



TYPICAL MANHOLE DETAIL - TYPE A
(DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE 3.0m to 6.0m)

YORKSHIRE WATER WORKS:

- 1) ALL ADAPTABLE SENSORS AND MATERIAL TO BE IN ACCORDANCE WITH "TENDERS FOR ADIPTION" 6TH EDITION, THE RELEVANT BRITISH/EUROPEAN AND YORKSHIRE WATER'S STANDARDS/REQUIREMENTS/ADDITION TO THE MECHANICAL AND ELECTRICAL SPECIFICATION AND RETAINED.
- 2) MANHOLE COVERS SHALL HAVE A CLEAR OPENING OF 800mm AND SHALL BE CLASS 5400 TO BS EN 124 WITH 150mm DEEP FRAMES IN HIGHWAY.
- 3) FILLED DRAINAGE MUST BE FILLED AND CONSOLIDATED UNDER THE SUPERVISION AND TO THE SATISFACTION OF YORKSHIRE WATER BEFORE ANY SENSER WORKS ARE CARRIED OUT.
- 4) YORKSHIRE WATER IS NOT OBLIGED TO ACCEPT FILLED DRAINAGE/LAND DRAINAGE BANNIT INTO PUBLIC SENSER NETWORK OR ADAPTABLE DRAINAGE SYSTEM (DIRECTLY OR INDIRECTLY). AN ALTERNATIVE METHOD OF DISPOSAL OF THE LAND DRAINAGE RUNOFF WILL THEREFORE BE REQUIRED AND YOU WILL HAVE TO LIAISE WITH LOCAL AUTHORITY, LAND DRAINAGE SECTION WITH REGARD TO THE DISPOSAL OF THE FILTER DRAINAGE/LAND DRAINAGE RUNOFF.
- 5) COVER SLABS MUST CARRY THE BS NETWORK OR WILL BE SELECTED BY YORKSHIRE WATER INSPECTOR WHERE THE CLEAR OPENING OF THE VENTHATED PRODUCT IS SUPERIOR TO THAT OF THE COVER AND FRAME. A LOADING BEARING SLAB SHOULD BE FITTED ABOVE THE COVER SLAB TO BRING TO THE 20kN/m² TO 20kN/m² A 40kN/m² FOR YORKSHIRE WATER SPECIFIED COVER SIZE. PLEASE REFER TO CONCRETE PIPE SYSTEMS ASSOCIATION (CPSA) TECHNICAL BULLETIN REISED AUGUST 2004 FOR VENTHATED COVER SLAB FITTING SIZES.
- 6) SULPHATE RESISTANT CEMENT (SR-C30-C42) AND PRECAST CONCRETE PRODUCTS MUST BE USED ON A LABORATORY REPORT PROVIDED PROVING SUCH PRECASTS ARE NOT NECESSARY.
- 7) THE ADAPTABLE SENSORS SHOULD BE A MINIMUM OF 1m AND MANHOLES 0.5m FROM KERB FACES AND SERVICE WORKINGS.
- 8) SENSORS MUST HAVE 5 METRES CLEARANCE FROM TREES AND HEDGES (PLEASE ALSO REFER TO FIGURE 2.3 ON PAGE 23 IN "TENDERS FOR ADIPTION" 6TH EDITION FOR RESTRICTIONS ON TREE PLANNING AHEAD OF SENSING)
- 9) SENSORS TO BE Laid IN CLASS "D" BEDDING (150mm GRANULAR BEDDING AND SURROUNDING) WITH 50mm OF COVER TO TOP OF SENSER IS LESS THAN 1.5m IN HIGHWAYS AND VEHICULAR AREAS (OR LESS THAN 900mm IN NONE VEHICULAR ACCESS AREAS) THEN A CONCRETE SLAB SHOULD BE PROVIDED ABOVE GRANULAR BED AND SURROUND.
- 10) BEDDING AND SUFFILL MATERIAL TO CONFORM TO REQUIREMENT OF WATER INDUSTRY SPECIFICATION 4-01-02 (TABLE A2)
- 11) THE CHAMBER SIZE OF MANHOLES WITH MORE THAN ONE CONNECTION IN THEM MUST BE INCREASED AN INCREMENT TO ACCOMMODATE THE CONNECTIONS AND BENDS.
- 12) YORKSHIRE WATER POLICY IS NOT TO ACCEPT TYPE "C" BRICK MANHOLES AND 1000mm DIA MANHOLES WITH BEDDING IS IT PRETERRED THAT YOU USE A TYPE "B" MANHOLE WITH 1200mm DIA OR 1500mm DIA BRINGS WITH THE OPENING SET OVER THE CHANNEL WHERE DEPTH IS COVERED TO PIPE SOFFIT IS 1-1.5m.

TYPICAL MANHOLE DETAIL - TYPE B
(MAXIMUM DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE 3.0m)

MANHOLE DIMENSIONS:

DIAMETER OF LARGEST PIPE IN MANHOLE (mm)	INTERNAL DIAMETER OF MANHOLE (mm)
150	225
175	250
200	275
225	300
250	325
275	350
300	375
GREATER THAN 300	CONSULT UNDERPART

TYPICAL MANHOLE DETAIL - TYPE E
(MAXIMUM DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE 1.0m TO 1.5m)
MAXIMUM SEWER DIAMETER 375mm

APPROVAL OF THE UNDERTAKER MUST BE GIVEN FOR INSTALLATION OF THIS TYPE OF MANHOLE.