

Appendix C

Architects Layout - Proposed Site

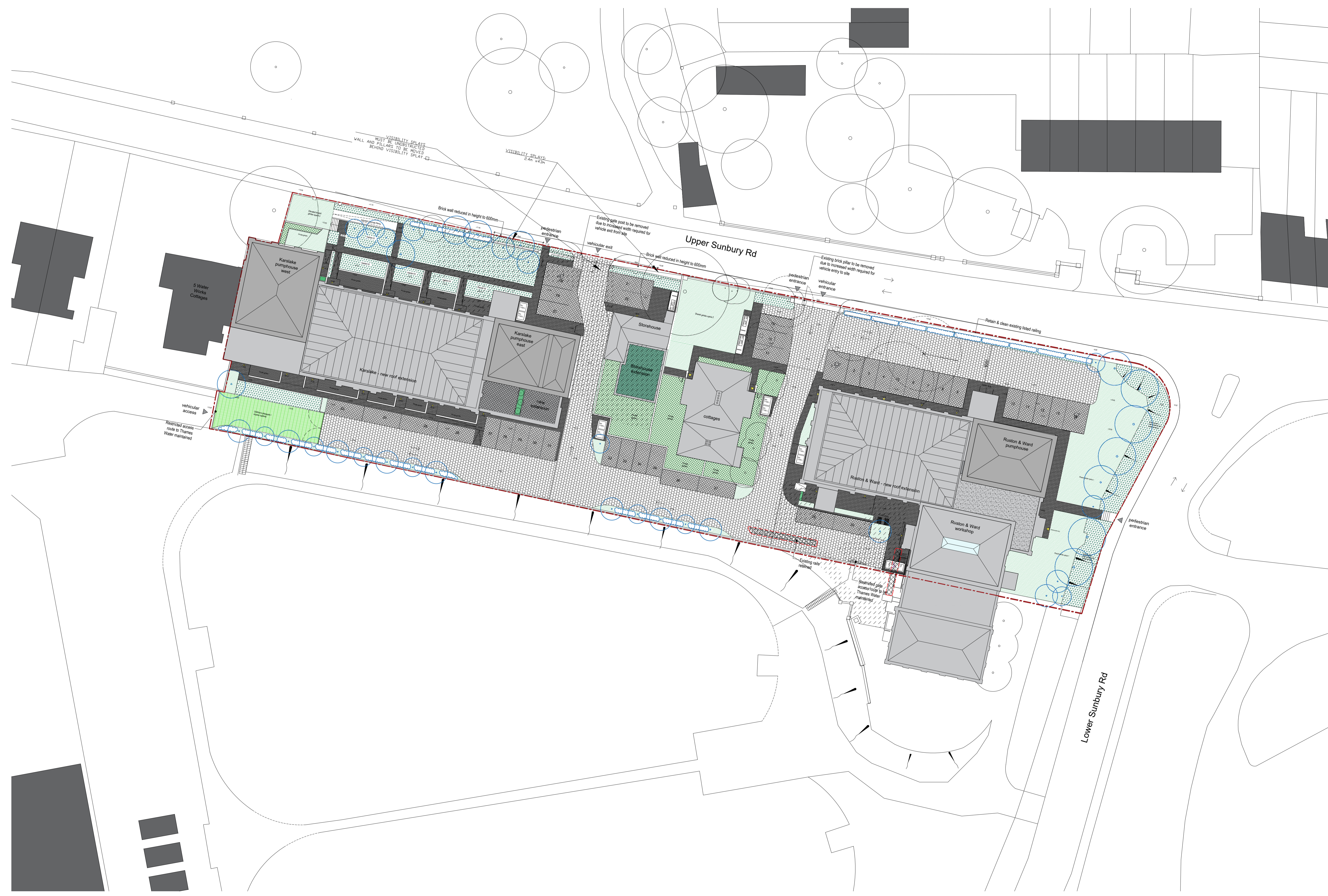
USE OF DRAWINGS
 DO NOT SCALE FROM THIS DRAWING. USE WRITTEN DIMENSIONS AND CHECK ON SITE. THIS DRAWING IS BASED ON SITE INFORMATION SUPPLIED BY THIRD PARTIES AND ACCURACY OF EXISTING FEATURES IS NOT GUARANTEED. ANY ERROR, OMISSION OR DISCREPANCY NOTED ON OR BETWEEN DRAWINGS AND OTHER DOCUMENTS MUST BE REPORTED IN WRITING IMMEDIATELY.
 ALL MECHANICAL, ELECTRICAL AND STRUCTURAL LAYOUTS / COMPONENTS ARE INDICATIVE AND MUST BE DESIGNED AND CHECKED BY SPECIALISTS. DO NOT START WORK ON SITE BEFORE CONFIRMING THAT ALL NECESSARY STATUTORY AND OTHER CONSENTS HAVE BEEN OBTAINED.
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REVISIONS

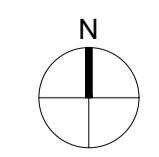
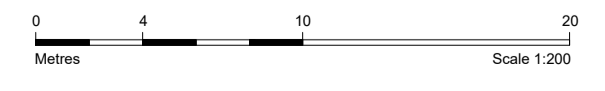
REV.	DATE	DESCRIPTION	BY	CHKD.
-	11.10.2019	INITIAL ISSUE	MC	RH
A	04.11.2019	LEVEL ADJUSTMENTS	MC	RW
B	04.05.2020	LEVEL ADJUSTMENTS, ADDITIONAL TREES TO EASTERN BOUNDARY	SJ	RH
C	06.05.2020	MAIN VEHICULAR EXIT AMENDED	SJ	RH
D	15.05.2020	AMENDMENTS TO TREES AND LANDSCAPING	SJ	RH
E	27.05.2020	HABITAT PLANTING SHOWN	SJ	RH
F	29.07.2020	DESIGN REVIEW AMENDMENTS	OC	JP

NOTE:
 DRAWINGS ARE DESIGN INTENT FOR THE PURPOSE OF PLANNING APPROVAL. ALL DRAWINGS ARE SUBJECT TO FURTHER DESIGN DEVELOPMENT AND COORDINATION WITH ENGINEERS INFORMATION.
 ALL FINISHING AND INTERIOR DETAILS ARE INDICATIVE AND SUBJECT TO DETAILED DESIGN.
 EXISTING HERITAGE BRICK AND STONE FACADES TO BE CLEANED AND RESTORED.
 INTERNAL VOLUMES TO BE SHIPPED OUT, ROADWORK WITH C- WORK AND RESTORING ORIGINAL FABRIC.
 INDUSTRIAL HERITAGE FEATURES: TRUCKS, ELECTRICAL SWITCHES, LIFTING CRANES, ETC. TO BE CLEANED AND RETAINED.
 ALL EXISTING ORIGINAL WINDOWS TO BE RETAINED AND RESTORED, WITH NEW HIGH PERFORMANCE SECONDARY GLAZING INSTALLED BEHIND.
 ALL EXISTING WINDOWS WHICH ARE NOT ORIGINAL TO THE BUILDING TO BE REPLACED WITH HIGH PERFORMANCE WINDOWS TO MATCH EXISTING DESIGN.

- Key**
- Asphalt
 - Shared surface paving
 - Pedestrian paving
 - Car parking bays
 - Private amenity space
 - Shared soft landscaping
 - Children's play area / shared access surface
 - Habitat planting
 - Trees:
 - Existing & retained
 - Removed
 - New
 - Existing cobbles to be retained.
 - Existing cobbles to be replaced.
 - New location of retained cobbles



SCALE 1:200
 Proposed Site Plan



client
WATERFALL PLANNING LTD

project
HAMPTON WATERWORKS

drawing title
PROPOSED SITE PLAN

sheet size scale
A1 1:200 @ A1

status
PLANNING

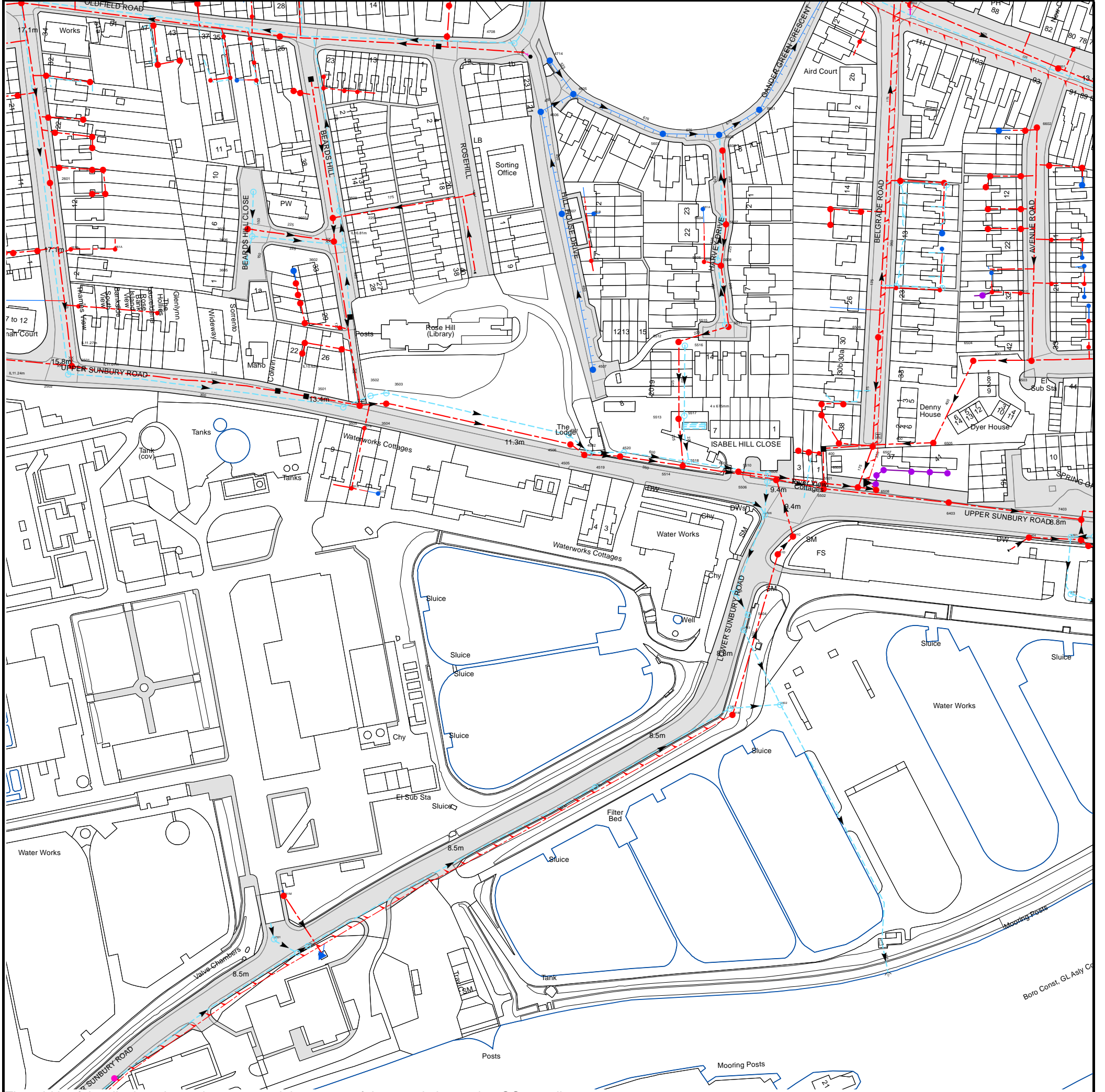
drawing no. revision
1685-A-P100 F

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Appendix D

Sewer Asset Map

Asset Location Search Sewer Map - ALS/ALS Standard/2019 4018101



The width of the displayed area is 500 m and the centre of the map is located at OS coordinates 513464,169479

The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified and established on site before any works are undertaken.

Based on the Ordnance Survey Map with the Sanction of the controller of H.M. Stationery Office, License no. 100019345 Crown Copyright Reserved.

NB. Levels quoted in metres Ordnance Newlyn Datum. The value -9999.00 indicates that no survey information is available

Manhole Reference	Manhole Cover Level	Manhole Invert Level
741B	n/a	n/a
7405	8.93	7.49
6404	8.94	8.27
6401	n/a	n/a
7401	n/a	n/a
7403	9.07	7.39
6403	n/a	n/a
6513	n/a	n/a
6402	n/a	n/a
671A	n/a	n/a
6709	14.74	11.56
6702	14.56	11.21
4708	16.84	14.71
47YZ	n/a	n/a
2704	n/a	n/a
26WX	n/a	n/a
27ZV	n/a	n/a
26WY	n/a	n/a
27ZP	n/a	n/a
26ZY	n/a	n/a
27ZQ	n/a	n/a
37XV	n/a	n/a
36ZY	n/a	n/a
37YZ	n/a	n/a
36ZX	n/a	n/a
36ZT	n/a	n/a
37XR	n/a	n/a
37YP	n/a	n/a
36XS	n/a	n/a
36ZR	n/a	n/a
36ZQ	n/a	n/a
3703	n/a	n/a
36YX	n/a	n/a
361A	n/a	n/a
361B	n/a	n/a
361C	n/a	n/a
47YY	n/a	n/a
661A	n/a	n/a
651B	n/a	n/a
66YY	n/a	n/a
651C	n/a	n/a
66YT	n/a	n/a
66ZP	n/a	n/a
66YQ	n/a	n/a
66XV	n/a	n/a
6602	13.39	11.82
66XR	n/a	n/a
66YX	n/a	n/a
65ZY	n/a	n/a
6601	13.56	10.99
771E	n/a	n/a
76YQ	n/a	n/a
76WS	n/a	n/a
76WV	n/a	n/a
76YR	n/a	n/a
76YV	n/a	n/a
75YZ	n/a	n/a
75YY	n/a	n/a
76XT	n/a	n/a
261A	n/a	n/a
251J	n/a	n/a
3605	17.16	n/a
3601	17.13	n/a
3606	17.19	n/a
3607	17.21	n/a
36ZP	n/a	n/a
35ZY	n/a	n/a
35ZX	n/a	n/a
36YW	n/a	n/a
35ZW	n/a	n/a
35ZR	n/a	n/a
35ZQ	n/a	n/a
35ZV	n/a	n/a
3603	16.77	14.33
3602	n/a	n/a
3609	16.74	14.47
35ZT	n/a	n/a
35ZP	n/a	n/a
3501	n/a	n/a
3608	n/a	n/a
361D	n/a	n/a
3505	12.92	10.4
351B	n/a	n/a
3502	n/a	n/a
3503	n/a	n/a
3504	n/a	n/a
6503	13.26	10.85
75XW	n/a	n/a
75XX	n/a	n/a
75XY	n/a	n/a
4606	15.56	13.31

Manhole Reference	Manhole Cover Level	Manhole Invert Level
4714	15.95	13.23
4607	15.54	13.46
4501	n/a	n/a
4506	n/a	8.64
4605	15.68	13.18
4502	10.85	9.14
461A	n/a	n/a
4507	15.6	13.82
461B	n/a	n/a
4520	11.34	9.29
5603	15.6	13.05
5513	10.58	8.75
5512	15.5	13.23
5517	10.56	9.14
5516	15.5	13.21
5605	15.34	13.15
5602	15.66	12.99
5608	15.36	13.66
5604	15.5	13.1
5606	15.56	14.1
5515	15.32	13.27
5607	15.34	13.82
5511	15.29	13.42
5601	15.76	12.92
5507	n/a	n/a
5508	n/a	n/a
5509	n/a	n/a
55ZW	n/a	n/a
55ZX	n/a	n/a
56ZX	n/a	n/a
56ZW	n/a	n/a
55ZV	n/a	n/a
55ZY	n/a	n/a
66ST	n/a	n/a
6507	13.07	11.06
6506	14.17	12.27
65YR	n/a	n/a
65YV	n/a	n/a
66WX	n/a	n/a
66WP	n/a	n/a
6505	n/a	n/a
65YW	n/a	n/a
66XP	n/a	n/a
66WV	n/a	n/a
65YS	n/a	n/a
66WY	n/a	n/a
66WQ	n/a	n/a
6504	n/a	n/a
651A	n/a	n/a
66ZR	n/a	n/a
66YR	n/a	n/a
66YV	n/a	n/a
66ZQ	n/a	n/a
4301	n/a	n/a
541B	n/a	n/a
5401	n/a	n/a
5402	n/a	n/a
5403	n/a	n/a
5404	n/a	n/a
5405	n/a	n/a
541D	n/a	n/a
541C	n/a	n/a
5406	n/a	n/a
6508	n/a	n/a
5502	n/a	n/a
6509	n/a	n/a
6518	n/a	n/a
5501	n/a	n/a
5506	n/a	n/a
5503	9.71	7.69
6517	n/a	n/a
5505	9.52	8.28
6516	n/a	n/a
5510	n/a	n/a
6515	n/a	n/a
6514	n/a	n/a
5514	10.65	8.1
5518	10.65	9.09
4519	10.88	8.33
4505	10.85	8.57
2201	n/a	n/a
3202	n/a	n/a
3203	n/a	n/a
3201	n/a	n/a
331M	n/a	n/a
351C	n/a	n/a
351A	n/a	n/a
26ZV	n/a	n/a
26ZT	n/a	n/a
26YX	n/a	n/a
26ZS	n/a	n/a
26XP	n/a	n/a
2601	n/a	n/a



















Manhole Reference	Manhole Cover Level	Manhole Invert Level
26XT	n/a	n/a
26XY	n/a	n/a
2502	n/a	n/a
261B	n/a	n/a
2501	11.27	n/a
251A	n/a	n/a
26XQ	n/a	n/a
26XV	n/a	n/a
26YR	n/a	n/a
26XZ	n/a	n/a
26XW	n/a	n/a
26YP	n/a	n/a
26YQ	n/a	n/a

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ALS Sewer Map Key

Public Sewer Types (Operated & Maintained by Thames Water)

-  **Foul:** A sewer designed to convey waste water from domestic and industrial sources to a treatment works.
-  **Surface Water:** A sewer designed to convey surface water (e.g. rain water from roofs, yards and car parks) to rivers or watercourses.
-  **Combined:** A sewer designed to convey both waste water and surface water from domestic and industrial sources to a treatment works.
-  Trunk Surface Water
-  Trunk Foul
-  Storm Relief
-  Trunk Combined
-  Vent Pipe
-  Bio-solids (Sludge)
-  Proposed Thames Surface Water Sewer
-  Proposed Thames Water Foul Sewer
-  Gallery
-  Foul Rising Main
-  Surface Water Rising Main
-  Combined Rising Main
-  Sludge Rising Main
-  Proposed Thames Water Rising Main
-  Vacuum





Sewer Fittings

A feature in a sewer that does not affect the flow in the pipe. Example: a vent is a fitting as the function of a vent is to release excess gas.

-  Air Valve
-  Dam Chase
-  Fitting
-  Meter
-  Vent Column




Operational Controls

A feature in a sewer that changes or diverts the flow in the sewer. Example: A hydrobrake limits the flow passing downstream.

-  Control Valve
-  Drop Pipe
-  Ancillary
-  Weir






End Items

End symbols appear at the start or end of a sewer pipe. Examples: an Undefined End at the start of a sewer indicates that Thames Water has no knowledge of the position of the sewer upstream of that symbol, Outfall on a surface water sewer indicates that the pipe discharges into a stream or river.

-  Outfall
-  Undefined End
-  Inlet






Other Symbols

Symbols used on maps which do not fall under other general categories








-  /  Public/Private Pumping Station
-  Change of characteristic indicator (C.O.C.I.)
-  Invert Level
-  Summit

Areas

Lines denoting areas of underground surveys, etc.

-  Agreement
-  Operational Site
-  Chamber
-  Tunnel
-  Conduit Bridge

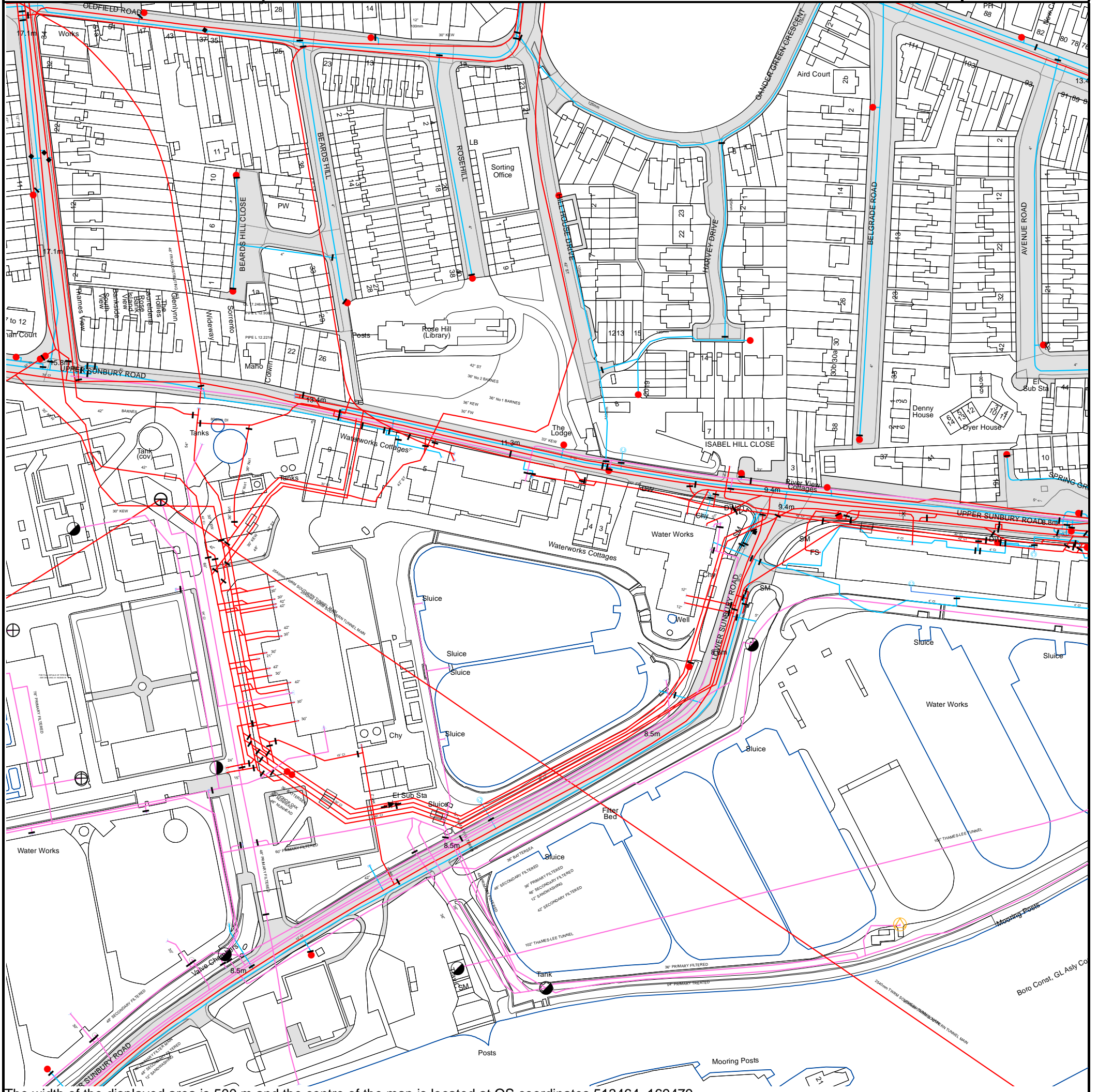
Other Sewer Types (Not Operated or Maintained by Thames Water)

-  Foul Sewer
-  Surface Water Sewer
-  Combined Sewer
-  Gully
-  Culverted Watercourse
-  Proposed
-  Abandoned Sewer

Notes:

- 1) All levels associated with the plans are to Ordnance Datum Newlyn.
- 2) All measurements on the plans are metric.
- 3) Arrows (on gravity fed sewers) or flecks (on rising mains) indicate direction of flow.
- 4) Most private pipes are not shown on our plans, as in the past, this information has not been recorded.
- 5) 'na' or '0' on a manhole level indicates that data is unavailable.
- 6) The text appearing alongside a sewer line indicates the internal diameter of the pipe in millimetres. Text next to a manhole indicates the manhole reference number and should not be taken as a measurement. If you are unsure about any text or symbology present on the plan, please contact a member of Property Insight on 0845 070 9148.

Asset Location Search Water Map - ALS/ALS Standard/2019 4018101










The width of the displayed area is 500 m and the centre of the map is located at OS coordinates 513464, 169479.
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 Based on the Ordnance Survey Map with the Sanction of the controller of H.M. Stationery Office, License no. 100019345 Crown Copyright Reserved.







ALS Water Map Key

Water Pipes (Operated & Maintained by Thames Water)


- 
Distribution Main: The most common pipe shown on water maps. With few exceptions, domestic connections are only made to distribution mains.
- 
Trunk Main: A main carrying water from a source of supply to a treatment plant or reservoir, or from one treatment plant or reservoir to another. Also a main transferring water in bulk to smaller water mains used for supplying individual customers.
- 
Supply Main: A supply main indicates that the water main is used as a supply for a single property or group of properties.
- 
Fire Main: Where a pipe is used as a fire supply, the word FIRE will be displayed along the pipe.
- 
Metered Pipe: A metered main indicates that the pipe in question supplies water for a single property or group of properties and that quantity of water passing through the pipe is metered even though there may be no meter symbol shown.
- 
Transmission Tunnel: A very large diameter water pipe. Most tunnels are buried very deep underground. These pipes are not expected to affect the structural integrity of buildings shown on the map provided.
- 
Proposed Main: A main that is still in the planning stages or in the process of being laid. More details of the proposed main and its reference number are generally included near the main.

PIPE DIAMETER	DEPTH BELOW GROUND
Up to 300mm (12")	900mm (3')
300mm - 600mm (12" - 24")	1100mm (3' 8")
600mm and bigger (24" plus)	1200mm (4')

Valves

-  General Purpose Valve
-  Air Valve
-  Pressure Control Valve
-  Customer Valve

Hydrants








-  Single Hydrant

Meters










-  Meter

End Items

Symbol indicating what happens at the end of a water main.

-  Blank Flange
-  Capped End
-  Emptying Pit
-  Undefined End
-  Manifold
-  Customer Supply
-  Fire Supply



Operational Sites

-  Booster Station
-  Other
-  Other (Proposed)
-  Pumping Station
-  Service Reservoir
-  Shaft Inspection
-  Treatment Works
-  Unknown
-  Water Tower

Other Symbols

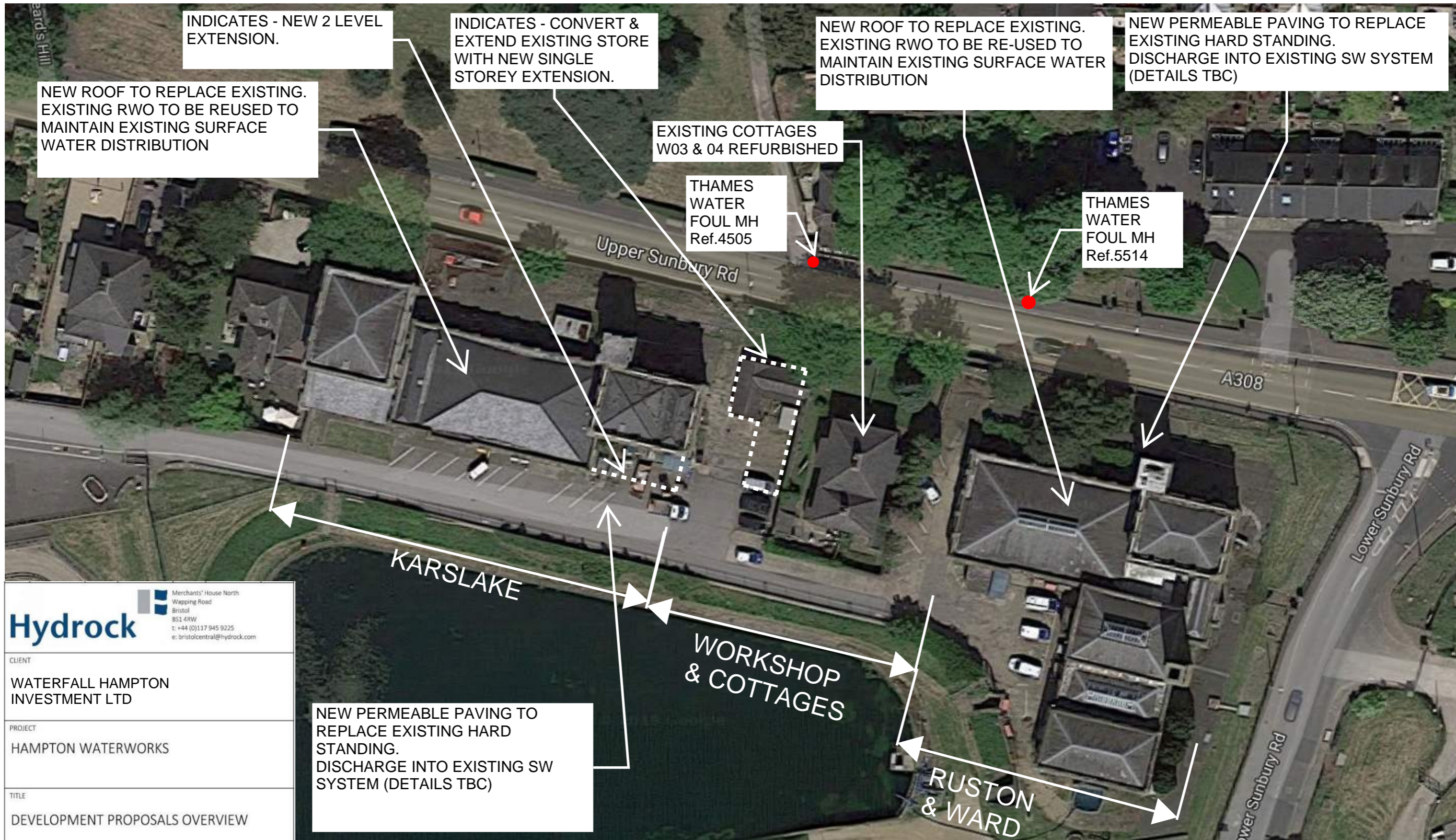
-  Data Logger

Other Water Pipes (Not Operated or Maintained by Thames Water)

- 
Other Water Company Main: Occasionally other water company water pipes may overlap the border of our clean water coverage area. These mains are denoted in purple and in most cases have the owner of the pipe displayed along them.
- 
Private Main: Indicates that the water main in question is not owned by Thames Water. These mains normally have text associated with them indicating the diameter and owner of the pipe.

Appendix E

Drainage Strategy



Hydrock Merchants' House North
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CLIENT
WATERFALL HAMPTON INVESTMENT LTD

PROJECT
HAMPTON WATERWORKS

TITLE
DEVELOPMENT PROPOSALS OVERVIEW

HYDROCK PROJECT NO. C-12193-C	SCALE @ A1 1:250	STATUS S2
STATUS DESCRIPTION PLANNING		REVISION P06
DRAWING NO. (PROJECT CODE-ORIGINATOR-ZONE-LEVEL-TYPE-ROLE-NUMBER) 12193-HYD-00-ZZ-SK-C-7700		

NEW PERMEABLE PAVING TO REPLACE EXISTING HARD STANDING. DISCHARGE INTO EXISTING SW SYSTEM (DETAILS TBC)

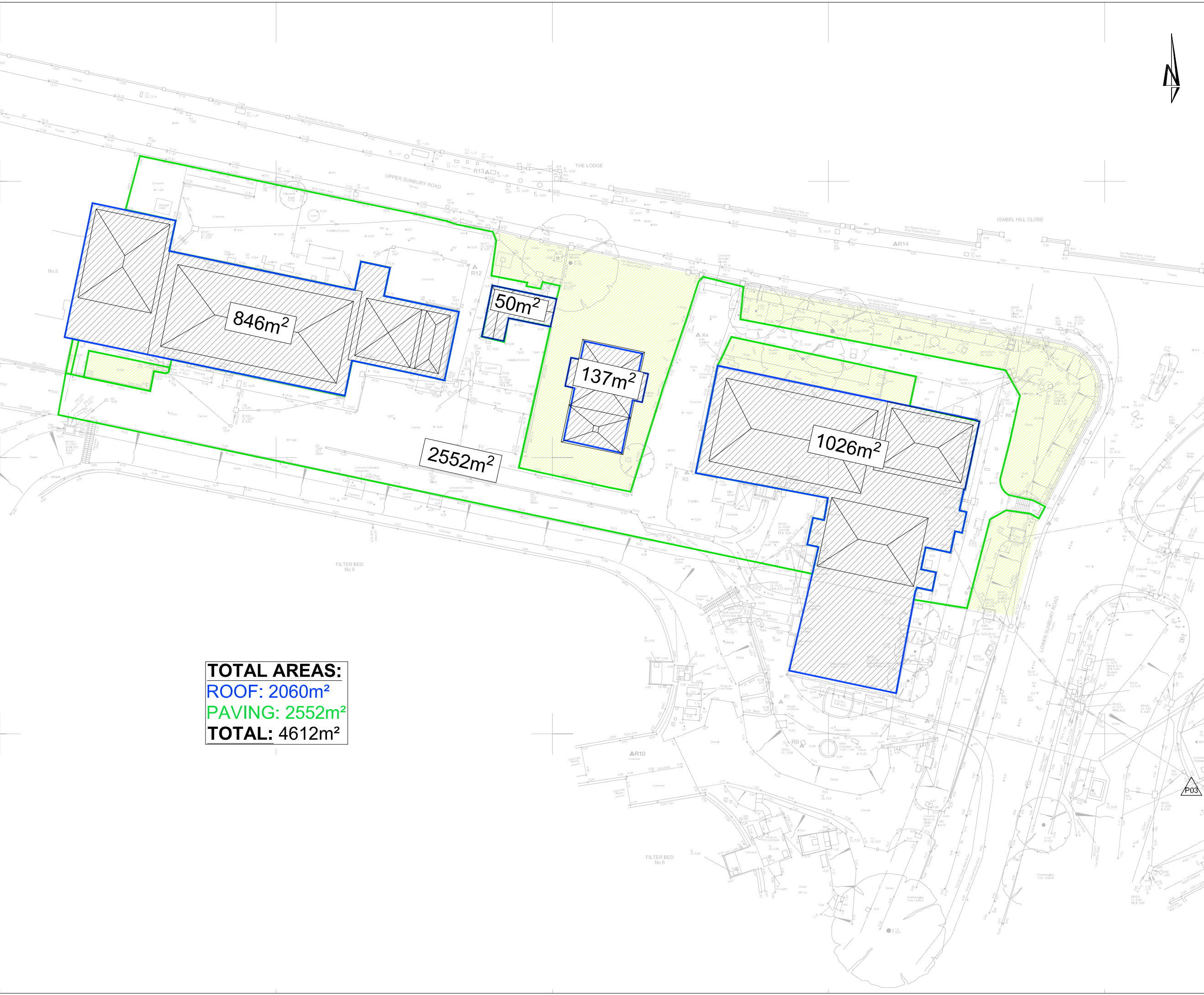
P04	ISSUED FOR PLANNING	W.SANDERCOCK	27/09/19	L. DALY	26/09/19	L. DALY	26/09/19
P03	ISSUED TO TW AS PRE-DEVELOPMENT APPLICATION	W.SANDERCOCK	23/09/19	L. DALY	23/09/19	L. DALY	23/09/19
P02	ISSUED TO LLFA FOR COMMENTS	R.HUNT	28/08/19	L. DALY	28/08/19	L. DALY	28/08/19
P01	PRELIMINARY ISSUE	W.SANDERCOCK	13/08/19	L. DALY	13/08/19	L. DALY	13/08/19
REV	REVISION NOTES/COMMENTS						
	DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE	

P06	DRAWING NUMBER CORRECTED TO 7701 TO 7700	R. BAREHAM	27/2/23				
P05	ISSUED FOR PLANNING / UPDATED LAYOUT	M.GRIFFIN	27/04/20				



NOTES

- All dimensions are to be checked on site before the commencement of works. Any discrepancies are to be reported to the Architect & Engineer for verification. Figured dimensions only are to be taken from this drawing.
- The DWG file is issued for the purposes of coordination only and do not represent formal drawing issue and are not to be reprinted in any form. Formal issue of drawings is via DWF, Adobe PDF files and/or hard copies and their associated information issue sheets.
- Note that all care has been taken with the export of DWG files and their content, but we recommend that you make due dimensional checks before using any DWG file information. Any errors found are to be reported to Hydrock immediately.
- All levels are shown in metres above Ordnance Datum (m AOD).
- All private drainage to comply with current Building Regulations, BS EN-752 Drain and Sewer systems outside Buildings and other relevant British Standards and Codes of Practices.
- Drainage pipework routes under building footprint will require Co-ordination with foundations.
- Final foul pipe connection routes and manholes are subject to confirmation of above ground drainage design discharge points at ground level by others to allow final pipe sizes, configuration and connections.
- Door threshold drainage channel requirements to be advised by others.
- Surface water drainage RWP locations to be confirmed by Architect.
- External levels shown on this drawing relating to the civils, drainage works etc are to be confirmed on receipt of final external levels drawing (by others).
- Foul drainage shown indicative subject to detailed design.



TOTAL AREAS:
BLUE: 2060m²
PAVING: 2552m²
TOTAL: 4612m²

ISSUED FOR PLANNING					
P03	R.HUNT	30/10/19	L DAILY	30/10/19	30/10/19
ISSUED TO LLFA FOR COMMENTS					
P02	R.HUNT	28/08/19	L DAILY	28/08/19	28/08/19
ISSUED FOR CO-ORDINATION					
P01	W.SANDERCOCK	13/08/19	L DAILY	13/08/19	13/08/19
REVISION NOTES/COMMENTS					
REV	DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY

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 e: bristolcentral@hydrock.com

CLIENT
WATERFALL HAMPTON INVESTMENT LTD

PROJECT
HAMPTON WATERWORKS

TITLE
EXISTING CATCHMENT AREA SUMMARY

HYDROCK PROJECT NO. C-12193-C	SCALE @ A1 1:250	STATUS S2
STATUS DESCRIPTION PLANNING		REVISION P03
DRAWING NO. (PROJECT CODE ORIGINATOR-ZONE-LEVEL-TYPE-ROLE-NUMBER) 12193-HYD-00-ZZ-SK-C-7701		

NOTES

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- Foul drainage shown indicative subject to detailed design.

P06	UPDATED LAYOUT / ISSUED FOR PLANNING	R COGBILL	05/09/22	A TODD	05/09/22	R BAREHAM	05/09/22
P05	UPDATED LAYOUT / ISSUED FOR PLANNING	M GRIFFIN	27/04/20				
P04	ISSUED FOR PLANNING	R HUNT	30/10/19	L DALY	30/10/19	L DALY	30/10/19
P03	ISSUED TO LLFA FOR COMMENTS	R HUNT	28/08/19	L DALY	28/08/19	L DALY	28/08/19
P02	PAVING CATCHMENT AREA REVISED - REDUCTION DUE TO NORTH EASTERN HARDSTANDING PROPOSED TO DISCHARGE TO SOFT LANDSCAPING.	W SANDERCOCK	16/08/19	L DALY	16/08/19	L DALY	16/08/19
P01	ISSUED FOR CO-ORDINATION	W SANDERCOCK	13/08/19	L DALY	13/08/19	L DALY	13/08/19
REV	REVISION NOTES/COMMENTS	DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE

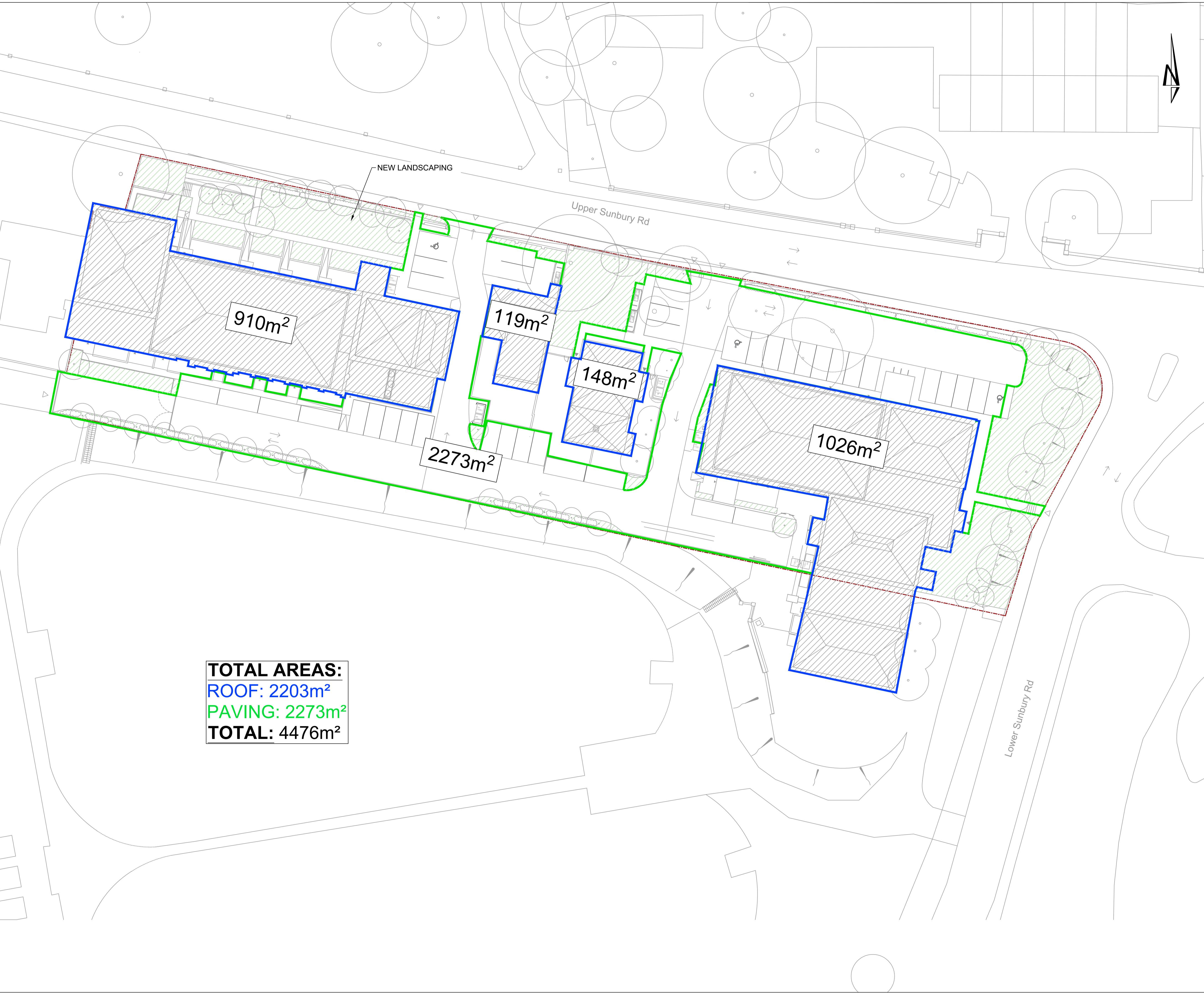
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CLIENT
WATERFALL HAMPTON INVESTMENT LTD

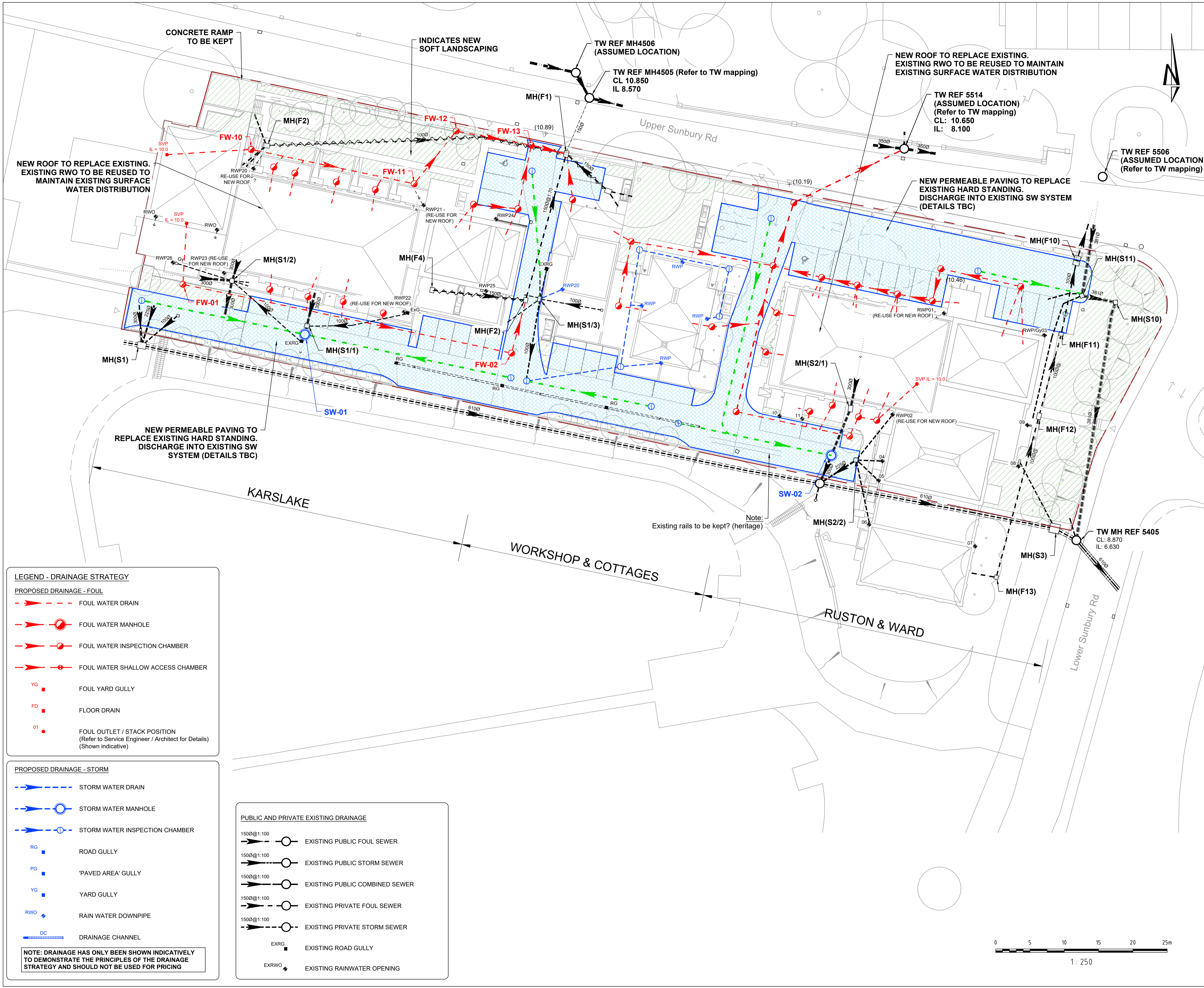
PROJECT
HAMPTON WATERWORKS

TITLE
PROPOSED CATCHMENT AREA SUMMARY

HYDROCK PROJECT NO. C-12193-C	SCALE @ A1 1:250
STATUS DESCRIPTION PLANNING	STATUS S2
DRAWING NO. (PROJECT CODE-ORIGINATOR-ZONE-LEVEL-TYPE-ROLE-NUMBER) 12193-HYD-00-ZZ-SK-C-7702	REVISION P06



TOTAL AREAS:
ROOF: 2203m²
PAVING: 2273m²
TOTAL: 4476m²



LEGEND - DRAINAGE STRATEGY

PROPOSED DRAINAGE - FOUL

- FOUL WATER DRAIN
- FOUL WATER MANHOLE
- FOUL WATER INSPECTION CHAMBER
- FOUL WATER SHALLOW ACCESS CHAMBER
- FOUL YARD GULLY
- FLOOR DRAIN
- FOUL OUTLET / STACK POSITION (Refer to Service Engineer / Architect for Details) (Shown indicative)

PROPOSED DRAINAGE - STORM

- STORM WATER DRAIN
- STORM WATER MANHOLE
- STORM WATER INSPECTION CHAMBER
- ROAD GULLY
- 'PAVED AREA' GULLY
- YARD GULLY
- RAIN WATER DOWNPIPE
- DRAINAGE CHANNEL

PUBLIC AND PRIVATE EXISTING DRAINAGE

- EXISTING PUBLIC FOUL SEWER
- EXISTING PUBLIC STORM SEWER
- EXISTING PUBLIC COMBINED SEWER
- EXISTING PRIVATE FOUL SEWER
- EXISTING PRIVATE STORM SEWER
- EXISTING ROAD GULLY
- EXISTING RAINWATER OPENING

- NOTES**
- All dimensions are to be checked on site before the commencement of works. Any discrepancies are to be reported to the Architect & Engineer for verification. Figured dimensions only are to be taken from this drawing.
 - The DWG file is issued for the purposes of coordination only and do not represent formal drawing issue and are not to be reprinted in any form. Formal issue of drawings is via DWF, Adobe PDF files and/or hard copies and their associated information issue sheets.
 - Note that all care has been taken with the export of DWG files and their content, but we recommend that you make due dimensional checks before using any DWG file information. Any errors found are to be reported to Hydrock immediately.
 - All levels are shown in metres above Ordnance Datum (m AOD).
 - All private drainage to comply with current Building Regulations, BS EN-752 Drain and Sewer systems outside Buildings and other relevant British Standards and Codes of Practices.
 - Drainage pipework routes under building footprint will require Co-ordination with foundations.
 - Final foul pipe connection routes and manholes are subject to confirmation of above ground drainage design discharge points at ground level by others to allow final pipe sizes, configuration and connections.
 - Door threshold drainage channel requirements to be advised by others.
 - Surface water drainage RWP locations to be confirmed by Architect.
 - External levels shown on this drawing relating to the civils, drainage works etc are to be confirmed on receipt of final external levels drawing (by others).
 - Foul drainage shown indicative subject to detailed design.

P06	ISSUED FOR PLANNING / UPDATED LAYOUT				
	R.COGBILL	05/09/22	A.TODD	05/09/22	R.BAREHAM
P05	ISSUED FOR PLANNING / UPDATED LAYOUT				
	R.HUNT	27/04/20			
P04	ISSUED FOR PLANNING				
	R.HUNT	30/10/19	L.DALY	30/10/19	L.DALY
P03	ISSUED TO TW AS PRE-DEVELOPMENT APPLICATION				
	W.SANDERCOCK	23/09/19	L.DALY	23/09/19	L.DALY
P02	ISSUED TO LFA FOR COMMENTS				
	R.HUNT	28/08/19	L.DALY	28/08/19	L.DALY
P01	ISSUED FOR COMMENTS/ CO-ORDINATION - FOR PLANNING				
	W.SANDERCOCK	13/08/19	L.DALY	13/08/19	L.DALY
REV	REVISION NOTES/COMMENTS				
	DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY

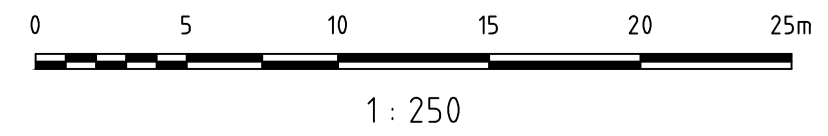
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t: +44 (0)117 945 9225
e: bristolcentral@hydrock.com

CLIENT
WATERFALL HAMPTON INVESTMENT LTD

PROJECT
HAMPTON WATERWORKS

TITLE
SW & FW DRAINAGE STRATEGY

HYDROCK PROJECT NO. C-12193-C	SCALE @ A1 1:250
STATUS DESCRIPTION PLANNING	STATUS S2
DRAWING NO. (PROJECT CODE-ORIGINATOR-ZONE-LEVEL-TYPE-ROLE-NUMBER) 12193-HYD-00-ZZ-DR-C-7001	REVISION P06



Appendix F

LLFA & Thames water correspondence.



Mr L Daly
Hydroc Ltd
Merchants House North
Wapping Road
Bristol
BS1 4RW



Our ref: DS6066091



0800 009 3921
Monday to Friday, 8am to 5pm

27th Sept 2019

Pre-planning enquiry: Wastewater Capacity check

Dear Mr Daly

Thank you for providing details of your development with the Pre-Planning application dated 23rd Sept 19 for development @ Ruston Ward Building Hampton Water Works Upper Sunbury Rd Hampton TW12 2DS.

This letter supersedes any previous correspondence.

{ Brownfield site {existing TW Hampton Water works} , developed to {37 Residential properties+260 m2 Office space} as per your above application}.

Foul

If your proposals progress in line with the details you've provided as above, we're pleased to confirm that there will be sufficient sewerage capacity to serve your foul discharges from your development, provided the discharge is by gravity.

Surface Water

In considering your surface water needs, we support the use of sustainable drainage on development sites.

Typically greenfield run off rates of 5l/s/ha should be aimed for using the drainage hierarchy. The hierarchy lists the preference for surface water disposal as follows; Store Rainwater for later use > Use infiltration techniques, such as porous surfaces in non-clay areas > Attenuate rainwater in ponds or open water features for gradual release > Discharge rainwater direct to a watercourse > Discharge by storing and attenuating rainwater direct to a surface water sewer/drain > Discharge by storing and attenuating rainwater to the combined sewer.

Please refer to the attached document titled "Planning your wastewater" attached to this letter, specifically to notes relating to surface water. **Also I would advise you to liaise with the LA and discuss their criteria regarding surface water discharges in that area and adhere to their stipulation.**

I note that you have consulted with the LLFA and they have accepted our SW proposals to introduce Suds permeable paving as betterment.

This confirmation is valid for 12 months or for the life of any planning approval that this information is used to support, to a maximum of three years.

Please note that you must keep us informed of any changes to your design – for example, an increase in the number or density of homes. Such changes could mean there is no longer sufficient sewerage capacity.

What happens next?

Please make sure you submit your connection application, when you are ready, giving us at least 21 days' notice of the date you wish to make your new connection/s.

If you've any further questions, please contact me.

Yours sincerely

Siva Sivarajan

Developer Services- Wastewater Adoptions Engineer
Office:0203 577 7752 Mobile: 07747842608
siva.sivarajan@thameswater.co.uk

Thames Water Utilities Ltd, Clearwater Court, Vastern Road, Reading, Berkshire, RG1 8DB
Find us online at developers.thameswater.co.uk



TW int ref: DTS 62399

Laurence Daly

From: Humphris, Brian <Brian.Humphris@richmondandwandsworth.gov.uk>
Sent: 19 September 2019 15:03
To: Laurence Daly
Cc: Kim Walker; Martina Chokova; Josh Bullard; Mike Griffin; Will Sandercock; Simon Mirams
Subject: RE: Hampton Waterworks Development_ Lead Local Flood Authority_ Initial Consultation

Official

Laurence

I have looked at your plans and note that there is an overall reduction in catchment. Permeable paving will add further benefits. There is unlikely to be any land available for major SuDS measures, and I doubt that TW would allow surface water to flow into their (Raw) reservoirs next to the site! Small SuDS measures may be feasible within the gardens of the cottages.

You will obviously need to submit a formal Flood Risk Analysis, but there are unlikely to be any issues that concern me. The site is on the edge of Flood Zone 2 and the Thames at Hampton is non-tidal, as it's upstream of Teddington Weir.

Flood-related data can be found on our website address below:-

https://www.richmond.gov.uk/services/planning/planning_policy/local_plan/local_development_framework_research/flood_risk_assessment

Call me if you require any further comments or guidance.

Regards Brian

Brian Humphris

Highway Asset Co-ordinator
Serving Richmond and Wandsworth Councils

Environment Directorate
London Borough of Richmond upon Thames
2nd Floor
Civic Centre
44 York Street
Twickenham
TW1 3BZ

020 8891 7738

brian.humphris@richmondandwandsworth.gov.uk
www.richmond.gov.uk / www.wandsworth.gov.uk

Please note that I work only on Tuesday, Wednesday and Thursday.

If you have received this message in error you must not print, copy, use or disclose the contents, but must delete it from your system and inform the sender of the error. You should be aware that all emails received and sent by the London Borough of Richmond upon Thames may be stored or monitored, or disclosed to authorised third parties, in accordance with relevant legislation.

We welcome both positive and negative customer feedback on the services we provide. If you wish to provide feedback please do so using our online feedback form. Thank you.

Appendix G

SUDS Proforma.

The London Sustainable Drainage Proforma

Introduction

This proforma is intended to accompany a drainage strategy prepared for a planning application where required by national or local planning policy. It should be used to summarise the key outputs from the strategy to allow assessing officers at the Lead Local Flood Authority (LLFA) to quickly assess compliance with sustainable drainage (SuDS) planning

The proforma is divided into 4 sections, which are intended to be used as follows:

1. Site and project information - Provide summary details of the development, site and drainage
2. Proposed discharge arrangement – Summarise site ground conditions to determine potential for infiltration. Select a surface water discharge method (or mix of methods) following the hierarchical approach set out in the London Plan.
3. Drainage strategy – Prioritise SuDS measures that manage runoff as close to source as possible and contribute to the four main pillars of SuDS; amenity, biodiversity, water quality and water quantity.
4. Supporting information – Provide cross references to the page or section of the drainage strategy report where the detailed information to support each element can be found. This may be more than one reference for each

Policy

Drainage strategies for developments in the London Borough of Richmond upon Thames need to comply with the following policies on SuDS:

1. [London Borough of Richmond upon Thames Local Plan policy LP21](#)
2. [London Plan policy 5.13](#) and draft [New London Plan policy SI13](#)
3. [The National Planning Policy Framework \(NPPF\)](#)

Technical Guidance

- Post-development surface water discharge rate should be limited to greenfield runoff rates. Proposals for higher discharge rates should be agreed with the LLFA ahead of submission of the Planning Application. Clear evidence should be provided with the Planning Application to show why greenfield rates cannot be achieved.
- Greenfield runoff rate is the runoff rate from a site in its natural state, prior to any development. This should be calculated using one of the runoff estimation methods set out in Table 24.1 of CIRIA C753 The SuDS Manual.
- Attenuation storage volumes required to reduce post-development discharge rates to greenfield rates should be calculated using one of the runoff estimation methods set out in Table 24.1 of CIRIA C753 The SuDS Manual.
- 'CC' refers to climate change allowance from the current Environment Agency guidance.
- An operation and maintenance strategy for proposed SuDS measures should be submitted with the Planning Application and include the details set out in section 32.2 of CIRIA C753 The SuDS Manual. The manual should be site-specific and not directly reproduce parts of The SuDS Manual.
- Other useful sources of guidance are:
 - [o Richmond upon Thames Sustainable Drainage guidance](#)
 - [o The London Plan Sustainable Design and Construction SPG](#)
 - [o DEFRA non-statutory technical standards for sustainable drainage](#)
 - [o Environment Agency climate change guidance](#)
 - [o CIRIA C753 The SuDS Manual](#)

3. Drainage Strategy					
3a. Discharge Rates & Required Storage		Greenfield (GF) runoff rate (l/s)	Existing discharge rate (l/s)	Required storage for GF rate (m ³)	Proposed discharge rate (l/s)
Qbar					
1 in 1					
1 in 30					
1 in 100					
1 in 100 + CC					
Climate change allowance used			40%		
3b. Principal Method of Flow Control		N/A			
3c. Proposed SuDS Measures					
	Catchment area (m ²)	Plan area (m ²)	Storage vol. (m ³)		
Rainwater harvesting	0		0		
Infiltration systems	0		0		
Green roofs	0		0		
Blue roofs	0		0		
Filter strips	0		0		
Filter drains	0		0		
Bioretention / tree pits	0		0		
Pervious pavements	0		0		
Swales	0		0		
Basins/ponds	0		0		
Attenuation tanks	0		0		
Total	0	0	0	0	0

4. Supporting Information	
4a. Discharge & Drainage Strategy	Page/section of drainage report
Infiltration feasibility (2a) – geotechnical factual and interpretive reports, including infiltration results	PAGE 6
Drainage hierarchy (2b)	PAGE 10
Proposed discharge details (2c) – utility plans, correspondence / approval from owner/regulator of discharge location	APP D APP F
Discharge rates & storage (3a) – detailed hydrologic and hydraulic calculations	
Proposed SuDS measures & specifications (3b)	
4b. Other Supporting Details	<i>Page/section of drainage report</i>
Detailed Development Layout	APP B & C
Detailed drainage design drawings, including exceedance flow routes	APP E
Detailed landscaping plans	APP C
Maintenance strategy	PAGE 13
Demonstration of how the proposed SuDS measures improve:	
a) water quality of the runoff?	
b) biodiversity?	
c) amenity?	