



- KEY**
- Proposed Surface Water Sewer
 - Proposed Foul Water Sewer
 - Indicative Routes
 - Road Gully, Omitted until further layout detail supplied

Proposed Drainage is Indicative subject to detailed layout design, although sizing and strategy is unlikely to change.

- NOTES:**
- D400 covers & frames with kermark to be used on all adoptable manholes. All covers to be embossed with FW/SW as appropriate. 150mm deep, non-slip cover and frames to be used.
 - Cover and Rocking slabs, shaft and chamber ring to be bedded with mortar, proprietary slabs or non-elastic casters. All fitting holes to be pointed.
 - Ensure all slab coverings and step iron ladders are properly aligned. At the foot of each ladder or set of step rungs, a minimum of 450mm landing area should be provided from the outer edge of the step or rung. This may consist of:
 - a) a single area adjacent to the foot of the ladder or steps or
 - b) where the chamber is no more than DN450, one area of at least 225mm adjacent to the foot of the ladder or steps with the remainder on the other side of the chamber.

Chamber Diameter:

Dia. of largest pipe in MM (mm)	Dia. of chamber ring (mm)
Less than 375	1200
375-450	1500
450-500	1800
500-600	2100
600-750	2400
750-1000	2700

- Above slabs are minimum and may need increasing for more than one incoming pipe to accommodate adequate benching.
- Rate min to be in accordance with the chemical analysis report for buried site for site. High strength topping to BS 5192 and PD 682-1 to be brought up to a dense smooth face neatly shaped and finished to all branch connections, benching pipe to be not faster than 1 in 30.
- Rocking/Short pipe length:

Pipe dia. (mm)	Rocking pipe length (m)
150-600	0.6
601-1500	1.00
over 1500	1.25

Short length pipes to be similar length to rocking pipe. Manhole to large diameter sewers. Chambers with outgoing pipes greater than 400mm dia. to be constructed as per detail. Tee holes to be provided in benching of sewers greater than 450mm dia. for access to invert.

- Bricks to be solid type and either Class B engineering bricks complying with the relevant provisions of BS EN 771-1 or special bricks that comply with the relevant provisions of BS 4727 with Sulphate-resisting Portland cement binder. Brickwork to be in English bond.
- Brick Manhole Widths: Chamber widths to be increased for pipes larger than 225mm dia. to give 225mm benching each side with the brickwork casted down to suit cover.
- All pipes built into manhole invert should be installed with soffits level.
- PIPE BEDDING AND BACKFILL MATERIALS: Granular bedding and silt-free Type A material shall be imported or selected as-plug material complying with the recommendation of WMA Note 4-01-01. Selected fill Type B shall consist of uniform, readily compactible material free from vegetable matter, building rubbish and frozen materials, or materials susceptible to spontaneous combustion, and excluding of liquid limit greater than 80 and/or plastic greater than 55 and materials of excessively high moisture content. Lumps and stones retained on 75mm and 37.5mm sieves respectively shall be excluded from the fill material. Pipe bedding and fill materials to site pipes shall not contain more than 0.3% sulphate, expressed as sulphur trioxide.

TRENCH WIDTHS

Pipe dia. (mm)	BC (mm)	800mm
150	190	620
225	280	700
300	350	750
375	500	1050
450	580	1150
525	670	1200
600	750	1300
750	940	1540
900	1140	1760
1150	1420	2200
1300	1740	2340
1600	2090	2490

- All Adoptable Drainage pipes to be of spigot & socket type connection.
- During construction all outfall manholes to be fitted with debris screen (mesh size 20mm) over the outgoing pipes.
- All Adoptable Drainage Works shall comply with the requirements of Design and Construction Guidance for foul and surface water sewers offered for adoption under the Code for adoption agreements for water and sewerage companies operating wholly or partly in England (The Code) Approved Version 2.0

Rev	Description	Date
Status:	Planning	

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Adoptable Drainage Layout Sheet 3

Project:
 Towcester Grange West

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