Three Counties Flood Risk Assessment

MARGARET'S COTTAGE SANDHURST GLOUCESTER GL2 9NP TEL/ 01452 730818 email: david@three-counties-flood-risk-assessment.co.uk

FLOOD RISK ASSESSMENT

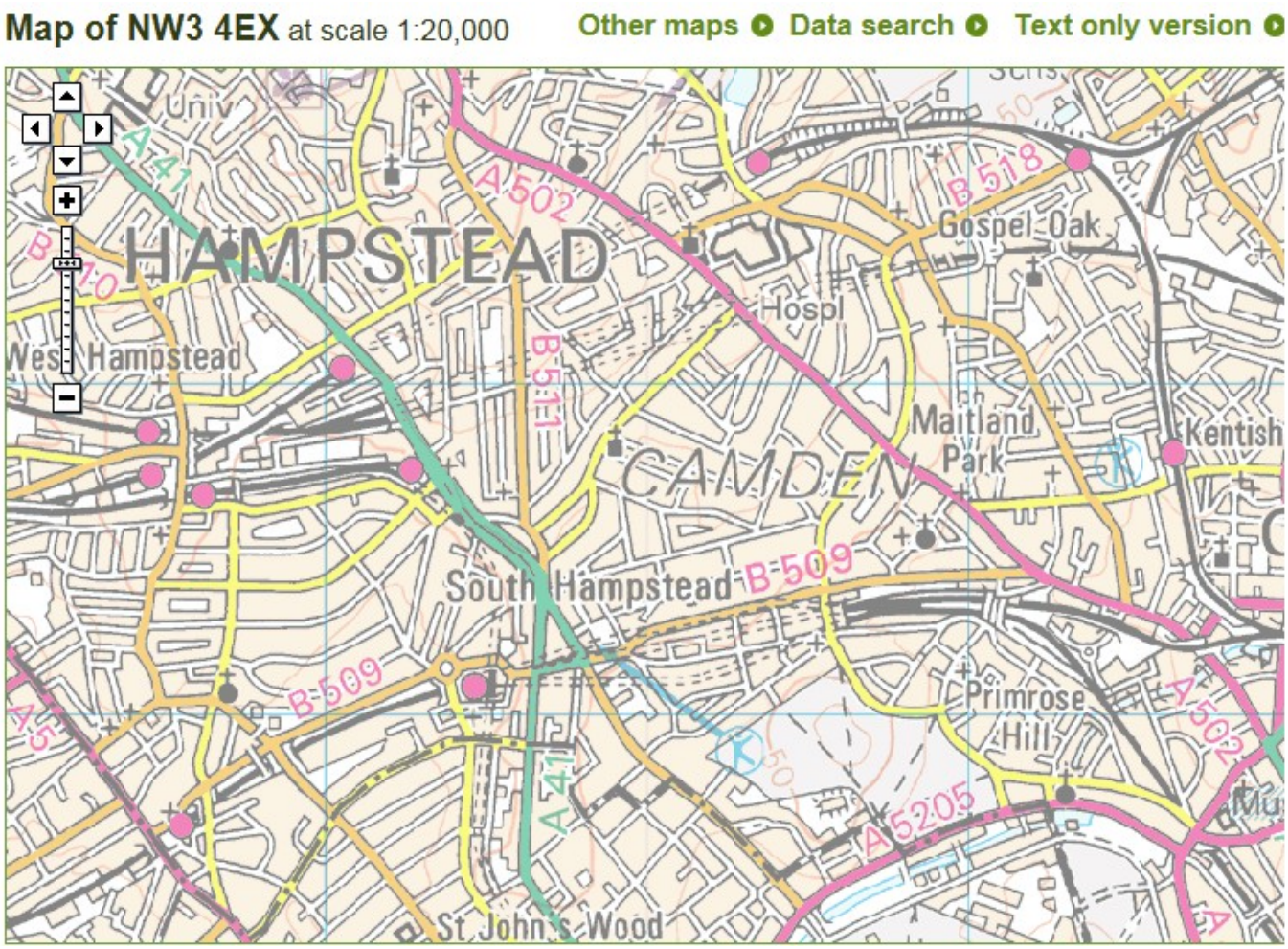
Proposed Development at :

5-7 Lancaster Grove London NW3 4HE

Dated: 2 October 2014

Geographical Location

ENVIRONMENT AGENCY FLOOD MAPPING .



SITE LIES IN FLOOD ZONE 1 .

Proposed demolition of existing house to be replaced by a new dwelling including a basement at 5-7 Lancaster Grove Belsize Park London NW3 4HE

Flood Risk Assessment/Desk Top Study .

This study report is prepared to accompany a planning application with regard to the above . Detailed plans are provided within the application . This report works to criteria within the National Planning Policy Framework(NPPF) and its practice Guidance Notes . The NPPF directs that all forms of authenticated mapping should be used in a flood risk assessment

The existing property is without a basement so the proposed basement and lower ground floor are new departures in this respect . A basement impact assessment has been prepared by the applicant so this report deals with flood risk only .

The basement has two flats a plant room and a storage area . The flats are not self contained as they have access to the floors above by an internal stairway.This complies with the NPPF and the guidelines within the local authority Strategic Flood Risk Assessment (SFRA)

As can be seen by the Environment Agency (EA) Flood Mapping above the site lies in Flood Zone 1 from fluvial sources and this is confirmed in the Camden SFRA.

Other sources of flooding have to be considered such as groundwater , surface water , sewer discharge and reservoir threat .

It is reported in the Camden Surface Water Management study that surface water is the chief source of flooding within the Borough .It also states , however, that flooding is rare in Camden but when it does happen it can be severe ,

A Flood Risk Management Strategy has been created by the Borough to decrease both the probability and impact of flooding but the borough warns it could still happen and exhorts stakeholders to make their contribution to limit the effects .

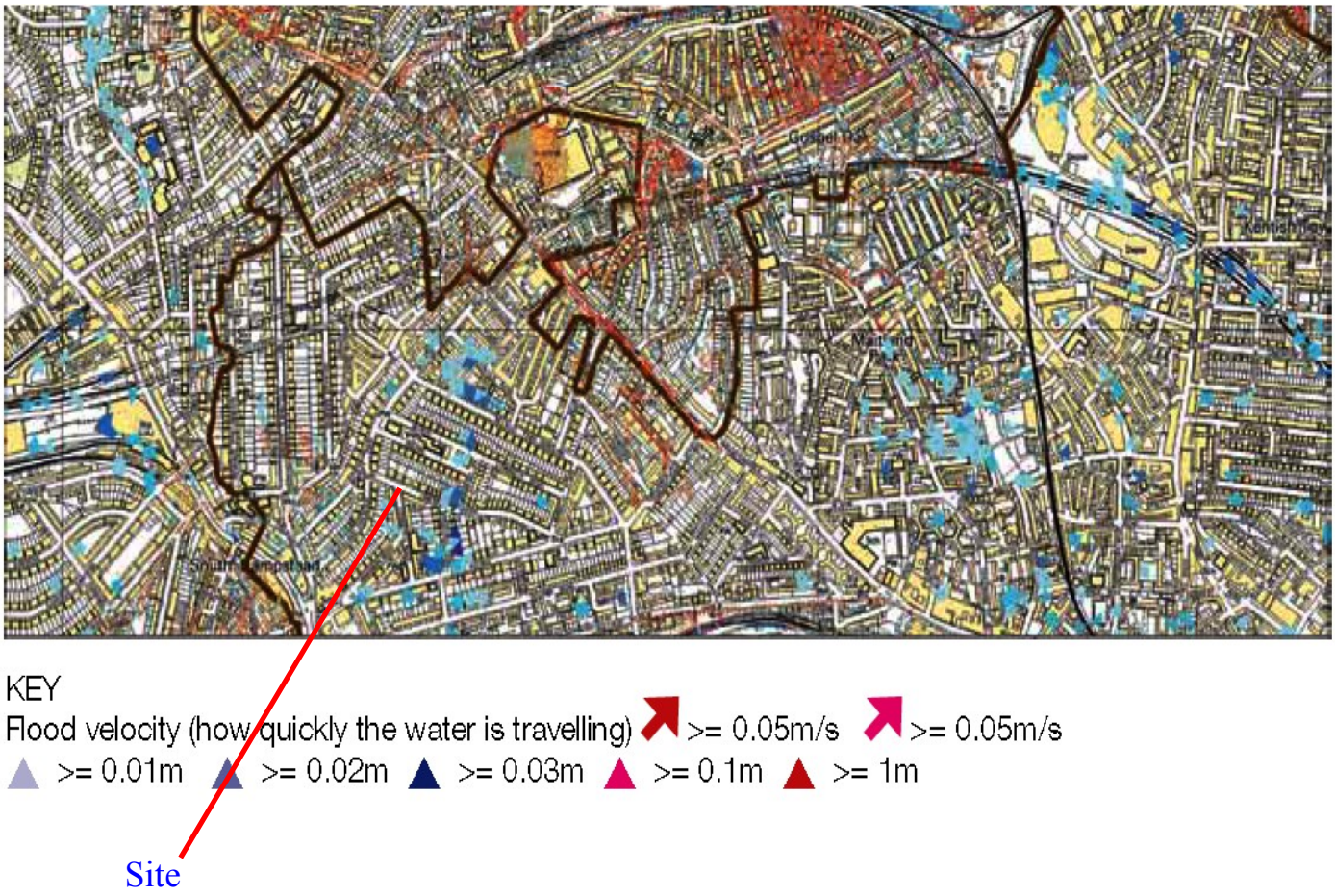
History of Flooding

There have been two incidents of severe flooding in Camden due to storm deluge . These were in 1975 and 2002 . There is no record of flooding in 2007 when the country was hit by the worst storm on record . It has been referred to as the “great flood” and was the worst event since records began . It is recorded in the SFRA that Camden escaped the worst of the storm and so was not effected .

In both the incidents on record the capacity of road drains, gullies , and sewers were unable

to cope with the storm water and flooding was caused to residential and commercial properties .

The site under assessment in Lancaster Grove is not shown to be in an area that was susceptible to surface water flooding as in the mapping below

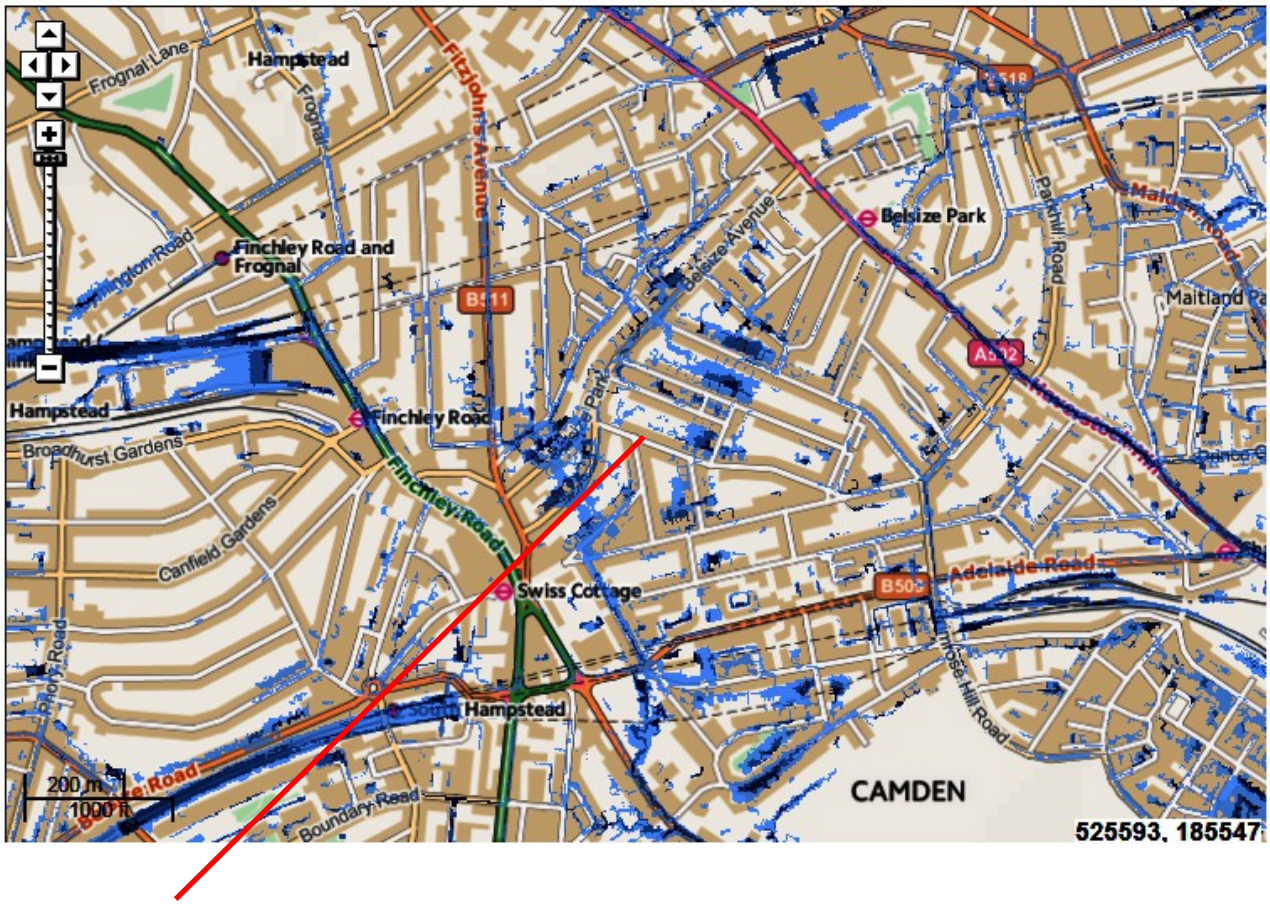


The site is not shown in an area with a recorded history of surface water flooding .Hence it would not be affected by any velocity of water .

More accurate surface water mapping showing depths has been created by the EA more recently

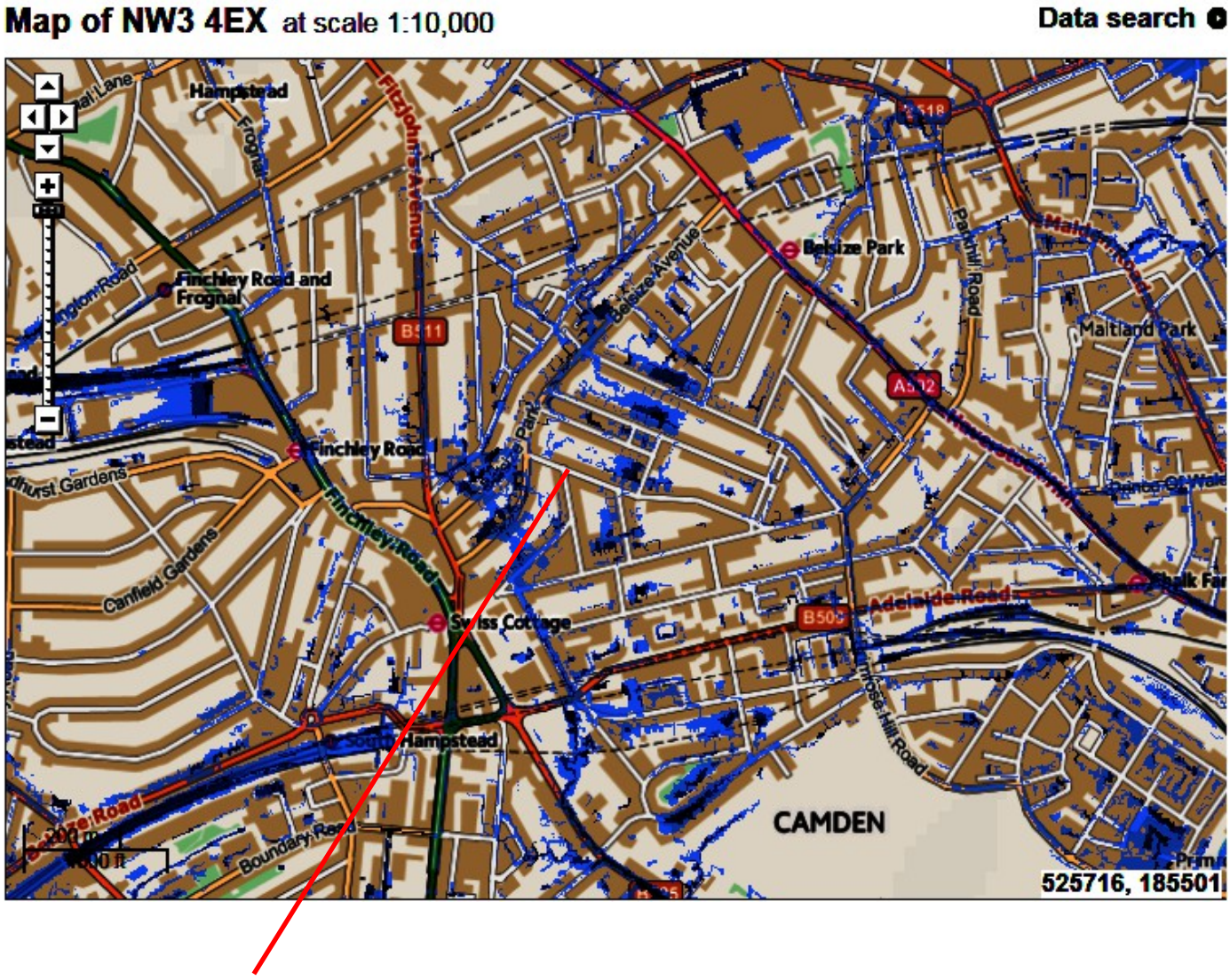
This is shown below .

Map of NW3 4HE at scale 1:10,000 **Data search**



The site in Lancaster Grove itself is shown not to be susceptible to surface water flooding. The official EA legend says the threat of surface water flooding is “very low” There is however an area to the East of the road which shows medium risk of flooding .

The mapping also shows the chances of flooding from surface water (see mapping below)



There is a facility within this mapping to click on areas of interest to get a read out on the flood threat .

By clicking on Lancaster Grove itself the reading is “very low”

By clicking on the flood area to the North of Lancaster Grove the reading is “medium”

It is considered that the net result of all this mapping is to show that although the road lies in what would be generally described as a critical drainage area the chances of a major flood are not shown to be a threat . Over a wider catchment of course there are areas which stand a far greater possibility of being flooded to significance levels.

Road Flooding

There is mapping within the SFRA showing roads that flooded in 2002 . The report states

that the majority of the road flooding was in the NW2 and NW6 post code areas but there was also flooding in parts of the NW3 area . Unfortunately the mapping is too indistinct for accurate assessment to be made as to exactly where this took place.

Road flooding in itself is not necessarily the prime cause of surface water flooding in that there are receptor drains in the roads to take the surface water . However it has to be accepted that blocked drains can cause overspilling of the pavement .

It has to be pointed out that there is no record of Lancaster Road flooding in the area of the site under assessment during the time surface water was created by the two storms . It has no history of flooding from any other source so there would be no flood conditions to affect safe ingress/egress.

Groundwater

The SFRA states that the risk from this source is low . EA mapping indicates that there is no history of groundwater problems in the Camden area .

Local sources

There are sources of possible localised threat . One is the Regents Canal which poses a very low risk . Another is the Maiden Lane Reservoir in Islington . The owners , Thames water considers the risk from this source as low .

The Hampstead Heath Ponds do have the capacity to be a threat to life in breach conditions . There is however a specific on-site emergency plan covering any breach , further works on an ongoing basis are being carried to reduce the risk and it is stated in the SFRA that any threat from this source is unlikely .

Sewer discharge

This has occurred in the two main storms events as mentioned in this report but there is no record of significant discharges affecting the area during every day usage.

Sustainable Drainage

This is of great importance to the country as a whole with regard to development projects , as detailed within the NPPF and the EA guidelines . It is considered imperative to consider ways of improving on site run off by the use of SuDs techniques – especially in critical drainage areas .

There are a number of ways of doing this using SuDs and the aim is to decrease the rate of run off or to make sure that there is no increase in the rate from that existing . It is essential that this is considered in this project and it is recommended that this be made a matter of condition within the planning permission .

Again the basement impact assessment will play a part in the detailed analysis .

Off-site Implications

With the measures as recommended above there will be no implications for adjoining properties.

Conclusion

It is accepted within the SFRA that generally surface water flooding is not a problem in the Camden area. However extreme storm events have proved that the drainage system can be overwhelmed . Actions are taking place to address this but climate change and global warming also have to be taken into consideration .

However one can only go on current events . The methodology behind future events is rather like looking into a crystal ball which can be blurred by calculations based on surmise and assumption of what's to come.

The mapping within this FRA has shown that even in the major storms of 1975 and 2002 no houses were flooded in this immediate area of assessment and there is no record of the proposed development having been affected although there was flooding to the |East of Lancaster Grove .

The Borough of Camden is also on record as saying that major infra-structure requirements are being lined up to decrease the threat of surface water flooding so that augurs well for the future.

There is ,however, a responsibility on developers to make their contribution to easing flood problems including surface water in critical drainage areas.

This is why recommend that a SuDs regime should be made a matter of condition within the planning permission for detailed examination .

Lancaster Grove is not within a fluvial flood zone .

On all the evidence available to hand Lancaster Grove is considered to be at “very low” risk of flooding from surface water as detailed within the mapping produced within this study report . All the authentic mapping has been considered as directed within the NPPF and this confirms our conclusion that the threat to the proposed development would be very low .

The proposed development is considered appropriate within all the criteria .

P.P.Fearnside FICE 2nd October 2014