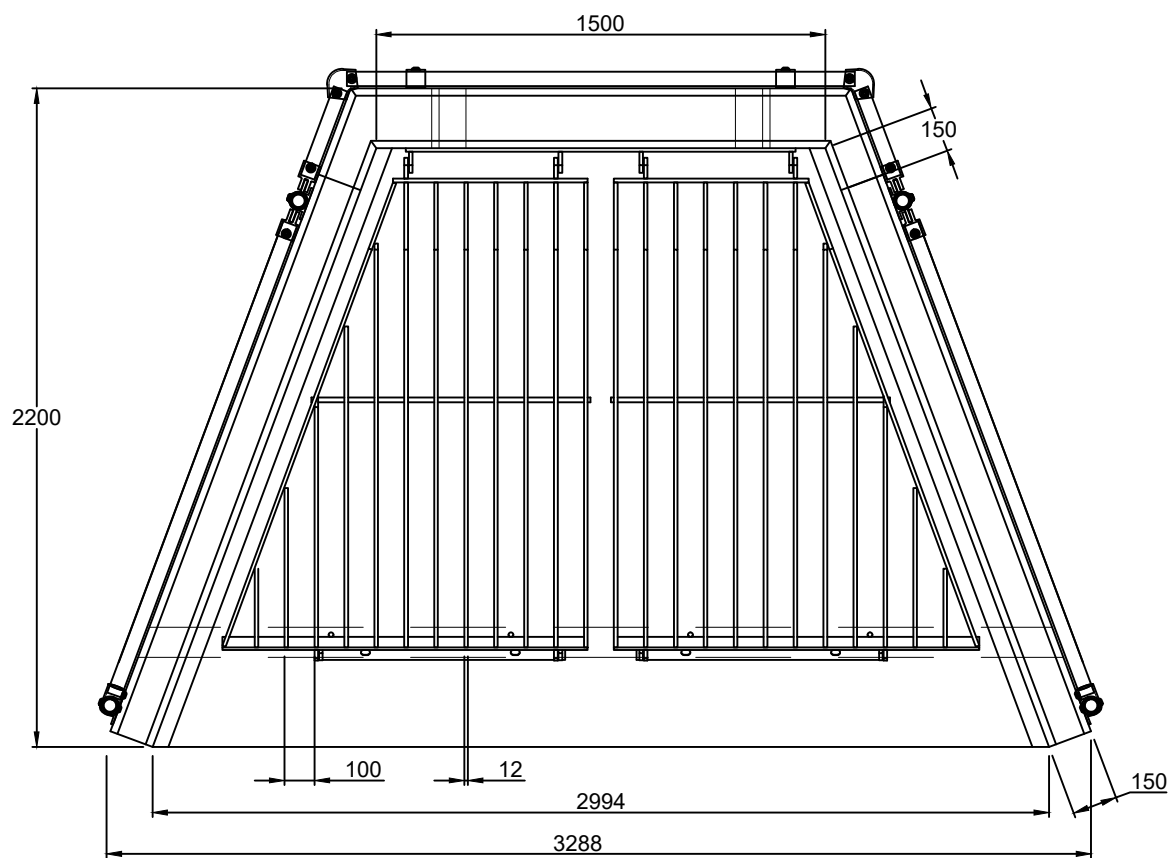
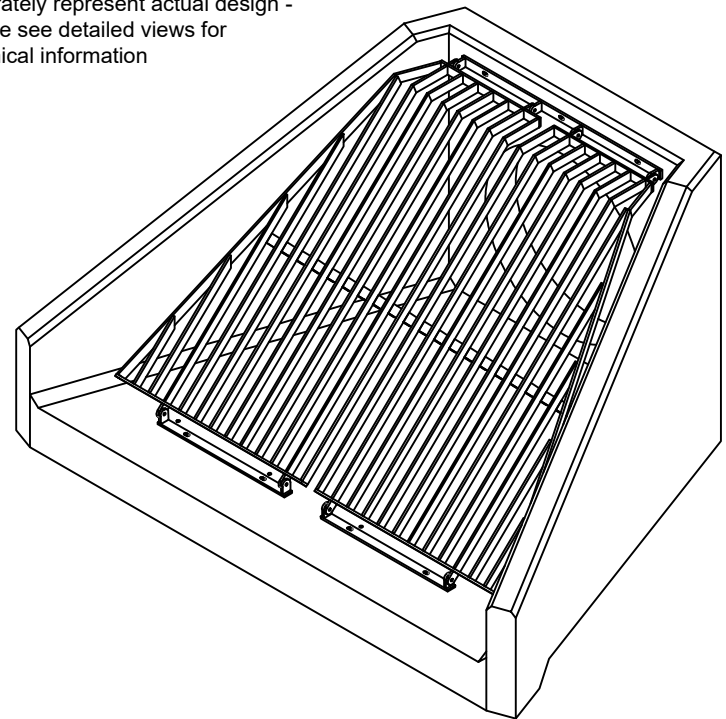
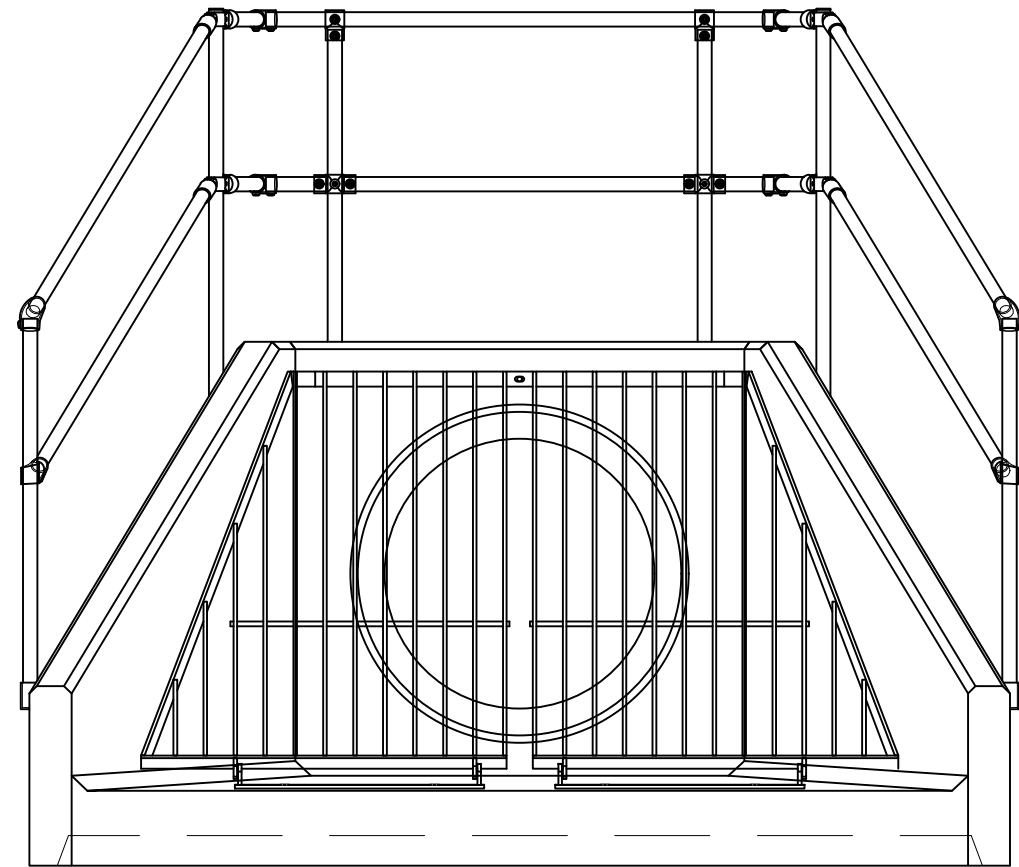
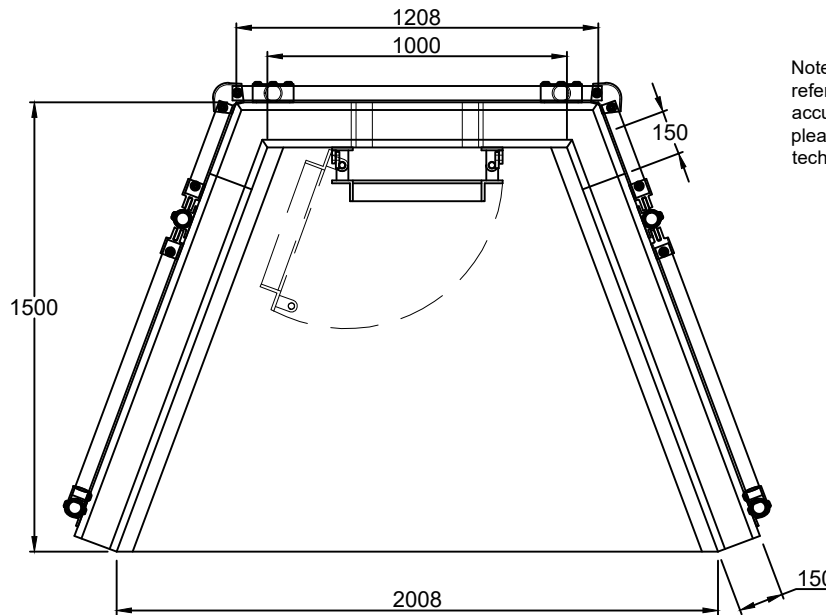




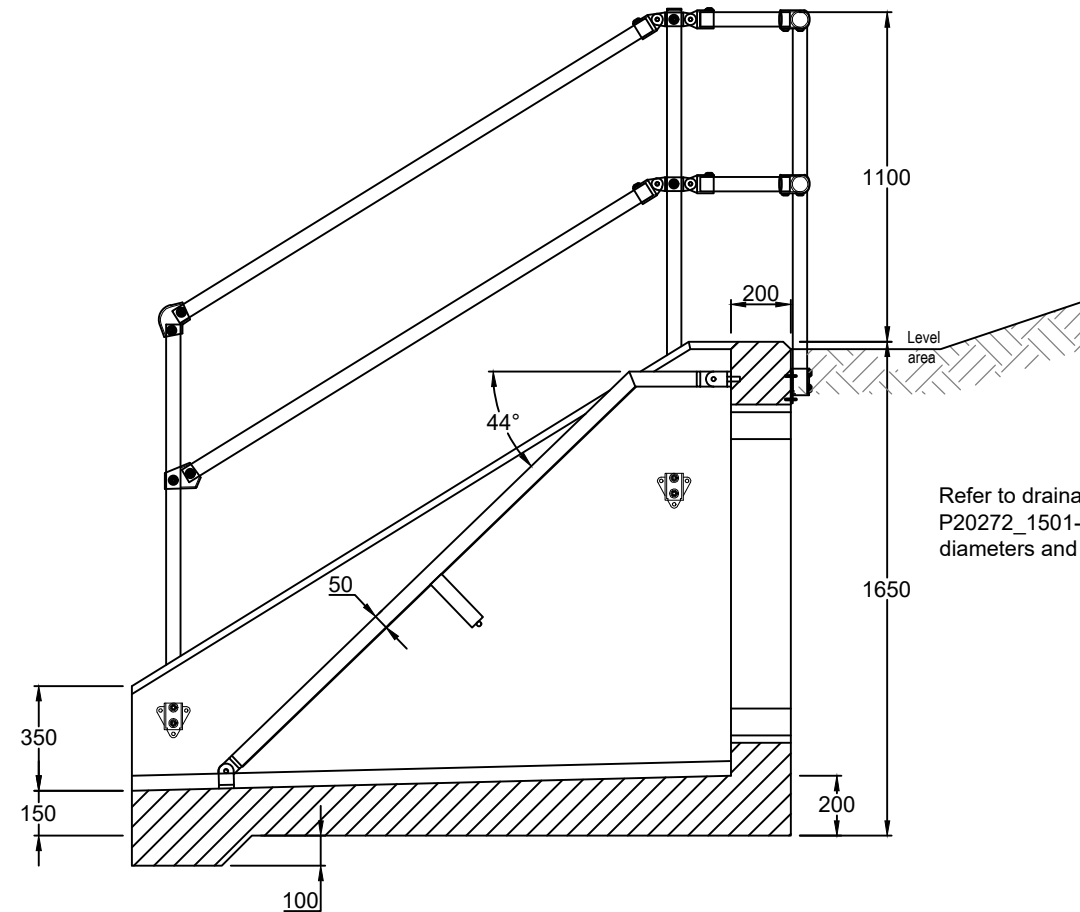
Note: Isometric drawing is for reference only, details may not accurately represent actual design - please see detailed views for technical information



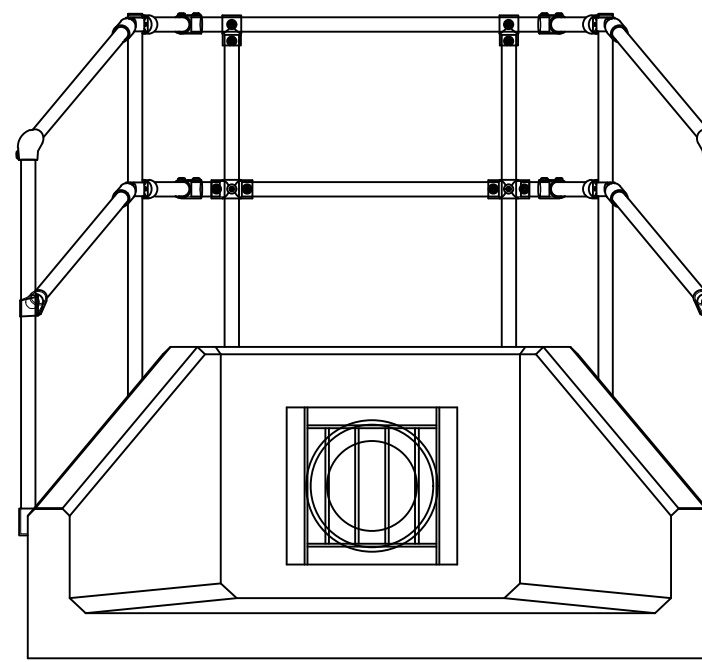
Note: Isometric drawing is for reference only, details may not accurately represent actual design - please see detailed views for technical information



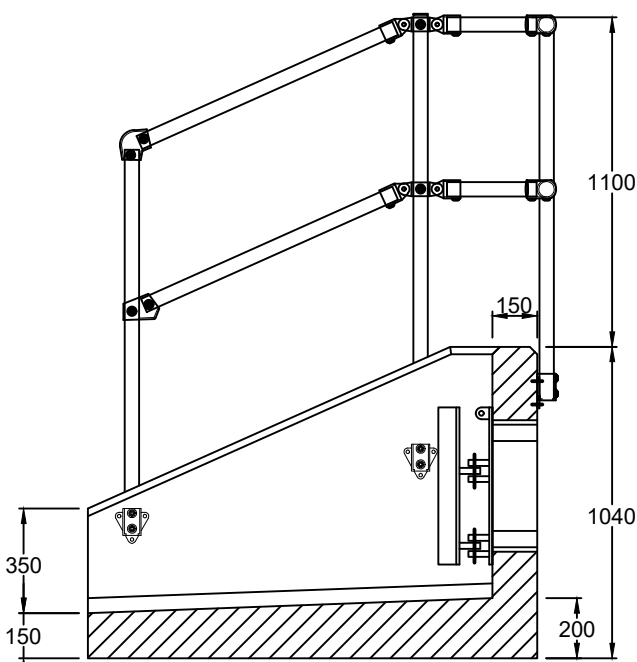
Precast Concrete Headwall Detail
Althon SFA15 B with cranked grating or similar approved
to suit all pipe diameters up to 1050mmØ



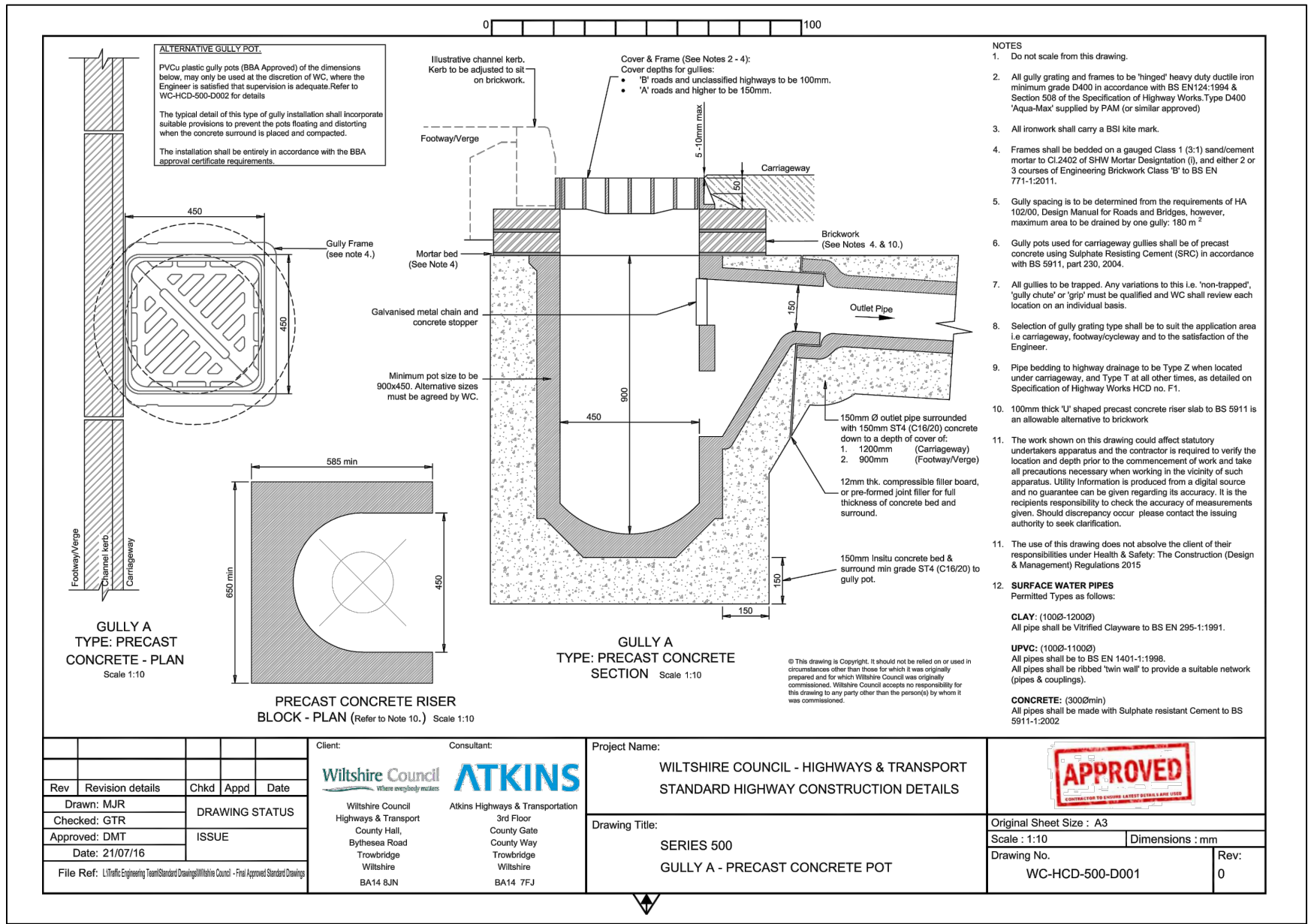
Refer to drainage layouts
P20272_1501-1508 for pipe
diameters and invert levels



Precast Concrete Headwall Detail
Althon SFA10 B with cranked grating or similar approved
to suit all pipe diameters up to 450mmØ



Refer to drainage layouts
P20272_1501-1508 for pipe
diameters and invert levels



Pipe diameter	Y Minimum		Maximum trench width.	L
	Y1 min.	Y2 min.		
100	150	200	700	18
150	150	200	750	18
200	150	200	800	18
225	150	200	825	18
250	150	200	850	18
300	150	200	925	18
350	150	200	1000	18
375	150	200	1025	18
400	150	200	1050	18
450	150	200	1175	36
500	150	200	1240	36
525	150	250	1270	36
600	150	250	1370	36
675	150	250	1420	36
700	225	300	1460	36
750	225	300	1500	36
800	225	300	1560	36
825	225	300	1585	36
900	225	300	1675	36
975	225	300	1805	36
1050	225	300	1865	36
1125	225	350	1950	36
1200	375	350	2035	36
1350	375	400	2220	54
1500	375	450	2340	54
1650	375	500	2510	54
1800	375	500	2690	54

- NOTES:
- All dimensions are in millimetres.
 - Dimension Y1 shall be used unless Y2 is specified or is directed by the engineer.
 - Dimension Y2 shall be used in place of Y1 where the excavation is in rock or in mixed soils containing rock beds, boulders, large flints or other irregular hard spots.
 - Dimension Y2 shall be increased by 40mm for each additional 1.0m of cover in excess of 5.0m.
 - Dimension L is the width of compressible filler required at joints in concrete

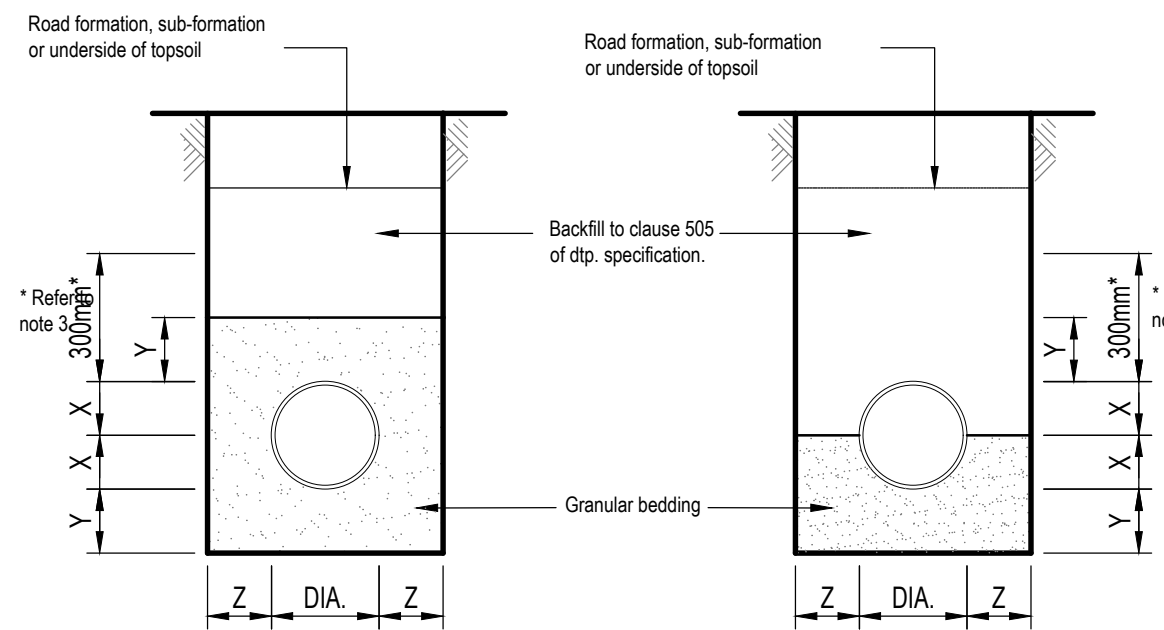
PIPE BEDDING DIMENSIONS

Pipe diameter	Class of bedding	Imported granular material (note 1)
100	S B	10mm nominal size
Over 100 to 150	S B	10 or 14mm nom. single size or 14 to 5mm graded
Over 150 to 500	S B	10,14,20mm nom. single size or 14 to 5mm graded or 20 to 5mm graded
Over 500 (Note 2)	S B	10,14,20mm nom. single size crushed rock or 14 to 5mm graded or 20 to 5mm graded or 40 to 5mm graded

NOTES:

- Imported granular materials to include aggregates to BS 882, air-cooled blast furnace slag to BS 1047 & sintered pulverized fuel ash to BS.3797.
- Angular materials should be chosen to ensure sufficient support is provided to heavier pipes.
- Class S bedding shall be used with flexible pipes.

GRANULAR BEDDING AND SIDEFILL MATERIALS



CLASS S BEDDING
GRANULAR BED AND SURROUND
(Bedding factor = 2.2)

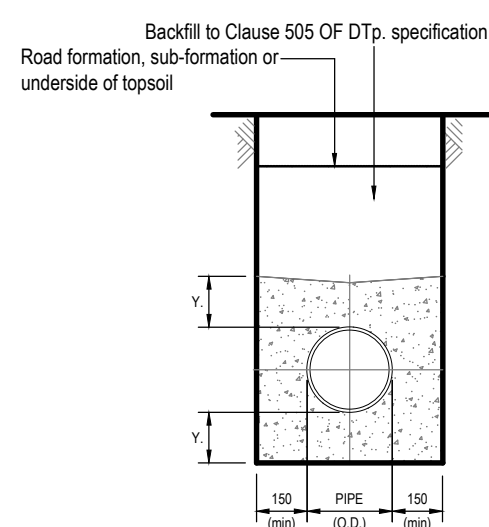
CLASS B BEDDING
GRANULAR BED AND HAUNCH
(Bedding factor = 1.9)

X = Half of outside diameter of pipe
Y = Refer to pipe bedding dimension table
Z = Minimum 150mm

NOTES:

- Refer to tables for dimensions and bedding details
- Bedding beneath and at the sides of the pipe to be well compacted
- The first 300mm of fill above the crown of the pipe is to be lightly tamped by hand. Mechanical compaction may be used only above this level.
- Geotextiles may be used where directed or approved by the engineer to contain bedding material in certain soils e.g. running sand
- In very wet conditions, where directed or approved by the engineer a temporary land drain may be laid within the granular bed.

GRANULAR BEDDING DETAILS



CLASS Z CONCRETE BED & SURROUND

CONCRETE BEDDINGS DETAILS

NOTES:

- Refer to tables for dimension and bedding materials.
- Bedding beneath and at sides of the pipe to be well compacted.
- Geotextiles may be used where directed or approved by the engineer to contain bedding material in certain soils e.g. running sand.
- In very wet conditions, where directed or approved by the engineer a temporary land drain may be laid within the granular bed.
- Where pipes with flexible joints are used, the concrete protection is to be interrupted over its full cross-section at intervals not exceeding 5 metres (or as directed by the engineer) by a shaped former of bitumen impregnated compressible filler. These interruptions shall coincide with pipe joints. See dimensions for pipe bedding table for thickness of compressible filler.
- Concrete to be Class 2; sulphate resisting ST4 concrete
- Where flexible pipes are used, care must be taken to prevent the pipes from floating.

Notes.

- Drainage to be constructed in accordance with the Code for Adoption Design and Construction Guidance Sewerage Sector Guidance Appendix C, Building Regulations 2010 Approved Document Part H and BS EN 752: 2017.
- To be read in conjunction with Jubb Consulting Engineers Drainage layout drawings.
- Headwall Units to be bedded on minimum 200mm thick well compacted Class 6A* selected well graded granular material.
- Where applicable, products are to be constructed to manufacturers guidelines and specifications.
- Any drainage constructed prior to S104 technical approval by Wessex Water is done so at risk and is subject to alterations.

*Manual of contract documents for Highway Works: Volume 1 (MCHW1) Specification for Highway Works, Series 600

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