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Drainage Statement

Proposed Development at

Stakers' Farm Barns, North End Road, Yapton

On behalf of

Mr Piers Bucknell

November 2019

Document History and Status

Project Number 23192

Date	Version	Prepared By	Reviewed By	Approved By
30 Aug 2019	1.0	Martin Kempshall CEng MICE	Steve Doughty Director	Stuart Magowan IEng MICE
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1 Non Technical Summary

- 1.1 This Drainage Statement has been undertaken on behalf of Mr Piers Bucknell in support of a Planning Application for the redevelopment and conversion of existing agricultural barns to three residential dwellings at Stakers' Farm Barns, North End Road, Yapton.
- 1.2 This report is to be read in conjunction with all planning, architectural and other reports that accompany the Planning Application for the proposed development.
- 1.3 The proposed development will incorporate a sustainable drainage system, which will discharge surface water infiltration to ground via an infiltration blanket for all storm return periods up to and including the 1:100 year rainfall event with a 40% allowance for climate change.
- 1.4 Water quality measures in accordance with CIRIA C753 SuDS Manual Guidance will be provided to mitigate against risk to any receiving waterbody.
- 1.5 The sustainable drainage system proposed will discharge surface water to ground.
- 1.6 There is an existing combined drain located on site, which is anticipated to discharge to the Southern Water foul sewer located beneath North End Road.
- 1.7 Foul water will be discharged to the public sewers. There is no requirement for an Environmental Assessment to justify the proposed foul discharge into the public sewer network.
- 1.8 Overall loadings on the existing foul water infrastructure will be reduced as a result of the development with the existing surface water connection to the foul sewer system removed.

2 Planning Policy Context

2.1 National Planning Policy Framework

- 2.1.1 The National Planning Policy Framework was updated in February 2019.
- 2.1.2 Following the updates to The National Planning Policy Framework (July 2018) in relation to planning and flood risk and in accordance with the Town and Country Planning Order 2015 a SuDS system will be incorporated into the design. This will be designed in accordance with the Non-Statutory Technical Standards for SuDS, CIRIA C753 SuDS Manual Guidance and Approved Document H of the Building Regulations.
- 2.1.3 The proposed development is in Flood Zone 1 and as the main development site is less than 1ha in size a standalone Flood Risk Assessment is not required to support the Planning Application.

2.2 Local Planning Policy

- 2.2.1 The Arun Local Plan 2011-2031 was adopted on 18 July 2018.
- 2.2.2 The following policy is of specific relevance to this Drainage Statement:
- 2.2.3 **Policy W DM3 Sustainable Urban Drainage Systems** states that *‘to increase the levels of water capture and storage and improve water quality, all development must identify opportunities to incorporate a range of Sustainable Urban Drainage Systems (SUDS), appropriate to the size of development, at an early stage of the design process.*

Proposals for both major and minor development proposals must incorporate SUDS within the private areas of the development in order to provide source control features to the overall SUDS design.

These features include:

- *Green roofs*
- *Permeable driveways and parking*
- *Soakaways*
- *Water harvesting and storage features including water butts*

Proposals for major development must also integrate SUDS within public open spaces and roads, reflecting discussion with the appropriate bodies. SUDS must therefore be integrated into the overall design of a development and must:

- a. *Contribute positively to the appearance of the area, integrating access to allow maintenance of existing watercourses and the system.*

- b. Effectively manage water (including its quality)*
- c. Accommodate and enhance biodiversity by making connections to existing Green Infrastructure assets*
- d. Provide amenity for local residents (ensuring a safe environment)*
- e. Retain the existing drainage network of the site and the wider area,*
- f. Be maintained in perpetuity, supported through a Maintenance and Management Plan/Regime, including its financing, agreed with the Local Planning Authority.*

In order to ensure that SUDS discharge water from the development at the same or lesser rate, as prior to construction, developers must:

- f. (sic) Follow the hierarchy of preference for different types of surface water drainage disposal systems as set out in Approved Document H of the Building Regulations and the SUDS manual produced by CIRIA.*
- g. Undertake up to six months groundwater monitoring within the winter period.*
- h. Undertake winter percolation testing in accordance with BRE365.*
- i. The proposed drainage system must be designed to ensure that there is no flooding on a 1 in 30 year storm event.*
- j. The design must also take account of the 1 in 100 year storm event plus 30% allowance for climate change, on stored volumes, to ensure that there is no flooding of properties or the public highway or inundation of the foul sewerage system.*

Any excess flows must be contained within the site boundary, and within designated storage areas.'

2.3 Best Practice Guidance

2.3.1 CIRIA report C753 The SuDS Manual-v6 provides guidance on the redevelopment of brownfield sites. The aim for surface water runoff is to match greenfield runoff rates and volumes where reasonably achievable.

3 Existing Site

3.1 Site Location

3.1.1 The development site is located on the land west of B2132 North End Road, Yapton at Ordnance Survey reference SU 977 035. The nearest postcode is BN18 0DU.



Image 1: Site Location

3.1.2 The site is bounded to the north by residential properties, the east by B2132 North End Road, the south by open fields and to the west by agricultural buildings.

3.1.3 A copy of the site location plan is located in Appendix 1 at the rear of this report.

3.2 Site Description

3.2.1 The site is approximately 2,900m² in area and comprises two single storey outbuildings and a single two storey agricultural barn with associated hardstanding of which approximately 2,000m² is impermeable.

3.2.2 Existing ground levels are highest at the northwest corner of the site at approximately 6.6m AOD. The site falls towards its southeast boundary to a level of approximately 5.4m AOD.

3.2.3 A copy of the existing site layout plan is located in Appendix 2 at the rear of this report.

3.3 Existing Drainage

- 3.3.1 There is a combined drain on site, which is at least 100mm in diameter at a gradient of 1 in 80, with a full-bore capacity of 7.3l/s. All foul and surface water is believed to discharge via this existing drain.
- 3.3.2 There are public foul sewers located beneath the B2132 North End Road to the southeast of the site.
- 3.3.3 Surface and foul water from the existing properties are currently discharged in an unrestricted manner via the existing onsite combined drain to the foul water sewer beneath North End Road.
- 3.3.4 There are no watercourses adjoining the site boundaries.
- 3.3.5 The site is within the Lidsey Foul Water Treatment Catchment Area.
- 3.3.6 A copy of the sewer records is located in Appendix 3 at the rear of this report.
- 3.3.7 A copy of the existing pipe capacity calculations is located in Appendix 4 at the rear of this report.

3.4 Geology and Groundwater

- 3.4.1 British Geological Survey maps and borehole information identify the site as being located within an area underlain by Superficial River Terrace Deposits (a clayey sand layer) overlying Lewes Nodular Chalk.
- 3.4.2 River Terrace Deposits have been recorded beneath the topsoil layer of the adjacent sites to the northwest and southwest of the site consisting of stiff orange brown clay with varying sand and gravel content. Trial holes identified bands of clayey gravelly fine to coarse sand were encountered at shallow depths of up to 0.8m.
- 3.4.3 Infiltration testing of adjacent sites identified moderate to low infiltration rates within this area with infiltration rates consistently in the order of 2×10^{-6} m/s.
- 3.4.4 Trial holes of adjacent sites to the northwest identified groundwater at between 3.8m and 5.2m below ground level within the chalk underlaying River Terrace Gravels.
- 3.4.5 Winter groundwater monitoring from the adjacent site to the southwest identifies a maximum groundwater level of approximately 2m below existing ground levels.
- 3.4.6 The online “Magic Map” available from Defra confirms that the site is located above a major aquifer classified as having an intermediate vulnerability.

3.4.7 A copy of the geological borehole data is located in Appendix 5 at the rear of this report.

4 Development Proposals

4.1 Description

- 4.1.1 The development proposals are for the redevelopment and conversion of existing agricultural barns and two outbuildings to three residential dwellings at Stakers' Farm Barns.
- 4.1.2 A copy of the proposed site layout plan is located in Appendix 6 at the rear of this report.

4.2 Drainage Strategy

- 4.2.1 A preliminary surface water drainage system has been designed in accordance with the National Planning Policy Framework (NPPF) and the accompanying Guidance and Technical Standards for SuDS. The design also complies with the requirements under Building Regulations Part H.
- 4.2.2 CIRIA report C753 The SuDS Manual-v6 provides guidance on the redevelopment of brownfield sites. The aim for surface water runoff is to match greenfield runoff rates and volumes where reasonably achievable.
- 4.2.3 For surface water discharge, the drainage hierarchy notes the following list of drainage options in order of preference:
 - 1. Infiltration to ground
 - 2. Discharge to a watercourse
 - 3. Discharge to a surface water sewer
 - 4. Discharge to a foul water sewer
- 4.2.4 Based on this the preferred surface water drainage strategy should where possible be based on infiltration to ground.
- 4.2.5 Given the underlying ground conditions the site will be based on infiltration to ground with storage provided on site at source.
- 4.2.6 All storage will be designed to accommodate surface water for a 1:100 year storm including an additional 40% to account for the future effects of climate change.
- 4.2.7 All surface water will be stored on site and discharged to the ground via an infiltration blanket beneath a permeable car parking area.
- 4.2.8 The total proposed impermeable area of the site is approximately 1,800m².
- 4.2.9 Preliminary calculations have been prepared based on an infiltration rate of 2 x 10⁻⁶m/s as experienced by ground investigation undertaken within the area.

- 4.2.10 A minimum 420mm deep 30% voided subbase system will be required beneath the access and car parking area, which consists of approximately 1,000m² providing 110m³ of storage with an estimated half drain time of 1,061 minutes (approximately 17.5 hours).
- 4.2.11 The drainage proposals will be confirmed at detailed design stage subject to further site investigations and testing which will include infiltration testing to BRE Digest 365 requirements to inform the detailed design.
- 4.2.12 If infiltration rates are found to be higher than initially identified the storage requirement will be reduced.
- 4.2.13 Removing the surface water loadings from the existing onsite connection to the public sewer will provide a significant betterment on downstream foul water sewer loadings in this area, with a peak reduction of approximately 7.3l/s (The full-bore capacity of the existing connection) during heavy rainfall events.
- 4.2.14 A copy of the existing and proposed drainage area plan is located in Appendix 7 at the rear of this report.
- 4.2.15 The preliminary drainage strategy plan together with the preliminary surface water calculations is located in Appendix 8 at the rear of this report.

4.3 Foul Water

- 4.3.1 Any new connection to the public sewer will be subject to an agreement with Southern Water under Section 106 of the Water Industry Act 1991.
- 4.3.2 The anticipated peak foul water discharge from the site has been calculated as 0.1 l/s in accordance with Sewers for Adoption guidance.
- 4.3.3 The existing gravity connection to the public foul sewer located beneath North End Road is to be used for the proposed development.

4.4 Water Quality

- 4.4.1 The proposed development is for residential use. In accordance with CIRIA SuDS Manual 2015 (Report C753), the pollution hazard level for this type of development is between very low and low.
- 4.4.2 The surface water scheme will include mitigation to ensure that surface water is suitably treated and any pollution risk adequately managed prior to discharge.

4.4.3 Table 26.2 in Chapter 26 of CIRIA report C753 The SuDS Manual provides Pollution Hazard Indices for varying land types. Those of relevance to the development proposals are as follows:

Land Use	Pollution hazard level	Total suspended solids (TSS)	Metals	Hydro-carbons
Residential roofs	Very Low	0.2	0.2	0.05
Individual property driveways, residential car park, low-traffic roads	Low	0.5	0.4	0.4

Table 1: Pollution Hazard Indices

4.4.4 Where multiple drainage components are used in series the individual mitigation index of secondary and tertiary components is lowered by 50% due to reduced performance associated with primary treatment.

SuDS Type	Total suspended solids (TSS)	Metals	Hydro-carbons
Permeable pavement	0.7	0.6	0.7

Table 2: Pollution Mitigation Indices

4.4.5 The proposed use of permeable paving will meet the target treatment level required for runoff with very low to low risk of pollution hazard thus demonstrating that the surface water drainage system for the site can be designed to adequately mitigate against the risk of pollution.

4.4.6 An outline drainage maintenance schedule is located in Appendix 9 at the rear of this report.

5 Conclusions

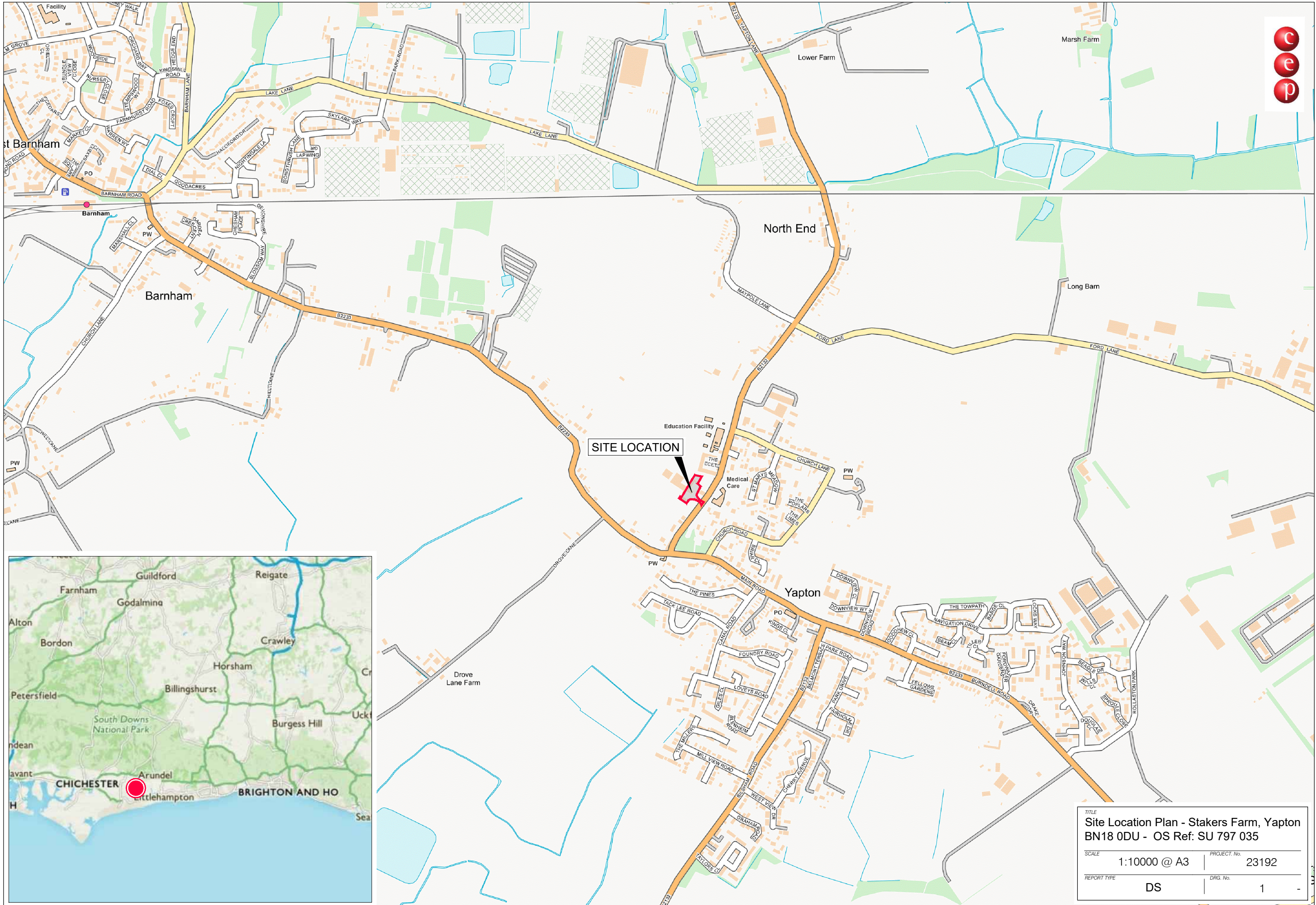
- 5.1 The geology of the area comprises River Terrace Deposits overlying Chalk and is anticipated to provide suitable percolation rates to accommodate an infiltration drainage system.
- 5.2 The preferred surface water drainage option will incorporate a sustainable drainage system, which will discharge surface water to ground via an infiltration blanket beneath the access road and carpark.
- 5.3 Preliminary calculations indicate that surface water runoff generated by the proposed development can be attenuated on site for all rainfall events up to the 1:100 year event including an allowance for climate change.
- 5.4 Water quality measures will be provided to mitigate against any risk to any receiving waterbody.
- 5.5 Site investigations should be undertaken including infiltration testing to BRE Digest 365 requirements to inform the detailed design.
- 5.6 This report confirms a suitable surface water drainage system that is SuDS compliant is achievable for this development.
- 5.7 Foul water will be discharged to the Southern Water sewer located beneath North End Road.
- 5.8 Overall loadings on the existing foul water infrastructure will be reduced as a result of the development removing the existing surface water connection to the foul system.
- 5.9 The site is within the Lidsey Foul Water Treatment Catchment Area and has no requirement for an Environmental Assessment to justify the proposed foul discharge into the public sewer network.

6 List of Appendices, Images and Tables

Appendix 1	Site Location Plan
Appendix 2	Existing Site Layout Plans
Appendix 3	Southern Water Sewer Records
Appendix 4	Existing Pipe Capacity Calculations
Appendix 5	BGS Borehole Records
Appendix 6	Proposed Site Layout Plan
Appendix 7	Existing and Proposed Drainage Area Plan
Appendix 8	Preliminary Drainage Strategy Plan and Calculations
Appendix 9	Drainage Maintenance Schedule
Image 1	Site Location
Image 2	Local Topography
Table 1	Pollution Hazard Indices
Table 2	Pollution Mitigation Indices

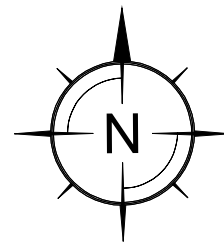
Appendix 1

Site Location Plan

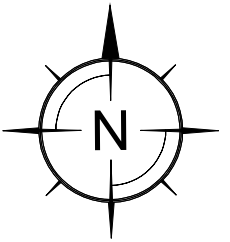


Appendix 2

Existing Site Layout Plans



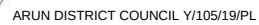
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1:500 @ A3		23192	
REPORT TYPE		DRG. No.	
DS		2	



TITLE	
Existing Ground Floor Plan	
SCALE	1:250 @ A3
PROJECT No.	23192
REPORT TYPE	DS
DRG. No.	3

Appendix 3

Southern Water Sewer Records



[illegible]

Appendix 4

Existing Pipe Capacity Calculations

Colebrook White Equation / Darcy Weisbach Formula for Circular Pipes under Part Full Conditions

(substituting pipe diameter with hydraulic radius)

$$V = -\sqrt{(32gRS)} \log \left[\frac{k_s}{14.8R} + \frac{1.255v}{R\sqrt{32gRS}} \right]$$

Where:

g= gravitational acceleration	9.81 m/s ²	
S= hydraulic gradient	1: 80.0	
v = kinematic velocity of fluid	1.139E-06 m ² /s	(1.139E-6 for water at 15 Celsius)
k _s = roughness value	0.6 mm	
D= pipe diameter	100 mm	
Depth of flow	94 mm	
Centre Angle	5.2933 Rad	
Flow Area	0.0077 m ²	
Wetted Perimeter	0.2647 m	
R = hydraulic radius = Area/Wetted Perimeter =		0.0289 m

V= 0.95 m/s

Q= 0.01 m³/s 7.26 l/s

Appendix 5

BGS Borehole Records





**British
Geological Survey**

NATURAL ENVIRONMENT RESEARCH COUNCIL

BGS ID: 434407 : BGS Reference: SU90SE29
British National Grid (27700) : 497380,103350
Report an issue with this borehole

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SU 90 SE 29 9738 0335

British Geological Survey

Surface level +6.6 m
Water struck at +1.9 m
October 1981

North-east end of Drove Lane, Yapton

British Geological Survey

British Geological Survey

Block H

Overburden 2.9 m
Mineral 1.0 m
Bedrock 2.3 m+

LOG

Geological classification

Lithology

Thickness m **Depth m**

	Soil	0.5	0.5
Brickearth	Clay, brown, silty	1.4	1.9
Raised Beach Deposits (younger)	Silt, chalky, with chalk pebbles	1.0	2.9
	'Very clayey' sandy gravel	1.0	3.9
	Gravel: coarse with flint dominant, and fine with chalk dominant; some cobbles		
	Sand: fine with some medium and coarse; coarse mostly chalk		
	Fines: silt and clay, chalky		
Upper Chalk	Chalk, rubbly, soft, silty and sandy to 6.0 m	2.3+	6.2

British Geological Survey

British Geological Survey

GRADING

Mean for deposit percentages

Depth below surface (m)

Percentages

Fines Sand Gravel

Fines

Sand

Gravel

-1

+1 -1

+1 -1

+1 -4

+4 -16

+16 -64

+64 mm

35

38

27

2.9-3.9

35

28

4

6

10

14

3

96

British Geological Survey

British Geological Survey

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**British
Geological Survey**

NATURAL ENVIRONMENT RESEARCH COUNCIL

BGS ID: 434410 : BGS Reference: SU90SE32

British National Grid (27700) : 498220,104300

[Report an issue with this borehole](#)

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British Geological Survey

SU 90 SE 32 9822 0430

Surface level +6.0 m
Water not stuck
August 1981

British Geological Survey

North End, Yapton

British Geological Survey

Block H

Waste 3.3 m
Bedrock 1.2 m+

LOG

Geological classification

Lithology

British Geological Survey

Thickness Depth
m m

	Soil	0.3	0.3
Brickearth	Clay, brown, silty, with a few subangular flint pebbles. Very sandy near base	2.7	3.0
Raised Beach Deposits (younger)	Sand, mid to dark brown: fine to coarse; quartz with flint; silty and with angular to well rounded flint pebbles	0.3	3.3
Upper Chalk	Chalk, soft, rubbly	1.2+	4.5

British Geological Survey

British Geological Survey

British Geological Survey

British Geological Survey

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British Geological Survey



British Geological Survey

NATURAL ENVIRONMENT RESEARCH COUNCIL

BGS ID: 434411 : BGS Reference: SU90SE33

British National Grid (27700) : 498270,103490

[Report an issue with this borehole](#)

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British Geological Survey

SU 90 SE 33

9827 0349

British Geological Survey

Yapton Church

British Geological Survey

Block H

Surface level +6.4 m

Water not struck

September 1981

**Waste
Bedrock**

**1.4 m
1.6 m+**

LOG

Geological classification

British Geological Survey

Lithology

British Geological Survey

Thickness Depth
m m

British Geological Survey

	Soil and made ground	0.3	0.3
Brickearth	Clay, very sandy, mottled brown and grey-brown; some small flint pebbles	1.1	1.4
Upper Chalk	Chalk, soft, weathered, pale yellowish brown; nodular flints	1.6+	3.0

British Geological Survey

British Geological Survey

British Geological Survey

British Geological Survey

British Geological Survey

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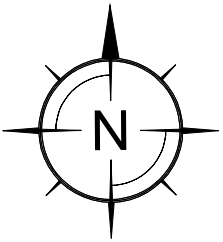
British Geological Survey

British Geological Survey

British Geological Survey

Appendix 6

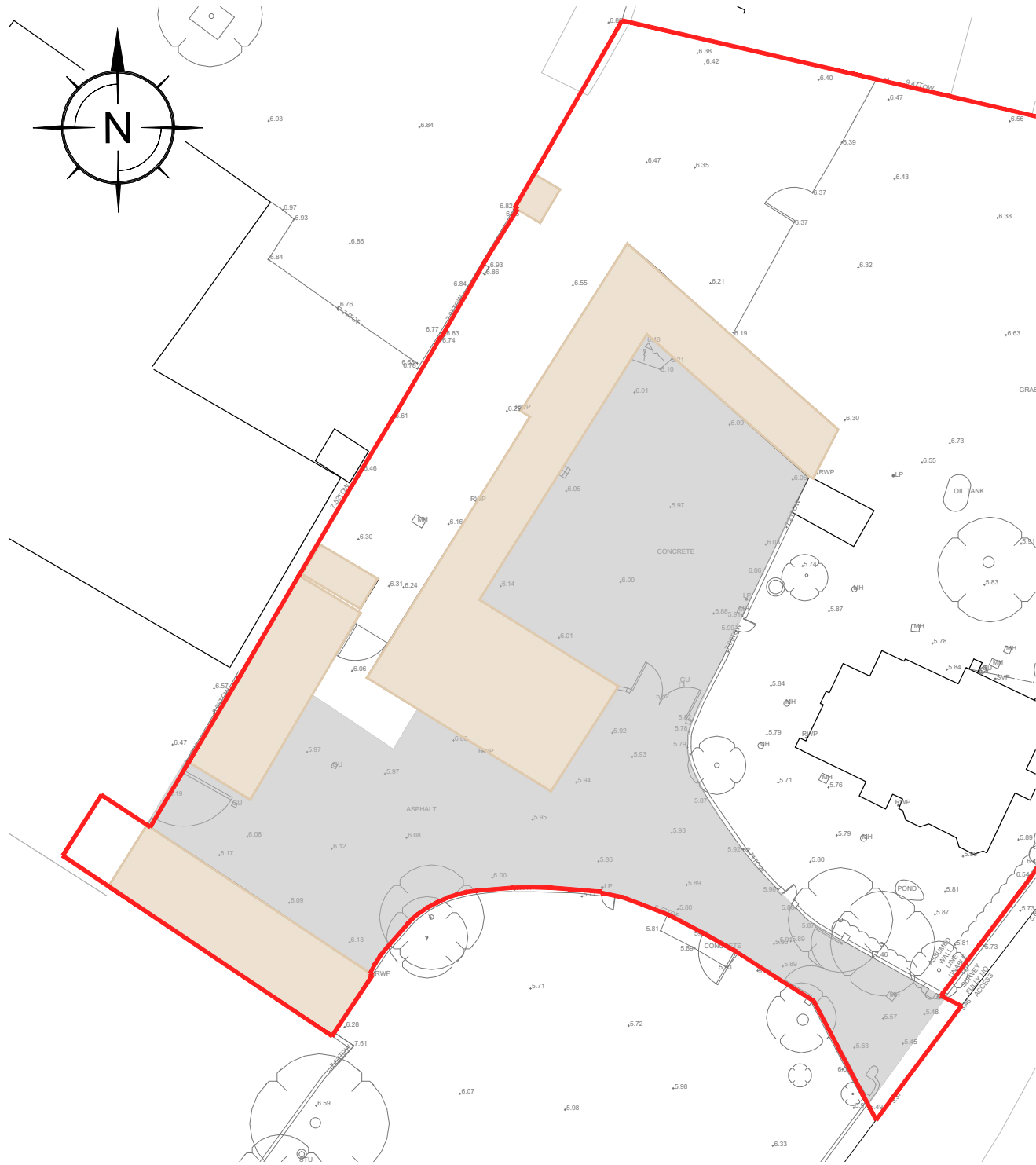
Proposed Site Layout Plan



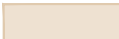
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DS		4	

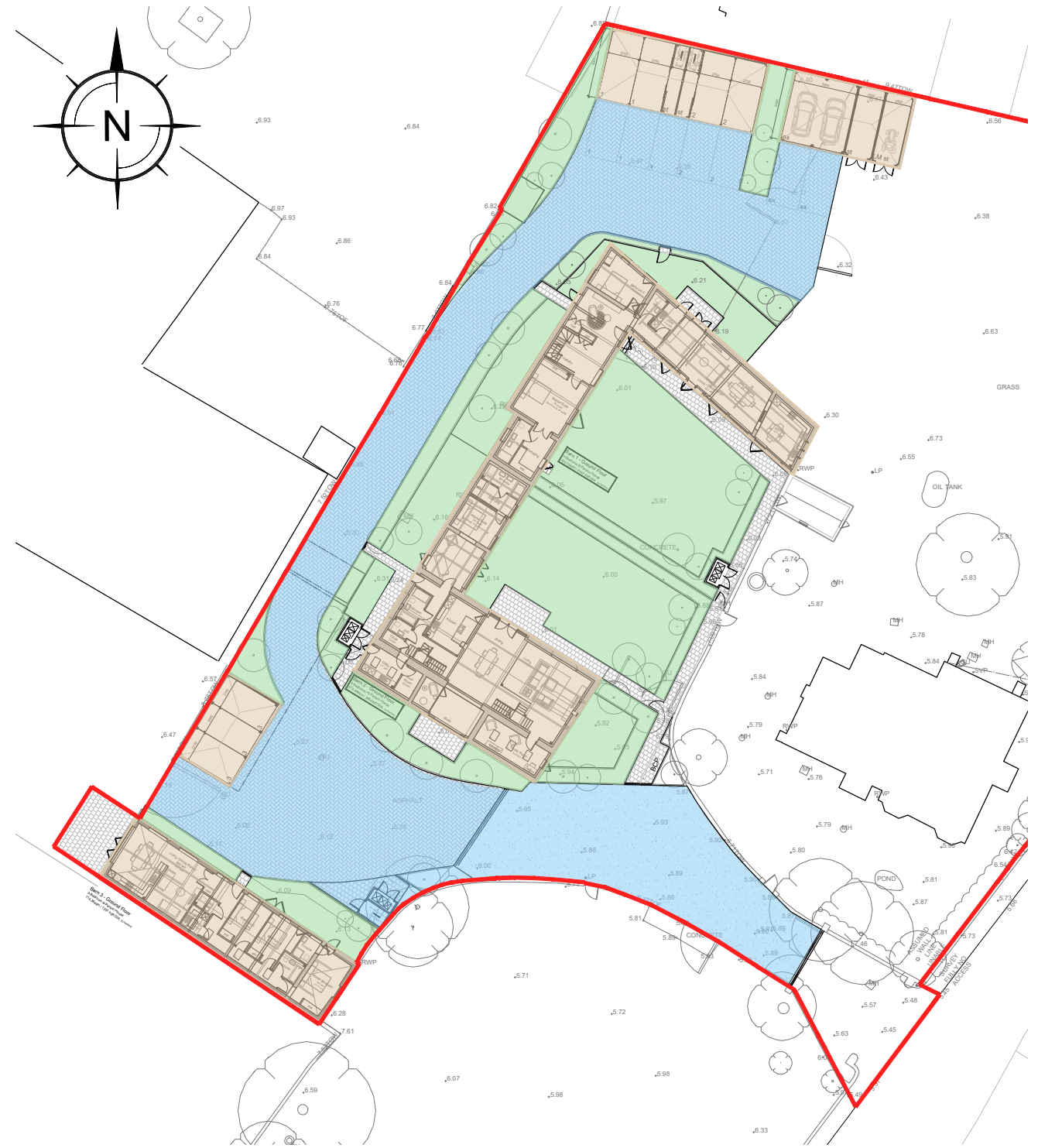
Appendix 7

Existing and Proposed Drainage Area Plan

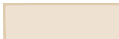
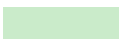


EXISTING SITE PLAN
(Scale 1:500)

Key	
	Roofs 713m ²
	Existing Impermeable paving 1264m ²

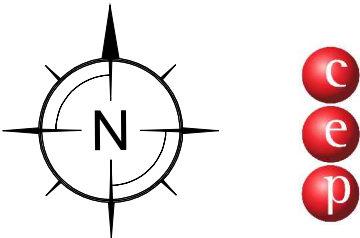


PROPOSED SITE PLAN
(Scale 1:500)

Key	
	Roofs 770m ²
	Proposed permeable paving 1021m ²
	Proposed permeable landscaping areas 865m ²

TITLE Drainage Areas Plan	
SCALE 1:500 @ A3	PROJECT No. 23192
REPORT TYPE DS	DRG. No. 6

Appendix 8
Preliminary Drainage Strategy Plan
and Calculations



Legend:

- Private Type 3 / 4 Foul Water Inspection Chamber To discharge via existing connection
- Existing Southern Water Sewer
- 1021m² Permeable surface Voids subbase Approx 420mm thick to accommodate stormwater from roofs and hard paved areas. Based on an assumed infiltration rate of 2x10⁻⁶m/s
- Proposed roof area of 770m²

Assumed existing combined connection to public foul sewer in North End Road. To be confirmed by drainage survey prior to detailed design

TITLE Preliminary Drainage Strategy Plan			
SCALE 1:500 @ A3		PROJECT No. 23192	
REPORT TYPE DS		DRG. No. 5	

The Civil Engineering Practice					Page 1																																																																																																																																																																																																																			
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Innovyze			Source Control 2019.1																																																																																																																																																																																																																					
Summary of Results for 100 year Return Period (+40%) Half Drain Time : 1061 minutes. <table><thead><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr></thead><tbody><tr><td>15 min Summer</td><td>5.588</td><td>0.138</td><td>1.0</td><td>41.1</td><td>O K</td></tr><tr><td>30 min Summer</td><td>5.635</td><td>0.185</td><td>1.0</td><td>55.1</td><td>O K</td></tr><tr><td>60 min Summer</td><td>5.685</td><td>0.235</td><td>1.0</td><td>70.0</td><td>O K</td></tr><tr><td>120 min Summer</td><td>5.735</td><td>0.285</td><td>1.0</td><td>85.0</td><td>Flood Risk</td></tr><tr><td>180 min Summer</td><td>5.762</td><td>0.312</td><td>1.0</td><td>92.8</td><td>Flood Risk</td></tr><tr><td>240 min Summer</td><td>5.777</td><td>0.327</td><td>1.0</td><td>97.5</td><td>Flood Risk</td></tr><tr><td>360 min Summer</td><td>5.796</td><td>0.346</td><td>1.0</td><td>103.1</td><td>Flood Risk</td></tr><tr><td>480 min 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Date 07/11/2019 File 1 IN 100 PLUS 40.SRCX		Designed by MK Checked by			
Innovyze		Source Control 2019.1			
Summary of Results for 100 year Return Period (+40%)					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	5.658	0.208	1.0	61.9	O K
60 min Winter	5.715	0.265	1.0	78.8	Flood Risk
120 min Winter	5.772	0.322	1.0	95.8	Flood Risk
180 min Winter	5.803	0.353	1.0	105.0	Flood Risk
240 min Winter	5.821	0.371	1.0	110.6	Flood Risk
360 min Winter	5.845	0.395	1.0	117.5	Flood Risk
480 min Winter	5.858	0.408	1.0	121.5	Flood Risk
600 min Winter	5.865	0.415	1.0	123.6	Flood Risk
720 min Winter	5.868	0.418	1.0	124.5	Flood Risk
960 min Winter	5.867	0.417	1.0	124.1	Flood Risk
1440 min Winter	5.850	0.400	1.0	119.1	Flood Risk
2160 min Winter	5.822	0.372	1.0	110.8	Flood Risk
2880 min Winter	5.791	0.341	1.0	101.4	Flood Risk
4320 min Winter	5.726	0.276	1.0	82.2	Flood Risk
5760 min Winter	5.666	0.216	1.0	64.2	O K
7200 min Winter	5.613	0.163	1.0	48.4	O K
8640 min Winter	5.568	0.118	1.0	35.2	O K
10080 min Winter	5.533	0.083	1.0	24.7	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	83.917	0.0	37		
60 min Winter	54.074	0.0	66		
120 min Winter	33.635	0.0	124		
180 min Winter	25.091	0.0	182		
240 min Winter	20.228	0.0	240		
360 min Winter	14.907	0.0	358		
480 min Winter	11.995	0.0	472		
600 min Winter	10.125	0.0	586		
720 min Winter	8.810	0.0	700		
960 min Winter	7.068	0.0	918		
1440 min Winter	5.171	0.0	1184		
2160 min Winter	3.774	0.0	1624		
2880 min Winter	3.015	0.0	2076		
4320 min Winter	2.192	0.0	2940		
5760 min Winter	1.746	0.0	3744		
7200 min Winter	1.464	0.0	4472		
8640 min Winter	1.268	0.0	5184		
10080 min Winter	1.124	0.0	5752		
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Innovyze Source Control 2019.1		

Model Details

Storage is Online Cover Level (m) 6.000

Infiltration Blanket Structure

Infiltration Coefficient Base (m/hr)	0.00720	Diameter/Width (m)	31.5
Safety Factor	2.0	Length (m)	31.5
Porosity	0.30	Cap Volume Depth (m)	0.460
Invert Level (m)	5.450		

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Appendix 9

Drainage Maintenance Schedule

Drainage Maintenance Schedule



The Civil Engineering Practice
11 Tungsten Building
George Street
Fishersgate
Sussex
BN41 1RA
01273 424424
reception@civil.co.uk
www.civil.co.uk

Project	Stakers Farm Barns
Project Number	23192

By Martin Kempshall

Date 07 November 2019

1 Schedule of Maintenance

- 1.1 Once appointed the Contractor will prepare a site specific method statement for the control of silt and other pollutants during construction. CIRIA Report C532, Control of water pollution from construction sites, provides further guidance on this.
- 1.2 The Contractor will maintain the proposed drainage system during construction and until the handing over of the site.
- 1.3 Upon completion management of the shared drainage facilities (where not adopted) will be passed on to a Management Company appointed by the developer on behalf of the new residents.
- 1.4 In the event that the Management Company becomes unable to discharge its duties within two years of first appointment the developer will endeavour to appoint an alternative on behalf of the residents.
- 1.5 Maintenance of individual property drainage connections is the responsibility of the individual property owners.
- 1.6 The following maintenance schedule details the typical tasks to be undertaken at different intervals.

Maintenance Schedule	Required Action	Frequency
Regular Maintenance	Remove sediment and debris from silt trap chambers, channel drains and inlet chambers	6 monthly
	Surface and foul water pipework – jetting / rodding	Every 2 years or as required
	Manage other vegetation and remove nuisance plants – aesthetics	As required
	Visual inspection of permeable paving for defects and settlement	Annually
	Sweeping / brushing of permeable paving	Every 2 years



ISO
9001 : 2008
REGISTERED
Cert No. 14127180

Maintenance Schedule	Required Action	Frequency
Corrective Maintenance	Remove debris / blockages to silt traps / channel drains	As required
	Repairs to access chambers / manhole covers	As required
	Replace any broken permeable blocks / surface, remedial works to any depressions or rutting	As required
	Inspect inlet, outlet from downpipe and gullies for blockages, standing water and clear	As required

Indicative Schedule of Maintenance for the Proposed Drainage System

2 Financing

- 2.1 The regular maintenance of all private drainage, channels, gutters, rainwater pipes and connections will be the responsibility of the individual homeowner.
- 2.2 The regular and corrective maintenance of all shared elements of the drainage system will be managed and funded through the Management Company on behalf of the Residents.

Inspection / Action Required	Gullies, Channels and Gutters	Permeable Surface	Surface Water Pipework
After leaf fall in Autumn	✓		
6 Months	✓	✓	
1 Year		✓	
2 Years			✓

Drainage System Maintenance Summary