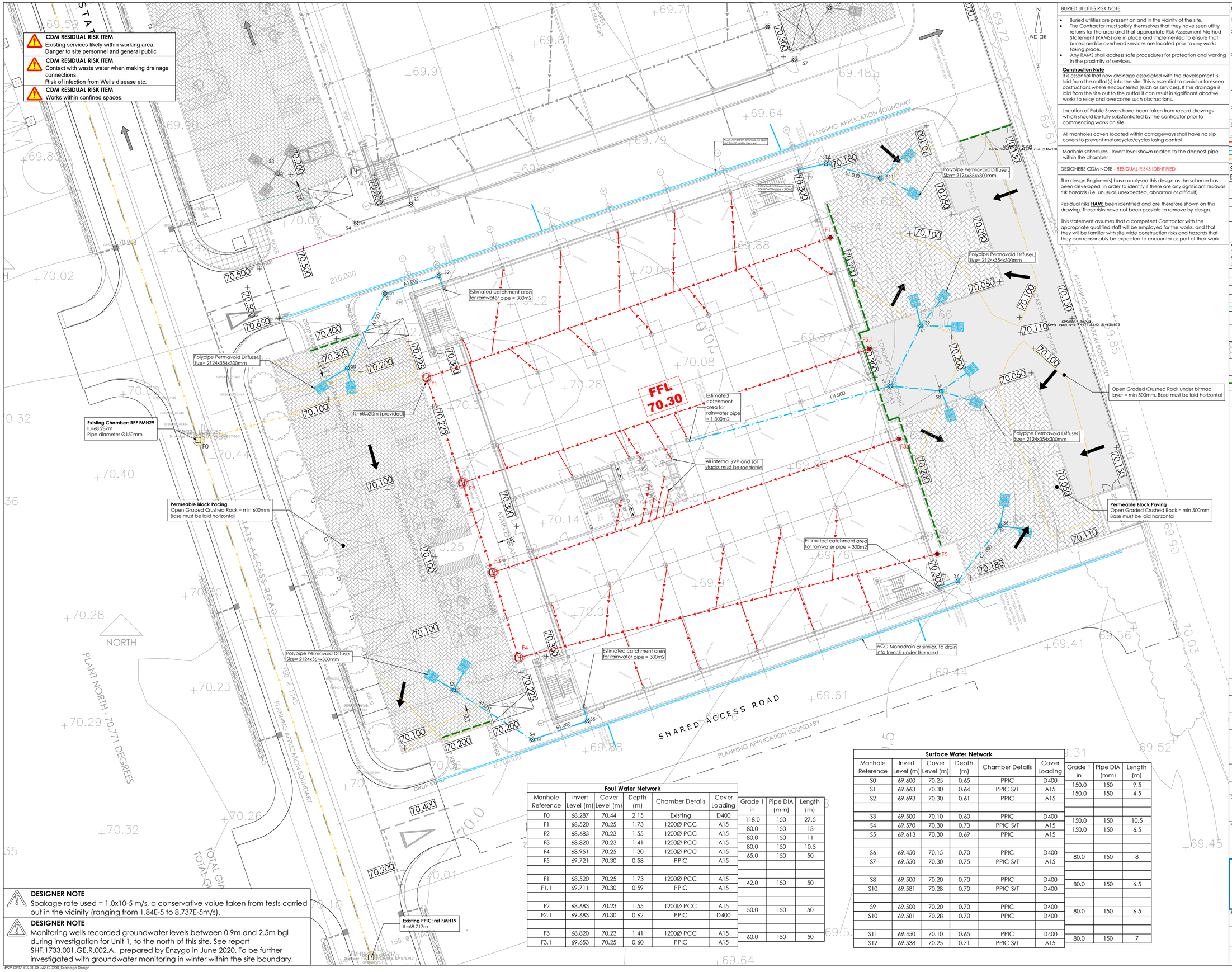


**DESIGNER NOTE**
Soakage rate used = 1.0x10-5 m/s, a conservative value taken from tests carried out in the vicinity (ranging from 1.84E-5 to 8.737E-5m/s).

**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.

**Foul Water Network**

| Manhole Reference | Invert Level (m) | Cover Level (m) | Depth (m) | Chamber Details | Cover Loading | Grade 1 in | Pipe DIA (mm) | Length (m) |
|---|---|---|---|---|---|---|---|---|
| F0 | 68.287 | 70.44 | 2.15 | Existing | D400 | 118.0 | 150 | 27.5 |
| F1 | 68.520 | 70.25 | 1.73 | 1200Ø PCC | A15 | 80.0 | 150 | 13 |
| F2 | 68.683 | 70.23 | 1.55 | 1200Ø PCC | A15 | 80.0 | 150 | 11 |
| F3 | 68.820 | 70.23 | 1.41 | 1200Ø PCC | A15 | 80.0 | 150 | 10.5 |
| F4 | 68.951 | 70.25 | 1.30 | 1200Ø PCC | A15 | 65.0 | 150 | 50 |
| F5 | 69.721 | 70.30 | 0.58 | PPIC | A15 | | | |
| | | | | | | | | |
| F1 | 68.520 | 70.25 | 1.73 | 1200Ø PCC | A15 | 42.0 | 150 | 50 |
| F1.1 | 69.711 | 70.30 | 0.59 | PPIC | A15 | | | |
| | | | | | | | | |
| F2 | 68.683 | 70.23 | 1.55 | 1200Ø PCC | A15 | 50.0 | 150 | 50 |
| F2.1 | 69.683 | 70.30 | 0.62 | PPIC | D400 | | | |
| | | | | | | | | |
| F3 | 68.820 | 70.23 | 1.41 | 1200Ø PCC | A15 | 60.0 | 150 | 50 |
| F3.1 | 69.653 | 70.25 | 0.60 | PPIC | A15 | | | |

**Surface Water Network**

| Manhole Reference | Invert Level (m) | Cover Level (m) | Depth (m) | Chamber Details | Cover Loading | Grade 1 in | Pipe DIA (mm) | Length (m) |
|---|---|---|---|---|---|---|---|---|
| S0 | 69.600 | 70.25 | 0.65 | PPIC | D400 | 150.0 | 150 | 9.5 |
| S1 | 69.663 | 70.30 | 0.64 | PPIC S/T | A15 | 150.0 | 150 | 4.5 |
| S2 | 69.693 | 70.30 | 0.61 | PPIC | A15 | | | |
| | | | | | | | | |
| S3 | 69.500 | 70.10 | 0.60 | PPIC | D400 | 150.0 | 150 | 10.5 |
| S4 | 69.570 | 70.30 | 0.73 | PPIC S/T | A15 | 150.0 | 150 | 6.5 |
| S5 | 69.613 | 70.30 | 0.69 | PPIC | A15 | | | |
| | | | | | | | | |
| S6 | 69.450 | 70.15 | 0.70 | PPIC | D400 | 80.0 | 150 | 8 |
| S7 | 69.550 | 70.30 | 0.75 | PPIC S/T | A15 | | | |
| | | | | | | | | |
| S8 | 69.500 | 70.20 | 0.70 | PPIC | D400 | 80.0 | 150 | 6.5 |
| S10 | 69.581 | 70.28 | 0.70 | PPIC S/T | D400 | | | |
| | | | | | | | | |
| S9 | 69.500 | 70.20 | 0.70 | PPIC | D400 | 80.0 | 150 | 6.5 |
| S10 | 69.581 | 70.28 | 0.70 | PPIC | D400 | | | |
| | | | | | | | | |
| S11 | 69.450 | 70.10 | 0.65 | PPIC | D400 | 80.0 | 150 | 7 |
| S12 | 69.538 | 70.25 | 0.71 | PPIC S/T | A15 | | | |

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.

**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

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.

NOTES

1. All dimensions and levels are in metres unless otherwise noted
2. This drawing is to be read in conjunction with the relevant Architect's/Engineer's drawings, specifications and CDM documentation
3. 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.
4. This drawing contains coloured lines / information that may not be clear if reproduced in black and white.
5. Digital copies of this plan can only be considered accurate if supplied directly by Infrastruct CS Ltd.

**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*
- Adoptable 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
- S1/F1 — Manhole reference number
- Linear drainage channel
- DU — RWP cellular discharge/collection unit (DU) (Permavoid or similar)
- FFL XX.XX — Finished Floor Level (FFL)
- Block paving - permeable
- Flood exceedance routing
- Impermeable barrier to stop lateral movement of water

| REV | DRAWN | CHECK | REVISION COMMENTS | ISSUE DATE |
|---|---|---|---|---|
| P06 | NJ | MBD | Pipe numbering added | 14/10/22 |
| P05 | NJ | MBD | Rear kerb assumed 100mm. Levels amended | 28/07/22 |
| P04 | NJ | MBD | F1 raised 50mm. Rear car park amended. | 21/07/22 |
| P03 | NJ | MBD | Additional foul water points added. Rear car park landscape updated | 26/05/22 |
| P02 | NJ | MBD | Foul water updated to avoid clashes with foundations | 20/05/22 |
| P01 | IMT | MBD | Initial issue | 11/05/22 |

DRAWING TITLE: Drainage Design
SHEET NO.: 1/1

PROJECT
Building 7
Oxford Technology Park
Kidlington, Oxon

CLIENT
SWJ Consulting Ltd

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SCALE @ A1: 1:200 (0m – 5m – 10.0m)
ENGINEER: IMT
PROJECT NUMBER: 4929
STATUS: S2
ISSUE PURPOSE: INFORMATION
DRAFT: NJ
APPROVED: MBD

| PROJECT | ORIGIN | PHASE | LEVEL | TYPE | ROLE | NO. | REVISION |
|---|---|---|---|---|---|---|---|
| OTP7 | ICS | 01 | XX | DR | C | 0200 | P06 |

4929-OPT7-ICS-01-XX-M2-C-0200_Drainage Design