LEGEND:

- = EXISTING BUILDING
- = EXISTING FOULWATER SEWER
- = EXISTING FOULWATER MANHOLE
- = EXISTING COMBINED SEWER
- = EXISTING COMBINED MANHOLE
- = EXISTING STORMWATER SEWER
- = EXISTING STORMWATER MANHOLE
- = EXISTING GULLY
- = PROPOSED GREEN ROOF
- = PROPOSED CANOPY / FLAT ROOFS
- = PROPOSED PITCHED ROOF
- = PROPOSED FOULWATER SEWER
- = PROPOSED FOULWATER MANHOLE
- = PROPOSED STORMWATER SEWER
- = PROPOSED STORMWATER MANHOLE
- = PROPOSED GULLEY
- = EXISTING LEVELS
- = PROPOSED LEVELS
- = PROPOSED FINISH FLOOR LEVELS
- = PROPOSED ACO DRAIN

CONTRACTOR TO MAKE ALLOWANCE TO CCTV SURVEY ALL NEW STORMWATER AND FOULWATER SEWERS AS PER UISCE ÉIREANN CODE OF PRACTICE

OTHER SITE UTILITY UNDERGROUND SERVICES ARE LOCATED ON SITE.
CONTRACTOR REFERRED TO UNDERGROUND SURVEY DRAWINGS INCLUDED IN THIS PACKAGE FOR FURTHER INFORMATION

REFER TO DRAWING D2104DR0001 FOR ALL COVER AND INVERT LEVELS OF EXISTING DRAINAGE INFRASTRUCTURE.

PROPOSED GREEN ROOF.

REFER TO ARCHITECTS DRAWING FOR PROPOSED FALLS AND DISCHARGE LOCATIONS.

REFER TO DFCE DRAWING D2104DR0006-02 FOR EXEMPLAR DETAILS.

CONTRACTORS TENDER PRICE TO BE BASED ON THEIR SPECIALIST SUPPLIERS DESIGN.

PROPOSED ACO DRAIN TO BE INSTALLED AT FOOTPATH ENTRANCE / EXIT TO TAKE ANY STORM RUN-OFF FROM HARD LANDSCAPING

PROPOSED GREEN ROOF.

REFER TO ARCHITECTS DRAWING FOR PROPOSED FALLS AND DISCHARGE LOCATIONS.

REFER TO DFCE DRAWING D2104DR0006-02 FOR EXEMPLAR DETAILS.

CONTRACTORS TENDER PRICE TO BE BASED ON THEIR SPECIALIST SUPPLIERS DESIGN AND DETAIL.

PROPOSED ACO DRAIN TO BE INSTALLED AT FOOTPATH ENTRANCE / EXIT TO TAKE ANY STORM RUN-OFF FROM HARD LANDSCAPING

EXISTING GULLEY TO BE REMOVED ALONG WITH ALL ASSOCIATED PIPE WORK.

DUE PIPES RUN BENEATH PROPOSED BUILDING, PIPES TO BE ENCASED IN CONCRETE FOR PROTECTION AS PER UISCE ÉIREANN STANDARD DETAIL STD-WW-08.

SECTION OF RUN TO BE PROTECTED HIGHLIGHTED IN YELLOW.

SPIGOT AND SOCKET JOINT TO BE INSTALLED AS PER TGD H AT EACH JOINT.

REFER TO DFCE DRAWING D2104DR0006-02 FOR FURTHER DETAIL

EXISTING STORM WATER MANHOLE TO BE REMOVED.

ALLOWANCE TO BE MADE FOR THE DECOMMISSIONING AND REMOVAL OF SAME ALONG WITH ALL CONTAMINATED SOIL WITHIN 500mm OF TOP,BOTTOM AND SIDES.

PROPOSED FOULWATER TO CONNECT LOCALLY TO FOULWATER SYSTEM AT THIS LOCATION

FOUL / STORM MANHOLES:
MANHOLES SHALL BE CONSTRUCTED OF EITHER;

HIGH DENSITY BLOCK
BLOCK WORK IS TO BE FLUSH POINTED AND **NOT** PLASTERED, IN ACCORDANCE WITH IS 20, DESIGNATION S10, OR EQUIVALENT, AND LINED INTERNALLY WITH SOLID ENGINEERING BRICK TO IS 91 OR EQUIVALENT, TO A HEIGHT OF 1 METRE ABOVE BENCHING. BRICK TO BE BONDED TO THE BLOCK WORK USING ENGLISH GARDEN WALL BOND.
OR
CAST IN SITU
IN SITU CONCRETE, CLASS 30N/20mm.THE MINIMUM WALL THICKNESS IS TO BE 225mm. HIGHER THICKNESSES MAY BE REQUIRED UNDER MAIN ROADS.

ALL OUTFALL MANHOLES MUST BE CONSTRUCTED AS PER THE GREATER DUBLIN REGIONAL CODE OF PRACTICE FOR DRAINAGE WORKS VERSION 6.0.

TABLE 4: PROPOSED STORM WATER MANHOLE SCHEDULE

MANHOLE NAME:	COVER LEVEL (m)	MANHOLE DEPTH (m)	INVERT LEVEL (m)
SW100	99.050	0.700	98.350
SW101	99.050	1.000	98.050
SW102	99.050	1.200	97.850
SW103	99.050	0.700	98.350
SW104	99.000	1.310	97.690
SW105	99.000	1.460	97.540
SW106	99.150	1.760	97.390
SW107	99.150	1.790	97.360
SW108	99.150	1.830	97.320
SW109	98.970	0.620	98.350
S18 *(Existing - manhole to be relocated)*	99.050	0.970	98.080
S23 *(Existing)*	99.120	2.100	97.020

TABLE 5: PROPOSED FOULWATER MANHOLE SCHEDULE

MANHOLE NAME:	COVER LEVEL (m)	MANHOLE DEPTH (m)	INVERT LEVEL (m)
FW100	99.050	0.500	98.550
FW101	99.050	0.610	98.440
FW102	99.050	0.720	98.330
FW103	99.000	0.670	98.330
FW104	99.000	0.870	98.130
F16 *(Existing)*	99.040	1.130	97.910
F17 *(Existing)*	99.020	1.000	98.020
F32 *(Existing)*	99.030	0.900	98.130

PROPOSED ACO DRAIN TO BE INSTALLED AT FOOTPATH ENTRANCE / EXIT TO TAKE ANY STORM RUN-OFF FROM HARD LANDSCAPING

PROPOSED 450mm Ø STORMWATER SEWER

EXISTING 225mmØ STORM WATER SEWER TO BE RETAINED AND PROTECTED

EXISTING FOULWATER SEWER MANHOLE TO BE RETAINED.

CONTRACTOR TO MAKE ALLOWANCE TO HAVE LID RESET TO NEW HARD LANDSCAPE LAYOUT LEVEL. CONTRACTOR TO MAKE ALLOWANCE FOR REMOVAL OF EXISTING MANHOLE LID, FRAME & ENGINEERING BRICKS AND REBUILDING TO NEW LEVEL WITH NEW MANHOLE FRAME & LID.

PROPOSED 150mm Ø STORMWATER OVERFLOW TO CONNECT TO LOCAL STORMWATER SYSTEM

PROPOSED 450mm Ø STORMWATER SEWER

ATTENUATION TANK TO DISCHARGE TO EXISTING SW MANHOLE S23.

TO TIE IN AT 97.090m AOD

CONTRACTOR TO MAKE ALLOWANCE TO CCTV SURVEY EXISTING STORMWATER SEWER FROM STORMWATER MANHOLE **S23** TO WHERE SAME JOINS UP WITH EXISITNG MUNICIPAL STORMWATER NETWORK AT COMPLETION.

CONTRACTOR TO MAKE ALLOWANCE TO CCTV SURVEY EXISTING FOULWATER SEWER FROM FOULWATER MANHOLE **F10** TO WHERE SAME JOINS UP WITH EXISITNG MUNICIPAL FOULWATER NETWORK AT COMPLETION.

PROPRIETARY FLOW CONTROL DEVICES REQUIRED AT THIS MANHOLE SW108 TO LIMIT DISCHARGE TO EXISTING STORM SEWER.

PROPRIETARY FLOW CONTROL TO BE FITTED WITH PULL CHORD BYPASS & PENSTOCK VALVE

PROPRIETARY FLOW CONTROL TO CONFORM TO EN 13562-1:2002 & EN 13562-2:2002 ANTI-FLOODING DEVICES FOR BUILDINGS.

DISCHARGE TO BE LIMITED TO 1.1 L/S.

REFER TO DFCE DRAWING D2104DR0006-01 FOR FURTHER DETAILS.

EXISTING UNDERGROUND DATA CABLE TO BE DIVERTED - TO M&E ENGINEERS DETAIL DURING DETAILED DESIGN STAGE.

CONTRACTOR TO MAKE ALLOWANCE FOR THE RASING AND RESETTING OF ALL EXISTING MANHOLE LIDS IN AREA BUBBLED TO MAKE THAT OF NEW HARD LANDSCAPE LAYOUT LEVEL.

CONTRACTOR TO MAKE ALLOWANCE FOR REMOVAL OF EXISTING MANHOLE LID, FRAME & ENGINEERING BRICKS AND REBUILDING TO NEW LEVEL WITH NEW MANHOLE FRAME & LID, ENGINEERING BRICK WORK AND MORTAR.

SLIT TRAP TO BE INCORPORATED INTO MANHOLE SW107

PROPOSED LOCATION OF ATTENUATION SYSTEM - NO CLASH WITH SITE SERVICES OTHER THAN THAT INDICATED

PROPOSED PROPRIETARY SUDS ATTENUATION SYSTEM (NON-TRAFFICABLE AND TANKED SYSTEM OR SIMILAR AND APPROVED).

- REQUIRED STORAGE VOLUME = 161m^3.
- IMPERMEABLE AREA TO BE SERVED BY TANK = 2175m^2
- SYSTEM TO BE DESIGN TO CATER FOR A 1:100 YEAR STORM EVENT + A 20% INCREASE FOR CLIMATE CHANGE.
- FLOW CONTROL DEVICE TO BE FITTED TO OUTFLOW MANHOLE TO LIMITED DISCHARGE FROM ATTENUATION SYSTEM TO 1.1 l/s.

PROPOSED ATTENUATION SYSTEM - EXACT SIZE & TYPE TO BE CONFIRMED WITH SPECIALIST SUPPLIER.

PROPOSED SYSTEM IS BASED ON 96% VOID RATIO WITH NO INFILTRATION.

PROPOSED SYSTEM TO BE 14.4m (l) x 11.2m (w) X 1.09m (dp) - TO BE CONFIRMED BY SPECIALIST SUPPLIER

REFER TO DFCE DRAWING D2104DR0006-01 FOR FURTHER EXEMPLAR DETAILS.

NON PERMEABLE GEOTEXTILE TO TOP, BASE AND SIDES OF EXCAVATION THAT MEETS MASS SPECIFICATION OF 300G/m2/ (EN965) S 13 NW POLYPROPYLENE OR EQUIVALENT WRAPPED;

SURROUNDED IN CLAUSE 6P ANGULAR STONE (OR TYPE 1/2 SUB BASE); INCLUDING GEOTEXTILE WRAPPED 150mm DIA PERFORATED DISTRIBUTION PIPE; CONNECTING INTO SURFACE DRAINAGE SYSTEM AT MANHOLE COMPLETE;

CONTRACTOR TO INCLUDE FOR EXCAVATION, TEMPORARY SHORING/ SUPPORT, DISPOSAL OF EXCAVATED MATERIAL, DISPOSAL OF GROUND WATER; BACKFILLING ABOVE ATTENUATION TANKS WITH GRANULAR WELL GRADED SOIL/AGGREGATE MIXTURES, <35% FINES. COMPACT IN 150mm LIFTS TO 95% PROCTOR DENSITY; ALL AS PER ENGINEERS SPECIFICATION AND DRAWINGS.

FINAL DIMENSIONS & VOLUME OF ATTENUATION TANK IS SUBJECT TO CONTRACTORS SPECIALIST SUPPLIERS DESIGN AND CALCULATION BASED ON THE ABOVE PARAMETERS. TO BE APPROVED BY DFCE VIA TECHNICAL SUBMITTAL.

CONTRACTORS TENDER PRICE TO BE BASED ON THEIR SPECIALIST SUPPLIERS DESIGN

EXTENTS OF REQUIRED EXCAVATION SHOWN NOTIONALLY BY DASHED GREY LINE.

EXCAVATIONS TO BE 1m AWAY FROM PROPOSED ATTENUATION TANK TO ALLOW FOR INSTALLATION.

EXACT EXTENTS TO BE CONFIRMED WITH SPECIALIST SUPPLIER.

CONTRACTOR TO MAKE ALLOWANCE FOR THE RASING AND RESETTING OF ALL EXISTING MANHOLE LIDS IN AREA BUBBLED TO MAKE THAT OF NEW HARD LANDSCAPE LAYOUT LEVEL.

CONTRACTOR TO MAKE ALLOWANCE FOR REMOVAL OF EXISTING MANHOLE LID, FRAME & ENGINEERING BRICKS AND REBUILDING TO NEW LEVEL WITH NEW MANHOLE FRAME & LID, ENGINEERING BRICK WORK AND MORTAR.

EXISTING MANHOLE TO BE RECONDITIONED TO CATER FOR NEW FOUL WATER SEWER RUNNING FROM FW103 TO FW104. MANHOLE TO HAVE LID, FRAME & ENGINEERING BRICK RE-BUILT WITH A PROPRIETARY TRIPLE SEALED INTERNAL MANHOLE FRAME & LID.
TO BE FINISHED & CO-ORDINATED WITH FINISH FLOOR LEVEL FINISHES (TO ARCHITECT DETAILS)

EXISTING ESB CABLES TO BE ISOLATED & PROTECTED DURING WORKS, AS PER M&E CONSULTANTS SPECIFICATIONS

SECTION OF RUN TO BE PROTECTED HIGHLIGHTED IN GREEN

SITE BOUNDARY SHOWN IN RED. REFER TO ARCHITECTS DRAWING.

PROPOSED DRAINAGE LAYOUT
SCALE 1:500

General Notes:

1. THIS DRAWING IS THE PROPERTY OF D. FALLON CONSULTING ENGINEERS. IT IS A CONFIDENTIAL DOCUMENT AND MUST NOT BE COPIED, USED, OR IT'S CONTENT DIVULGED WITHOUT PRIOR CONSENT.

2. ALL WORKS TO COMPLY WITH THE BUILDING REGULATIONS AND THE BUILDING CONTROL ACT 2014, CURRENT IRISH STANDARDS AND CODES OF PRACTICE.

3. DO NOT SCALE, ALL DIMENSIONS TO BE CHECKED ON SITE AND ANY DISCREPENCIES TO BE NOTIFIED TO ARCHITECT / ENGINEER.

4. ALL CONTRACTORS, WHETHER MAIN OR SUB CONTRACTORS MUST VISIT THE SITE AND ARE RESPONSIBLE FOR TAKING AND CHECKING ANY AND ALL DIMENSIONS AND LEVELS THAT RELATE TO THE WORKS.

5. WHERE THIS DRAWING CONTAINS DISCREPANCIES IN RELATION TO OTHER RELEVANT DOCUMENTS, SUCH DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECTS / ENGINEERS WHO SHALL ISSUE A WRITTEN INSTRUCTION AS TO WHICH INFORMATION IS TO BE FOLLOWED, AND UNTIL SUCH INSTRUCTIONS HAS BEEN ISSUED ANY WORK CARRIED OUT ON FOOT OF THE DISCREPANCIES SHALL BE UNAUTHORISED.

6. PROPRIETARY ITEMS SHALL BE FIXED IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

FOUL / STORMWATER NETWORK NOTES

NOTE A:
THERE SHOULD BE A MINIMUM CLEAR HORIZONTAL DISTANCE OF AT LEAST 300mm BETWEEN THE GRAVITY SEWER/RISING MAIN AND ANY OTHER UTILITIES RUNNING PARALLEL TO IT AS WELL AS TO CABINETS, POLES, JUNCTION BOXES, MANHOLES OR CHAMBERS AS PER UISCE ÉIREANN DETAIL STD-WW-05.
ANY SEWER CROSSING A WATER MAIN SHALL DO SO AT RIGHT ANGLES, OR AS NEAR AS POSSIBLE, TO AVOID PROLONGED ENVELOPES OF INFLUENCE BETWEEN THE SERVICES. CROSSINGS SHOULD BE LOCATED MIDWAY BETWEEN THE WATER MAIN JOINTS WITH A MINIMUM VERTICAL CLEAR DISTANCES OF AT LEAST 300mm AND UP TO 500mm IN SOME INSTANCES BETWEEN THE SEWER PIPE AND THE WATER MAIN ALL SUCH CROSSINGS SHALL BE TO IRISH WATER APPROVAL AND SHALL NOT BE UNDERTAKEN UNTIL IRISH WATER OR ITS AGENT HAS EXAMINED THE WORK AT THE CROSSING POINT AND DEEMED IT FIT FOR BACKFILLING.
SPECIFIC SEPARATION CLEARANCE DISTANCES IN EXCESS OF THOSE OUTLINED ABOVE SHALL BE PROVIDED FOR SERVICES SUCH AS GAS, ELECTRICITY, FIBRE-OPTIC OR OIL FILLED CABLES AS THE CASE MAY BE THE PARTICULAR UTILITY PROVIDERS SHALL BE CONSULTED TO DETERMINE THESE MINIMUM SEPARATION DISTANCES AND EVIDENCE OF THIS CONSULTATION, WITH SEPARATION DISTANCES, SHALL BE PROVIDED TO UISCE ÉIREANN.

NOTE B:
SEPERATION DISTANCES:
SEPARATION DISTANCES FOR FOUL INFRASTRUCTURE TO COMPLY WITH UISCE ÉIREANN CODE OF PRACTICE FOR SEPARATION DISTANCES.

NOTE C:
ALL LOCAL CONNECTION DRAINAGE INFRASTRUCTURE TO BE INSTALLED IN ACCORDANCE WITH TGD PART H.
ALL INSPECTION CHAMBERS PROVIDED ARE TO BE PROVIDED IN ACCORDANCE WITH UISCE ÉIREANN STANDARD DETAIL STD-WW-02 AND STD-WW-03.
REFER TO TABLES FOR COVER / INVERT LEVELS OF PROPOSED MANHOLES.

NOTE D:
SERVICE LAYOUT DISTANCES SHOULD BE FOLLOWED IN ACCORDANCE WITH UISCE ÉIREANN STANDARD DETAIL STD-WW-05.

NOTE E:
WHERE ANY DISCREPANCIES MAY ARISE ON THIS LAYOUT, WHICH MAY CONTRADICT THE UISCE ÉIREANN CODES OF PRACTICE AND STANDARD DETAILS, THE WORKS SHALL BE DESIGNED AND CARRIED OUT TO THE REQUIREMENTS OF THE UISCE ÉIREANN COP & STANDARD DETAIL DOCUMENTS -THESE TAKE PRECEDENCE.

NOTE F:
ALL COVERS TO MANHOLES AND OTHER OPENINGS OF THE WASTEWATER SYSTEM AND ON SURFACE WATER SYSTEM SHOULD BE WATER TIGHT.

ALL MANHOLE COVERS IN THE PUBLIC REALM AND FRAMES SHALL COMPLY WITH ISEN 124, CLASS D400 (OR E600 FOR HEAVILY TRAFFICKED MAIN ROADS).

NOTE G - GULLEYS:
GULLIES FOR DRAINAGE OF ROADS AND LARGE PAVED AREA ARE TO BE PRECAST CONCRETE, COMPLYING WITH REQUIREMENTS OF BS 5911:PART 230 or MAY CONSIST OF A CHAMBER CONSTRUCTED OF 100mm SOLID BLOCKWORK AND HAVING A 150mm IN SITU CONCRETE FLOOR, WITH MINIMUM INTERNAL DIMENSIONS OF 450mm X 300mm X 750mm.
THE OUTLET FROM THE GULLEY SHOULD BE 150mm DIAMETER, SET A MINIMUM OF 375mm ABOVE FLOOR CHAMBER.
THE CLASS OF GULLEY GRATING REQUIRED FOR ROADWAYS & VEHICULAR ACCESSES IS CLASS D 400 (i.e. TRAFFICABLE) AND CLASS B 125 FOR FOOTWAYS & GRASS VERGES, AS PER IS EN 124. CAST IRON GULLIES ARE PROPOSED HERE.

NOTE H - ACO-DRAINS:
150mm Ø CONSTANT DEPTH ACO DRAIN CHANNEL WITH LOAD CLASS D 400 ARE PROPOSED (i.e. NON TRAFFICABLE) AS PER IS EN 124.

PIPELINES:
ALL PIPELINES ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF BOTH THIS CODE OF PRACTICE AND THE LOCAL SANITARY AUTHORITY.
ALL SEWERAGE SYSTEMS SHOULD BE DESIGNED TO MINIMISE THE PRODUCTION OF HYDROGEN SULPHIDE AND THAT SULPHATE RESISTANT CONCRETE SHOULD BE USED IN ANY CASE WHERE H2S PRODUCTION MAY OCCUR.

PIPE TYPES:
THE FOLLOWING MUST BE USED IN THE CONSTRUCTION OF MAIN PIPELINES OR CONNECTIONS FROM GULLIES OR PRIVATE DRAINS. THE LIST BELOW APPLIES TO ALL THE LOCAL SANITARY AUTHORITIES APART FROM DUBLIN CITY COUNCIL WHO DO NOT APPROVE THE USE OF UPVC PIPES IN THE PUBLIC AREA.

CONCRETE:
CONCRETE SEWER PIPES WITH SPIGOT AND SOCKET JOINTS AND RUBBER RINGS FITTINGS TO COMPLY WITH IS EN 1916 AND IS 6 2004 OR EQUIVALENT STANDARD. CLASS M OR CLASS H.

CLAYWARE:
VITRIFIED CLAY PIPES AND FITTINGS MUST COMPLY WITH THE REQUIREMENTS OF I.S./EN 295-1/2/3:1992 OR EQUIVALENT STANDARD. CLASS 160 OR 200.

ALL OUTFALL PIPEWORK MUST BE CONSTRUCTED AS PER THE GREATER DUBLIN REGIONAL CODE OF PRACTICE FOR DRAINAGE WORKS VERSION 6.0.

NOTES ABOVE ARE FOR INFORMATION ONLY. WHERE CONFLICTS WITH IRISH WATER LATEST 'WATER INFRASTRUCTURE DETAILS - CONNECTION AND DEVELOPER SERVICES,' IRISH WATER SPECIFICATIONS TAKE PRECEDENT

IRISH GRID CO-ORDINATES:
EASTINGS (X) = 318356, NORTHINGS (Y) 226584

Rev:	Description:	By:	App:	Date:
B02	Tender	LMcG	AA	19/08/2026
B01	Pre-Tender	LMcG	AA	05/02/2026
P01	Planning	JG	JG	01/05/2024
D03	Draft	JG	JG	10/04/2024
D02	Draft	JG	JG	03/04/2024
D01	Draft	IMS	JG	08/02/2023

Status: **TENDER**

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Project:
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Drawing:
Proposed Drainage Layout

Scale At A3:	Date:	Job No:	Status Code:
1:500	AUG 2026	D2104	X

Drawing Number: **D2104DR0002**
Revision: **B02**