

## **APPENDIX A – TOPOGRAPHICAL SURVEY**





**Notes**

- Datum : Ordnance Survey Level datum via OS Active GPS Network
- Survey Grid : Ordnance Survey National Grid Co-ordinates derived via OS Active GPS Network.
- Survey contents correct as of date of survey and survey undertaken to agreed specification
- All critical dimensions to be checked prior to site works
- All kerb levels shown are channel levels
- Drainage and Service covers :  
Covers buried or obscured at the time of the survey are not shown. Manholes have not been entered for safety reasons and all pipe diameters are estimated from the surface. Drainage pipe diameters are in millimetres, eg. D100 means a 100mm diameter pipe. The flow type stated is based on visual evidence seen from the surface at the time of the survey. All internal manhole details should be confirmed by the contractor on site prior to site works.
- Trees :  
For concentric spread trees the spread plotted is an average value drawn to scale to the nearest metre. The minimum individual diameter surveyed is 0.15m at 1m up the trunk from the ground. Trunk diameters are not plotted to size. General species are only stated where noted. A qualified arboriculturalist should be consulted for species type and condition. Heights (when requested) are approximate to the nearest metre.

**Legend of Abbreviations**

AV	Air Valve	ST/W	Stone Wall
BEDS	Flower Beds	SV	Sluice Valve
BK/W	Brick Wall	SVP	Soil Vent Pipe
BLK/W	Black Wall	TEL	Call Box (telephone)
BOL	Bollard	TH	Threshold Level
BS	Brick Setts	TL	Traffic Light
BT	British Telecom	TP	Telegraph Pole
BW	Barbed Wire Fence	TV	Cable Television
CB	Close Board Fence	UTL	Unable to Lift (Cover)
CCTV	Closed Circuit Television Camera	V	Valve (Unknown Type)
CEL	Cellar Cover	VP	Vent Pipe
CGI	Corrugated Iron Fence	W	Top of Wall Level
CL	Cover Level	W:HT	Water Level
C/L	Chain Link Fence	WM	Water Meter
CONC	Concrete Surface	W/M	Wire Mesh Fence
CONC/P	Concrete Panel Fence	WO	Washout Valve
CP	Chestnut Paling Fence	WV	Water Valve
CRB	Crash Barrier		
D	Diameter (trees in metres / drainage pipes in millimetres)		
DK	Drop Kerb		
E	Electricity Cover		
EP	Electricity Pole		
ER	Earth Rod		
FFL	Finished Floor Level		
FH	Fire Hydrant		
FLAG	Flag Pole		
FLP	Floodlight Post		
FP	Footpath		
G	Gully		
GV	Gas Valve		
HW	Head Wall		
IC	Inspection Cover		
IL	Invert Level		
IR	Iron Railing		
LL	Larch-lap Fence		
LP	Lamp Post		
MB	Mulchhole Tree		
MH	Manhole		
MP	Marker Post		
MP-E	Marker Post - Electric		
MP-G	Marker Post - Gas		
MP-T	Marker Post - Telephone		
MP-W	Marker Post - Water		
NAME	Road Nameplate		
PAL	Palisade Fence		
POK	Post and Rail Fence		
PR	Post and Wire Fence		
PW	Post and Wire Fence		
RE	Road Sign		
RET	Retaining		
RS	Road Sign		
RWP	Rainwater Pipe		
SCX	Stop Cock		
SOF	Soffit Level		

**Tree Abbreviations**

ALD	Alder	BCH	Beech
CED	Cedar	CHE	Cherry
CYP	Cypress	EUC	Eucalyptus
FAC	False Acacia	FRT	Fruit
HAW	Hawthorn	HOL	Holly
HOAK	Holm Oak	HORN	Hornbeam
HCH	Horse Chestnut	LAR	Larch
LAU	Laurel	MAP	Maple
PLN	London Plane	POP	Poplar
RHO	Rhododendron	ROW	Rowan
SAL	Sallow	SB	Silver Birch
SPR	Spruce	SCH	Sweet Chestnut
WBM	Whitebeam	WIL	Willow

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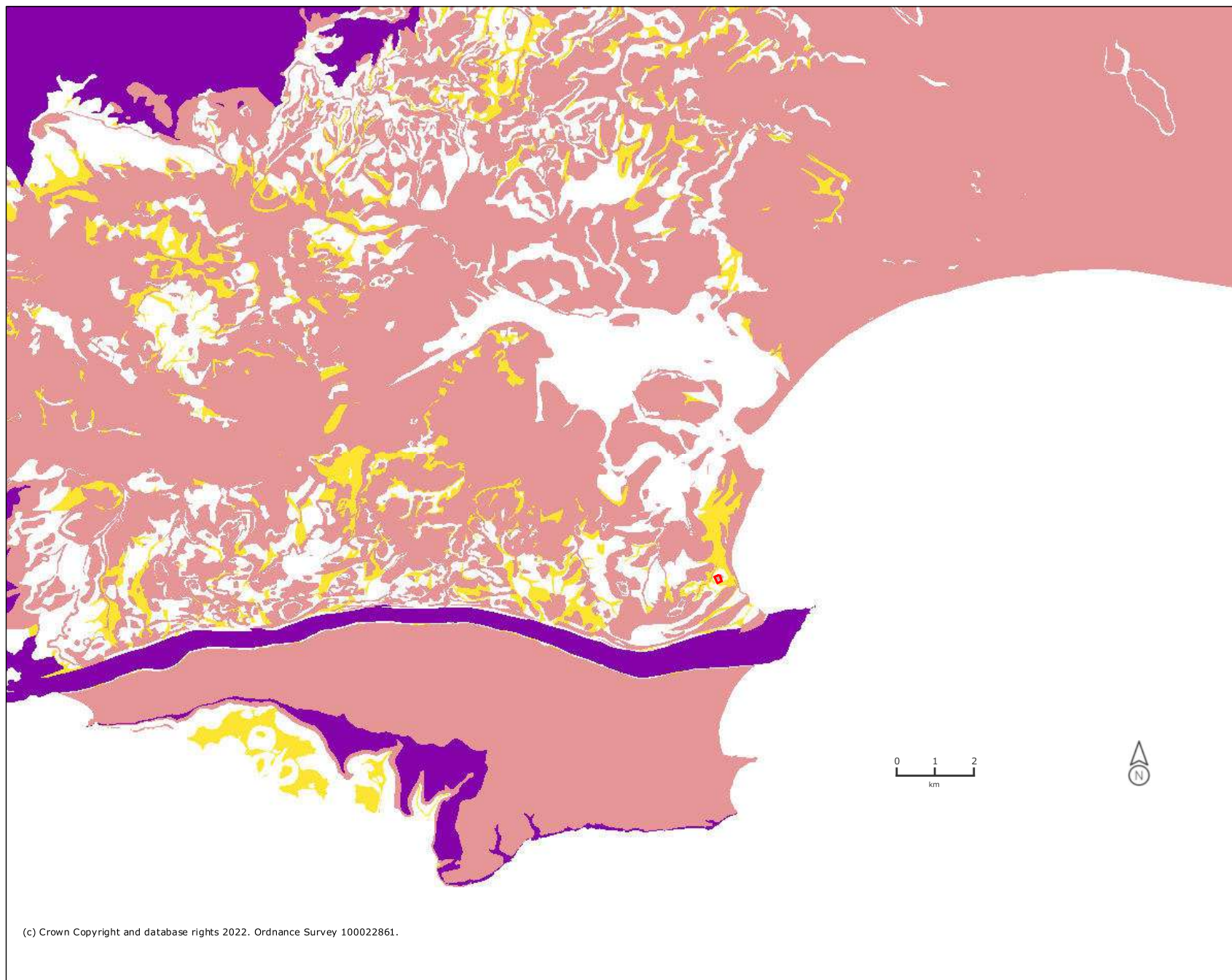
Telephone: 01386-555486 Telephone: 01752-837382  
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Title		Knoll House Hotel, Ferry Road, Studland, Dorset BH19 3AH Topographic Survey	
Client		Knoll House Hotel	
Date	December 2017	Drawing No. -	
Plot scale	1 : 250 on A0 Sheet	Revision	
Digital scale	-		
Surveyed	SJG/LBM	Checked	JKW
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## **APPENDIX B – MAGIC MAP GEOLOGY INFORMATION**

# Aquifer Designation Map



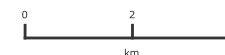
## Legend Aquifer Designation Map (Bedrock) (England)

- Principal
- Secondary A
- Secondary B
- Secondary (undifferentiated)
- Unproductive

## Aquifer Designation Map (Superficial Drift) (England)

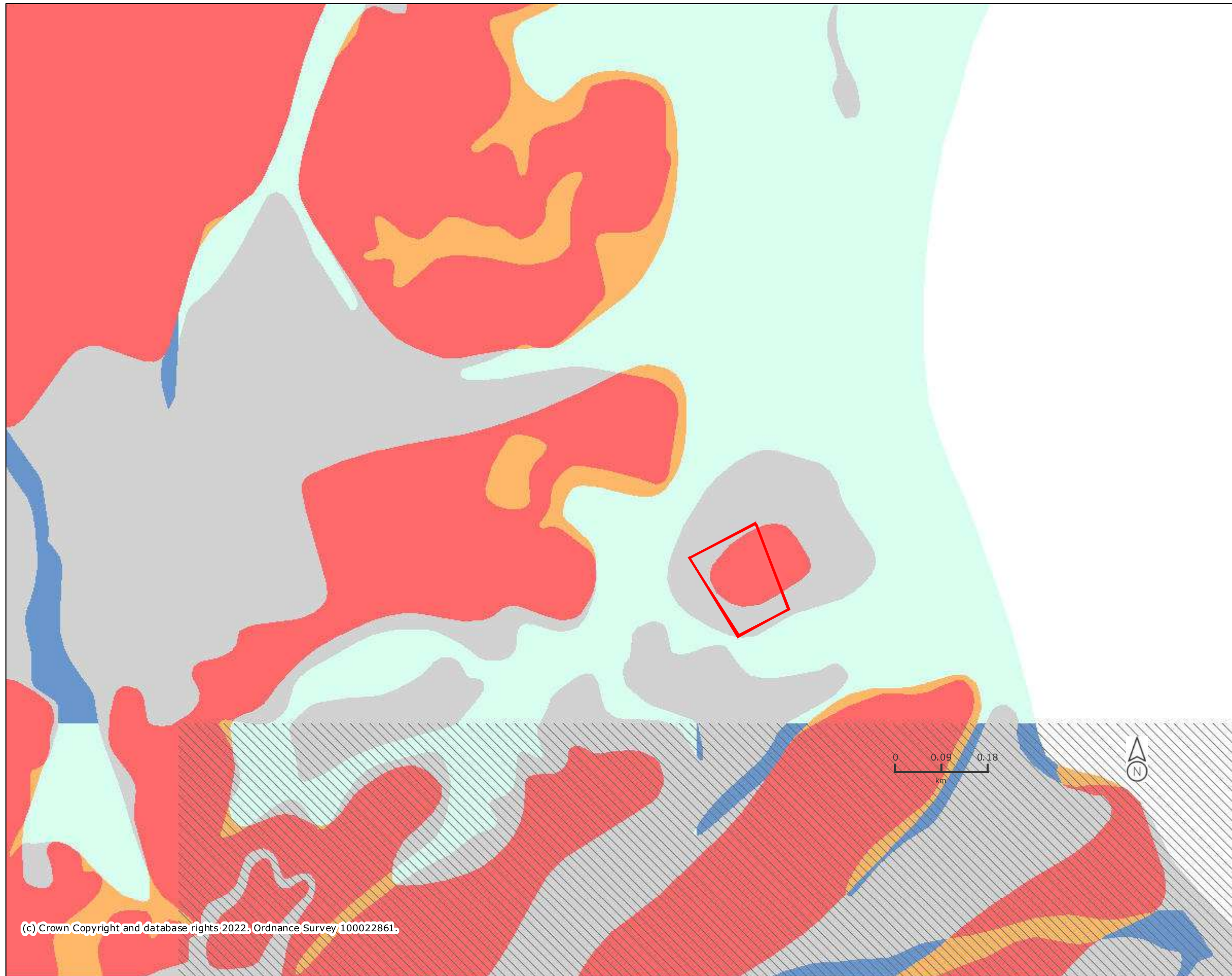
- Principal
- Secondary A
- Secondary B
- Secondary (undifferentiated)
- Unknown (lakes+landslip)
- Unproductive

Projection = OSGB36  
 xmin = 375500  
 ymin = 73040  
 xmax = 425900  
 ymax = 97830







Map produced by MAGiC on 5 October, 2022.  
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**Legend**  
**Groundwater Vulnerability Map (England)**

-  Local Information
-  Soluble Rock Risk
-  High
-  Medium - High
-  Medium
-  Medium - Low
-  Low
-  Unproductive

Projection = OSGB36  
 xmin = 401000  
 ymin = 82520  
 xmax = 404700  
 ymax = 84380



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**APPENDIX C – PROPOSED BLOCK PLAN**  
**DRAWING 4561-AWW-SI-ZZ-DR-A-20004**

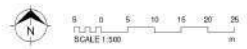




**Notes**  
 Do not scale from this document unless for the purposes of planning applications where available it provides. This is a design document only. All dimensions to be verified on site prior to construction. Report all dimensions or omissions to the Document Originator immediately. This document to be read in conjunction with relevant documents, drawings and standards.

PSD 06/10/22 Planning Block RM MAG

File	Date	Notes	Drawn	Checked
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Document Originator

**AWW**

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 Plymouth East Quay House, PL1 8PQ 01752 281 282  
 Bristol 1001 - 1004, 49-52 Station Street, BS1 1QB 0117 925 2000  
 RIBA Chartered Practice www.aww.co.uk

Client  
 Kingfisher Resorts Studland Ltd

AWW Project Number: 4561 Project Stage: STAGE 2

Project Title: Knoll Houses Studland

Title: Proposed Block Plan

Scale @ A1: 1:500 Document Status: PLANNING

Project	Discipline	Volume	Level	Type	Phase	Number	Rev
4561	AWW	SI	ZZ	DR	A	20004	PO2



## **APPENDIX D – ENVIRONMENT AGENCY FLOOD MAP FOR PLANNING**



# Flood map for planning

Your reference  
**EA Flood Map**

Location (easting/northing)  
**403085/83275**

Created  
**6 Oct 2022 10:21**

**Your selected location is in flood zone 1, an area with a low probability of flooding.**

You will need to do a flood risk assessment if your site is **any of the following:**

- bigger than 1 hectare (ha)
- In an area with critical drainage problems as notified by the Environment Agency
- identified as being at increased flood risk in future by the local authority's strategic flood risk assessment
- at risk from other sources of flooding (such as surface water or reservoirs) and its development would increase the vulnerability of its use (such as constructing an office on an undeveloped site or converting a shop to a dwelling)

## Notes

The flood map for planning shows river and sea flooding data only. It doesn't include other sources of flooding. It is for use in development planning and flood risk assessments.

This information relates to the selected location and is not specific to any property within it. The map is updated regularly and is correct at the time of printing.

Flood risk data is covered by the Open Government Licence **which** sets out the terms and conditions for using government data. <https://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/>

Use of the address and mapping data is subject to Ordnance Survey public viewing terms under Crown copyright and database rights 2021 OS 100024198. <https://flood-map-for-planning.service.gov.uk/os-terms>



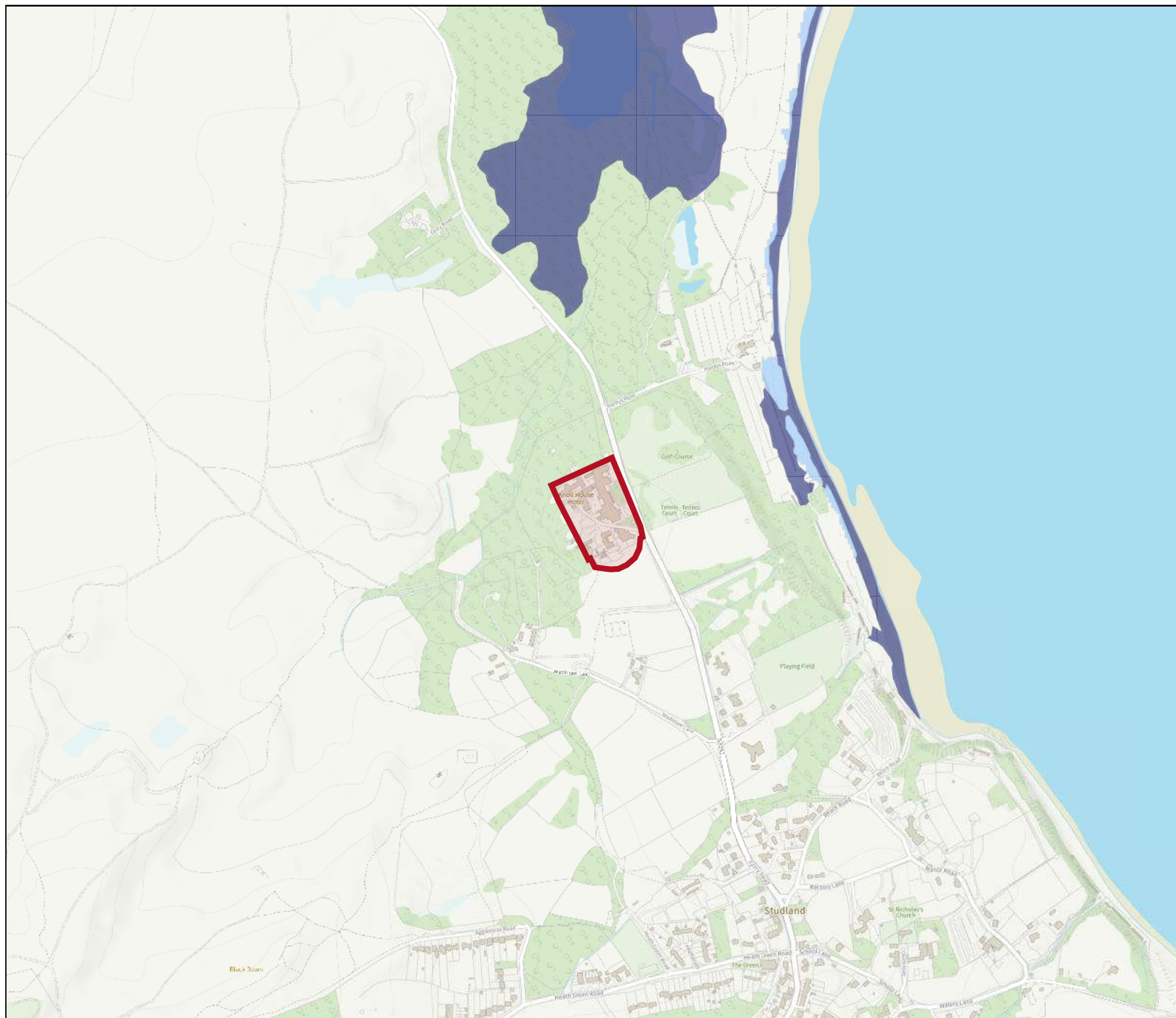
## Flood map for planning






Your reference  
**EA Flood Map**

Location (easting/northing)  
**403085/83275**

Scale  
**1:10000**

Created  
**6 Oct 2022 10:21**



-  Selected area
-  Flood zone 3
-  Flood zone 3: areas benefiting from flood defences
-  Flood zone 2
-  Flood zone 1
-  Flood defence
-  Main river
-  Water storage area

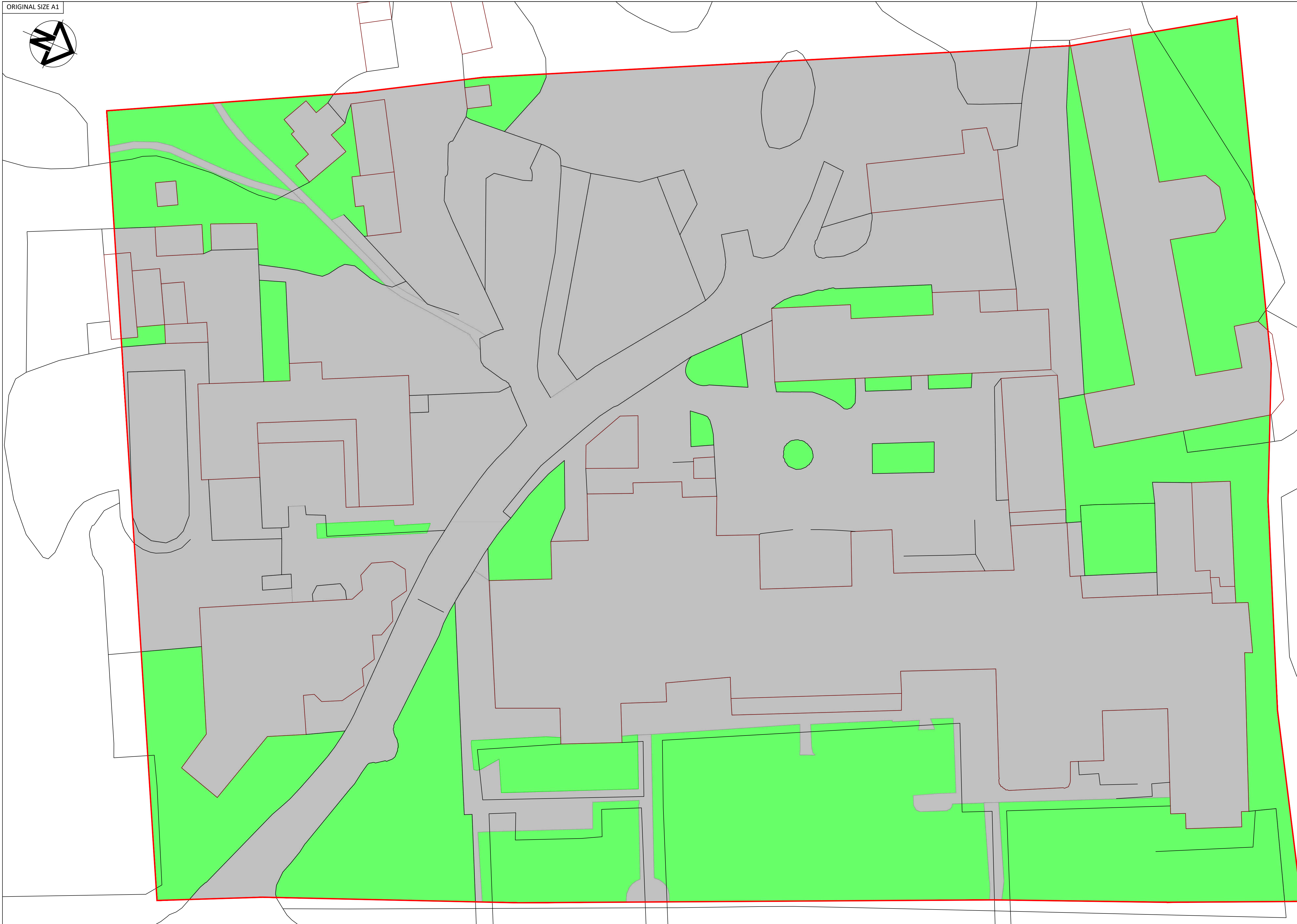
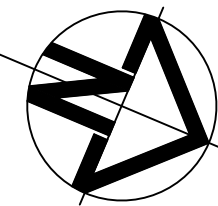
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**APPENDIX E – EXISTING RUNOFF RATES**

**DRAWING KHS-PPC-XX-XX-DR-C-0203**





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- 1.4. ALL DIMENSIONS IN mm UNLESS NOTED OTHERWISE.
- 1.5. ALL LEVELS IN METERS.
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**LEGEND**

- SITE BOUNDARY
- PERMEABLE AREA
- IMPERMEABLE AREA

P2	ISSUED FOR INFORMATION.				
OT	21.10.22	MK	21.10.22	AD	21.10.22
P1	ISSUED FOR INFORMATION.				
BF	10.10.22	MK	10.10.22	AD	10.10.22
REV.	REVISION NOTE/COMMENT				
DRW BY	DATE	CCK BY	DATE	APP BY	DATE

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Client  
**KINGFISHER RESORTS  
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Project  
**KNOLL HOUSE, SWANAGE**

Drawing  
**EXISTING RUNOFF RATES**

Drawn BF	Date OCT 2022
Patrick Parsons Project No. 11088	Scale @ A1 1:250
Status Description <b>INFORMATION</b>	Status <b>S2</b>
Drawing No. (project-ordinator-volume-level-type-role-number) KHS-PPC-XX-XX-DR-C-0203	Revision <b>P2</b>

**PRE DEVELOPMENT PEAK RUN-OFF RATES**

$Q_p = 3.61 \times C_v \times i \times A_i$

$C_v =$  VOLUMETRIC RUN-OFF COEFFICIENT = 0.75  
 $A_i =$  IMPERMEABLE AREA = 1.23 ha  
 $i =$  RAINFALL INTENSITY

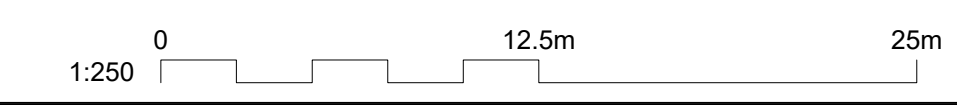
$i$  (1 in 1Y) = 65 mm/hr  
 $i$  (1 in 2 Y) = 84 mm/hr  
 $i$  (1 in 30 Y) = 158 mm/hr  
 $i$  (1 in 100 Y) = 204 mm/hr

$Q_p$  (1 in 1Y) =  $3.61 \times 0.75 \times 32 \times 1.23 = 216$  l/s  
 $Q_p$  (1 in 2 Y) =  $3.61 \times 0.75 \times 41 \times 1.23 = 280$  l/s  
 $Q_p$  (1 in 30 Y) =  $3.61 \times 0.75 \times 78 \times 1.23 = 526$  l/s  
 $Q_p$  (1 in 100 Y) =  $3.61 \times 0.75 \times 100 \times 1.23 = 679$  l/s

**PRE DEVELOPMENT AREAS**

TOTAL SITE AREA = 1.72 Ha  
 PERMEABLE AREA = 0.49 Ha  
 IMPERMEABLE AREA = 1.23 Ha


FERRY ROAD - B3351





## **APPENDIX F – MICRODRAINAGE CALCULATIONS**



Patrick Parsons Limited		Page 1
Waterloo House Thornton Street Newcastle Upon Tyne, NE1 4AP		
Date 06/10/2022 14:11 File	Designed by brandon.fair Checked by	
Innovyze	Source Control 2020.1	

ICP SUDS Mean Annual Flood

Input

Return Period (years)	2	Soil	0.450
Area (ha)	1.720	Urban	0.000
SAAR (mm)	867	Region Number	Region 7


**Results 1/s**

QBAR Rural	9.7
QBAR Urban	9.7

Q2 years 8.6

Q1 year	8.2
Q30 years	22.0
Q100 years	31.0



Patrick Parsons Limited		Page 1
Waterloo House Thornton Street Newcastle Upon Tyne, NE1 4AP	Knoll House	
Date 19/10/2022 17:26 File KNOLL HOUSE MD.MDX	Designed by BF Checked by MK	
Innovyze	Network 2020.1	

STORM SEWER DESIGN by the Modified Rational Method

Design Criteria for Storm

Pipe Sizes STANDARD Manhole Sizes STANDARD

FSR Rainfall Model - England and Wales

Return Period (years)	30	PIMP (%)	100
M5-60 (mm)	17.900	Add Flow / Climate Change (%)	0
Ratio R	0.337	Minimum Backdrop Height (m)	0.200
Maximum Rainfall (mm/hr)	50	Maximum Backdrop Height (m)	1.500
Maximum Time of Concentration (mins)	30	Min Design Depth for Optimisation (m)	1.200
Foul Sewage (l/s/ha)	0.000	Min Vel for Auto Design only (m/s)	1.00
Volumetric Runoff Coeff.	0.750	Min Slope for Optimisation (1:X)	500

Designed with Level Soffits

Time Area Diagram for Storm




Time (mins)	Area (ha)	Time (mins)	Area (ha)	Time (mins)	Area (ha)
0-4	0.059	4-8	0.324	8-12	0.122

Total Area Contributing (ha) = 0.505

Total Pipe Volume (m³) = 18.567


Network Design Table for Storm

« - Indicates pipe capacity < flow












PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
1.000	14.078	0.249	56.6	0.024	4.00	0.0	0.600	o	225	Pipe/Conduit	
1.001	21.680	0.094	229.4	0.055	0.00	0.0	0.600	o	225	Pipe/Conduit	
2.000	52.934	0.098	540.0	0.151	4.00	0.0	0.600	o	225	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	E I.Area (ha)	E Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
1.000	50.00	4.13	23.100	0.024	0.0	0.0	0.0	1.74	69.2	3.3
1.001	50.00	4.56	23.000	0.079	0.0	0.0	0.0	0.86	34.2	10.7
2.000	50.00	5.59	23.150	0.151	0.0	0.0	0.0	0.56	22.1	20.4

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Waterloo House Thornton Street Newcastle Upon Tyne, NE1 4AP	Knoll House	
Date 19/10/2022 17:26 File KNOLL HOUSE MD.MDX	Designed by BF Checked by MK	
Innovyze	Network 2020.1	


Network Design Table for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
3.000	11.069	0.189	58.5	0.046	4.00	0.0	0.600	o	225	Pipe/Conduit	
1.002	25.371	0.113	225.0	0.016	0.00	0.0	0.600	o	225	Pipe/Conduit	
4.000	13.916	0.238	58.5	0.046	4.00	0.0	0.600	o	225	Pipe/Conduit	
1.003	26.476	0.118	225.0	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	
5.000	13.887	0.237	58.5	0.049	4.00	0.0	0.600	o	225	Pipe/Conduit	
1.004	25.292	0.112	225.0	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	
1.005	37.169	0.165	225.0	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	
1.006	35.251	0.157	225.0	0.047	0.00	0.0	0.600	o	225	Pipe/Conduit	
6.000	9.469	0.164	57.7	0.042	4.00	0.0	0.600	o	225	Pipe/Conduit	
1.007	16.876	0.075	225.0	0.031	0.00	0.0	0.600	o	225	Pipe/Conduit	
1.008	91.971	0.409	225.0	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
3.000	50.00	4.11	23.000	0.046	0.0	0.0	0.0	1.71	68.1	6.2
1.002	50.00	6.07	22.900	0.291	0.0	0.0	0.0	0.87	34.5«	39.4
4.000	50.00	4.14	23.000	0.046	0.0	0.0	0.0	1.71	68.1	6.2
1.003	50.00	6.58	22.785	0.337	0.0	0.0	0.0	0.87	34.5«	45.6
5.000	50.00	4.14	23.000	0.049	0.0	0.0	0.0	1.71	68.1	6.6
1.004	50.00	7.07	22.670	0.386	0.0	0.0	0.0	0.87	34.5«	52.2
1.005	50.00	7.78	22.555	0.386	0.0	0.0	0.0	0.87	34.5«	52.2
1.006	50.00	8.46	22.390	0.433	0.0	0.0	0.0	0.87	34.5«	58.6
6.000	50.00	4.09	22.500	0.042	0.0	0.0	0.0	1.72	68.6	5.7
1.007	50.00	8.78	22.235	0.505	0.0	0.0	0.0	0.87	34.5«	68.4
1.008	50.00	10.25	22.085	0.505	0.0	0.0	0.0	1.04	73.8	68.4



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Waterloo House Thornton Street Newcastle Upon Tyne, NE1 4AP	Knoll House	
Date 19/10/2022 17:26 File KNOLL HOUSE MD.MDX	Designed by BF Checked by MK	
Innovyze	Network 2020.1	

Area Summary for Storm

Pipe Number	PIMP Type	PIMP Name	PIMP (%)	Gross Area (ha)	Imp. Area (ha)	Pipe Total (ha)
1.000	User	-	100	0.024	0.024	0.024
1.001	User	-	100	0.055	0.055	0.055
2.000	User	-	100	0.086	0.086	0.086
	User	-	100	0.065	0.065	0.151
3.000	User	-	100	0.046	0.046	0.046
1.002	User	-	100	0.016	0.016	0.016
4.000	User	-	100	0.046	0.046	0.046
1.003	-	-	100	0.000	0.000	0.000
5.000	User	-	100	0.049	0.049	0.049
1.004	-	-	100	0.000	0.000	0.000
1.005	-	-	100	0.000	0.000	0.000
1.006	User	-	100	0.047	0.047	0.047
6.000	User	-	100	0.042	0.042	0.042
1.007	User	-	100	0.031	0.031	0.031
1.008	-	-	100	0.000	0.000	0.000
				Total	Total	Total
				0.505	0.505	0.505

Free Flowing Outfall Details for Storm


Outfall Pipe Number	Outfall Name	C. Level (m)	I. Level (m)	Min I. Level (m)	D,L (mm)	W (mm)
1.008		24.000	21.676	0.000	0	0

Simulation Criteria for Storm

Volumetric Runoff Coeff	0.750	Additional Flow - % of Total Flow	0.000
Areal Reduction Factor	1.000	MADD Factor * 10m <sup>3</sup> /ha Storage	2.000
Hot Start (mins)	0	Inlet Coefficient	0.800
Hot Start Level (mm)	0	Flow per Person per Day (l/per/day)	0.000
Manhole Headloss Coeff (Global)	0.500	Run Time (mins)	60
Foul Sewage per hectare (l/s)	0.000	Output Interval (mins)	1
Number of Input Hydrographs	0	Number of Storage Structures	5
Number of Online Controls	1	Number of Time/Area Diagrams	5
Number of Offline Controls	0	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model	FSR	Profile Type	Summer
Return Period (years)	30	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	17.900	Storm Duration (mins)	30
Ratio R	0.337		

Patrick Parsons Limited		Page 4
Waterloo House Thornton Street Newcastle Upon Tyne, NE1 4AP	Knoll House	
Date 19/10/2022 17:26 File KNOLL HOUSE MD.MDX	Designed by BF Checked by MK	
Innovyze	Network 2020.1	

Online Controls for Storm

Hydro-Brake® Optimum Manhole: 8, DS/PN: 1.008, Volume (m³): 1.8


Unit Reference	MD-SHE-0124-9700-2340-9700
Design Head (m)	2.340
Design Flow (l/s)	9.7
Flush-Flo™	Calculated
Objective	Minimise upstream storage
Application	Surface
Sump Available	Yes
Diameter (mm)	124
Invert Level (m)	22.160
Minimum Outlet Pipe Diameter (mm)	150
Suggested Manhole Diameter (mm)	1200

Control Points	Head (m)	Flow (l/s)
Design Point (Calculated)	2.340	9.7
Flush-Flo™	0.543	8.6
Kick-Flo®	1.110	6.8
Mean Flow over Head Range	-	7.9

The hydrological calculations have been based on the Head/Discharge relationship for the Hydro-Brake® Optimum as specified. Should another type of control device other than a Hydro-Brake Optimum® be utilised then these storage routing calculations will be invalidated

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	4.4	1.200	7.1	3.000	10.9	7.000	16.3
0.200	7.3	1.400	7.6	3.500	11.7	7.500	16.9
0.300	8.1	1.600	8.1	4.000	12.5	8.000	17.4
0.400	8.5	1.800	8.6	4.500	13.2	8.500	17.9
0.500	8.6	2.000	9.0	5.000	13.9	9.000	18.4
0.600	8.6	2.200	9.4	5.500	14.5	9.500	18.9
0.800	8.3	2.400	9.8	6.000	15.2		
1.000	7.6	2.600	10.2	6.500	15.7		



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Storage Structures for Storm

Porous Car Park Manhole: PP1, DS/PN: 1.000

Infiltration Coefficient Base (m/hr)	0.00000	Width (m)	3.0
Membrane Percolation (mm/hr)	1000	Length (m)	100.0
Max Percolation (l/s)	83.3	Slope (1:X)	100.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	23.100	Cap Volume Depth (m)	0.300

Porous Car Park Manhole: PP2, DS/PN: 3.000

Infiltration Coefficient Base (m/hr)	0.00000	Width (m)	20.0
Membrane Percolation (mm/hr)	1000	Length (m)	20.0
Max Percolation (l/s)	111.1	Slope (1:X)	100.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	23.000	Cap Volume Depth (m)	0.300

Porous Car Park Manhole: PP3, DS/PN: 4.000


Infiltration Coefficient Base (m/hr)	0.00000	Width (m)	25.0
Membrane Percolation (mm/hr)	1000	Length (m)	28.0
Max Percolation (l/s)	194.4	Slope (1:X)	100.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	23.000	Cap Volume Depth (m)	0.300

Porous Car Park Manhole: PP4, DS/PN: 5.000

Infiltration Coefficient Base (m/hr)	0.00000	Width (m)	20.0
Membrane Percolation (mm/hr)	1000	Length (m)	20.0
Max Percolation (l/s)	111.1	Slope (1:X)	100.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	23.000	Cap Volume Depth (m)	0.300

Porous Car Park Manhole: PP5, DS/PN: 6.000

Infiltration Coefficient Base (m/hr)	0.00000	Width (m)	2.0
Membrane Percolation (mm/hr)	1000	Length (m)	200.0
Max Percolation (l/s)	111.1	Slope (1:X)	100.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	22.500	Cap Volume Depth (m)	0.300

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1 year Return Period Summary of Critical Results by Maximum Level (Rank 1)  
for Storm

Simulation Criteria

Areal Reduction Factor 1.000      Additional Flow - % of Total Flow 0.000  
Hot Start (mins) 0      MADD Factor \* 10m<sup>3</sup>/ha Storage 2.000  
Hot Start Level (mm) 0      Inlet Coefficient 0.800  
Manhole Headloss Coeff (Global) 0.500      Flow per Person per Day (l/per/day) 0.000  
Foul Sewage per hectare (l/s) 0.000

Number of Input Hydrographs 0      Number of Storage Structures 5  
Number of Online Controls 1      Number of Time/Area Diagrams 5  
Number of Offline Controls 0      Number of Real Time Controls 0

Synthetic Rainfall Details


Rainfall Model      FSR      Ratio R 0.344  
Region England and Wales Cv (Summer) 0.750  
M5-60 (mm)      18.000 Cv (Winter) 0.840

Margin for Flood Risk Warning (mm)      300.0  
Analysis Timestep 2.5 Second Increment (Extended)  
DTS Status      ON  
DVD Status      OFF  
Inertia Status      OFF

Profile(s)      Summer and Winter  
Duration(s) (mins) 15, 30, 60, 120, 240, 360, 480, 960, 1440  
Return Period(s) (years)      1, 30, 100  
Climate Change (%)      0, 0, 40


PN	US/MH Name	Event	US/CL (m)	Water Surcharged			Flow / Cap.
				Level (m)	Depth (m)	Volume (m <sup>3</sup> )	
1.000	PP1	60 minute 1 year Winter I+0%	24.500	23.122	-0.203	0.000	0.02
1.001	1	120 minute 1 year Winter I+0%	24.500	23.050	-0.175	0.000	0.11
2.000	9	120 minute 1 year Winter I+0%	26.325	23.221	-0.154	0.000	0.22
3.000	PP2	30 minute 1 year Winter I+0%	24.500	23.031	-0.194	0.000	0.05
1.002	2	120 minute 1 year Winter I+0%	24.870	22.986	-0.139	0.000	0.31
4.000	PP3	120 minute 1 year Winter I+0%	25.000	23.023	-0.202	0.000	0.02
1.003	3	120 minute 1 year Winter I+0%	25.000	22.877	-0.133	0.000	0.35
5.000	PP4	30 minute 1 year Winter I+0%	25.000	23.033	-0.192	0.000	0.05
1.004	4	120 minute 1 year Winter I+0%	25.000	22.767	-0.128	0.000	0.39
1.005	5	240 minute 1 year Winter I+0%	25.000	22.737	-0.043	0.000	0.32
1.006	6	240 minute 1 year Winter I+0%	25.000	22.718	0.103	0.000	0.33
6.000	PP5	240 minute 1 year Winter I+0%	25.000	22.696	-0.029	0.000	0.03
1.007	7	240 minute 1 year Winter I+0%	25.000	22.697	0.237	0.000	0.30
1.008	8	240 minute 1 year Winter I+0%	23.100	22.684	0.299	0.000	0.12



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1 year Return Period Summary of Critical Results by Maximum Level (Rank 1)  
for Storm

PN	US/MH Name	Overflow (l/s)	Half Drain Pipe		Status
			Time (mins)	Flow (l/s)	
1.000	PP1		6	1.2	OK
1.001	1			3.5	OK
2.000	9			4.7	OK
3.000	PP2		7	2.6	OK
1.002	2			9.9	OK
4.000	PP3		13	1.3	OK
1.003	3			11.1	OK
5.000	PP4		7	3.1	OK
1.004	4			12.4	OK
1.005	5			10.6	OK
1.006	6			10.8	SURCHARGED*
6.000	PP5		19	1.6	OK
1.007	7			9.1	SURCHARGED*
1.008	8			8.5	SURCHARGED*

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30 year Return Period Summary of Critical Results by Maximum Level (Rank 1)  
for Storm

Simulation Criteria

Areal Reduction Factor 1.000      Additional Flow - % of Total Flow 0.000  
Hot Start (mins) 0      MADD Factor \* 10m<sup>3</sup>/ha Storage 2.000  
Hot Start Level (mm) 0      Inlet Coefficient 0.800  
Manhole Headloss Coeff (Global) 0.500      Flow per Person per Day (l/per/day) 0.000  
Foul Sewage per hectare (l/s) 0.000

Number of Input Hydrographs 0      Number of Storage Structures 5  
Number of Online Controls 1      Number of Time/Area Diagrams 5  
Number of Offline Controls 0      Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model      FSR      Ratio R 0.344  
Region England and Wales Cv (Summer) 0.750  
M5-60 (mm)      18.000 Cv (Winter) 0.840

Margin for Flood Risk Warning (mm)      300.0  
Analysis Timestep 2.5 Second Increment (Extended)  
DTS Status      ON  
DVD Status      OFF  
Inertia Status      OFF

Profile(s)      Summer and Winter  
Duration(s) (mins) 15, 30, 60, 120, 240, 360, 480, 960, 1440  
Return Period(s) (years)      1, 30, 100  
Climate Change (%)      0, 0, 40

PN	US/MH Name	Event	US/CL (m)	Level (m)	Water Surcharged Flooded			Flow / Cap.
					Depth (m)	Volume (m <sup>3</sup> )		
1.000	PP1	240 minute 30 year Winter I+0%	24.500	23.253	-0.072	0.000	0.02	
1.001	1	240 minute 30 year Winter I+0%	24.500	23.264	0.039	0.000	0.18	
2.000	9	30 minute 30 year Winter I+0%	26.325	23.281	-0.094	0.000	0.63	
3.000	PP2	240 minute 30 year Winter I+0%	24.500	23.247	0.022	0.000	0.05	
1.002	2	240 minute 30 year Winter I+0%	24.870	23.259	0.134	0.000	0.44	
4.000	PP3	240 minute 30 year Winter I+0%	25.000	23.230	0.005	0.000	0.06	
1.003	3	240 minute 30 year Winter I+0%	25.000	23.259	0.249	0.000	0.47	
5.000	PP4	240 minute 30 year Winter I+0%	25.000	23.214	-0.011	0.000	0.06	
1.004	4	240 minute 30 year Winter I+0%	25.000	23.260	0.365	0.000	0.51	
1.005	5	240 minute 30 year Winter I+0%	25.000	23.260	0.480	0.000	0.47	
1.006	6	240 minute 30 year Winter I+0%	25.000	23.237	0.622	0.000	0.43	
6.000	PP5	240 minute 30 year Winter I+0%	25.000	23.169	0.444	0.000	0.13	
1.007	7	240 minute 30 year Winter I+0%	25.000	23.220	0.760	0.000	0.32	
1.008	8	60 minute 30 year Summer I+0%	23.100	23.100	0.715	0.000	0.12	



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30 year Return Period Summary of Critical Results by Maximum Level (Rank 1)  
 for Storm

		<b>Half Drain Pipe</b>			
	<b>US/MH</b>	<b>Overflow</b>	<b>Time</b>	<b>Flow</b>	
<b>PN</b>	<b>Name</b>	<b>(l/s)</b>	<b>(mins)</b>	<b>(l/s)</b>	<b>Status</b>
1.000	PP1		88	1.4	OK
1.001	1			5.7	SURCHARGED
2.000	9			13.4	OK
3.000	PP2		116	2.8	SURCHARGED
1.002	2			13.9	SURCHARGED
4.000	PP3		100	3.7	SURCHARGED
1.003	3			15.1	SURCHARGED
5.000	PP4		86	3.7	OK
1.004	4			16.1	SURCHARGED*
1.005	5			15.4	SURCHARGED*
1.006	6			13.9	SURCHARGED*
6.000	PP5		181	7.1	SURCHARGED
1.007	7			9.8	SURCHARGED*
1.008	8			8.4	FLOOD RISK*

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100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

Simulation Criteria

Areal Reduction Factor 1.000      Additional Flow - % of Total Flow 0.000  
Hot Start (mins) 0      MADD Factor \* 10m<sup>3</sup>/ha Storage 2.000  
Hot Start Level (mm) 0      Inlet Coefficient 0.800  
Manhole Headloss Coeff (Global) 0.500      Flow per Person per Day (l/per/day) 0.000  
Foul Sewage per hectare (l/s) 0.000

Number of Input Hydrographs 0      Number of Storage Structures 5  
Number of Online Controls 1      Number of Time/Area Diagrams 5  
Number of Offline Controls 0      Number of Real Time Controls 0

Synthetic Rainfall Details


Rainfall Model      FSR      Ratio R 0.344  
Region England and Wales Cv (Summer) 0.750  
M5-60 (mm)      18.000 Cv (Winter) 0.840

Margin for Flood Risk Warning (mm)      300.0  
Analysis Timestep 2.5 Second Increment (Extended)  
DTS Status      ON  
DVD Status      OFF  
Inertia Status      OFF

Profile(s)      Summer and Winter  
Duration(s) (mins) 15, 30, 60, 120, 240, 360, 480, 960, 1440  
Return Period(s) (years)      1, 30, 100  
Climate Change (%)      0, 0, 40

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m <sup>3</sup> )	Flow / Cap.
1.000	PP1	240 minute 100 year Winter I+40%	24.500	23.979	0.654	0.000	0.06
1.001	1	240 minute 100 year Winter I+40%	24.500	23.980	0.755	0.000	0.30
2.000	9	240 minute 100 year Winter I+40%	26.325	23.986	0.611	0.000	0.70
3.000	PP2	240 minute 100 year Winter I+40%	24.500	23.977	0.752	0.000	0.05
1.002	2	240 minute 100 year Winter I+40%	24.870	23.976	0.851	0.000	0.67
4.000	PP3	240 minute 100 year Winter I+40%	25.000	23.964	0.739	0.000	0.08
1.003	3	240 minute 100 year Winter I+40%	25.000	23.963	0.953	0.000	0.49
5.000	PP4	240 minute 100 year Winter I+40%	25.000	23.950	0.725	0.000	0.07
1.004	4	240 minute 100 year Winter I+40%	25.000	23.949	1.054	0.000	0.52
1.005	5	240 minute 100 year Winter I+40%	25.000	23.933	1.153	0.000	0.46
1.006	6	240 minute 100 year Winter I+40%	25.000	23.913	1.298	0.000	0.45
6.000	PP5	240 minute 100 year Winter I+40%	25.000	23.889	1.164	0.000	0.12
1.007	7	240 minute 100 year Winter I+40%	25.000	23.893	1.433	0.000	0.32
1.008	8	15 minute 100 year Summer I+40%	23.100	23.100	0.715	0.000	0.12



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100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Overflow (l/s)	Half Drain Pipe		Status
			Time (mins)	Flow (l/s)	
1.000	PP1		67	3.5	SURCHARGED
1.001	1			9.2	SURCHARGED
2.000	9			14.8	SURCHARGED
3.000	PP2		305	2.8	SURCHARGED
1.002	2			21.3	SURCHARGED
4.000	PP3		258	4.6	SURCHARGED
1.003	3			15.6	SURCHARGED
5.000	PP4		283	4.4	SURCHARGED
1.004	4			16.5	SURCHARGED*
1.005	5			15.2	SURCHARGED*
1.006	6			14.5	SURCHARGED*
6.000	PP5		209	7.0	SURCHARGED
1.007	7			9.9	SURCHARGED*
1.008	8			8.4	FLOOD RISK*



**PATRICK PARSONS**

**APPENDIX G – PROPOSED DRAINAGE STRATEGY LAYOUT**

**DRAWING KHS-PPC-XX-XX-DR-C-0201**





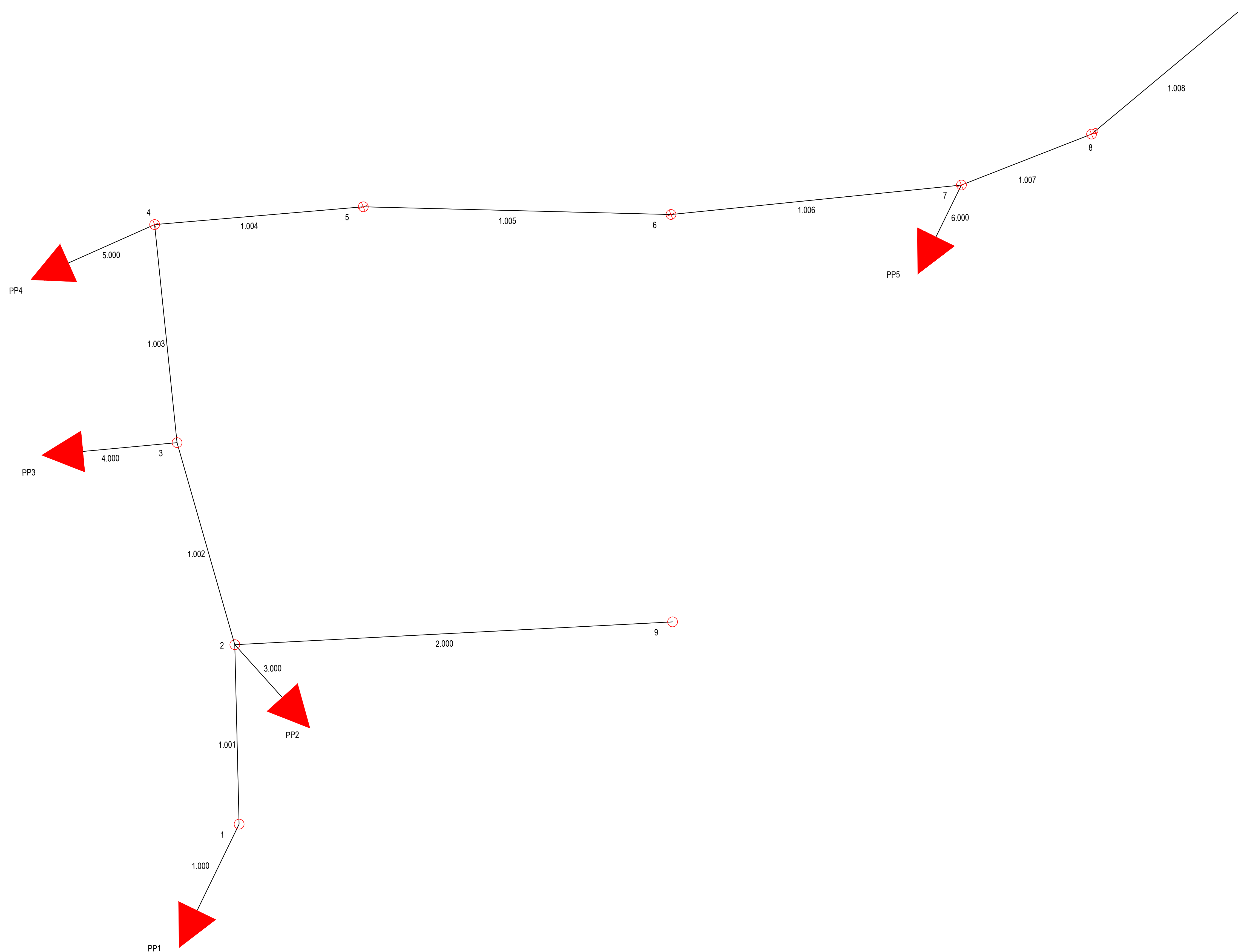
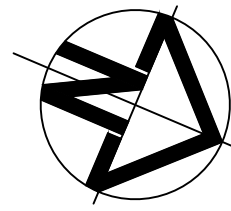




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**APPENDIX H – MICRODRAINAGE SCHEMATIC LAYOUT**

**DRAWING KHS-PPC-XX-XX-DR-C-0204**



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OT	21.10.22	MK	21.10.22	AD	21.10.22
P1	ISSUED FOR INFORMATION.				
BF	10.10.22	MK	10.10.22	AD	10.10.22
REV.	REVISION NOTE/COMMENT				
DRW BY	DATE	CCK BY	DATE	APP BY	DATE



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Project  
**KNOLL HOUSE, SWANAGE**

Drawing  
**MICRODRAINAGE SCHEMATIC**

Drawn BF	Date OCT 2022
Patrick Parsons Project No. 11088	Scale @ A1 N/A

Status Description <b>INFORMATION</b>	Status <b>S2</b>
Drawing No. [project-ordinator-volume-level-type-role-number] <b>KHS-PPC-XX-XX-DR-C-0204</b>	Revision <b>P2</b>



## UK Locations

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