CATCHMENT D – STORAGE AND FLOW RESTRICTION

ATTENUATION STORAGE NUMBER	DOWNSTREAM MANHOLE	FLOW RESTRICTION	COVER LEVEL	INVERT LEVEL	MAX TOP WATER LEVEL	STORAGE VOLUME	STORAGE TYPE	LOCATED BELOW
ATT.D1	OCD.1	0.4L/SEC	112.950	111.550	112.350	9.5m³	AQUACELL CRATE OSA	PERMEABLE PAVING
ATT.D2	SWMH0.5	2.0L/SEC	112.850	109.950	112.050	30.0m³	STORMTECH (MC-4500) OSA	GRASSED AREA
ATT.D3	OCD.2	0.4L/SEC	112.730	111.330	112.130	9.5m³	AQUACELL CRATE OSA	PERMEABLE PAVING
ATT.D4	SWMH0.9	1.0L/SEC	112.750	109.787	111.870	30.0m³	STORMTECH (MC-4500) OSA	GRASSED AREA
ATT.D5	OCD.3	0.4L/SEC	112.420	111.020	111.820	9.5m³	AQUACELL CRATE OSA	PERMEABLE PAVING
ATT.D6	SWMH0.12	2.0L/SEC	111.700	109.771	110.971	90.7m³	AQUACELL CRATE OSA	BIO-RETENTION
ATT.D7	OCD.4	0.4L/SEC	112.150	110.750	111.550	9.5m³	AQUACELL CRATE OSA	PERMEABLE PAVING
ATT.D8	OCD.5	0.4L/SEC	111.800	110.400	111.200	9.5m³	AQUACELL CRATE OSA	PERMEABLE PAVING
ATT.D9	SWMH0.16	NONE	111.200	108.455	110.550	30.0m³	STORMTECH (MC-4500) OSA	GRASSED AREA
ATT.D10	OCD.6	0.4L/SEC	111.350	109.950	110.750	9.5m³	AQUACELL CRATE OSA	PERMEABLE PAVING
ATT.D11	OCD.7	0.4L/SEC	111.220	109.820	110.620	9.5m³	AQUACELL CRATE OSA	PERMEABLE PAVING
ATT.D12	SWMH0.22	NONE	110.920	108.189	110.289	30m³	STORMTECH (MC-4500) OSA	GRASSED AREA
ATT.D13	OCD.8	0.4L/SEC	110.920	109.520	110.320	9.5m³	AQUACELL CRATE OSA	PERMEABLE PAVING
ATT.D14	OCD.9	0.4L/SEC	111.300	109.900	110.700	9.5m³	AQUACELL CRATE OSA	BIO-RETENTION
ATT.D15	OCD.10	0.4L/SEC	111.100	109.700	110.500	9.5m³	AQUACELL CRATE OSA	BIO-RETENTION
ATT.D16	SWMH0.28	2.5L/SEC	111.200	107.970	110.370	192.0m³	CONCRETE TANK	LANDSCAPE SWALE
ATT.D17	OCD.11	0.4L/SEC	113.100	111.700	112.500	9.5m³	AQUACELL CRATE OSA	BIO-RETENTION
ATT.D18	OCD.12	0.4L/SEC	113.000	111.600	112.400	9.5m³	AQUACELL CRATE OSA	PERMEABLE PAVING
ATT.D19	SWMH0.33	1.0L/SEC	112.000	108.672	110.672	186.0m³	CONCRETE TANK	LANDSCAPE SWALE
ATT.D20	OCD.13	0.4L/SEC	109.225	108.400	108.800	4.5m³	AQUACELL CRATE OSA	BIO-RETENTION
ATT.D21	SWMH0.40	4.1L/SEC	110.200	107.790	108.890	40.0m³	STORMTECH (DC-780) OSA	PERMEABLE PAVING
TOTAL STORAGE PROVIDED = 747.2m³								

CATCHMENT C – STORAGE AND FLOW RESTRICTION

ATTENUATION STORAGE NUMBER	DOWNSTREAM MANHOLE	FLOW RESTRICTION	COVER LEVEL	INVERT LEVEL	MAX TOP WATER LEVEL	STORAGE VOLUME	STORAGE TYPE	LOCATED BELOW
ATT.C1	SWMH841A	1.4L/SEC	113.500	111.500	113.000	300m³	RC CONCRETE TANK	BLOCK B BASEMENT
TOTAL STORAGE PROVIDED = 300m³								

CATCHMENT B – STORAGE AND FLOW RESTRICTION

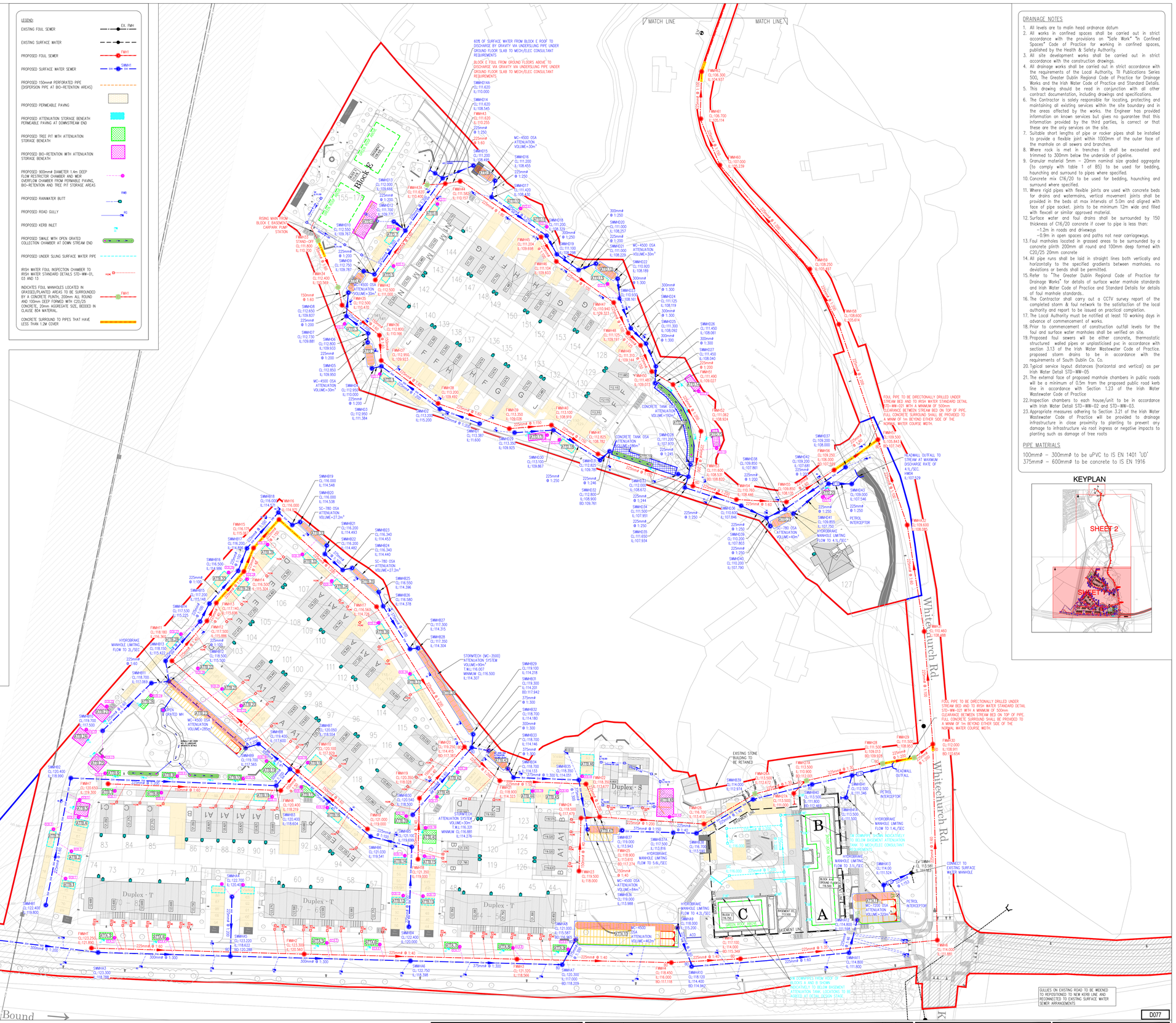
ATTENUATION STORAGE NUMBER	DOWNSTREAM MANHOLE	FLOW RESTRICTION	COVER LEVEL	INVERT LEVEL	MAX TOP WATER LEVEL	STORAGE VOLUME	STORAGE TYPE	LOCATED BELOW
ATT.B1	OCB.1	0.4L/SEC	121.850	120.425	121.225	9.5m³	AQUACELL CRATE OSA	PERMEABLE PAVING
ATT.B2	OCB.2	0.4L/SEC	121.425	120.025	120.825	9.5m³	AQUACELL CRATE OSA	PERMEABLE PAVING
ATT.B3	OCB.3	0.4L/SEC	121.425	120.025	120.825	9.5m³	AQUACELL CRATE OSA	PERMEABLE PAVING
ATT.B4	OCB.4	0.4L/SEC	121.000	119.600	120.400	9.5m³	AQUACELL CRATE OSA	PERMEABLE PAVING
ATT.B5	OCB.5	0.4L/SEC	120.700	119.300	119.700	9.5m³	AQUACELL CRATE OSA	BIO-RETENTION
ATT.B6	OCB.6	0.4L/SEC	120.700	119.300	119.700	9.5m³	AQUACELL CRATE OSA	TREE PIT
ATT.B7	OCB.7	0.4L/SEC	120.800	119.400	119.800	9.5m³	AQUACELL CRATE OSA	TREE PIT
ATT.B8	OCB.8	0.4L/SEC	121.000	119.600	120.000	9.5m³	AQUACELL CRATE OSA	TREE PIT
ATT.B9	OCB.9	0.4L/SEC	121.000	119.600	120.000	9.5m³	AQUACELL CRATE OSA	TREE PIT
ATT.B10	OCB.10	0.4L/SEC	120.720	119.320	120.120	9.5m³	AQUACELL CRATE OSA	PERMEABLE PAVING
ATT.B11	OCB.11	0.4L/SEC	120.400	119.000	119.800	9.5m³	AQUACELL CRATE OSA	PERMEABLE PAVING
ATT.B12	OCB.12	0.4L/SEC	121.900	120.500	121.300	9.5m³	AQUACELL CRATE OSA	PERMEABLE PAVING
ATT.B13	OCB.13	0.4L/SEC	121.900	120.500	121.300	9.5m³	AQUACELL CRATE OSA	PERMEABLE PAVING
ATT.B14	OCB.14	0.4L/SEC	121.000	119.700	120.500	9.5m³	AQUACELL CRATE OSA	PERMEABLE PAVING
ATT.B15	OCB.15	0.4L/SEC	121.100	119.700	120.500	9.5m³	AQUACELL CRATE OSA	PERMEABLE PAVING
ATT.B16	OCB.16	0.4L/SEC	120.500	119.100	119.500	9.5m³	AQUACELL CRATE OSA	TREE PIT
ATT.B17	OCB.17	0.4L/SEC	120.300	118.900	119.300	9.5m³	AQUACELL CRATE OSA	TREE PIT
ATT.B18	OCB.18	0.4L/SEC	120.050	118.650	119.450	9.5m³	AQUACELL CRATE OSA	PERMEABLE PAVING
ATT.B19	OCB.19	0.4L/SEC	119.400	118.000	118.400	9.5m³	AQUACELL CRATE OSA	TREE PIT
ATT.B20	OCB.20	0.4L/SEC	119.000	117.600	118.400	9.5m³	AQUACELL CRATE OSA	PERMEABLE PAVING
ATT.B21	OCB.21	0.4L/SEC	118.750	117.350	118.150	9.5m³	AQUACELL CRATE OSA	PERMEABLE PAVING
ATT.B22	OCB.22	0.4L/SEC	119.900	118.500	119.300	9.5m³	AQUACELL CRATE OSA	PERMEABLE PAVING
ATT.B23	SWMH.B.12	2.0L/SEC	118.500	115.500	115.900	285.0m³	STORMTECH (MC-4500) OSA	GRASSED AREA
ATT.B24	OCB.23	0.4L/SEC	119.700	118.300	119.100	9.5m³	AQUACELL CRATE OSA	PERMEABLE PAVING
ATT.B25	OCB.24	0.4L/SEC	118.800	117.400	117.800	9.5m³	AQUACELL CRATE OSA	TREE PIT
ATT.B26	OCB.25	0.4L/SEC	118.800	117.400	117.800	9.5m³	AQUACELL CRATE OSA	TREE PIT
ATT.B27	OCB.26	0.4L/SEC	118.500	117.100	117.500	9.5m³	AQUACELL CRATE OSA	TREE PIT
ATT.B28	OCB.27	0.4L/SEC	117.530	116.130	116.530	9.5m³	AQUACELL CRATE OSA	BIO-RETENTION
ATT.B29	OCB.28	0.4L/SEC	116.500	115.100	115.900	9.5m³	AQUACELL CRATE OSA	PERMEABLE PAVING
ATT.B30	OCB.29	0.4L/SEC	116.500	115.100	115.900	9.5m³	AQUACELL CRATE OSA	PERMEABLE PAVING
ATT.B31	OCB.30	0.4L/SEC	116.100	114.700	115.500	9.5m³	AQUACELL CRATE OSA	PERMEABLE PAVING
ATT.B32	OCB.31	0.4L/SEC	116.150	114.750	115.550	9.5m³	AQUACELL CRATE OSA	PERMEABLE PAVING
ATT.B33	SWMH.B.21	NONE	116.200	114.493	115.693	27.2m³	STORMTECH (DC-780) OSA	GRASSED AREA
ATT.B34	OCB.32	0.4L/SEC	116.350	114.950	115.750	9.5m³	AQUACELL CRATE OSA	PERMEABLE PAVING
ATT.B35	SWMH.B.25	NONE	116.500	114.396	115.596	27.2m³	STORMTECH (DC-780) OSA	GRASSED AREA
ATT.B36	OCB.33	0.4L/SEC	116.650	115.250	116.050	9.5m³	AQUACELL CRATE OSA	PERMEABLE PAVING
ATT.B37	OCB.34	0.4L/SEC	117.000	116.200	117.000	9.5m³	AQUACELL CRATE OSA	PERMEABLE PAVING
ATT.B38	SWMH.B.29	NONE	119.100	114.218	115.918	90.1m³	AQUACELL CRATE OSA	PERMEABLE PAVING
ATT.B39	OCB.35	0.4L/SEC	120.600	119.200	120.000	9.5m³	AQUACELL CRATE OSA	PERMEABLE PAVING
ATT.B40	OCB.36	0.4L/SEC	120.700	119.300	120.100	9.5m³	AQUACELL CRATE OSA	PERMEABLE PAVING
ATT.B41	OCB.37	0.4L/SEC	120.125	118.725	119.525	9.5m³	AQUACELL CRATE OSA	PERMEABLE PAVING
ATT.B42	OCB.38	0.4L/SEC	119.650	118.250	119.050	9.5m³	AQUACELL CRATE OSA	PERMEABLE PAVING
ATT.B43	SWMH.B.33	NONE	118.700	114.146	116.246	30.0m³	STORMTECH (MC-4500) OSA	GRASSED AREA
ATT.B44	OCB.39	0.4L/SEC	118.400	117.000	117.800	9.5m³	AQUACELL CRATE OSA	PERMEABLE PAVING
ATT.B45	OCB.40	0.4L/SEC	118.300	116.900	117.700	9.5m³	AQUACELL CRATE OSA	PERMEABLE PAVING
ATT.B46	OCB.41	0.4L/SEC	118.350	116.950	117.750	9.5m³	AQUACELL CRATE OSA	PERMEABLE PAVING
ATT.B48	OCB.42	2.0L/SEC	118.650	116.850	117.650	38.0m³	STORMTECH (MC-4500) OSA	BIO-RETENTION
ATT.B49	SWMH.B.37A	5.6L/SEC	117.500	113.876	115.976	84.0m³	STORMTECH (MC-4500) OSA	GRASSED AREA
TOTAL STORAGE PROVIDED = 971m³								

CATCHMENT A – STORAGE AND FLOW RESTRICTION

ATTENUATION STORAGE NUMBER	DOWNSTREAM MANHOLE	FLOW RESTRICTION	COVER LEVEL	INVERT LEVEL	MAX TOP WATER LEVEL	STORAGE VOLUME	STORAGE TYPE	LOCATED BELOW
ATT.A1	OCA.1	0.4L/SEC	121.870	120.470	120.870	9.5m³	AQUACELL CRATE OSA	TREE PIT
ATT.A2	OCA.2	0.4L/SEC	122.250	120.850	122.050	9.5m³	AQUACELL CRATE OSA	TREE PIT
ATT.A3	OCA.3	0.4L/SEC	123.400	122.000	112.130	9.5m³	AQUACELL CRATE OSA	TREE PIT
ATT.A4	OCA.4	0.4L/SEC	123.400	122.000	111.870	9.5m³	AQUACELL CRATE OSA	TREE PIT
ATT.A5	OCA.5	0.4L/SEC	123.200	121.800	111.820	9.5m³	AQUACELL CRATE OSA	TREE PIT
ATT.A6	OCA.6	0.4L/SEC	122.900	121.500	110.971	9.5m³	AQUACELL CRATE OSA	TREE PIT
ATT.A7	OCA.7	0.4L/SEC	122.300	120.900	111.550	9.5m³	AQUACELL CRATE OSA	TREE PIT
ATT.A8	OCA.8	0.4L/SEC	121.250	119.850	111.200	9.5m³	AQUACELL CRATE OSA	TREE PIT
ATT.A9	OCA.9	0.4L/SEC	121.000	119.600	110.550	9.5m³	AQUACELL CRATE OSA	TREE PIT
ATT.A10	SWMH.A.9	4.2L/SEC	118.000	115.200	117.300	462.0m³	STORMTECH (MC-4500) OSA	GRASSED AREA
ATT.A11	SWMH.A.13	3.1L/SEC	113.800	111.521	113.121	320.0m³	STORMTECH (MC-7200) OSA	PLAZA
TOTAL STORAGE PROVIDED = 867.5m³								

LEGEND:

- EXISTING FOUL SEWER
- EXISTING SURFACE WATER
- PROPOSED FOUL SEWER
- PROPOSED SURFACE WATER SEWER
- PROPOSED 150mmø PERFORATED PIPE (DISPERSION PIPE AT BIO-RETENTION AREAS)
- PROPOSED PERMEABLE PAVING
- PROPOSED ATTENUATION STORAGE BENEATH PERMEABLE PAVING AT DOWNSTREAM END
- PROPOSED TREE PIT WITH ATTENUATION STORAGE BENEATH
- PROPOSED BIO-RETENTION WITH ATTENUATION STORAGE BENEATH
- PROPOSED 900mmø DIAMETER 1.4m DEEP FLOW RESTRICTOR CHAMBER AND WER OVERFLOW CHAMBER FROM PERMABLE PAVING, BIO-RETENTION AND TREE PIT STORAGE AREAS
- PROPOSED RAINWATER BUTT
- PROPOSED ROAD GULLY
- PROPOSED KERB INLET
- PROPOSED SWALE WITH OPEN GRATED COLLECTION CHAMBER AT DOWN STREAM END
- PROPOSED UNDER SLUNG SURFACE WATER PIPE
- IRISH WATER FOUL INSPECTION CHAMBER TO IRISH WATER STANDARD DETAILS STD-WW-01, 03 AND 13
- INDICATES FOUL MANHOLES LOCATED IN GRASSED/PLANTED AREAS TO BE SURROUNDED BY A CONCRETE PLINTH, 200mm ALL ROUND AND 100mm DEEP FORMED WITH C20/25 CONCRETE, 20mm AGGREGATE SIZE, BEDDED IN CLAUSE 804 MATERIAL.
- CONCRETE SURROUND TO PIPES THAT HAVE LESS THAN 1.2M COVER



DRAINAGE NOTES

1. All levels are to malin head ordnance datum
2. All works in confined spaces shall be carried out in strict accordance with the provisions on "Safe Work" "In Confined Spaces" Code of Practice for working in confined spaces, published by the Health & Safety Authority.
3. All site development works shall be carried out in strict accordance with the construction drawings.
4. All drainage works shall be carried out in strict accordance with the requirements of the Local Authority, TII Publications Series 500, The Greater Dublin Regional Code of Practice for Drainage Works and the Irish Water Code of Practice and Standard Details.
5. This drawing should be read in conjunction with all other contract documentation, including drawings and specifications.
6. The Contractor is solely responsible for locating, protecting and maintaining all existing services within the site boundary and in the areas affected by the works. the Engineer has provided information on known services but gives no guarantee that this information provided by the third parties, is correct or that these are the only services on the site.
7. Suitable short lengths of pipe or rocker pipes shall be installed to provide a flexible joint within 1000mm of the outer face of the manhole on all sewers and branches.
8. Where rock is met in trenches it shall be excavated and trimmed to 300mm below the underside of pipeline.
9. Granular material 5mm – 20mm nominal size graded aggregate (to comply with table 1 of B5) to be used for bedding, haunching and surround to pipes where specified.
10. Concrete mix C16/20 to be used for bedding, haunching and surround where specified.
11. Where rigid pipes with flexible joints are used with concrete beds for drains and watermains, vertical movement joints shall be provided in the beds at max intervals of 5.0m and aligned with face of pipe socket. joints to be minimum 12m wide and filled with flexcell or similar approved material.
12. Surface water and foul drains shall be surrounded by 150 thickness of C16/20 concrete if cover to pipe is less than:
    - 1.2m in roads and driveways
    - 0.9m in open spaces and paths not near carriageways.
13. Foul manholes located in grassed areas to be surrounded by a concrete plinth 200mm all round and 100mm deep formed with c20/25 20mm concrete
14. All pipe runs shall be laid in straight lines both vertically and horizontally to the specified gradients between manholes. no deviations or bends shall be permitted.
15. Refer to "The Greater Dublin Regional Code of Practice for Drainage Works" for details of surface water manhole standards and Irish Water Code of Practice and Standard Details for details of foul manhole standards.
16. The Contractor shall carry out a CCTV survey report of the completed storm & foul network to the satisfaction of the local authority and report to be issued on practical completion.
17. The Local Authority must be notified at least 10 working days in advance of commencement of works.
18. Prior to commencement of construction outfall levels for the foul and surface water manholes shall be verified on site.
19. Proposed foul sewers will be either concrete, thermostatic structured walled pipes or unplasticised pvc in accordance with section 3.13 of the Irish Water Wastewater Code of Practice. proposed storm drains to be in accordance with the requirements of South Dublin Co. Co.
20. Typical service layout distances (horizontal and vertical) as per Irish Water Detail STD-WW-05
21. The external face of proposed manhole chambers in public roads will be a minimum of 0.5m from the proposed public road kerb line in accordance with Section 1.23 of the Irish Water Wastewater Code of Practice
22. Inspection chambers to each house/unit to be in accordance with Irish Water Detail STD-WW-02 and STD-WW-03.
23. Appropriate measures adhering to Section 3.21 of the Irish Water Wastewater Code of Practice will be provided to drainage infrastructure in close proximity to planting to prevent any damage to infrastructure via root ingress or negative impacts to planting such as damage of tree roots

PIPE MATERIALS

100mmø – 300mmø to be uPVC to IS EN 1401 'UD'
375mmø – 600mmø to be concrete to IS EN 1916

KEYPLAN

D077

PLANNING DRAWING

NOT FOR CONSTRUCTION THIS DRAWING HAS BEEN ISSUED FOR INFORMATION PURPOSES ONLY AND MUST NOT BE USED FOR CONSTRUCTION UNDER ANY CIRCUMSTANCES

NOTES
1. For setting out refer to Architect's drawings.
2. This drawing to be read in conjunction with all other Architectural and Engineering drawings and all other relevant drawings and Specifications.
3. DO NOT SCALE THIS DRAWING. Use figured dimensions only.
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Rev. No.	Date	REVISION NOTE	Drn. By	Chkd. By
P1	22.10.2021	ISSUED FOR PLANNING STAGE 3	DD	OS
P2	23.02.2022	REVISED FOR IRISH STATEMENT OF DESIGN ACCEPTANCE REVIEW	DD	GF
P3	03.03.2022	ISSUED FOR STAGE 3 PLANNING	DD	GF

Architect	JFOC Architects
Project	Edmondstown Lands
Title	Proposed Drainage Layout Sheet 1 Of 2
Dwg. No.	EDM-CSC-GF-XX-DR-C-0007

Date	Drn by	Chkd by	Apvd by	Scale	Revision
June 2020	PJC	RFM	OS	1:500 @ A0	P3

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Health & Safety OHSAS 18001:2007