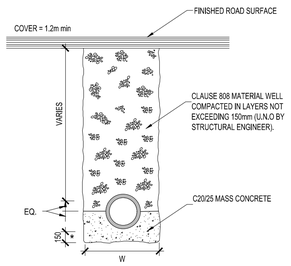


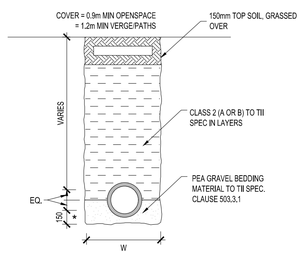
DETAIL SCALE 1:25 01

BEDDING DETAIL ACROSS OPEN SPACE/VERGES/PATHS (SIMILAR)



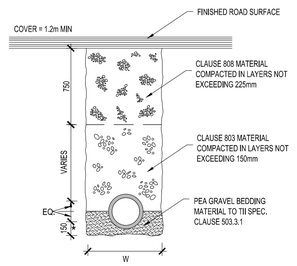
DETAIL SCALE 1:25 02

BEDDING DETAIL ACROSS ROADWAY



DETAIL SCALE 1:25 03

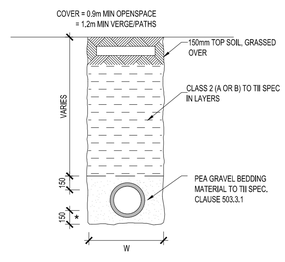
BEDDING DETAIL ACROSS OPEN SPACE/VERGES/PATHS (SIMILAR) - CLASS B



DETAIL SCALE 1:25 04

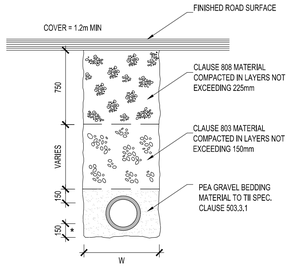
BEDDING DETAIL ACROSS ROADWAY - CLASS B

BEDDING FOR RIGID PIPES



DETAIL SCALE 1:25 05

BEDDING DETAIL ACROSS OPEN SPACE/VERGES/PATHS (SIMILAR) - CLASS S

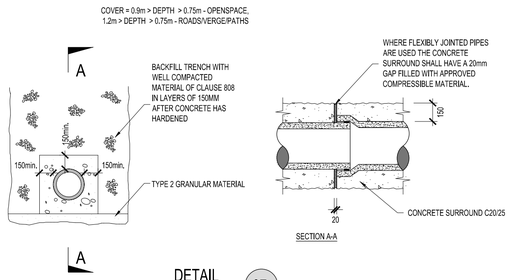


DETAIL SCALE 1:25 06

BEDDING DETAIL ACROSS ROADWAYS - CLASS S

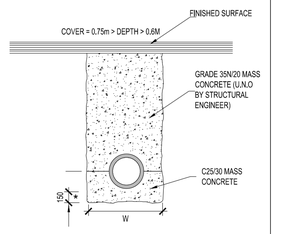
BEDDING FOR FLEXIBLE PIPES

TABLE 1:	TRENCH WIDTH LIMITS (W)	
NOMINAL INTERNAL Ø (mm)	MINIMUM TRENCH WIDTH mm	MAXIMUM TRENCH WIDTH mm
100	450	650
150	500	700
225	600	800
300	700	900
375	950	1150
450	1050	1250
525	1150	1350
600	1250	1450
675	1350	1550
750	1400	1600
825	1500	1700
900	1950	2150
1050	2100	2300
1200	2300	2500
ABOVE 1200	OUTSIDE Ø OF PIPE PLUS 800mm	OUTSIDE Ø OF PIPE PLUS 1000mm



DETAIL SCALE 1:25 07

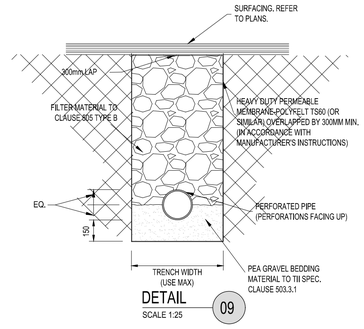
TRENCH DETAIL WITH LESS THAN 900mm COVER



DETAIL SCALE 1:25 08

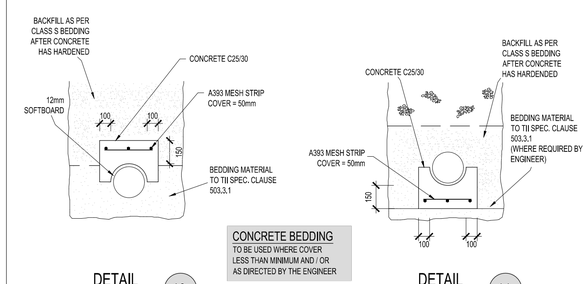
TRENCH DETAIL WITH LESS THAN 750mm COVER

BEDDING FOR RIGID AND FLEXIBLE PIPES WITH LIMITED COVER



DETAIL SCALE 1:25 09

TYPICAL FILTER DRAIN DETAIL



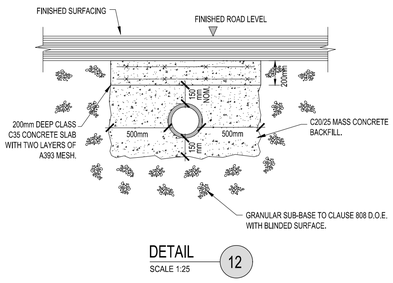
DETAIL SCALE 1:25 10

FLEXIBLE PIPES : ARCH

DETAIL SCALE 1:25 11

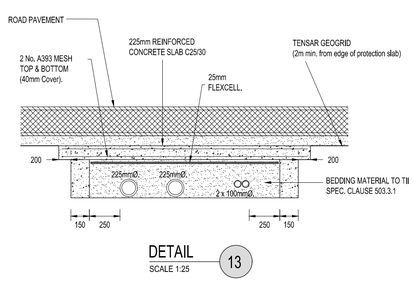
FLEXIBLE PIPES : CRADLE

ALTERNATIVE BEDDING



DETAIL SCALE 1:25 12

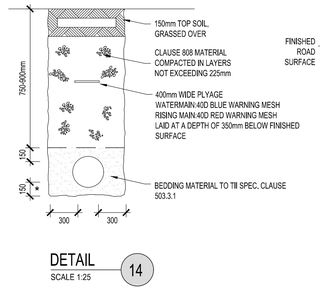
TYPE 1
(600mm COVER TO PIPE & BELOW)



DETAIL SCALE 1:25 13

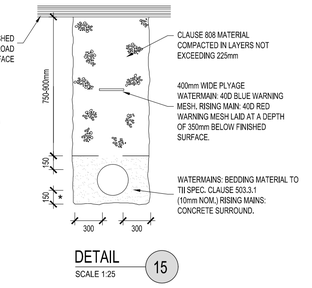
TYPE 2
(600mm COVER TO PIPE & BELOW)

TYPICAL SERVICES PROTECTION DETAIL



DETAIL SCALE 1:25 14

(A) BEDDING DETAIL ACROSS OPENSPACE/VERGE/PATHS (SIMILAR)



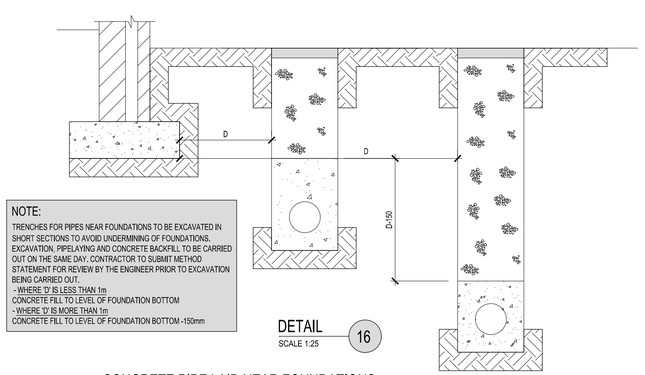
DETAIL SCALE 1:25 15

(B) BEDDING DETAIL ACROSS ROADS

WATERMAIN/RISING MAIN BEDDING

TABLE 2	LANDSCAPED AREAS	ROADWAYS/ FOOTPATHS	NOTES
CONCRETE PIPE (>1.2m COVER)	1,3	2,4	A, DETAIL 4 NOT ACCEPTABLE IN DCC AREA
CONCRETE PIPE (1.2m > D > 0.9m)	1,3	7	A
CONCRETE PIPE (0.9m > D > 0.75m)	7	7	A
CONCRETE PIPE (0.75m > D > 0.60m)	8	8	A
CONCRETE PIPE (0.6m > D > 0.45m)	12,13	12,13	C
FLEXIBLE PIPE (>1.2m COVER)	5	6	B
FLEXIBLE PIPE (1.2m > D > 0.9m)	5	7	B
FLEXIBLE PIPE (0.9m > D > 0.75m)	7	7	B
FLEXIBLE PIPE (0.75m > D > 0.6m)	8	8	B
FLEXIBLE PIPE (0.6m > D > 0.45m)	12,13	12,13	B, C
WATERMAINS (D > 0.75m)	14	15	A
RISING MAIN (D > 0.75m)	14	15	A
REINSTATEMENT OF PIPES IN EXISTING ROADS.	N/A	18	A

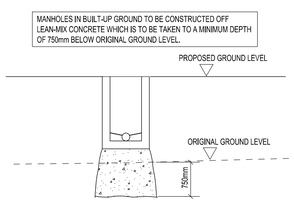
NOTES: A. APPLIES THROUGHOUT GDSDS AUTHORITY REGIONS B. APPLIES THROUGHOUT GDSDS AUTHORITY REGIONS EXCEPT DCC
C. AGREEMENT FROM AUTHORITY REQUIRED



NOTE:
TRENCHES FOR PIPES NEAR FOUNDATIONS TO BE EXCAVATED IN SHORT SECTIONS TO AVOID UNDERMINING OF FOUNDATIONS. EXCAVATION, PIPELAYING AND CONCRETE BACKFILL TO BE CARRIED OUT ON THE SAME DAY. CONTRACTOR TO SUBMIT METHOD STATEMENT FOR REVIEW BY THE ENGINEER PRIOR TO EXCAVATION BEING CARRIED OUT.
- WHERE 'D' IS LESS THAN 1m
CONCRETE FILL TO LEVEL OF FOUNDATION BOTTOM
- WHERE 'D' IS MORE THAN 1m
CONCRETE FILL TO LEVEL OF FOUNDATION BOTTOM -150mm

DETAIL SCALE 1:25 16

CONCRETE PIPE LAID NEAR FOUNDATIONS



NOTE: ALL DRAINS ABOVE EXISTING GROUND LEVEL TO BE CONSTRUCTED BY FIRST STRIPPING TOPSOIL AND MAKING UP GROUND TO PROPOSED LEVELS. TRENCH EXCAVATION THEN TO BE CARRIED OUT TO ORIGINAL STRIPPED GROUND LEVEL AND GRANULAR MATERIAL TO BE LAID IN WELL-COMPACTED LAYERS (MAX. 150mm THICK) TO INVERT LEVEL. PIPE THEN TO BE LAID.

DETAIL SCALE NTS 17

DRAINS IN BUILT-UP GROUND

NOTES: [FOR PERMANENT REINSTATEMENT]

A. FORM A SAW CUT 100mm DEEP AT A MIN. OF 100mm FROM SIDES OF EXCAVATION PRIOR TO PERMANENT REINSTATEMENT. WHERE ANY TRIM LINES ARE WITHIN 400mm OF ROAD EDGE, JOINT, OTHER REINSTATEMENT, OR IRONWORK, THE TRIM LINE SHOULD BE EXTENDED TO THE INTERFACE OF SUCH SITUATIONS.

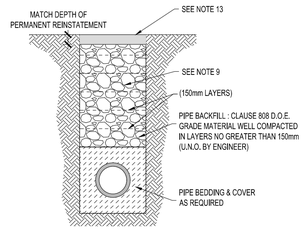
B. DIG OUT SURFACING & TOP 220mm OF CL808 MATERIAL & REPLACE WITH NEW WIDER SURFACING ON 220 LAYER OF LEAN-MIX CONCRETE

C. LEAN-MIX SURFACE TO BE SPRAYED PER CLAUSE 920 (TII SPEC.) PRIOR TO APPLICATION OF BINDER COURSE MACADAM.

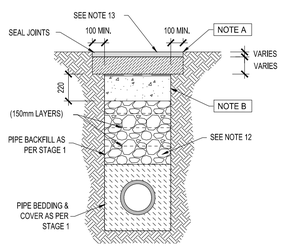
D. 100°C HOT BITUMEN BINDER 50 PEN OR COLD THIXOTROPIC BITUMEN 50 - 70 PEN TO BE APPLIED TO ALL VERTICAL CUTS IN ACCORDANCE WITH B.S.594 PRIOR TO APPLICATION OF BITUMINOUS MATERIAL.

E. JOINTS SEALED WITH HOT BITUMEN AND TOPPED WITH FINE SAND / GRIT TO GET A MINIMUM 55 SKID RESISTANCE VALUE AS DETERMINED BY THE PORTABLE SKID RESISTANCE PENDULUM USED IN ACCORDANCE WITH ROAD NOTE 27 AND SHALL NOT EXCEED 3mm THICKNESS AND 25mm WIDTH.

TEMPORARY & PERMANENT REINSTATEMENT



STAGE 1
(LEAVE FOR 6 MONTHS TO CONSOLIDATE)



STAGE 2

DETAIL SCALE 1:25 18

REINSTATEMENT OF PIPE TRENCH IN EXISTING ROAD

GENERAL NOTES:

1. ALL DIMENSIONS ARE IN METERS UNLESS NOTED OTHERWISE.
2. ALL LEVELS ARE TO MALIN HEAD DATUM.
3. ONLY WRITTEN DIMENSIONS SHALL BE USED. NO DIMENSIONS SHALL BE SCALED FROM THE DRAWINGS.
4. CONTRACTOR TO CHECK ALL DIMENSIONS ON SITE.
5. ALL COORDINATES ARE TO IRISH TRANSVERSE MERCATOR
6. ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE PROJECT SPECIFICATIONS.
7. COPYRIGHT OSL.

SURFACE WATER NOTES:

1. RIGID PIPES SHALL MEAN CAST OR SPUN IRON, CONCRETE OR CLAY.
2. FLEXIBLE PIPES SHALL MEAN PIPES OF STEEL, PVC, OTHER PLASTIC OR DUCTILE IRON.
3. CONCRETE C20/25 TO HAVE COVER = 50mm MIN. WITH A MINIMUM CEMENT CONTENT OF 260 kg/m³, MAXIMUM W/C RATIO OF 0.65 AND SLUMP CLASS S2.
4. C25/30 CONCRETE TO HAVE A MINIMUM CEMENT CONTENT OF 280Kg/m³, MAXIMUM WATER/CEMENT RATIO OF 0.65 AND SLUMP CLASS S2.
5. ALL PIPES WITH LESS THAN 1.2m COVER UNDER GRASSED AREAS AND FOOTPATHS TO BE SURROUNDED IN 150mm MINIMUM OF C20/25 CONCRETE.
6. LEAN-MIX BACKFILL TO TRENCHES IN EXISTING ROADS, WHERE REQUIRED BY THE LOCAL AUTHORITY TO BE GRADE C20/25 CONCRETE.
7. TRENCH DETAILS ARE REFERENCED FROM;
   7.1. GREATER DUBLIN REGIONAL CODE OF PRACTICE FOR DRAINAGE WORKS
   7.2. TII ROAD CONSTRUCTION DETAILS
   7.3. RECOMMENDATIONS FOR SITE DEVELOPMENT WORKS
   7.4. BUILDING REGULATIONS
8. WHERE ROCKS OR OTHER HARD TRENCH BOTTOM IS ENCOUNTERED, THE FIGURE DENOTED BY * IS TO BE DOUBLED.
9. GRANULAR BACKFILL MATERIAL SHALL BE IN COMPLIANCE WITH CLAUSE 808 (GRANULAR MATERIAL TYPE B) OF THE TII SPECIFICATION FOR ROAD WORKS. GRANULAR BACKFILL SHOULD BE PLACED UNIFORMLY ON EITHER SIDE OF THE PIPE IN LAYERS NOT EXCEEDING 100mm, EACH LAYER BEING COMPACTED BY HAND TAMPING UNTIL THE PIPE HAS MINIMUM OF 300mm COMPACTED COVER. CARE SHOULD BE TAKEN THAT THE PROCESS OF COMPACTION DOES NOT DISPLACE THE PIPE FROM ITS CORRECT LINE AND LEVEL. SUBSEQUENT LAYERS OF GRANULAR FILL TO BE WELL COMPACTED IN 150mm THICK LAYERS TO THE LOCAL AUTHORITY ROAD DIVISION SPECIFICATION. MECHANICAL COMPACTION EQUIPMENT SHOULD NOT BE USED UNTIL THERE IS A MINIMUM OF 450mm COMPACTED COVER OVER THE CROWN OF THE PIPE.
10. SELECTED FILL SHOULD BE FREE FROM STONES LARGER THAN 37mm, LUMPS OF CLAY OVER 75mm, TIMBER, FROZEN MATERIAL AND VEGETABLE OR FOREIGN MATTER. SELECTED FILL SHOULD BE PLACED UNIFORMLY ON EITHER SIDE OF THE PIPE IN LAYERS NOT EXCEEDING 100mm, EACH LAYER BEING COMPACTED BY HAND TAMPING UNTIL THE PIPE HAS A MINIMUM OF 150mm COMPACTED COVER. CARE SHOULD BE TAKEN THAT THE PROCESS OF COMPACTION DOES NOT DISPLACE THE PIPE FROM ITS CORRECT LINE AND LEVEL. SUBSEQUENT SELECTED FILL CAN BE PLACED AND COMPACTED IN 150mm THICK LAYERS.
11. GENERAL BACKFILL MATERIAL SUITABLE FOR BACKFILL ABOVE SELECTED FILL MATERIAL SHOULD BE FREE FROM BOULDERS, LUMPS OF CONCRETE, TIMBER AND VEGETABLE OR FOREIGN / CONTAMINATED MATTER. GENERAL BACKFILL SHOULD BE PLACED IN LAYERS NOT EXCEEDING 300mm, EACH LAYER BEING WELL COMPACTED. MECHANICAL COMPACTION EQUIPMENT SHOULD NOT BE USED UNTIL THERE IS A MINIMUM OF 450mm COMPACTED COVER OVER THE CROWN OF THE PIPE.
12. TRENCH ABOVE PIPES WITH LESS THAN 750mm COVER TO BE BACKFILLED WITH C20/25 CONCRETE TO FORMATION LEVEL.
13. SURFACING TO BE IN ACCORDANCE WITH THE ROAD SPECIFICATION AND, IF APPROPRIATE, LOCAL AUTHORITY REQUIREMENTS.
14. WHERE CLASS 6F1 / 6F2 CAPPING MATERIAL IS PROPOSED WITHIN 500mm OF CONCRETE OR STEEL, CLASS 6N IS TO BE USED INSTEAD.

REV	DATE	DESCRIPTION	BY	CHK'D	AUTH
P03	29.05.26	ISSUED FOR PLANNING	BJM	DB	DB
P02	03.11.25	ISSUED FOR SECTION 32B	BJM	JT	DB
P01	28.10.25	ISSUED FOR INFORMATION	BJM	JT	DB

OSL·BUTLER CONSULTING ENGINEERS
Civil, Structural & Project Engineering Services
Unit 38 Eastgate Drive, Little Island, Cork T45 YO49
Tel: +353 21 4297672

CLIENT

GLR PROPERTY LTD.

PROJECT
PROPOSED LARGE-SCALE RESIDENTIAL DEVELOPMENT AT OLD ORCHARD, MONALEEN, LIMERICK, CO. LIMERICK

TITLE
PROPOSED SURFACE WATER DETAILS SHEET 2

PURPOSE
FOR PLANNING

ORIGINAL SCALE
A1 - AS SHOWN

ORIGINAL ISSUE DATE
28.10.2025

STATUS
S2

DRAWING NO
25066-OSL-90-DR-C-9021

REV
P03