

Drainage Strategy

Foul and Surface Water

Planning Application: DC/25/0114

Site Address: The Old Dairy, Home Farm, Cowfold Road, Coolham, RH13 8QJ

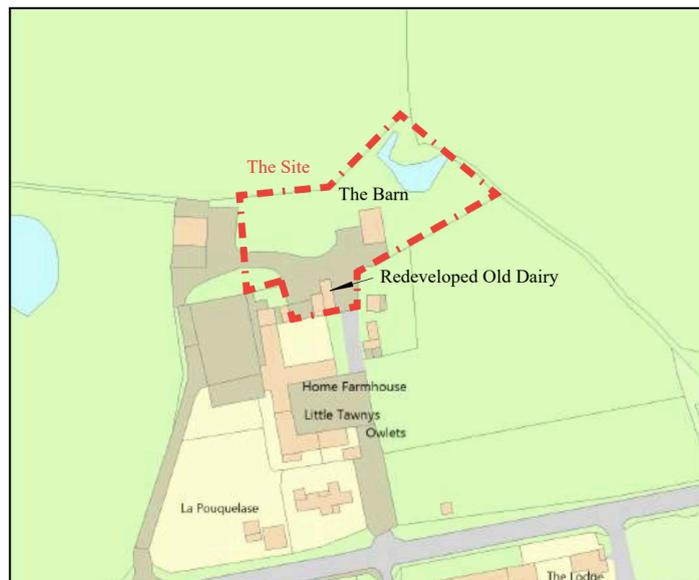
1. Introduction

This Drainage Strategy has been prepared to support the planning application for the **conversion and extension of a redundant agricultural barn to form a residential dwelling, including a change of use of land from agricultural to residential to create a curtilage for the dwelling.** The strategy outlines the proposed means of managing foul and surface water drainage in a sustainable and effective manner, ensuring compliance with relevant planning policies, environmental requirements, and water neutrality principles.

2. Existing Site Conditions

The site comprises an agricultural barn within the demise of The Old Dairy, a private residential dwelling, accessed from Cowfold Road. A topographic survey confirms a gentle south-to-north fall across the site, from 50.05m to 48.88m, approximately.

Hydrology: The nearest significant water feature is a large pond 400m south of Coolham Road, with a smaller pond to the west of the site near the access track. A ditch watercourse runs westward along the northern boundary.

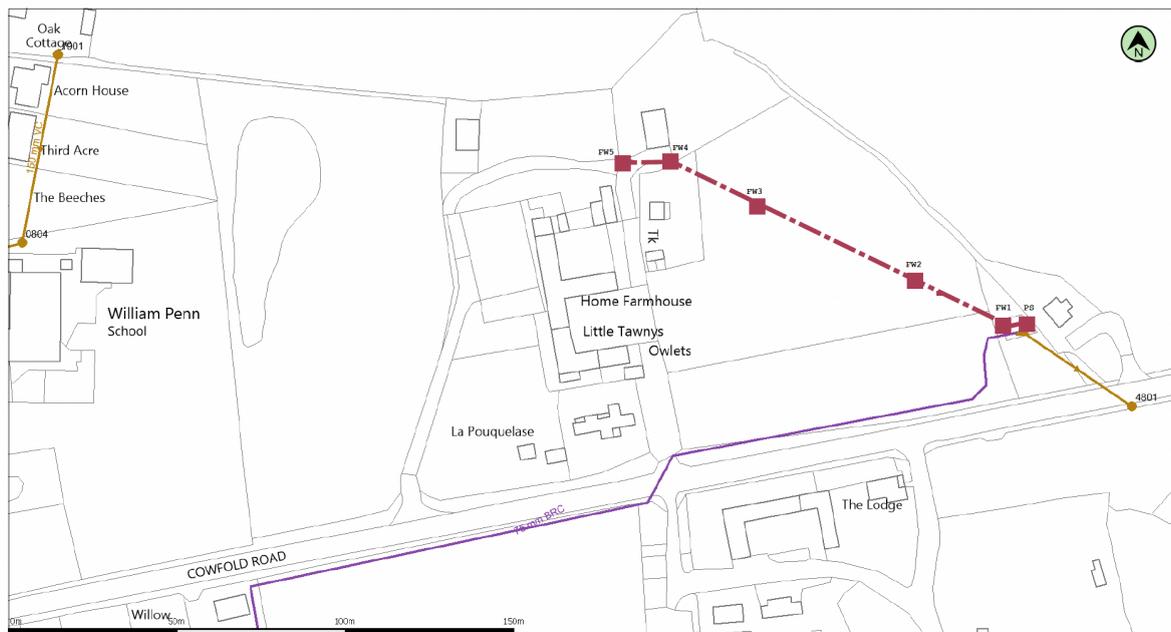
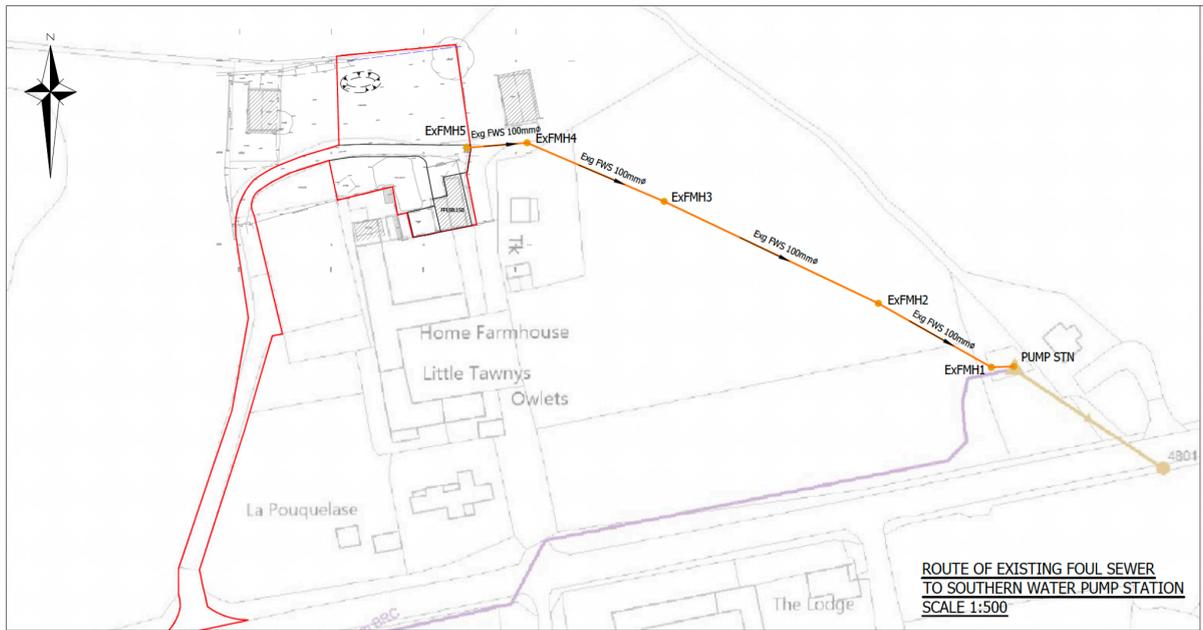


Geology & Infiltration Potential: The British Geological Survey (BGS) map indicates Weald Clay (mudstone) as the dominant substrate, with a narrow band of River Terrace Deposits near the barn. Soakage tests to BRE Digest 365 standards confirm that the site has low infiltration potential, limiting sustainable drainage options.

3. Foul Water Drainage

The proposed development has an existing connection to the mains sewer, following the established foul drainage route of the existing house. A CCTV survey confirms that this drain joins the public sewerage network to the southeast, via a rising main along Cowfold Road. The connection will be made in compliance with Southern Water’s sewer records and Building Regulations (Part H).

Southern Water sewer records:



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The positions of pipes shown on this plan are believed to be correct, but Southern Water Services Ltd accept no responsibility in the event of inaccuracy. The actual positions should be determined on site. This plan is produced by Southern Water Services Ltd (c) Crown copyright and database rights 2020 Ordnance Survey 100031673. This map is to be used for the purposes of viewing the location of Southern Water plant only. Any other uses of this map data or further copies is not permitted.

WARNING: BAC pipes are constructed of Bonded Asbestos Cement.
WARNING: Unknown (UNK) materials may include Bonded Asbestos Cement.

ctagan@gtacivils.co.uk	
Home Farmhouse	



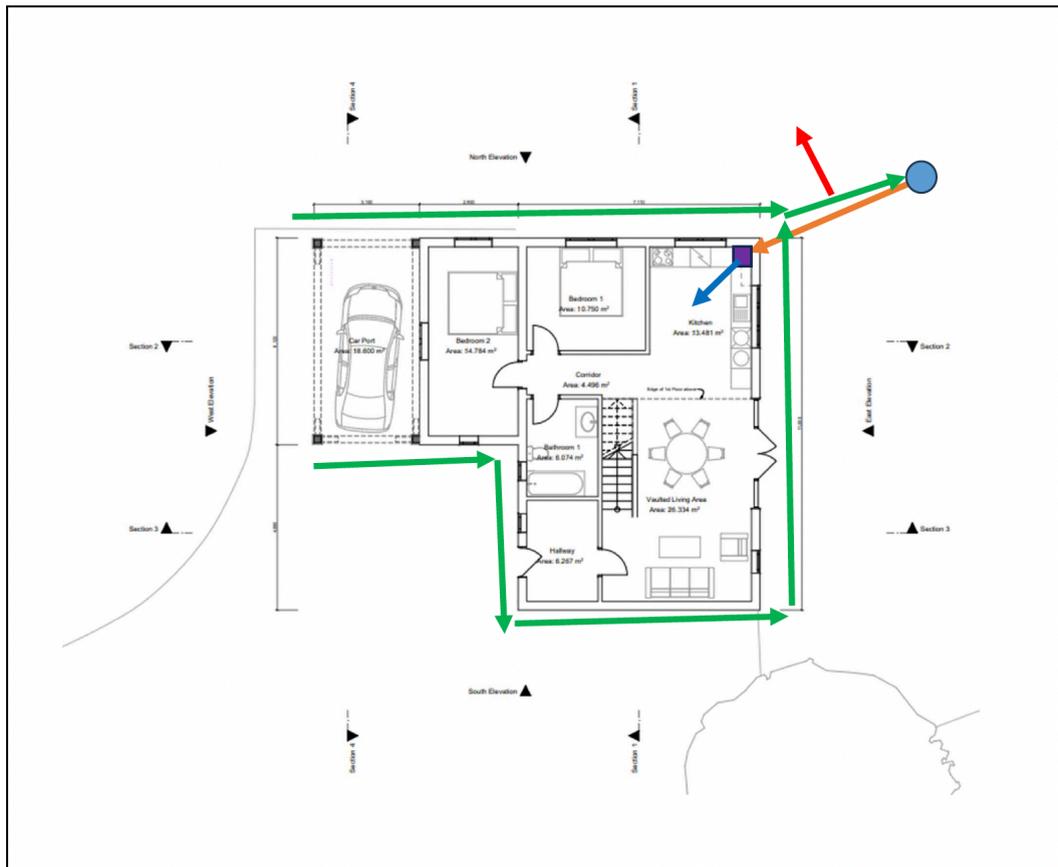
4. Surface Water Drainage

To manage surface water effectively and sustainably, the following measures will be implemented and have been implemented under a previous planning application DC/24/1053 and subsequent HRA application HRA/24/0017.

4.1 Rainwater Harvesting System

- Surface water will be collected and directed into a rainwater harvesting system designed to store, filter, and treat rainwater for use within the property.
- The system will cater to both potable and non-potable water requirements, promoting water efficiency and reducing demand on the mains water supply.
- Harvested rainwater will undergo filtration and treatment to meet safety and quality standards.

Schematic of Rainwater Harvesting system:



4.2 Water Neutrality Measures

In alignment with water neutrality objectives, the following measures will be incorporated:

- Potable Water Supply: Treated rainwater will supplement potable water demand, reducing reliance on the mains network.
- Non-Potable Water Use: Rainwater will be used for toilet flushing, irrigation, and other applications.
- Water Efficiency Measures: Low-flow fixtures and water-efficient appliances will be installed.
- Monitoring & Maintenance: A water usage monitoring system will ensure efficiency, with regular system maintenance.

4.3 Sustainable Urban Drainage System (SuDS) Considerations

- The SuDS Hierarchy has been applied: Infiltration is not viable due to clay soils, so discharge will be directed to the ditch watercourse.
- The site layout includes a balancing pond in the northwest corner, sized to accommodate a 1 in 100 years + 40% climate change storm event.
- Flow control measures: A protected vortex device (e.g., Hydrobrake) will limit discharge to 1.0 l/s, aligning with greenfield runoff rates.
- Permeable paving will be used in the driveway area to slow surface water runoff.

5. Compliance and Environmental Considerations

This drainage strategy has been updated to reflect the specific planning requirements of Horsham District Council (HDC), particularly in relation to water neutrality, sustainable drainage, and climate resilience. The following local planning policies are addressed:

- **Policy 35 (Climate Change):** Measures outlined in this strategy, such as SuDS, rainwater harvesting, and water-efficient fixtures, contribute to climate change mitigation and adaptation.

- **Policy 37 (Sustainable Construction):** The proposed drainage systems support sustainable construction principles through the use of water-efficient appliances, low-flow fixtures, and reduced reliance on mains water.

- **Policy 38 (Flooding):** The use of a balancing pond, permeable paving, and flow control measures effectively manage surface water and mitigate flood risks.

- **Water Neutrality:** In response to Horsham's requirement for water neutrality due to environmental sensitivity, this strategy includes rainwater harvesting, water reuse, and efficiency monitoring.

5.1 Horsham District Council Local Policy Alignment

- The drainage strategy complies with local and national policies, including:
 - **National Planning Policy Framework (NPPF)** – promoting sustainable drainage solutions.
 - **Water Framework Directive (WFD)** – ensuring local water bodies are protected.
 - **The Environment Act 2021** – supporting sustainable water use.
 - **DEFRA’s Non-Statutory Technical Standards for SuDS** – ensuring flood risk management.
 - **Building Regulations (Part H)** – providing a legal drainage framework.
 - **Southern Water’s drainage guidelines** – ensuring compliance with sewer connection requirements.

6. Conclusion

This drainage strategy presents a sustainable approach to foul and surface water management for the proposed development at Home Farm. The use of an existing mains sewer connection for foul drainage, alongside a rainwater harvesting system and SuDS-based surface water management, ensures environmental sustainability and compliance with all relevant regulations.

Should additional details or modifications be required, further assessments can be undertaken to refine the drainage provisions in line with planning and regulatory requirements.