

- Do not scale this drawing. All dimensions must be checked / verified on site. If in doubt ask.
- This drawing is to be read in conjunction with all relevant Architects, Engineers and Specialists drawings and specifications.
- All dimensions in millimetres unless stated otherwise. All levels in metres unless stated otherwise.
- Any discrepancies noted on site are to be reported to the Engineer immediately.
- The data specification for drainage works shall be the Water Authority Association 'Sewers for Adoption' (7th Edition).
- For details of ground conditions refer to the Ground Investigation Report.
- The following pipe strengths shall be adopted unless noted otherwise:
 - Pipes 150mm diameter and up to and including 225mm to be classed as BS EN 205 Class 160
 - Pipes over 300mm diameter to be classed as BS EN 205 Class 160
 - All pipes are to be laid with flexible joints.
 - All pipes entering and exiting manholes are to be connected with pipe soffits level unless noted otherwise.
- Bedding and surround to be as follows:

Location	Cover to Soffit	Bedding
Roads	+1.2m	Class '3' granular bed and surround
	+1.2m	Class 'X' Concrete surround
Hard and soft landscaping	+0.6m	Class '3' granular bed and surround
	+0.6m	Class 'X' Concrete surround

12. The following concrete mixes are to be used (all in accordance with BS 5890):

Location	Mix Reference
Concrete surround to pipes	SL1
Concrete base and surround to manholes	SL1

- The above concrete mixes have been selected for BS 5890 Class 2 Subphases.
- All precast concrete products (ie pipes, manholes rings etc.) shall be of suitable concrete mix to cater for Class 2 subphases.
 - Preformed channels are to be used in manholes where applicable.
 - Granular concrete bedding to be bedded to a dense smooth finish neatly shaped and finished to all branch connections and laid in accordance with the Specification.
 - All connections to be formed in direction of flow using pipe bands.
 - Manhole covers and frames to be ductile iron medium duty Grade D400 circular or rectangular to BS EN124 positions inside vehicular trafficked areas.
 - First flexible joint in pipes adjacent to a manhole shall be a maximum of 600mm from inside face of manhole, connecting to rocker pipe.
- The length of rocker pipe is as follows:
- | Pipe Diameter | Length of Rocker pipe |
|---------------|-----------------------|
| 150mm-400mm | 600mm |
- Manholes with outgoing pipes greater than 600mm diameter shall be fitted with guard bars, safety chains or other safety devices.
 - The Principal Contractor shall be responsible for checking the existing line and level levels of any connection points for both the foul and surface water systems, prior to undertaking installation of any new drainage works. Any deviation to the levels and positions indicated on the drawing should be brought to the immediate attention of the Project Engineer.
 - All inverts specified are outgoing (except backdrops). All pipes are to be laid soffit levels U.N.O.
 - All foul connections to be 150mm dia. laid at a minimum gradient of 1:100 unless noted otherwise. All surface water pipes to be 225mm dia. U.N.O.
 - All connections to be made by purpose made junction as far as practicable.
 - Manhole covers in block paved areas to be recessed to receive required surface finish.

KEY

- PROPOSED STORM
- PROPOSED CHANNEL DRAINAGE
- PROPOSED PERMEABLE PAVING
- PROPOSED PERFORATED LAND DRAINAGE
- PROPOSED CELLULAR STORAGE
- PROPOSED FOUL

FOR PLANNING

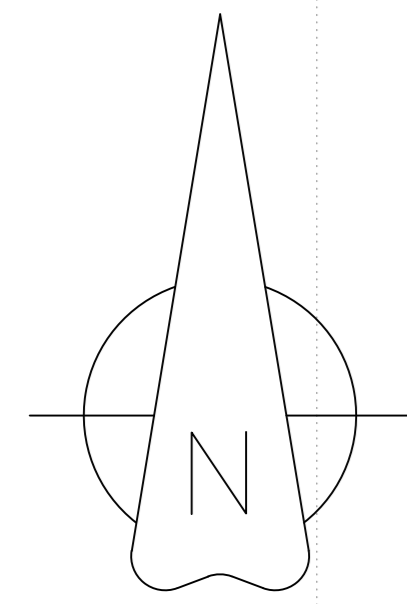
Rev	Date	First Issue	Description	JH	GL
-	22.02.2019	First Issue		JH	GL

Project Title
PLOT 5100
HATFIELD BUSINESS PARK

Drawing Title
PROPOSED DRAINAGE AND LEVELS PLAN

Drawn by	Checked by	Project Engineer
JH	GL	GL

Date	Scale	Project No	Drawing No
FEB 19	1:250	12690	104



TRAVELER BUND AT
 BOUNDARY TO BE REMOVED
 TO ELIMINATE THE NEED
 FOR RETAIN.

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 BOUNDARY TO BE REMOVED
 TO ELIMINATE THE NEED
 FOR RETAIN.

EXISTING FOUL PUMPING
 STATION AND EASEMENT TO
 REMAIN AND BE PROTECTED

ANY PROPOSALS WITHIN
 PUMPING STATION IS IN
 ABEYANCE AND IS TO BE
 AGREED.
 EASEMENT DETAILED ON
 DRAWING 12690 / 103

