an identified risk of surface water flooding in the rear garden ('Low' to 'High' risk), where there is a low point within the landscaping of approximately 4.40m AOD. Surface water flooding may occur in this area as a result of heavy rainfall or an exceedance event. The proposed dwelling will have a finished floor level 850mm above the site low point within the rear garden, therefore mitigating any such risk of surface water flooding. The site is largely identified as being at 'Very Low' risk of surface water flooding.
- vi. As part of the development proposals, a basement is proposed. No sleeping accommodation (bedrooms) are proposed at basement level, which will instead provide a garage/plant room gym/sauna/steam room and shower facilities in addition to a swimming pool and foyer. It is proposed that an internal means of escape from the basement will be provided, allowing occupants to escape to the ground floor and/or upper floors of the proposed dwelling. This will allow escape to higher levels/ground in the event of flooding. Arrangements are to be made to provide a means of draining potential flood water from the basement should flooding occur.

12 FLOOD RISK MANAGEMENT

12.1 Safe Access and Egress

12.1.1 The existing access route is located within Flood Zone 1, elevated above or very near the 'peak' modelled flood level of 4.95m AOD. Areas of the driveway are at slightly lower levels than the modelled flood level (c. 250mm maximum depth) although site levels elevate towards the road (c. 5.00m AOD). The maximum envisaged depths are not considered to significantly impede safe access and/or egress. Should issues occur, safe refuge can be sought within the property, where the floor level is raised 300mm above the peak modelled flood level of 4.95m AOD.

12.1.2 There is therefore no access or egress concerns with respect to the development.

12.2 Flood Warning

12.2.1 It is recommended that occupants register for any available flood alert and/or warning systems or services available, such as through the Environment Agency.

13 OFFSITE IMPACTS

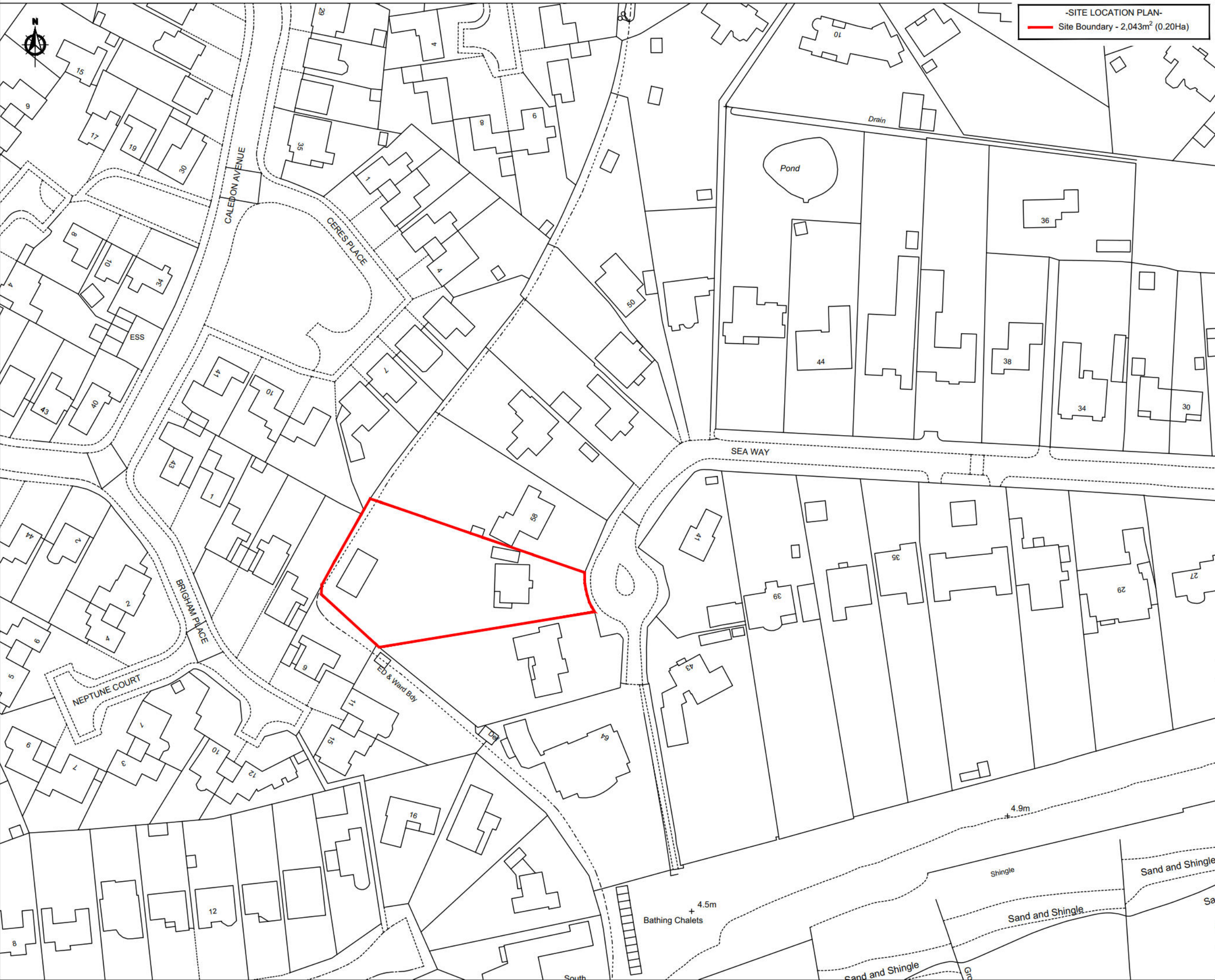
- 13.1.1 Post-development surface water flows will be discharged to the sea via the 300mm dia. public surface water sewer which increases in size to a 675mm pipe before discharging to the sea, rather than to the foul sewer network as existing.
- 13.1.2 Foul water generated by the proposed replacement dwelling will continue to discharge to the public foul sewer, as existing.
- 13.1.3 The effects of climate change have been considered in the design of the proposed site flood mitigation and surface water drainage, with an allowance made for up to 45%.

14 SUMMARY

- 14.1.1 The proposed development will involve the erection of 1 No. detached dwelling following demolition of existing dwelling with associated parking and landscaping as demonstrated by the development proposals contained within **Appendix A**.
- 14.1.2 The topographical survey identifies levels in the range of 4.33m and 5.22m AOD.
- 14.1.3 Site-specific ground investigation has been undertaken at the site by Albury S.I. Ltd. Groundwater strikes were recorded within the range of 1.70m to 2.90m below ground level, with short-term standing water levels recorded at 0.95m to 3.00m below ground level. The water level at WS5 rose to 1.00m below ground level after three hours.
- 14.1.4 Infiltration testing within the vicinity of the site identifies poor rates of infiltration, with further groundwater monitoring confirming groundwater at very shallow depths (0.22m below ground level).
- 14.1.5 The site is currently served by a combined drainage network that discharges both foul and surface water from the existing building to the public foul water sewer in Sea Way.
- 14.1.6 The site is located in Flood Zone 1.
- 14.1.7 Flood Risk Assessment Data provided by the Environment Agency identifies a 'peak' modelled flood level of 4.95m AOD (0.5% 2115 Tidal Defended AEP). The proposed finish floor level (5.25m AOD) is raised 300mm above this level. Additional resilience and resistance measures are also proposed.
- 14.1.8 The proposed driveway will be of a permeable construction to provide treatment and slow run-off from the surface, and will discharge to a below ground piped system, discharging to the 300mm dia. public surface water sewer which runs parallel to the rear boundary of the site. Roof areas of the proposed dwelling will also drain to a below ground piped system, which will benefit from a rainwater harvesting system to allow rainwater re-use. Exceedance flows from the on-site proposed rainwater harvesting system will discharge to the 300mm dia. public surface water sewer which in turn discharges to the sea via a 675mm surface water sewer, downstream of the site.
- 14.1.9 Calculations demonstrate the proposed system will discharge run-off for the design event without exceedance.
- 14.1.10 The completion of the development will not increase flood risk on or off the site and will provide betterment and improvement given that existing surface water flows will be removed from the public foul water sewer network.
- 14.1.11 In conclusion, this development is suitable with regards to flood risk and surface water drainage.

DRAWINGS

- PL100** Site Location Plan
- PL200** Existing Topography
- PL300** Flood Map for Planning Output
- PL301** Flood Map for Planning Surface Water
- PL400** Impermeable Areas Comparison
- PL500** Preliminary Levels & Drainage



-SITE LOCATION PLAN-
Site Boundary - 2,043m² (0.20Ha)

NOTES

1. This drawing is to be read in conjunction with all other BP Civils drawings, and with all relevant Architect's and Engineer's drawings and specification. Any discrepancies found are to be reported immediately to the Engineer.
2. BP Civils accepts no responsibility for inaccuracies in data provided by third parties such as topographic surveys or Ordnance Survey mapping.
3. Do not scale, work to figured dimensions only. All dimensions are in millimeters unless noted otherwise and all levels are in metres from the topographic survey datum.
4. Any information given regarding existing underground services is given in good faith after consultation with the relevant authority, however accuracy is not certain. The main contractor is responsible for checking all information on site prior to work commencing and taking due care whilst undertaking the works.
5. All dimensions to be checked on site. All details and dimensions relating to sub-contractors work must be checked and agreed between the sub-contractor or supplier and the general contractor.
6. The electronic information from this drawing can not be guaranteed as dimensionally drawn exact. Figured dimensions must be used for setting out and detailing. BP Civils logos and company information must be removed from copies if information is re-used.
7. Where used, this map is based on or reproduced from Ordnance Survey material with the permission of Ordnance Survey on behalf of the controller of His Majesty's Stationary Office (c) Crown Copyright. Licence number: 100022432. BP Civils accept no liability for any inaccuracies with the data.
8. The client shall ensure all licences, consents and approvals required to implement the works are in place prior to commencing construction.

P1	07/05/2026	Updated title block
Rev.	Date	Amendments

BP CIVILS
CONSULTING

INCORPORATING BRIGHT PLAN CIVILS
2 West Barn, Old Dairy Lane, Aldingbourne, West Sussex PO20 3AF
Tel: 01243 210418
www.bpcivils.co.uk enquiries@bpcivils.co.uk

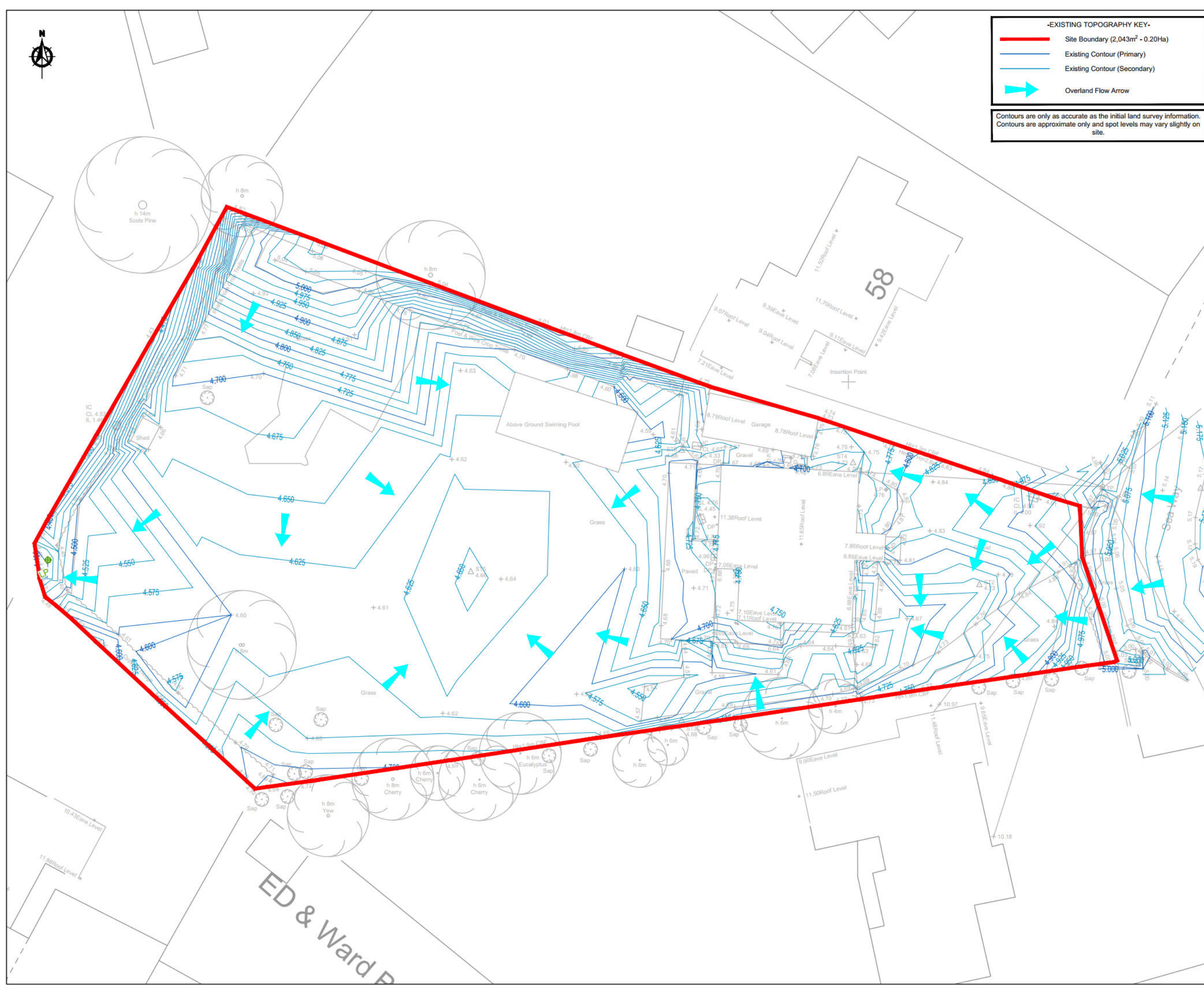
Drawing Status
PLANNING
NOT FOR CONSTRUCTION

Client
Mr. G Vlad

Project
**60 Sea Way,
Middleton-on-Sea PO22 7SA**

Drawing Title
Site Location Plan

Scale at A3 1:1000	Date May '26	Drawn By SPB	Checked By MJA	Project No. D2295
Drawing Code 000-BPC-WD-ZZ-D-C	Drawing No. PL100	Rev. P1		



A3

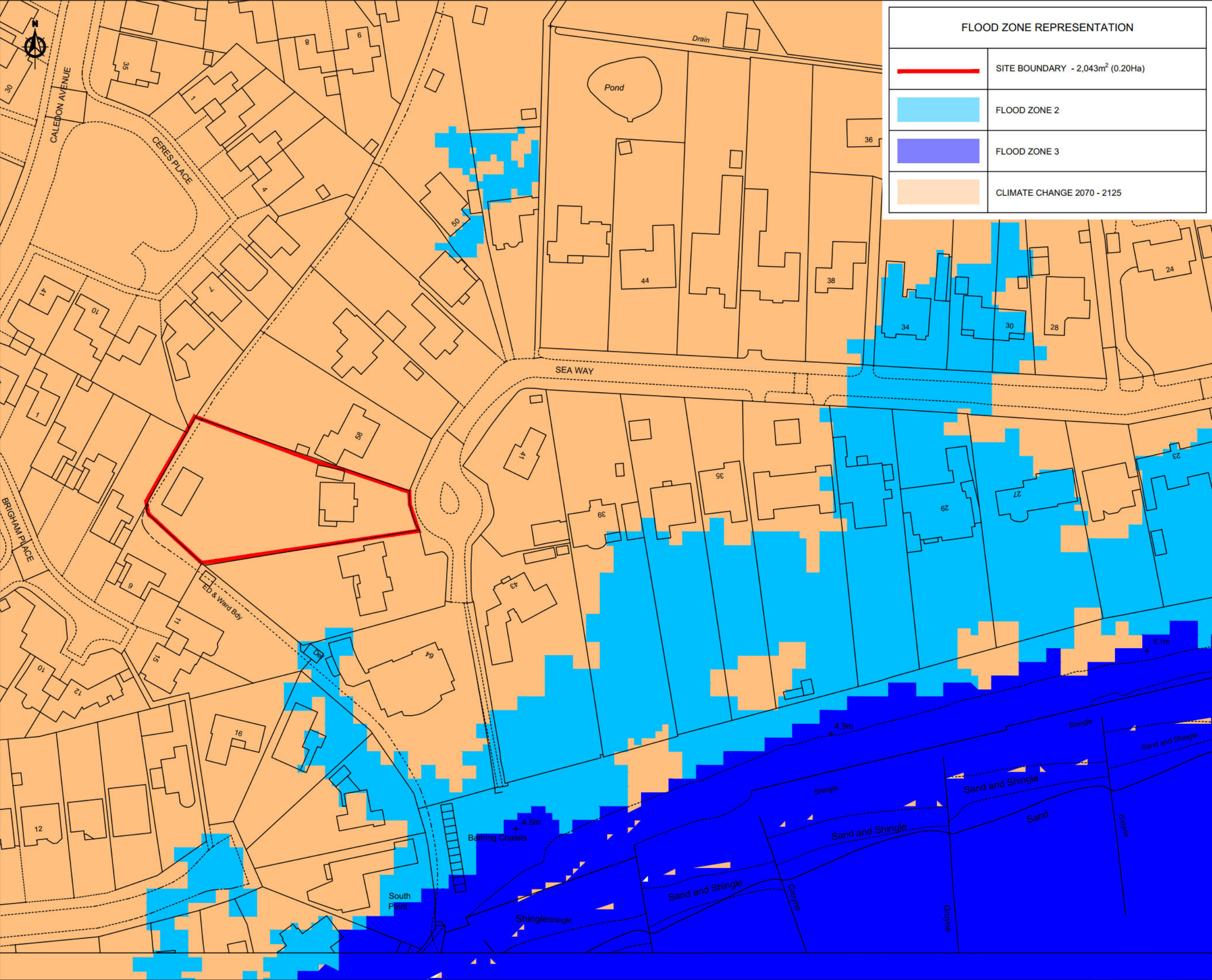
- | | | |
|------|------------|---------------------|
| P1 | 07/05/2026 | Title block updated |
| Rev. | Date | Amendments |

Drawing Status **PLANNING**
NOT FOR CONSTRUCTION

Project 60 Sea Way,
Middleton-on-Sea PO22 7SA

Scale at A3 1:250	Date May '26	Drawn By SPB	Checked By MJA	Project No. D2295
----------------------	-----------------	-----------------	-------------------	----------------------

Drawing Code	Drawing No.	Rev.
000-BPC-WD-ZZ-D-C	PL200	P1



FLOOD ZONE REPRESENTATION	
	SITE BOUNDARY - 2,043m ² (0.20Ha)
	FLOOD ZONE 2
	FLOOD ZONE 3
	CLIMATE CHANGE 2070 - 2125

NOTES

A3

1. This drawing is to be read in conjunction with all other BP Civils drawings, and with all relevant Architect's and Engineer's drawings and specification. Any discrepancies found are to be reported immediately to the Engineer.

2. BP Civils accepts no responsibility for inaccuracies in data provided by third parties such as topographic surveys or Ordnance Survey mapping.

3. Do not scale, work to figured dimensions only. All dimensions are in millimeters unless noted otherwise and all levels are in metres from the topographic survey datum.

4. Any information given regarding existing underground services is given in good faith after consultation with the relevant authority, however accuracy is not certain. The main contractor is responsible for checking all information on site prior to work commencing and taking due care whilst undertaking the works.

5. All dimensions to be checked on site. All details and dimensions relating to sub-contractors work must be checked and agreed between the sub-contractor or supplier and the general contractor.

6. The electronic information from this drawing can not be guaranteed as dimensionally drawn exact. Figured dimensions must be used for setting out and detailing. BP Civils logos and company information must be removed from copies if information is re-used.

7. Where used, this map is based on or reproduced from Ordnance Survey material with the permission of Ordnance Survey on behalf of the controller of His Majesty's Stationary Office (c) Crown Copyright. Licence number: 100022432. BP Civils accept no liability for any inaccuracies with the data.

8. The client shall ensure all licences, consents and approvals required to implement the works are in place prior to commencing construction.

P1

07/05/2026

Updated flood map data

Rev.

Date

Amendments

BP CIVILS

CONSULTING

INCORPORATING BRIGHT PLAN CIVILS

2 West Barn, Old Dairy Lane, Aldingbourne, West Sussex PO20 3AF

Tel: 01243 210418

www.bpcivils.co.uk enquiries@bpcivils.co.uk

Drawing Status

PLANNING

NOT FOR CONSTRUCTION

Client

Mr. G Vlad

Project

60 Sea Way,

Middleton-on-Sea PO22 7SA

Drawing Title

Flood Map for Planning

Output

Scale at A3

Date

May '26

Drawn By

SPB

Checked By

MJA

Project No.

D2295

Drawing Code

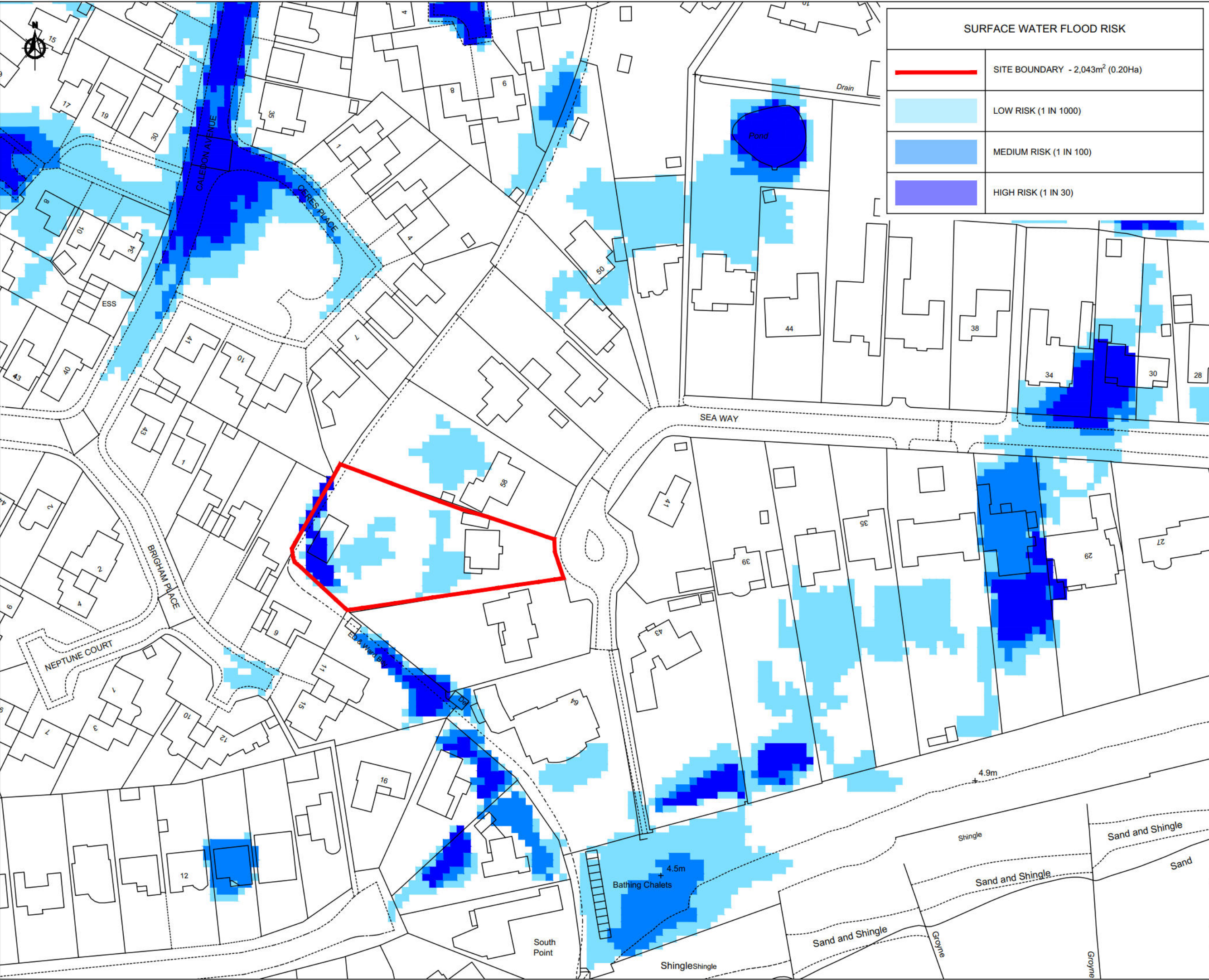
000-BPC-WD-ZZ-D-C

Drawing No.

PL300

Rev.

P1



SURFACE WATER FLOOD RISK	
	SITE BOUNDARY - 2,043m ² (0.20Ha)
	LOW RISK (1 IN 1000)
	MEDIUM RISK (1 IN 100)
	HIGH RISK (1 IN 30)

NOTES

A3

1. This drawing is to be read in conjunction with all other BP Civils drawings, and with all relevant Architect's and Engineer's drawings and specification. Any discrepancies found are to be reported immediately to the Engineer.

2. BP Civils accepts no responsibility for inaccuracies in data provided by third parties such as topographic surveys or Ordnance Survey mapping.

3. Do not scale, work to figured dimensions only. All dimensions are in millimeters unless noted otherwise and all levels are in metres from the topographic survey datum.

4. Any information given regarding existing underground services is given in good faith after consultation with the relevant authority, however accuracy is not certain. The main contractor is responsible for checking all information on site prior to work commencing and taking due care whilst undertaking the works.

5. All dimensions to be checked on site. All details and dimensions relating to sub-contractors work must be checked and agreed between the sub-contractor or supplier and the general contractor.

6. The electronic information from this drawing can not be guaranteed as dimensionally drawn exact. Figured dimensions must be used for setting out and detailing. BP Civils logos and company information must be removed from copies if information is re-used.

7. Where used, this map is based on or reproduced from Ordnance Survey material with the permission of Ordnance Survey on behalf of the controller of His Majesty's Stationary Office (c) Crown Copyright. Licence number: 100022432. BP Civils accept no liability for any inaccuracies with the data.

8. The client shall ensure all licences, consents and approvals required to implement the works are in place prior to commencing construction.

P1

07/05/2026

Updated flood map data

Rev.

Date

Amendments

BP CIVILS

CONSULTING

INCORPORATING BRIGHT PLAN CIVILS

2 West Barn, Old Dairy Lane, Aldingbourne, West Sussex PO20 3AF

Tel: 01243 210418

www.bpcivils.co.uk enquiries@bpcivils.co.uk

Drawing Status

PLANNING

NOT FOR CONSTRUCTION

Client

Mr. G Vlad

Project

60 Sea Way,
Middleton-on-Sea PO22 7SA

Drawing Title

Flood Map for Planning
Surface Water

Scale at A3

Date

Drawn By

Checked By

Project No.

1:1000

May '26

SPB

MJA

D2295

Drawing Code

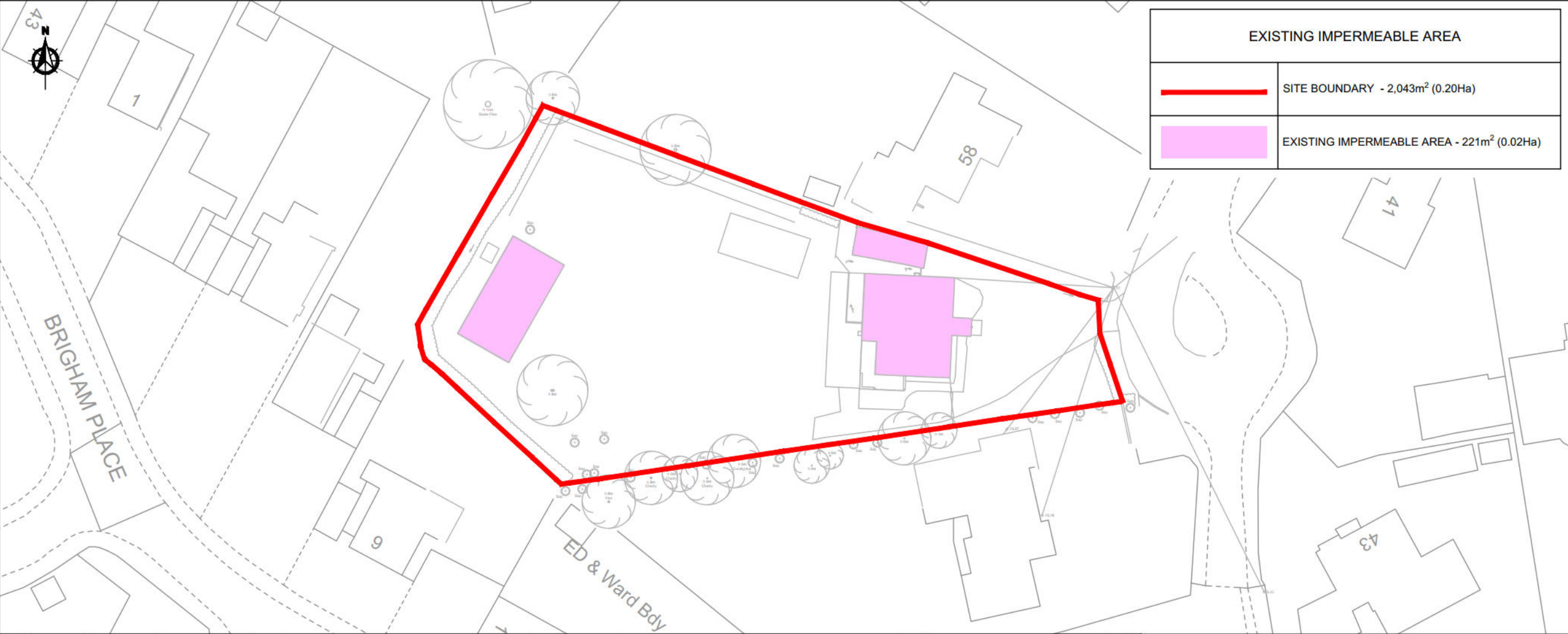
Drawing No.

Rev.

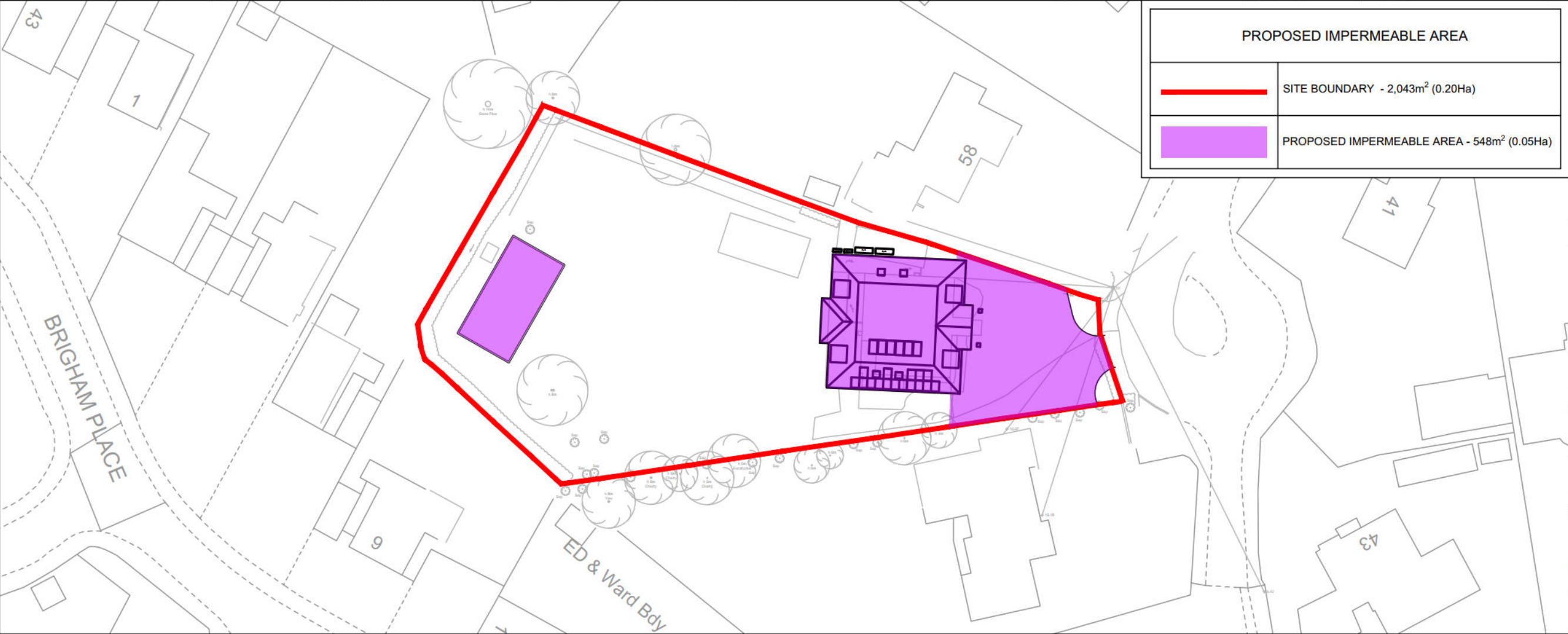
000-BPC-WD-ZZ-D-C

PL301

P1



EXISTING IMPERMEABLE AREA	
	SITE BOUNDARY - 2,043m ² (0.20Ha)
	EXISTING IMPERMEABLE AREA - 221m ² (0.02Ha)



PROPOSED IMPERMEABLE AREA	
	SITE BOUNDARY - 2,043m ² (0.20Ha)
	PROPOSED IMPERMEABLE AREA - 548m ² (0.05Ha)

NOTES

A3

1. This drawing is to be read in conjunction with all other BP Civils drawings, and with all relevant Architect's and Engineer's drawings and specification. Any discrepancies found are to be reported immediately to the Engineer.

2. BP Civils accepts no responsibility for inaccuracies in data provided by third parties such as topographic surveys or Ordnance Survey mapping.

3. Do not scale, work to figured dimensions only. All dimensions are in millimeters unless noted otherwise and all levels are in metres from the topographic survey datum.

4. Any information given regarding existing underground services is given in good faith after consultation with the relevant authority, however accuracy is not certain. The main contractor is responsible for checking all information on site prior to work commencing and taking due care whilst undertaking the works.

5. All dimensions to be checked on site. All details and dimensions relating to sub-contractors work must be checked and agreed between the sub-contractor or supplier and the general contractor.

6. The electronic information from this drawing can not be guaranteed as dimensionally drawn exact. Figured dimensions must be used for setting out and detailing. BP Civils logos and company information must be removed from copies if information is re-used.

7. Where used, this map is based on or reproduced from Ordnance Survey material with the permission of Ordnance Survey on behalf of the controller of His Majesty's Stationary Office (c) Crown Copyright. Licence number: 100022432. BP Civils accept no liability for any inaccuracies with the data.

8. The client shall ensure all licences, consents and approvals required to implement the works are in place prior to commencing construction.

P1

07/05/2026

Updated title block, revised site layout

Rev.

Date

Amendments

BP CIVILS

CONSULTING

INCORPORATING BRIGHT PLAN CIVILS

2 West Barn, Old Dairy Lane, Aldingbourne, West Sussex PO20 3AF

Tel: 01243 210418

www.bpcivils.co.uk enquiries@bpcivils.co.uk

Drawing Status

PLANNING

NOT FOR CONSTRUCTION

Client

Mr. G Vlad

Project

60 Sea Way.

Middleton-on-Sea PO22 7SA

Drawing Title

Impermeable Areas Comparison

Scale at A3

Date

May '26

Drawn By

SPB

Checked By

MJA

Project No.

D2295

Drawing Code

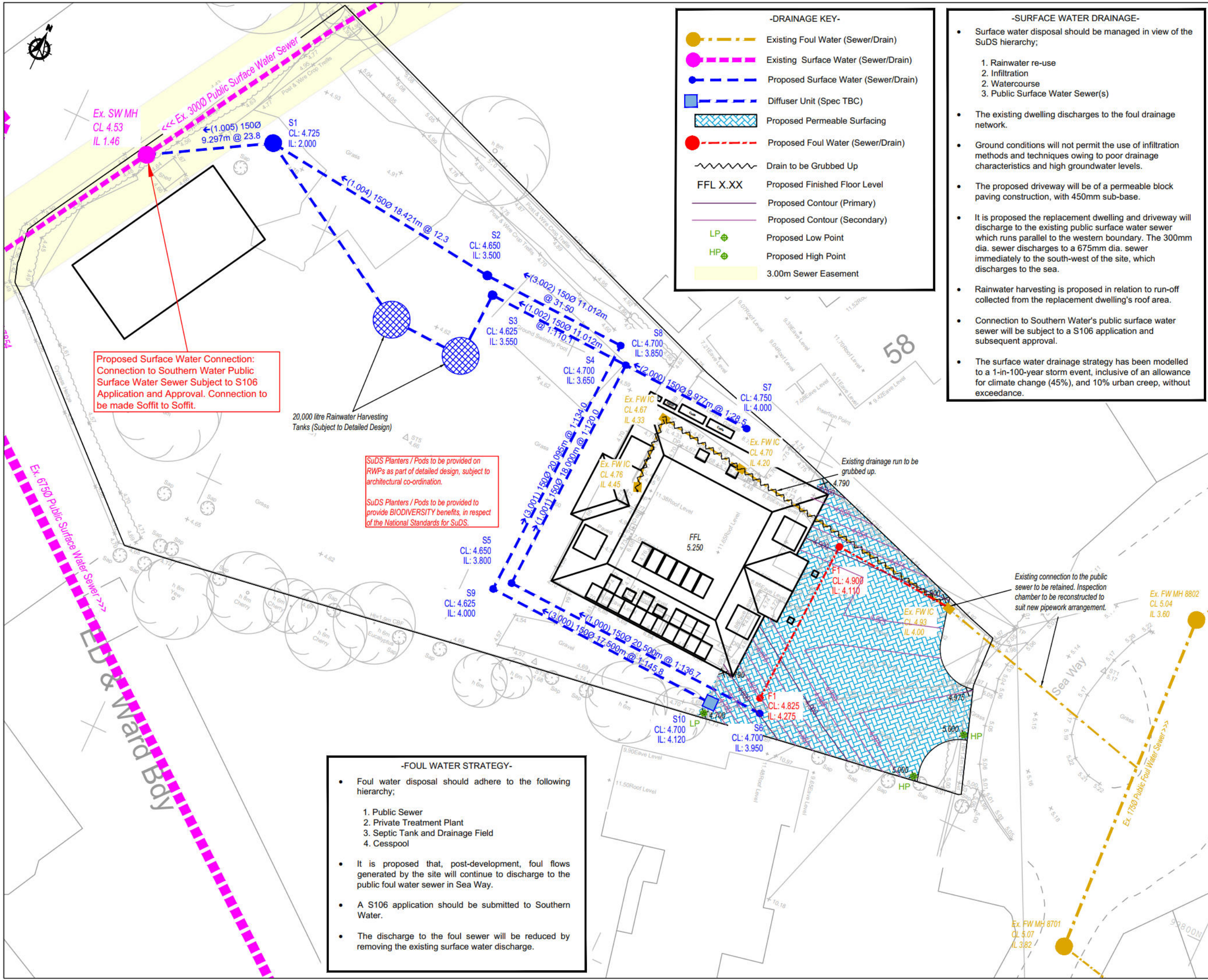
000-BPC-WD-ZZ-D-C

Drawing No.

PL400

Rev.

P1



1. This drawing is to be read in conjunction with all other BP Civils drawings, and with all relevant Architect's and Engineer's drawings and specification. Any discrepancies found are to be reported immediately to the Engineer.
2. BP Civils accepts no responsibility for inaccuracies in data provided by third parties such as topographic surveys or Ordnance Survey mapping.
3. Do not scale, work to figured dimensions only. All dimensions are in millimeters unless noted otherwise and all levels are in metres from the topographic survey datum.
4. Any information given regarding existing underground services is given in good faith after consultation with the relevant authority, however accuracy is not certain. The main contractor is responsible for checking all information on site prior to work commencing and taking due care whilst undertaking the works.
5. All dimensions to be checked on site. All details and dimensions relating to sub-contractor work must be checked and agreed between the sub-contractor or supplier and the general contractor.
6. The electronic information from this drawing can not be guaranteed as dimensionally drawn exact. Figured dimensions must be used for setting out and detailing. BP Civils logos and company information must be removed from copies if information is re-used.
7. Where used, this map is based on or reproduced from Ordnance Survey material with the permission of Ordnance Survey on behalf of the controller of His Majesty's Stationary Office (c) Crown Copyright. Licence number: 100022432. BP Civils accept no liability for any inaccuracies with the data.
8. The client shall ensure all licences, consents and approvals required to implement the works are in place prior to commencing construction.

RESIDUAL HAZARDS

- In addition to the hazards/risks normally associated with the type of work detailed on this drawing, note the following:
1. Buried services. Contractor to refer to record drawings and use CAT to locate existing services and undertake necessary precautions and investigation prior to excavating.
 2. Working in live sewers. Contractor to ensure operatives are familiar and competent with the dangers of working in live sewers.
 3. Excavations close to existing structures. Contractor to prepare method statement to ensure stability of existing structure.
- It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved risk assessment and method statement

P1	07/05/2026	Updated title block, revised site layout
Rev.	Date	Amendments

BP CIVILS
CONSULTING

INCORPORATING BRIGHT PLAN CIVILS
2 West Barn, Old Dairy Lane, Aldingbourne, West Sussex PO20 3AF
Tel: 01243 210418
www.bpcivils.co.uk enquiries@bpcivils.co.uk

Drawing Status
PLANNING
NOT FOR CONSTRUCTION

Client
Mr. G Vlad

Project
**60 Sea Way,
Middleton-on-Sea PO22 7SA**

Drawing Title
Preliminary Levels & Drainage

Scale at A3 Date Drawn By Checked By Project No.
1:250 May '26 SPB MJA D2295

Drawing Code Drawing No. Rev.
000-BPC-WD-ZZ-D-C PL500 P1