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THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS, SPECIFICATIONS AND THE PRELIMINARY HEALTH & SAFETY PLAN.

ALL DIMENSIONS ARE IN MM UNLESS NOTED OTHERWISE. DO NOT SCALE DIMENSIONS.

THE CONTRACTOR SHALL CHECK ALL DIMENSIONS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. ALL DISCREPANCIES SHALL BE REPORTED TO THIS OFFICE IN WRITING.

NOTES

BY	DRAWING No. & REFERENCE	DATE
SURVEY		
ARCH	SH5-FLD-DR-MOR-CS-P3-003	03/09/2024
LS/ARCH	SH5-FLD-DR-MOR-CS-P3-001	22/04/2024

DRAINAGE NOTES

- ALL FOUL WORKS TO BE IN ACCORDANCE WITH IRISH WATER CODE OF PRACTICE DOCUMENT IW-COS-5030-03 AND IRISH WATER STANDARD DETAILS IW-COS-5030-01.
- ALL FOUL WATER DRAINAGE RUNS ARE TO A GRADE OF 1:150 AND PIPE SIZE OF 225# UNLESS OTHERWISE STATED.
- ALL SURFACE WATER DRAINAGE RUNS ARE TO A GRADE OF 1:200 AND PIPE SIZE OF 225# UNLESS OTHERWISE STATED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR SETTING OUT JUNCTION BOXES, CHAMBERS, MANHOLES, GULLIES TO ENSURE NO CLASHES WITH SERVICE DUCTS AND PIPES.
- ALL LEVELS ARE IN METRES ABOVE MALIN HEAD DATUM UNLESS OTHERWISE NOTED.
- ALL COVER LEVELS ARE INDICATIVE ONLY.
- ALL DRAINAGE WORK TO BE IN ACCORDANCE WITH IRISH WATER CODE OF PRACTICE FOR WASTE WATER INFRASTRUCTURE AND STANDARD DETAILS.
- MANHOLES, MANHOLES COVERS AND ROAD GULLY GRATINGS TO STANDARD SPECIFICATION.
- ALL PIPE DIAMETERS ARE NOMINAL.
- THE CONTRACTOR MUST SATISFY HIMSELF IN RESPECT TO THE LOCATION OF ALL EXISTING SERVICES.
- ALL FOUL PIPEWORK TO BE UPVC IN ACCORDANCE WITH SECTION 3.13 AND 3.14 OF IRISH WATER CODE OF PRACTICE FOR WASTE WATER INFRASTRUCTURE.
- ALL ROAD GULLY DRAINS ARE 150mm  $\phi$ .
- 600mm MAX LENGTH ROCKER PIPES ARE TO BE PROVIDED ON SEWERS WHERE:
  - A PIPE ENTERS A MANHOLE OR PUMPING STATION
  - A PIPE LEAVES A MANHOLE
  - A PIPE ENTERS CONCRETE ENCASUREMENT
  - A PIPE LEAVES CONCRETE ENCASUREMENT
  - ANY OTHER LOCATION AS DIRECTED BY THE ENGINEER
- ALL SEWER ROCKER PIPES ARE TO BE FORMED BY CUTTING AND TRIMMING A LENGTH OF SPIGOT & SOCKET PIPE TO FORM A SPIGOT AT THE CUT END, THEREBY FORMING SPIGOT & SOCKET JOINTS AT BOTH ENDS OF THE ROCKER PIPE.
- ALL ROCKER PIPES SHALL BE NO MORE THAN 150mm FROM THEIR ASSOCIATED MANHOLE, PUMPING STATION, CONCRETE ENCASED SECTION OR VALVE CHAMBER.
- ALL MANHOLE COVERS LOCATED IN TRAFFICKED AREA ARE TO BE SKID RESISTANT.
- ALL GULLY GRATINGS ARE TO BE MIN. CLASS D400 TO IS EN 124 AND ARE TO BE LOCKABLE.
- WHERE COVER TO PIPE IS LESS THAN 900mm UNDER GRASSED AREAS OR LESS THAN 1200mm UNDER ROADWAYS THE PIPE SHOULD BE SURROUNDED IN CONCRETE.
- EXTERNAL FACE OF PROPOSED MANHOLE CHAMBERS LOCATED AT LEAST 0.5m FROM KERB LINES. EXTERNAL FACE OF SEWERS TO BE LOCATED AT LEAST 1m FROM KERB LINES.
- EXTERNAL FACE OF SEWERS TO BE A MINIMUM OF 3m FROM EXTERNAL FACE OF DEVELOPMENT OR EQUIVALENT DISTANCE TO THE DEPTH OF SEWER BELOW THE FOUNDATION (WHICHEVER IS GREATER).
- NOTE: ALL ATTENUATION ZONES TO BE SEALED TO AVOID ANY POTENTIAL NEGATIVE EFFECTS ON THE SURROUNDING GROUND WATER.
- EXTERNAL FACE OF FOUL MANHOLE CHAMBERS TO BE LOCATED AT LEAST 0.5m FROM KERBLINES. EXTERNAL FACE OF FOUL SEWER PIPEWORK TO BE LOCATED AT LEAST 1.0m FROM KERBLINES.
- ALL WASTEWATER INSPECTION CHAMBERS SHOULD BE IN COMPLIANCE WITH THE IW CODE OF PRACTICE AND STD-WW-02 & 03.
- SEPARATION DISTANCES FROM OTHER SERVICES, BOUNDARY WALLS, TREES, ETC. TO BE IN ACCORDANCE WITH IRISH WATER STANDARD DETAILS STD-WW-05, STD-WW-06, STD-WW-08A.
- ALL MANHOLES IN PEDESTRIAN AREAS TO HAVE NON-SLIP COVERS.
- ALL EXISTING MANHOLE COVERS IN PEDESTRIAN AREAS TO BE COVERED WITH ANTI-SLIP SURFACING.

DRAINAGE LEGEND

- PROPOSED FOUL DRAINAGE LINE
- PROPOSED FOUL MANHOLE
- PROPOSED FOUL ARMSTRONG JUNCTION
- EXISTING FOUL DRAINAGE LINE
- EXISTING FOUL MANHOLE
- EXISTING FOUL ARMSTRONG JUNCTION
- PROPOSED SURFACE DRAINAGE LINE
- PROPOSED SURFACE MANHOLE
- PROPOSED SURFACE ROAD GULLY
- EXISTING SURFACE DRAINAGE LINE
- EXISTING SURFACE MANHOLE
- EXISTING SURFACE ARMSTRONG JUNCTION
- EXISTING SURFACE ROAD GULLY
- INDICATES SERVICES TO BE REMOVED/DELETED
- ARMSTRONG JUNCTION (AJ)
- INSPECTION CHAMBER (IC)
- PERMEABLE PAVING
- INTENSIVE GREEN ROOF COVER 50% OF ROOF AREA
- BLUE ROOF OVER 75% OF ROOF AREA
- RAINWATER PIPES
- PERMEABLE PAVING UNDERDRAIN 150#

IRISH WATER APPLICABLE DETAILS (NON-EXHAUSTIVE LIST) WASTE WATER DETAILS - TABLE

STD-WW-01	WASTEWATER SERVICES CONNECTION MAINTENANCE RESPONSIBILITY
STD-WW-03	DRAIN & SERVICE CONNECTION PIPEWORK
STD-WW-04	TYPICAL SEWER/SERVICE PIPE CONNECTION
STD-WW-05	TYPICAL SERVICE LAYOUT INDICATING SEPARATION DISTANCES
STD-WW-05A	WASTEWATER SERVICE CONNECTION VERTICAL SEPARATION DISTANCES
STD-WW-06	RESTRICTIONS ON WASTEWATER INFRASTRUCTURE WORKS ADJACENT TO TREES
STD-WW-06A	RESTRICTIONS ON NEW TREES / SHRUBS PLANTING ADJACENT TO SEWERS
STD-WW-07	TRENCH BACKFILL AND BEDDING
STD-WW-08	CONCRETE BED, HAUNCH AND SURROUND TO WASTEWATER PIPES
STD-WW-10	PRE-CAST CONCRETE MANHOLE WITH CAST-IN-SITU BASE
STD-WW-10A	PRE-CAST CONCRETE MANHOLE WITH PRECAST BASE
STD-WW-12	BACKDROP AND CASCADE MANHOLES
STD-WW-36	MARKER POST/PLATES

1	ISSUED FOR PLANNING	09.09.24	KA	DW
0	ISSUED FOR CO-ORDINATION	29.08.24	KA	DW
REV	DESCRIPTION	DATE	BY	CHK

STATUS: P3 - PLANNING

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CLIENT: DUBLIN CITY COUNCIL

JOB NAME: SOCIAL HOUSING BUNDLE 4, FORBES LANE DEPOT

DRG. NAME: FOUL AND SURFACE WATER DRAINAGE LAYOUT

JOB REF	SHEET	SCALE	DATE	BY	ENG	APP	REV.
23006	A1	1:250	JULY 2023	KA	PB	PB	1

DRG. NO.: SHB5-FLD-DR-MOR-CS-P3-130

**GREEN/BLUE ROOF ATTENUATION VOLUME**  
GREEN/BLUE ROOF AREA = 1413.800m<sup>2</sup>  
STORAGE LAYER = 0.1m DEEP  
VOID RATIO = 95%  
STORAGE VOLUME PROVIDED = 134.311m<sup>3</sup>  
STORAGE VOLUME REQUIRED = 23.251m<sup>3</sup>

**ATTENUATION ZONE INFORMATION**  
ATTENUATION PROVIDED BY STONE FILL UNDER PERMEABLE PAVING (30% STONE VOID RATIO ASSUMED)

**LEVELS CHECK**  
LOWEST ROAD LEVEL = 18.370m-0.3m FREEBOARD = 18.070m  
LOWEST FFL = 18.000m-0.3m FREEBOARD = 17.700m  
PERMEABLE PAVING PERFORATED COLLECTOR PIPE IL = 17.218m  
LET THE PERMITTED 1:100 YEAR WATER LEVEL = 17.700m

**ATTENUATION VOL. REQUIRED = 59.631m<sup>3</sup>**  
ATTENUATION ZONE AREA = 400.673m<sup>2</sup>  
VOID RATIO = 30%  
ATTENUATION STORAGE DEPTH = (59.631m<sup>3</sup>/400.673m<sup>2</sup>)/30% = 0.482m  
REFER TO DWG 151 FOR ATTENUATION ZONE DETAIL AND SECTION

