

132b FULHAM ROAD, LONDON SW3 6HX

Structural engineer's SUDS report

September 2016

Issue 1



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1 PREAMBLE

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2 TERMS OF REFERENCE

MBP has been appointed by the owners of 132b Fulham Road to undertake an appraisal of the sustainable urban drainage, (SuDs), requirements for the refurbishment and extension of the existing property at 132b Fulham Road, 132bFR, including the construction of a new single level of basement.

3 INTRODUCTION

MBP has been appointed to provide design for a new single basement structure below the footprint of the existing property and 50% of the garden.

The aim of this appraisal is to identify what needs to be put in place in the design of the drainage system to meet the SuDs requirements set out for small developments within the Royal Borough of Kensington and Chelsea, RBK&C. We have assessed the plan areas of the proposed development using the Planning drawings produced by Cousins & Cousins Architects, and have used the tool provided by RBK&C to work out what needs to be put in place.

4 SITE LOCATION

132b Fulham Road is part of the Royal Borough of Kensington and Chelsea at the postcode SW3 6HX. The property is located on the North Side of Fulham Road, just to the west of Old Church Street.

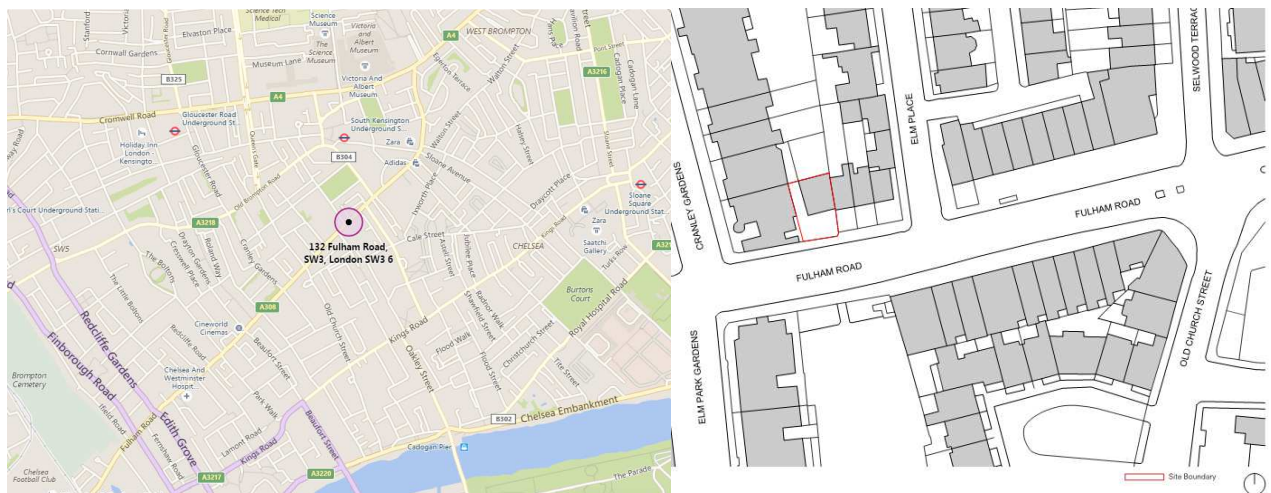


Figure 1: Site Location

5 RBK&C SUDS TOOL REPORT

Appended to this report is the output from our analysis of the SuDs requirements using the SuDs tool made available on the RBK&C website. The results show that we should adopt a rainwater harvesting system that gives a 1.75m³ attenuation volume. This is straightforward to achieve and would have been part of the landscaping design for the rear garden anyway. Section 6 below gives an example of the type of rainwater harvesting system that will be buried in the front garden and connected to the drainage system of the extended property.

6 RAINWATER HARVESTING

Using the results from the RBK&C SuDs tool, see Appendix A, we are to incorporate within the refurbishment and extension of 132bFR a rainwater harvesting system with the volume capacity of 1.75m³.

We propose that this system will be a buried system in the front garden and linked to the drainage of the house. Figure 2 shows an example of the type of system that will be developed during the detail design and incorporated in the scheme. A 2.4x2.4 by 0.65 tank will provide 3000 litres, 3m³.



Technical Data

| Size | Length | Width | Height tank body | Height incl. Entrance shaft | Height pump basin | Weight | Inflow** | Overflow** |
|-------------|--------|--------|------------------|-----------------------------|-------------------|--------|----------|------------|
| 1500 litre* | 2400mm | 1200mm | 650mm | 1015mm | 100mm | 80kg | 330mm | 385mm |
| 3000 litre* | 2400mm | 2400mm | 650mm | 1015mm | 100mm | 170kg | 330mm | 385mm |
| 5000 litre* | 2960mm | 2220mm | 920mm | 1350mm | 100mm | 250kg | 330mm | 385mm |
| 7500 litre* | 3340mm | 2310mm | 1125mm | 1415mm | | 310kg | 325mm | 375mm |

* The useable volume can deviate according to connection variation approx. 10% from the nominal volume ** Top edge shaft extension including lid to invert level

Figure 2: Buried rainwater harvesting system to be used in the front garden

7 CONCLUSION

We have assessed the impact of the proposed extension and refurbishment works on the drainage of 132bFR and will be incorporating a minimum of 1.75m³ rainwater harvesting system in the front garden to satisfy the SuDs requirements set out in the subterranean development policy of Royal Borough of Kensington and Chelsea.

Report Prepared by:



Name Ezio Lauro
For Michael Barclay Partnership LLP

Report Approved by:



Name (Principal) Tony Hayes
Date: 27.09.16

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Appendix A – Small Scale SuDs Tool report for 132b Fulham Road