

Foul Water Drainage Strategy & Sewage Management Plan

Planning Application Reference: **DM/26/2272**

Project: 3-Dwelling Residential Development

Site Location: Chideok, Valebridge Road, Burgess Hill

Document Purpose: Discharge of Planning Conditions (Foul Water Drainage Strategy)

Adopting Authority: Southern Water

Design Standards: Compliant with Building Regulations Part H (Drainage), BS EN 752, and Southern Water Developer Services Standards.

1. Introduction & Objectives

This document establishes the operational foul water drainage strategy for the 3-dwelling residential development at Chideok, Valebridge Road under Planning Application DM/26/2272.

The strategy addresses the unique structural, environmental, and third-party asset constraints of the deep public sewer main running along the rear boundary line. To avoid extensive, high-risk deep-trench excavations across the entire site, the design utilises a hybrid layout: a localised private pumping asset for the lowest plot, a shared gravity network for the upper plots, and a single, controlled connection into a validated public sewer asset.

2. Strategic Infrastructure Context & Connection Justification

The public sewer main running behind the development's rear fence line features two adjacent access assets, requiring a clear engineering justification for the finalised connection route:

Public Manhole 4901 (Proximate Asset - Excluded): Public Manhole 4901 sits topographically closest to the site boundary, located approximately 3.5 metres behind the rear fence line. However, a site investigative audit has confirmed that a third-party developer has unlawfully buried this manhole asset within the private domestic garden of the property directly behind this application site. Because this asset is structurally buried, inaccessible, and in breach of statutory access regulations, it is excluded as a viable connection point to ensure long-term operational safety.

Public Manhole 4900 (Validated Asset - Selected Connection): Due to the physical obstruction of Manhole 4901, the development outfall is diverted left along the boundary line to Public Manhole Number 4900, located precisely 10 metres from the rear fence line. This asset resides within an open, uncompromised nature corridor.

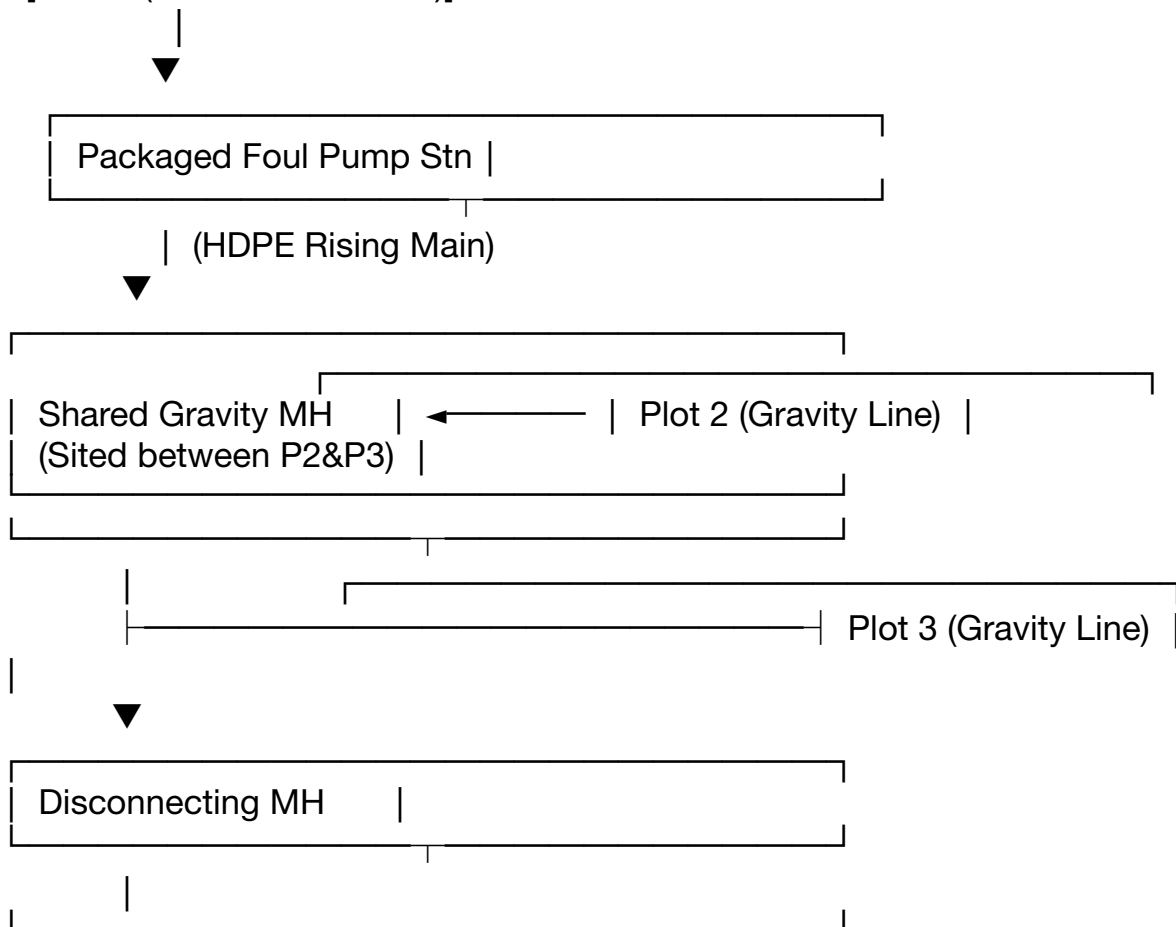
Existing Network Safeguards: Public Manhole 4900 features an active, pre-installed high-water telemetry alarm system maintained by Southern Water. This existing sensor infrastructure provides an instant alert to the network operator in the event of an upstream surcharge or high-level water event, serving as a critical safety monitor for both the existing regional network (which carries upstream flows from the adjacent Mill Rose Way development) and this proposed 3-dwelling connection.

Ecological Preservation: Because Manhole 4900 resides within a sensitive nature corridor, the design explicitly rules out open-cut deep excavations to reach the 6.0m invert depth. Utilising an internal backdrop vertical drop pipe entirely eliminates the need to dig up or disturb the root systems, flora, or topsoil within the corridor, ensuring zero negative impact on local biodiversity.

3. Site Layout & Network Topology

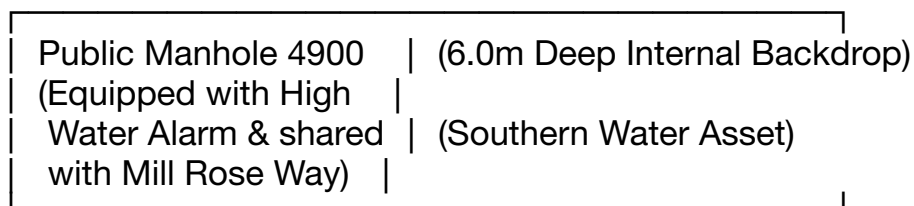
The site-wide foul network segments the three plots based on individual topography and proximity to the public sewer connection asset:

[Plot 1 (Lowest Elevation)]



[Public MH 4901]
(3.5m Away - EXCLUDED
due to illegal burial)

▼ [10-Metre Connection Run Left Through Nature Corridor



3.1 Plot 1 Scheme: Localised Pumping Asset

Infrastructure: Due to localised levels, Plot 1 will not drain via standard gravity. It will be served by a private, underground Packaged Foul Water

Pumping Station situated within its domestic boundary footprint.

Pump Specifications: The chamber will be fitted with a submersible macerator/grinder pump with a duty/assist configuration to shred domestic waste and discharge it under pressure via a high-density polyethylene (HDPE) rising main.

Safety Volume: The chamber features a minimum 24-hour storage reserve based on standard occupancy rates (150L per person per day) to act as a fail-safe during local power utility failures.

Discharge Point: The rising main travels uphill and terminates cleanly into the shared gravity inspection chamber situated topographically between Plots 2 and 3.

3.2 Plots 2 & 3 Scheme: Shared Gravity Network

Infrastructure: Plots 2 and 3 will utilise standard gravity drainage, utilising 110mm uPVC pipework bedded in granular material maintaining a minimum continuous fall of 1 in 40.

Shared Manhole: Flows from Plots 2 and 3, along with the pressurised pumped discharge from Plot 1, converge at a new central shared gravity manhole positioned strategically between the footprints of Plots 2 and 3.

4. Deep Sewer Connection & Internal Backdrop into Manhole 4900

Connecting individual shallow runs directly into a 6.0m deep main sewer is structurally unviable and ecologically prohibited due to the nature corridor. The primary connection point consolidates all flows into a single engineered drop:

Asset Interconnection: A shared gravity line departs from the development's final boundary disconnecting manhole, crossing a brief 10-metre run left toward the deep public asset running through the nature corridor.

Internal Backdrop Specification: In accordance with Southern Water's technical criteria, the physical connection inside Public Manhole Number 4900 will be formed using an internal backdrop (dropped head) vertical pipe assembly.

Mechanism: Waste water enters the deep chamber structure at a standard shallow depth, hits a vertical drop pipe secured internally to the manhole wall with heavy-duty stainless steel brackets, and discharges cleanly into the channel at the bottom (invert level). A removable access cap will be positioned at the top of the vertical drop for rod cleaning and jetting maintenance.

Water Board Legal Status: A specialist asset company is currently in active consultation with Southern Water Developer Services. A formal Section 106 Water Industry Act 1991 application is being processed to finalise the structural adoption and connection entry consent specifically for Manhole 4900, accounting for the existing high-water alarm network, the shared asset flows from the Mill Rose Way link, and providing formal notification to the utility provider regarding the buried state of Manhole 4901.

5. Construction Phase Mitigation & Civil Safeguards

To prevent structural failure, blockages, or environmental contamination within the nature corridor during building works, the following mandatory controls apply:

Trade Waste Prohibition: Under no circumstances are site trades permitted to wash down cement mixers, concrete barrows, tile grout buckets, or plaster mixers into the foul gully traps or open inspection chambers.

Temporary Mechanical Plugs: All internal soil pipe stubs and external clay/uPVC entry lines must remain blanked off with expanding mechanical test plugs during the brickwork, floor screed, and plastering phases. Caps may only be removed once final bathroom white goods are physically connected.

Ecology Safeguards: No construction plant machinery or heavy vehicles are permitted past the rear fence line into the nature corridor. Access to Manhole 4900 for the backdrop installation must be undertaken using light, hand-carried tools to completely protect the local ecosystem from compaction or rutting. The existing high-water sensor cable and telemetry components inside the chamber must be fiercely shrouded and protected from physical contact during the vertical backdrop fixing process.

6. Operational Maintenance Matrix

Component

Private Pumping Station (Plot 1)

Shared Gravity Manholes

Boundary Disconnecting Manhole

Operational Maintenance Action

Lift lid inspection; wash down float switches to prevent grease/fat scaling; verify macerator blade clarity.

Visual check of benching channels between Plots 2 and 3 to ensure zero solid settlement or paper snagging.

Inspection of the main outfall leading toward the boundary fence line and public manhole 4900.

Frequency

Annually

Bi-annually

Annually