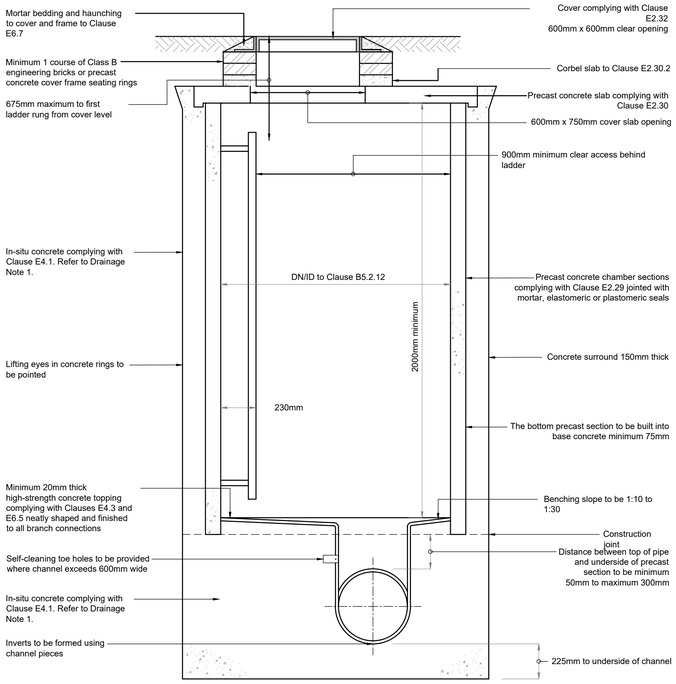
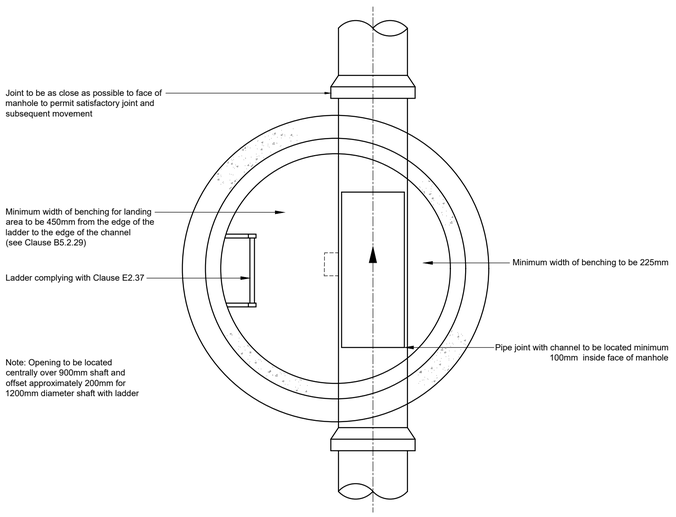
A1

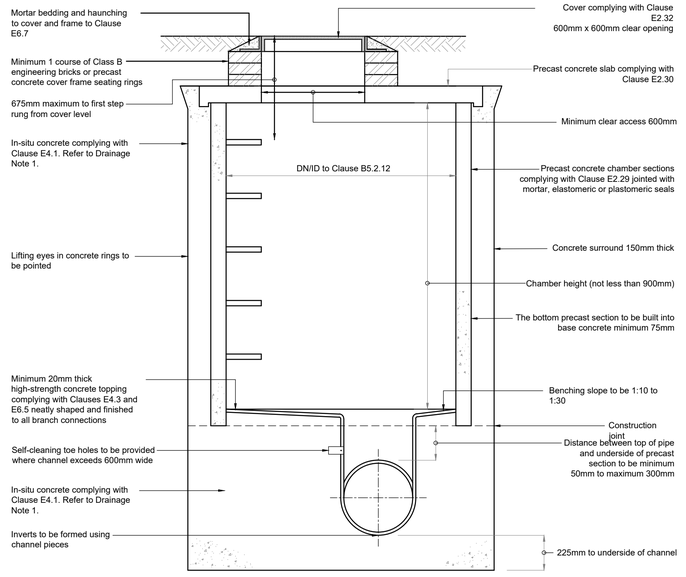


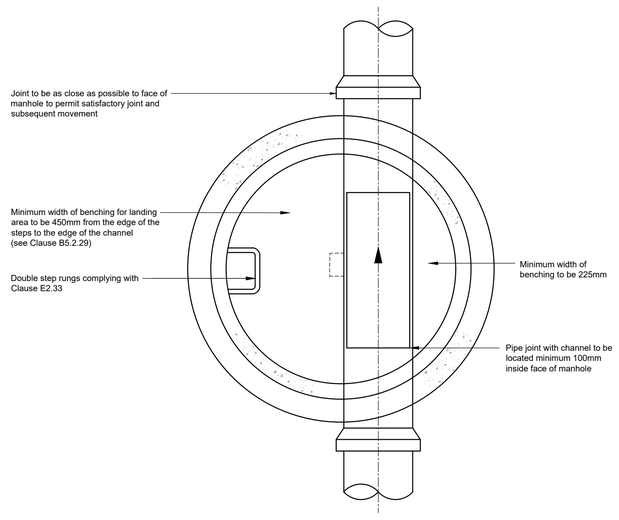


TYPICAL MANHOLE DETAIL - TYPE A

SCALE 1:20

Depth from cover level to soffit of pipe 3m to 6m with ladder.
Alternative rigid material construction with concrete surround.

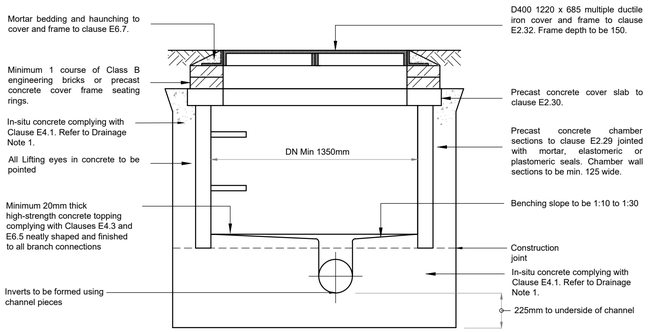


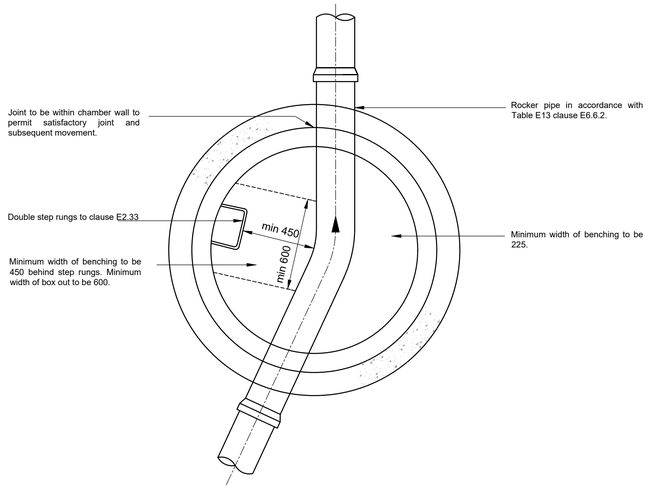


TYPICAL MANHOLE DETAIL - TYPE B

SCALE 1:20

Depth from cover level to soffit of pipe 1.5m to 3m.
Alternative rigid material construction with concrete surround.





TYPICAL MANHOLE DETAIL - TYPE C

SCALE 1:20

Depth from cover level to soffit of pipe less than 1.5m.
Rigid material construction without concrete surround.

GENERAL NOTES

1. DO NOT SCALE.
2. This drawing is to be read in conjunction with all other relevant drawings and details.
3. Should there be any conflict between the details indicated on this drawing and those on other drawings the Engineer should be informed PRIOR to construction on site.
4. Until technical approval has been obtained from the relevant Authority, it should be understood that all drawings issued are Preliminary and NOT for construction. Should the Contractor commence site works prior to such approval being provided it is entirely at their own risk.
5. All dimensions are in metres unless otherwise stated.
6. The Rodgers Leask Designer's Risk Assessment(s) for this project must be reviewed PRIOR to the commencement of any works on site.

DRAINAGE NOTES

1. Ground conditions indicate Design Sulphate Class 4 and Aggressive Chemical Environment Class 4. Concrete specification to be Class DC-4, in compliance with BRE Special Digest 1, unless further testing demonstrates otherwise.
2. Refer to Sewerage Sector Guidance Appendix C 'Design and Construction Guidance' document for specification clause references.
3. All manholes and inspection chambers situated in areas subject to vehicular loading to have min. class D400 covers and frames to BS EN124 and those not subject to vehicular loading to have class B125 covers and frames.
4. The first flexible joint in pipes adjoining a manhole shall be a maximum length of 600mm from the inside face of the manhole, connecting to a rocker pipe. The length of the rocker pipe shall be as follows:

Pipe diameter	Length of Rocker pipe
150-600mm	600mm
675-750mm	1000mm
over 750mm	1250mm

5. All pipes, chambers and fittings shall be installed, bedded and backfilled in accordance with the manufacturers instructions.
6. Type S bed and surround to be used for all pipework except where depth from finish surface to crown of pipe is;
   - less than 1.2m and subject to trafficking in excess of 7.5tn vehicle weight (eg HGVs), or
   - less than 0.9m generally,

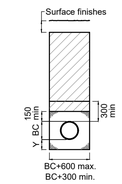
   In which case Type Z concrete bed and surround should be used.
5. The following types of pipe may be used unless noted or agreed otherwise;
   - Pipes up to 300mm to be super strength Vitrified Clay pipes to BS 295.
   - Pipes over 300mm diameter to be Concrete to BS 5911.
6. Both Clay and Concrete pipes shall be strength class 120 (100/150mm min crushing strength 28kN/m).
7. Pipes which run adjacent to buildings shall be installed in strict accordance with Part H, Clauses 2.23 to 2.25.

KEY

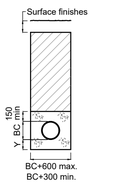
	Granular material (see table below)
	Granular type 1 material deposited in layers not exceeding 225mm unconsolidated thickness and then fully compacted.
	Concrete - Refer to Drainage Note 1.
BC	Outside diameter of pipe
Y	BC/6 or 100mm under barrels and 50mm min. under sockets whichever is greater (400mm max.) OR
Y	BC/4 or 200mm under barrels and 150mm min. under sockets whichever is greater (400mm max.) for trenches in hard material.
Z	BC/4 or 100mm under barrels whichever is greater.
——	Earthworks outline.

GRANULAR MATERIAL	
DIA. OF DRAIN	AGGREGATE
100mm	10mm single size
150mm	10mm or 14mm single size or 5-20mm graded.
225-525mm	10mm or 14mm single size or 5-20mm graded.
over 525mm	10, 14, 20 or 40mm single size or 5-40mm graded.

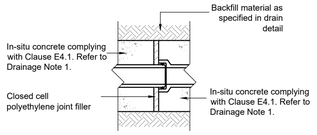
NOTE A No mechanical compaction within 300mm of crown of pipe.



TYPE S (GRANULAR) BED AND SURROUND



TYPE Z (CONCRETE) BED AND SURROUND



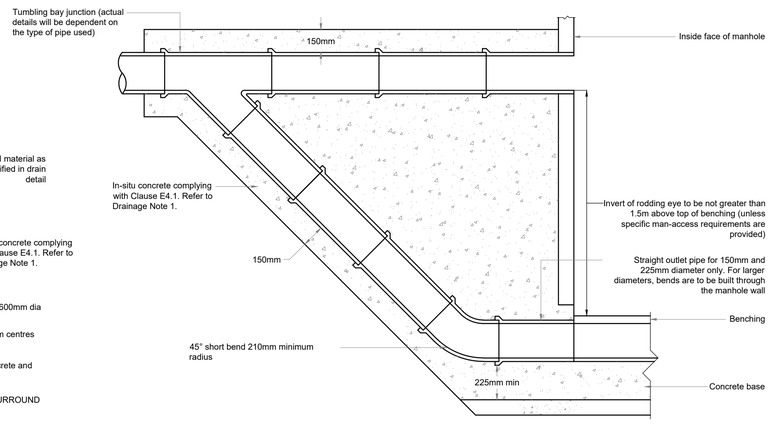
NOTES

1. Joint filler thickness: up to 300mm dia pipe, 25mm. up to 600mm dia pipe, 40mm.
2. Provide joint in concrete surround at every pipe joint or 5m centres whichever is greater
3. The joint filler shall extend across the full area of the concrete and there is to be no bridge of concrete across the joint.

FLEXIBLE JOINT DETAIL FOR CONCRETE BED AND SURROUND

TYPICAL PIPE BED AND SURROUND DETAILS

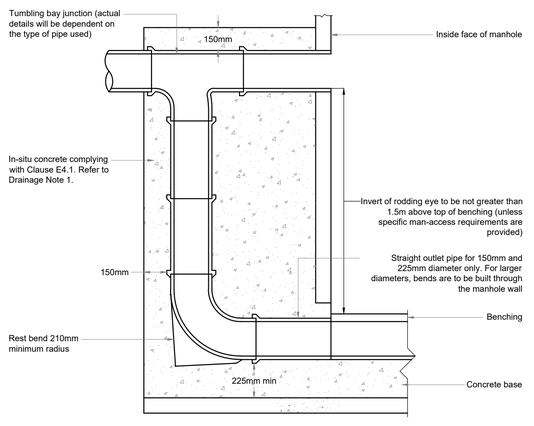
NTS



EXTERNAL RAMPED BACKDROP

SCALE 1:20

Rigid material construction



EXTERNAL VERTICAL BACKDROP

SCALE 1:20

Rigid material construction

Rev	Date	Amendments	By	Chk
P02	22:12:25	Updated for planning	TH	DB
P01	03.03.25	First Issue	DP	DB

RLRE Consulting Engineers

Client
INDURENT

Project
INDURENT PARK, NEWPORT - UNITS 19 - 21

Drawing Title
DRAINAGE CONSTRUCTION DETAILS
SHEET 1 OF 2

Status
FOR PLANNING

Scale	Drawn	Checked	Date
As Shown @ A1	DP	DB	03.03.25

Drawing Number: 25105-RLL-25-XX-DR-C-2007
Revision: P02

BIM Drawing Reference
-

Scale Bar
1:20 0.2 0.4 0.6 0.8 1.0 1.2 1.4

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