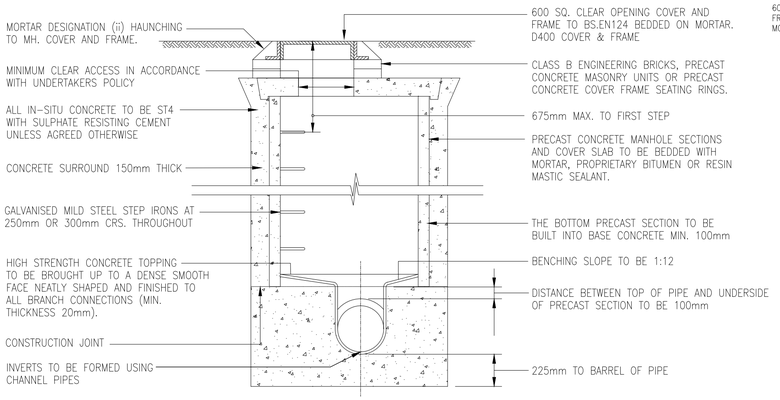
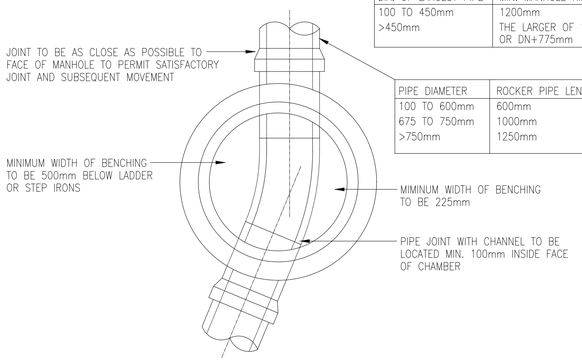
Original Drawing Size A1

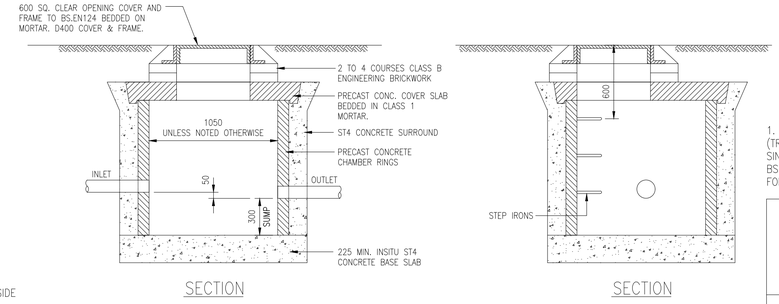


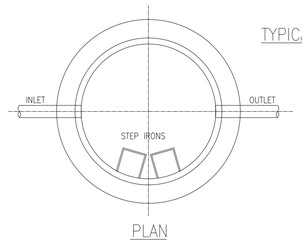
DIA. OF LARGEST PIPE	MIN. MANHOLE RING DIAMETER
100 TO 450mm	1200mm
>450mm	THE LARGER OF 1800mm OR DN+775mm



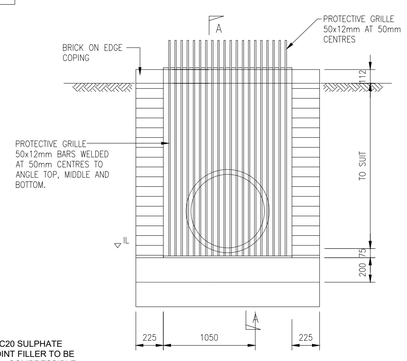
PIPE DIAMETER	ROCKER PIPE LENGTH
100 TO 600mm	600mm
675 TO 750mm	1000mm
>750mm	1250mm

SHALLOW MANHOLE (M)
DEPTH FROM GROUND TO SOFFIT 1.2m – 3m
NTS

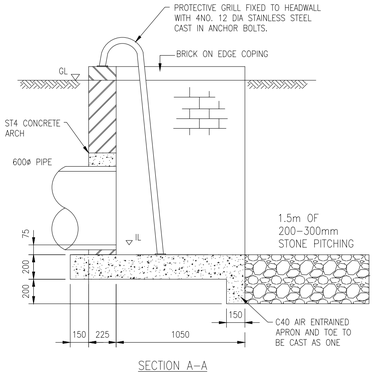




TYPICAL CATCHPIT (CP) DETAIL
NTS
PLAN

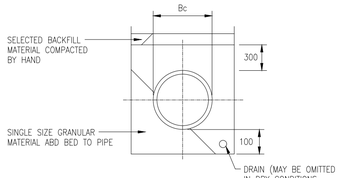


HEADWALL 4 ELEVATION

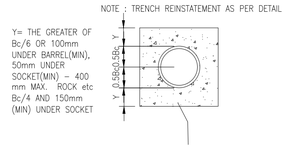


SECTION A–A

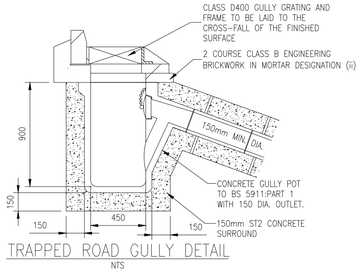
DETAIL OF SWALE HEADWALLS TYPE "A"
NTS



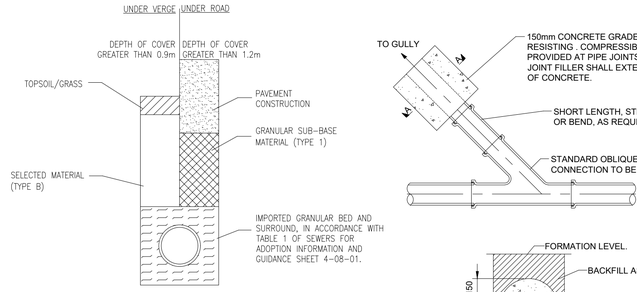
TYPE S BEDDING



PIPE BED & SURROUND
COVER LESS THAN 1.2m UNDER ROADS



TRAPPED ROAD GULLY DETAIL
NTS

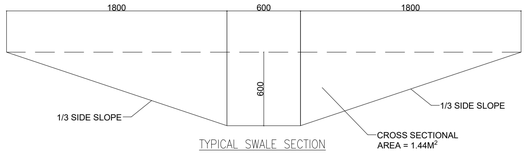


NOTES:
1. TYPE B BACKFILL TO CONSIST OF UNIFORM, READILY COMPACTABLE MATERIAL, FREE FROM VEGETABLE MATTER, BUILDING RUBBISH AND FROZEN MATERIAL, OR MATERIALS SUSCEPTABLE TO SPONTANEOUS COMBUSTION, AND EXCLUDING CLAY OF LIQUID LIMIT GREATER THAN 80 AND/OR PLASTIC LIMIT GREATER THAN 55, AND MATERIALS OF EXCESSIVELY HIGH MOISTURE CONTENT. CLAY LUMPS AND STONES SHALL BE RETAINED ON 75mm AND 37.5mm SIEVES RESPECTIVELY, ALL AS CLAUSE 2.50.3 OF THE CIVIL ENGINEERING SPECIFICATION FOR THE WATER INDUSTRY, 3rd EDITION.
2. BACKFILL MATERIAL TO BE COMPACTED IN LAYERS NOT GREATER THAN 250mm THICK. HEAVY COMPACTION EQUIPMENT NOT TO BE USED FOR FIRST 250mm OF BACKFILL.
3. ALL DIMENSIONS ARE IN MILLIMETRES.
4. ALL PIPES SHALL HAVE FLEXIBLE JOINTS.

PIPE SURROUND & TRENCH REINSTATEMENT
COVER GREATER THAN 1.2m UNDER ROADS

GULLY CONNECTION
NTS

NOTES.
1. FOR PIPE SPECIFICATION SEE DRINAGE PLANS.



TYPICAL SWALE SECTION

1. GRANULAR PIPE BEDDING MATERIAL FOR PIPES, AND BACKFILLING FOR TEMPORARY DRAINS (TRENCH SUB-DRAINS), SHALL CONSIST OF AGGREGATES FROM NATURAL SOURCES OR SINTERED PULVERIZED-FUEL ASH COMPLYING WITH THE RELEVANT PROVISIONS OF BS 882 AND BS 3797, PART 2 RESPECTIVELY, SIZED IN ACCORDANCE WITH THE FOLLOWING TABLE:

NOMINAL BORE OF PIPE (MM)	ALTERNATIVE AGGREGATE SIZES (MM)	
	SINGLE-SIZED	GRADED
100	10	–
150	10 OR 14	14 TO 5
225 – 300	10, 14 OR 20	14 TO 5 OR 20 TO 5
375 – 525	14 TO 20	14 TO 5 OR 20 TO 5
EXCEEDING	14, 20 OR 40	14 TO 5, 20 TO 5 OR 40 TO 5

2. SELECTED BACKFILL MATERIAL, WHETHER SELECTED FROM LOCALLY EXCAVATED MATERIAL OR IMPORTED, SHALL CONSIST OF UNIFORM, READILY COMPACTIBLE MATERIAL, FREE FROM VEGETABLE MATTER, BUILDING RUBBISH AND FROZEN MATERIAL, OR MATERIALS SUSCEPTIBLE TO SPONTANEOUS COMBUSTION, AND EXCLUDING CLAY OF LIQUID LIMIT GREATER THAN 80 AND/OR PLASTIC LIMIT GREATER THAN 55 AND MATERIALS OF EXCESSIVELY HIGH MOISTURE CONTENT. CLAY LUMPS AND STONES SHALL BE RETAINED ON 75MM AND 37.5MM SIEVES RESPECTIVELY.

3. COMPRESSIBLE FILLER FOR INTERRUPTING CONCRETE PROTECTION TO PIPELINES SHALL CONSIST OF BITUMEN IMPREGNATED INSULATING BOARD TO BS 1142, PART 3 OR OTHER EQUALLY COMPRESSIBLE MATERIAL. THE THICKNESS OF COMPRESSIBLE FILLER SHALL BE AS FOLLOWS:

NOMINAL BORE OF PIPE (MM)	THICKNESS OF COMPRESSIBLE FILLER (MM)
LESS THAN 450	18
450 – 1200	36
EXCEEDING 1200	54

4. THE CONTRACTOR IS TO PROTECT BURIED PIPES (PARTICULARLY SHALLOW PIPES) FROM DAMAGE CAUSED BY LOADS IMPOSED BY CONSTRUCTION PLANT.

5. BELOW ROADS AND OTHER PAVED AREAS WHERE SPECIFIED TRENCHES SHALL BE BACKFILLED WITH DOT SPECIFICATION TYPE 2 SUB-BASE MATERIAL UPTO ROAD/PAVING FORMATION LEVEL.ALL OTHER TRENCHES,UNLESS OTHERWISE SPECIFIED SHALL BE BACKFILLED TO FINISHED GROUND LEVEL OR UNDERSIDE OF TOPSOIL LAYER WITH WELL COMPACTED EXCAVATED MATERIAL.

GRANULAR BEDDINGS

1. DIMENSION Y: 1/6 BC OR 100MM UNDER BARRELS,AND 50MM MIN UNDER SOCKETS WHICHEVER IS THE GREATER (400MAX). ROCK ETC 1/4 BC AND 150MM MIN UNDER SOCKETS (400MAX)
2. DN : NOMINAL BORE OF PIPE
3. BC : EXTERNAL DIAMETER OF PIPE BARREL

CONCRETE BEDDINGS

1. THE USE OF GRANULAR BEDDINGS BELOW CONCRETE BEDDINGS (BEDDING TYPES A2,A4,A6) ARE FOR USE IN WET CONDITIONS.
2. CONCRETE CRADLES MAY EXTEND TO SIDES OF TRENCH.
3. TRANSVERSE STEEL TO BE 0.4% MIN OF CONCRETE AT X–X (FM=3.4) UNLESS .OTHERWISE STATED.
4. BEDDING BENEATH AND AT SIDES OF PIPE TO BE WELL COMPACTED
5. BEDDING/BACKFILL DIRECTLY ABOVE PIPE TO BE LIGHTLY COMPACTED BY HAND.
6. DIMENSION Y: 1/6BC OR 100MM UNDER BARRELS, AND 50MM UNDER SOCKETS WHICHEVER IS GREATER (SUBJECT TO 400MM MAXIMUM).
7. DN = NOMINAL BORE OF PIPE.
8. BC = EXTERNAL DIAMETER OF PIPE BARREL.

TRENCH WIDTH

1. THE MAXIMUM TRENCH WIDTHS ARE TO BE AS SHOWN BELOW UNLESS THE APPROVAL OF THE ENGINEER IS OBTAINED.

INTERNAL PIPE DIAMETER	MAXIMIM TRENCH WIDTH
100	600
150	600
225	700
300	850
375	1050
450	1150
525	1200
600	1350
675	1450
750	1500
825	1600
900	1900
975	2000
1050	2100
1200	2300

Construction Design and Management (CDM)
Key Residual Risks

Contractors entering the site should gain permission from the relevant land owners and/or principle contractor working on site at the time of entry. Contractors shall be responsible for carrying out their own risk assessments and for liaising with the relevant services companies and authorities. Listed below are Site Specific key risks associated with the project.

1) Overhead and underground services
2) Street Lighting Cables
3) Working adjacent to live highways
4) Unchartered services

NOTES:

1. Do not scale from this drawing.
2. All dimensions are in metres unless otherwise stated.
3. Brookbanks Consulting Ltd has prepared this drawing for the sole use of the client. The drawing may not be relied upon by any other party without the express agreement of the client and Brookbanks Consulting Ltd. Where any data supplied by the client or from other sources has been used, it has been assumed that the information is correct. No responsibility can be accepted by Brookbanks Consulting Ltd for inaccuracies in the data supplied by any other party. The drawing has been produced based on the assumption that all relevant information has been supplied by those bodies from whom it was requested.
4. No part of this drawing may be copied or duplicated without the express permission of Brookbanks Consulting Ltd.
5. For construction depths refer to drawings 10738-WAL-XX-XX-DR-0710-0712 Road Pavements Construction. Earthworks assumed between existing ground model and proposed finished surface levels. Top soil scrape extents shown on drawing 10738-WAL-XX-XX-DR-0210 Site Clearance.
6. Gobain 'Griptop' D400 covers shall be place on Highway Drainage.

A	DCC Updates and RSA comments	CDW	MT	01.11.24
-	First Issue	JM	MT	04.08.24

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Drakelow Developments Ltd

Walton-on-Trent Bypass - Area A

Combined S38 S278 Standard Details Sheet 1

Status		Status Date
Approval		AUG 2024
Drawn	**Checked**	**Date**
JM	MT	04.08.24
Scale	**Number**	**Rev**
NTS	10738-WAL-XX-XX-DR-0713	A

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UNTIL TECHNICAL APPROVAL HAS BEEN OBTAINED FROM THE RELEVANT LOCAL AUTHORITIES, IT SHOULD BE UNDERSTOOD THAT ALL DRAWINGS ARE ISSUED AS PRELIMINARY AND NOT FOR CONSTRUCTION. SHOULD THE CONTRACTOR COMMENCE SITE WORK PRIOR TO APPROVAL BEING GIVEN, IT IS ENTIRELY AT THEIR OWN RISK.