

- NOTE: DRAWING IS FOR APPROVAL
AND SUBJECT TO DETAILED DESIGN**

Drawing No.	Revision:
FW2285-D-410-03	A5

1	Invert levels of the existing ditch TBC prior to any construction works by the Contractor and Non-return flap valve installed to headwall
2	New headwall construction subject to OWC by LLFA
3	New culverts to be installed where required subject to OWC approval by LLFA
4	Adoptable flow pumping station. Location and discharge rates to be agreed with STW
5	New filter drain at the base of the noise bund to replace the existing. Discharge into the existing watercourse subject to LLFA approval
6	Existing levels do be locally lowered by 150mm, to provide flooding compensation
7	Invert levels of the existing sewer TBC by Contractor prior any works
8	Foul rising main route subject to agreement with STW and third party land owners.
9	Mesh screen to be placed over the outlet pipe of chambers during site construction works and removed immediately prior to the first occupancy of the dwellings served by the sewers.
10	Overhead Power Lines Care to be taken within extent of overhead power lines

HAZARD, HEALTH AND ENVIRONMENTAL HAZARD INFORMATION BOX		
THE HAZARDS NOTED BELOW ARE IN ADDITION TO THE NOTED HAZARDS AND RISKS FACED BY A COMPETENT CONTRACTOR WHEN DEALING WITH THE TYPES OF WORKS DETAILED ON THIS DRAWING.		
CONSTRUCTION RISKS		
EXISTING UNARMED WATERCOURSE EXISTING HIGHWAY EXISTING SERVICES		
MAINTENANCE / CLEANING RISKS		
NONE RELEVANT TO THIS DRAWING.		
DEMOLITION RISKS		
NONE RELEVANT TO THIS DRAWING.		
Flow Control Channel	Catchment Area ha	Proposed Discharge Rate l/s/ha/10°C
S19	1.626	7.88 t/s
S96	5.406	23.60 t/s
S101	1.976	8.60 t/s
S121	1.053	4.60 t/s
Total	10.222	44.60 t/s

Site Details

64.57m² / 26.5ha : Development area

2.62m³ / 0.66ha : Existing impermeable area

10.223m³ / 10.223ha : Proposed impermeable area

115.6 t/s : Existing Qbar storm discharge rate

4.36t/s : Existing Qbar / hectare storm discharge rate

Development impermeable areas to be drained into the storm sewers via filter drains, attenuation basins and rain gardens with minimum SUDs treatment to CnA5r5, to unsewered wastewater.

Minimum pipe cover to soffits to be per the **Sever Stormwater Guidance Appendix C**

- 0.35m - domestic gardens and pathways without vehicle access
- 0.5m - domestic driveways, parking areas and yards for vehicle access
- 0.75m - domestic driveways, parking areas and yards for vehicle access
- 0.9m - domestic driveways, parking areas, shared spaces with limited access for vehicles >7.5T gross weight
- 0.9m - agricultural roads and public open space
- 1.2m - highway and parking areas with unrestricted access for heavy vehicles

Any pipes with cover to soffits less than those stated above are to have a Class 2 concrete pipe bed & surround.

Internal foul drain pipe minimum gradients:

- 1:80 from SVP & WC to IC
- 1:100 from Basin & Sink to IC

Refer to Architect's M&E drawings for pipe sizes and setting-out information.

Maximum Drainscape Chamber Depths

- 0.215m SPPC - 1.2m - Type 4 (BS EN 13598-2)
- 0.405mm PPC - 3.0m - Type 3/4 (BS EN 13598-2)
- 0.405mm PPC - 3.0m - Type 3 (BS EN 13598-2)
- 0.210mm SPPC - 5.0m (with standard outlet)

All drainage to be constructed in accordance with **Sever Stormwater Guidance and Building Regulations Part H**.

A CCTV and level survey of the as-built drainage to OS Datum and an Grid is to be undertaken by the Contractor and provided to the Engineer for final approval.

Sever details shown have been taken from STW Water sewerage design manual to validate drainage locations and levels prior to commencement of the works.

Construction Note:

It is essential that new drainage associated with the development (and laid from the outfalls) is into the site. This is essential to avoid any drainage from the site (such as unsewered services). If the drainage is laid from the site out to the outfall, it will result in significant additional works to relay and overcome such obstructions.