

Drawing Legend	
Surface Water Drainage	
	Phase 1 drainage
	Proposed surface water drainage
	Proposed Backdrop Connection
	Type A-B precast concrete ring manhole
	Type B-C inspection chamber Rigid Construction - Rectangular
	Type D inspection chamber Flexible Construction
	Rainwater pipe position
	Rodding eye
	Threshold Drain. Hexdrain or similar approved by client
	Tanked porous paving. Permeable surface finish to Clients preference.
	Tanked porous paving subbase only. Sealed macadam surface finish.
	Perforated distribution pipe laid in permeable sub-base
	Perforated collector pipe laid in a trench at formation in permeable sub-base
	Type E inspection chamber - Flexible Construction
	Proposed catchpit location
	Proposed orifice plate location. Refer to layout for diameter
	Concrete filled bag headwall in accordance with WSCC detail S278/38/23 Rev A
	Existing ditch to be cleared, repaired and re-profiled where necessary.
Foul Water Drainage	
	Phase 1 foul sewer
	Proposed foul water drainage
	Proposed Backdrop Connection
	Type A-B inspection chamber Rigid Construction - Circular
	Type B-C inspection chamber Rigid Construction - Rectangular
	Type D inspection chamber Flexible Construction
Miscellaneous	
	Phase 1 Catchment Area. Surface and foul drainage for this area is to be connected to the Phase 1 drainage system approved under planning ref: DM/23/1051

Drainage Design Strategy

Surface Water

To compliment the SuDS design philosophy already implemented and approved for Gatehouse Phase 1, Gatehouse 2 will adopt the same design principle, which is as follows.

All hard standing areas subject to vehicular traffic (parking bays, access roads and circulation areas) will be constructed with sub-bases of coarse granular fill (0.33 voids ratio), which will fulfil the attenuation requirements for Gatehouse Phase 2.

The parking bays will have porous paved surface finishes, and the roads and circulation areas will be constructed with an impermeable macadam finish; these impermeable areas have been designed such that flows from these areas are directed to the porous paving - or to trapped gullies/channels and into the voided sub-base material.

The surface water system for Gatehouse 2 will function independently of Gatehouse Phase1 and the surface water runoff created by Gatehouse Phase2 will then be discharged at restricted rate to an existing ditch on the western boundary of the Site via a concrete bagwork headwall, similar to the design approved by MSDC for Phase 1.

The Gatehouse 2 Development is on land designated as greenfield, and in accordance with Mid-Sussex District Council Guidelines the runoff rate post development must match the pre-development Qbar rate of 3.3l/s. This restricted rate of 3.3 l/s is achieved using orifice plates and includes all storms up to and including the 1:100 year event including a 45% climate change allowance.

The Drainage design has been divided into three separate catchments each with its own attenuation, voided sub-base material, and orifice plate to restrict discharge from each area. The areas are divided as follows.

- Area A - Wellness centre and adjacent parking, catchment area 1,700m², discharge restricted to 1.0l/s using a 24mmØ orifice plate.
- Area B - Units 2 - 9 and adjacent Parking, catchment area 1,630m², discharge restricted to 1.0l/s using a 23mmØ orifice plate.
- Area C - Units 10-13 & 17-19 and adjacent parking, catchment area 1,910m², discharge restricted to 1.3l/s using a 26mmØ orifice plate.

All three areas connect to headwall and discharge at 3.3l/s (Qbar).

Foul Water

Gatehouse Phase 2 will have a new foul drainage system designed to connect via gravity into the foul water network already installed to serve Gatehouse Phase 1.

This system connects to a wastewater treatment plant (WWTP) in the southeast corner of the Gatehouse Phase 1 and then discharges to the existing ditch at the southeast corner of the Site.

The Environmental Agency has granted approval to discharge at this location under an Environmental Part B6.5 Permit to Discharge ref: **EPR/SB3457TW**

The Phase 1 treatment plant has adequate capacity to receive the proposed foul flows from Phase 2 and the EA have confirmed that this approach is acceptable, subject to approval of a variation to permit EPR/SB3457TW.

Water Quality Management

The CIRIA SuDS Manual C753 outlines three categories of pollution identification for the various types of land use as follows:

- Total Suspended Solids (TSS)
- Metals (M)
- Hydrocarbons (H)

In accordance with C753 Table 26.2 the proposed land uses at the site are categorised as the following:

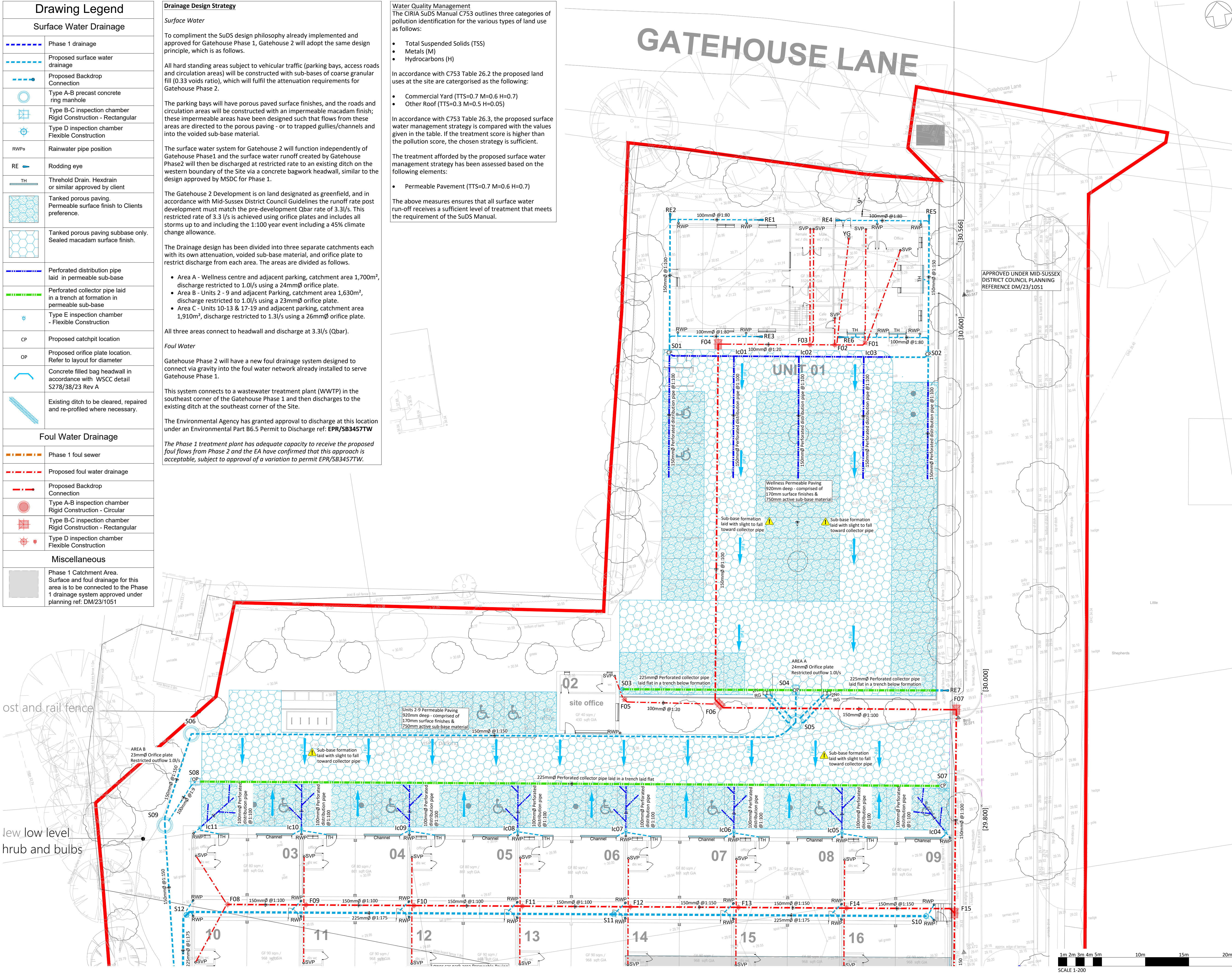
- Commercial Yard (TTS=0.7 M=0.6 H=0.7)
- Other Roof (TTS=0.3 M=0.5 H=0.05)

In accordance with C753 Table 26.3, the proposed surface water management strategy is compared with the values given in the table. If the treatment score is higher than the pollution score, the chosen strategy is sufficient.

The treatment afforded by the proposed surface water management strategy has been assessed based on the following elements:

- Permeable Pavement (TTS=0.7 M=0.6 H=0.7)

The above measures ensures that all surface water run-off receives a sufficient level of treatment that meets the requirement of the SuDS Manual.



- NOTES:
1.

This drawing is to be read in conjunction with all other SWP drawings, and with all relevant architect's and engineer's drawings and specification and any discrepancies found are to be reported immediately to the engineer.
2.

No dimensions are to be scaled from this drawing, unless noted otherwise all dimensions are in millimeters and all levels are in metres from the site datum.
3.

All dimensions to be checked on site. All details and dimensions relating to sub-contractors work must be checked and agreed between the sub-contractor or supplier and the general contractor.
4.

The electronic information from this drawing can not be guaranteed as dimensionally drawn exact. figured dimensions must be used for setting out and detailing. swp logos and company information must be removed from copies if information is re-used.
5.

The main contractor is responsible for the design of all temporary works, and is also responsible for the safe maintenance and stability of existing buildings at all times.
6.

The main contractor is responsible for all occurrences of ground water during the construction period.
7.

Any information given regarding existing underground services is given in good faith after consultation with the relevant authority, however accuracy is not certain. The main contractor is responsible for checking all information on site prior to work commencing and taking due care and attention whilst undertaking the works.
8.

The contractor must comply with all current legislation relating to health & safety.
9.

All products specified shall be installed in strict accordance with the manufacturers recommendations and instructions. If there are discrepancies between that information and the details on any swp drawings, the manufacturers instructions must be used.

Groundworker responsible for recording photographic evidence of drainage installation prior to backfilling

The tanked permeable paving are lined with an *impermeable* membrane to prevent infiltration and is fully sealed against the ingress of groundwater.

Connection to ditch subject to ordinary water course consent with MSDC

Cover levels shown are indicative only and subject to final adjustment on site

All pipework shall be 100mmØ unless noted otherwise

All pipework shall be installed at a gradient of 1:80 unless noted otherwise

All RWP and SVP positions are to be confirmed by the Architect

P02	14.08.2025	DETAILED DRAINAGE DESIGN TO SUPPORT DISCHARGE OF PLANNING CONDITIONS
P01	30.09.2024	PRELIMINARY ISSUE
REV.	DATE	DESCRIPTION
PRELIMINARY		
STEPHEN WILSON PARTNERSHIP LTD Chalvington Barn, Dittons Business Park, Dittons Road, POLEGATE, BN26 6HY Telephone: 01323 412020 E-mail: info@swpeast.co.uk • Website: www.swpeast.co.uk		
CLIENT BEDFORD PARK DEVELOPMENTS		
ARCHITECT THE ORANGERY		
JOB TITLE GATEHOUSE LANE DEVELOPMENT, GODDARDS GREEN, BN6 9LE		
DRAWING TITLE PHASE 2 DRAINAGE LAYOUT SHEET 1		
SCALE AT A1 1:200	DATE SEPT 24	DRAWN JWM
	ENG. JWM	CHECKED DMG
RIBA STATUS STAGE3 - SPATIAL COORDINATION		
DRAWING STATUS S3	DRAWING SUFFICIENCY REVIEW AND COMMENT	
JOB No. E9427	DRAWING No. 9427-SWP-ZX-XX-DP-C-1100	REV. P02