

NO PART OF THIS DRAWING MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR STORED IN ANY RETRIEVAL SYSTEM OF ANY NATURE WITHOUT THE WRITTEN PERMISSION OF MALONE O'REGAN CONSULTING ENGINEERS AS COPYRIGHT HOLDER EXCEPT AS AGREED FOR USE ON THE PROJECT FOR WHICH THE DRAWING WAS ORIGINALLY CREATED.

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.

BY	DRAWING No. & REFERENCE	DATE
SURVEY		
ARCH	SHB5-BDR-DR-MOR-CS-AR-P3-1002 Rev 1	26.07.2024
AS Arch	SHB5-BDR-DR-MOR-CS-AR-P3-SKT01 - 01	05.03.2024

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 ARMSTRONG JUNCTION
	PROPOSED SURFACE ROAD GULLY
	EXISTING SURFACE DRAINAGE LINE
	EXISTING SURFACE MANHOLE
	EXISTING SURFACE ARMSTRONG JUNCTION
	EXISTING SURFACE ROAD GULLY
	PERMEABLE PAVING
	SWALE AREA
	GRATED MANHOLE
	RAIN GARDEN AREA
	PERMEABLE PAVING UNDERDRAIN 150#
	SWALE / RAIN GARDEN UNDERDRAIN 150#
	TREE PIT UNDERDRAIN 150#
	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

- 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 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 #.
  - 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 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 TO BE 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.

4	ISSUED FOR PLANNING	01.08.24	KA	FM
3	FOOTPATHS AMENDED AND LAYOUT REVISED AS PER COMMENTS	10.04.24	KD	FM
2	REVISED TO SUIT NEW ARCHITECT AND LANDSCAPE SITE LAYOUT	05.03.24	KD	PB
REV	DESCRIPTION	DATE	BY	CHK

STATUS: **P3 - PLANNING**

**MDR** Unit 2B Richview Office Park, Clonskeagh, DUBLIN 14 D14 XT57  
 MALONE O'REGAN CONSULTING ENGINEERS T: +353 1 260 2655 E: dublin@mor.ie W: www.maloneoregan.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: **NDA ON BEHALF OF DUN LAOGHAIRE-RATHDOWN COUNTY COUNCIL**

JOB NAME: **PPP SHB 4&5 - BALALLY**

DRG NAME: **FOUL SEWER AND SURFACE WATER DRAINAGE LAYOUT**

JOB REF	SHEET	SCALE	DATE	BY	ENG	APP	REV.
23006	A1	1:200	SEPT '23	JC	PB	PB	4

DRG NO: **SHB5-BDR-DR-MOR-CS-P3-130**

