



**notes**  
 The information on this drawing has been based on:  
 1. Topographical Survey: Survey Solutions, dwg: 17162UG-01  
 2. Architect's Drawing: Househam Henderson, dwg: 4898 A\_100

1. Only drawings marked as 'Construction Drawing' should be used for construction. Any other drawings used for construction purposes may not represent the finalized design and will be used at the contractor's own risk.
2. All dimensions are in mm unless stated otherwise.
3. This drawing is to be read in conjunction with all relevant architectural, structural and civil drawings/documents relating to this site.
4. Do not scale from this drawing. All levels and dimensions to be checked on site prior to works starting. Notify the project manager of any discrepancy.
5. All private drainage works to comply with current Building Regulations Part H and BS EN 752.
6. Workmanship on site shall accord with the principles of BS8000-14 "Workmanship on Building Sites. Code of Practice for Below Ground Drainage" and general good working practices.
7. Before commencing any sewer or drainage works, the Contractor's ground worker must satisfy themselves of actual levels and conditions of existing sewers.
8. Depth and location of existing services to be traced prior to commencing any drainage excavations.
9. Drainage pipelines to be laid under roads, parking bays and other trafficked areas shall be either:  
 a) Vitrified clayware to BS EN295.  
 b) Concrete to BS5911 Class M.
10. All private drains that run under non trafficked areas, to be laid to the invert levels shown using flexible jointed pipes, either UPVC to BS 4460 and BS 5481 or vitrified clayware to BS EN 295.
11. All rainwater pipe outfalls shall be 100%, all soil vent pipes / foul connection outfalls leaving buildings shall be 100%.
12. Buried concrete shall be suitable for Class D5-2 and AC2 conditions in accordance with BRE Special Digest 1.
13. Precast concrete used in the construction of foul sewers and chambers to be Sulphate Resisting to Class 4 conditions.
14. Private manhole and inspection chambers located under trafficked areas to have a concrete surround.
15. Where private manholes and catchpits are constructed using precast concrete circular rings, they are to be constructed to BS 5911-200.
16. All disused, abandoned or redundant drainage to be removed/sealed as stated in Part H of the Building Regulations 2002 edition, Appendix H1-B.
17. All abandoned, buried obstructions encountered during the construction of Highway & Drainage Works are to be broken out to bed level of drains and sewers, and to the formation of car parks and drives etc., and to sufficient depth to allow for laying service company's mains and services.
18. Access panels are to be provided to all rainwater pipes, a maximum of 600mm above finished ground level.
19. All soil vent pipe locations shown on this drawing are indicative only. Reference should be made to the architects drawings for accurate location.
20. All foul water connections from dwellings to sewer to be laid at a minimum 1:40 gradient unless indicated otherwise on this drawing. All WCs should be on the main drainage run and not branching onto another run.
21. All cover and invert levels are shown in metres, all pipe diameters are shown in millimetres.
22. All ground levels for manholes are approximate and should be confirmed onsite prior to construction. Actual ground levels should be taken from the landscaping layout.
23. Non return valves to be fitted to manholes where sewer surcharge is considered a risk to building flooding.
24. Reverse arm interceptor traps to be used where surface water sewers connect to combined sewer manholes.

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION	
In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following:	
<b>CONSTRUCTION</b>	Contractor to: prefabricate wherever possible, ensure confined space training is provided, trenches are adequately shored, open excavations are adequately fenced off, identify and locate all existing services prior to construction, ensure all drainage construction personnel are made fully aware of all apparatus in the ground prior to commencing operations.
<b>MAINTENANCE / CLEANING</b>	Refer to residual risks identified in the Health & Safety File.
<b>DECOMMISSIONING / DEMOLITION</b>	Refer to residual risks identified in the Health & Safety File.
It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement	

rev.	description	date
A	Issued for tender	20.10.2016
-	Issued for comment	20.05.2016

**LEGEND**

- PROPOSED FOUL WATER SEWER
- FOUL WATER SEWER EXISTING
- PROPOSED FOUL WATER INSPECTION CHAMBER 450Ø
- PROPOSED STORM WATER SEWER
- STORM WATER SEWER EXISTING
- EXISTING MANHOLE
- SVP PROPOSED SOIL VENT PIPE
- RWP PROPOSED RAIN WATER PIPE / GULLY

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**TENDER**

scale	date
1:100 @ A1	MAY 2016
drawn	checked
BF	PD

**project**  
 FOUNTAIN HOUSE  
 WELWYN GARDEN CITY

**drawing title**  
 BELOW GROUND  
 DRAINAGE LAYOUT

drawing no.	revision
16082 / 300	A

- Residual Design Issues**
1. Layout subject to detailed design.
  2. Ground Level SVP & RWP connections are subject to frozen Architectural Layouts.
  3. All levels subject to confirmation of FFL & Floor Finishing Depths.
  4. Design is subject to NHBC / Building Control (as applicable) approval.
  5. Design is subject to capacity check and connection consent from Thames Water.