

FLOOD RISK ASSESSMENT

**PROJECT: 44 DARTMOUTH PARK ROAD
LONDON
NW5 1SN**

PROJECT NO: 113715/FRA/01

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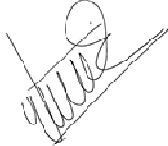

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1. INTRODUCTION

This flood risk assessment has been prepared to accompany the detailed Planning Application for the alterations of the existing detached house and to form a new lower ground floor.

Ordnance Survey Grid Reference:- 528772.781E
186086.740N

Significant and serious flooding in Camden in 1975 was reported on by Building Works Services and Social Services Committee. That report confirmed a storm delivering 170mm of rainfall in 24 hours.

It was noted then that such an event exceeded the sewer capacity by many times.

It was also stated in that document, and subsequent documents that *"...It is impractical to design sewers capable of dealing with the greatest magnitude of storm, therefore there must remain a risk of flooding in certain areas of the Borough"*.

Further significant flooding occurred in 2002 and was reported in London Borough of Camden "Report of the Floods Scrutiny Panel" dated June 2003.

This Flood Risk Assessment is intended to set out measures introduced to mitigate as far as possible all risks related to the risk of flooding in terms of the proposed works.

The Flood Risk Assessment has been produced with reference to the following drawings:-

Peter Stern 370/01	Site survey with building plotted on
Peter Stern 370/02	Lower ground floor plan
Peter Stern 370/03	Ground floor plan
Peter Stern 370/04	First floor plan
Peter Stern 370/05	Second floor plan
Peter Stern 370/06	Attic floor plan
Peter Stern 370/07	Roof plan
Peter Stern 370/08	Section A-A
Peter Stern 370/09	Elevation to Dartmouth Park Road
Peter Stern 370/10	Elevation to York Rise
Peter Stern 370/11	Elevation to garden
Peter Stern 370/12	Elevation to No.46

E.L.S Land Consultants Ltd 2079 site survey

2. FLOOD RISK

Reference to the Environment Agency maps confirms that the property is in Zone 1. This zone is defined and confirmed in the North London Strategic Flood Risk Assessment dated August 2008.

This same document confirms that properties in Camden are not in danger from flooding from the Thames or other open rivers. They are potentially at risk from sewer and surface water flooding, with sewers being subject to “surcharge pressure”.

The proposed development will not significantly alter the existing surface water run off to the public sewers, but instead will have the potential to reduce that run off.

Dartmouth Park Road is defined as being in “Camden North” within “the London Borough of Camden Flood Risk Management Strategy”.

This document states that planning policy shall ensure that new developments are not at flood risk and do not increase it for neighbours.

3. FLOOD RISK ASSESSMENT AND PROPOSALS

Some parts of the Borough of Camden experienced serious floods in 1975 and again in August 2002.

A report was commissioned by Camden to look at the causes and impact of the flooding, entitled “Report of the Floods, Scrutiny Panel” was published in June 2003. This report did not record Dartmouth Park Road as having flooded in 1975 or 2002.

Flooding recorded in other areas of Camden was pluvial (surcharged sewers releasing storm water at ground level) and was the result of summer thunderstorms and the inability of the combined sewers network to cope with the sudden volume of rainfall.

It is reasonable to assume, and was reported, that surcharge pressure in the sewers caused water to be forced up out of manholes and road gullies, with water then flowing above ground within the carriageway.

Both Dartmouth Park Road and York Rise have a gradual gradient away from No.44. The property has a public footway to both boundaries abutting the carriageway. From the topographical survey it can be seen that the level at the back edge of the footway is higher than the kerb line and there is then a further drop to carriageway level of circa 100mm-150mm

Further reference to the topographical survey and the proposed plans confirms that a masonry wall will exist to the whole of both properties to the highway, apart from the front entrance in Dartmouth Park Road and a pedestrian access gate on the York Rise elevation.

It is reasonable therefore to conclude that:-

- a) The proposed works will not alter existing pluvial flood water movement and “sheet flow” can be expected to be contained within the existing kerb lines of the adjacent carriageways.
- b) The proposed works will reduce the run off to the existing drainage infrastructure. The existing rear gardens are, apart from a few very modest borders, wholly concreted over. The proposed works include for complete removal of this concrete and for a domestic soft landscaped garden to be formed in its place.

With no evidence of on site drainage, it is reasonable to suggest that in the event of significant rainfall, the run off either discharges laterally to the carriageway or enters the drainage infrastructure.

The proposed work increases the size of the dwelling footprint. However, the additional area (which is to have an extensive green roof) will occupy an area formerly wholly concreted over and, as such will not increase the discharge to the sewer system for this element of the works, and has the potential to reduce it.

Area of concreted garden to be removed and formed in domestic soft landscaping is circa 60m².

Area of concreted garden removed and replaced with extension having extensive green roof is 30.5m².

- c) The proposed works will not have any adverse effect on the built and natural environment or the neighbouring properties in terms of surface water run-off.

4. FLOOD PROTECTION MEASURES FOR THE DEVELOPMENT

This Flood Risk Assessment looks at measures to minimise the potential for flooding affecting the property and sets out measures considered necessary to achieve that.

The following proposals will be implemented as part of the development:

1. The masonry front and side boundary walls will be maintained and the existing openings in the flank wall to York Rise shall be infilled or modified in such a way as to prevent pluvial water entering onto the site. This may be achieved by raising the threshold by circa 150mm.
2. The step at the pedestrian access in Dartmouth Park Road shall be raised by 150mm with necessary landscape adjustments undertaken on site, or the approach ramped to ensure wheelchair access.
3. The existing concreted garden removed and replaced with domestic soft landscaping.
4. Internal access to the lower ground floor is to be via a fixed stair and this will be maintained at all times.
5. No internal doors at basement level shall be lockable.
6. All electric sockets shall be raised to circa 900mm above lower ground floor level.
7. "Extensive" green roof in compliance with the recommendations made in SUDS documents shall be provided at new first floor level flat roof, equating to approximately 33m².

5. SUMMARY AND CONCLUSIONS

The key conclusions of this Flood Risk Assessment are as follows:

The proposed development falls wholly within Flood Zone 1 and pluvial flood water will not enter the property.

Consideration of residual risks within the property indicate that the development proposal is acceptable.

Below ground drainage proposals can be designed so as not to increase flood risk elsewhere and will utilise a SUDS based drainage strategy for the site (removal of existing impermeable surfaces).

Living roofs (Extensive Green Roofs) are proposed to be incorporated in the development.

The occupants of the property will not be vulnerable and can safely access and egress the lower ground floor areas.

Other possible sources of flooding have been considered and the site has been shown not to be vulnerable to flooding from sheet flow or sewer surcharging and other flooding.



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