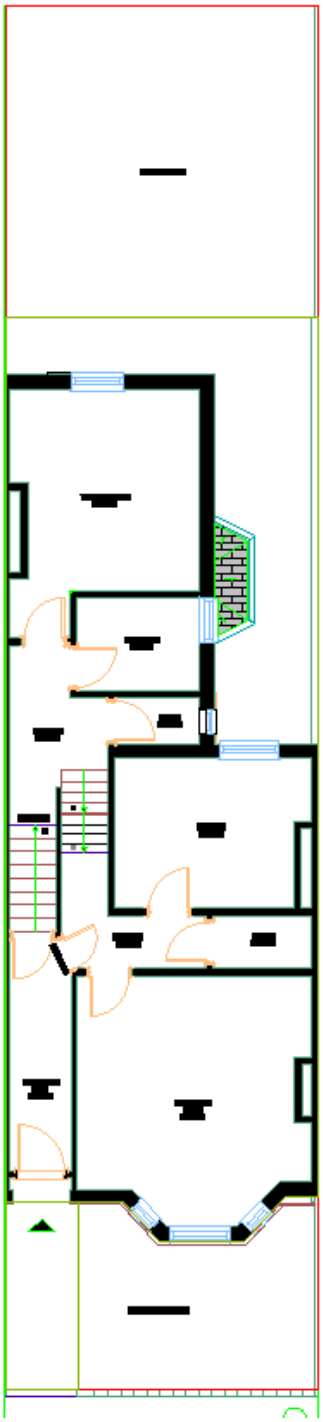
CROFT STRUCTURAL ENGINEERS

EXISTING SITE PLAN



EXISTING AND PROPOSED IMPERMEABLE AREA

Existing site area: 129.3 sqm

Ground and cellar: 83.9 sqm
Front entrance area: 4.03 sqm
Total Existing impermeable area: 87.93 sqm

68 % impermeable area

Rear addition: 9.4 sqm
Front entrance area: 4.03 sqm
Light well: 5.60 sqm
Green roof: -10.01 sqm
Total Proposed impermeable area: 92.92 sqm
Ground and cellar: 83.9 sqm

71 % impermeable area

If the front entrance area is made permeable,
Rear addition: 9.4 sqm
Front entrance area: -4.03 sqm
Light well: 5.60 sqm
Green roof: -10.01 sqm
Total Proposed impermeable area: 92.92 sqm
Ground and cellar: 83.9 sqm

68.7 % impermeable area

DESIGN RAINFALL

Greenfield run-off rates 1/100yr, 6 hour event

DESIGN RAINFALL

In accordance with the Wallingford Procedure

Tedds calculation version 2.0.02

Design rainfall intensity

Location of catchment area		London	
Storm duration	D = **6** hr	Return period	Period = **100** yr
Ratio 60 min to 2 day rainfall		r = **0.440**	Global warming
increase	$p_{climate}$ = **40** %		
Factor Z1	Z1 = **1.53**	5yr return period storm	$M5\_6hr_i$ = **42.8** mm
Factor Z2	Z2 = **1.87**	100 yr return period storm	M100_6hr = **80.0** mm
Design rainfall intensity	I_{max} = **13.3** mm/hr		

ATTENUATION TANK

Total Proposed impermeable area A = 92.92 m^2
Design Rainfall (from calculations above) Imax = 13.3 mm/hr
Volume of Attenuation tank V = 6hr*A*Imax = **7.415** m^3

Depth of tank considered D = 1m
Area of tank required At = V/D = **7.415** m^2
2.75mx2.75mx1m deep tank is required. The water will be discharged into the sewer at a rate of 2 l/s through pump.