

Surface Water Network						
Manhole Reference	Invert Level (m)	Cover Level (m)	Depth (m)	Chamber Details	Cover Loading	Grade I in
S0	69.320	70.10	0.78	Diffuser	-	60.0
S1	69.353	70.10	0.75	PPIC S/T	D400	60.0
S2	69.445	70.28	0.84	PPIC	A15	60.0
S3	69.320	70.15	0.83	Diffuser	-	60.0
S4	69.370	70.15	0.78	PPIC S/T	D400	60.0
S5	69.478	70.28	0.80	PPIC	A15	60.0
S6	69.320	70.18	0.86	Diffuser	-	60.0
S7	69.370	70.22	0.85	PPIC S/T	D400	60.0
S8	69.570	70.15	0.58	Diffuser	-	100.0
S9	69.625	70.25	0.62	PPIC S/T	A15	100.0
S10	69.680	70.28	0.60	PPIC	A15	100.0
S11	69.720	70.28	0.56	PPIC	A15	100.0
S12	69.570	70.15	0.58	Diffuser	-	100.0
S13	69.600	70.25	0.65	PPIC S/T	A15	100.0
S14	69.630	70.28	0.65	PPIC	A15	100.0
S15	69.690	70.28	0.59	PPIC	A15	100.0
S20	69.320	69.90	0.58	Diffuser	-	150.0
S21	69.343	69.90	0.56	PPIC S/T	D400	150.0
S22	69.350	69.90	0.55	Special	D400	150.0

Foul Water Network						
Manhole Reference	Invert Level (m)	Cover Level (m)	Depth (m)	Chamber Details	Cover Loading	Grade I in
F0	68.710	70.00	1.29	Existing	-	150.0
F1	68.920	70.20	1.28	1200Ø PCC	A15	150.0
F2	69.013	70.20	1.19	1200Ø PCC	A15	150.0
F3	69.127	70.20	1.07	1200Ø PCC	A15	150.0
F4	69.739	70.30	0.56	PPIC	A15	80.0
F5	68.920	70.20	1.28	1200Ø PCC	A15	70.0
F6	69.627	70.28	0.65	PPIC	A15	150.0
F7	69.013	70.20	1.19	1200Ø PCC	A15	80.0
F8	69.638	70.28	0.64	PPIC	A15	150.0

DESIGNERS CDM NOTE - RESIDUAL RISKS IDENTIFIED

The Design Engineer(s) have analysed this design as the scheme has been developed, in order to identify if there are any significant residual risk hazards (i.e. unusual, unexpected, abnormal or difficult).

Residual risks **HAVE** been identified and are therefore shown on this drawing. These risks have not been possible to remove by design.

This statement assumes that a competent Contractor with the appropriate qualified staff will be employed for the works, and that they will be familiar with site wide construction risks and hazards that they can reasonably be expected to encounter as part of their work.

BURIED UTILITIES RISK NOTE

- Buried utilities are present on and in the vicinity of the site.
- The Contractor must satisfy themselves that they have seen utility returns for the area and that appropriate Risk Assessment Method Statement (RAMS) are in place and implemented to ensure that buried and/or overhead services are located prior to any works taking place.
- Any RAMS shall address safe procedures for protection and working in the proximity of services.

- NOTES**
- All dimensions and levels are in metres unless otherwise noted
 - This drawing is to be read in conjunction with the relevant Architect's/Engineer's drawings, specifications and CDM documentation
 - This drawing has been produced electronically and may have been photo reduced or enlarged when copied. Work to figured dimensions only (DO NOT SCALE - EXCEPT FOR PLANNING PURPOSES). All dimensions to be checked on site. Any errors or omissions to be reported to the engineer immediately.
 - This drawing contains coloured lines / information that may not be clear if reproduced in black and white.
 - Digital copies of this plan can only be considered accurate if supplied directly by Infrastruct CS Ltd.

Construction Note

It is essential that new drainage associated with the development is laid from the outfall(s) into the site. This is essential to avoid unforeseen obstructions where encountered (such as services). If the drainage is laid from the site out to the outfall it can result in significant abortive works to relay and overcome such obstructions.

Location of Public Sewers have been taken from record drawings which should be fully substantiated by the contractor prior to commencing works on site

All manholes covers located within carriageways shall have no slip covers to prevent motorcycles/cycles losing control

Manhole schedules - Invert level shown related to the deepest pipe within the chamber

Drainage Key

Sewers

- Foul water drain (private/non adoptable)
- Surface water drain (private/non adoptable)
- Existing foul water sewer (Adopted)

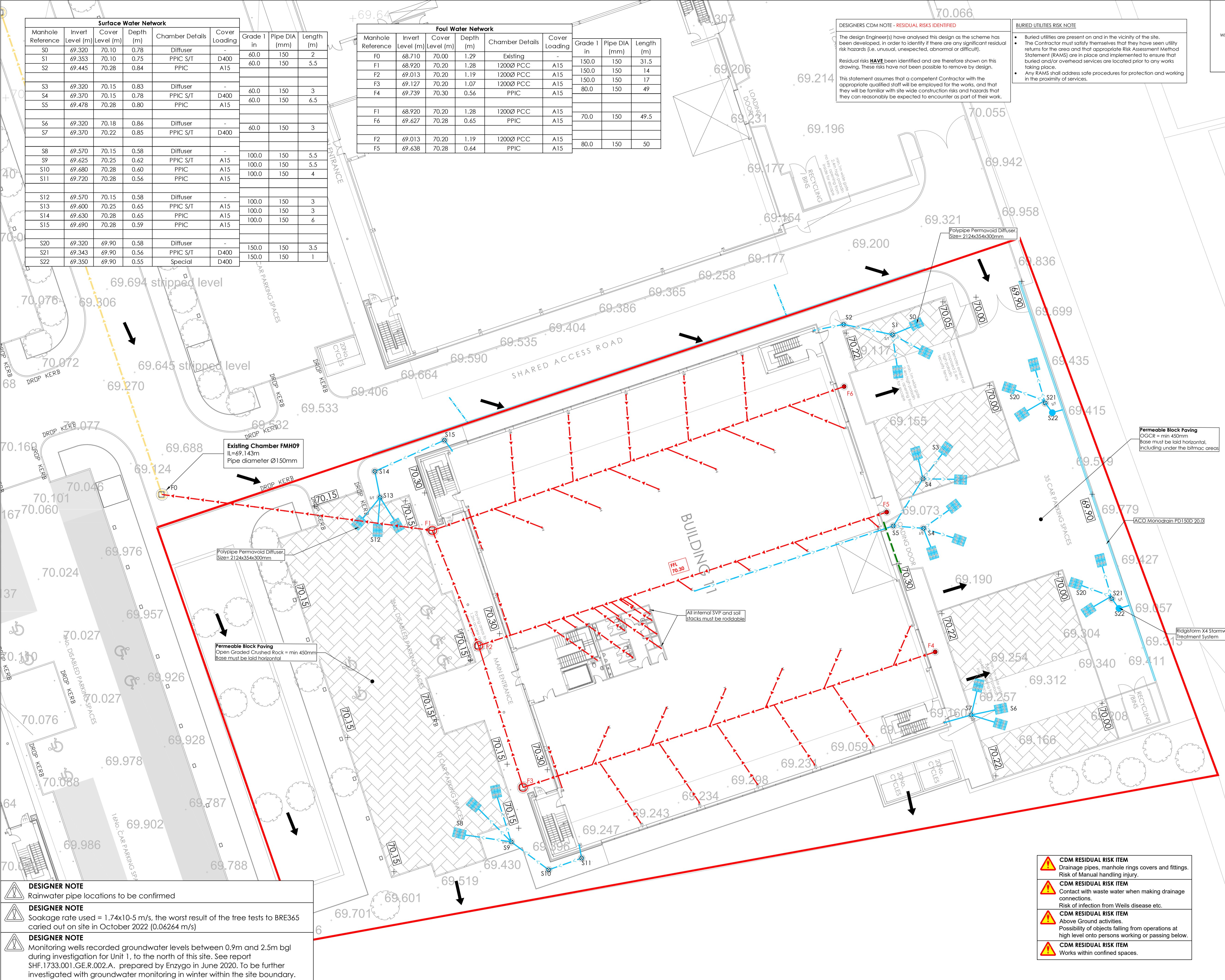
Chamber Key

FW/SW

- Mini access chamber (mac) - 300mmØ
- PPIC - 475mmØ*
- P.C.C. units/brick*
- Adaptable demarcation manhole within 1m of boundary
- Manhole Depth: 1.25m to 1.5m* Depth: 1.55m to 3.0m*

* General note
(Refer to standard details & longitudinal sections for chamber sizes. Size may need to increase dependant on number of incoming pipes/size of incoming pipes)

- Rain water down pipe (roddable access)
- Soil vent pipe/soil stack
- Silt Trap (ST) with removable silt bucket
- Manhole reference number
- Linear drainage channel
- RWP cellular discharge/collection unit (DU) (Permavoid or similar)
- Finished Floor Level (FFL) (Permavoid or similar)
- Block paving - permeable
- Flood exceedance routing
- Impermeable barrier to stop lateral movement of water



DESIGNER NOTE
Rainwater pipe locations to be confirmed

DESIGNER NOTE
Soakage rate used = 1.74x10⁻⁵ m/s, the worst result of the tree tests to BRE365 carried out on site in October 2022 (0.06264 m/s)

DESIGNER NOTE
Monitoring wells recorded groundwater levels between 0.9m and 2.5m bgl during investigation for Unit 1, to the north of this site. See report SHF.1733.001.GE.R.002.A. prepared by Enzygo in June 2020. To be further investigated with groundwater monitoring in winter within the site boundary.

- CDM RESIDUAL RISK ITEM**
Drainage pipes, manhole rings covers and fittings. Risk of Manual handling injury.
- CDM RESIDUAL RISK ITEM**
Contact with waste water when making drainage connections. Risk of infection from Wells disease etc.
- CDM RESIDUAL RISK ITEM**
Above Ground activities. Possibility of objects falling from operations at high level onto persons working or passing below.
- CDM RESIDUAL RISK ITEM**
Works within confined spaces.

P02	SNN	APL	New Site Layout	19/04/23
P01	RSI	MBD	Initial Issue	16/11/22
REV	DRAWN	CHECK	REVISION COMMENTS	ISSUE DATE
Drawing Title: Drainage Design				SHEET NO.: 1/1
PROJECT: Building 11, Oxford Technology Park, Kidlington, Oxon				
CLIENT: HILL STREET HOLDINGS		ENGINEER: MBD		
INFRASTRUCT CS LTD		DRAFT: SNN		
SCALE @ A1: 1:200		APPROVED: RJW		
PROJECT: OTP	ORIGIN: ICS	PHASE: 11	LEVEL: XX	TYPE: DR
ROLE: C	NO.: 0200	REVISION: P02		

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