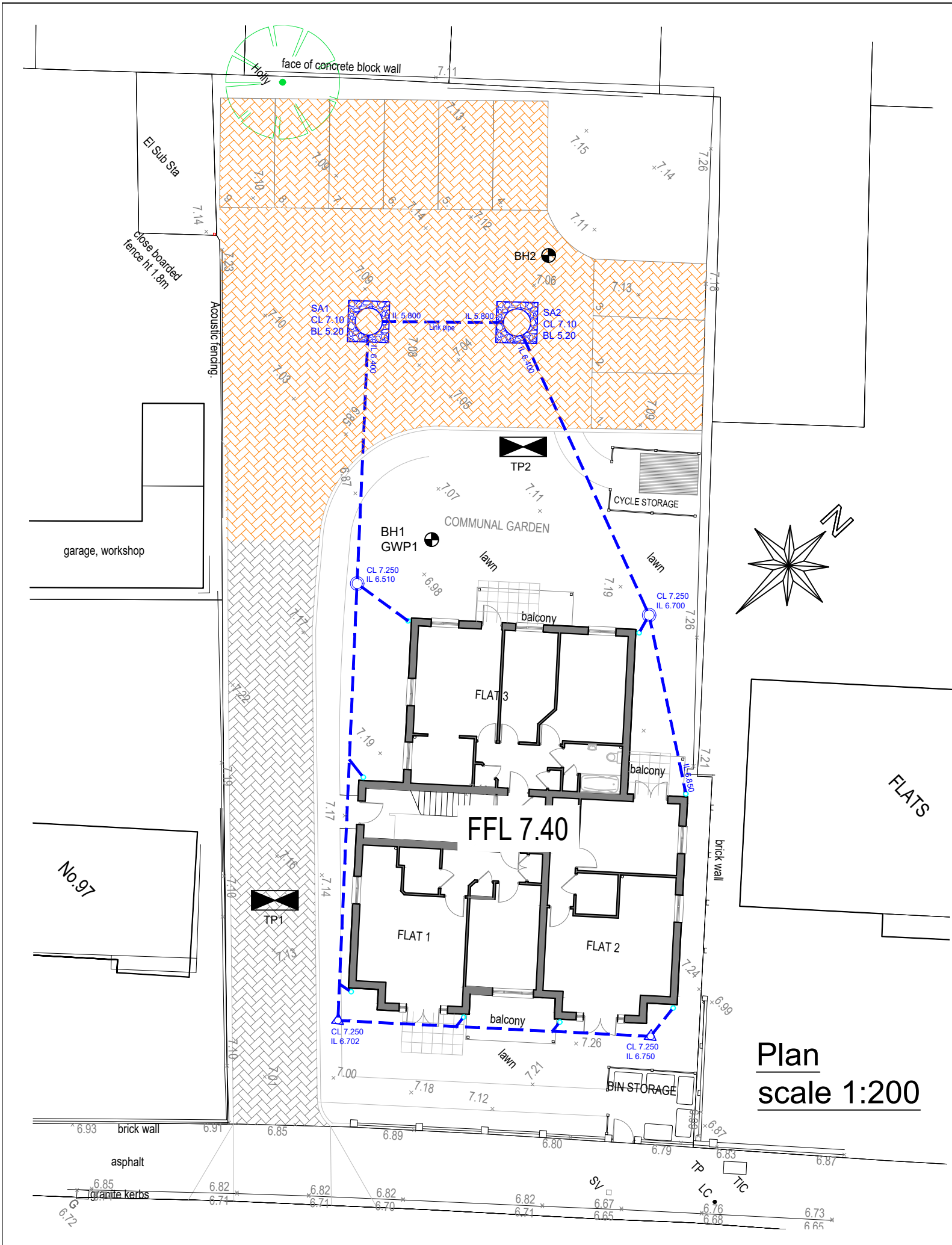




NOTE

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

BH1 1.730 x 10⁻⁶ m/s at 1.045m BGL
BH2 2.707 x 10⁻⁶ m/s at 1.320m BGL
BH2 1.797 x 10⁻⁶ m/s at 0.705m BGL
TP1 5.066 x 10⁻⁶ m/s at 0.740m BGL
TP2 1.108 x 10⁻⁶ m/s at 0.650m BGL

Note: These are the lowest results from three tests carried out in each test pit

Permeable paving and shallow concrete ring soakaways have been designed on the lowest of the shallow trial pit results of 5.066 x 10⁻⁶ m/s. Deep borehole results are not representative of the design situation here.



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Location Plan - scale 1:1250

KEY

Proposed storm drainage
100mm dia at min 1:100



Proposed 1.2m dia. concrete ring soakaways, depth as specified



Proposed permeable surfaces hydraulically connected to concrete ring soakaways - 310mm of CGA will be required



Proposed permeable surfaces draining only their own areas -180mm of CGA will be required for hydraulic design but a minimum of 275mm for structural strength



TP 201 Percolation test pits



BH1/GWP 2 Borehole/Groundwater monitoring point



Proposed 250 Dia. inspection chamber (Osma Shallow or similar approved)



Proposed silt trap inspection chamber



Cover level of surface water manholes



Invert level of surface water drains



Base level of soakaways



Existing ground levels in metres AOD

Surface Water Drainage Design Notes

Ground conditions here comprise a little Topsoil over River Terrace Deposits of sand, silt and clay over the Lambeth Group comprising similar soils. These soils were confirmed down to 2.960m, which was the deepest borehole drilled.

Two rectangular test pits were also excavated, TP1 being 1000mm x 450mm and 740mm deep and TP2 being 1100mm x 450mm and 650mm deep.

Only slight seepages of groundwater were encountered during boring but subsequent monitoring from late October 2018 through to late March 2019, showed levels rising to a maximum of 844mm below ground level (6.242m AOD) in late December 2018.

The drainage design is based on percolation tests carried out to BRE 365 in boreholes in early November 2018 and in two separate test pits in early February 2019. Soil infiltration rates varying between 1.730x10⁻⁶ m/s and 1.797x10⁻⁶ m/s were obtained, with the lower values being obtained at greater depth. It is clear that deep soakage is not available here and the lower of the shallow test pit results has been used in the calculations for both the ring soakaways and the permeable paving.

Two 1.2m dia. linked concrete ring soakaways have been designed as shown. For hydraulic design purposes, the invert level of the soakaways has been taken as highest groundwater level. The base levels of the soakaways are shown lower than this, however, in order to provide 2 No. 500mm perforated rings below the cover slab, which is considered to be the minimum practical to provide for siltation, storage at drier times and outflow. The soakaways will help to drain a small area but will mainly act as a means of collecting water from roof areas and distributing it to the permeable paving as levels rise in an extreme event. The design will be suitable to drain the new roof areas without flooding on a 1 in 100 year rainfall event + 40% climate change addition. The front permeable paved drive will only drain its own surface area with no roof areas being connected.

-	Original	RC	10.12.20
Rev.	Description	Drn.	Date

Project
99 Victoria Drive Bognor Regis West Sussex

Client
Sam Quinn
Drawing Title
SW Drainage Layout

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Scale As shown		At original A3	
Drawing Number 2104/SK5		Revision -	