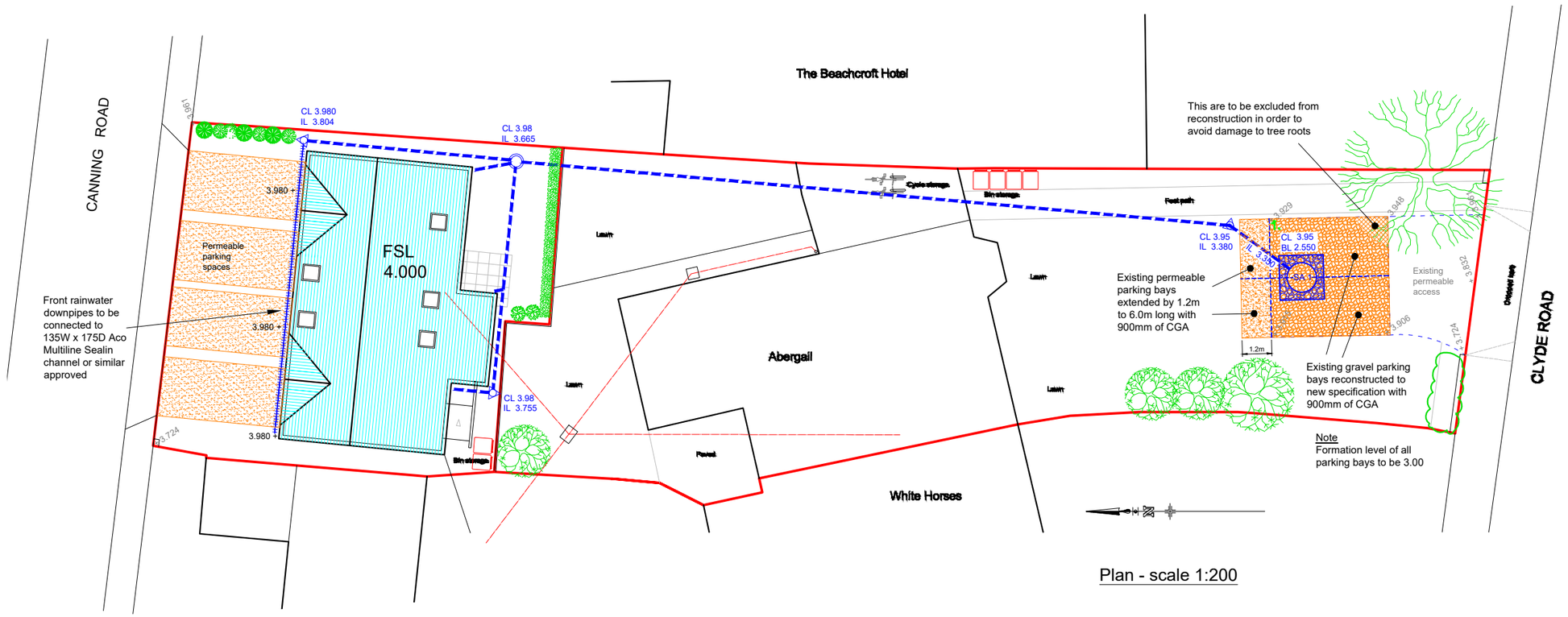


Plan - scale 1:200

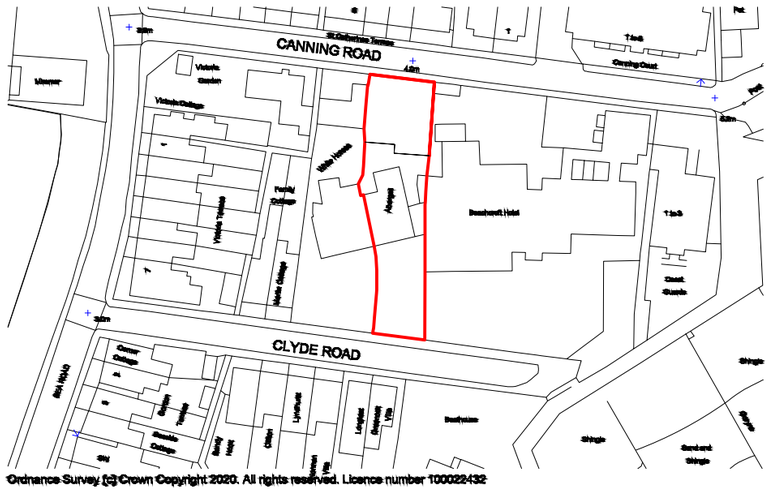
NOTE

This drawing has been produced for discharge of planning conditions only. All levels and details to be checked for Building Regulations approval and construction purposes

Percolation Test Results

Test 1 5.051×10^{-6} m/s in 450 x 1200 test pit
Test 2 4.785×10^{-6} m/s in 450 x 1200 test pit
Test 3 4.622×10^{-6} m/s in 450 x 1200 test pit

Note: Tests carried out in early February 2021



LOCATION PLAN - 1/1250

Surface Water Drainage Design Notes

Ground conditions here comprise topsoil over River Terrace Deposits (soft to firm silty sandy clays) over Lambeth Group deposits. The River Terrace Deposits were found at 0.32 metres below ground level (BGL) and extended to the base of the borehole at 1.70 metres BGL.

Groundwater was encountered at 1.060 metres BGL during the investigations in late January 2021. Groundwater monitoring, in a single monitoring pipe in the front garden of "Abergail", at the location of the proposed infiltration structure, was conducted weekly from early February 2021 through to the end of March 2021. The highest recorded groundwater level of 931mm BGL - 2.914 metres AOD - was recorded in mid February.

The drainage design is based on 3 percolation tests carried out to BRE365 principles in a trial pit sized 1200mm long x 450mm wide x 900mm deep, in early February 2021. The lowest soil infiltration rate of 4.622×10^{-6} metres/second from all three tests has been used in the design. to which a factor of safety of 2 has been applied.

Permeable parking bays are proposed for the front of garage parking which will only be required to drain their own area. 275mm of coarse graded aggregate (CGA) on a non-woven geotextile should be sufficient for light vehicles here unless the formation is particularly soft. The CGA could be topped with a decorative gravel should the client require or permeable concrete blocks/ permeable resin bound surfacing.

All roof water will be taken to the rear where there are currently two gravel parking bays. These will need to be extended as shown and reconstructed to provide longer bays with 900mm of CGA for hydraulic purposes. Again, a non-woven geotextile should be placed on the formation. The CGA may need stabilising with one or two layers of Tensar or similar geogrid depending on the nature of the CGA used and the strength of the formation and specialist advice should be sought.

A concrete ring soakaway is proposed to collect the flow and distribute it to the permeable surfacing. It's hydraulic benefit has not been included in the calculations.

Key

- Proposed 100Ø surface water drainage
- 250 dia surface water inspection chamber
- 450 dia surface water inspection chamber
- 600 dia silt trap inspection chamber
- 1.2m diameter concrete ring soakaway 1.4m deep from cover level to top of base
- Permeable parking bays comprising min. 275mm of DOT Type 3 aggregate. minimum 30% voids topped with decorative gravel if required to client's requirements - see notes
- Permeable parking bays comprising 900mm of DOT Type 3 aggregate. minimum 30% voids topped with decorative gravel if required to client's requirements
- + 3.929 Existing levels in metres AOD

Rev.	Description	App.	Chk.	Drn.	Date
-	Original			RTFC	20.4.21

Project
Abergail
Clyde Road
Felpham

Client
Tom Barnes

Drawing Title
Surface Water Drainage Layout

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Scale: As shown
At original: A3
Drawing Number: 2020/SK5
Revision: -