

Appendix E – Proposed Drainage Strategy



- NOTES**
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 - Any discrepancies between all working drawings, specifications and schedules of all disciplines to be immediately notified to CTP for clarification/correction prior to construction of relevant structure.
 - This drainage layout is subject to a full CCTV survey being carried out on existing drainage.
 - Pipe sizes subject to a Thames Water impact study being carried out.

KEY

- Foul Water Drain (Proposed)
- - - Surface Water Drain (Proposed)
- Existing F.W. Pipe
- - - Existing S.W. Pipe
- F.W. Pipe to be diverted/abandoned
- S.W. Pipe to be diverted/abandoned
- - - F.W. Rising Main
- FM1 PCC F.W. Manhole (Proposed)
- ⊕ GRP F.W. Pumping Chamber
- FM1 PCC F.W. Manhole (Existing Public)
- SM1 PCC S.W. Manhole (Proposed)
- SM1 PCC S.W. Manhole (Existing Public)
- ⊕ CP1 Catchpit
- AT1 Geo-Cellular Attenuation Tank, by SDS or similar
- PERM1 Tanked Permeable paving with 0.600m deep type 3 sub base material

PRELIMINARY

P4	Revised to suit Architects Latest Master plan. Phases 1A and 1B drainage revised. Drawing sheet size and scale increased.	07.04.21	DO	SM
P3	Revised to suit latest Phase 1 boundary.	22.10.20	DO	KN
P2	Revised to suit latest Architect's drawing.	01.10.20	DO	SM
P1	Preliminary issue for FRA (under drawing no. A5277-1500-01)	10.12.19	CR	AK

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Cambridge Road

Proposed Drainage Layout

A6424-1500

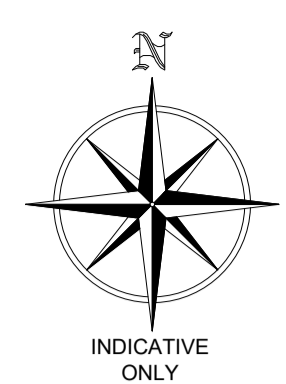
P4

Attenuation Volumes	Impermeable Area (ha)	Greenfield Run-off Rate	50% of Brownfield Run-off Rate
	Storage Required (m³)	Storage Required (m³)	Storage Required (m³)
All Phases	6.94	4200	4970
Phase 1	1.53	900	1080

- Values calculated for a 1 in 100 year storm event with 40% allowance for climate change
- Values calculated using a 145-60 value of 20.00mm, R value of 0.405
- Storage volumes estimated to suit the greenfield run off discharge for a 100 year storm event. Greenfield run off rate of 43.4L/s has been used.
- Values shown are the worst case scenario and are expected to reduce at detailed design stage.
- An total site area of 8.62ha has been used. With a proposed total impermeable area of 6.94ha.
- Values shown are subject to Thames Water Impact Study and agreed discharge rates during planning approval.

SCALE 1:1000





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	PCC S.W. Manhole (Existing Public)
	Catchpit
	Geo-Cellular Attenuation Tank, by SDS or similar
	Tanked Permeable paving with 0.600m deep type 3 sub base material

Phase 1B Area 8870m²
Phase 1A Area 13223m²
Total Area 22093m²
 Restricted flow rate 10 l/s

Phase 1B
 Restricted flow rate (0.8m² x 10) = 4.0 l/s
 Soft Landscape area 2260m²
 Impermeable Area 8870-2260 = 6610m²
 Volume attenuated at 4.0 l/s
 Quick storage estimate 522m³
 Cellular crate storage = 528m³
 Storm water runoff from the new development is to be attenuated using Geo-cellular crates and tanked permeable paving and restricted to 4 l/s utilizing hydrobrake, before discharging into the existing Thames Water manhole on Washington Road to the west of the site.
 Total Permeable paving area 112m²
 Stone depth 0.60m
 Volume 112x0.6 = 67m³

Note:
 The underlying soil has been categorized to be Clayey gravelly and London Clay up to a depth of 4m below ground level and therefore no suitable for infiltration, refer to Geo-Environmental Site investigation report ref. GE18530/GIR/OCT20 dated 6/10/2020

Note:
 S106 Direct connection approval is required from Thames water before connection into public sewer.

Diverted FW and SW pipes are subject to S185 diversion approval from Thames Water

Foul water drainage philosophy:
 Generally proposed foul is designed to discharge by gravity and connected to the public foul sewer at two locations, one via a new manhole installed on existing foul pipe on Washington Road to the west of the site and the other via existing Thames Water manhole near the junction of Hawks road and Washington to the North west of the site. A package foul pump is to be installed in the basement car park of the building to pump foul to the proposed manhole on the ground level. Foul package pump is to specialist design.

Note:
 All foul water pipes to be 100mm diameter unless noted otherwise.
 All surface water pipes to be 100mm diameter unless noted otherwise
 All level threshold to incorporate drainage (brick slot manufactured by acco or similar approved)
 All svp/ss and rwp positions to be confirmed by the Architect and M&E consultant

Note:
 This drawing has been transcribed from Patel Taylor Architect's master plan drawing no. X-503-PTA-MP-RF-DR-A-1201_S3-PL2 dated 16-11-2020, building C drawing 503-PTA-PH1-00-DR-LA-4300_S2-PL2 and Survey Solutions topographical survey drawing 20085Se-01 to 05 dated 11-08-2017

Drainage Layout and Solution subject to final detailed design

PRELIMINARY

P1	Preliminary Issue	07.04.21	DO	SM
Revision	Amendments	Date	Rev'd	Ch'd
DO		April 2021		CIVIL



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Project Title: Cambridge Road

Phase 1B
 Proposed Drainage Layout

Drawing Number: A6424-1551
 Scale: 1:250 @A1
 Unless Noted Otherwise

