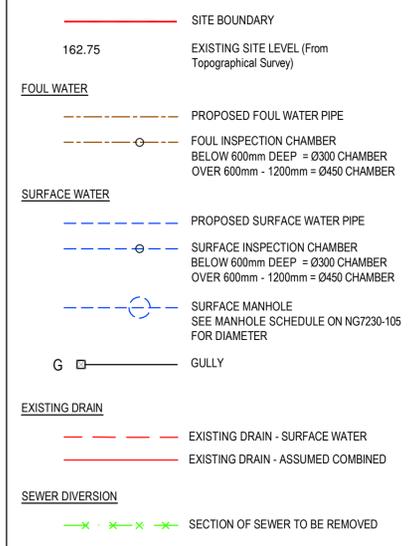




### DRAINAGE KEY



#### 1.1.1 Non-Adopted Drainage Notes

- All new private surface water and foul drainage shall be constructed and tested in accordance with BS EN 752:2008, Building Regulations Approved Document Part 'H' and NHBC Chapter 5.3, as appropriate.
- Pipes shall be 100 mm diameter, manufactured from vitrified clay or uPVC, and constructed to a fall of 1:80 unless noted otherwise.
- Pipe bedding to be class 'S' bedding (100 mm granular bed and surround).
- Where cover to soffit of pipe is less than 600 mm in private areas, the following shall apply:
  - Vitrified clay pipes - provide a 100 mm min. thick concrete bed and surround (instead of class 'S' bedding) and a 13 mm thick compressible filler at each joint.
  - uPVC pipes - provide a concrete bridging (in addition to class 'S' bedding) in accordance with appendix A15, Building Regulations part 'H'.
- All concrete indicated in the construction of drainage infrastructure (pipe bedding, bridging, manholes etc) shall be standardised prescribed concrete ST2 and is to conform to BS EN 206-1 and BS 8500-2. The maximum aggregate size shall be 20mm.
- Pipe runs adjacent to proposed foundations are to be installed in accordance with appendix A11, Building Regulations part 'H'.
- Excavations for manholes, pipe runs etc located within a 45 degree load distribution splay from any adjoining existing foundations, are to be adequately supported for the duration of the works and pipe runs protected as note 5 above.
- Foundations adjacent to pipe runs or manholes are to have their formation level set above the invert level no higher than the equivalent of the horizontal distance between the pipe/excavation trench and the foundation, minus 500mm.
- Where excavations for pipe runs are parallel and in close proximity to each other and/or other service trenches, the Contractor shall ensure that adequate safety measures, including temporary shoring, are provided in line with current health & safety legislation and good practice. Particular attention is to be paid to adjacent trenches of differing invert levels.
- All existing drainage found on site during the works shall be investigated, its operational status confirmed, and the following applied:
  - Inoperative drainage shall be cut back and pipe runs filled with concrete grout.
  - 'Live' drainage shall be temporarily re-routed to allow the new drainage to be constructed.
- All new private shallow 225 mm diameter surface water and foul drain inspection chambers and rodding eyes shown without cover levels (CL) shall be assumed to be at external ground level, and invert levels (IL) are to be typically between 450 and 600 mm below CL, subject to the length of the internal house connections.
- All domestic drainage connection points shown (sfp's, rwp's etc.) are located indicatively. For final positions, refer to The Architect's drawings.

- Notes:-
- Where this drawing has been issued in electronic .dwg format it has been done so in good faith. jnpgroup do not take any responsibility for any inaccuracies in the electronic data, which should be checked against the paper (or .pdf) drawing issue. Any apparent discrepancies should be immediately reported to jnpgroup. The electronic .dwg file should not be assumed to be to scale and should not be used for 'overlying', setting out or checking of any third party information. All dimensions should be taken from the paper (or .pdf) version of the drawing. Electronic drawings may contain third party information, jnpgroup take no responsibility for this information, which should be checked against the originators paper drawing(s).
  - All working dimensions to be checked on site.
  - Do not scale.
  - Any discrepancies between drawings of different scales, and between drawings and specification where appropriate to be notified to The Engineer for decision.
  - Copyright reserved. This drawing may only be used for The Client and location specified in the title block. It may not be copied or disclosed to any third party without the prior written consent of jnpgroup.
  - This drawing should only be used for construction if the drawing status is "Construction". jnpgroup take no responsibility for construction works undertaken to drawings which are not marked with this status.
  - Drawing to be read in conjunction with Drawing Nos. NG8230-101 to NG8230-104
  - Manhole covers shall/must have a clear opening of 600mm and shall be class D400 to BS EN 124 with 150mm deep frames in trafficked areas.
  - Sewers must have 5metres clearance from trees and hedges.
  - Sewers to be laid in class "S" bedding (150mm granular bed and surround). Where depth of cover to top of the sewer is less than 1.2m in highways and verges (or less than 900mm in none vehicular access areas), concrete surround or a concrete slab should be provided above the granular bed and surround.
  - The chamber size of manholes with more than one connection in them may need to be increased an increment to accommodate the connections and bends.
  - Sulphate resistant cement (C20-DC2) and precast concrete products must be used or a laboratory report providing proof that such precautions are not necessary.
  - Bedding and backfill material to conform to the requirement of Water Industry Specification 4-08-02 (Table A2).

**Health and Safety Note:**  
The details on this drawing have been prepared on the assumption that a competent contractor will be carrying out the works. If the contractor(s) considers that there is insufficient Health and Safety information on this drawing, this should immediately be brought to the attention of the designer.

| HAZARD IDENTIFICATION BOX  |                               |                                |
|--|-------------------------------|--------------------------------|
| This table is provided to assist the Principal Contractor to fulfil their obligations under the CDM Regulations 2015 |                               |                                |
| Construction Hazard  | Maintenance / Cleaning Hazard | Demolition / Adaptation Hazard |
|  |                               |                                |

| Rev. | Date     | Amendment   | By | Chk. |
|------|----------|---|----|------|
| B    | 08.09.15 | Levels in external yard area amended. Reference to yard drainage and section drawing added. |    | CPY  |
| A    | 26.08.15 | Attenuation tank and off site drainage amended  |    | CPY  |

Status: **For Approval**

**john newton & partners**  
**jnpgroup**  
Consulting Engineers  
[www.jnpgroup.co.uk](http://www.jnpgroup.co.uk)  
Chesham • Brighouse • Leamington Spa • Sheffield • Teesside  
Tel: 01484 400691 E-mail: brighouse@jnpgroup.co.uk

Client: **PLANNED CONTRACTS LTD**

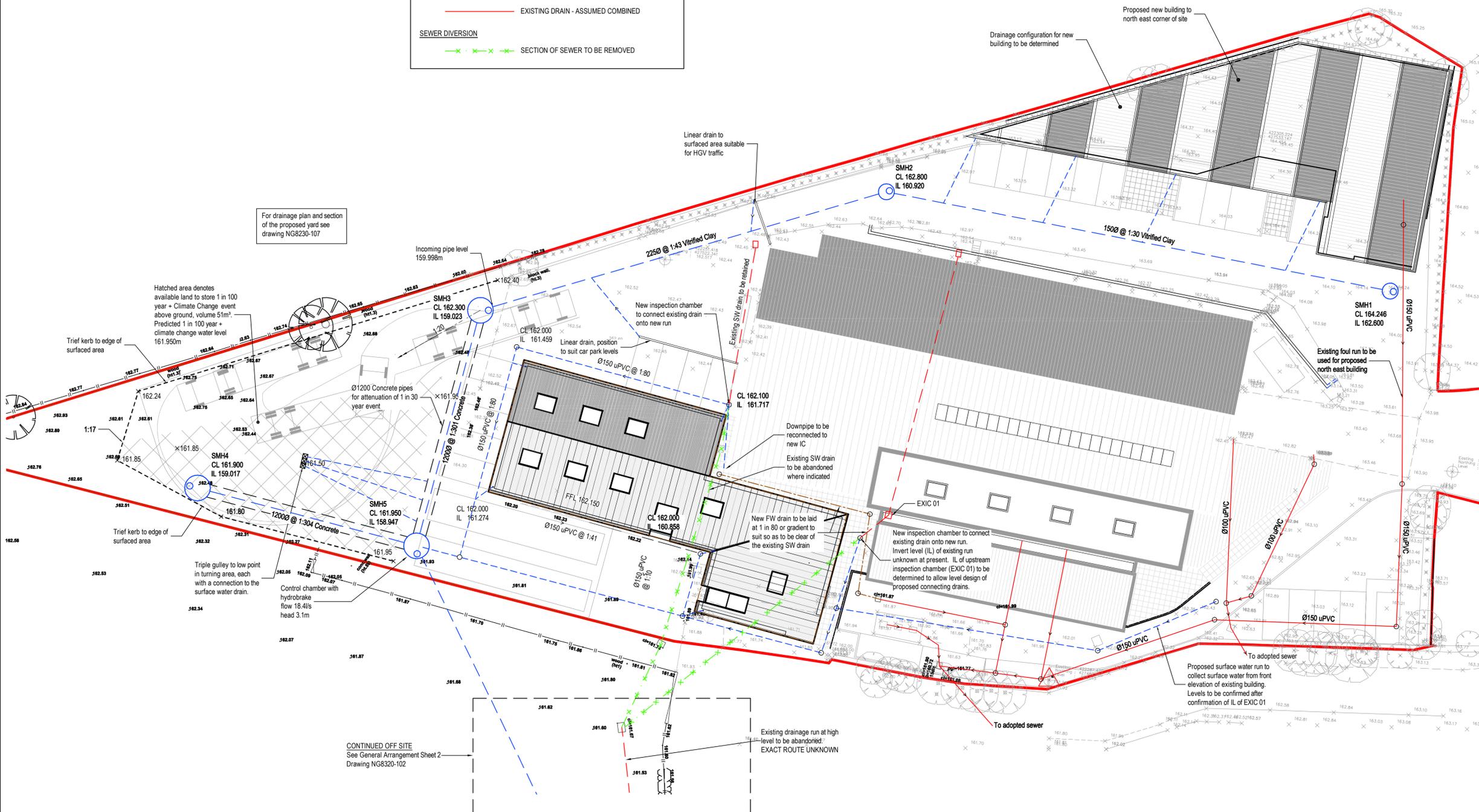
Job: **JOSEPH PRIESTLY ENTERPRISE VILLAGE**

Title: **DRAINAGE - ON SITE GENERAL ARRANGEMENT SHEET 1**

Scale: 1:200 @ A1 Date: MAY 2015  
Drawn By: CPY Eng. Check: Tech. Check



Drawing No: **NG8230-101** Rev. **B**



For drainage plan and section of the proposed yard see drawing NG8230-107

Hatched area denotes available land to store 1 in 100 year + Climate Change event above ground, volume 51m<sup>3</sup>. Predicted 1 in 100 year + climate change water level 161.95m

Trief kerb to edge of surfaced area

Trief kerb to edge of surfaced area

Triple gully to low point in turning area, each with a connection to the surface water drain.

Control chamber with hydrobrake flow 18.4l/s head 3.1m

CONTINUED OFF SITE See General Arrangement Sheet 2 Drawing NG8320-102

### DRAINAGE GENERAL ARRANGEMENT - SHEET 1

Scale 1:200