

Land rear of Nos. 41 – 47 Pevensey Road, Bognor Regis

Statement on Flood Risk and Foul / Surface Water Drainage

Introduction

This statement has been produced in support of an application for planning consent for the construction of four new dwellings on land to the rear of Nos 41 – 47 Pevensey Road, Bognor Regis, West Sussex PO21 5NY; OS Grid Reference SZ 9219 9983. See the attached plan, Drawing No. 1615/2.05 for a Location Plan and details of the proposals.

Flood Risk

The site is shown to lie in Flood Zone 1 on the current Environment Agency Flood Map for Planning and is thus considered to have a low risk of flooding from both tidal and fluvial sources. However, the rear gardens of 41 - 47 are shown to have a low to medium risk of flooding from surface water (pluvial flooding) on the Surface Water Flood Map and there is concern to ensure that the proposed new dwellings can be safe and that the site can be adequately drained without increasing the risk of flooding elsewhere.

Historical Flooding

During the 10th, 11th and 12th June 2012, an extreme rainfall event led to widespread flooding across parts of West Sussex. Storm frequencies with a return period in the region of 1 in 200 years were recorded in this area, resulting in overloading of much of the local drainage network and causing flooding to almost 800 properties across the region. The flooding has been attributed partly to issues with local land drainage systems and partly to simple hydraulic overloading.

Several properties in Pevensey Road were flooded and from records of the flooding and residents' reports, we have determined a peak flood level here of 6.62m AOD.

Since this flood event, Arun District Council have carried out various repairs and improvements to the local land drainage system, clearing blockages and repairing partial collapses.

Flood Mitigation

Notwithstanding the extreme nature of the June 2012 event and the improvements that have been carried out subsequently, the area remains at risk of surface water flooding due to the local topography and it will be important to have due regard for this in the design of any new dwellings.

It is not normal practice to design against such extreme 1 in 200-year return period floods but it would be considered imprudent here to recommend floor levels any lower than the recorded June 2012 flood event and we therefore recommend that they are set no lower than 6.62m AOD.

This floor level is some 600 to 800mm above existing ground levels and it is proposed to provide some garaging and raised ground floors of beam and block construction that will allow any flood water to flow beneath if necessary, in order not to significantly reduce the flood storage availability within the site.

Surface Water Drainage

The local geology comprises River Terrace Deposits of sand, silt and clay over London Clay and Lambeth Group 'bedrock' of similar material. Percolation testing to BRE 365 will need to be carried out in due course to determine which, if any, SuDS features can be employed here. From other testing that we have carried out in the region, we would expect low soil infiltration rates of less than 5×10^{-6} metres/ second. Winter groundwater monitoring will also need to be carried out in order to determine the optimum base level for any SuDS features provided.

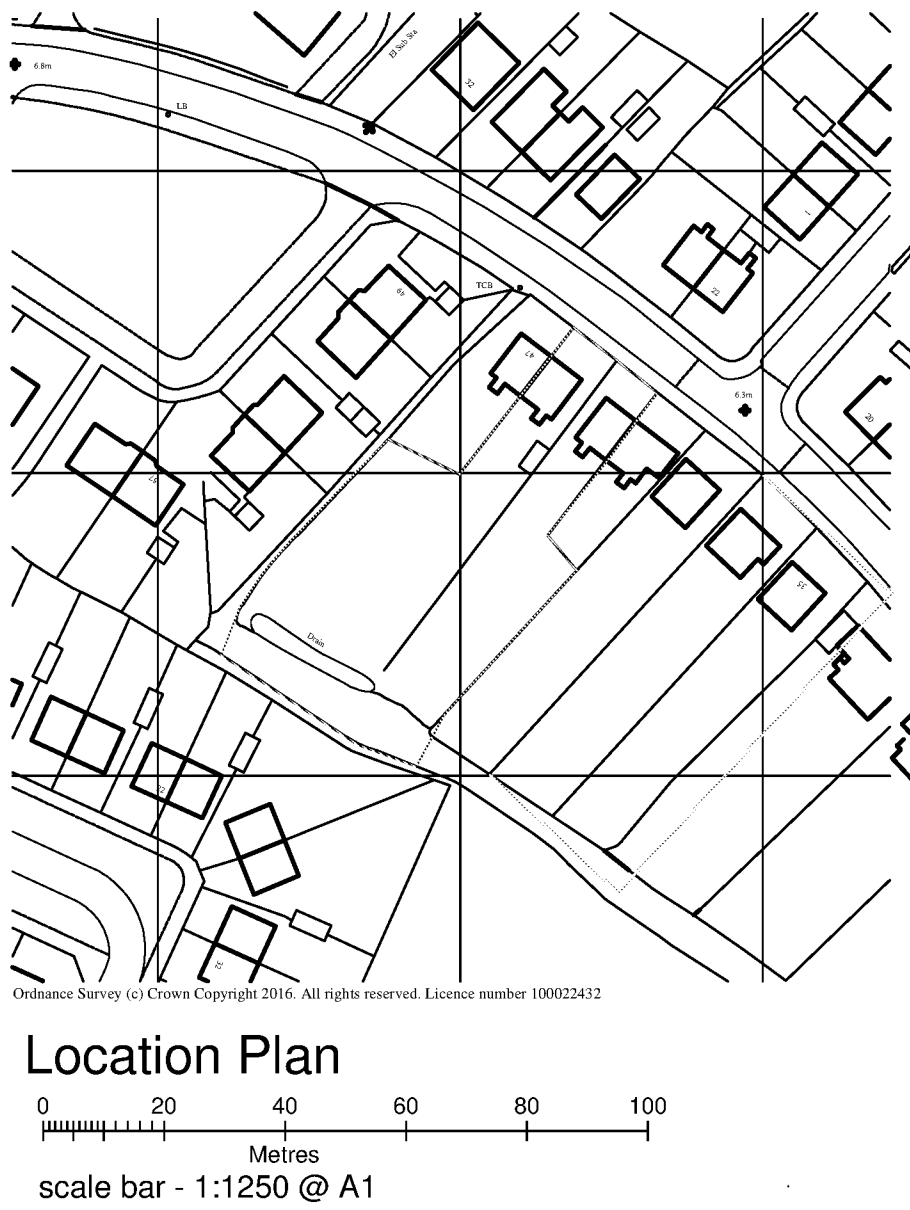
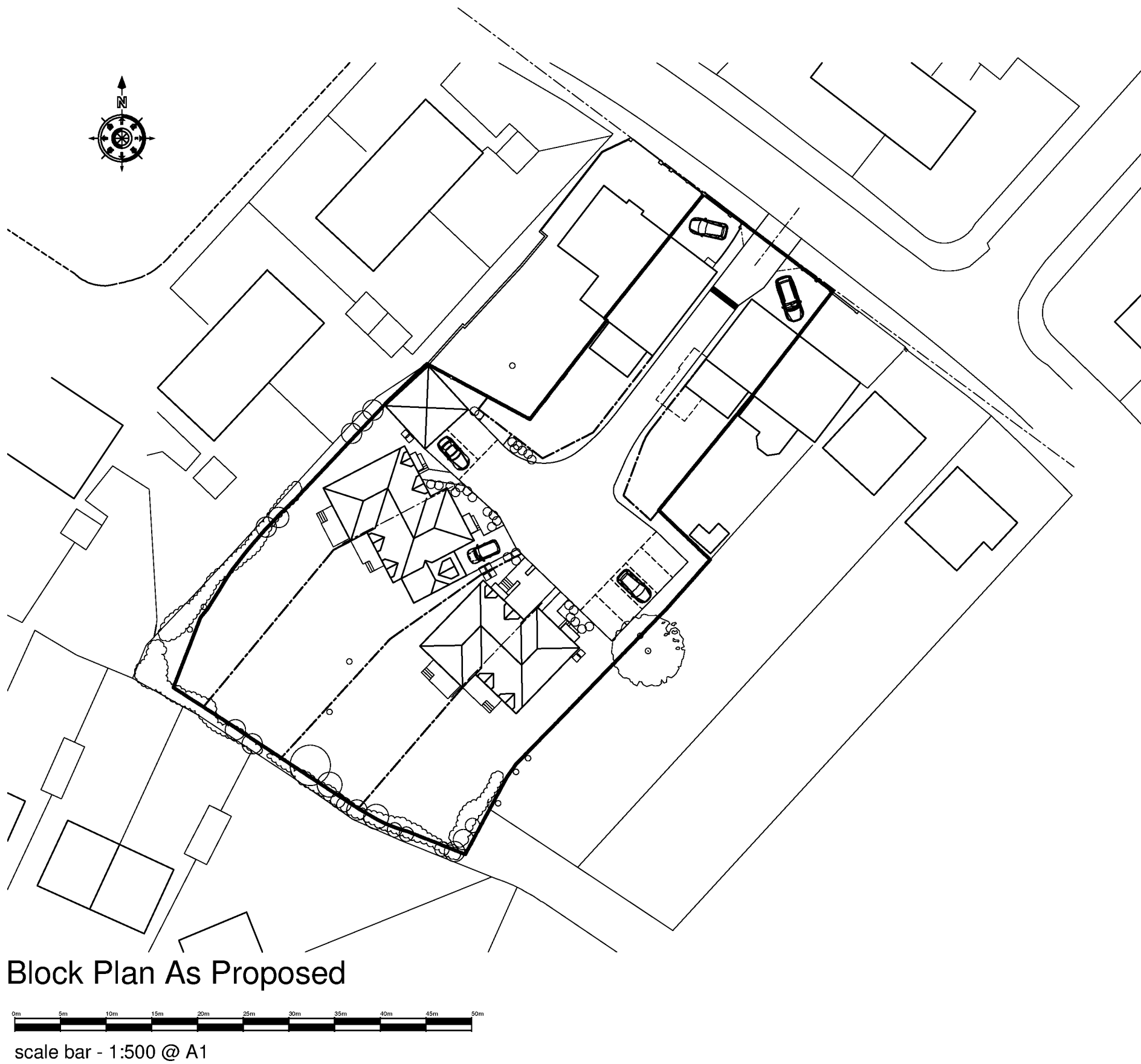
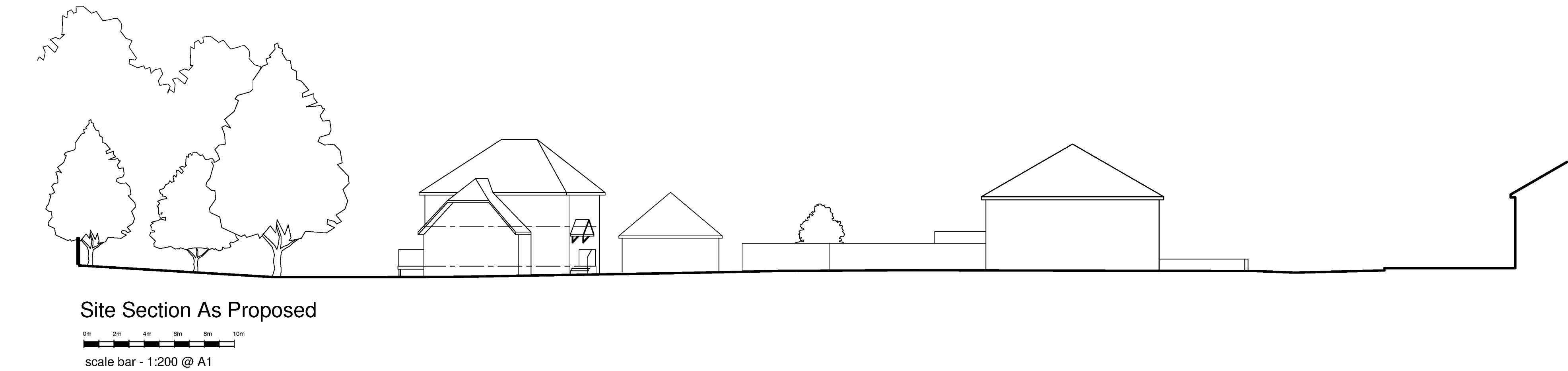
If the testing shows that percolation rates are too low or groundwater levels too high for infiltration methods, then a controlled discharge to the land drain running through the rear of the site can be provided.

Foul Water Drainage

Southern Water Services Ltd has not been consulted but it is considered unlikely that they would object to just four additional dwellings being connected to the 225mm diameter public foul water sewer in the highway.

1705-R2
8 August 2017

Robert Clark Associates Ltd
Chartered Civil Engineers



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CLIENT
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JOB TITLE
Proposed development at
43 & 45 Pevensey Road
Bognor Regis

DRAWING TITLE
Block & Location Plans and Site Section

DATE	SCALE	DRAWN BY	GIM
July '17	1:200 @ A1	CHECKED BY	

JOB NO.	DRAWING NO.	REVISION
1615	2.05	