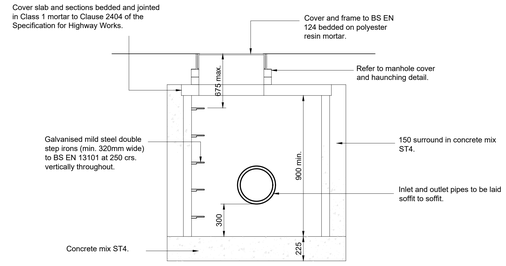


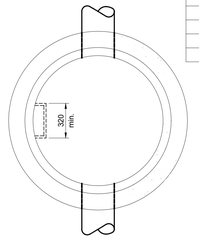
PLAN

SECTION A-A

TYPICAL CHANNEL SILT PIT DETAILS

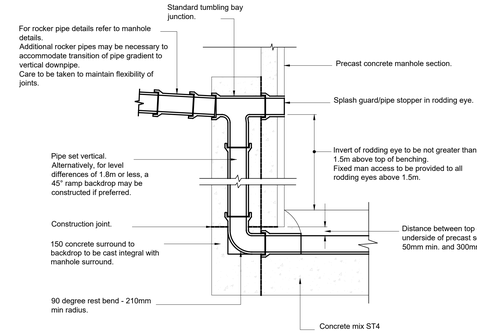


DIAMETER OF LARGEST PIPE IN CATCHPIT (mm)	MINIMUM INTERNAL DIAMETER OF CATCHPIT (mm)
100 - 225	1200
300 - 525	1500
600 - 825	1800
900 - 1125	2100
1200	2400



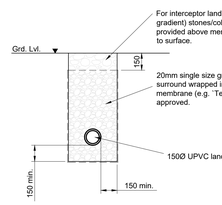
SHALLOW CATCHPIT

DEPTH TO TOP OF BASE SLAB 1.2M - 3.0M



TYPICAL VERTICAL BACKDROP DETAIL

Note : Where the drop is not excessive a 45° drop pipe may be used



TYPICAL LAND DRAIN DETAIL

General Notes

1. Ductile iron manhole covers and frames to be in accordance with BS EN 124 and to the following load class;
class E600 - service yards
class D400 - carriageways and service roads
class C250 - car parks and car park access roads
class B125 - pavements and landscaped areas
class A15 - internal areas (refer also to architect's specification)

2. Heavy duty concrete cover slabs to be used with class C250, D400 & E600 manhole covers.
Light duty concrete cover slabs to be used with class A15 & B125 manhole covers.

3. Covers laid to falls of finished surfaces.

4. Inlet and outlet pipes to be laid soffit to soffit unless stated otherwise.

5. Precast concrete manholes to be in accordance with BS EN 1917 and BS 5911.

6. Ductile iron gully gratings and frames to be class D400 to BS EN 124, non-rock design with a captive end hinge set on the traffic side of the gully. Grating slots are to be perpendicular to the direction of traffic.

7. All drainage details and specifications to be in accordance with Water UK/Water Research Centre publication `Sewers for Adoption' latest edition.

8. All concrete products and in-situ concrete for use in adoptable sewerage shall utilize sulphate resisting cement in accordance with `Sewers for Adoption' latest edition.

9. The standard concrete specified on this drawing are suitable only for non-aggressive soils. Where sulphates or other aggressive chemicals are present in the ground water, the ground or in any adjacent material then sulphate resisting cement or the corresponding extra quantity of ordinary portland cement is to be used in the concrete.
All in accordance with BS EN 206-1 and BS 8500-1 & 2.

10. Chalk and limestone are not to be used as bedding or backfilling material in soils with a pH value less than 7.

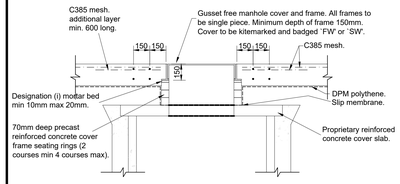
11. All mortar to be class 1 (1:1/4:3) for brick manholes and benching.

12. All brickwork in connection with drainage is to be engineering brick Class B to BS 3921.

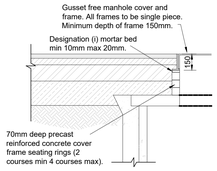
13. Manhole and gully frames to be bedded on polyester resin mortar.

14. All ductile iron products shall display the manufacturer's name and achieve kitemark accreditation.

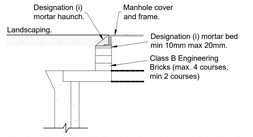
15. All dimensions in millimeters unless stated otherwise.



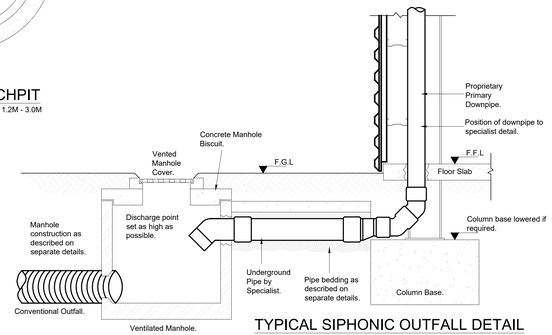
MANHOLE COVER AND HAUNCHING DETAIL IN SERVICE YARD



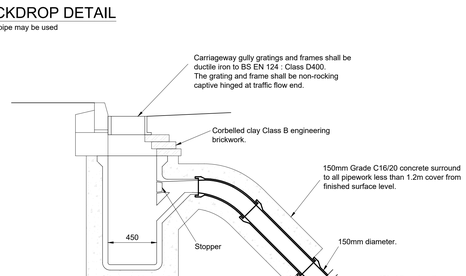
MANHOLE COVER AND HAUNCHING DETAIL IN FLEXIBLE SURFACING



MANHOLE COVER AND HAUNCHING DETAIL IN LANDSCAPING



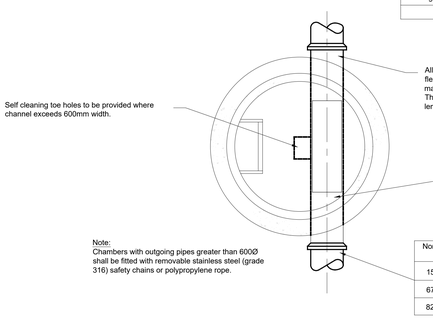
TYPICAL SIPHONIC OUTFALL DETAIL



GULLY DETAIL

NOTES:
1. Gully pot to be of 100 litres capacity.
2. Maximum trench width for 150mm gully lead is 600mm.
3. Number of bends may vary due to site differences.
4. Concrete surround to pipes shall always finish at a joint.

DIAMETER OF LARGEST PIPE IN MANHOLE (mm)	MINIMUM INTERNAL DIAMETER OF MANHOLE (mm)
100 - 225	1200
300 - 525	1500
600 - 825	1800
900 - 1125	2100
1200	2400



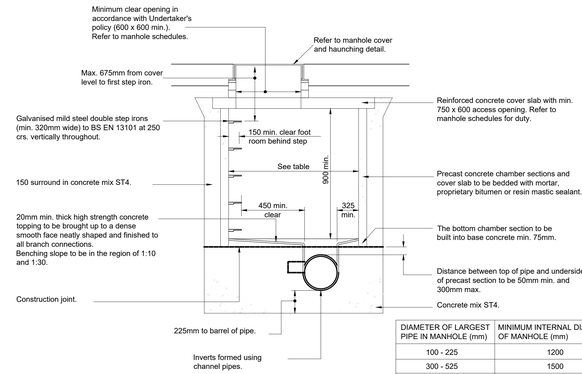
Note:
Chambers with outgoing pipes greater than 600Ø shall be fitted with removable stainless steel (grade 316) safety chains or polypropylene rope.

Nominal dia. (mm)	Effective length (mm)
150 to 600	600
675 to 750	1000
825 & over	1250

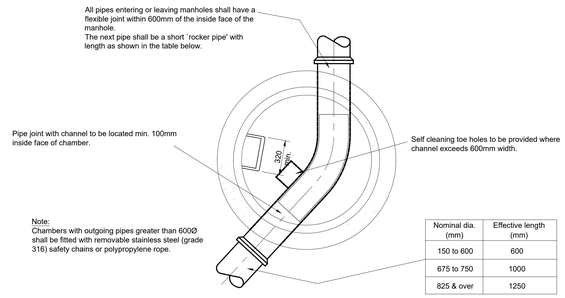
TYPICAL MANHOLE DETAIL TYPE A

DEPTH FROM GROUND LEVEL TO SOFFIT OF PIPE 3m TO 6m

Summary of requirements - positions and sizes of openings to manhole cover slabs (BS EN 752:2008, BS EN 1917, BS 5911-4 and CPA Technical Bulletin September 2001).		
Shaft/chamber diameter (mm)	Manhole less than 1.5m deep (mm)	Manhole greater than 1.5m deep (mm)
1200	----------	750 x 600 eccentric
1500	1200 x 675 central	750 x 600 eccentric
1800-3000	1200 x 675 eccentric	750 x 600 eccentric



DIAMETER OF LARGEST PIPE IN MANHOLE (mm)	MINIMUM INTERNAL DIAMETER OF MANHOLE (mm)
100 - 225	1200
300 - 525	1500
600 - 825	1800
900 - 1125	2100
1200	2400

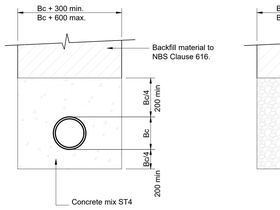


Note:
Chambers with outgoing pipes greater than 600Ø shall be fitted with removable stainless steel (grade 316) safety chains or polypropylene rope.

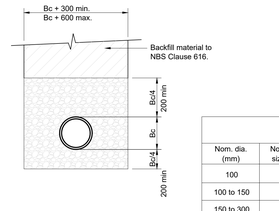
Nominal dia. (mm)	Effective length (mm)
150 to 600	600
675 to 750	1000
825 & over	1250

TYPICAL MANHOLE DETAIL TYPE B

DEPTH FROM GROUND LEVEL TO SOFFIT OF PIPE 1.45m TO 3.0m



Bc = Outside diameter



Bedding Note:
Min. thickness of bedding below pipe:
Hard spots/irregular trench bottom Bc/4 (200mm min.).
Even trench bottom Bc/6 (100mm min.).
Bc = Outside diameter

Table of Suitable Pipe Bedding / Surround Material		
Nom. dia. (mm)	Nom. max. size (mm)	Materials specified in British Standards
100	10	10mm nom. single size.
100 to 150	15	10 or 14mm nom. single size or 14mm to 5mm graded.
150 to 300	20	10, 14 or 20mm nom. single size or 14mm to 5mm graded or 20mm to 5mm graded.
300 to 550	20	14 or 20mm nom. single size or 14mm to 5mm graded or 20mm to 5mm graded.
over 550	40	14, 20 or 40mm nom. single size crushed rock or 14mm to 5mm graded or 20mm to 5mm graded or 40mm to 5mm graded.

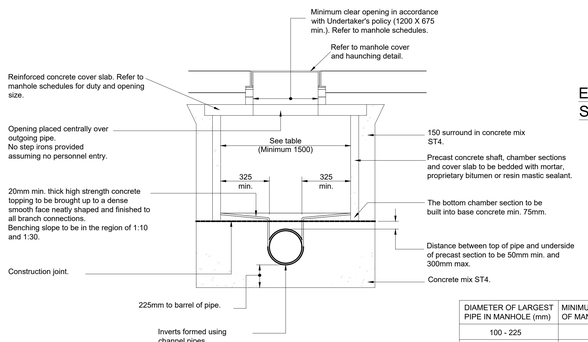
CLASS Z - PLAIN CONCRETE BED AND SURROUND

(SOFT AREAS WITH A COVER OF LESS THAN 600mm AND ALL PIPE WORK BENEATH ROADS, CAR PARKS AND ALL OTHER TRAFFICKED HARDSTANDING AREAS WITH A COVER LESS THAN 1200mm)

CLASS S - GRANULAR BED AND SURROUND

(SOFT AREAS WITH A COVER GREATER THAN 600mm AND ALL PIPE WORK BENEATH ROADS, CAR PARKS AND ALL OTHER TRAFFICKED HARDSTANDING AREAS WITH A COVER GREATER THAN 1200mm)

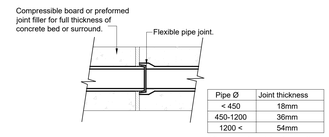
Note: Pipe bedding details assume rigid pipes



DIAMETER OF LARGEST PIPE IN MANHOLE (mm)	MINIMUM INTERNAL DIAMETER OF MANHOLE (mm)
100 - 225	1200
300 - 525	1500
600 - 825	1800
900 - 1125	2100
1200	2400

TYPICAL MANHOLE DETAIL TYPE E

DEPTH FROM GROUND LEVEL TO SOFFIT OF PIPE 1.0m TO 1.45m



Pipe Ø	Joint thickness
< 450	18mm
450-1200	36mm
1200 <	54mm

(To occur at a joint not more than 8m apart).

EXPANSION JOINT FOR CONCRETE SURROUND TO PIPES

Rev.	Tech.	Date	Description
T2	JJ	26.08.22	ENGINEERING BRICKS ADDED TO SILT PIT DETAIL. PIPE BEDDING NOTES ADDED.
T1	PG	27.05.22	TENDER ISSUE.
T1	JJ	13.05.22	TENDER ISSUE.

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Project Title: **5 COMMERCE WAY, LANCING.**

Drawing Title: **TYPICAL DRAINAGE CONSTRUCTION DETAILS SHT 1 OF 3**

Purpose of Issue: Information ○ Preliminary ○ Approval ○ Tender ● Construction ○ Record Copy ○

First Issue Date	Drawn By	Scale	Checked
MARCH 22	JJ	NTS	NDH

Drawing Number: **21-008D / 301** Rev. **T2**