



**NOTES**

- All dimensions are in millimetres
- CONCRETE BENCHING AND PIPE SURROUND**  
Shall be placed in single continuous operation from top of base slab to top of benching and pipe surround
- CONNECTION INTO MANHOLES**  
Shall be constructed with the soffits at the level unless detailed differently on contract drawings
- METALWORK**  
Ladders, handrailing and safety chain shall be as shown on Developer Services Detail 9 (STND/19/009)
- CONCRETE SURROUND TO MANHOLES**  
A 150mm surround of at least 20N/mm<sup>2</sup> concrete shall be provided to the top design water level. Any joints should be staggered with precast concrete joints
- MINIMUM LENGTH OF CHANNEL (X Min)**

CHAMBER DIA	"X" MIN
1050	800
1200	950
1350	1000
1500	1050
1800	1150
2100	1300
2400	1450
2700	1550
3000	1700
- CUT ENDS OF REINFORCED CONCRETE PIPES**  
Shall be treated with epoxy resin paint/mortar
- MANHOLE ACCESSSES AND VARIABLE FEATURES (v.f.)**  
Refer to Developer Services Detail 10 (STND/19/010). Double steps shall be plastic encapsulated carbon steel. Double steps shall not be used where cover-to-soffit dimension is >3.0m
- INVERT ACCESS DETAILS**  
Refer to Developer Services Detail 2 (STND/19/002)
- COVER AND FRAME**  
150mm deep covers are to be used in category 1, 2, 3 roads.  
100mm deep covers are to be used in Category 4 roads.  
Double triangular covers are to be used in carriageway.  
Road category to be designated by the highway authority.  
Frame to be set as per specification
- CONCRETE**  
All in-situ concrete to be DC-3 or FND 3
- Minimum headroom shall be 2000. Where 2000 cannot be achieved with benching set at half pipe level then the manhole cover size shall be increased to be in accordance with BS EN 752. Refer to Developer Services Detail 4 (STND/19/004)
- Invert level for overflow to be site specific

A	SC	DH	SD	FOR INFORMATION	15.04.16
VERSION	DRWN	CHKD	REVD	DATE	



UNITED UTILITIES LTD  
DEVELOPER SERVICES  
DETAIL 5  
FLOW CONTROL MANHOLE DETAIL

SCALE	NTS	SHEET SIZE	A3
DRAWING NUMBER	STND/19/005	REVISION	A