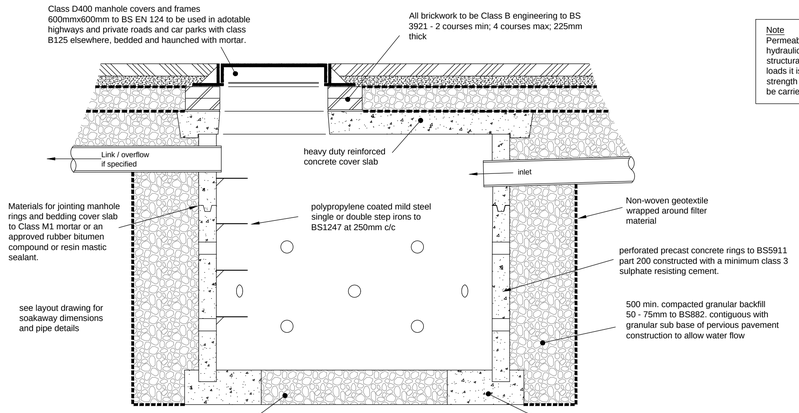
Key

- Proposed surface water drainage
- 250 dia surface water inspection chamber
- 450 dia surface water inspection chamber
- 500 dia surface water silt trap IC
- Surface water rodding eye
- Permeable paving to hydraulic and structural design
- Tarmacadam surface laid to fall to permeable paved areas
- Concrete ring soakaway 1.2m diameter and 2.0m deep
- + 5.644 Existing ground levels

Concrete Block Permeable Paving
Scale 1:20



TYPICAL PCC RING SOAKAWAY
IN PERMEABLE PAVEMENT AREAS
Scale 1:20

Note
Permeable paving design is for hydraulic purposes only. The structural design will depend on the loads it is required to take and the strength of the formation and is to be carried out by others

Location Plan - Scale 1:1250

Surface Water Drainage Design Notes

Ground conditions here comprise topsoil over silty, sandy clays and clayey sands (Brickearth) over Upper Chalk at depth. The Brickearth was found to extend from around 200mm below ground level to the end of the boreholes at 2.0m when nodules of chalk were becoming more prevalent. The Brickearth comprised compact silty clays with an increasing presence of flints from 0.6m down in some of the test pits.

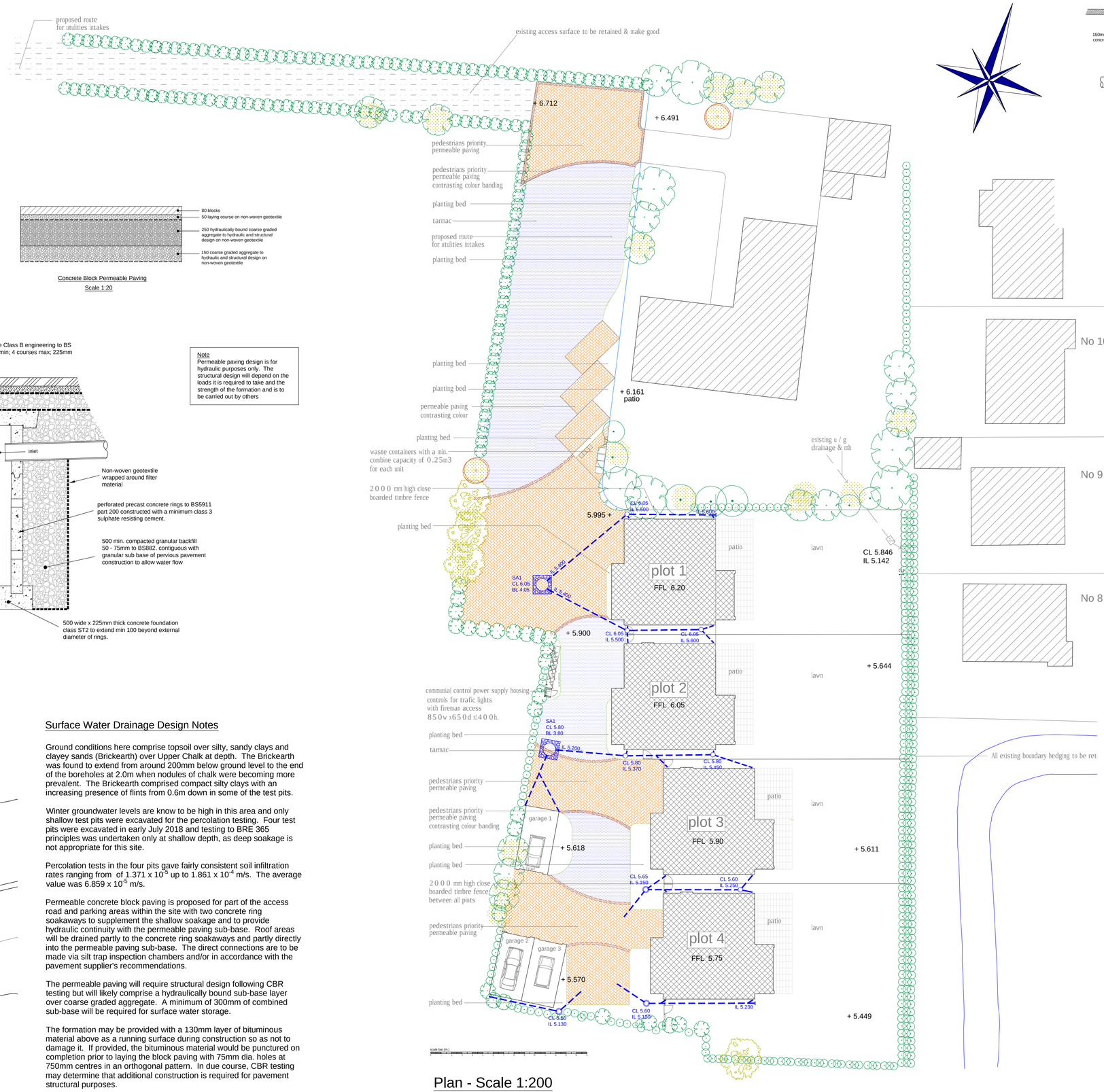
Winter groundwater levels are know to be high in this area and only shallow test pits were excavated for the percolation testing. Four test pits were excavated in early July 2018 and testing to BRE 365 principles was undertaken only at shallow depth, as deep soakage is not appropriate for this site.

Percolation tests in the four pits gave fairly consistent soil infiltration rates ranging from of 1.371×10^{-5} up to 1.861×10^{-4} m/s. The average value was 6.859×10^{-5} m/s.

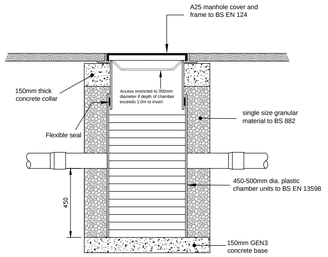
Permeable concrete block paving is proposed for part of the access road and parking areas within the site with two concrete ring soakaways to supplement the shallow soakage and to provide hydraulic continuity with the permeable paving sub-base. Roof areas will be drained partly to the concrete ring soakaways and partly directly into the permeable paving sub-base. The direct connections are to be made via silt trap inspection chambers and/or in accordance with the pavement supplier's recommendations.

The permeable paving will require structural design following CBR testing but will likely comprise a hydraulically bound sub-base layer over coarse graded aggregate. A minimum of 300mm of combined sub-base will be required for surface water storage.

The formation may be provided with a 130mm layer of bituminous material above as a running surface during construction so as not to damage it. If provided, the bituminous material would be punctured on completion prior to laying the block paving with 75mm dia. holes at 750mm centres in an orthogonal pattern. In due course, CBR testing may determine that additional construction is required for pavement structural purposes.



Plan - Scale 1:200



Typical Silt Trap Inspection Chamber Detail
(for use in landscaped areas and footways)
Scale 1:20

Rev.	Description	App.	Chk.	Drn.	Date
-	Original	PC		RTFC	19.7.18

Client
Alan Cornell

Project
44 Ferringham Lane
Ferring

Drawing Title
Surface Water Drainage Layout and Construction Details

Robert Clark Associates Ltd
Chartered Civil Engineers
Willow Cottage, Herne Lane, Rustington
West Sussex BN16 3EE
Tel: 01903 778945

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Scale: As shown | At original: A1
Drawing Number: 1798/SK2 | Revision: -

ARUN DISTRICT COUNCIL FG/140/18/PL