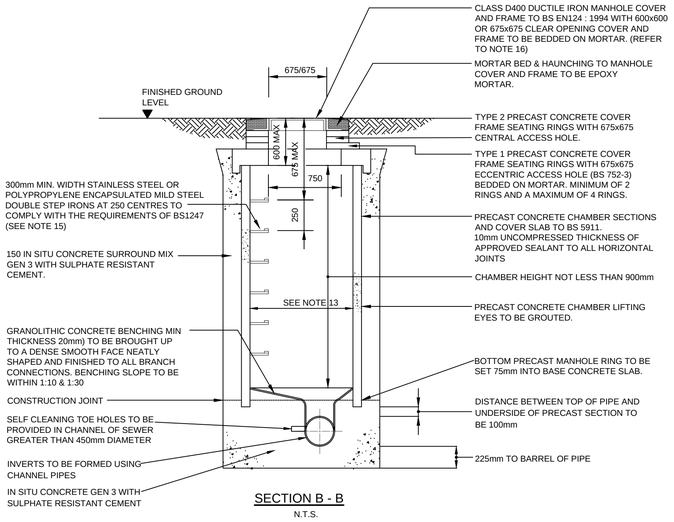
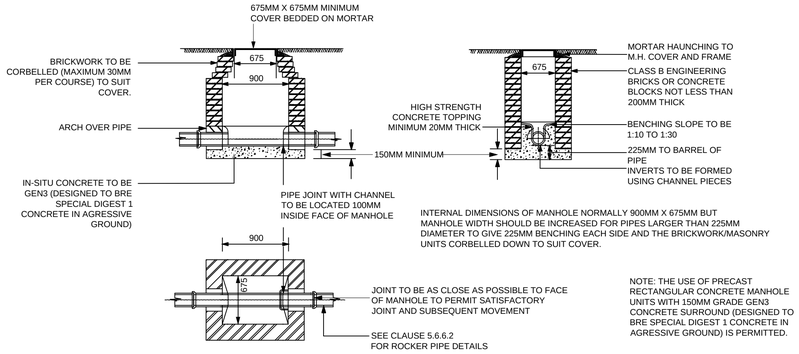
THIS DRAWING MAY BE USED ONLY FOR THE PURPOSE INTENDED AND ONLY WRITTEN DIMENSIONS SHALL BE USED




SECTION B - B

N.T.S.

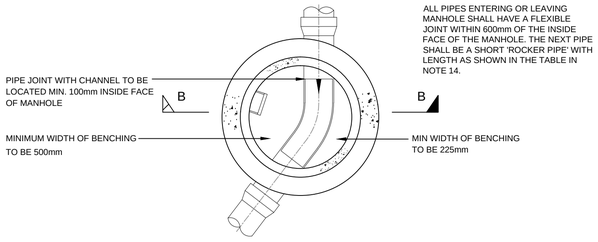



INTERNAL DIMENSIONS OF MANHOLE NORMALLY 900MM X 675MM BUT MANHOLE WIDTH SHOULD BE INCREASED FOR PIPES LARGER THAN 225MM DIAMETER TO GIVE 225MM BENCHING EACH SIDE AND THE BRICKWORK/MASONRY UNITS CORBELLED DOWN TO SUIT COVER.

NOTE: THE USE OF PRECAST RECTANGULAR CONCRETE MANHOLE UNITS WITH 150MM GRADE GEN3 CONCRETE SURROUND (DESIGNED TO BRE SPECIAL DIGEST 1 CONCRETE IN AGRESSIVE GROUND) IS PERMITTED.

TYPICAL TYPE D MANHOLE - DETAIL

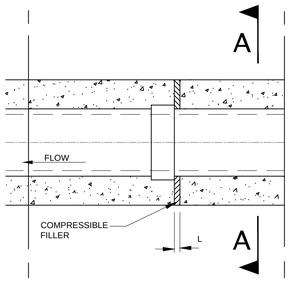
DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE LESS THAN 1.0M




TYPICAL TYPE B MANHOLE - DETAIL

DEPTH FROM GROUND LEVEL TO SOFFIT OF PIPE 1.45m TO 3m

N.T.S.

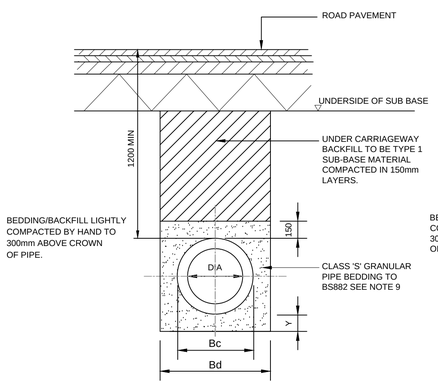



FLEXIBLE JOINT DETAIL

CONCRETE BED AND SURROUND FOR GULLY CONNECTIONS

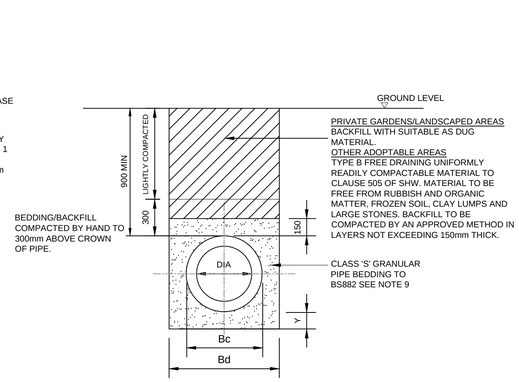
N.T.S

| TABLE APPLIES FOR TRENCHES UNDER CARRIAGEWAY AND IN LANDSCAPED AREAS | | | |
|---|---|---|---|
| PIPE DIA/TYPE | TRENCH WIDTH Bd | APPROX. EXT PIPE DIA Bc | BEDDING THICKNESS Y |
| 150 | 600 | 190 | 100 |
| 225 | 700 | 280 | 100 |
| 300 | 850 | 380 | 100 |
| 450 | 1150 | 575 | 100 |
| 525 | 1200 | 670 | 125 |
| 600 | 1350 | 770 | 130 |
| 900 | 1900 | 1100 | 185 |



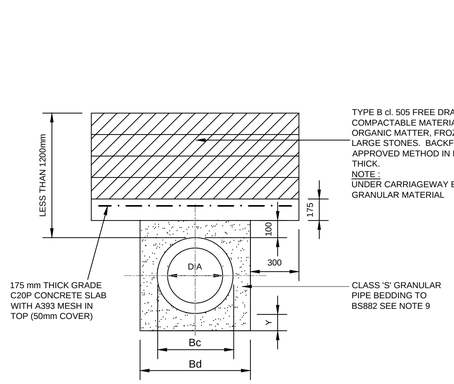

TYPICAL CROSS SECTION THROUGH DRAINAGE TRENCH UNDER CARRIAGEWAY/ADOPTABLE AREAS

SCALE 1:20



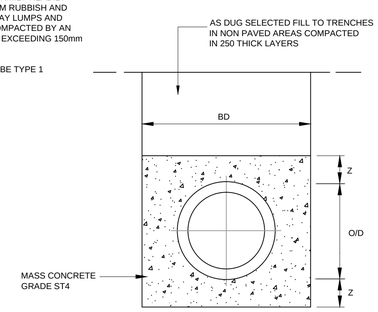

TYPICAL CROSS SECTION THROUGH DRAINAGE TRENCH IN OTHER AREAS

SCALE 1:20




TYPICAL CROSS SECTION THROUGH DRAINAGE TRENCH WITH COVER DEPTH LESS THAN 1200mm UNDER CARRIAGEWAY / ADOPTABLE AREAS

SCALE 1:20




SECTION A -A

SCALE 1:25

NOTES:

1. ALL DIMENSIONS IN MILLIMETRES UNLESS STATED OTHERWISE.
2. ALL PRIVATE DRAINAGE WORKS ARE TO COMPLY WITH THE REQUIREMENTS OF BS 752 BUILDING DRAINAGE AND BUILDING REGULATIONS 2000 APPROVED DOCUMENT H 2002 EDITION. ALL ADOPTABLE DRAINAGE TO COMPLY WITH THE REQUIREMENTS OF SEVERN TRENT WATER AND SEWERS FOR ADOPTION (6th EDITION) INCLUDING THE RELEVANT PROVISIONS OF THE COMBINED ADDENDUM.
3. ALL MATERIALS, UNLESS SPECIFIED OTHERWISE, SHALL COMPLY WITH THE RELEVANT BRITISH STANDARD. SOURCES OF MATERIALS ARE TO BE AGREED WITH THE EMPLOYER'S REPRESENTATIVE/ENGINEER IN ADVANCE OF THE WORKS.
4. THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL OTHER ENGINEERING DRAWINGS AND DETAILS AND CONTRACT DOCUMENTATION
5. ANY DISCREPANCIES IN THE DETAILS SHOWN TO BE REPORTED TO THE EMPLOYER'S REPRESENTATIVE/ENGINEER PRIOR TO CONSTRUCTION.
6. LOCATION AND LEVELS OF EXISTING DRAINAGE RUNS ARE BASED UPON SEWER RECORD PLANS AND MUST BE CHECKED ON SITE PRIOR TO THE COMMENCEMENT OF ANY DRAINAGE WORKS.
7. ALL EXISTING SERVICES TO BE LOCATED PRIOR TO THE COMMENCEMENT OF ANY DRAINAGE WORKS WHERE NECESSARY PROTECTION OR DIVERSIONS TO BE UNDERTAKEN TO AVOID CONFLICT WITH THE PROPOSED WORKS.
8. ALL ADOPTABLE DRAINAGE AND FITTINGS TO BE FLEXIBLY JOINTED CLAYWARE TO BS EN295 OR CONCRETE TO BS5911 PART 100. FLEXIBLY JOINTED UPVC PIPES AND FITTINGS TO WIS No 4-13-05 MAY BE USED FOR PRIVATE BUILDING DRIANAGE SYSTEMS ONLY.
9. TYPICAL PIPE BEDDING TO DRAINAGE WHERE DEPTH TO SOFFIT IS GREATER THAN 600mm IN LANDSCAPED AREAS AND GREATER THAN 1200mm IN ADOPTABLE HIGHWAYS AND 900mm IN OTHER TRAFFICKED AREAS IS TO BE CLASS S (I.E. 10-14mm GRADED IMPORTED GRANULAR BED AND SURROUND FOR PIPES UP TO 525Ï AND 20 - 40mm GRADED IMPORTED GRANULAR BED AND SURROUND FOR PIPES GREATER THAN 525Ï )
10. WHERE DEPTH TO SOFFIT OF DRAINAGE PIPEWORK IS LESS THAN 600mm IN LANDSCAPED AREAS AND LESS THAN 1200mm IN ADOPTABLE HIGHWAYS AND 900mm IN OTHER TRAFFICKED AREAS THEN PIPEWORK IS TO BE PROTECTED WITH 175mm THICK C20P REINFORCED CONCRETE SLAB AS SHOWN ON DRAWING No WM02953/003
11. BACKFILL TO DRAINAGE TRENCHES UNDER CARRIAGEWAYS TO BE TYPE 1 SUB-BASE MATERIAL, ELSEWHERE BACKFILL TO BE FREE DRAINING READILY COMPATIBLE MATERIAL, FREE FROM RUBBISH AND ORGANIC MATTER, FROZEN SOIL CLAY LUMPS AND LARGE STONES. TO BE COMPACTED IN LAYERS NOT EXCEEDING 150mm THICK.
12. CONCRETE MIXES INDICATED ON THIS DRAWING ARE DESIGNED MIXES CONFORMING TO BS 8500-1, 2002.
13. MANHOLE DIAMETERS SHOULD BE IN ACCORDANCE WITH THE TABLE BELOW:

| DIAMETER OF LARGEST PIPE IN MANHOLE (mm) | INTERNAL DIAMETER OF MANHOLE (mm) |
|---|---|
| LESS THAN 375 | 1200 * |
| 375-450 | 1350 |
| 500-700 | 1500 |
| 750-900 | 1800 |
| 950-1200 | 2100 |

*1350 WHERE DEPTH TO SOFFIT IS 1350-1500mm

14. A FLEXIBLE JOINT SHALL BE PROVIDED AS CLOSE AS IS FEASIBLE TO OUTSIDE FACE OF ANY STRUCTURE INTO WHICH A PIPE IS BUILT, COMPATIBLE WITH THE SATISFACTORY COMPLETION AND SUBSEQUENT MOVEMENT OF THE JOINT. THE LENGTH OF THE NEXT PIPE (ROCKER PIPE) AWAY FROM THE STRUCTURE SHALL BE AS SHOWN IN THE TABLE BELOW.

| NOMINAL DIAMETER (mm) | EFFECTIVE LENGTH (m) |
|---|---|
| 150-600 | 0.6 |
| 675-750 | 1.0 |
| 825 AND OVER | 1.25 |

15. ALL STEP IRONS TO BE POLYPROPYLENE ENCAPSULATED TO BS 1247 PARTS 1-2, DOUBLE STEP RUNGS (280mm MIN WIDTH AT 250mm MAXIMUM CENTRES). MAXIMUM DISTANCE FROM COVER LEVEL TO FIRST STEP TO BE 675mm.
16. ALL MANHOLE / INSPECTION CHAMBER COVERS TO BE CLEARLY MARKED 'SW' OR 'FW', AS APPROPRIATE, SO AS TO BE CLEARLY VISIBLE FROM THE SURFACE. MANHOLE COVERS TO BE 675x675 CLEAR OPENING FOR PIPES LESS THAN 875mm DIA. AND 675x675 CLEAR OPENING FOR PIPES 875mm DIA. OR GREATER. MIN 675 x 675 ACCESS TO CHAMBERS FITTED WITH A LADDER OR FLOW CONTROL DEVICE.

| Revision Details | By / Check | Date | Suffix |
|---|---|---|---|

Drawing Number J01026/A1/004 Revision

BENTLEY ROAD NORTH WALSALL

Drawing Title

DRAINAGE DETAILS

STW 1.4 APPROVAL

| Scale at A1 | Detailed | | Approved |
|---|---|---|---|
| 1:200 | | | James Mewis |
| Drawn | Tech Chk | Det Chk | Date |
| RJS | JJM | | 22.10.07 |


JNM CIVIL ENGINEERING DESIGN CONSULTANTS
www.jnmengineering.co.uk
84 Lloyds Head, Jackfield
Ironbridge. TF8 7LZ.
Tel: 01952 885767
info@jnmengineering.co.uk
Company Registration Number: 05782540


DB1V