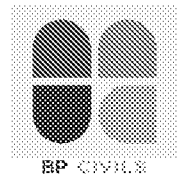


APPENDICES



Appendix A Development Proposals

- This drawing is to be read in conjunction with all other Bright Plan drawings, and with all relevant Architects' and Engineers' drawings and specification. Any discrepancies noted are to be resolved immediately to the Engineer.
- Bright Plan accepts no responsibility for inaccuracies in data provided by third parties such as topographic surveys or Ordnance Survey mapping.
- Road markings are indicative, based on aerial imagery when not provided within a topographical survey. Bright Plan accepts no responsibility for discrepancies in aerial imagery.
- 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.
- Any information given regarding existing underground services is given in good faith after consultation with the relevant authority, however accuracy is not certain.

Application Boundary

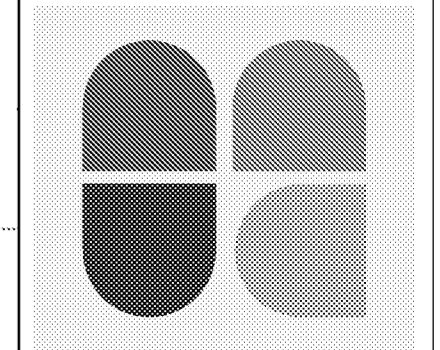
Existing Road Markings

Category A Trees

RPA

Tree Removed

B	Revised Layout	14/06/2024
A	Revised Layout	11/06/2024
-	Original Issue	06/06/2024
Rev.	Amendments	Date



BRIGHT PLAN
 Transport Planning | Civil Engineering | Landscape Design
 65 Chichester Enterprise Centre, Terminus Road, Chichester, PO19 8FY
 Tel: 0333 358 3270 Email: enquiries@bpcivils.co.uk
 www.bpcivils.co.uk

Drawing Status: Draft

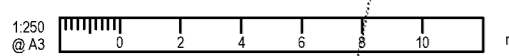
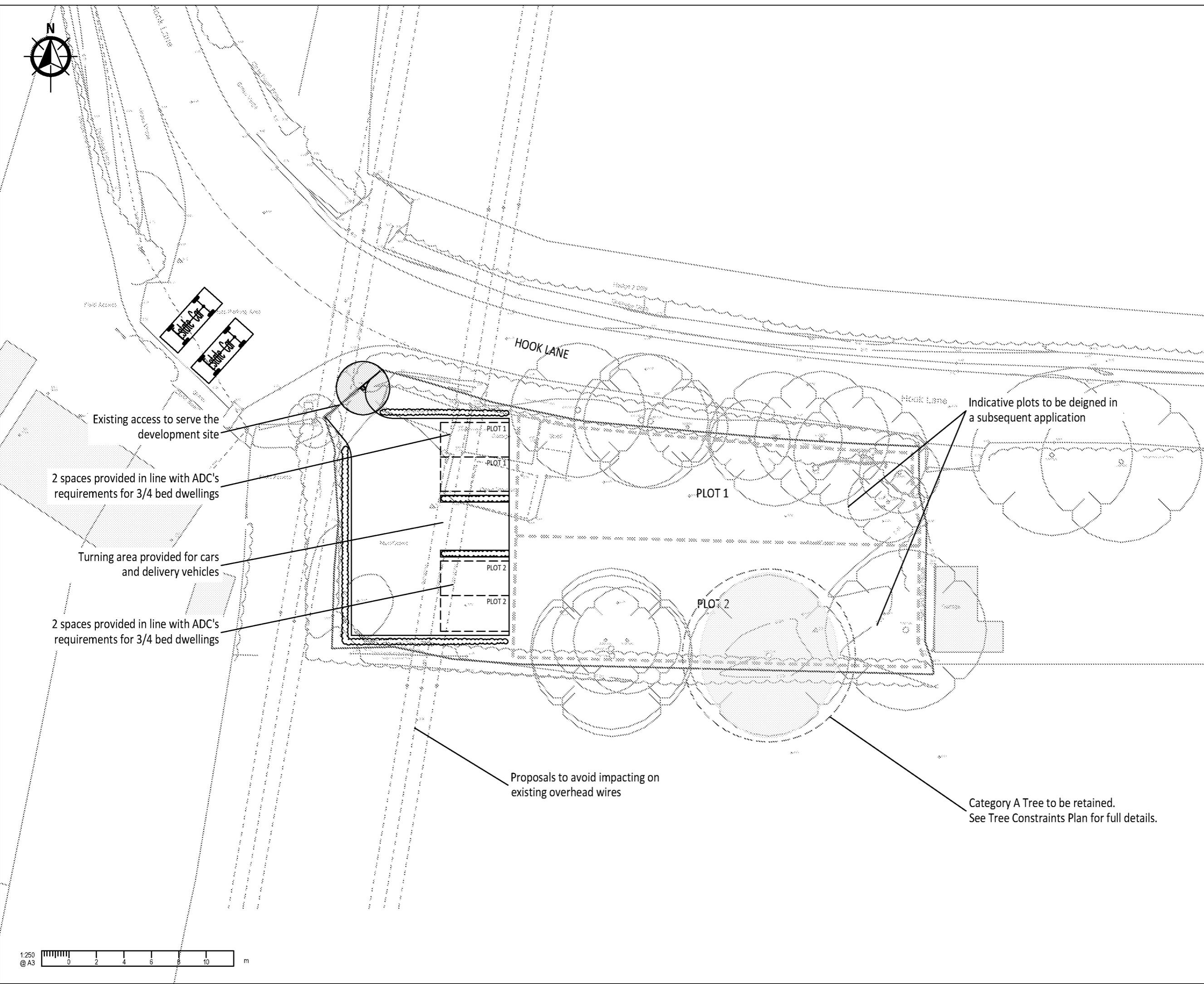
Client: Mr P. Homewood

Project: Hook Lane, Aldingbourne

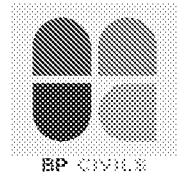
Drawing Title: Site Overview

Scale	Date	Drawn By	Checked
1:250	Jun 24	SMO	PMR

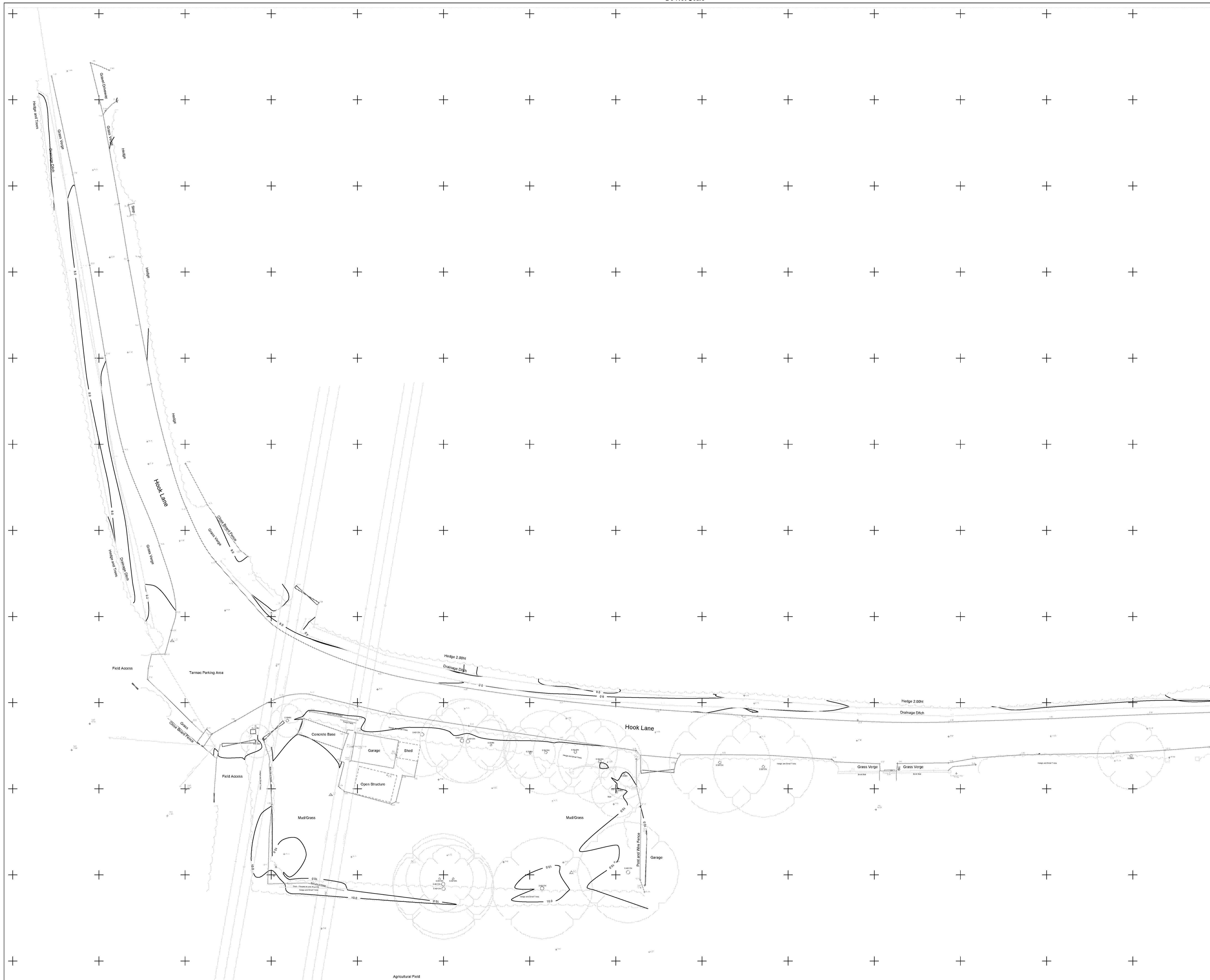
Drawing No.	Rev.
2024-6645-001	B



A3 IN DISTRICT COPY

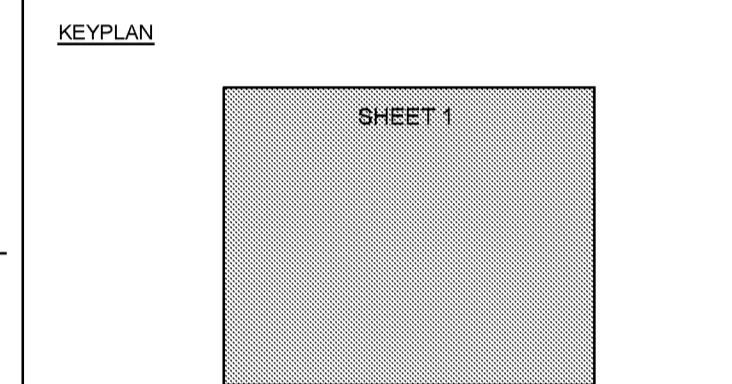


Appendix B Topographic Survey



- NOTES**
- The Grid and Levels are orientated to OS Active Grid using OSTN 15.
 - Please request any survey control information if required.
 - Surveyed boundary features are not necessarily legal boundaries.
 - Dimensions should not be scaled. All dimensions should be checked on site before any fabrication / construction.
 - Copyright of all data produced by InCo Surveys shall remain with InCo Surveys unless otherwise specifically agreed.
 - Information provided should not be altered or modified in any way. It should not be used for any purpose other than for which it was intended and should not be issued to other parties without prior agreement.
 - InCo Surveys cannot accept responsibility for any damage to computer systems which may result from viruses which may be contained in the data provided.
 - If the AutoCAD drawing is being read by any system other than AutoCAD it should be checked against a hard copy. InCo Surveys cannot accept liability for omissions.
 - All utilities have been identified to the best of the surveyors knowledge. The correct identification of the utility types can not be 100% guaranteed, therefore these should be independently verified prior to use in any design and building works.
 - All pipe diameters and levels are assumed to be correct, however due to non entry to inspection chambers, these should be verified before any works commence.
 - External eaves levels are surveyed to lowest tile position.

- LEGEND**
- B - Bollard
 - CL - Cover Level
 - EAV - Eaves Level
 - FH - Fire Hydrant
 - FPO - Fence Post
 - GV - Gas Valve
 - IC - Inspection Cover
 - IL - Invert Level
 - LP - Lamp Post
 - MT - Multi Trunk
 - RID - Ridge Level
 - RS - Road Sign
 - SC - Stop Cock
 - SV - Sluice Valve
 - TK - Top of Kerb
 - TW - Top of Wall
 - WM - Water Meter
 - WO - Wash Out



Rev	Revised By	Date	Revision

Project
**LAND OFF HOOK LANE
 ALDINGBOURNE, CHICHESTER
 SUSSEX, PO20 3TQ**

Drawing Title
TOPOGRAPHIC SURVEY

16 Allcard Close
 Horsham
 RH12 5AJ
 Tel No: 078667411903
www.incosurveys.co.uk



Surveyed: M.Jones March 2024
 Drawn: M.Jones March 2024

Project No.	Drawing Status	Scale (@ A1)
S24838	INFORMATION	1:200

**TOPOGRAPHIC
 SURVEY**



Appendix C BGS Records & Site Groundwater Monitoring



SU 90 NW 72 9359 0501

Westergate

Block G

Surface level +10.8 m
Water struck at +7.8 m
September 1981

Overburden 2.2 m
Mineral 3.8 m
Bedrock 0.8 m+

LOG

Geological classification	Lithology	Thickness m	Depth m
	Soil	0.3	0.3
Brickearth	Silt, brown	0.4	0.7
	Clay, silty, brown, with a few pebbles near base	1.5	2.2
Head Gravel	a 'Very clayey' gravel Gravel: fine with coarse, angular to subrounded; flint, some white and porous Sand: coarse with fine and medium Fines: clay	0.8	3.0
Raised Beach Deposits (younger)	b 'Clayey' pebbly sand Gravel: coarse and fine, angular to subrounded; flint, some white and porous Sand: fine with traces of medium and coarse; quartz Fines: silt, brown	2.0	5.0
	c Sandy gravel Gravel: fine and coarse, angular to well rounded; flint (some white and porous), chalk and other rock fragments Sand: fine with coarse and medium; quartz	1.0	6.0
London Clay	Clay, stiff, dark olive grey with a few rounded flint pebbles	0.8+	6.8

GRADING

	Mean for deposit percentages			Depth below surface (m)	Percentages						
	Fines	Sand	Gravel		Fines	Sand			Gravel		
						-4	+4-16	+16-64	+64 mm		
a	37	17	46	2.2-3.0	37	5	4	8	29	17	0
b	15	79	6	3.0-4.0	15	70	1	1	6	7	0
				4.0-5.0	15	84	1	0	0	0	
				Mean	15	77	1	1	3	3	0
c	3	56	41	5.0-6.0	3	41	7	8	19	22	0
b+c	11	72	17	3.0-6.0	11	66	3	3	8	9	0
a+b+c	16	60	24	2.2-6.0	16	53	3	4	13	11	0



COMMERCIAL
IN CONFIDENCE

IGS 1536 (1159) 2000 1/76

Institute of Geological Sciences

Sheet 1 of

Borehole Reg No: SU90NW/72 Temp borehole No: SU90/36 Nat Grid Ref: SU93590501 Locality: Colt Nursery, Westergate Surface level: 10.8 m O.D. (ft O.D.) Drilled by: Sondadores Drill type: Hole diameter: Depth(s) bailed: Date started: 8/9/81 Date finished: " Recorded by: PHAN	Classification of ground	Thickness m	Nature
	O.B.	to 2.2	silty clay variable fine sand, clayey gravel, sandy gr. grey London Clay
	Min	2.2 to 6.0	
	BR.	6.0 → 6.8	

Remarks

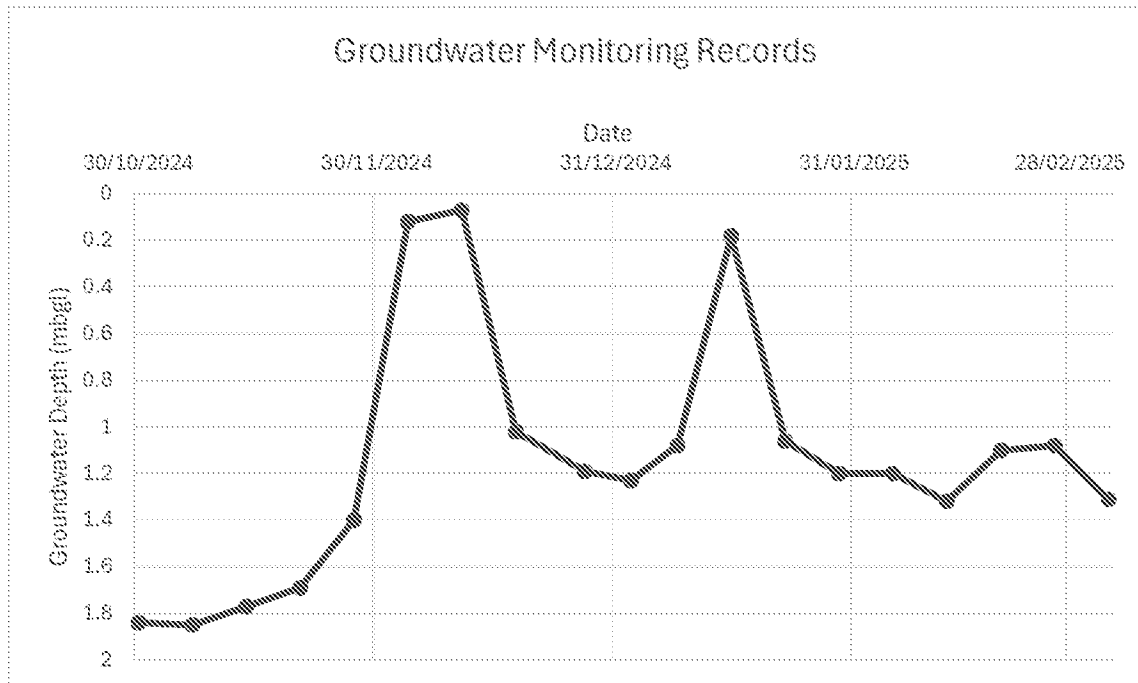
Explanation

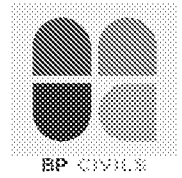
- ▽ Groundwater depth first encountered
- a▽ Morning water level
- p▽ Evening water level
- ==== Casing depth
- Borehole depth
- w Water sample
- █ U, sample; solid ornament shows fraction recovered
- Spot disturbed sample
- █ Bulk sample
- S.P.T. Standard Penetration Test

Geological Classification	Description of Strata	Sampling	Sample Nos	Water level	Drilling and Casing progress
	Soil				
	dry brown silt				
Brickearth	brown silty clay	1	0.8 CBSS 175		
	brown pebbly silty clay	2	1.8-1.9 CBSS 176		
Gg	clayey gravel 20 cgr } flint 30 fgr } 10 cs 40 fines	2.2 to 3.0	CCB 095		
	Sandy gravel <20 cgr + a few lge flint cobbles >10 fgr 60 f.s. (95) 10 fines	3.0 to 4.0	CCB 096	▽ 3.0	
Marine Sand + gravel	95 sand >95% fs - no coarser material seen <5% fines (silty) some ms.	4.0 to 5.0	CCB 097		
	Sandy gravel 30 cgr 30 fgr 10 cs 30 f/ms	5.0 to 6.0	CCB 098		
London Clay	dark olive grey stiff clay with a few flint pebbles	6	CBSS 177		end 6.8
		7			
		8			

Date	Water Height (m)	Depth (mbgl)
30/10/2024	0.16	1.84
06/11/2024	0.15	1.85
13/11/2024	0.23	1.77
20/11/2024	0.31	1.69
27/11/2024	0.6	1.4
04/12/2024	1.88	0.12
11/12/2024	1.93	0.07
18/12/2024	0.98	1.02
27/12/2024	0.81	1.19
02/01/2025	0.77	1.23
08/01/2025	0.92	1.08
15/01/2025	1.82	0.18
22/01/2025	0.94	1.06
29/01/2025	0.8	1.2
05/02/2025	0.8	1.2
12/02/2025	0.68	1.32
19/02/2025	0.9	1.1
26/02/2025	0.92	1.08
05/03/2025	0.69	1.31

**Min Depth
(mbgl) 0.07**





Appendix D Arun District Council Strategic Flood Risk Assessment (SFRA) & Lidsey Surface Water Management Plan (SWMP) Extracts



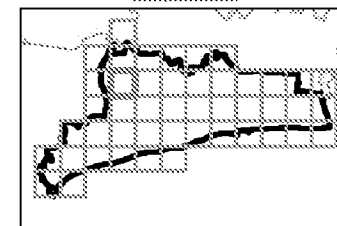
Notes

The Areas Susceptible to Groundwater Flooding (ASGF007) is a strategic scale map showing groundwater flood areas on a 1km square grid. The data was produced by estimates indicated in Flood Risk Areas for Preliminary Flood Risk Assessment (PFRA) studies and also the Local Level Flood Authorities (LLFA) to determine whether there may be a risk of flooding from groundwater.

This data shows the proportion of each 1km grid square where geological and hydrogeological conditions show that groundwater might emerge. It does not show the likelihood of groundwater flooding occurring. It does not take account of the effects of flooding from groundwater rebound. This dataset covers a large area of land, and only selected locations within the overall susceptible area are actually likely to suffer the consequences of groundwater flooding.

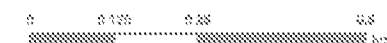
The ASGF007 data should be used only in combination with other information, for example local data or historic work. It should not be used as sole evidence for any specific flood risk management land use planning or other decisions at any scale. However, the data may help to identify areas at risk assessment at a local scale where finer resolution datasets exist.

Key Plan



Legend

- Arun District SFRA boundary
- < 25%
- 25% - 50%
- 50% - 75%
- 75%



REF	Date	Description
1	June 2010	-
2		
3		

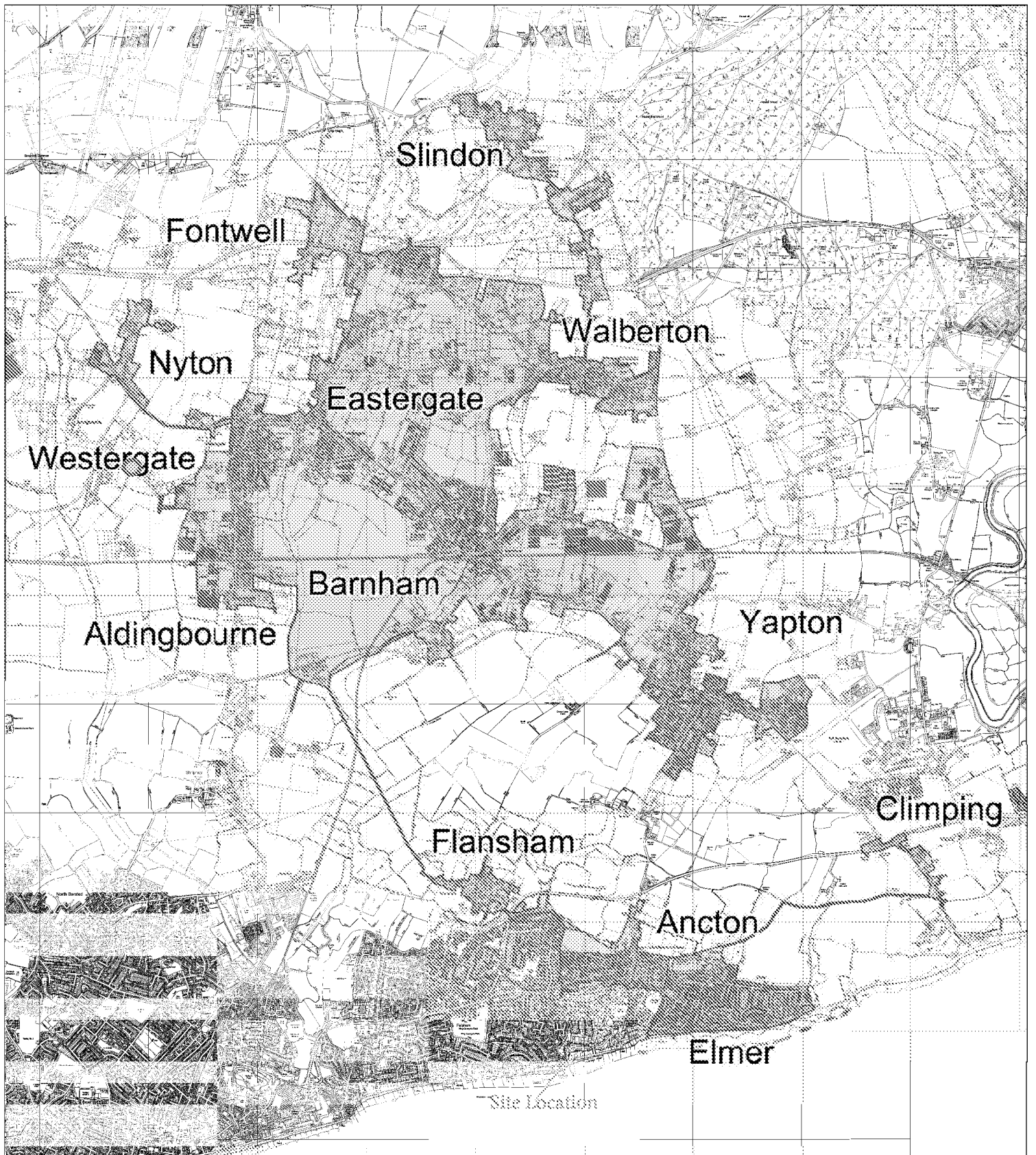
This data is based upon Ordnance Survey data and the permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office in whose Copyright certain data are reproduced hereon. Crown Copyright and more used in production of our publications. 1000124887.

**ARUN DISTRICT COUNCIL
LEVEL 1 SFRA, APPENDIX F
AREAS SUSCEPTIBLE TO GROUNDWATER**

Sheet No: 01 of 48 Sheet Number: ARUN_01

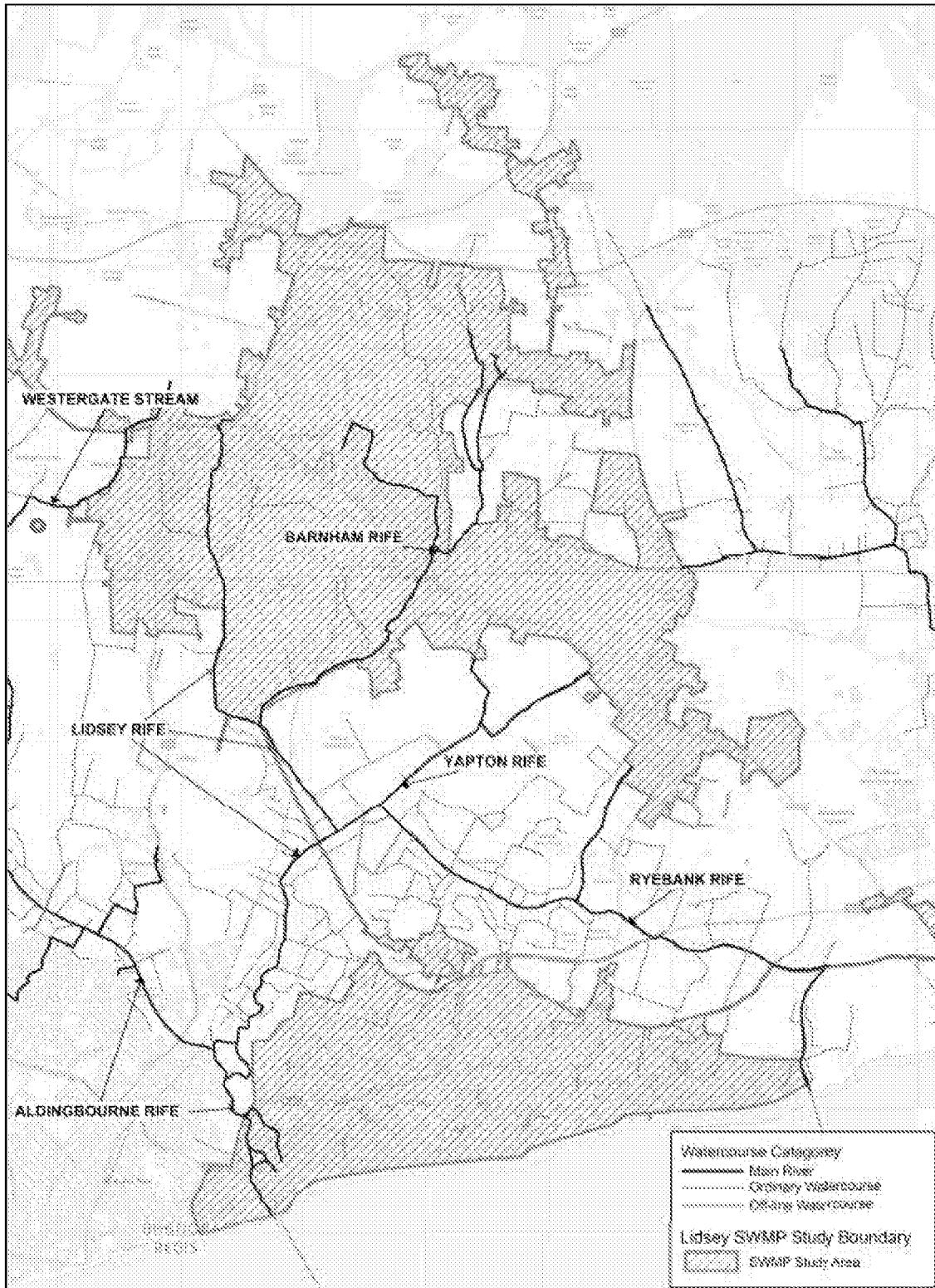
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Lidsey Catchment

Figure 1.8 - Main Rivers in the study area

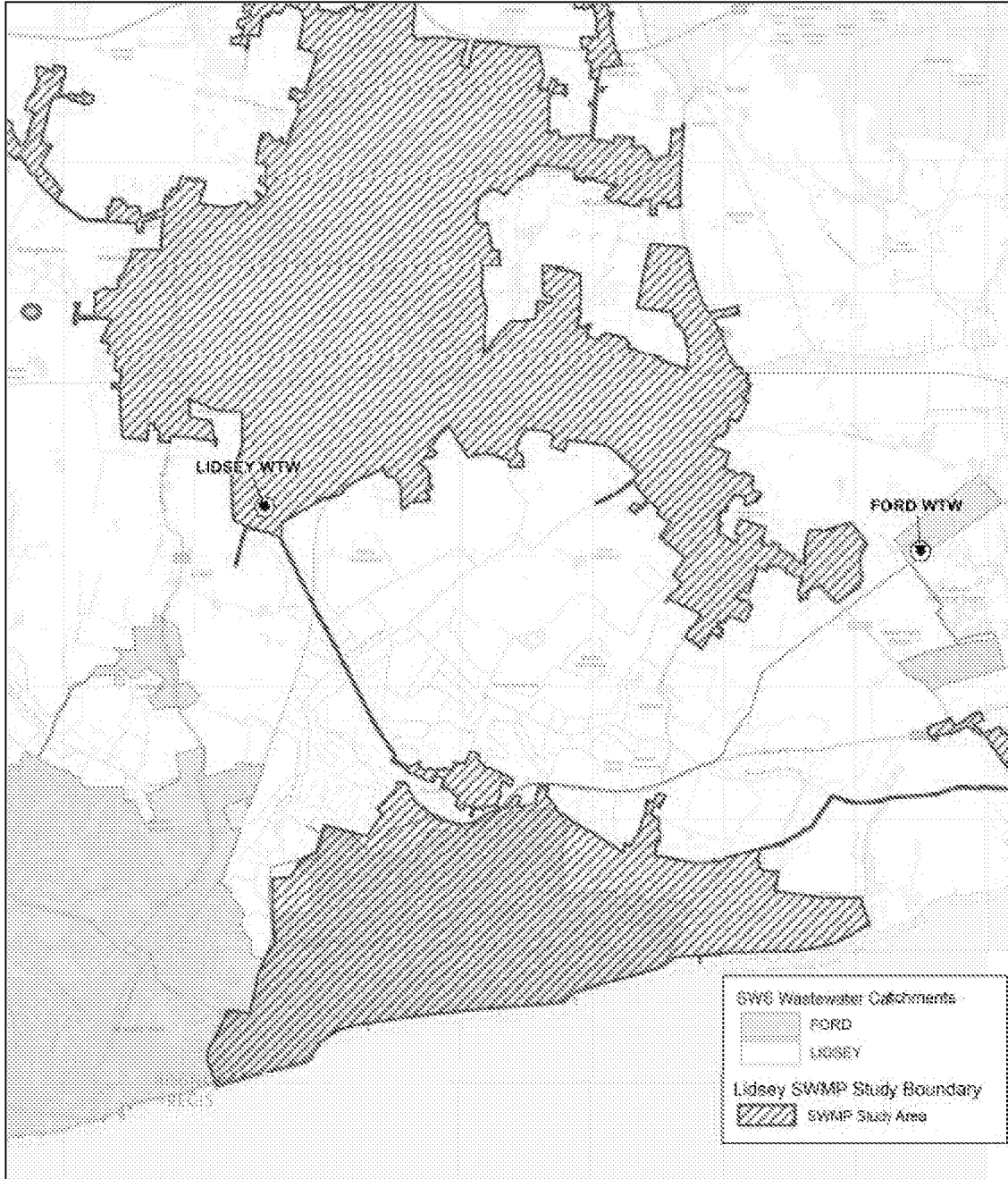


1.12. Public Sewer System (Southern Water Assets)

The public sewer system can comprise separate foul and surface water systems or a combined network. The majority of designated foul systems actually have some form of surface water response and so are considered combined.

The Lidsey SWMP study area overlaps with two Southern Water Services (SWS) wastewater treatment catchments; Lidsey and Ford as shown in the Figure 1.9. The Lidsey wastewater catchment is fully encompassed within the SWMP study area. The majority of Middleton and Felpham are located within the Ford wastewater catchment area. Both the Lidsey and Ford public sewer networks comprise of a mixture of separate and combined sewerage assets.

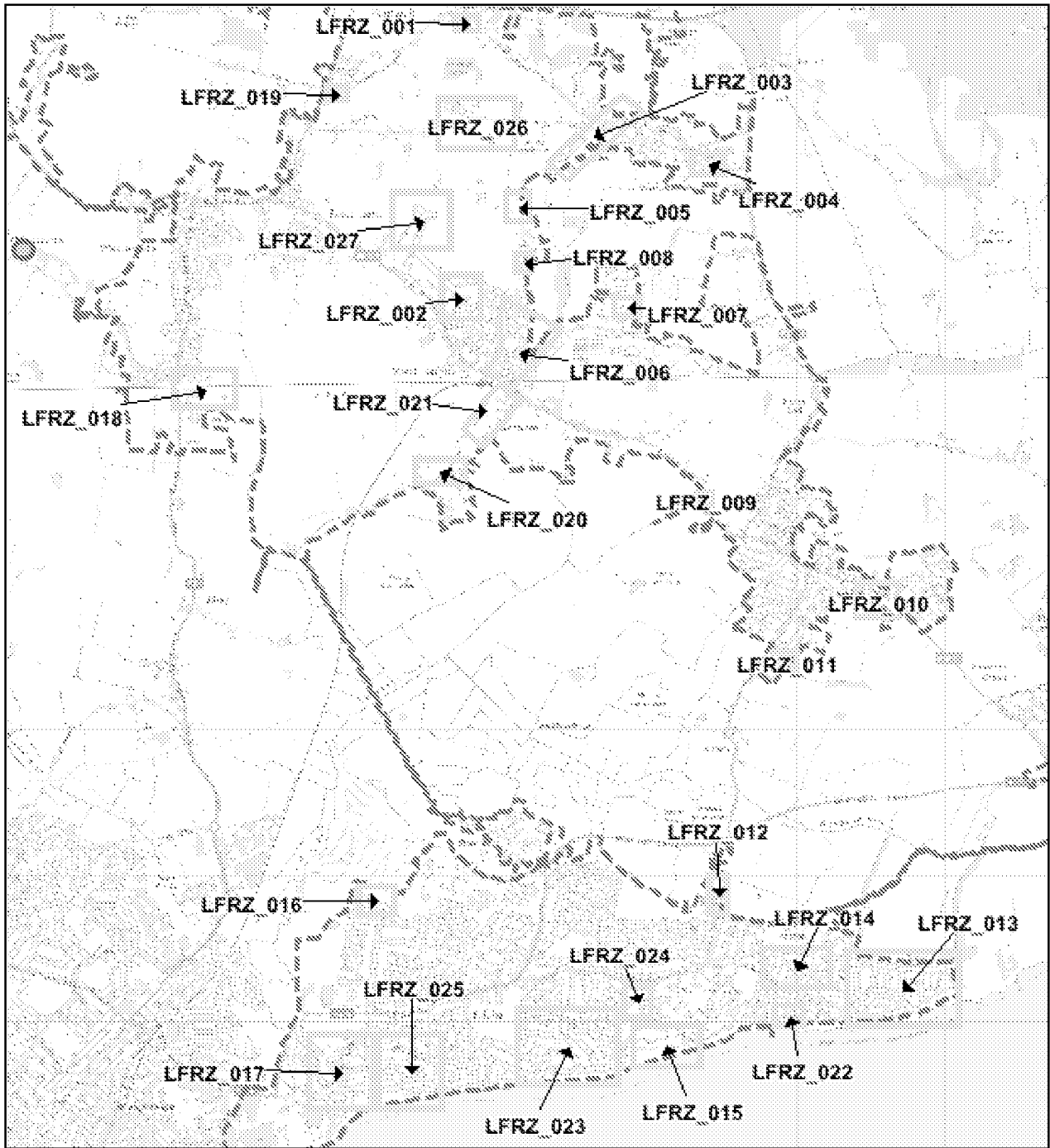
Figure 1.9 - SWMP and Wastewater Catchment Boundaries



Lidsey WTW is located approximately 800m south of Woodgate and 900m south west of Barnham. The public system is made up mostly of separate sewerage systems, with only very limited areas of combined sewer drainage. Flows arrive at the Lidsey WTW from three sources:

- Hoe Lane Wastewater Pumping Station (WPS) rising main;
- the 350mm and 375mm gravity sewers from Barnham; and
- a 450mm gravity sewer from Westergate.

Figure 5.1 - LFRZ Location Plan



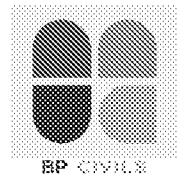
8.4. Source / Pathway / Receptor Options

As outlined in Section 8.3 options or interventions can be categorised under the three headings. The types of options available are detailed in Table 8.1.

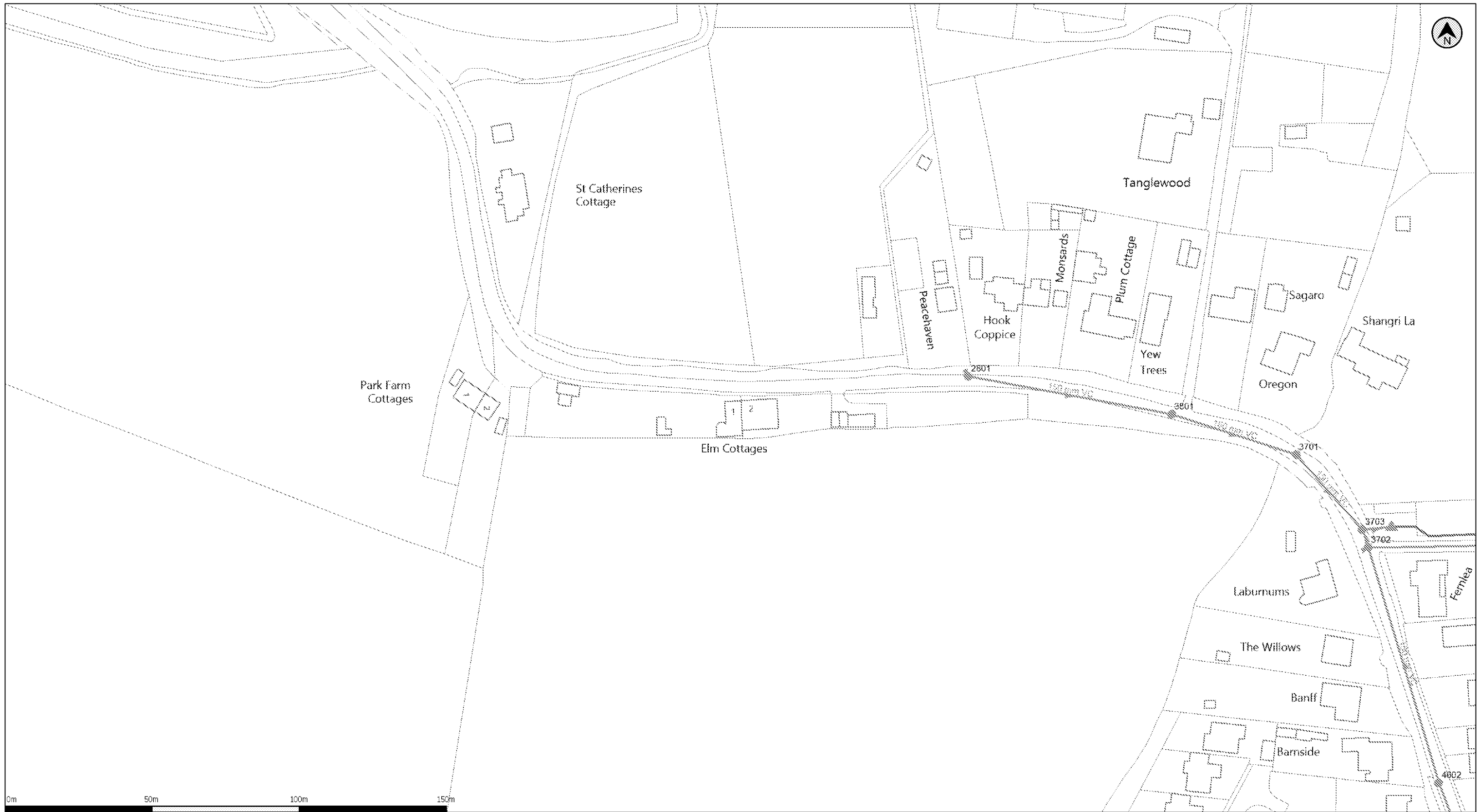
Table 8-1 - Source / Pathway / Receptor Options

Option Ref.	Category	Option
1	Source	Green Roof
2	Source	Detention Basins (Attenuation / Retention)
3	Source	Permeable Paving
4	Source	Ponds and Wetlands
5	Source	Rainwater Harvesting
6	Source	Soakaways
7	Source	Swales
8	Source	Bioretention Basins
9	Source	Bioretention Street Planting
10	Source	Sealing of foul manhole covers and protecting open foul gullies
11	Source	Sealing Sewers (Reduce ground water / rainfall induced infiltration)
12	Pathway	Increasing Capacity in Drainage System (Storage, Upsize)
13	Pathway	Deculverting Watercourse(s)
14	Pathway	Improved maintenance regimes
15	Pathway	Increase Gully Assets
16	Pathway	Land management practices
17	Pathway	Managing overland flows (above ground storage)
18	Pathway	Managing overland flows (preferential flow paths during exceedance)
19	Pathway	Separation of foul and surface water
20	Receptor	Improve Weather Warning
21	Receptor	Improve resilience to flooding
22	Receptor	Social change, education and awareness
23	Receptor	Raising doorway / access threshold
24	Receptor	Planning policies to influence development (Development Control, SUDS Strategy, Blue Development Corridors, New Development).
25	Receptor	Temporary demountable flood defences
26	Strategy	Further Study / Investigations
27	Strategy	Survey, Advise & Monitoring
28	Strategy	Community Awareness

Examples of the Source Control options are shown in Figure 4.4. Figure 6.4 and Figure 8.5 show examples of Pathway and Receptor Options available to the drainage planners.



Appendix E Southern Water Public Sewer Records

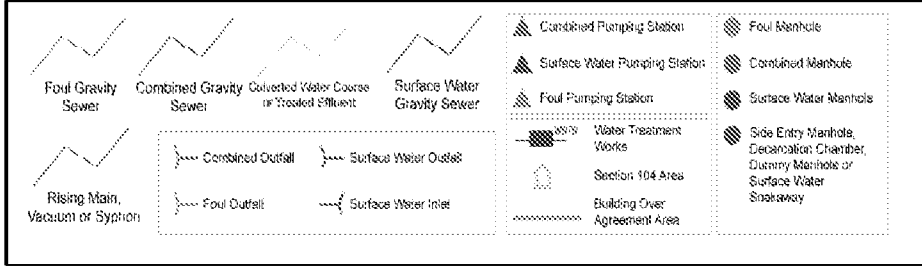


(c) Crown copyright and database rights 2024 Ordnance Survey 100031673 Date: 17/09/24 Scale: 1:1250 Map Centre: 493182,104808 Data updated: 22/08/24 Our Ref: 1571394 - 1 Wastewater Plan A3
 Powered by digdat

The positions of pipes shown on this plan are believed to be correct, but Southern Water Services Ltd accept no responsibility in the event of inaccuracy. The actual positions should be determined on site. This plan is produced by Southern Water Services Ltd (c) Crown copyright and database rights 2024 Ordnance Survey 100031673. This map is to be used for the purposes of viewing the location of Southern Water plant only. Any other uses of the map data or further copies is not permitted.

WARNING: BAC pipes are constructed of Bonded Asbestos Cement.

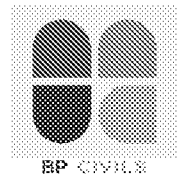
WARNING: Unknown (UNK) materials may include Bonded Asbestos Cement.



searches@bpcivils.co.uk

D2308





Appendix F Wallingford Greenfield Run-off Calculations



Greenfield runoff rate estimation tool

www.uksuds.com | Greenfield runoff rate estimation tool (<https://www.uksuds.com/>)

This is an estimation of the greenfield runoff rates that are used to meet normal best practice criteria in line with Environment Agency guidance “Rainfall runoff management for developments”, SC030219 (2013), the SuDS Manual C753 (CIRIA, 2015) and the non-statutory standards for SuDS (Defra, 2015). This information on greenfield runoff rates may be the basis for setting consents for the drainage of surface water runoff from sites.

Project details

Date

20/03/2025

Calculated by

DJL

Reference

D2308

Model version

0.6.5

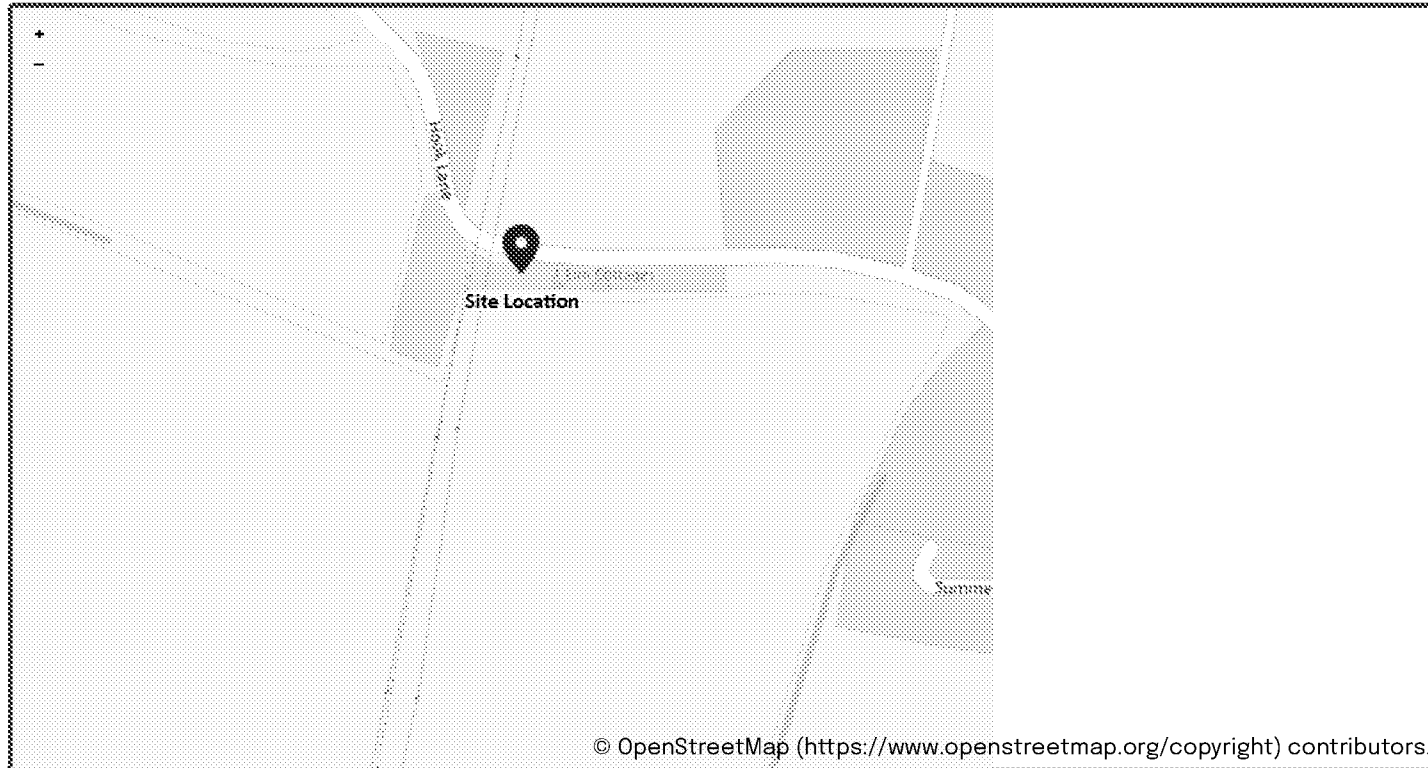
Location

Site name

Hook Lane

Site location

Aldingbourne



Site easting

493136

Site northing

104795

Site details

Total site area (ha)

0.08 ha

Greenfield runoff

Method

Method

IH124

IH124

SAAR (mm)

My value

749 mm

Map value



749

How should SPR be derived?

WRAP soil type

WRAP soil type

2



2

SPR

0.3



0.3

QBar (IH124) (l/s)

0.16 l/s

Growth curve factors

Hydrological region

My value

7

Map value



7

1 year growth factor

0.85

2 year growth factor

0.88

10 year growth factor

1.62

30 year growth factor

2.3

100 year growth factor

3.19

200 year growth factor

3.74

Results

Method

IH124	
0.13	l/s
0.14	l/s
0.26	l/s
0.36	l/s
0.5	l/s
0.59	l/s

Flow rate 1 year (l/s)

Flow rate 2 year (l/s)

Flow rate 10 years (l/s)

Flow rate 30 years (l/s)

Flow rate 100 years (l/s)

Flow rate 200 years (l/s)

Disclaimer

This report was produced using the Greenfield runoff rate estimation tool (0.6.5) developed by HR Wallingford and available at uksuds.com (<https://www.uksuds.com/>). The use of this tool is subject to the UK SuDS terms and conditions and licence agreement, which can both be found at uksuds.com/terms-conditions (<https://www.uksuds.com/terms-conditions>). The outputs from this tool have been used to estimate Greenfield runoff rates. The use of these results is the responsibility of the users of this tool. No liability will be accepted by HR Wallingford, the Environment Agency, Centre for Ecology and Hydrology, Wallingford Hydrosolutions or any other organisation for the use of these data in the design or operational characteristics of any drainage scheme.



Appendix G Environment Agency Product 4 Data

Jessica Lambert
BP Civils

Our ref: SSD376588
Your ref: K9VYX2HRNJF7
Date: 26/09/2024

Dear Jessica,

Thank you for your request of 17 September 2024 to use Environment Agency Product 4 data for the site at **Hook Lane, Aldingbourne, Chichester, PO20 3TG**.

Response to your request

The Environment Agency's records indicate that the above site is located in Flood Zone 1 (land assessed as having less than 0.1% (1 in 1,000) chance of flooding in any given year from **rivers or the sea**). Therefore, the likelihood of flooding from rivers and sea in this area is estimated as 'very low'.

Proximity to Flood Zones 2 or 3

The above site is approximately 70 metres away from Flood Zone 2. We are therefore unable to provide data from our detailed fluvial or tidal models which is relevant to your site.

More information on Flood Zones can be found on the GOV.UK website:

<http://planningguidance.planningportal.gov.uk/blog/guidance/flood-risk-and-coastal-change/flood-zone-and-flood-risk-tables/table-1-flood-zones/>

Surface water flooding

Our mapping indicates that this site is at **Very Low Risk** of surface water flooding.

For information on flooding from all other sources, such as surface water, please contact the Lead Local Flood Authority, which in this case is West Sussex County Council. A link to their information available online is shown below:

<https://www.westsussex.gov.uk/fire-emergencies-and-crime/dealing-with-extreme-weather/dealing-with-flooding/flood-risk-management/local-flood-risk-management-strategy/>

Please note that the above is a link to an external website which the Environment Agency does not control or maintain. Therefore, the link may not be the most up-to-date at the date of this letter. If the link does not work, and you are unable to find the information about surface water flooding on the relevant website, please contact the authority named above directly.

Where you can find further information

- Detailed long-term flood information and maps can be found on the GOV.UK website:

<https://flood-warning-information.service.gov.uk/long-term-flood-risk/>

- Flood maps for planning can be found on the GOV.UK website:

<https://flood-map-for-planning.service.gov.uk/>

- Please be aware that in February 2016 the Environment Agency updated its guidance on climate change allowances. The standard allowance of adding 20% to peak flows – as per previous guidance in the National Planning Policy Framework, may not be applicable for the purposes of informing development proposals. It is possible that our current modelling has under estimated flood risk when taking climate change into consideration. This does not however have an effect on Flood Zones 2 or 3. For further information please visit:

<https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances>

- Further details about the Environment Agency information supplied can be found on the GOV.UK website:

<https://www.gov.uk/browse/environment-countryside/flooding-extreme-weather>

- If you have requested this information to help inform a development proposal, then you should note the information on GOV.UK on the use of Environment Agency information for Flood Risk Assessments:

<https://www.gov.uk/planning-applications-assessing-flood-risk>

<https://www.gov.uk/government/publications/pre-planning-application-enquiry-form-preliminary-opinion>

If you have any queries or would like to discuss the content of this letter further please call us on 03708 506 506, or reply to the email sent to you with this letter attached.

Please get in touch if you have any further queries or contact us within two (2) months if you would like us to review the information we have sent.

For information on what you can expect from us and our full service commitment to you, please click on this link:

<https://www.gov.uk/government/publications/environment-agency-customer-service-commitment--2/environment-agency-customer-service-commitment>

Yours sincerely,

Amy O'Donnell

Partnership and Strategic Overview West Sussex, Solent and South Downs

Environment Agency | Guildbourne House, Chatsworth Road, Worthing, West Sussex,
BN11 1LD

Risk of flooding from Surface Water. Centred 493130,104808. Created 26/09/2024.



1: 5,000

0 Metres 125



Likelihood of flooding from Surface Water

- High (>=3.3%)
- Medium (3.3% - 1%)
- Low (1% - 0.1%)
- Very Low
- Flood Extent 1 in 30
- Flood Extent 1 in 100
- Flood Extent 1 in 1000

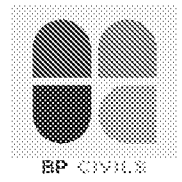
Likelihood of flooding from Surface Water

- High:** Greater than or equal to 3.3% (1 in 30) chance in any given year
- Medium:** Less than 3.3% (1 in 30) but greater than or equal to 1% (1 in 100) chance in any given year
- Low:** Less than 1% (1 in 100) but greater than or equal to 0.1% (1 in 1,000) chance in any given year
- Very Low:** Less than 0.1% (1 in 1,000) chance in any given year

This information is shown on the Risk of Flooding from Surface Water map on GOV.UK.

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Contact Us: National Customer Contact Centre, PO Box 544, Rotherham, S60 1BY. Tel: 03708 506 506 (Mon-Fri 8-6). E-mail: enquires@environment-agency.gov.uk



Appendix H Hydraulic Calculations

Network Details

Manhole Schedule

Manhole	Catchment Area (ha)	Diameter (m)	Type	CL (m)	IL (m)	Depth To Soffit (m)	Easting (m)	Northing (m)
PS7	0.008	0.450	450	9.723	9.200	0.423	493137.379	104799.722
PS6	0.000	0.450	450	9.798	9.060	0.638	493124.012	104800.054
PS4	0.008	0.250	250	9.694	9.100	0.494	493137.619	104813.585
PS5	0.000	0.450	450	9.641	8.900	0.641	493124.352	104813.876
PS3	0.021	0.180	Type E	9.354	8.750	0.454	493112.554	104814.509
PS1	0.000	0.250	Type C	9.500	8.625	0.650	493113.106	104817.119
PS2	0.000	0.000	Type E	8.538	8.500	-0.187	493094.006	104832.918

Pipe Schedule

Pipe Number	US Manhole	US IL (m)	DS Manhole	DS IL (m)	Shape	Dimension (m)	Length (m)	Gradient (1:x)	Roughness (mm)	US Depth To Soffit (m)	DS Depth To Soffit (m)
1.000	PS7	9.200	PS6	9.060	Circ	0.1mØ	13.371	95.5	0.600	0.423	0.638
1.001	PS6	9.060	PS5	8.900	Circ	0.1mØ	13.827	86.4	0.600	0.638	0.641
2.000	PS4	9.100	PS5	8.900	Circ	0.1mØ	13.270	66.4	0.600	0.494	0.641
1.002	PS5	8.900	PS1	8.750	Circ	0.1mØ	11.704	78.0	0.600	0.641	0.650
3.000	PS3	8.750	PS1	8.700	Circ	0.15mØ	2.668	53.4	0.600	0.454	0.650
1.003	PS1	8.625	PS2	8.500	Circ	0.225mØ	24.788	198.3	0.600	0.650	-0.187

Permeable Paving Schedule

Permeable Paving	Assigned Manhole	Effective Storage Volume (m3)	CL (m)	IL (m)	Storage Infil Rate (m/hr)	Safety Factor	Easting (m)	Northing (m)
PP1	PS3	24.849	9.354	8.774	0.00000000	2.00	493116.692	104809.608

Outfall Details

Outfall Manhole PS2 : Free Discharge

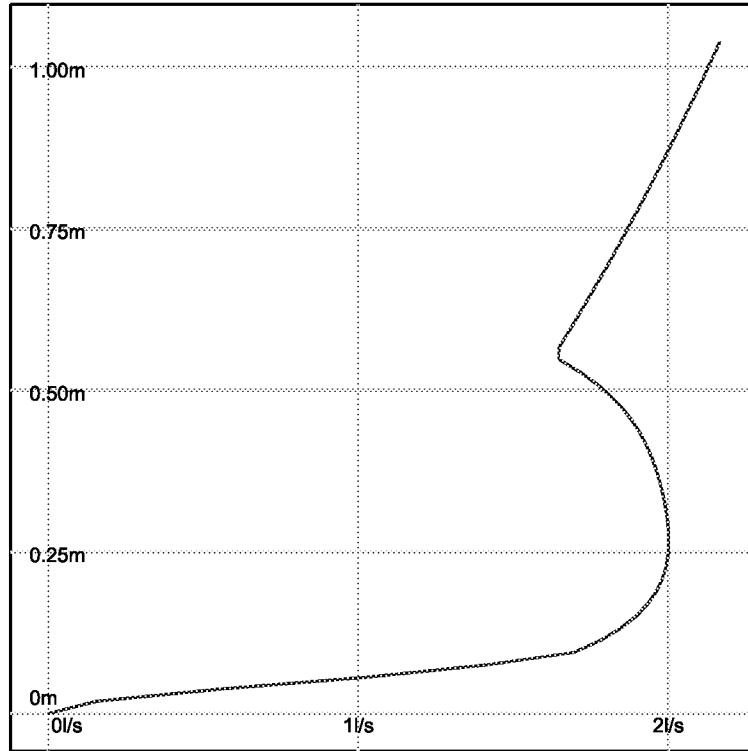
Flow Control Details

Controls within Manhole PS1

Hydro-Brake® Optimum Control at Manhole PS1

Model Ref	Design Depth (m)	Design Flow (l/s)	Depth Above Invert (m)	FF Head (m)	FF Flow (l/s)	KF Head (m)	KF Flow (l/s)
SHE-0069-2000-0875-2000	0.875	2.000	0.000	0.267	2.001	0.552	1.628

Hydro-Brake® Optimum Control at PS1



Simulation Settings

FEH2022 (point): Filename=FEH_Point_Descriptors_493728_105298_v5_0_1.xml

Summer (Cv: 1.00), Winter (Cv: 1.00)

Global Time of Entry: 5.0 mins

Durations (mins): 30

Return Periods (yrs) + Climate Change: (2, +0%), (10, +40%), (30, +40%), (100, +45%)

Simulated Rainfall Events

Storm	Average Intensity (mm/hr)	Runoff Continuity %	Flow Continuity %	Storm	Average Intensity (mm/hr)	Runoff Continuity %	Flow Continuity %
2Yr 30Min Winter	21.400	0.00	0.00	30Yr+40% 30Min Summer	75.848	0.00	0.00
2Yr 30Min Summer	21.400	0.00	0.00	30Yr+40% 30Min Winter	75.848	0.00	0.14
10Yr+40% 30Min Winter	57.955	0.00	0.00	100Yr+45% 30Min Winter	99.341	0.00	0.39
10Yr+40% 30Min Summer	57.955	0.00	0.00	100Yr+45% 30Min Summer	99.341	0.00	0.37

Simulation Results

Return Period Yrs: 2.0

Climate Change %: 0

Manholes

Manhole	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
PS7	30 min Summer	16	9.231	0.031	1.325		OK
PS6	30 min Summer	16	9.090	0.030	1.326		OK
PS4	30 min Summer	16	9.128	0.028	1.325		OK
PS5	30 min Summer	16	8.943	0.043	2.648		OK
PS3	30 min Summer	18	8.796	0.046	0.435		OK
PS1	30 min Summer	18	8.796	0.171	2.265		OK
PS2	30 min Summer	18	8.534	0.034	1.860		Outfall

Conduits

Pipe No.	Critical Storm	Peak (mins)	US Manhole	DS Manhole	Flow Depth (m)	Max Velocity (m/s)	Max Flow (l/s)	Flow / Capacity	Status
1.000	30 min Summer	16	PS7	PS6	0.031	0.640	1.326	0.215	OK
1.001	30 min Summer	16	PS6	PS5	0.037	0.507	1.324	0.204	OK
2.000	30 min Summer	16	PS4	PS5	0.036	0.535	1.325	0.178	OK
1.002	30 min Summer	16	PS5	PS1	0.043	0.817	2.623	0.384	OK
3.000	30 min Summer	21	PS3	PS1	0.071	0.536	0.662	0.027	OK
1.003	30 min Summer	18	PS1	PS2	0.034	0.491	1.860	0.051	OK

Permeable Paving Storage

Permeable Paving	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
PP1	30 min Summer	30	8.795	0.021	0.444		OK

Return Period Yrs: 10.0

Climate Change %: 40

Manholes

Manhole	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
PS7	30 min Summer	16	9.255	0.055	3.589		OK
PS6	30 min Summer	16	9.113	0.053	3.589		OK
PS4	30 min Summer	16	9.149	0.049	3.587		OK
PS5	30 min Summer	17	9.023	0.123	6.718		Surcharged
PS3	30 min Winter	29	8.884	0.134	1.218		OK
PS1	30 min Winter	29	8.884	0.259	1.981		Surcharged
PS2	30 min Winter	29	8.535	0.035	1.991		Outfall

Conduits

Pipe No.	Critical Storm	Peak (mins)	US Manhole	DS Manhole	Flow Depth (m)	Max Velocity (m/s)	Max Flow (l/s)	Flow / Capacity	Status
1.000	30 min Summer	16	PS7	PS6	0.054	0.836	3.589	0.582	OK
1.001	30 min Summer	16	PS6	PS5	0.076	0.622	3.589	0.553	OK
2.000	30 min Summer	16	PS4	PS5	0.074	0.672	3.587	0.483	OK
1.002	30 min Summer	17	PS5	PS1	0.100	0.890	6.790	0.993	Surcharged
3.000	30 min Winter	62	PS3	PS1	0.142	0.717	4.573	0.188	OK
1.003	30 min Winter	29	PS1	PS2	0.035	0.501	1.991	0.054	OK

Permeable Paving Storage

Permeable Paving	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
PP1	30 min Winter	29	8.888	0.114	1.250		OK

Return Period Yrs: 30.0

Climate Change %: 40

Manholes

Manhole	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
PS7	30 min Summer	16	9.265	0.065	4.697		OK
PS6	30 min Summer	17	9.184	0.124	4.382		Surcharged
PS4	30 min Summer	17	9.173	0.073	4.306		OK
PS5	30 min Summer	18	9.122	0.222	7.834		Surcharged
PS3	30 min Winter	31	8.936	0.186	1.523		Surcharged
PS1	30 min Winter	31	8.935	0.310	1.988		Surcharged
PS2	30 min Summer	36	8.535	0.035	2.001		Outfall

Conduits

Pipe No.	Critical Storm	Peak (mins)	US Manhole	DS Manhole	Flow Depth (m)	Max Velocity (m/s)	Max Flow (l/s)	Flow / Capacity	Status
1.000	30 min Summer	17	PS7	PS6	0.081	0.870	4.697	0.761	OK
1.001	30 min Summer	17	PS6	PS5	0.100	0.626	4.142	0.638	Surcharged
2.000	30 min Summer	17	PS4	PS5	0.086	0.687	4.505	0.607	OK
1.002	30 min Winter	17	PS5	PS1	0.100	0.923	7.246	1.060	Surcharged
3.000	30 min Winter	88	PS3	PS1	0.150	0.542	4.540	0.186	Surcharged
1.003	30 min Summer	36	PS1	PS2	0.035	0.502	2.001	0.055	OK

Permeable Paving Storage

Permeable Paving	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
PP1	30 min Winter	31	8.941	0.167	1.199		OK

Return Period Yrs: 100.0

Climate Change %: 45

Manholes

Manhole	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
PS7	30 min Summer	18	9.386	0.186	4.573		Surcharged
PS6	30 min Summer	18	9.307	0.247	4.753		Surcharged
PS4	30 min Summer	18	9.309	0.209	4.571		Surcharged
PS5	30 min Summer	18	9.229	0.329	9.353		Surcharged
PS3	30 min Winter	32	9.004	0.254	1.632		Surcharged
PS1	30 min Winter	32	9.003	0.378	1.973		Surcharged
PS2	30 min Summer	71	8.535	0.035	2.001		Outfall

Conduits

Pipe No.	Critical Storm	Peak (mins)	US Manhole	DS Manhole	Flow Depth (m)	Max Velocity (m/s)	Max Flow (l/s)	Flow / Capacity	Status
1.000	30 min Summer	16	PS7	PS6	0.100	0.879	5.356	0.868	Surcharged
1.001	30 min Summer	18	PS6	PS5	0.100	0.622	4.565	0.703	Surcharged
2.000	30 min Summer	16	PS4	PS5	0.100	0.697	5.261	0.709	Surcharged
1.002	30 min Summer	17	PS5	PS1	0.100	1.165	9.154	1.339	Surcharged
3.000	30 min Summer	86	PS3	PS1	0.150	0.112	1.946	0.080	Surcharged
1.003	30 min Summer	71	PS1	PS2	0.035	0.502	2.001	0.055	OK

Permeable Paving Storage

Permeable Paving	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
PP1	30 min Winter	32	9.010	0.236	2.055		OK