



BY	DRAWING No. & REFERENCE	DATE
SURVEY	SHB4-WRF-DR-SHA-AR-P2-004	12.04.2024
ARCH	SHB4-WRF-DR-SHA-AR-P2-004	21.03.2024
LS ARCH	SHB4-WRF-DR-MAL-L-PI-0100_Ver1	21.03.2024

DRAINAGE NOTES

- ALL FOUL WORKS TO BE IN ACCORDANCE WITH IRISH WATER CODE OF PRACTICE DOCUMENT IW-CDS-5030-03 AND IRISH WATER STANDARD DETAILS IW-CDS-5030-01.
- ALL SURFACE WATER DRAINAGE RUNS ARE TO A GRADE OF 1:150 AND PIPE SIZE OF 225^{mm} UNLESS OTHERWISE STATED.
- ALL SURFACE WATER DRAINAGE RUNS ARE TO A GRADE OF 1:200 AND PIPE SIZE OF 225^{mm} 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, MANHOLE 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 SEWER ROCKER PIPES ARE TO BE FORMED BY CUTTING AND TRIMMING A LENGTH OF SPIGOT & SOCKET PIPE TO FORM A SPIGOT AT THE OUT 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 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.
 - A PIPE ENTERS A MANHOLE OR PUMPING STATION
 - A PIPE LEAVES A MANHOLE
 - A PIPE ENTERS CONCRETE ENCASEMENT
 - A PIPE LEAVES CONCRETE ENCASEMENT
 - ANY OTHER LOCATION AS DIRECTED BY THE ENGINEER
- 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-06A.
- ALL MANHOLES IN PEDESTRIAN AREAS TO HAVE NON-SLIP COVERS.
- ALL EXISTING MANHOLE COVERS IN PEDESTRIAN AREAS TO BE COVERED WITH ANTI-SLIP SURFACING.

LEGEND

- PROPOSED FOUL DRAINAGE LINE
- PROPOSED FOUL MANHOLE
- PROPOSED FOUL ARMSTRONG JUNCTION
- EXISTING FOUL DRAINAGE LINE
- EXISTING FOUL MANHOLE
- EXISTING FOUL ARMSTRONG JUNCTION
- EXISTING COMBINED SEWER DRAINAGE LINE
- EXISTING SURFACE DRAINAGE LINE
- EXISTING SURFACE MANHOLE
- EXISTING SURFACE ARMSTRONG JUNCTION
- EXISTING SURFACE ROAD GULLY
- PROPOSED SURFACE DRAINAGE LINE
- PROPOSED SURFACE MANHOLE
- PROPOSED SURFACE ROAD GULLY
- PERMEABLE PAVING
- RAIN GARDEN AREA
- PERMEABLE PAVING UNDERDRAIN 150^{mm}
- SWALE / RAIN GARDEN UNDERDRAIN 150^{mm}
- DROPPED KERB AT 5m C/C
- INSPECTION CHAMBER

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

DETECTION BASIN
 LEVELS CHECK
 LOWEST ROAD LEVEL = 51.230m
 1:100YR WATER LEVEL i.e. 300mm FREEBOARD = 50.930m
 LOWEST FFL = 52.000m
 1:100YR WATER LEVEL i.e. 500mm FREEBOARD = 51.500m
 LET THE 1:100YR WATER LEVEL = 50.930m

DETECTION BASIN
 SIDE SLOPE 1:4
 TOP OF EMBANKMENT = 51.230m
 1:100YR WATER LEVEL = 50.930m
 i.e. 300mm FREEBOARD FROM 1:100YR WATER LEVEL
 BASIN BOTTOM LEVEL = 49.648m

TOP AREA OF BASIN AT 1:100YR STORM WATER = 184.960m²
 BOTTOM AREA OF BASIN AT 1:100YR STORM WATER = 5.060m²
 AVERAGE AREA = 95.010m²
 1:100YR STORM VOLUME PROVIDED = 95.010m² x 1.282m = 121.803m³
 1:100YR STORM VOLUME REQUIRED = 78.576m³

REFER TO DWG. 151 FOR DETENTION BASIN SECTION AND DETAILS

GREEN/BLUE ROOF ATTENUATION VOLUME
 TOTAL GREEN/ BLUE ROOF AREA = 1138.61m²
 STORAGE LAYER = 0.1m DEEP
 VOID RATIO = 85%
 STORAGE VOLUME PROVIDED = 108.170m³
 STORAGE VOLUME REQUIRED = 15.234m³

REV	DESCRIPTION	DATE	BY	CHK
5	ISSUED FOR PLANNING	03.07.24	KA	ND
4	SITE LAYOUT REVISED TO SUIT AUDIT COMMENTS	19.06.24	KD	KA
3	SITE LAYOUT REVISED TO SUIT LATEST ARCH LAYOUT AND COMMENTS	14.04.24	KA	ND
2	ISSUED FOR INFORMATION	20.03.24	KA	PB
1	DRAINAGE REVISED TO SUIT NEW SITE LAYOUT	19.02.24	KA	PB
0	ISSUED FOR PLANNING	25.01.24	KA	PB

P1 - INFORMATION

MOR Unit 2B Richview Office Park, Clonskeagh, DUBLIN 14 D14 XT57
 MALONE O'REGAN CONSULTING ENGINEERS W: +353 1 260 2655 E: dublin@mor.ie www.maloneyregan.ie
 Offices also in: GALWAY T: +353 91 531 069 E: galway@mor.ie
 WATERFORD T: +353 51 876 855 E: waterford@mor.ie

CLIENT: DUBLIN CITY COUNCIL

JOB NAME: SOCIAL HOUSING BUNDLE 4, DEVELOPMENT AT WELLMOUNT ROAD, FINGLAS
 DRG NAME: FOUL SEWER AND SURFACE WATER DRAINAGE LAYOUT

JOB REF	SHEET	SCALE	DATE	BY	ENG	APP	REV
2.3006	A1	1:250	OCT'23	KD	PB	PB	5

DRG NO: SHB4-WRF-DR-MOR-CS-P3-130