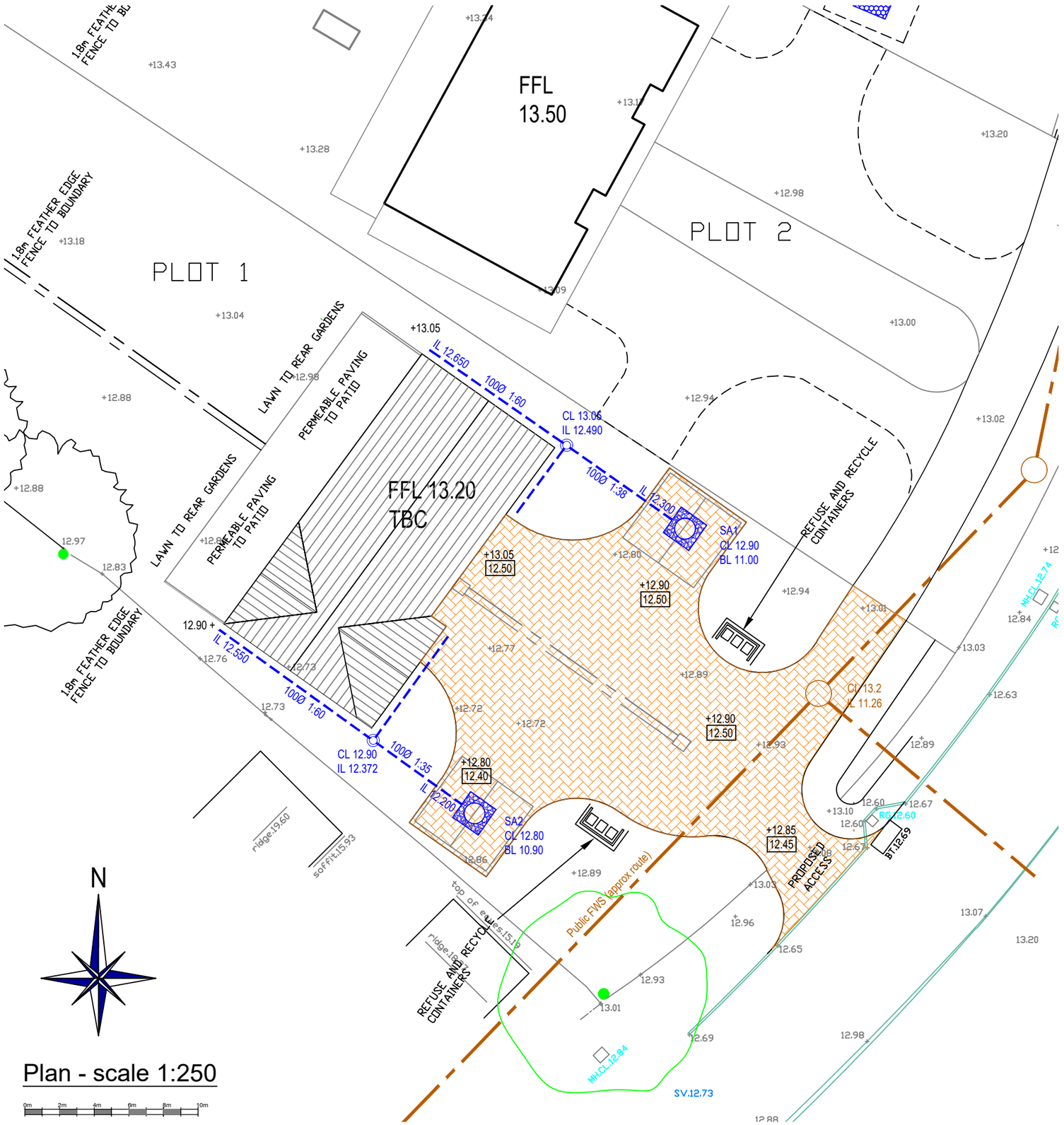


N

Plan - scale 1:250



Location plan - scale 1:2500

KEY

Proposed storm drainage 100mmØ at min 1:100

Proposed 500Ø silt trap inspection chamber with class A15 cover and frame

Proposed concrete ring soakaway 1.2mØ and 1.9m deep overall, hydraulically linked to permeable driveway. Cover and frame to be class D400

New roof areas connected to concrete ring soakaways

Permeable paving laid on coarse graded aggregate to manufacturer's recommendations - see Notes

+13.28 Existing ground levels in metres AOD

+12.85 Proposed finished levels in metres AOD

12.48 Proposed formation levels in metres AOD

Surface Water Drainage Design Notes

The design is based on site investigations carried out for the adjacent plots Nos. 2 & 3 which have already been approved for Discharge of Conditions for the Surface Water Drainage Disposal. It has been agreed with the Principal Drainage Engineer from Arun DC that it will be acceptable to use the results for Soil Infiltration from Percolation Testing carried out in early April 2017 and the Groundwater levels carried out in the winter period of 2017. As a note, these two sets of data utilised correlate very closely to those obtained from soil investigations carried out in an adjacent site - SRC - during the winter period of 2021.

Ground conditions here comprise Topsoil over Head Deposits (soft to firm clay, silt, sand, and gravel) over London Clay. The Head Deposits were encountered at 150mm to 250mm below ground level and were found to comprise compact clayey silts with some grit and gravel and occasional large sub-angular flints. The London Clay was not encountered but some chalk was found at depth. A little groundwater was found at the base of a borehole in the lowest part of the site at 1.96m below ground level during the investigations in mid March 2017.

The drainage design is based on percolation tests carried out to BRE 365 principles in four test holes. Soil infiltration rates varied considerably from $1.166x10^{-6}$ m/s through to $1.226x10^{-4}$ m/s obtained in a shallow test pit.

Permeable paving is being used throughout the access and drives, together with 2 concrete ring soakaways, each serving an individual property, into which the roofs will be directly connected. Each concrete ring soakaway will be hydraulically connected to the permeable paving to allow overflow.

Each soakaway has been designed accept 70 m^2 of roof area and then overflow into the permeable paving. This will be suitable to drain the full roof area of 186 m^2 without flooding on a 1 in 100 year rainfall event + 40% climate change addition. A Factor of Safety of 3 has been used for the calculations for the soakaways and 4 for the permeable paving. The permeable paving, which has been designed to accept the slight fall across the parking area, will only need to have 130mm depth of coarse graded aggregate for hydraulic storage but will need more for structural strength (to be determined by others).

Rev.	Description	Drn.	Date
-	Original	RTFC	31.8.21

Project

Plot 1
Fontwell Avenue
Eastergate

Client

Mr David Parker

Drawing Title

Surface Water Drainage

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Scale	At original
As shown	A3

Drawing Number	Revision
2112/SK4	-