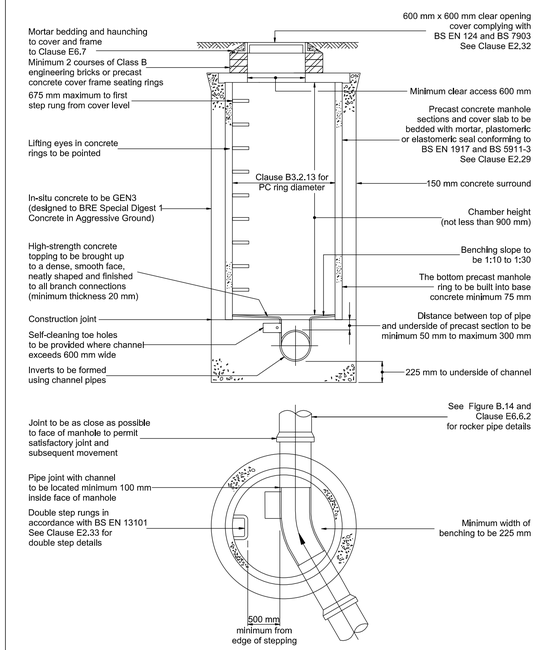
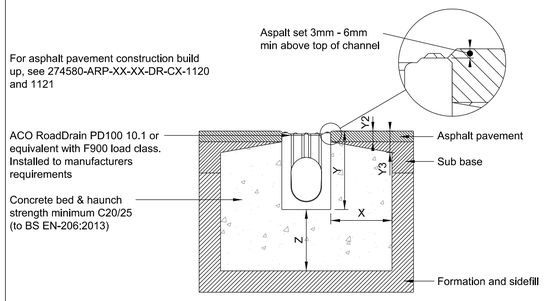
A1

FIGURE B.12
TYPICAL MANHOLE DETAIL - TYPE 2
Maximum depth from cover level to soffit of pipe 3.0 m



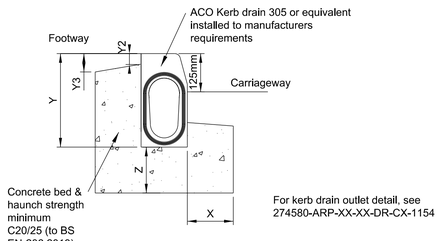
Load Class		D400	E600	F900
Minimum Dimensions (mm)	X	200	200	200
	Y	Full Channel Height (Less Y2 where applicable)		
	X	200	200	200
Maximum Dimensions (mm)	Y2	35	35	35
	Y3	70	70	70



Aco Road Drain Detail

Load Class		A15	B125	C250	D400**
Minimum Dimensions (mm)	X				
	Y	Full Channel Height (Less Y2 where applicable)			
	X				
Maximum Dimensions (mm)	**Y2				
	**Y3				
	Y4	No front haunch			Max 100

** Where regular HGV impacts are anticipated (e.g. roundabouts), We reccomend that the concrete backing is laid to the top of the ACO KerbDrain unit (i.e. Y2 = 0, Y3 = 0).



For kerb drain outlet detail, see 274580-ARP-XX-XX-DR-CX-1154

Kerb Drain Outlet Detail

FIGURE B.26
JOINTS FOR CONCRETE ENCASED PIPES

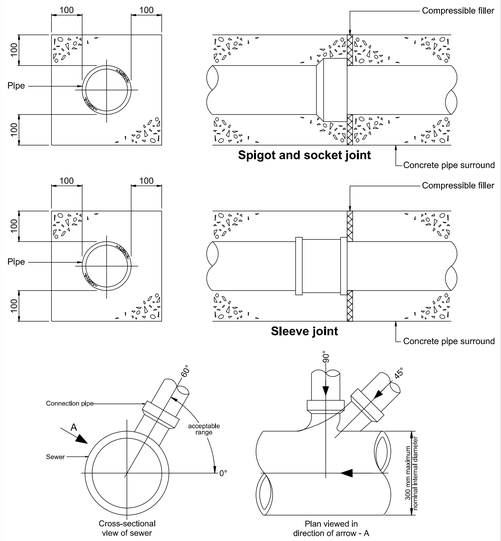
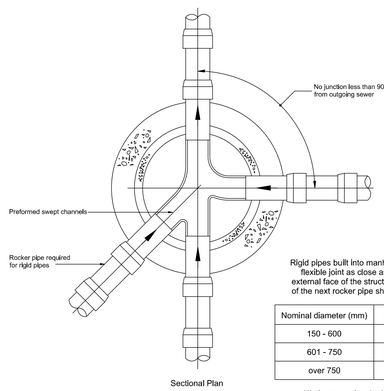


FIGURE B.14
TYPICAL ARRANGEMENT OF PIPE JUNCTIONS WITHIN MANHOLES



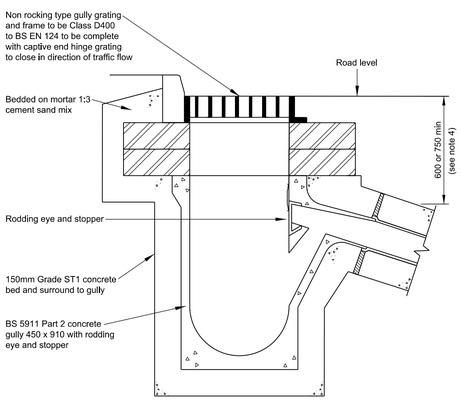
Rigid pipes built into manhole should have a flexible joint as close as feasible to the external face of the structure and the length of the next rocker pipe should be as shown.

Nominal diameter (mm)	Maximum effective length (m)
150 - 600	0.6
601 - 750	1.00
over 750	1.25

All pipes entering the bottom of the manhole to have soffits level.

Notes:-

1. Detail shown using pre-cast concrete gully. The following alternatives may be used:
(i) clayware
(ii) cast in situ using plastic or re-usable former and mix ST4 concrete using a minimum thickness 150 bed and backfill. Finish shall be Class F2 to Clause 1708.
2. Where constructed on trafficked roads, brickwork to be laid on polyester resin mortar.
3. Where cover to branch pipes is less than 1.2M, Class Z bedding and surround material is to be used.
4. The minimum depth from the top of the grating to the top of the gully outlet is to be 750 when the connecting pipe is under a carriageway or a hard shoulder and 600 elsewhere.



Detail of Road Gully

	Width Bc		Y		L	Z
Pipe Dia.	Max.	Min.	Y1 (Unifrom soil)	Y2 (Rock) *		Min.
100	550	450	100	200	25	100
150	600	490	100	200	25	100
225	700	580	150	200	25	100
300	750	680	150	200	25	100
375	1050	950	150	200	25	100
450	1150	1030	150	200	25	150
525	1200	1120	150	200	30	150
600	1350	1240	150	200	30	150
675	1450	1330	150	200	30	225
750	1500	1400	150	200	30	225
825	1600	1490	150	225	30	225
900	2100	1900	150	225	30	225
975	2150	1950	175	250	30	300
1050	2250	2050	175	275	30	300
1200	2500	2250	200	300	30	300
OVER 1200	Outside Dia. + 1000	Outside Dia. + 800	DIA/6	DIA/4	54	400

Table B - Trench widths and other dimesions
* See Note 2

Pipe Bedding Details

	Aggregate Size	
Pipe Dia. (mm)	Graded (mm)	or single sized (mm)
100	-	10
150	14 - 5	10 Or 14
225-300	14 - 5 Or 20 - 5	10, 14 Or 20
375-525	14 - 5 Or 20 - 5	10, 14 Or 20
EXCEEDING 525	14 - 5 Or 20 - 5 Or 40 - 5	10, 14, 20 Or 40

Table A - Granular pipe bedding material Type 'A'

Table of Dimensions

Letter		Pipe Sizes	Dimension (mm)
L		100 - 450	25
		525 - 900	30
Y*	Y1	100 - 150	100
		225 - 900	150
	Y2	100 - 750	200
		825 - 900	225
Z		100 - 375	100
		450 - 600	150
		675 - 900	225

* Y1 - Unifrom Soil
* Y2 - Rock

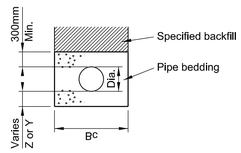
Notes:

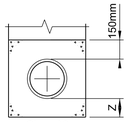
1. All excavation in excess of Bc shall be backfilled with concrete Mix ST2.

2. Dimension Y2 shall be increased at a rate of 40mm per additional 1000mm cover to pipe in excess of 5000mm.

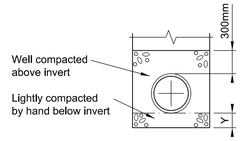
Legend

- Concrete mix ST4
- Granular pipe bedding material Type 'A'
- Selected excavated material (Refer to specification)

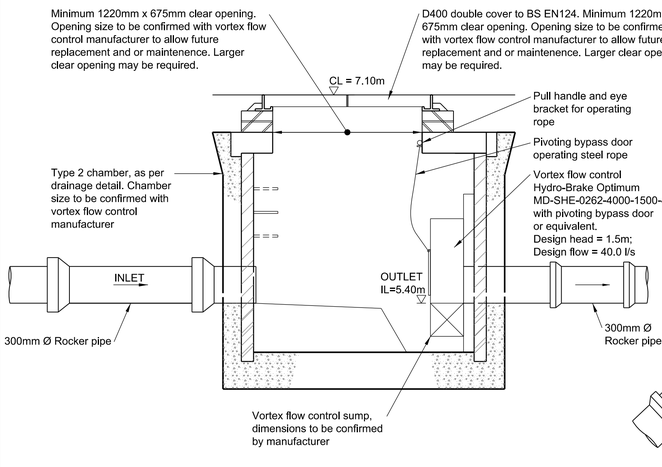




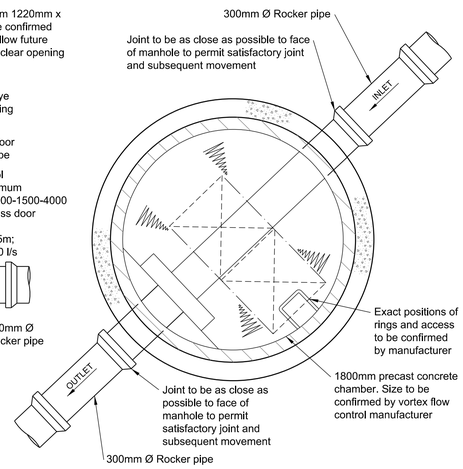
Class A3
Concrete Bed and Surround
(Bedding factor 4.5)



Class S
Granular Bed and Surround
(Bedding factor 2.2)



Section



Flow Control Chamber S5

Plan

Notes

1. Do not scale from this drawing
2. All dimensions are in metres unless noted otherwise.
3. The details shown on this drawing are based on a RIBA Stage 4 design for approval produced for a detailed planning application. The highway design shown is for adoption by Newport City Council and subject to design approval. The details will need to be reviewed and revised during subsequent design stages.
4. Figures taken from Sewers for Adoption 7th Edition.
5. Drainage design and construction is in accordance with Sewers for Adoption 7th Edition and the requirements of the statutory undertaker.
6. All proprietary products to be installed to manufacturers requirements.
7. Proposals shown subject to SAB Approval therefore subject to change.
8. All covers to be class D400 in accordance with EN 124. Covers within the highway to have high friction surfacing.

Rev.	Description	Drawn	Chkd.	Appd.	Issue Date
P02	ISSUED FOR TENDER	CB	CL	DL	11/05/21
P01	ISSUED FOR PLANNING	CB	SW	SW	24/02/21

Cyfoeth Naturiol Cymru Natural Resources Wales

ARUP

Project Name.
STEPHENSON STREET FLOOD DEFENCE SCHEME

Drawing Title.
EAST BANK ROAD
PROPOSED DRAINAGE DETAILS
SHEET 1 OF 2

Suitability.	Suitability Code.
D2 - FOR TENDER	D2

Internall Project Number.	Scale.	Rev.
274580	N.T.S	P02

Drawing Number.
274580-ARP-XX-XX-DR-CX-1153

J:\274000\274580-00\4 Internal Project Data\4-30 Drawings\4-31 Issue drawings\274580-ARP-XX-XX-DR-CX-1153.dgn