

Project: Havelock Farm
Project No.: 24079
Subject: Drainage Strategy for Planning

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Author: ML / KJS

1 INTRODUCTION

SFK Consulting is appointed as Civil Engineer for the drainage alterations associated with the repair and restoration of the East Range, the Bothy and the South Range at Havelock Farm, which is located on the Royal Botanic Gardens (RBG) site at Wakehurst.

This report is prepared to support a planning application for these works which are defined in the accompanying drawings, described in Section 5, and prepared as part of the Stage 4 civils work.

All SFK drawings produced as part of the Stage 4 civils work are listed in Section 5. The proposals do not increase the impermeable areas.

2 INFORMATION RECEIVED

A review of existing and past records pertaining to drainage at Havelock Farm has been undertaken to create a thorough understanding of the existing drainage regime, with pertinent reports and drawings listed below

Reports:

- Ardingly Wakehurst Place Services dated March 1971
- Wakehurst Place – Ardingly Alterations to Existing Foul Drain and Rerouting dated February 1979
- Plans and Sections of Sewage Pumping Main and Extension of Foul Sewer in Ardingly Road dated February 1979.
- 1971 Record Drawing Markup dated 2024
- Havelock Farm Drainage Survey C1010599.001 by Happy Drains dated February 2024
- Havelock Farm Report by Solum Surveying Ltd (Project Number 14673) dated July 2025

Drawings:

- Measured building survey with AutoCAD dwg files produced by Greenhatch Group dated July 2024.
- Topographical survey by MKSurveys dated September 2016.
- CCTV survey drawing by Solum Surveying Ltd (SS-14673-Havelock Farm-CTV-R0)

3 EXISTING DRAINAGE NETWORK

A walkover survey was undertaken by Mr S Divall of SFK Consulting in March 2025 to determine the extent of the existing drainage network in the vicinity of Havelock Farm. Observations were supplemented by interviews with onsite staff.

In addition, Solum Surveying Ltd carried out a CCTV survey in July 2025 to investigate the condition and connectivity of the existing drainage network on the south and east sides of Havelock Farm.

Havelock Farm and the separate toilet block are served by separate foul and surface water drains (Refer to Figure 1).

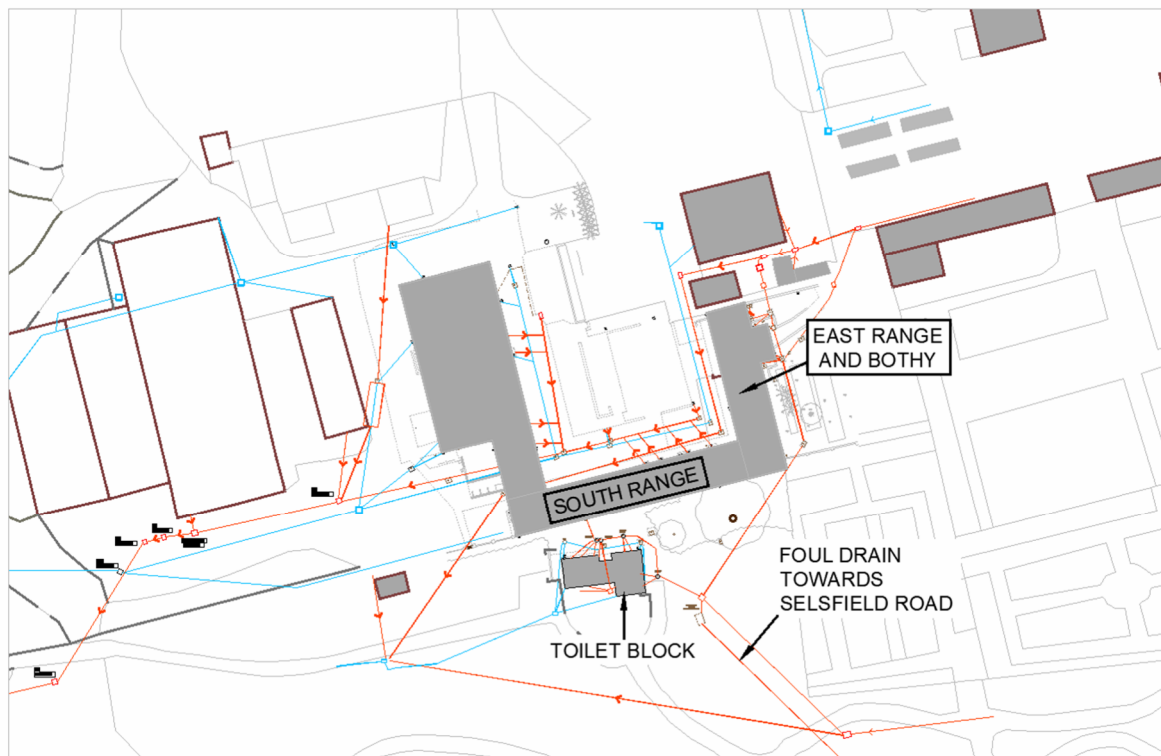


Figure 1: Plan showing location of the East Range and Bothy, the South Range, the toilet block and the existing foul drain towards Selsfield Road.

Foul drainage: Foul and wastewater is discharged via a pumping station and a foul drain towards Selsfield Road (formerly known as Ardingly Road) (Figure 1). The farm's foul drain network, in the courtyard (shown to be flowing west) has been abandoned.

Surface water: CCTV surveys were unable to confirm connectivity to a discharge point, however, interviews with Estate Management confirm that surface water drainage within the courtyard and toilet block discharges to the existing pond on the west side of Havelock Farm.

It is speculated that runoff from the roof of the South Ranges used to drain into the surface water network via the troughs on the north side of the Range. These troughs are believed to be connected to the now abandoned farm foul drain network.

The overall condition of the existing pipework is fair, although some structural damage was noted. Drains require jetting to remove settled deposits, which in some cases result in a 15% loss of cross-sectional area. A summary of notable structural defects, which will require patch repairs, is included in SFK drawings 24079.9002 and 9003.

For drawings of the existing drainage system, refer to SFK drawing 24079.9001.

4 PROPOSED DRAINAGE STRATEGY

Foul drainage: Proposed toilet facilities within the South Range will comprise 3 No WC's and 3 No wash and basins. Based on BS EN 12056-02, this would generate a peak flow of approximately 1.7 l/s. As the new facilities are a reallocation of existing toilet provision, no increase in population results therefore flows off site to the public network will not change.

New connections from the proposed toilet will require coring through the existing wall. A new manhole will be constructed downstream, and the new foul pipe will be connected to the existing network at MH5 (refer to SFK drawing 24079.9003). New foul pipes or condensate neutralisers will be provided for the discharge of condensate to ground.

Foul flows will combine with those from the adjacent toilet block and discharge to the existing pumping station. Some minor adjustment of start/stop floats may be required.

Surface water: New rainwater downpipes will be provided and connected to the retained surface water network. A new channel drain will be constructed and connected to a new surface water pipe on the south side of Havelock Farm. This pipe will then be connected to the existing network at MH10. All surface water flows will continue to discharge to the existing pond; no increase in impermeable areas is proposed.

The CCTV survey identified locations of defects within the existing drainage network; these will be repaired as part of the redevelopment works. See SFK drawings 24079.9002 and 24079.9003 for the locations.

5 SFK CIVILS DRAWINGS

SFK RIBA Stage 4 civils drawings detailing the repairs and alterations required are listed in the table below.

Drawing Title	Drawing Number	Revision
Existing and Abandoned Drainage Layout	24079.9001	T1
Existing Drainage Condition Survey (February 2024) and Proposed Repairs	24079.9002	T1
Existing Drainage Condition Survey (July 2025) and Proposed Repairs	24079.9003	T1
Proposed Drainage Strategy	24079.9011	T2
Proposed Drainage Details	24079.9021	T2

6 CONCLUSION

The existing Havelock Farm is served by foul and surface water drainage, which discharge to the wider private Wakehurst network. There are some locations where the surface water currently discharges into the foul network which will be rectified during these works to separate the networks, in accordance with best practice.

The proposals for Havelock Farm do not increase the impermeable areas. The existing drainage network will be repaired where necessary with additional connections to suit the revised layout. The proposals will provide betterment to the existing situation by separating the surface water from the foul network.