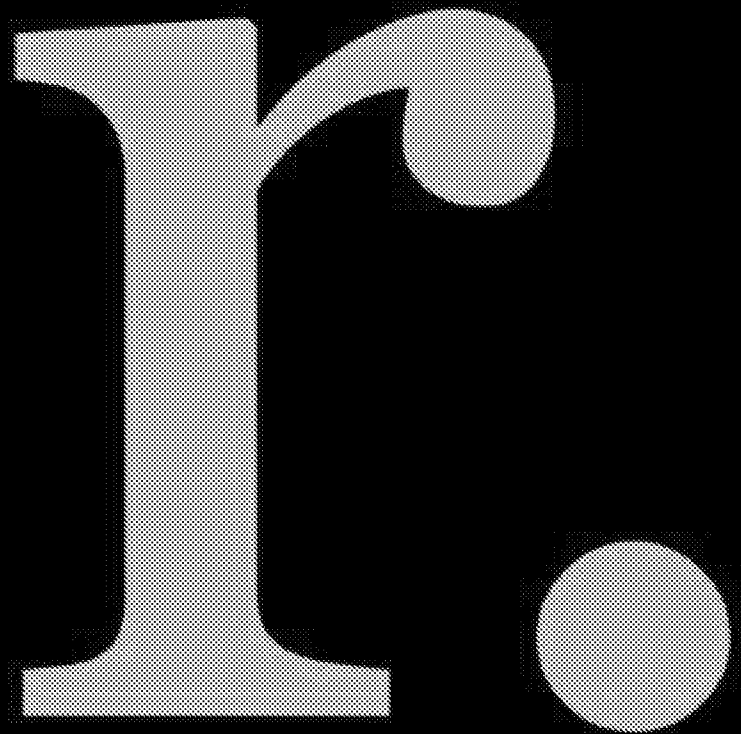
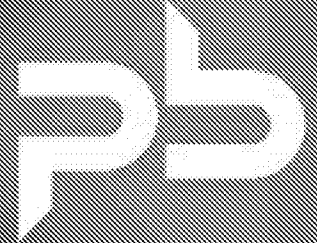


reside.

Land west of Fontwell Avenue, Eastergate

Flood Risk Assessment and Drainage Strategy





FONTWELL AVENUE, EASTERGATE

FLOOD RISK ASSESSMENT & DRAINAGE STRATEGY

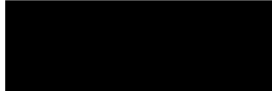
April 2020

Reside Developments Ltd

RESIDENTIAL DEVELOPMENT
FONTWELL AVENUE, EASTERGATE

FLOOD RISK ASSESSMENT & DRAINAGE STRATEGY

CONTROLLED DOCUMENT

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Checked by:	Adam Shephard		31.03.2020
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Rev.	Date	By	Summary of Changes	Chkd	Aprvd
1	31.03.2020	RW	First issue for client / team comment	AS	RW
2	15.04.2020	RW	Team comment added	AS	RW

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RESIDENTIAL DEVELOPMENT
FONTWELL AVENUE, EASTERGATE

FLOOD RISK ASSESSMENT & DRAINAGE STRATEGY

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1. INTRODUCTION

- 1.1 This Flood Risk Assessment (FRA) and Drainage Strategy has been prepared by Paul Basham Associates on behalf of Reside Developments Ltd to support a planning application for a residential site. The land is located to the west of Fontwell Avenue, Barnham and Eastergate, Arun, West Sussex. The nearest postcode is PO20 3RZ and the O.S. Grid ref is SU 94716 06244.

2. SITE DETAILS

- 2.1 The plot size is approximately 1.55Ha and the land is currently open field. The topographical survey shows that the site is gently sloping from the North-West down to the South-East. The survey indicates the high level of circa 19.27 in the North Western corner falling gently to a low point of 16.20 in the South-Eastern corner of the site. See **Figure 1** for site location. A copy of the topographic survey is included in **Appendix A**
- 2.2 The development aspirations are for a 42-plot residential site comprising of low-rise housing and flats with associated roads, parking and open space. A copy of the development proposal is included in **Appendix B**



Figure 1: Site Location Plan

Site Geology

- 2.3 A review of the British Geological Society mapping indicates that the bedrock geology beneath the site is Lambeth Group - Clay, silt and sand. Sedimentary bedrock formed between 59.2 and 47.8 million years ago during the Palaeogene period. See **Figure 2**: British Geological Society bedrock mapping for the BGS map extract.



Figure 2: British Geological Society bedrock mapping

2.4 Previous site investigations undertaken on the site show the ground conditions encountered in trial holes as follows:

- *Topsoil : Soils described as Topsoil were encountered in all three trial holes from ground level to depths ranging between 0.30m and 0.60m bgl. The Topsoil typically comprised turf over dark brown slightly gravelly silty CLAY with frequent roots and rootlets. Gravel was fine to medium subangular clasts of flint.*
- *Head: Soils described as Head were encountered in all three trial holes underlying the Topsoil and persisted to depths ranging between 1.35m and 2.50m bgl. The Head typically comprised dark becoming light brown gravelly CLAY. Gravel was fine to coarse subangular to angular clasts of flint. The gravel content was observed to increase with depth.*
- *Undifferentiated Lewes Nodular, Seaford and Newhaven Chalk Formation: Soils described as White Chalk Subgroup were encountered in all three trial holes underling deposits of Head and persisted to the full investigatory depth of 5.00m bgl. The White Chalk Subgroup comprised off white and brownish white weathered structureless CHALK recovered as fine gravel sized intact fragments of chalk within a sandy SILT calcareous matrix, with frequent fine to coarse gravel sized clasts of subrounded to angular flint.*

A copy of the letter report has been submitted with the application pack.

Soakage tests were undertaken during February 2020 which showed varying infiltration rates of between 1.07×10^{-4} and 8.57×10^{-5} m/sec. A copy of the soakage test results is also included in the application pack

3. EXISTING DRAINAGE

Existing Surface Water Drainage

- 3.1 As the site is currently undeveloped, there is no formal surface water drainage provision.
- 3.2 The nearest watercourse is the Lidsey Rife approximately 0.5Km to the south of Nyton Road
- 3.3 The greenfield run-off rates for the existing site have been estimated using the HR Wallingford online calculator on the UK SuDS website. The run-off rates are very low as anticipated for the subsoil as found during the S.I and shown in Figure 3 below

Greenfield runoff rates		
	Default	Edited
Q _{50%} (l/s):	0.29	0.29
1 in 1 year (l/s):	0.25	0.25
1 in 30 years (l/s):	0.68	0.68
1 in 100 year (l/s):	0.94	0.94
1 in 200 years (l/s):	1.1	1.1

Figure 3: Greenfield runoff rates

- 3.4 The developed area impermeable area has been calculated at 0.62ha, which provides the developed area greenfield rates as shown in **Figure 4** and are based on the layout shown in **Appendix B**. The developed area is all the impermeable areas added together (roofs, driveways, internal road, footway and a nominal patio allowance of 3.0x3.0m) plus an additional 10% for Urban creep.

Greenfield runoff rates		
	Default	Edited
Q _{50%} (l/s):	0.12	0.12
1 in 1 year (l/s):	0.1	0.1
1 in 30 years (l/s):	0.27	0.27
1 in 100 year (l/s):	0.38	0.38
1 in 200 years (l/s):	0.44	0.44

Figure 4: Developed area greenfield runoff rates

- 3.5 A copy of the full UKSuDs outputs are included in **Appendix C**

Existing Foul Water Drainage

- 3.6 As the site is currently undeveloped, there is no formal foul water drainage provisions for the site, however, there is an existing 225mm dia Foul sewer running through the site as indicated on the Southern Water sewer mapping records. A copy of the records is included in **Appendix D**

4. FLOOD RISK

Fluvial/Tidal Flooding

- 4.1 The Environment Agency (EA) flood mapping has identified that the site falls within Flood Zone 1 the site is indicated on a copy of the flood mapping in **Figure 5**.

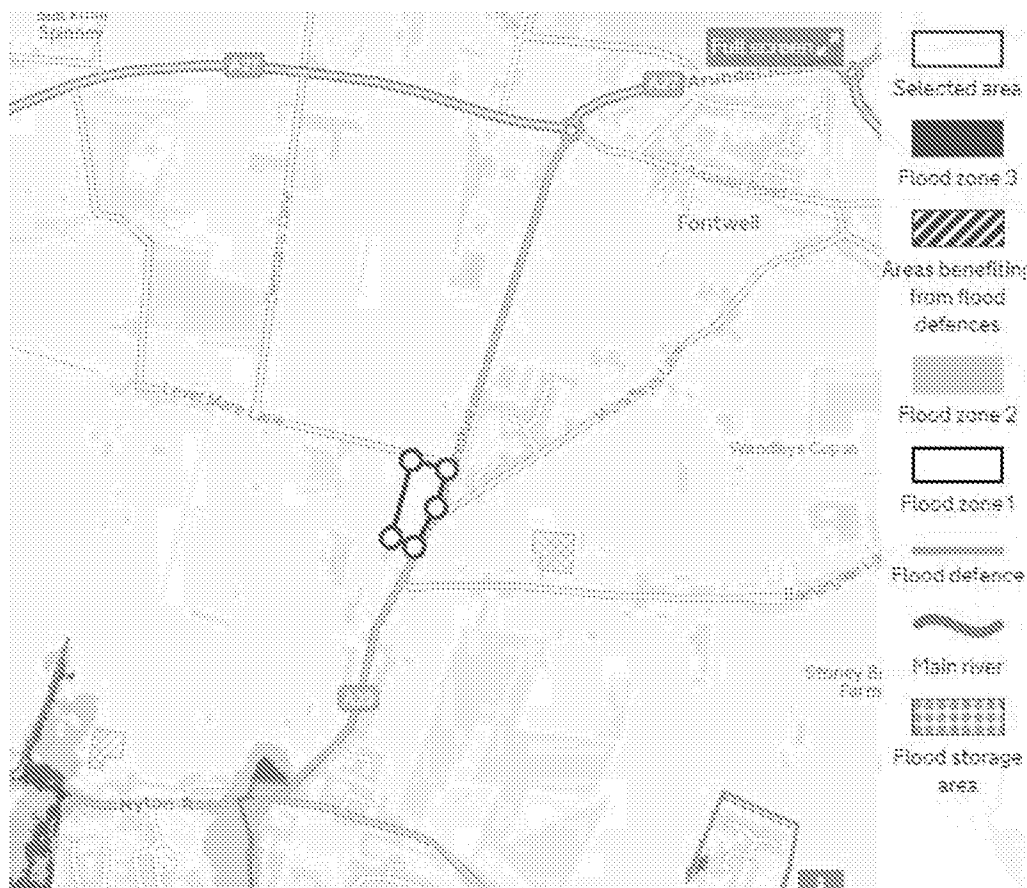


Figure 5: Environment Agency Flood Map for Rivers and Seas

Long Term Flood Risk and Flood Risk from Reservoirs

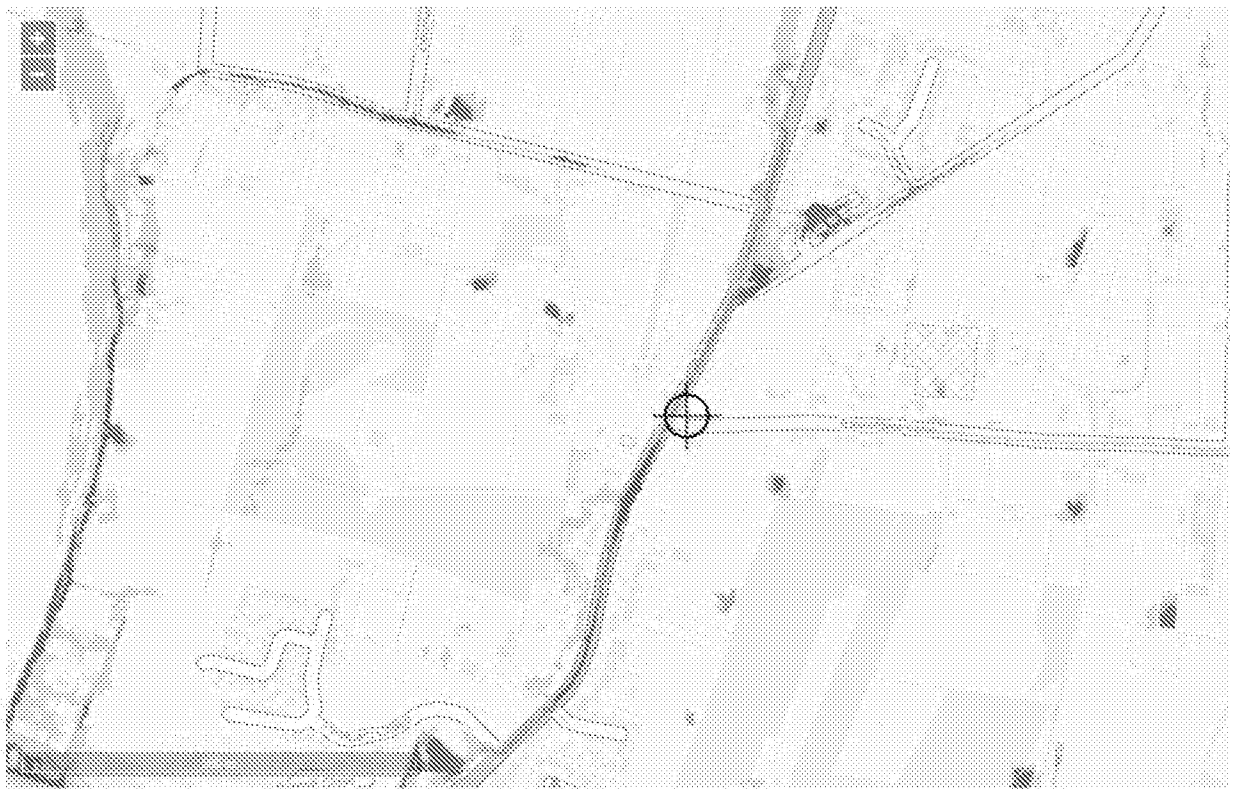
- 4.2 The EA's long-term flood risk and flood risk from reservoirs mapping shows that the site is not at risk from flooding due to artificial sources. Refer to the map in **Figure 6**



Figure 6: EA long term flood risk from reservoirs map

Surface Water Flooding

- 4.3 Surface water or 'pluvial' flooding results from rainfall running over ground before eventually entering a watercourse or sewer. It is usually associated with high intensity rainfall events but can also occur with lower intensity rainfall or melting snow where the ground is already saturated, frozen, developed (for example in an urban setting), or otherwise has low permeability.
- 4.4 The EA Flooding from Surface Water Map is included as and indicates that the site has a minimal risk of surface water flooding as indicated on the map in **Figure 7**



Extent of flooding from surface water

High
 Medium
 Low
 Very low
 Location you selected

Figure 7: EA long term flood risk from surface water

National Planning Policy Framework (NPPF)

- 4.5 This report has been prepared considering the National Planning Policy Framework (NPPF) Technical Guidance and the EA Flood Risk Standing Advice. This report will seek to quantify the flood risk posed to the site and the proposed housing development and to identify potential mitigation measures. The drainage of surface water run-off generated by the site is also considered to ensure that the housing development proposals would not pose an adverse effect on the flood risk to the surrounding area.
- 4.6 Table 3 from the NPPF Technical Guidance has been included as **Figure 8** below. This gives the classes of development (based on flood risk vulnerability) that are permitted within each of the flood zones. The Flood Risk Vulnerability Classification for the site is 'More Vulnerable' as it is a housing development, which is defined in Table 3 of the Planning Practice Guidance. Based on this, the development is appropriate as it passes the Sequential Test and no Exception Test is required.

Flood Zones	Essential infrastructure	Highly vulnerable	More vulnerable	Less vulnerable	Water compatible
Zone 1	✓	✓	✓	✓	✓
Zone 2	✓	Exception Test required	✓	✓	✓
Zone 3a †	Exception Test required †	X	Exception Test required	✓	✓
Zone 3b *	Exception Test required *	X	X	X	✓*

Table 3 - Flood Risk Vulnerability Classification

Key: ✓ Development is appropriate X Development should not be permitted.

Notes to table 3:

- This table does not show the application of the Sequential Test which should be applied first to guide development to Flood Zone 1, then Zone 2, and then Zone 3; nor does it reflect the need to avoid flood risk from sources other than rivers and the sea;
- The Sequential and Exception Tests do not need to be applied to minor developments and changes of use, except for a change of use to a caravan, camping or chalet site, or to a mobile home or park home site;
- Some developments may contain different elements of vulnerability and the highest vulnerability category should be used, unless the development is considered in its component parts.

† In Flood Zone 3a essential infrastructure should be designed and constructed to remain operational and safe in times of flood.

* * "In Flood Zone 3b (functional floodplain) essential infrastructure that has to be there and has passed the Exception Test, and water-compatible uses, should be designed and constructed to:

- remain operational and safe for users in times of flood;
- result in no net loss of floodplain storage;
- not impede water flows and not increase flood risk elsewhere

Minor development means:

- minor non-residential extensions: industrial/commercial/leisure etc extensions with a footprint less than 250 square metres.
- alterations: development that does not increase the size of buildings e.g. alterations to external appearance.
- householder development: For example; sheds, garages, games rooms etc within the curtilage of the existing dwelling, in addition to physical extensions to the existing dwelling itself. This definition excludes any proposed development that would create a separate dwelling within the curtilage of the existing dwelling e.g. subdivision of houses into flats.

Figure 8: NPPF Planning Practice Guidance Table – Flood Risk Vulnerability and Flood Zone Compatibility

Groundwater Flooding

- 4.7 Groundwater flooding occurs when groundwater levels increase sufficiently for the water table to intersect the ground surface. Groundwater flooding can occur in a variety of geological settings including valleys and in areas underlain by chalk, and in river valleys with thick deposits of alluvium and river gravels.
- 4.8 The groundwater flooding risk for the site is Medium to Low based on the data from the Defra Magic Map shown in **Figure 9**

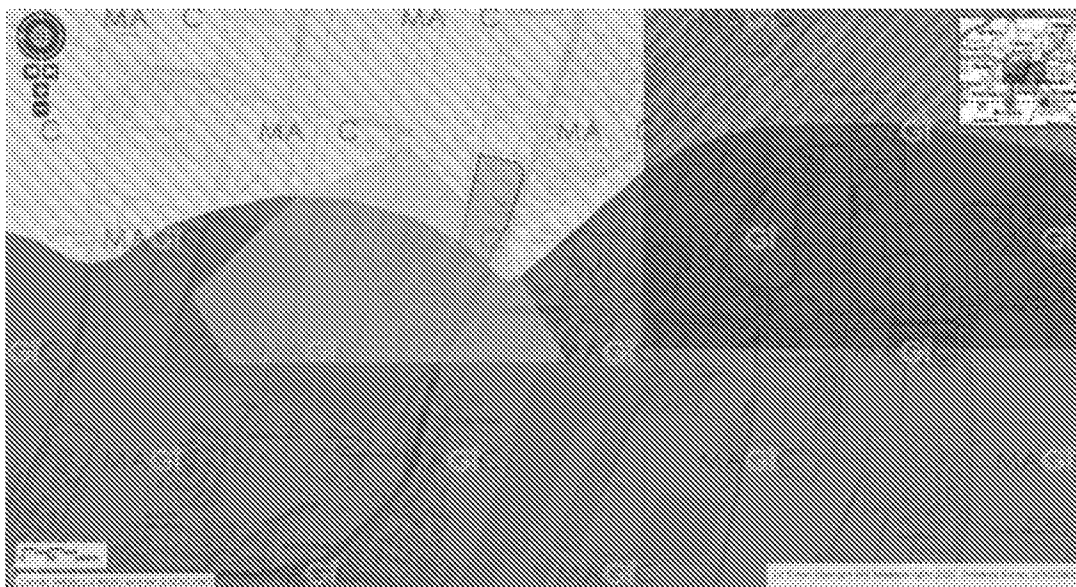


Figure 9 Magic Map Data, Ground Water Vulnerability



Figure 10 Magic Map Legend

- 4.9 Groundwater monitoring was carried out by Messrs Soils Ltd on behalf of Reside and the results are included in the application pack. A summary of the results is also included in the completed Arun District Council's surface water drainage checklist in **Appendix G**.

5. DRAINAGE STRATEGY

Potential Surface Water Drainage Strategy

- 5.1 In line with the Building Regulations Part H3, surface water shall discharge to one of the following, listed in order of priority:
- An adequate infiltration system: or, where not reasonably practicable,
 - A watercourse; or, where not reasonably practicable,
 - A sewer.
- 5.2 The proposals for the surface water drainage are by infiltration based on the results of the S.I. Given the variability of the soakage test results we have taken the worst case result obtained and applied the relevant factors of safety required by Arun District Council, as shown in **Figure 11**

Size of Area to be Drained	Factor of Safety Table					
	Consequences of failure					
	No damage or inconvenience		Minor inconvenience, e.g. surface water on car park		Damage to buildings or structures or roads.	
	Cv=1.0	Cv=0.75	Cv=1.0	Cv=0.75	Cv=1.0	Cv=0.75
<100 m ²	1.5	2	2	3	10	13
100m ² to 1000m ²	1.5	2	3	4	10	13
>1000m ²	1.5	2	5	6.5	10	13

Figure 11 Factors of safety for Soakaways

- 5.3 The proposed drainage strategy has been drawn up using the proposed site layout and includes a combination of trench soakaways, permeable pavements and swales. A copy of the drawing is included in **Appendix E**.
- 5.4 ADC's Surface Water Drainage Proposals Checklist has been completed and is included in Appendix G.

MicroDrainage Calculations

- 5.5 The drainage calculations have been carried out based on various sized catchments and a copy of the outputs are included in **Appendix F**

Potential Foul Water Drainage Strategy

- 5.6 The site lies within the Lidsey Foul Water Treatment Catchment Area, the proposals for the foul drainage are based on a gravity drainage system connecting into the existing public foul sewer to the South-East of the site.
- 5.7 As there is an existing Foul Sewer running through the site, this currently clashes with the proposed buildings, as a consequence it is proposed that this sewer be diverted through the site under an agreement with southern Water under Section 185 of the Water Industry Act 1991.

- 5.8 A copy of the proposed Foul drainage strategy is included on the drawings contained within **Appendix E**

6. SUMMARY AND CONCLUSION

- 6.1 This FRA has been prepared by Paul Basham Associates to help assess the suitability of the site for development of 42 residential units at Fontwell Avenue Eastergate.
- 6.2 There is no increase in flood risk, either on site or downstream as a result of the proposed development and no flood reduction measures are required based on the assumptions made in this report.
- 6.3 It has been identified that the site lies wholly with Flood Zone 1 and has a very low risk of flooding. The proposed drainage system has been designed for the 1:100year storm event with an additional 40% allowance for climate change.
- 6.4 The site has also been assessed for all sources of flood risk such as rivers, groundwater, canals, reservoirs, surface water (pluvial flooding) and sewer, and it is concluded that the site is not a risk of any means of flooding.

Drainage Strategy

- 6.5 In accordance with the Environment Agency, National Planning Policy Framework and current best practices, it is intended to attenuate the run-off at source using a number of different SuDS techniques, which also help improving the water quality prior to discharge into the ground.
- 6.6 The drainage strategy employed will comprise the following:
- Piped networks for both foul and surface water. Both water networks are to be drained by gravity, with the surface water discharging via a combination of soakaways, permeable pavements and infiltration swales.
 - The Existing foul water sewer will be diverted via an agreement with Southern Water under Section 185 of the Water Industry Act 1991
 - The new foul sewers will be connected to the existing network via an agreement with Southern Water under Section 106 of the Water Industry Act 1991
- 6.7 In this instance, given the underlying geology consists of Chalk, therefore as indicated in the S.I report, infiltration devices will be suitable at this location. The proposed drainage strategy will comprise of a gravity sewer network, and various SuDS components in the form of permeable paving, trench soakaways and swales.

- 6.8 The proposed foul drainage strategy comprises a gravity drain network made up of pipe sizes between 100mm and 150mm in diameters running in the main access roads through the site. Sewage will then be drained into the existing / diverted foul sewers based on the guidance within Sewers for Adoption 7th Edition.
- 6.9 Based on Sewers for Adoption 7th Edition, a foul flow of 4000litres of water per property per day has been used for the foul water drainage design, therefore the design flow is 1.94l/s for the proposed development of 42 residential dwellings. A pipe of 150mm diameter is to be specified in the design for 10 properties or more.

General

- 6.10 It is important to note that the surface and foul water strategies outlined in this report may not necessarily form the final design. It is simply a demonstration of the most suitable and technically feasible designs for the proposed development, based on the information available at present. Site constraints and economic appraisals undertaken as part of the design stage may result in suitable amendments to the current strategies.
- 6.11 This FRA has been prepared considering the National Planning Policy Framework Technical Guidance and the EA Flood Risk Standing Advice. This report has quantified the flood risk posed to the proposed development as being More Vulnerable which is a suitable development type for Flood Zone 1.

Appendix A

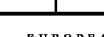
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S2	PEG	494701.189	106155.36	16.134
S3	ROAD NAIL	494756.746	106224.281	16.510
S4	ROAD NAIL	494797.867	106343.356	17.187
S5	ROAD NAIL	494701.120	106363.412	18.093
SW2	HILTI NAIL	494668.026	106132.518	16.562
SW100	HILTI NAIL	494660.503	106097.918	15.474
SW101	HILTI NAIL	494644.082	106098.470	15.420
SW102	HILTI NAIL	494625.858	106117.908	16.211
SW103	HILTI NAIL	494635.456	106133.875	16.394
SW104	HILTI NAIL	494645.405	106149.043	16.385
SW105	HILTI NAIL	494657.017	106147.905	16.234

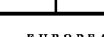
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Tel 01608 585581	Milton Keynes	enquiries@mk-surveys.co.uk
Tel 01605 584879	Oxford	oxford@mk-surveys.co.uk
Tel 0118 2849127	East Midlands	eastmidlands@mk-surveys.co.uk
Tel 01384 404203	West Midlands	westmidlands@mk-surveys.co.uk
Tel 01403 243182	Horsham	horsham@mk-surveys.co.uk

www.mk-surveys.com
www.surveys4him.co.uk

Northfields Cottages
Fontwell Avenue
West Sussex

Scale: 1:500	Sheet Size: A0	Sheet Number: 1	Date: March 2018
Project Number: 25221	Rev: -	Surveyed By: SW / SB	Approved By: CP / AJ / HC
  			

Scale: 1:500	Sheet Size: A0	Sheet Number: 1	Date: March 2018
Project Number: 25221	Rev: -	Surveyed By: SW / SB	Approved By: CP / AJ / HC
  			

Appendix B





NOTES:

Do Not Scale.

Report all discrepancies, errors and omissions.

Verify all dimensions on site before commencing any work on site or preparing shop drawings.

All materials, components and workmanship are to comply with the relevant British Standards, Codes of Practice, and appropriate manufacturers recommendations that from time to time shall apply.

For all specialist work, see relevant drawings.

This drawing and design are copyright of Clague LLP
Registration number OC335948.

Rev	Date	Description
-----	------	-------------

- Bin Collection Point
- Root Protection Zones
- 5m Water main easement
- Parking space
- Visitors Parking space
- Site Boundary

Project Title

Proposed Residential Development
Fontwell Avenue
West Sussex

Drawing Description

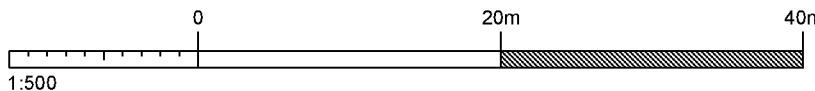
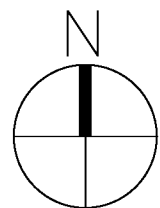
Site Block Plan

Scale	Drawn by
1:500 @ A1	AS
Date	Checked by
March 2020	CSS

CLAGUE ARCHITECTS

62 Burgate, Canterbury Kent CT1 2BH	01227 762060
1 Kinsbourne Court, Lufon Road, Harpenden, Hertfordshire AL5 3BL	01562 795102
8, Disney Street London SE1 1JF	0203 597 8112
CANTERBURY	LONDON
	HARPENDEN

Drawing Number	Revision
29662A_100	T



Appendix C

Calculated by:	Rob Wilson
Site name:	Fontwell Avenue
Site location:	Eastergate

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.

Site Details

Latitude:	50.99993° N
Longitude:	0.47241° W
Reference:	1519114103
Date:	Apr 21 2020 16:10

Runoff estimation approach

IH124

Site characteristics

Total site area (ha):	1.55
-----------------------	------

Methodology

Q _{BAR} estimation method:	Calculate from SPR and SAAR
SPR estimation method:	Calculate from SOIL type

Soil characteristics

	Default	Edited
SOIL type:	4	4
HOST class:	N/A	N/A
SPR/SPRHOST:	0.47	0.47

Hydrological characteristics

	Default	Edited
SAAR (mm):	802	802
Hydrological region:	7	7
Growth curve factor 1 year:	0.85	0.85
Growth curve factor 30 years:	2.3	2.3
Growth curve factor 100 years:	3.19	3.19
Growth curve factor 200 years:	3.74	3.74

Notes

(1) Is Q_{BAR} < 2.0 l/s/ha?

When Q_{BAR} is < 2.0 l/s/ha then limiting discharge rates are set at 2.0 l/s/ha.

(2) Are flow rates < 5.0 l/s?

Where flow rates are less than 5.0 l/s consent for discharge is usually set at 5.0 l/s if blockage from vegetation and other materials is possible. Lower consent flow rates may be set where the blockage risk is addressed by using appropriate drainage elements.

(3) Is SPR/SPRHOST ≤ 0.3?

Where groundwater levels are low enough the use of soakaways to avoid discharge offsite would normally be preferred for disposal of surface water runoff.

Greenfield runoff rates

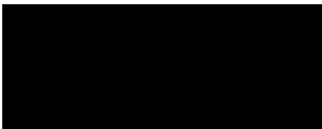
	Default	Edited
Q _{BAR} (l/s):	8.77	8.77
1 in 1 year (l/s):	7.46	7.46
1 in 30 years (l/s):	20.18	20.18
1 in 100 year (l/s):	27.99	27.99
1 in 200 years (l/s):	32.82	32.82

This report was produced using the greenfield runoff tool developed by HR Wallingford and available at 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 www.uksuds.com/terms-and-conditions.htm. The outputs from this tool are estimates of 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, CEH, Hydrosolutions or any other organisation for the use of this data in the design or operational characteristics of any drainage scheme.

Appendix D



TDS Limited
Hillreed House
54 Queen Street
Horsham
West Sussex
RH13 5AD

Your ref TAB.TDSS.RES.U.16
Our ref 284436
Date 09 March 2018
Contact 

Attention: Trevor Baker

Dear Customer

Re: Provision of public sewer record extract

Location: Land at Northfield Cottages Fontwell Avenue, Fontwell PO20 3RX

Thank you for your order regarding the provision of extracts of our sewer and/or water main records. Please find enclosed the extracts from Southern Water's records for the above location.

We confirm payment of your fee in the sum of £49.92 and enclose a VAT receipt for your records.

Customers should be aware that there are areas within our region in which there are neither sewers nor water mains. Similarly, whilst the enclosed extract may indicate the approximate location of our apparatus in the area of interest, it should not be relied upon as showing that further infrastructure does not exist and may subsequently be found following site investigation. Actual positions of the disclosed (and any undisclosed) infrastructure should therefore be determined on site, because Southern Water does not accept any responsibility for inaccuracy or omission regarding the enclosed plan. Accordingly it should not be considered to be a definitive document.

Should you require any further assistance regarding this matter, please contact the LandSearch team.

Yours faithfully

LandSearch

VAT receipt

Ordered by:

TDS Limited
54 Queen Street
Horsham
West Sussex
RH13 5AD

VAT registration number: 813 0378 56
Order reference: 284436
Your reference: TAB.TDSS.RES.U.16

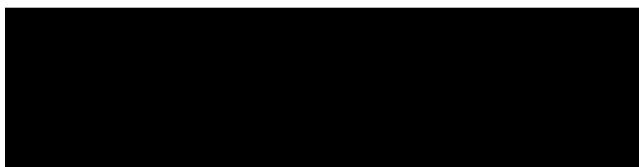
Receipt for provision of an extract from the public sewer and/or water main records.

Location	Costs
Land at Northfield Cottages Fontwell Avenue Fontwell PO20 3RX	£41.60
Net total	£41.60
VAT	£8.32
Total	£49.92
Paid	Paid in full

Thank you for your payment:

Received on: 9 March 2018

For enquiries regarding the information provided in this receipt, please contact the LandSearch team:



Web: www.southernwater.co.uk

LandSearch
Southern Water Services
Southern House
Capstone Road
Chatham
Kent
ME5 7QA



SEWER RECORDS PAGE 2 OF 2

Node	Cover	Invert	Size	Material	Shape	Node	Cover	Invert	Size	Material	Shape	Node	Cover	Invert	Size	Material	Shape
0001X	18.42		100	PF	CIRC												
0301X	19.05	17.58	150	VC	CIRC												
0401X	21.39	20.19	150	VC	CIRC												
0501X	15.19	13.38	175	VC	CIRC												
1001X			150	PF	CIRC												
1003X			150	VC	CIRC												
1004X			150	VC	CIRC												
1401X	20.48	18.61	150	VC	CIRC												
6001X	14.81	13.09	225	VC	CIRC												
6002X	15.11	12.93	225	VC	CIRC												
600DX	14.93		225	VC	CIRC												
6101X	15.31		100	VC	CIRC												
6901X	15.42	12.92	225	VC	CIRC												
7001X	15.8		225	VC	CIRC												
7101X	16.11	13.73	225	VC	CIRC												
7201X	16.79	15.6	100	VC	CIRC												
7202X	16.54	14.58	100	VC	CIRC												
7203X	16.58	15.01	225	VC	CIRC												
7204X	16.38	13.89	225	VC	CIRC												
720DX	16.45	14.1	150	VC	CIRC												
7301X	17.02	15.74	225	VC	CIRC												
7302X	17.23	15.65	225	VC	CIRC												
7303X	16.92	15.72	100	CI	CIRC												
8001X	16.89	14.63	150	VC	CIRC												
8201X	17.01	14.67	150	VC	CIRC												
8202X	17.34	14.82	150	VC	CIRC												
8203X	17.07	14.73	150	VC	CIRC												
8301X	16.72	15.67	150	VC	CIRC												
8302X	16.37	15.23	150	VC	CIRC												
8303X	16.8	15.07	150	VC	CIRC												
8304X	16.8	14.96	150	VC	CIRC												
8401X	17.98	16.17	225	VC	CIRC												
8503X	19.36	16.8	225	VC	CIRC												
9001X	16.24	15.21	150	VC	CIRC												
9301X	18.26	16.84	150	VC	CIRC												
9302X	18.25	16.48	150	VC	CIRC												
9401X	20.11	18.79	150	VC	CIRC												
9402X	19.17	19.16	150	VC	CIRC												
9403X	19.16	17.83	150	VC	CIRC												
9404X	19.1	17.99	150	VC	CIRC												
9405X	18.76	17.33	150	VC	CIRC												

[illegible]