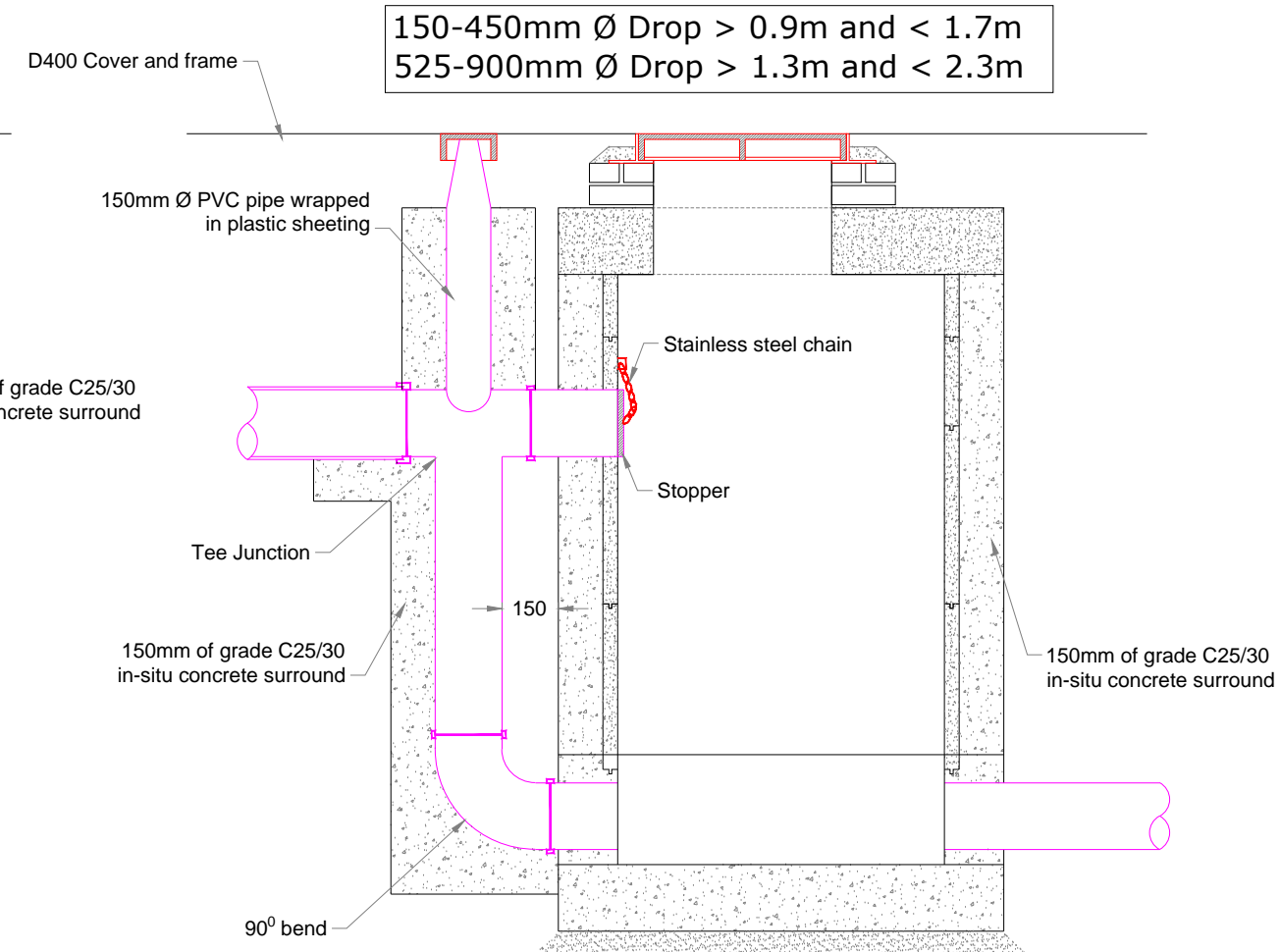
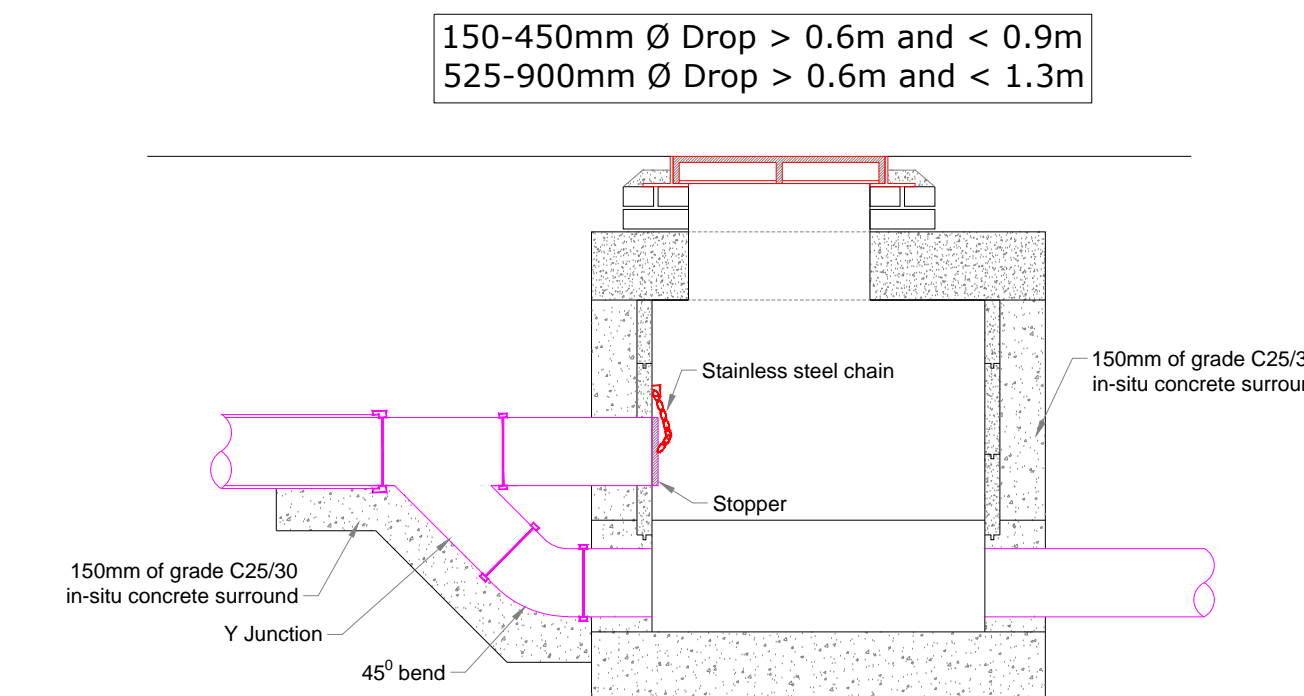


Section A-A
Type B 3-6m depth



Backdrop Manhole Type 2



Backdrop Manhole Type 3



2No. courses of Class B engineering bricks

Class D400 gully grating and frame set 5mm below finished road level and bedded and haunched with cement mortar

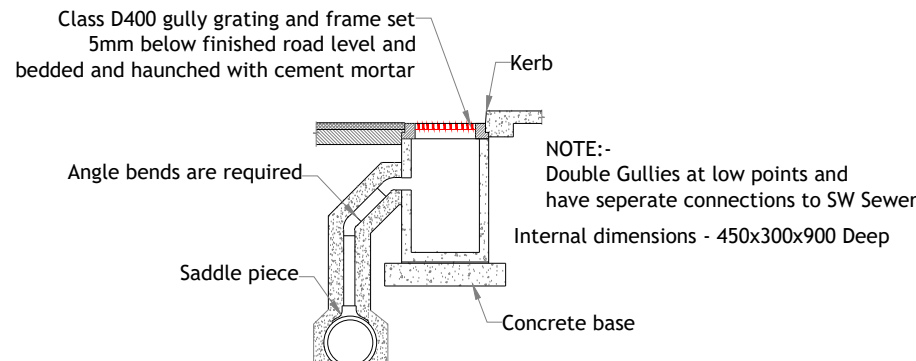
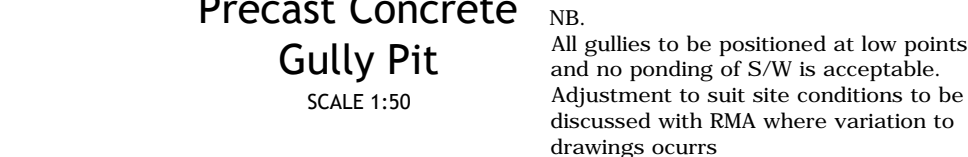
150mm ope pipe

Backfill Around Gully with C18 Stone to NR11 Spec. for Roads Work Compacted in Layers

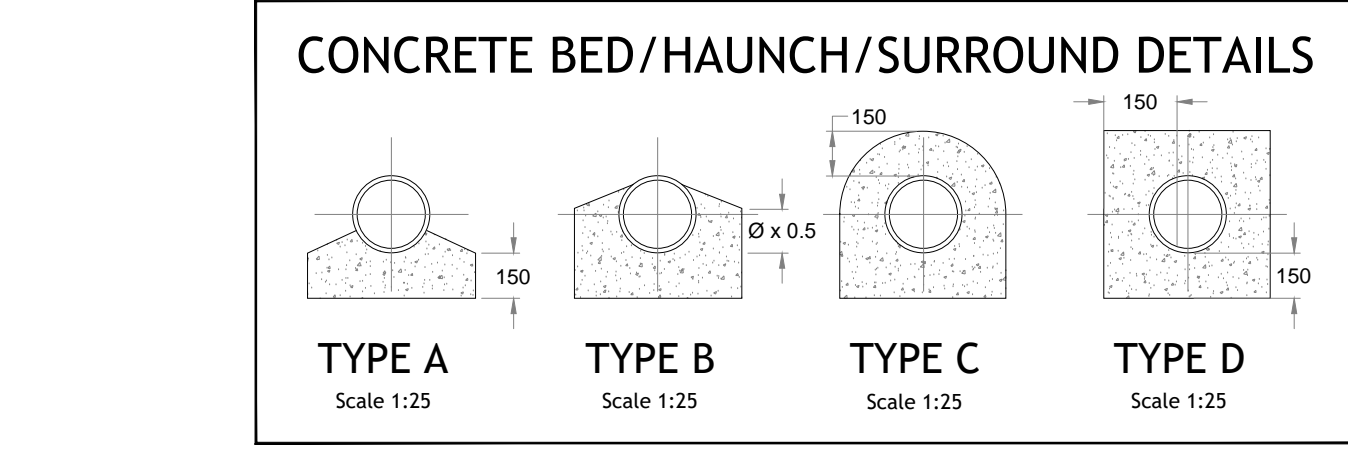
Gully to BS 2911

Internal dimensions - 450x300x900 Deep

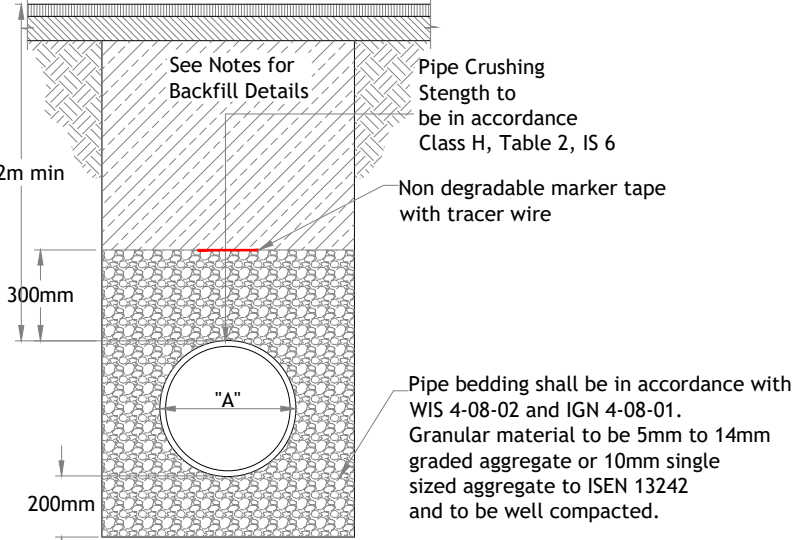
Precast Concrete Gully Pit



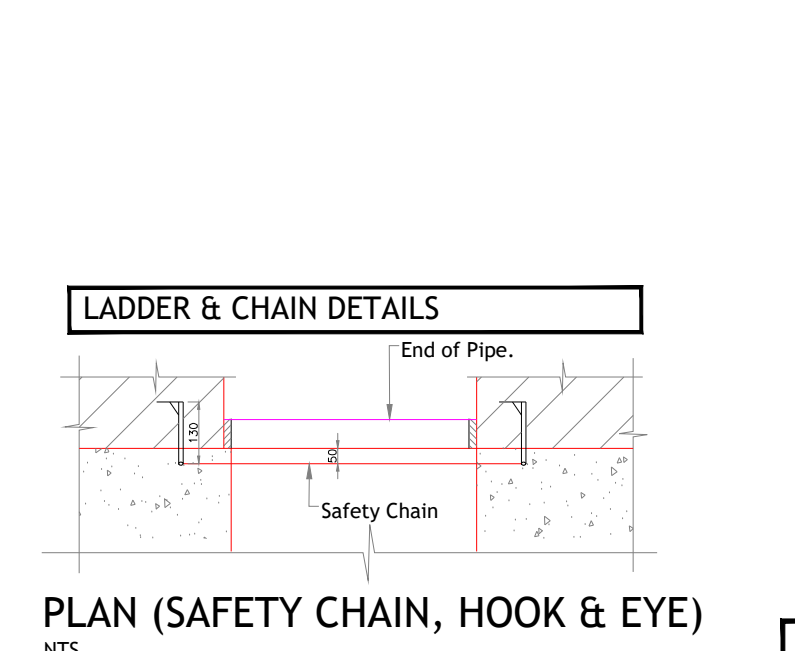
Gulley Connection



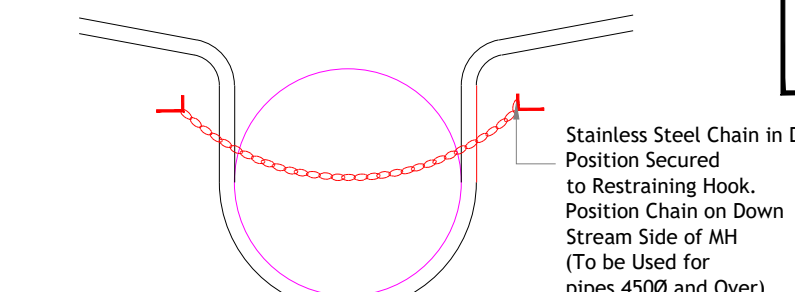
CROSS SECTION
GRASSED AREA
nular Bed & Surround
Scale 1:25



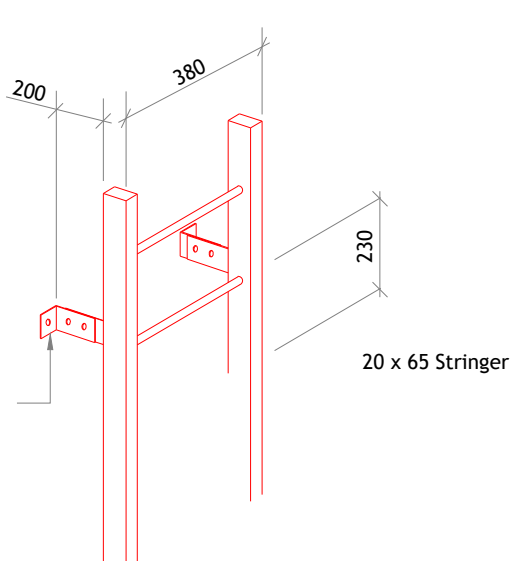
CROSS SECTION ROADS
Granular Bed & Surround



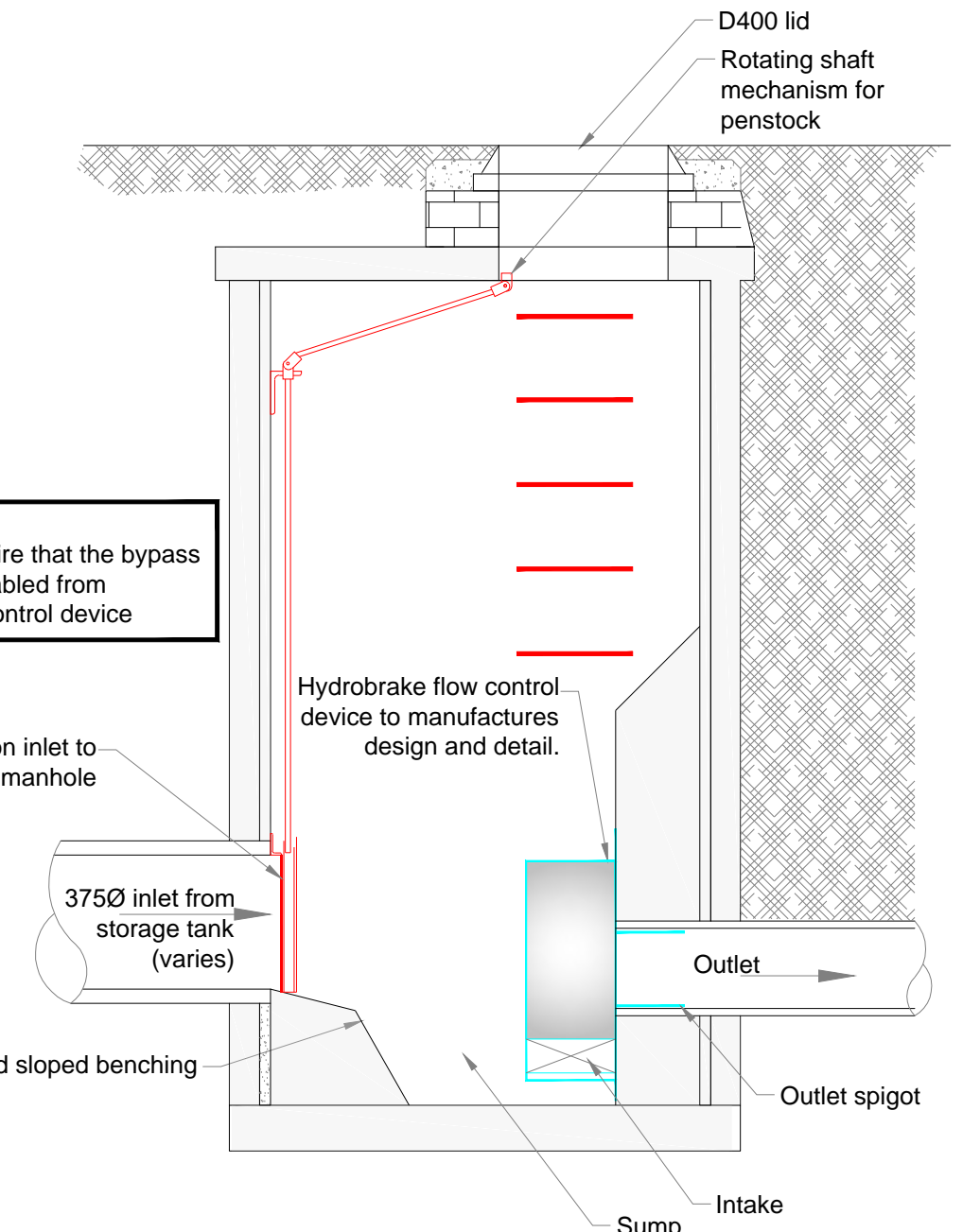
PLAN (SAFETY CHAIN, HOOK & EYE)



ELEVATION (SAFETY CHAIN, HOOK & EYE)



Note;
DLRCC require that the bypass facility is disabled from the vortex control device



Typical Hydrobrake Manhole

2. Read in conjunction with all relevant Architects & Engineer's drawings and cross read the detailed notes on the various manholes.
3. The minimum diameter of the manhole shall be as shown in Table A, but this may need be increased subject to the number of branches, this is made up as follows:
For pipes up to 150mmØ, provide the sum of the branches + 200mm per branch + 300mm for pipes over 150mmØ, provide the sum of the branches + 300mm per branch + 100mm for pipes over 150mmØ and 100mmØ for 2x150mm + 1x225Ø pipes on one side, 100mm = 1525mm (subject to minimum length)
3. Access runs shall be provided in manholes greater than 1m to the invert level of the pipe.
4. 100mm concrete surround, 100mm depth, shall be provided and manhole covers in grassed areas.
5. Class U2 finish to the top of slabs. Reinforcement in the slabs to details as or directed by the Engineer.
6. Manhole incursions to be 225mm C30/37 mass concrete with 75mm lean mix concrete blinding if required by site conditions.
7. Use pre-formed half circle channel pipes through manholes but the pipeline may be bunched under the manhole and the crown cut up to half diameter ensuring that flexible joints are located either side of manhole at max.600mm as measured from the inner face of a manhole wall.
8. Use CL 20N/20 concrete for benching and pipe channel pipe surround.
9. Benchings to be finished in 1:3 cement-sand mortar with a smooth trowel finish, at 1 in 30 slope towards channel. Form a 25mm radius nosing on benching, level with crown of pipe.
10. Standard galvanised (BS 729) pipes to be positioned @ 300c/c vertically.
11. Roof slab to have a min. 600mm square open.
12. Precast R.C. 200mm deep, 1000mm wide, 100mm thick. Cover to steel shall be 40mm.
13. MH cover plate to be laid on 1 No/min to 3 No., max. courses of engineering bricks CLB to 1:5.91:1983 set in C50/60 mortar.
14. MH cover and frames to be Class D400 and to IS/EN 124, 150mm deep frame for roads, 100mm deep for footpaths and green areas. Class B250 manhole covers may be used in private areas with 100mm deep, 1000mm wide, 100mm thick. Non-rock design, closed keyways, manufactured from spherulitic graphite cast iron (ductile cast iron), 600x600 (or 600x400), clear opening, cover and frame coated in bitumen or other approved material, cover to have a minimum mass of 140kg/m², frame bearing area shall be 1000mm² min., frames shall be 100mm thick, 1000mm wide, 100mm thick, cast into manhole. Frames shall be bedded on C50/60 mortar to manufacturers instructions.
15. Galvanised steel safety railings to be provided in benching of sewers greater than 450mm Ø and depth to invert-3m for access to invert. Toe holes of 230mm min. depth to be provided where channel width <600mm.
16. Safety chain to be provided on pipes that exceed 450mm Ø. Stainless steel safety chain shall be 10mm nominal size grade M18 non calibrated chain, type 1, complying with B.S. 4942 Part 2.
17. If the depth of Manhole to invert is greater than 3.0 m, ladders shall be used, instead of runs 25mm in dia. B.S. 4211 except that stringers should be not less than 65x200mm. in section and runs 25mm in dia. Fixed Ladders should be made to meet the dimensional requirements of B.S. 4211.
18. Ladder stringers should be made of 25mm dia. mild steel supplied from the manhole wall at intervals of not more than 2.0m. Stringers should be bolted to cleats to allow removal.
19. Socket of pipe to be cut flush with the inside surface of the manhole wall.
20. Where manhole diameter changes in deep manholes, provide a 910mm square open in intermediate roof slab.
21. All Manholes shall be watertight to the satisfaction of the Engineer. Formwork to reinforced concrete and mass concrete shall comply to Class 2, Section 6.2.7 BS8110 Part 1:1997. Finish to the top of slabs shall comply to Type A, Section 6.2.7 BS8110: Part 1: 1997. Manholes are designed to BS. 8005 and will conform to S.1525.
22. Precast Manholes, Chamber walls and cover slab to be constructed to IS EN 1917 and IS 420 2004.
23. Manhole steps to be situated further from the nearest carriageway. Manhole steps/access to be positioned to allow viewing of oncoming traffic.
24. For bedding and bedding of chamber rings, the top ring below PC slab and bottom ring to be sealed with cement mortar. For intermediate rings, joints to be sealed to approved precast concrete bedding.
25. Pre cast Manholes to be surrounded with a minimum of 150mm thick Grade C25/30 concrete.

1. Pipe/baffle to be granular material to C1804/808 in accordance with the NRA Specifications for Road Works. Use only C1808 material when within 500mm of cement bound subgrade material such as concrete kerbs/paths/haunching.
2. Baffle material to be well graded in accordance with C1802 of the NRA Specification for Road Works concrete in layers of not greater than 150mm.
3. Back filling in open spaces shall consist of suitable subgrade excavated material, shall be firm and strong greater than 25mm in size, builders rubbish, vegetable matter and lumps of clay less than 75mm in size. Backfilling shall be done to a depth of 150mm in accordance with requirements of 'Acceptable material' as defined in Clause 601 of the NRA Specification for Road Works.
4. All concrete to be in accordance with WIS 4-08-02 and IG-4 08-4 01. Granular material be 5mm to 14mm graded aggregate or 10mm single sized aggregate to ISAN 130242.
5. All pipes to have a 150mm Concrete surround where the cover is less than 150mm in Landscaped/Pedestrian areas. Use concrete bed & surround details if cover is <1.2m trafficable. All other pipes to have 150mm concrete bedding and 150mm concrete surround.
6. Concrete for pipe bedding, haunching and surrounds shall be grade C16/20 and have expansion joints at all pipe joints using 18mm filler board.
7. Formwork to Reinforced concrete shall be in accordance with BS 5400, class F2.
8. Wrap PE pipes in plastic sheeting before casting into concrete.

All pipe/manhole details to be compliant with
Uisce Éireann Wastewater Infrastructure Standard
Details document '25

THIS IS A PLANNING DRAWING AND IS
FOR THE APPROVAL OF UISCE ÉIREANN

REV	DATE	DESCRIPTION
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Project

GLENAMUCK NORTH - SITE B

<u>Drawing Title</u>	<u>Architect</u>
MANHOLE DETAILS	MCORM Architects

<u>Date</u>	<u>Drawn By</u>	<u>Scales</u>	<u>Dwg.No.</u>	<u>Stage</u>	<u>Rev</u>
May'25	RM	As Shown @ A1	2411/215	LRD Stage 3	