

FLOOD RISK ASSESSMENT

Site Address

18 Woodville Gardens

Ruislip

HA4 7ND

Client

Yvonne Stansfield

Date

22/05/2018



**CONSULTING GEO-ENVIRONMENTAL
ENGINEERS AND SCIENTISTS**

Phase 1 Contaminated Land Desk Studies, Geo-Environmental Site Investigations, Environmental Due Diligence, Flood Risk Assessments, Surface Water Management Strategies (SuDS), Ecology, Noise and Air Quality Assessments, Environmental Management Systems, GIS & Data Management Systems

Document Control



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1 Abbreviations

Abbreviation	Description
STM	STM Environmental Consultants Limited
BGS	British Geological Survey
EA	Environment Agency
OS	Ordnance Survey of Great Britain
FRA	Flood Risk Assessment
NPPF	National Planning Policy Framework
FWD	Floodline Warning Direct
FRMS	Flood Risk Management Strategy
GLA	Greater London Authority
HLB	Hillingdon London Borough
SWMP	Surface Water Management Plan
SFRA	Strategic Flood Risk Assessment
CDA	Critical Drainage Area
SuDS	Sustainable Drainage Systems
GWSPZ	Groundwater Source Protection Zone
LLFA	Lead Local Flood Authority
mbgl	metres below ground level
DCLG	Department for Communities and Local Government
PPGPS	Planning practice guidance and Planning system

2 Disclaimer

This report and any information or advice which it contains, is provided by STM Environmental Consultants Ltd (STM) and is solely for use by Yvonne Stansfield (Client).

STM has exercised such professional skill, care and diligence as may reasonably be expected of a properly qualified and competent consultant when undertaking works of this nature. However, STM gives no warranty, representation or assurance as to the accuracy or completeness of any information, assessments or evaluations presented within this report. Furthermore, STM accepts no liability whatsoever for any loss or damage arising from the interpretation or use of the information contained within this report. Any party using or placing reliance upon any information contained in this report, do so at their own risk.

3 Executive Summary

Location	18 Woodville Gardens Ruislip HA4 7ND Grid reference: 508304, 187711
Proposed Development	The planning application is for part two storey, part single storey side/rear extension.
Flood Zone	The property development lies within Flood Zone 3b.
Sequential and Exception Tests	Development is minor and More Vulnerable. Therefore, the Sequential and Exception Tests should not be required due to development compensation. LLFA to decide.
Main Sources of Flooding	The main sources of flooding are the River Pinn and surface water ponding.
Flood Defences	High ground is situated just North of the site along the banks of the River Pinn.
Records of Historic Flooding	The site was last impacted by flooding in 1977.
Fluvial (River) and Tidal (Sea) Flood Risk	High – However, the site benefits from flood defences; No recent significant fluvial flooding incidents identified. Site is within the functional flood plain.
Pluvial (Surface Water) Flood Risk	Low – No significant surface water and sewer flooding incidents identified.
Flood Risk from Artificial (Canals and Reservoirs) Sources	Medium – The site is at risk of reservoir flooding from the Ruislip Lido.
Groundwater Flood Risk	Low – The site is not thought to be susceptible to groundwater flooding; No recorded incidents have been identified, however groundwater table is thought to be at less than 3mgl.
Development Impacts on Local Flood Risk	The development is external. However, existing concrete structures will be demolished in order to offset the volume loss due to the new extension. As such it is unlikely to increase local flood risk.
Proposed Flood Risk Mitigation Measures	- Finished floor levels will be set no lower than existing ground floor levels; - Flood compensation storage will be provided demolishing existing concrete structures on site; - Construction will utilise flood resistant materials and services will be placed as high as practicable to reduce impact of flooding; - Occupants will sign up for EA Emergency Flood Warning Direct Service; - Safe egress to Flood Zone 1 is a 1-minute walk away and safe refuge is available on upper floors using internal staircase.
Surface Water Management (SuDS)	SuDS would reduce current surface water run-off rates, however, given the small size of the site (280m ²), there is limited potential for implementation. Consideration should be given to soakaways, green roofs, rainwater harvesting and permeable paving where possible.

Conclusions	Although the site is within Flood Zone 3b (functional flood plain) it is considered to be at Medium overall risk of flooding. There are reports of previous flooding that impacted the site in 1977. However, they did not impact the property. No other records of fluvial, tidal, groundwater or surface water flooding incidents were found. As the proposed development will provide storage compensation by demolishing existing structures on site, it will likely reduce local flood risk. The situation can be improved further with the implementation of SuDS measures. A detailed surface water strategy is going to be prepared upon approval from the Local Authority.
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4 Introduction

STM Environmental Consultants Limited (STM) has been appointed by Yvonne Stansfield (Client) to provide a Flood Risk Assessment (FRA) at a site located at 18 Woodville Gardens, Ruislip, HA4 7ND.

5 Development Proposal

The FRA is required to support a planning application development for a part two storey, part single storey side/rear extension. The planning application 42132/APP/2017/2018 was refused. The decision Notice is available in [Appendix 13](#).

The refusal condition one states:

“The proposal fails to demonstrate this development should be sited in an area with a high probability of flooding and that flood risk is suitably mitigated and is therefore contrary to Policy EM6 of the Hillingdon Local Plan: Part One - Strategic Policies (November 2012), Policies OE7 and OE8 of the Hillingdon Local Plan: Part Two - Saved UDP Policies (November 2012) Policy 5.12 of The London Plan (2016), the National Planning Policy Framework (March 2012) and the Planning Practice Guidance (March 2014)”.

Further details including drawings of the development plans are available in [Appendix 2](#).

6 Report Aims and Objectives

The purpose of this report is to establish the flood risk to the site from all potential sources and, where possible, to propose suitable mitigation methods to reduce any risks to an acceptable level. It aims to make an assessment of whether the development will be safe for its lifetime, taking into account climate change and the vulnerability of its users, without increasing flood risk elsewhere.

The FRA assesses flood risk to the site from tidal, fluvial, surface water, groundwater, sewers and artificial sources. The FRA has been produced in accordance with the National Planning Policy Framework (NPPF) and its supporting guidance.

7 Summary of Data Review Undertaken

The following research has been undertaken as part of the FRA:

-  Desktop assessment of topographical, hydrological and hydrogeological settings through review of the information sourced from the British Geological Survey (BGS), the Environment Agency (EA) and the Ordnance Survey (OS);
-  Review of publicly available flood risk mapping provided by the EA;
-  Review of the Preliminary Flood Risk Assessment (PFRA) and Level 1 Strategic Flood Risk Assessment (SFRA) produced by the LLFA outlining flood risk from various sources within the borough.

8 Legislative and Policy Context

8.1 Legislative Context

The Flood and Water Management Act was introduced in 2010. The Act defines the role of lead local flood authority (LLFA) for an area. All LLFA are required to develop, maintain, apply and monitor a strategy for local flood risk management in its area, called “local flood risk management strategy”.

Alongside the Act, Flood Risk Regulations (2009) outline the roles and responsibilities of the various authorities, which include preparing Flood Risk Management Plans and identifying how significant flood risks are to be mitigated.

8.2 Policy Context

8.2.1 National Planning Policy Framework (NPPF)

The NPPF sets out the government's planning policies for England and how these are expected to be applied. It also provides a set of guidelines and philosophy with which local planning authorities (LPAs) can build their own unique policies to appropriately regulate development within their jurisdictions.

Section 10 entitled "Meeting the challenge of climate change, flooding and coastal change" deals specifically with flood risk. Among other things it states that LPAs should try to ensure that "inappropriate development in areas at risk of flooding is avoided by directing development away from areas at highest risk, but where development is necessary, making it safe without increasing flood risk elsewhere". It further states that when determining planning applications, LPAs should "only consider development appropriate in areas at risk of flooding where, informed by a site-specific flood risk assessment following the Sequential Test, and if required the Exception Test, it can be demonstrated that:

-  within the site, the most vulnerable development is located in areas of lowest flood risk unless there are overriding reasons to prefer a different location; and
-  development is appropriately flood resilient and resistant, including safe access and escape routes where required, and that any residual risk can be safely managed, including by emergency planning; and it gives priority to the use of sustainable drainage systems.

Applications for minor development and changes of use should not be subject to the Sequential or Exception Tests but should still meet the requirements for site-specific flood risk assessments.

The NPPF also lays out requirements for how LPAs should deal with planning applications in coastal areas. They should ensure that should they "reduce risk from coastal change by avoiding inappropriate development in vulnerable areas or adding to the impacts of physical changes to the coast."

Developments in Coastal Change Management Areas should only be considered appropriate where it is demonstrated that:

- it will be safe over its planned lifetime and will not have an unacceptable impact on coastal change;
- the character of the coast including designations is not compromised;
- the development provides wider sustainability benefits; and
- the development does not hinder the creation and maintenance of a continuous signed and managed route around the coast.

8.2.2 Local Planning Policy

The key policy information that is in force within the London Borough of Hillingdon with regards to flood risk and development are policies EM6 of the Hillingdon Local Plan: Part One- Strategic Policies (November 2012) Policy OE7 of the Hillingdon Local Plan: Part Two - Saved UDP Policies (November 2012).

Policy EM6 states that the Council will require new development to be directed away from Flood Zones 2 and 3 in accordance with the principles of the National Planning Policy Framework (NPPF). The subsequent Hillingdon Local Plan: Part 2 - Site Specific Allocations LDD will be subjected to the Sequential Test in accordance with the NPPF.

Sites will only be allocated within Flood Zones 2 or 3 where there are overriding issues that outweigh flood risk. In these instances, policy criteria will be set requiring future applicants of these sites to demonstrate that flood risk can be suitably mitigated. The Council will require all development across the borough to use sustainable urban drainage systems (SUDS) unless demonstrated that it is not viable.

The Council will encourage SUDS to be linked to water efficiency methods. The Council may require developer contributions to guarantee the long-term maintenance and performance of SUDS is to an appropriate standard.

The above policies are the reasons for refusal of the original planning application.

8.3 EA Standing Advice on Flood Risk

The Environment Agency's [standing advice](#) lays out the process that must be followed when carrying out flood risk assessments for developments.

Flood risk assessments are required for developments within one of the flood zones. This includes developments:

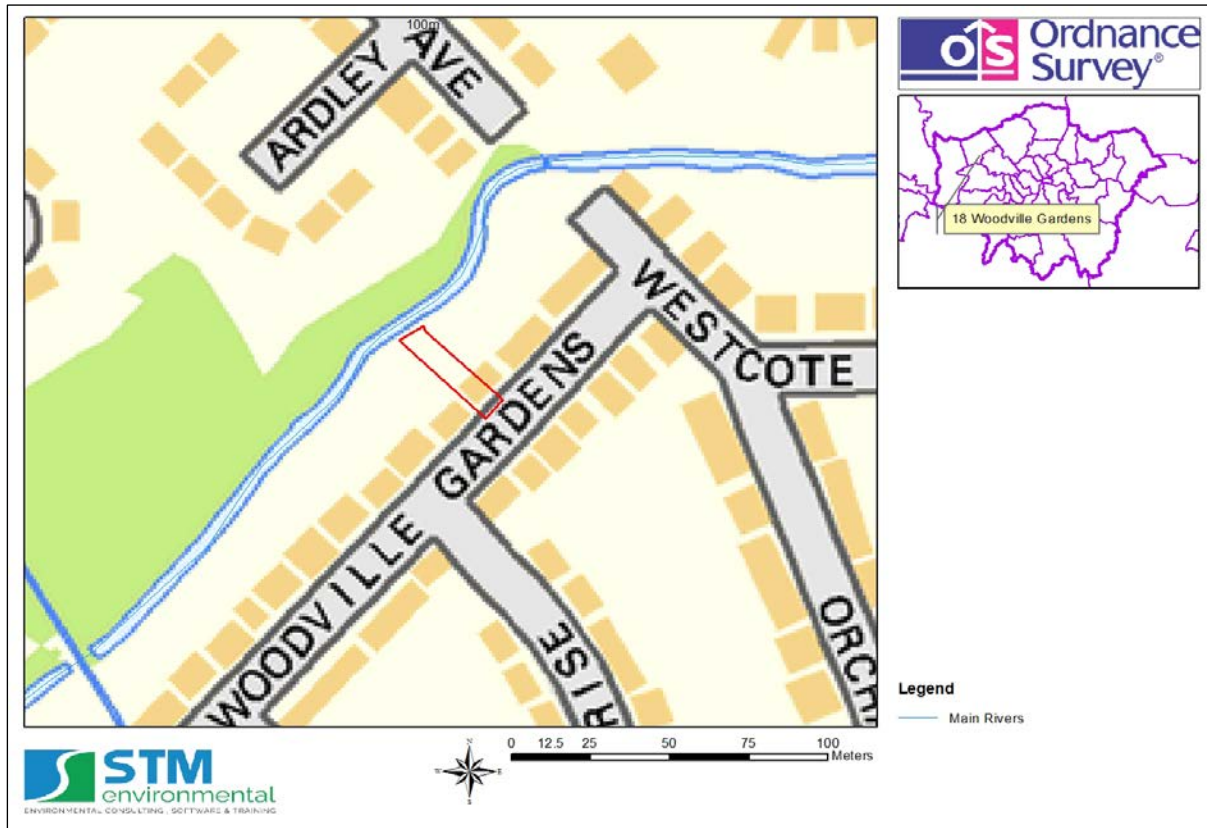
-  in flood zone 2 or 3 including minor development and change of use more than 1 hectare (ha) in flood zone 1
-  less than 1 ha in flood zone 1, including a change of use in development type to a more vulnerable class (for example from commercial to residential), where they could be affected by sources of flooding other than rivers and the sea (for example surface water drains, reservoirs)
-  in an area within flood zone 1 which has critical drainage problems as notified by the Environment Agency

9 Site Description and Environmental Characteristics

9.1 Site Location and Area

The site is located at 18 Woodville Gardens, Ruislip, HA4 7ND. It is centred at national grid reference 508304, 187711. The site has an area of approximately 280m².

A site location map and aerial photo are shown below. Photographs of the site are available in [Appendix 1](#).



9.2 Site Access

The site is accessed via Woodville Gardens.

9.3 Local Planning Authority

The site falls within the jurisdiction of Hillingdon London Borough Council in terms of the planning process.

9.4 Lead Local Flood Authority

Hillingdon London Borough Council is also the Lead Local Flood Authority (LLFA).

9.5 Flood Zone

For planning purposes, the site is located in Flood Zone 3b (Functional Flood Plain) as defined by the EA and LLFA. Mapping taken from LBH [website](#), shows the Flood Zones and potential Surface water flood areas. This map is available in [Appendix 5](#).

9.6 Site and Surrounding Land Uses

9.6.1 Site Current Land Use

The site is currently used as a single residential dwelling with a rear garden and side driveway.

9.6.2 Surrounding Land Uses

A description of current land uses surrounding the boundaries of the site is given below in Table 1 below.

Table 1: Summary of surrounding land uses

Boundary	Land Use Description	
	Immediately Adjacent (within 0 – 25m)	General Local Area (i.e. within 25 - 250m)
Northern	River Pinn / Residential Housing	Residential
Eastern	Residential	Residential
Southern	Residential	Residential
Western	River Pinn / Woodlands	Residential / Fields

9.7 Hydrology

The nearest main watercourse is the River Pinn which runs less than 5m away along the Northern boundary of 18 Woodville Garden's garden.

The River Pinn is 20km long and rises in the neighbouring Borough of Harrow before passing into Hillingdon where it flows through Ruislip, Ascote, Uxbridge and Yiewsley. The River Pinn joins the Frays River at Yiewsley forming a tributary of the River Colne. The Pinn is part of a very fast-responding catchment that requires maintenance by the Environment Agency as vegetation has a strong effect on flows and levels. The River Pinn is also vulnerable to erosion along its banks. The Lower Pinn catchment is steep, highly urbanised and prone to short duration flooding caused by intense rainfall events between 1 in 5 and 1 in 30 years at various locations along the watercourse (Lower Pinn Flood Risk Management Review, Inception Report, EA, 2006).

9.8 Geology

Data from the British Geological Survey indicates that the underlying bedrock geology is characterized as Lambeth Group. Alluvium is identified in the Northern most part of the site; no other superficial geology was identified. Copies of the maps are available in [Appendix 3](#).

9.9 Hydrogeology

The site lays upon a Secondary A bedrock aquifer. [Appendix 3](#) provides BGS mapping showing the hydrogeology at the site location.

9.10 Topography

The site ground levels range from approximately 40.3mAOD to 39.3mAOD along the South – North direction. A LIDAR map showing the topology of the site and surrounding area is available in [Appendix 3](#).

A topographic survey has not been conducted.

10 The Sequential and Exception Tests

10.1 The Sequential Test

The Sequential Test aims to steer developments and redevelopments to areas of lower flood risk. The test compares the proposed development site with other available sites, in terms of flood risk, to aid the steering process. The Sequential Test is not required if the proposed development is a minor development or if it involves a change of use unless the development is a caravan, camping chalet, mobile home or park home site.

Minor development means:

-  minor non-residential extensions: industrial/commercial/leisure etc extensions with a footprint less than 250 square metres.
-  alterations: development that does not increase the size of buildings eg alterations to external appearance.
-  householder development: For example; sheds, garages, games rooms etc within the curtilage of the existing dwelling, in addition to physical extensions to the existing dwelling itself. This definition excludes any proposed development that would create a separate dwelling within the curtilage of the existing dwelling eg subdivision of houses into flats.

The development is considered to be minor and as such the Sequential Test should not be required by the LLFA.

10.2 The Exception Test

If alternative sites of lower flood risk are not available then the proposed development may require an Exception Test to be granted planning permission. Where the exception test is required, it should be applied as soon as possible to all local development document allocations for developments and all planning applications other than for minor developments. All three elements of the exception test have to be passed before development is allocated or permitted. For the exception test to be passed:

-  It must demonstrate that the development provides wider sustainability benefits to the community that outweigh the flood risk, informed by an SFRA, where one has been prepared;
-  The development should be on developed land or on previously developed land;
-  A flood risk assessment must demonstrate that the development will be safe without increasing flood risk elsewhere, and where possible will reduce the overall flood risk.

The requirements for an Exception Test are given in Table 2 and are defined in terms of Flood Zone and development vulnerability classification.

Table 2: NPPF flood zone vulnerability compatibility (source: NPPF).

Flood Zones	Flood Risk Vulnerability Classification				
	Essential infrastructure	Highly vulnerable	More vulnerable	Less vulnerable	Water compatible
Zone 1	✓	✓	✓	✓	✓
Zone 2	✓	Exception Test required	✓	✓	✓
Zone 3a	Exception Test required	X	Exception Test required	✓	✓
Zone 3b	Exception Test required	X	X	X	✓

Key:

✓ Development is appropriate

X Development should not be permitted.

As the development is a household extension, it can be considered to be “more vulnerable” and would normally not be permitted in Flood Zone 3b. However as stated in the SFRA, development can be permitted if the increase in built footprint can be adequately compensated and the development is shown to be safe for its users, without increasing flood risk elsewhere, for the lifetime of the development.

11 Site Specific Flood Risk Analysis

The PFRA and Level 1 SFRA produced by the LLFA and maps from the EA provide information regarding historic flooding events and incidents as well as predictions of flood extents and depths during extreme rainfall events.

11.1 Fluvial (River) and Tidal (Sea) Flood Risk

11.1.1 Mechanisms for Fluvial Flooding

Fluvial, or river flooding, occurs when excessive rainfall over an extended period of time or heavy snow melt causes a river to exceed its capacity. The damage from a fluvial flood can be widespread as the overflow may affect downstream tributaries, overtopping defences and flooding nearby inhabited areas. Fluvial flooding consists of two main types:

-  Overbank flooding – this occurs when water rises steadily and overflows over the edges of a river or stream.
-  Flash flooding – this is characterized by an intense, high velocity torrent of water that occurs in an existing river channel with little to no notice. Flash floods are very dangerous and destructive not only because of the force of the water, but also the hurtling debris that is often swept up in the flow.

11.1.2 Definition of EA Modelled Fluvial Flood Risk Zones

Fluvial flood risk is assessed using flooding maps produced by the Environment Agency. These maps use available historic data and hydraulic modelling to define zones of flood risk. The maps allow a site to be defined in terms of its flood zone (e.g. 1, 2, 3) and in terms of the overall flood risk (very low, low, medium or high). It is important to note that existing flood defences are not taken into account within the models or the maps. The EA fluvial flood zones are defined as follows:

-  Flood zone 1: Less than 1 in 1000 (0.1%) annual probability of flooding;
-  Flood zone 2: Between 1 in 100 and 1 in 1000 annual probability of flooding;
-  Flood zone 3 - Greater than 1 in 100 annual probability of fluvial flooding.

Flood zone 3 is split into two sub-categories (3a and 3b) by LLFAs depending on whether the land is considered to be a functional flood plain (i.e. an important storage area for flood waters in extreme events).

-  Flood zone 3a: Greater than 1 in 100 annual probability of fluvial flooding and/or greater than 1 in 200 annual probability of tidal flooding;
-  Flood zone 3b: functional flood plain (definition specific to the LLFA). Less than 1 in 20 annual probability of fluvial and/or tidal flooding;

11.1.3 Main Potential Sources of Local Fluvial Flooding

The nearest potential source of fluvial flooding to the site is considered to be the River Pinn.

11.1.4 Records of Historic Fluvial Flooding Incidents

The EA's historic and recorded flood outline maps show the locations and extents of historic flooding. These maps indicate that there has been historic flooding at or in the vicinity of the site. Copies of the maps at the site location are available in [Appendix 4](#). The site was impacted by fluvial flooding in 1977.

11.1.5 Designated Fluvial Flood Risk Zone for the Site

The site is considered to be located within Flood Zone 3b as defined by the Environment Agency and the LLFA indicating that overall it has less than 1 in 20 annual probability of fluvial flooding.

11.1.6 Mechanisms for Tidal Flooding

Tidal flooding may be described simply as the inundation of low lying coastal areas by the sea, or the overtopping or breaching of sea defences. Tidal flooding may be caused by seasonal high tides, storm surges and where increase in water level above the astronomical tide level is created by strong on shore winds or by storm driven wave action.

11.1.7 Definition of EA Tidal Flood Risk Zones

As with fluvial flood risk, tidal flood risk is assessed using flooding maps produced by the Environment Agency. The difference is in the probability return periods used to define tidal flood zones. The EA tidal flood zones are defined as:

-  Flood zone 1: Less than 1 in 1000 (0.1%) annual probability of flooding;
-  Flood zone 2: Between 1 in 200 and 1 in 1000 annual probability of tidal flooding;
-  Flood zone 3 - Greater 1 in 200 annual probability of tidal flooding;

11.1.8 Potential Sources of Tidal Flooding

The area in which the site is located is considered unlikely to be affected by tidal flooding. The site does not lie within the Tidal Flood Warning area as defined by the LLFA SFRA.

11.1.9 Flood Defences

The EA's Areas benefitting from flood defences and current flood defences map which is available in [Appendix 7](#) shows that the site benefits from flood defences in the form of high ground just north of the site boundary along the River Pinn.

11.1.10 Climate Change - EA Modelled Predictions of Fluvial and Tidal Flood Levels and Extents

The EA Product 4 dataset which is presented in [Appendix 10](#) provides modelled flood levels and flows for model node points close to the site.

The closest modelled node to the site is P231in1. The results for this node are found in Table 3 below. Full results are available in [Appendix 10](#).

Table 3: EA modelled flood levels and expected flood depths for different return periods and scenarios.

			Return Period										
Node	Easting	Northing	2yr	5yr	10yr	20yr	30yr	50yr	75yr	100yr	100yr+20%	250yr	1000yr
P231in1	508294	187733	39.55	39.75	39.87	39.95	39.98	40.06	40.12	40.16	40.38	40.30	41.02

The modelling data available indicates that the site would be impacted during all the events. The flood extent on site is in general constricted to the garden in the modelled scenarios.

The modelled data in the 1 in 2yr to 1 in 30yr return periods indicates that the flooding will be restricted to the garden and will not reach the property.

Modelling predicts that from the 1 in 50yr flood event, part of the dwelling will potentially be impacted. During the 1 in 100-year event + 20% CC, flood levels will be up to 40.31mAOD within the property (See Flood Levels Map across the property in [Appendix 10](#)).

It is important to note that the modelling conducted on the River Pinn by JBA in 2015 is designed for catchment wide flood risk mapping and not to produce flood levels for specific development. Therefore, flood levels might be inaccurate.

11.1.11 Long Term Fluvial Flood Risk Considering Flood Defences

The EA's [long term flood risk maps](#) give an indication of the actual risk associated with flooding after taking into account the effect of any flood defences in the area. Copies of maps for the site which are available in [Appendix 8](#) indicate that the long-term risk from fluvial flooding to the site is High.

11.2 Pluvial (Surface Water) Flood Risk

A pluvial, or surface water flood, is caused when heavy rainfall creates a flood event independent of an overflowing water body. Surface water flooding occurs when high

intensity rainfall leads to run-off which flows over the ground surface, causing ponding in low-lying areas when the precipitation rate or overland flow rate is greater than the rate of infiltration, or return into watercourses. Surface water flooding can be exacerbated when the underlying soil and geology is saturated (as a result of prolonged precipitation or a high water table) or when the drainage network has insufficient capacity.

11.2.1 Mechanisms of Pluvial Flooding

The chief mechanisms for surface water flooding can be divided into the following categories:

-  Runoff from higher topography;
-  Localised surface water runoff – as a result of localised ponding of surface water;
-  Sewer Flooding – areas where extensive and deep surface water flooding is likely to be influenced by sewer flooding. Where the sewer network has reached capacity, and surcharged, this will exacerbate the flood risk in these areas;
-  Low Lying Areas – areas such as underpasses, subways and lowered roads beneath railway lines are more susceptible to surface water flooding;
-  Railway Cuttings – railway infrastructure cut into the natural geological formations can cause extra surface run off and pooling disrupting service and potentially affecting adjacent structures;
-  Railway Embankments – discrete surface water flooding locations along the up-stream side of the raised network rail embankments where water flows are interrupted and ponding can occur.
-  Failure of artificial sources (i.e. man-made structures) such as such as canals and reservoirs.

11.2.2 Main Potential Sources of Local Pluvial Flooding

The main potential source of fluvial flooding to the site is considered to be surface water ponding.

11.2.3 Records of Historic Pluvial Flooding Incidents

Examination of the LLFAs Level 1 SFRA & PFRA revealed no evidence of pluvial flooding incidents at or in the vicinity of the site.

A map showing the location of surface water flooding incidents is available in [Appendix 4](#).

11.2.4 Surface Water Flood Risk from Artificial Sources (Reservoirs and Canals)

An examination of OS mapping and the EA's mapping revealed that there are significant reservoirs or canals in the area of the site.

A large nature reserve called Ruislip Lido which includes a large water body is located 1.3 km to the north of the site. The EA's reservoir flood risk map indicates that the site does lie within an area that is at potential risk of reservoir flooding.

The mapping indicates that the site would be impacted by flood levels ranging from 0.3 – 2.0m across the site. Flood levels will be at their highest in the Northern part of the site away from the residential dwelling.

11.2.5 Sewer Flooding

A map showing recorded incidents of sewer flooding is available in [Appendix 4](#).

The site is located within zone HA4 7ND. Between 11 – 20 sewer flooding events have been recorded within this area, none are located at or in the vicinity of the site.

11.2.6 Climate Change - Modelled Predictions of Surface Water Run-off Flooding

Mapping of the predicted extent and depth of surface water flooding for the 1 in 100 years and 1 in 1000 rainfall return periods provided by the EA are available in [Appendix 6](#).

The maps indicate that the site would be impacted by both events mainly at the rear of the property. The surface water flooding occurring in 1 in 1000-year event would affect the site with flood depths of up to 900mm. This would largely be contained to the garden of the property, with some flooding occurring at the front of the existing building. The 1 in 100-year event would be restricted to the garden with depths up to 300mm.

Surface water flooding during 1 in 200-year event has also been mapped by the LBH within the PFRA published in 2011. This is available in [Appendix 6](#). This site would suffer from surface water flooding up to 1m in depth during this event.

11.2.7 Long Term Surface Water Flood Risk

The EA's [long term flood risk maps](#) which are available in [Appendix 8](#) indicate that the long term risk of flooding from surface water is considered to be Low with the rear of the site being at Medium-High risk of flooding from surface water.

11.3 Risk of Flooding From Multiple Sources (ROFMS)

The Environment Agency provides a map which gives an indication of the overall flood risk from fluvial, tidal and surface water sources considering the presence of river defences. This map indicates that there is more than 3% chance of flooding at the site in any year. A copy of the map is presented in [Appendix 8](#).

11.4 Groundwater Flood Risk

Groundwater flooding occurs when water rises from the underlying aquifer at the location of a spring – where the underlying impermeable geology meets the ground surface. This tends to occur after much longer periods of intense precipitation, in often low-lying areas where the water table is likely to be at a shallow depth. Groundwater flooding is known to occur in areas underlain by principal aquifers, although increasingly it is also being associated with more localised floodplain sands and gravels. A high groundwater table also has the potential to exacerbate the risk of surface water and fluvial flooding by reducing rainfall infiltration capacity, and to increase the risk of sewer flooding through sewer/groundwater interactions.

11.4.1 Historic Records of Groundwater Flooding

A map showing the locations of historic groundwater flooding incidents is available in [Appendix 4](#). The map indicates that there have been no recorded incidents of groundwater flooding at or within 500m of the site.

11.4.2 Susceptibility to Groundwater Flooding

The Groundwater Flood Susceptibility Map provided by BGS, which is available in [Appendix 9](#) indicates that the potential for groundwater flooding to occur at the surface does exist at the rear of the property.

The Groundwater Depth map also provided by BGS indicates that the groundwater table may be at approximately less than 3mbgl. The ground conditions are described as highly variable with regards to drainage potential.

11.5 Critical Drainage Area

A Critical Drainage Area may be defined as “a discrete geographic area (usually a hydrological catchment) where multiple and interlinked sources of flood risk (surface water, groundwater, sewer, main river and/or tidal) cause flooding in one or more Local Flood Risk Zones during severe weather thereby affecting people, property or local infrastructure”. A CDA is defined in the Town and Country Planning (General Development Procedure) (Amendment) (No. 2) (England) Order 2006 as “an area within Flood Zone 1 which has critical drainage problems and which has been notified... [to]...the local planning authority by the Environment Agency”.

The site is not located within a Critical Drainage Area. An area of CDA has been identified 220-250m to the North/North-west of the site by the LLFA.

12 Potential Impacts of the Development on Local Flood Risk

12.1 Impacts on Flood Storage

12.1.1 Changes to Impermeable Area and Building Footprint

Changes in ground cover arising from the development are presented in Table 4 below. The change to the impermeable area of the site is not considered to be significant.

Table 4: Existing and proposed site ground cover.

	Impermeable Area (m ²)	Permeable Area (m ²)	Total Area (m ²)
Existing (Approx.)	163.3	116.7	280
Proposed (Approx.)	153.5	126.5	280

The side extension will be built on part of existing driveway and the rear extension will be built on part of existing hardstanding patio. Moreover, currently there is a concrete pad at the far end of the garden which will be removed and replaced with soft-landscaping/permeable areas. Other existing concrete patios will be demolished as well to accommodate the new extension.

As the development will slightly decrease the site impermeable area (-3%), it is considered unlikely that it will impact upon local flood storage.

12.2 Flood Displacement storage

The proposed development involves the demolition of several existing structures in order to accommodate the new extension:

1. A shed which has a concrete base (150 – 550mm) which will be demolished in order to accommodate the rear extension (Patio 1);
2. Timber decking in the rear garden which is situated on 150mm thick concrete base (Patio 2);
3. Timber decking on a concrete base at the rear of the existing property which is approximately 230mm above ground level (Patio 3);
4. Concrete base at rear of the garden, approximately 250mm above ground level (Patio 4);

Pictures of the garden and of the abovementioned structures are available in [Appendix 1](#). Please refer to the scheme available in [Appendix 2](#) for the precise configuration of the structures on site.

A topology map of the site is available in [Appendix 3](#). As it can be seen, ground levels decrease gently from Woodville Gardens towards the back of the property.

The three patios are not only impermeable surfaces but they are raised structures which take up volume from the existing floodplain. The demolition will provide additional floodplain storage which will compensate the loss of storage that will be created due to the erection of the side/rear extension on a level for level compensation basis.

A cut and fill table showing the gains and losses of flood storage across the site is available below.

Table 5: Cut and Fill Table – Flood Displacement Storage

Flood Slice (mAOD)	structure	Depth (m)	Floodplain Gain		Loss of Floodplain			Total Volume (m ³)
			Area (m ²)	Volume A (m ³)	Area (m ²)	Depth (m)	Volume B (m ³)	
39.4 – 39.8	Patio 1	0.15-0.55	13.5	4.7				18.7
39.4 – 39.8	Patio 2	0.150	9.3	1.4				
39.4 – 39.8	Patio 3	0.230	27	6				
39.4 – 39.8	Patio 4	0.250	26.5	6.6				
39.4 – 39.8	Extension				30	0.4	12	12

The volume of floodplain lost through the new extension (also known as the fill volume) would be smaller than the floodplain volume gained by demolishing the existing structures on site.

The corresponding volume of floodplain gain (also known as the cut volume) would be of 18.7m³ which is greater than the volume lost (12m³) for the same flood slice.

12.3 Impacts on Flood Flow Routes

As the development does involve the redesign of buildings at the site it may alter flood flow paths, although this is not considered to be significant.

13 Flood Risk Mitigation Measures

13.1 SuDS

The Department for Communities and Local Government 's (DCLG) Planning practice guidance and Planning system (PPGPS) states that developers and Local Authorities should seek opportunities to reduce the overall level of flood risk in the area through the layout and form of the development, and the appropriate application of sustainable drainage techniques.

As such, the developer should implement a SuDS strategy in line with the drainage hierarchy as outlined in Table 4 below to reduce surface water discharges from the site.

Table 2: SuDS Options

	Store rainwater for later use;
	Use infiltration techniques, such as porous surfaces in non-clay areas;
	Attenuate rainwater in ponds or open water features for gradual release;
	Attenuate rainwater by storing in tanks or sealed water features for gradual release;
	Discharge directly to a water course;

- Discharge rainwater directly to a surface water sewer/drain;
- Discharge to a combined sewer.

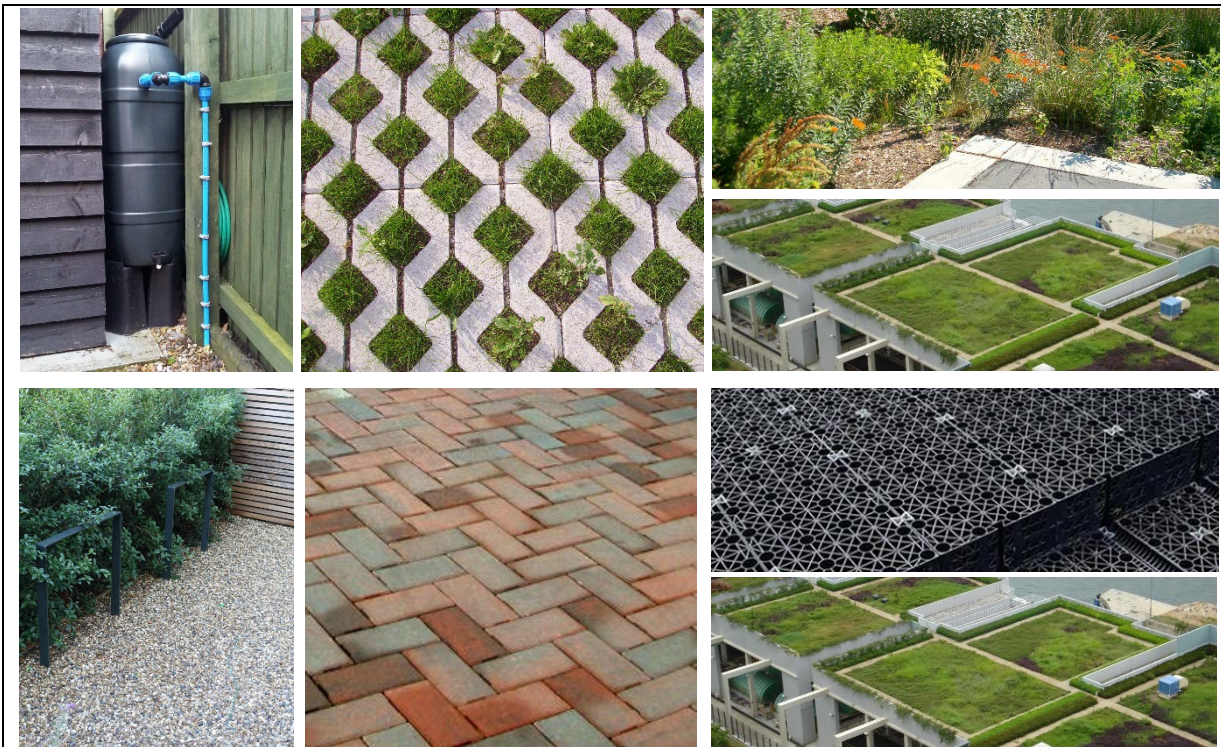


Figure 1 - Surface water storage facilities and potential SuDS features – rainwater harvesting, on-site tank storage, rain garden soak-away and green roofs. (Source: UK SuDS Manual).

Additionally, the relevant schedules from Policy CC4 – Minimizing Surface Water Run-off with Sustainable Drainage Systems are:

- Developments must maximize attenuation levels, achieving greenfield rates where possible;
- All new car parks and hard standing areas should be rainwater permeable with no run-off directed in to the sewer network;
- All flat roofs should be green or brown roofs to contribute to reducing surface water run-off.

Given the nature of the development and the size of the site, it is considered that there are limited opportunities for implementing SuDS. Measures such as green roofs,

rainwater harvesting, infiltration (soakaways, permeable paving, rain gardens) or attenuation storage tanks should be considered. The SuDS strategy will be detailed in a separate report once the application will get approved.

13.2 Flood Resilience

Flood resilient construction uses methods and materials that reduce the impact from a flood, ensuring that structural integrity is maintained, and the drying out and cleaning required, following inundation and before reoccupation, is minimised.

13.2.1 Finished Floor Levels

The average ground level of the development is approximately 39.5mAOD.

For minor extensions EA Standing Advice states that finished floor levels are either no lower than existing floor levels or 300 millimetres (mm) above the estimated flood level. Where floor levels cannot be set to 300mm above existing flood levels, applicants should check with the LPA if they need to take flood resistance and resilience measures.

In line with the climate change guidance issued on the 19th February 2017, the EA would expect a basic approach to climate change allowance to be adopted for this this development. Using the basic approach, a central allowance of 500mm can be applied to this development. Design floor levels should be set to 500 m above the 1% AEP flood extent, and the finished floor levels to 300 mm above the design levels.

As outlined in section 11.1.12 the EA's maximum predicted flood level at the site for 1% AEP event is 40.31mAOD (see [Appendix 10](#)). Based on this finished ground floor levels across internal areas of the development should be set to 41.11 mAOD.

However, it is considered unpracticable to raise finished floor levels. Therefore, finished floor levels will be set to current internal floor levels and additional flood resilience measure will be implemented as part of the design and construction.

13.2.2 Flood Resilience Measures

In terms of achieving resilience, there are two main strategies, whose applicability is dependent on the water depth the property is subjected to. These are:

-  Water exclusion strategy - where emphasis is placed on minimising water entry whilst maintaining structural integrity, and on using materials and construction techniques to facilitate drying and cleaning. This strategy is favoured when low flood water depths are involved (not more than 0.6m).
-  Water entry strategy - buildings are at significant risk of structural damage if there is a water level difference between outside and inside of about 0.6m or more. This strategy is therefore favoured when high flood water depths are involved (greater than 0.6m).

Given that flood depths less than 0.6m are predicted in extreme scenarios, the water exclusion strategy is considered most applicable for this site.

Flood resilience design and measures that will be implemented are outlined below. Water-resistant and resilient materials will be utilized through the construction to minimize the flood risk and potential impacts.

Floor construction:

-  Use of resilient flooring materials as ceramic tiles or stone floor finishes;
-  Use of a concrete slab 150mm thick;
-  Use of ceramic tiles or stone floor finishes is recommended;
-  Maintain existing under floor ventilation by UPVC telescopic vents above 400 mm to external face of extension;
-  Damp proof membrane of impermeable polythene at least 1200 gauge;
-  Avoid the use of MDF carpentry.

Wall construction:

-  Include in the external face of the extension a damp – proof course, 250 mm above ground level, to prevent damp rising through the wall;

- Use rigid closed – cell material for insulation above the DPC;
- Spread hardcore over the site within the external walls of the building to such thickness as required to raise the finished surface of the site concrete. The hardcore should be spread until it is roughly level and rammed until it forms a compact bed for the oversite concrete. This hardcore bed will be 100 mm thick and composed by well compacted inert material, blinded with fine inert material.

Doors:

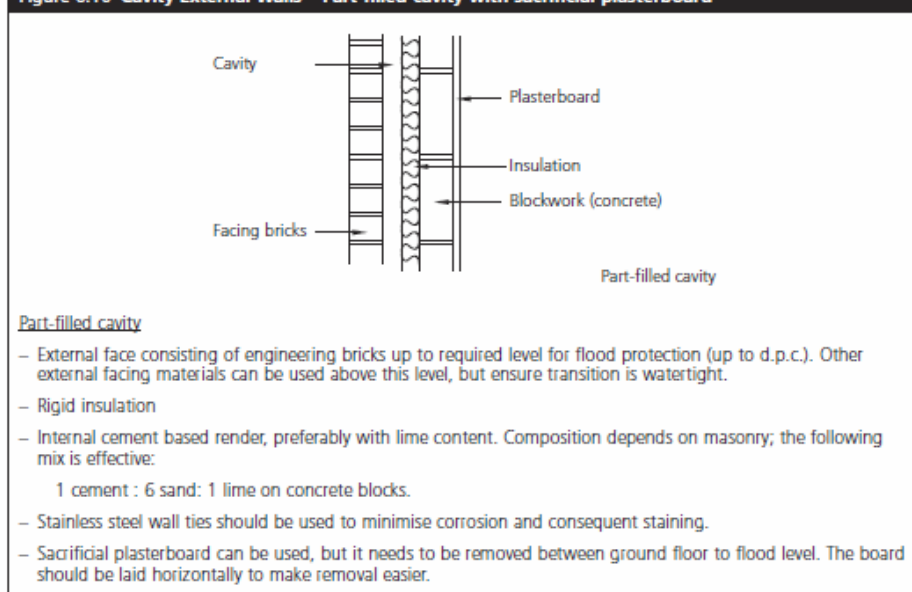
- Seal doors around edges and openings. UPVC or composite material will be used with passive protection meaning that minimal intervention will be required in the event of flooding.

Underground drainage:

- Avoid use of metal for any underground piping;
- Use closed cell insulation for pipes that are below the predicted flood level;
- Provide non – return valves for the drainage system to prevent back water flow;
- Use UPVC or clay pipework for fouds and surface water drainage.

Improving the flood performance of new buildings

Figure 6.10 Cavity External Walls – Part-filled cavity with sacrificial plasterboard



As well as the above the following flood resilience features should be applied as part of the development:

-  Electrical sockets should be installed above flood level for the ground floor;
-  Utility services such as fuse boxes, meters, main cables, gas pipes, phone lines and sockets will be positioned as high as practicable;
-  All external openings for pipes or vents below 400mm to be sealed around pipe or vent with expanding foam and mastic.

13.3 Emergency Plan

The dangers associated with flood water to people are possible injury and/or death. This can occur as a result of drowning or being carried along by the waters into hard objects or vice versa.

The risk to life is largely a function of the depth and velocity of the floodwater as it crosses the floodplain. Fast flowing deep water that contains debris would represent the greatest hazard.

The assessment of danger to people from walking in floodwater is described in the Flood Risks to People guidance documents (FD2321_TR1 and FD2321_TR2) by DEFRA/EA. Danger can be estimated by the simple formula:

$$HR = d \times (v + 0.5) + DF$$

where, HR = (flood) hazard rating; d = depth of flooding (m); v = velocity of floodwaters (m/sec); and DF = debris factor calculated using Tables below.

The scoring methodology and calculation matrix for this is summarised in [Appendix 12](#).

The EA Product 4 data indicates that the maximum flood level at the site in the 1 in 100 plus 20% climate change event would be 40.31mAOD. However, modelled

velocities are just indicated at the node in the stream and not across the site and therefore they cannot be used for this evaluation because considered unrealistic.

The use of a flood emergency plan is therefore sufficient for the proposed development. The key elements of the emergency plan are described below.

13.3.1 EA Flood Warnings Direct Service Subscription

The occupants will subscribe to the EA Flood Warnings Direct Service which is a free service offered by the EA providing flood warnings direct to people by telephone, mobile, email, SMS text message and fax. The EA aims to provide 2 hours' notice of flood, day or night, allowing timely evacuation of the site.

The agency operates a 24-hour telephone service on 0345 988 1188 that provides frequently updated flood warnings and associated floodplain information. In addition, this information can also be found at <https://fwd.environment-agency.gov.uk/app/olr/home> along with recommendations on what steps should be taken to prepare for floods, what to do when warnings are issued, and how best to cope with the aftermath of floods.

13.3.2 Access and Safe Egress

Access to and egress from the site is via Woodville Gardens. LIDAR data indicates that the ground levels along Woodville Gardens range from 40.5 to 40.9 mAOD.

Safe egress to Flood Zone 1 is easily available by walking less than a minute from 18 Woodville Gardens onto Heathfield Rise to the South of the site. Directions of this route are presented in [Appendix 11](#).

13.3.3 Safe Refuge

The proposed development will have internal connections to upper floors in the property which will act to provide sufficient safe refuge in the event of an extreme flood event.

14 Conclusions and Recommendations

This assessment has considered the potential risks to the application site associated with flooding from fluvial, tidal, surface water, artificial and groundwater sources and the potential impacts of climate change.

A review of LLFA's PFRA and SFRA as well as data provided by the EA was undertaken. The main findings of the review and assessment are provided below:

-  The site is classified as a More Vulnerable minor development.
-  The main sources of potential flooding to the site are the River Pinn and surface water ponding;
-  The EA define the site as being within Flood Zone 3b;
-  EA mapping indicates that the site is in an area that benefits from flood defences in the form of high ground;
-  One previous record of fluvial flooding was identified at the site (in 1977);
-  The site is not within a CDA. It is not in an area that has had a significant number of sewage flooding incidents;
-  No records of groundwater flooding incidents were identified at or in the vicinity of the site;
-  The EA considers the sites overall flood risk to be High;
-  The development will result in an overall decrease of the impermeable area of the site. Moreover, the demolition of the existing concrete structures on site will offset the volume loss due to the erection of the new extension. Therefore, it is unlikely to increase local flood risk.
-  There is limited opportunity for implementing SuDS mitigation measures. Consideration is being given to use of green roofs, soakaway and/or rainwater harvesting. A detailed Surface Water Drainage Scheme will be delivered upon approval from the LA;
-  Flood resilient materials and construction methods will be used so as to ensure that the impacts of any potential flooding are minimised as much as possible;
-  Occupants will subscribe to the EA Flood Warnings Direct Service;

-  Safe egress routes to Flood Zone 1 are easily accessible;
-  In the event that evacuation is not possible, safe refuge is available in the upper floors of the building which are accessible via an internal staircase.

Based on the information reviewed, it is considered that the overall flood risk to the proposed development is Medium. It is recommended to implement a SuDS strategy to further decrease the flood risk at the site and therefore be in compliance with the requirements of the LLFA's local planning policies and the NPPF.

15 References

1. Communities and Local Government - National Planning Policy Framework NPPF, March 2012.
2. Communities and Local Government - Planning Practice Guidance: Flood Risk and Coastal Change, Updated 06 March 2014.
3. Strategic Flood Risk Assessment - LBH 2008
4. Preliminary Flood Risk Assessment 2011 – LBH 2011
5. Local Flood Risk Management Strategy (FRMS) – Hillingdon London Borough
6. CIRIA, Defra, Environment Agency – UK SuDS Manual, 2015.
7. Greater London Authority – London Sustainable Drainage Action Plan, 2015.
8. Google Maps accessed July 2017.

16 Appendices

16.1 Appendix 1 – Site Photographs

View of site from Woodville Gardens



Main Patio and Shed



Additional Concrete Pad in front of the Shed



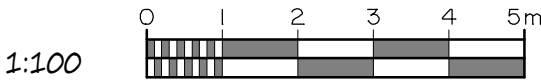
Concrete Area at the end of the garden



16.2 Appendix 2 – Development Plans

Proposed Elevations - All Materials to Match Existing

Scale Bar



Face brickwork to match existing

Rear Elevation



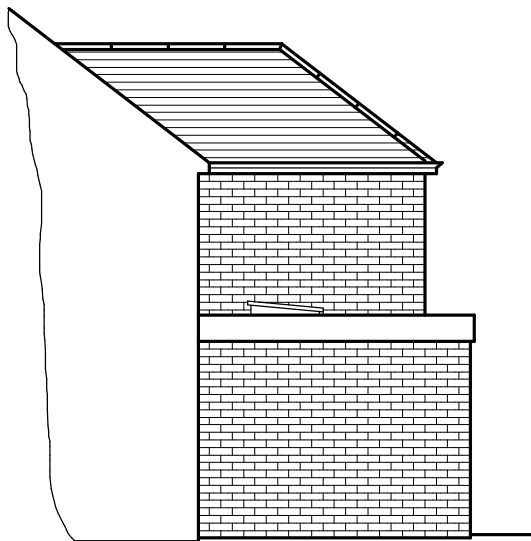
Obscurely glazed window,
non-openable up to 1.7m above FFL

Side Elevation



Top of pitched roof
3400 Max
Ground level

Front Elevation



Top of flat roof
3000 Max
Ground level

Side Elevation

This drawing to be read in conjunction with Drg No 3831/01

NOTES:
All dimensions must be checked on
site and not scaled from this drawing.

A		
	Date	Revisions

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Drawing Title

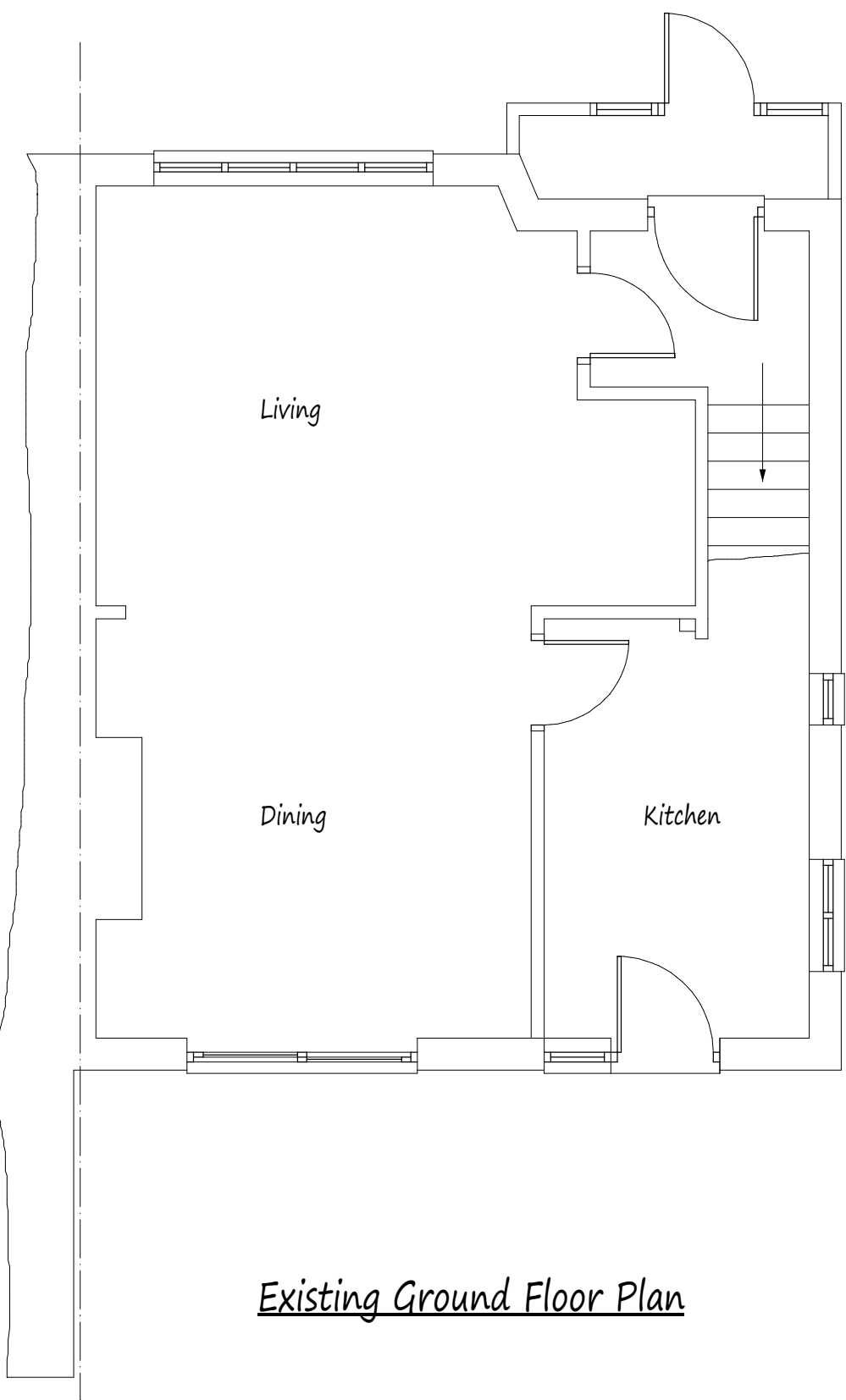
Proposed Elevations

Scale
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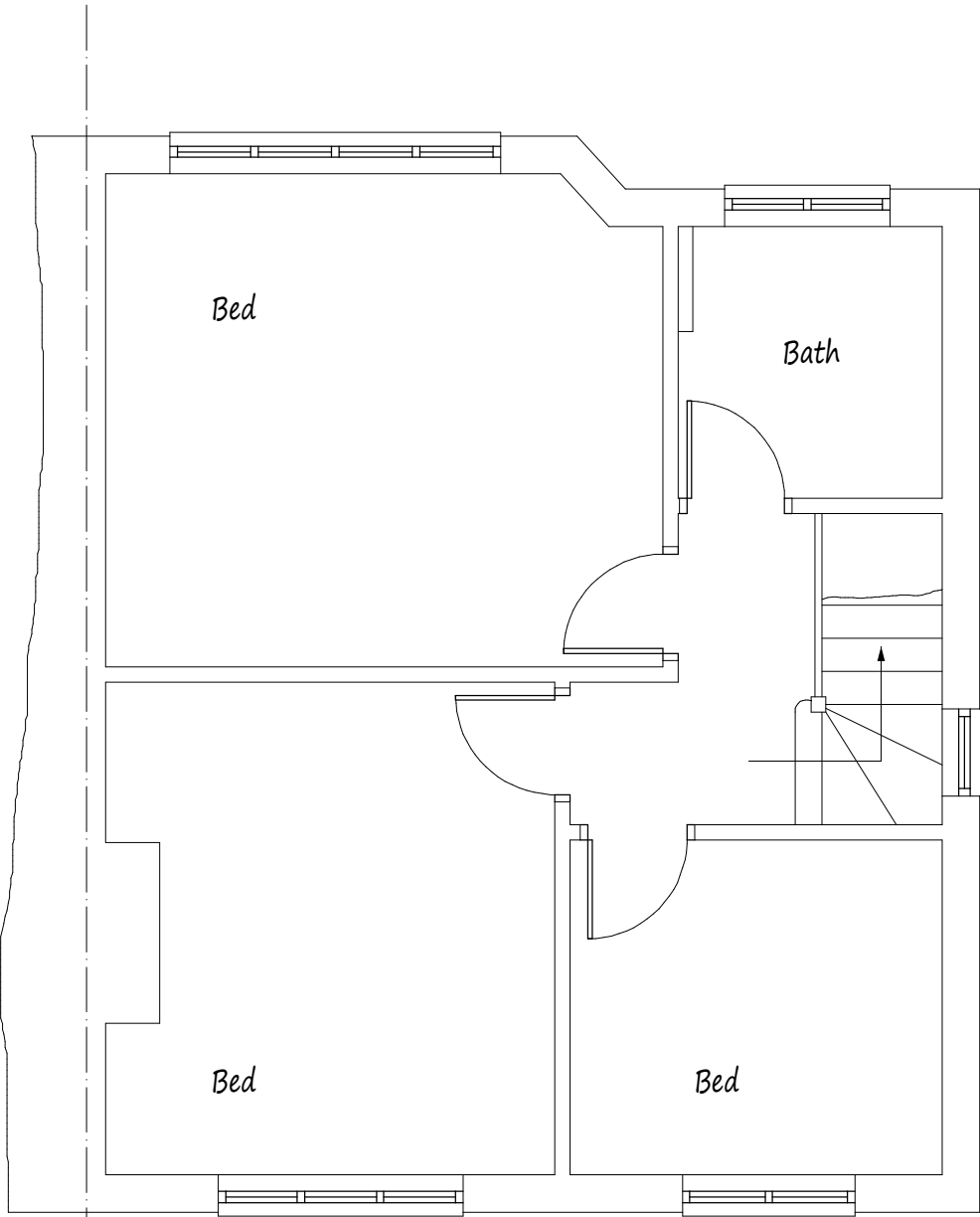
Date May 2017	Drawn by MDP
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Drg No.
3831/02

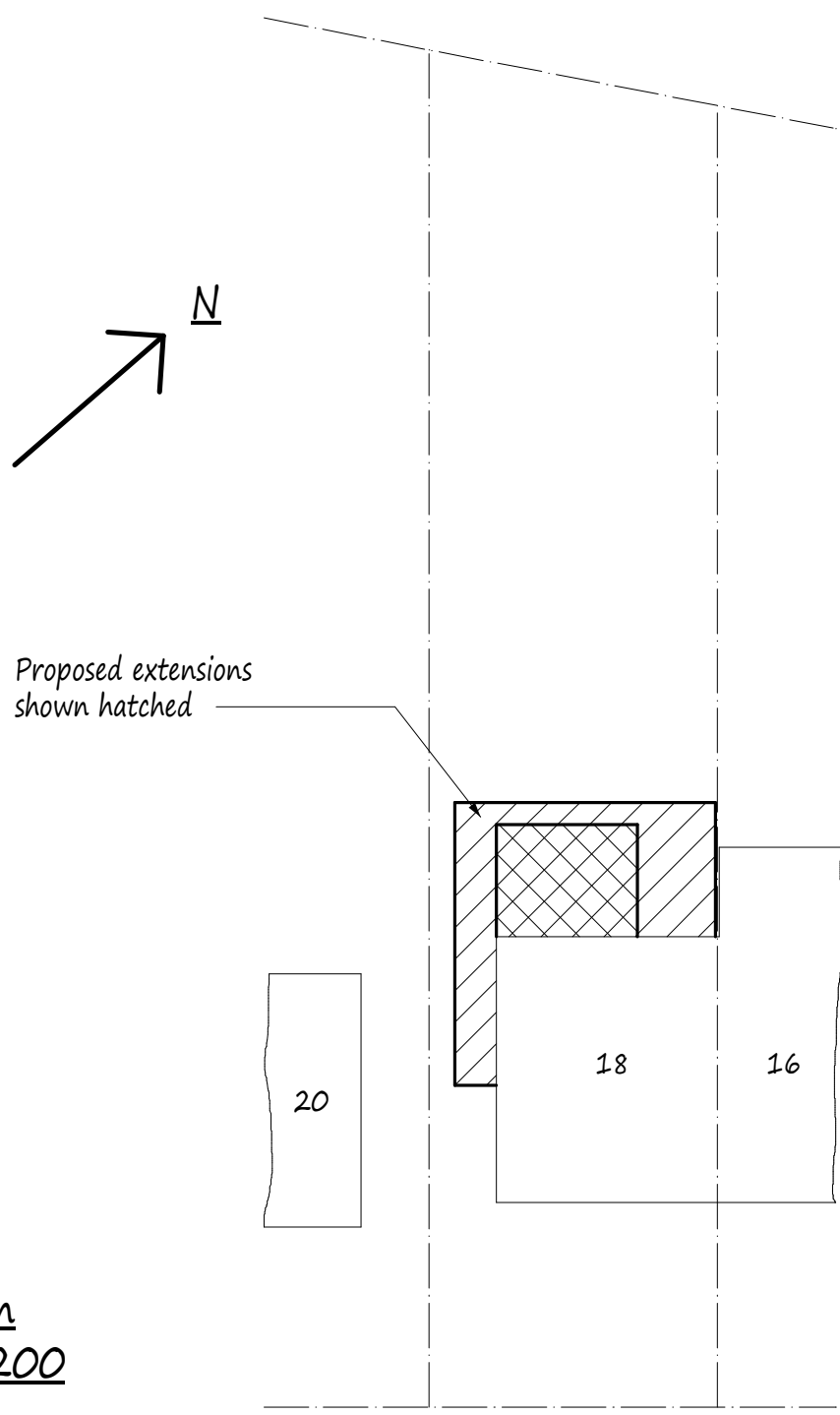
NOTES:
All dimensions must be checked on site and not scaled from this drawing.



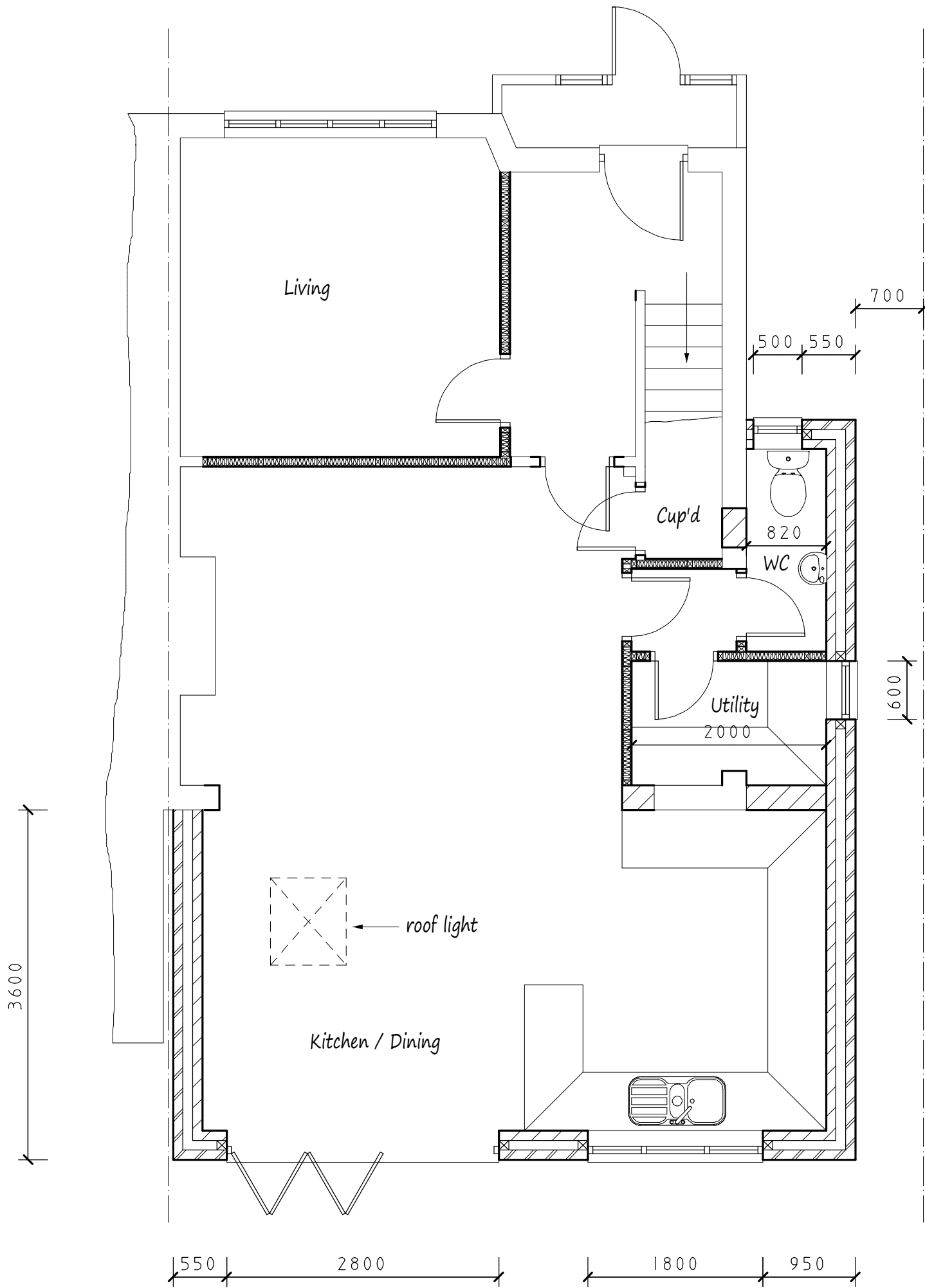
Existing Ground Floor Plan



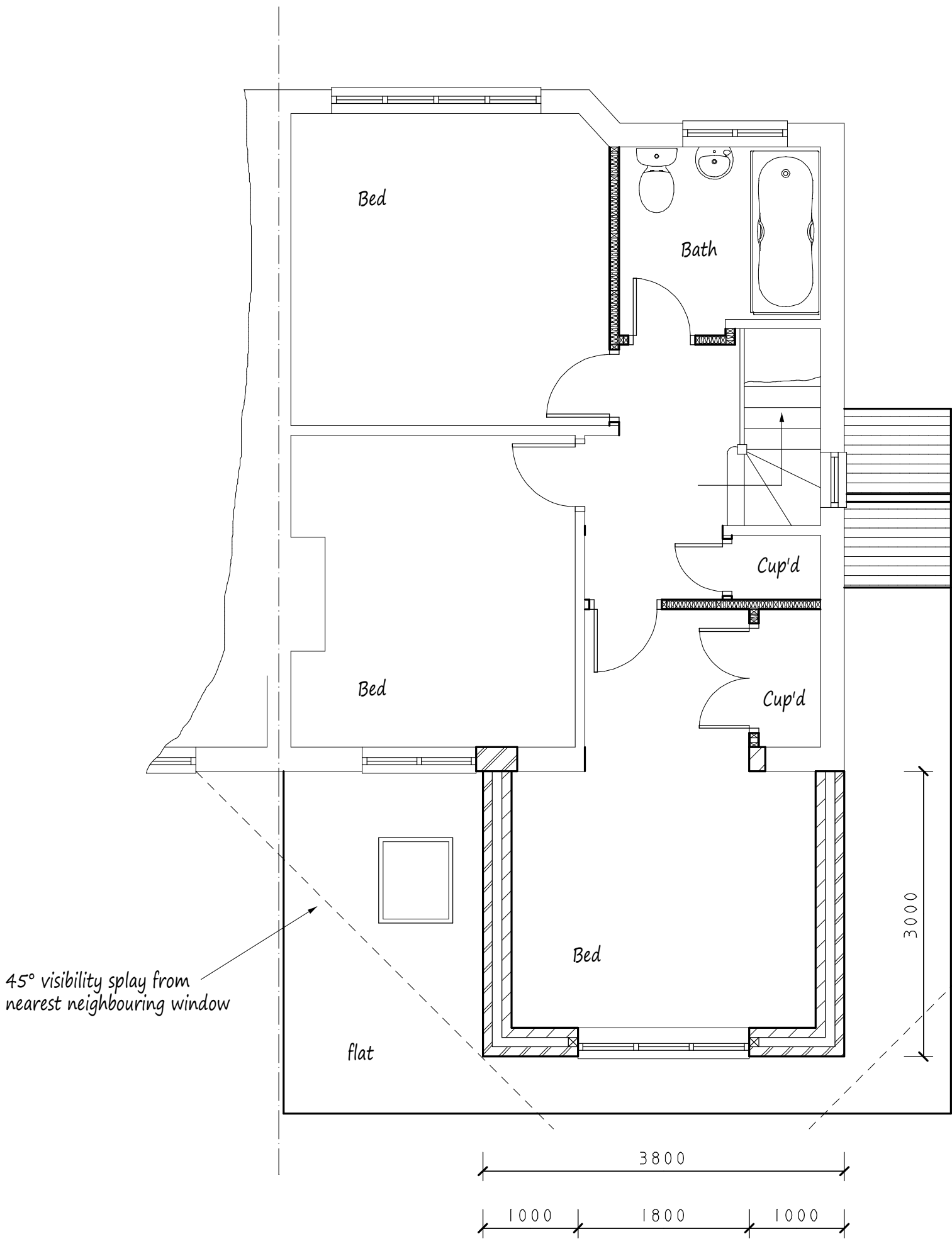
Existing First Floor Plan



Site Plan
scale 1:200



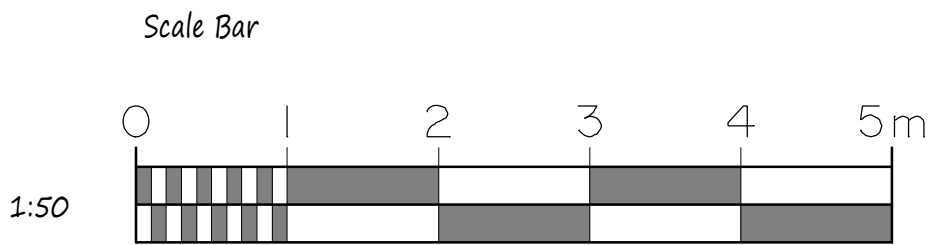
Proposed Ground Floor Plan



Proposed First Floor Plan

This drawing to be read in
conjunction with Drg No 3831/02

45° visibility splay from
nearest neighbouring window



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Drawing Title

Proposed Single Storey Side and
Part Single Storey, Part Two
Storey Rear Extension.

Scale
1:50, 200

Date	Drawn by
December 2016	MDP

Drg No.
3831/01

16.2.1 Existing site configuration

NOTES:
All dimensions must be checked on site and not scaled from this drawing.

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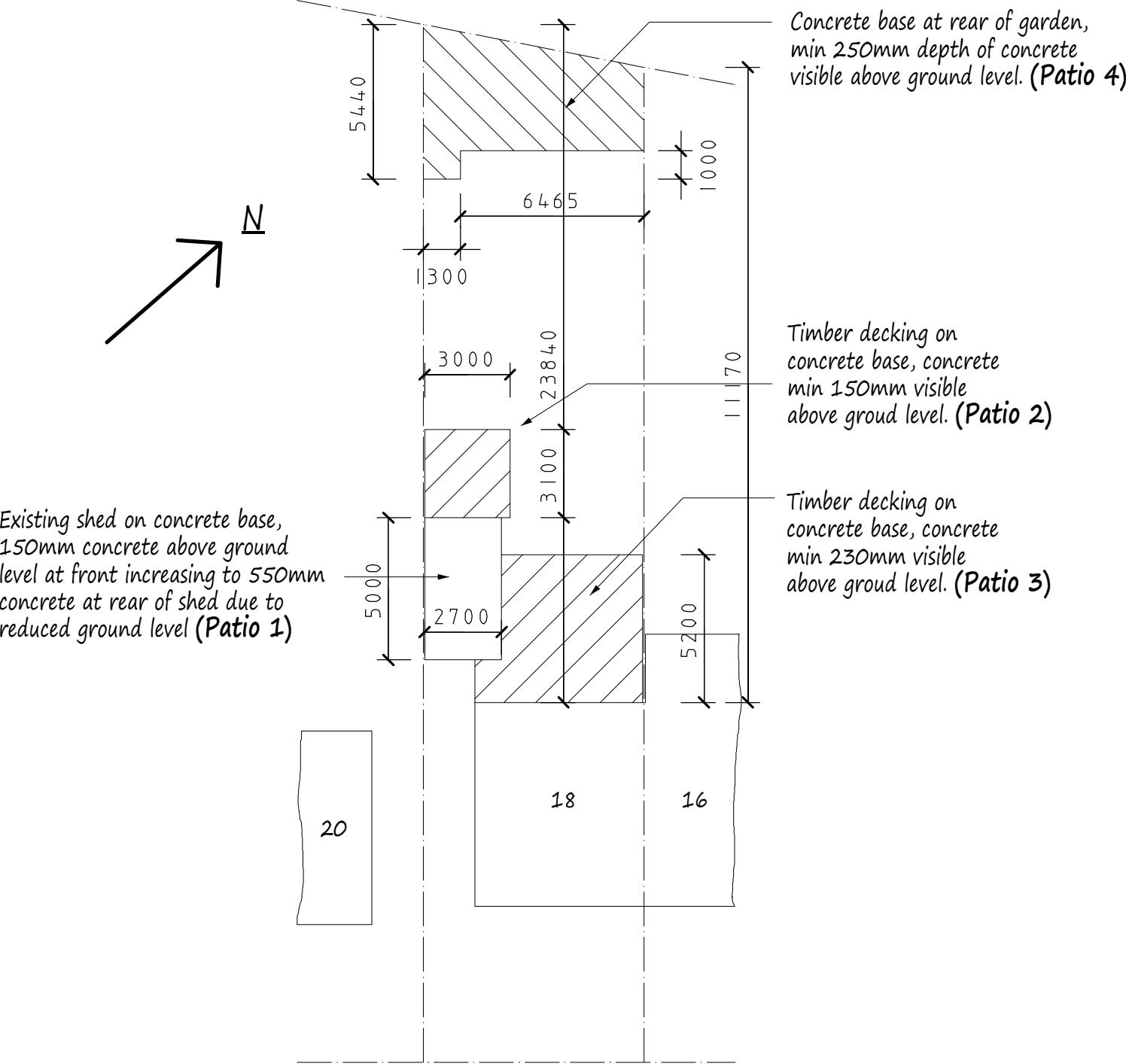
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Further Site Information for
Flood Risk Assessment.

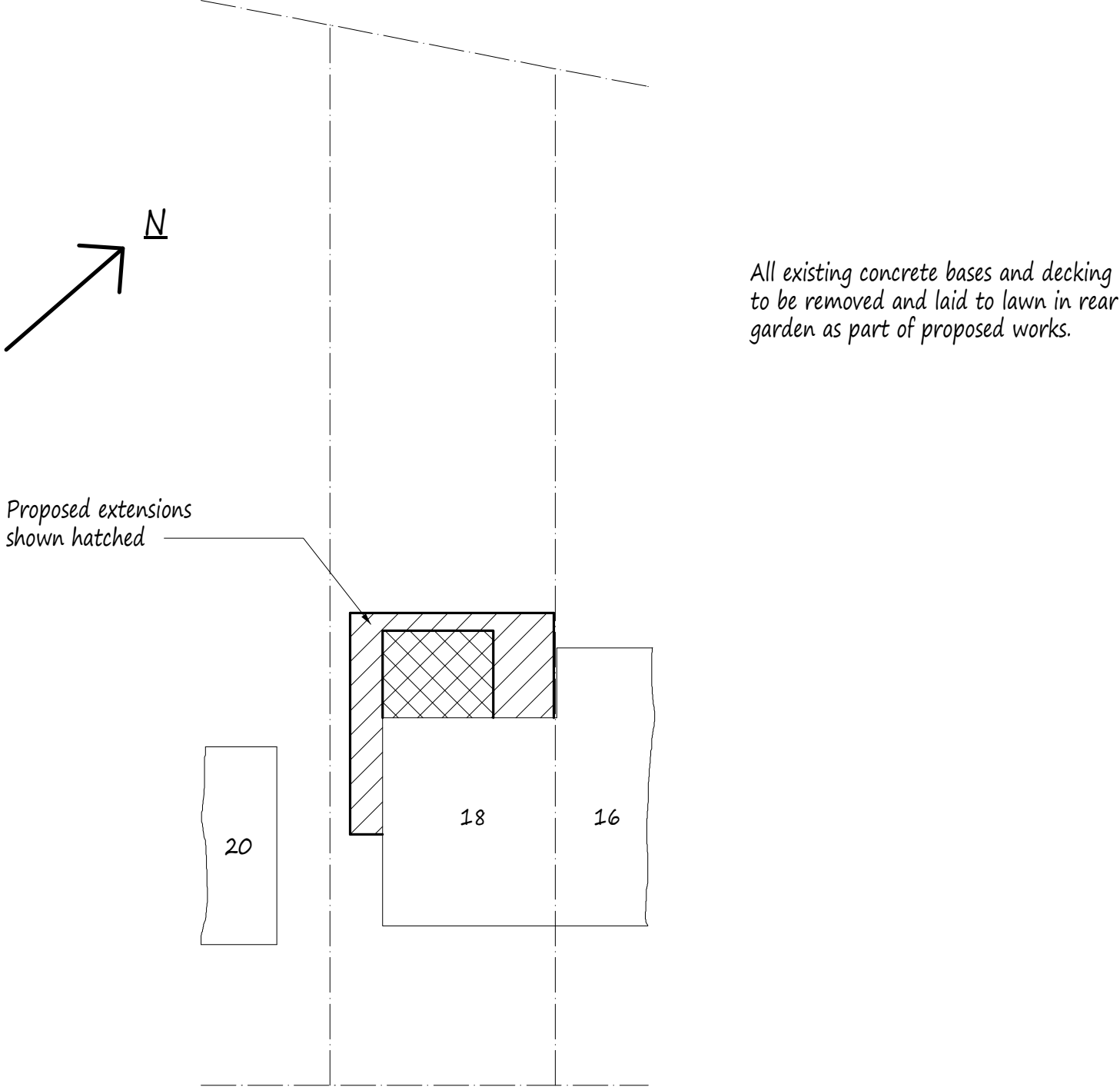
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Date March 2018	Drawn by MDP
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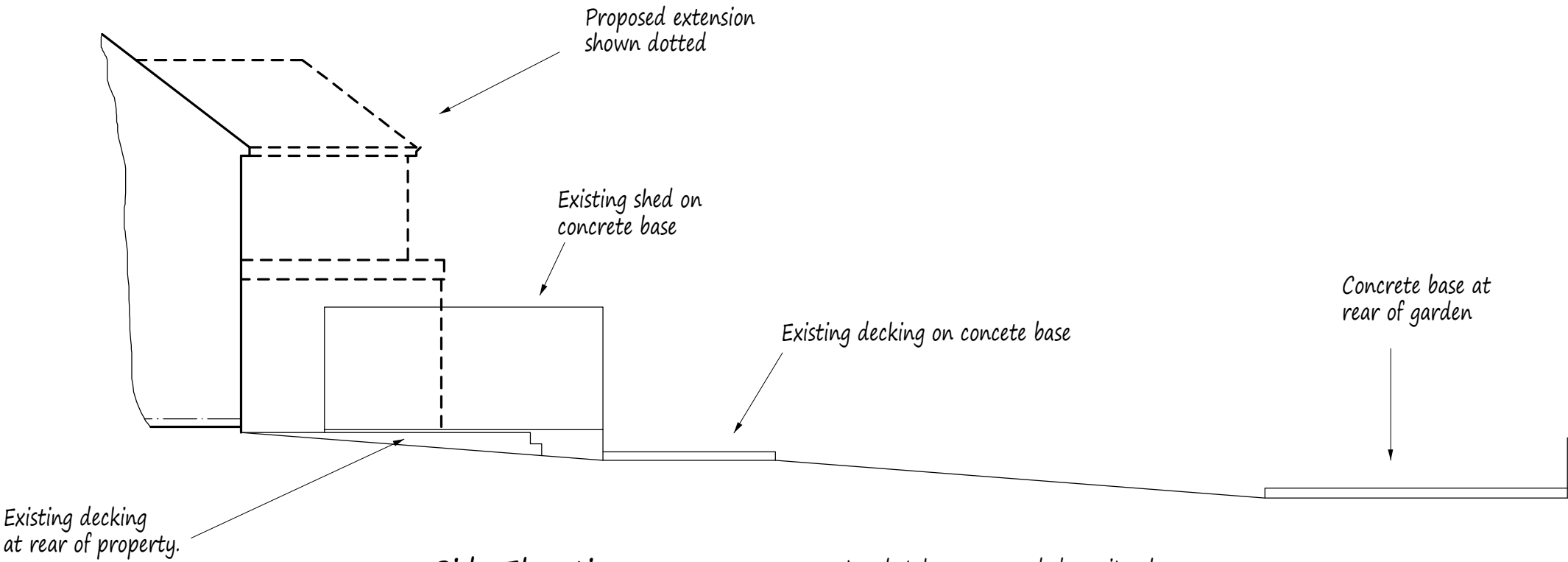
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3831/03



Existing Site Plan scale 1:200



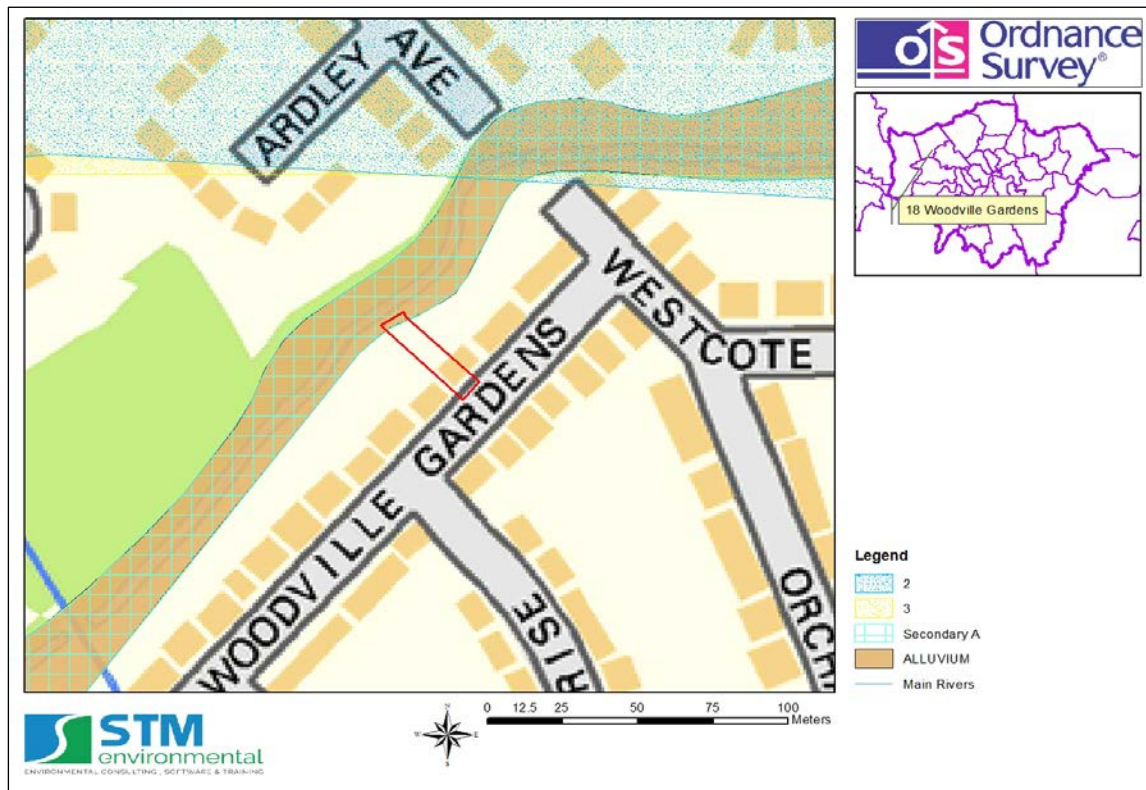
Proposed Site Plan scale 1:200



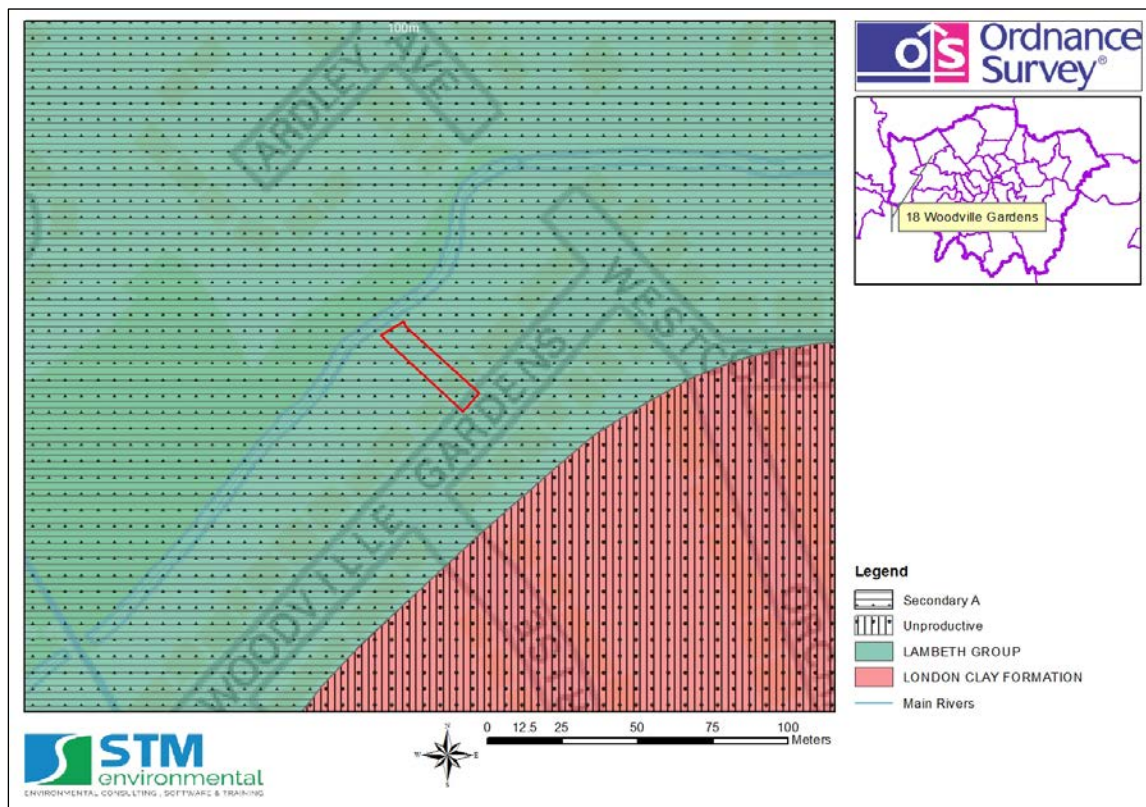
Levels taken as recorded on site plan, actual fall to end of rear garden is not to scale.

16.3 Appendix 3 – Environmental Characteristics

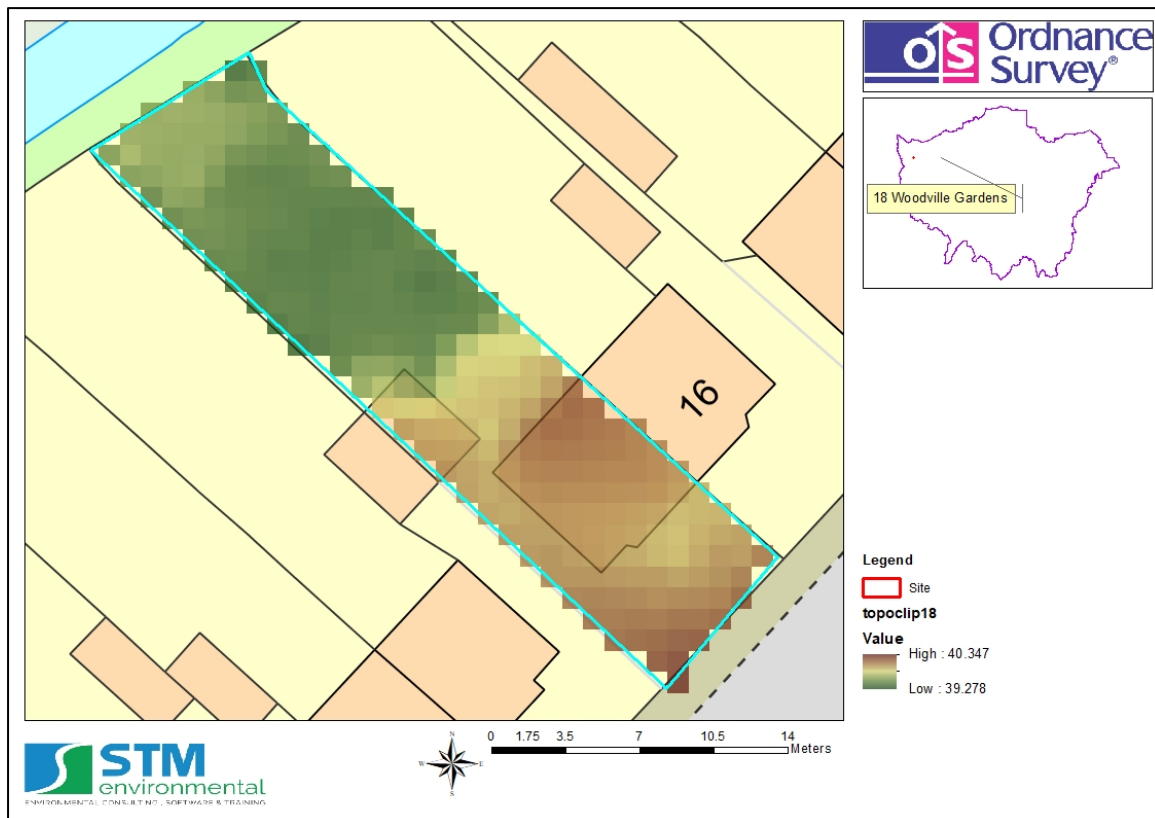
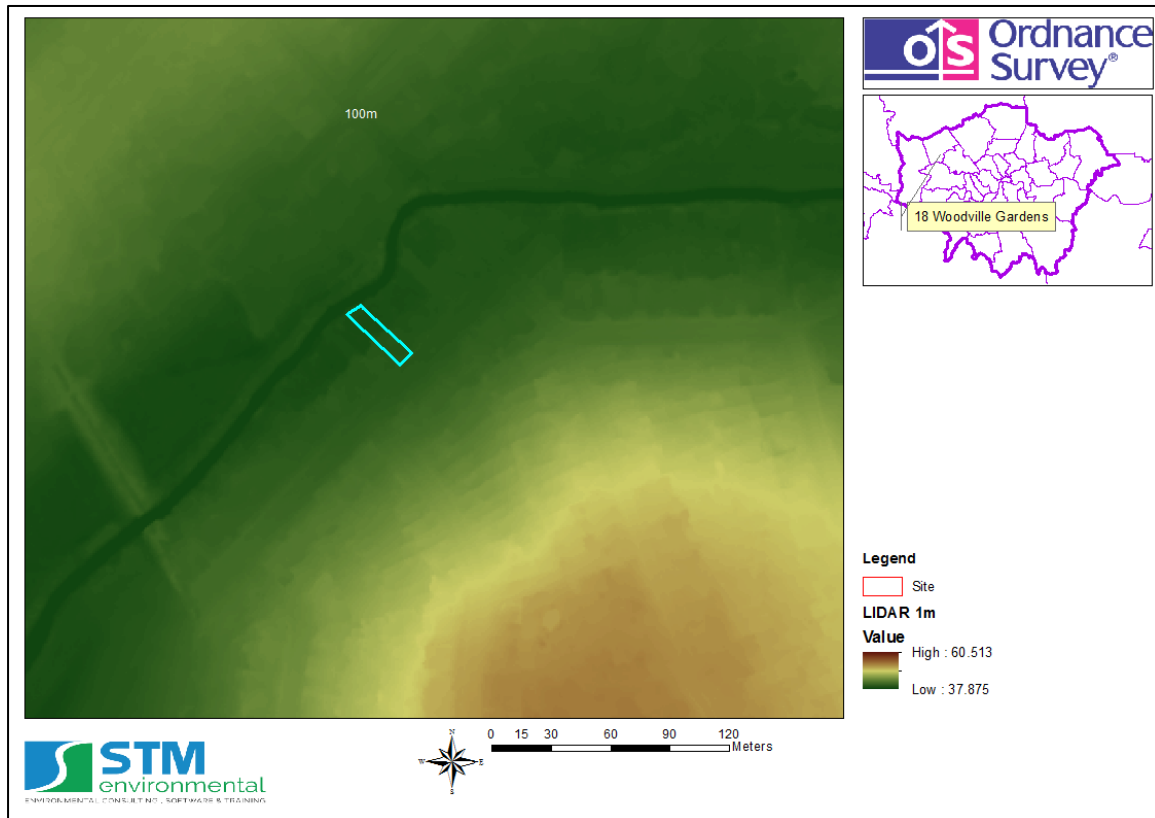
16.3.1 Superficial Geology Map



16.3.2 Bedrock Geology Map

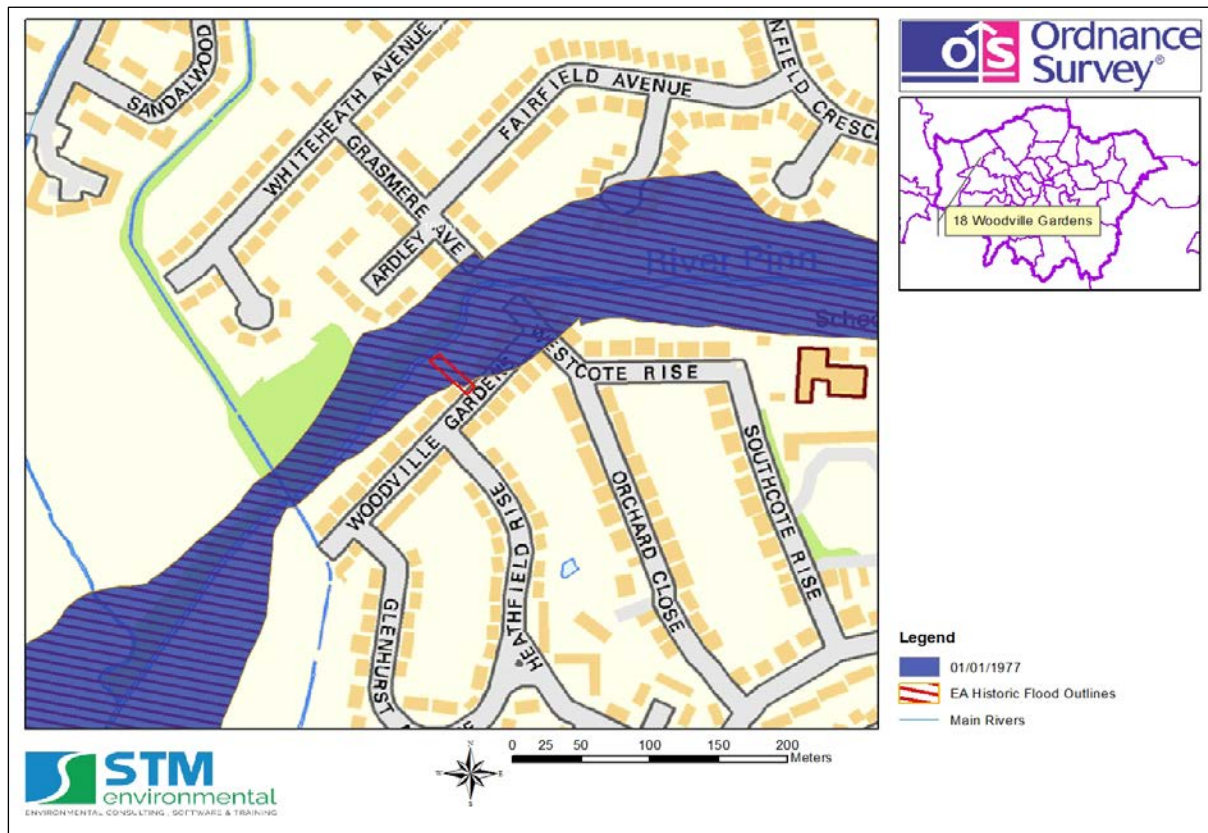


16.3.3 Topology Map

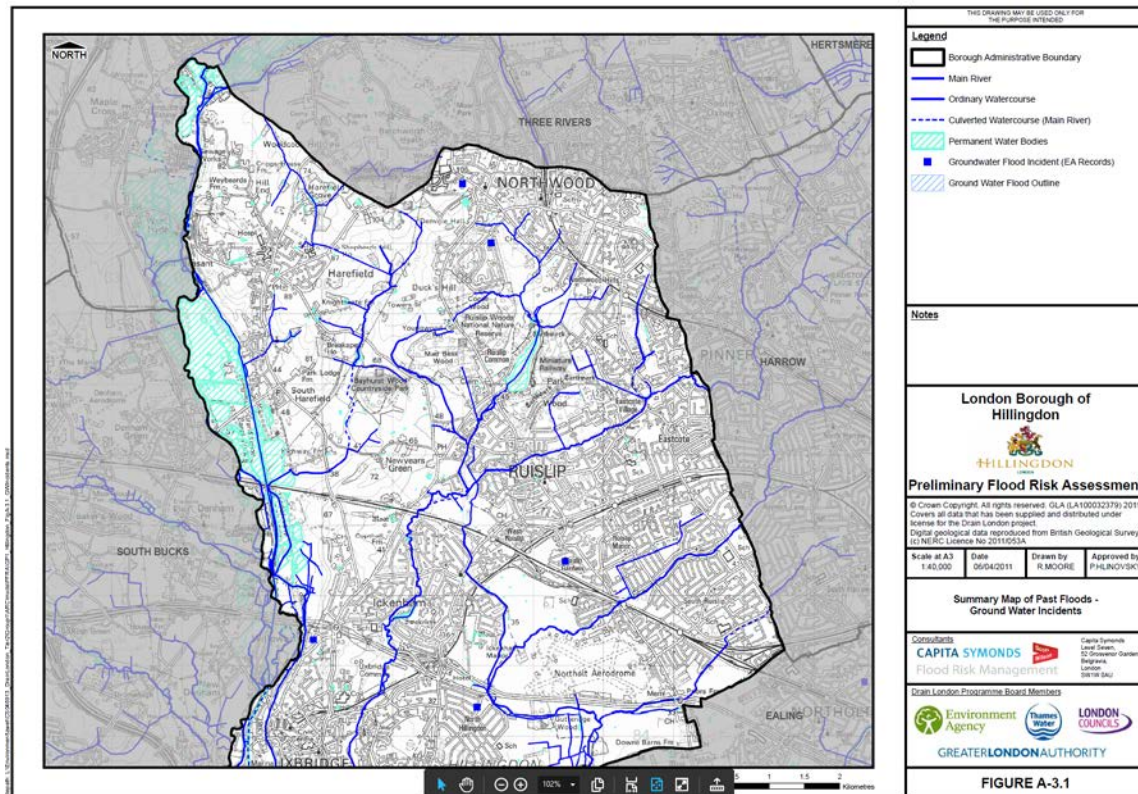


16.4 Appendix 4 – Historical Flood Incident Maps

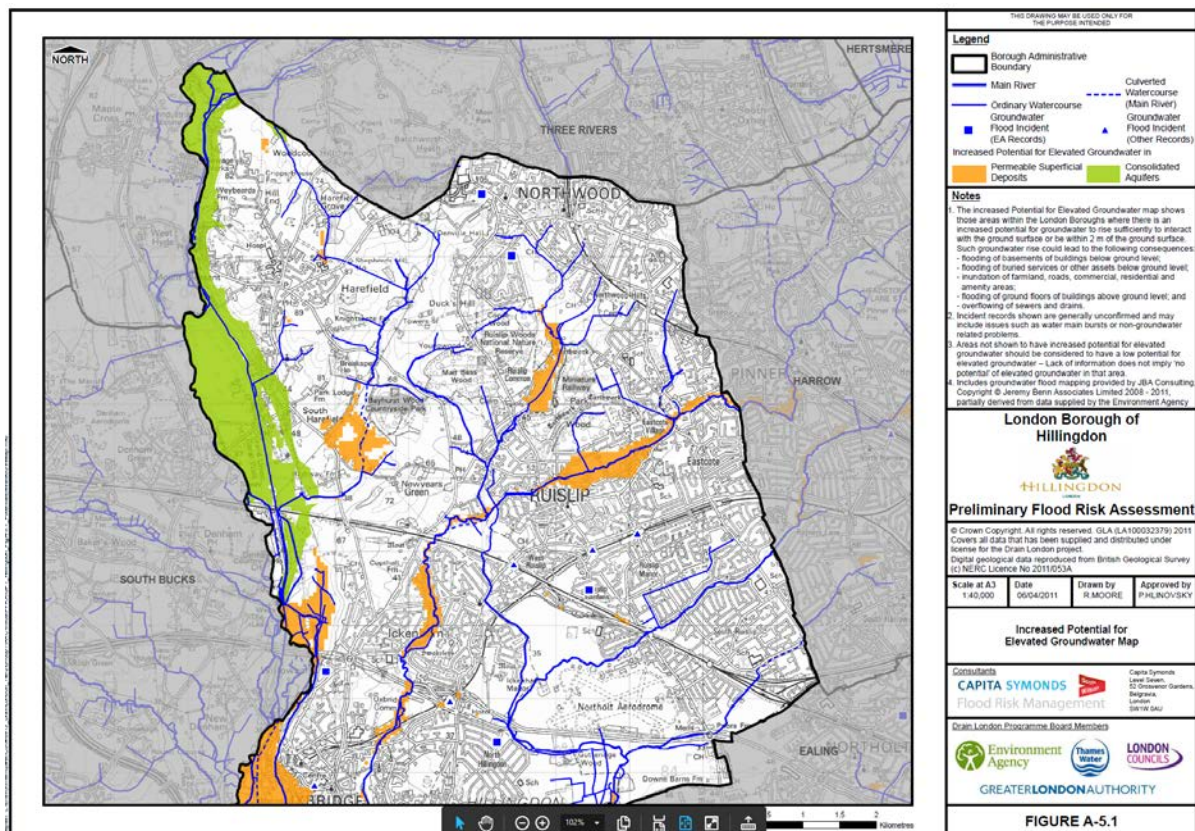
16.4.1 EA Historic Flood Outlines



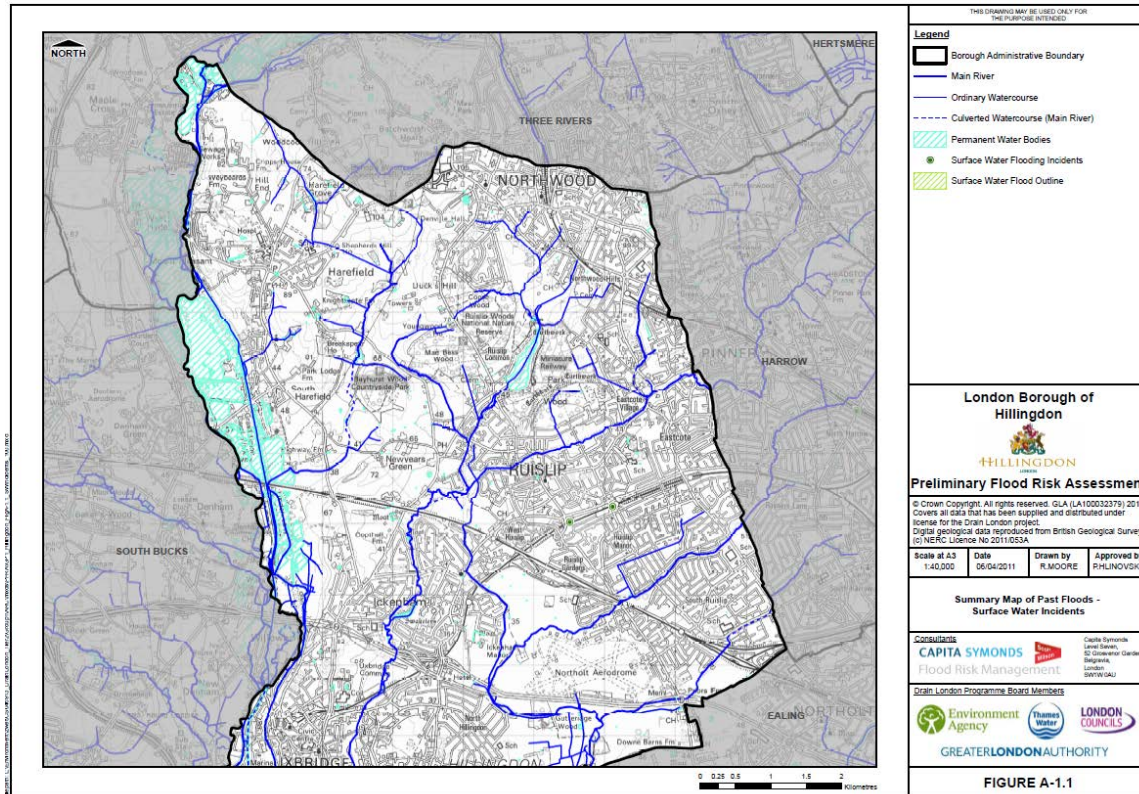
16.4.3 Map of Recorded Groundwater Flooding – PFRA Hillingdon



16.4.4 Map of Groundwater Potential – PFRA Hillingdon

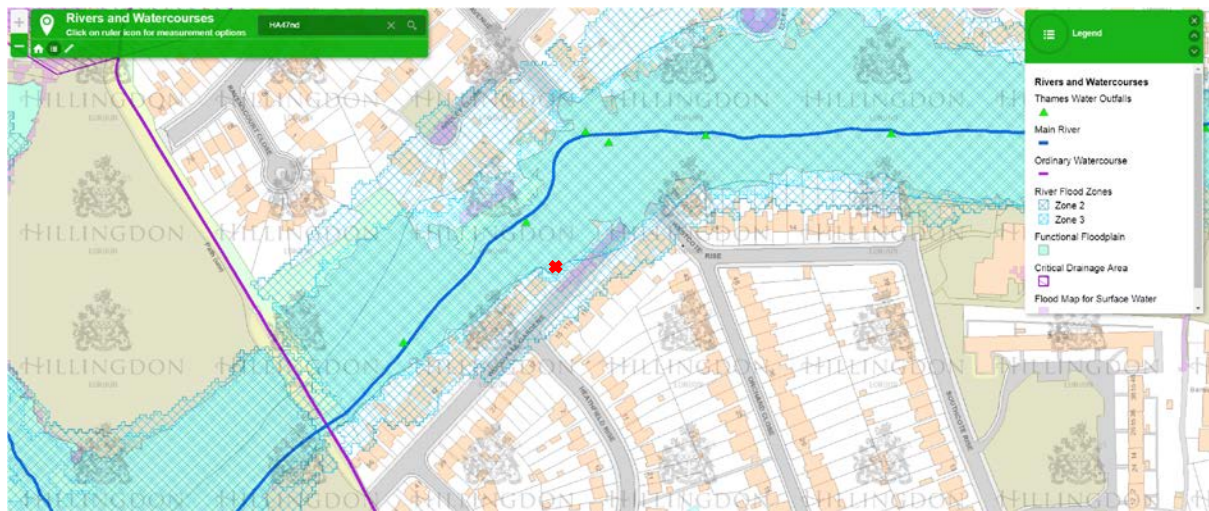


16.4.5 Map of Recorded Surface Water Flooding Incidents – PFRA Hillingdon

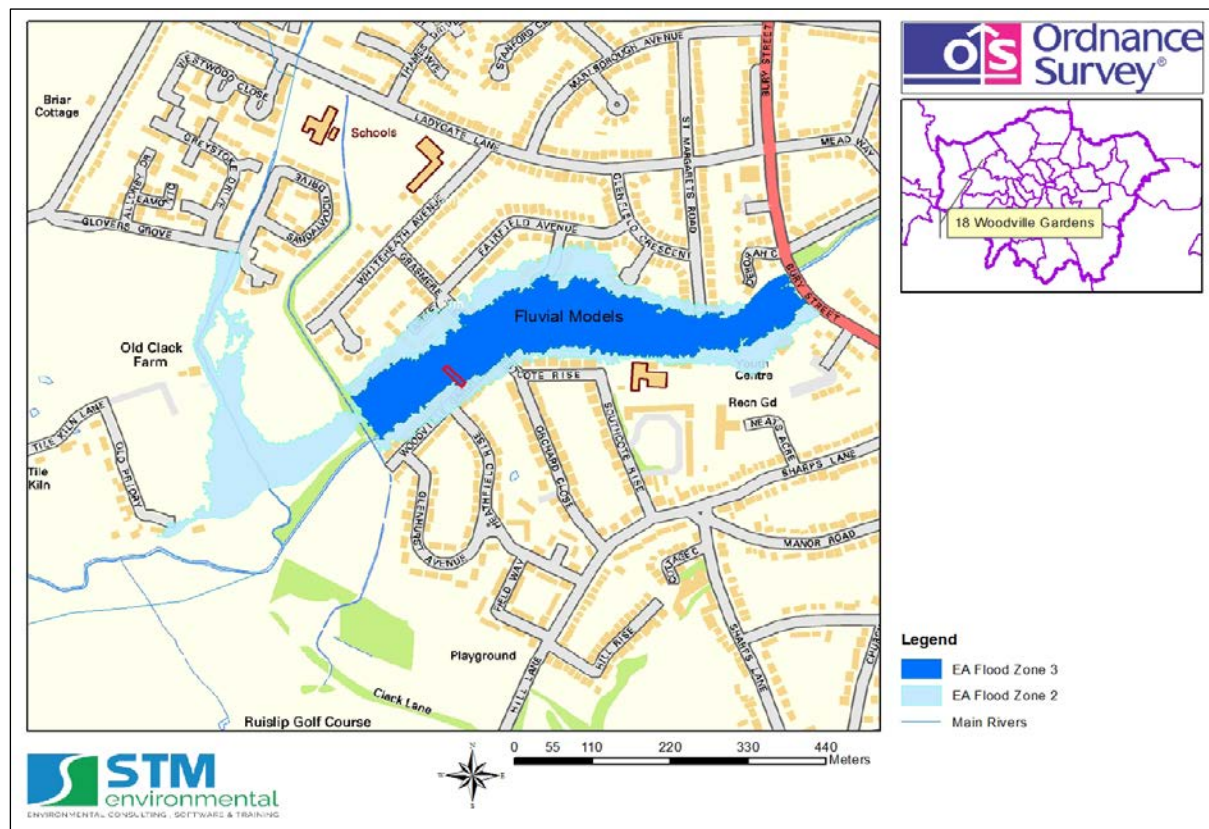


16.5 Appendix 5 – EA/LBH Flood Zone Map

16.5.1 LLFA Functional Flood Plain

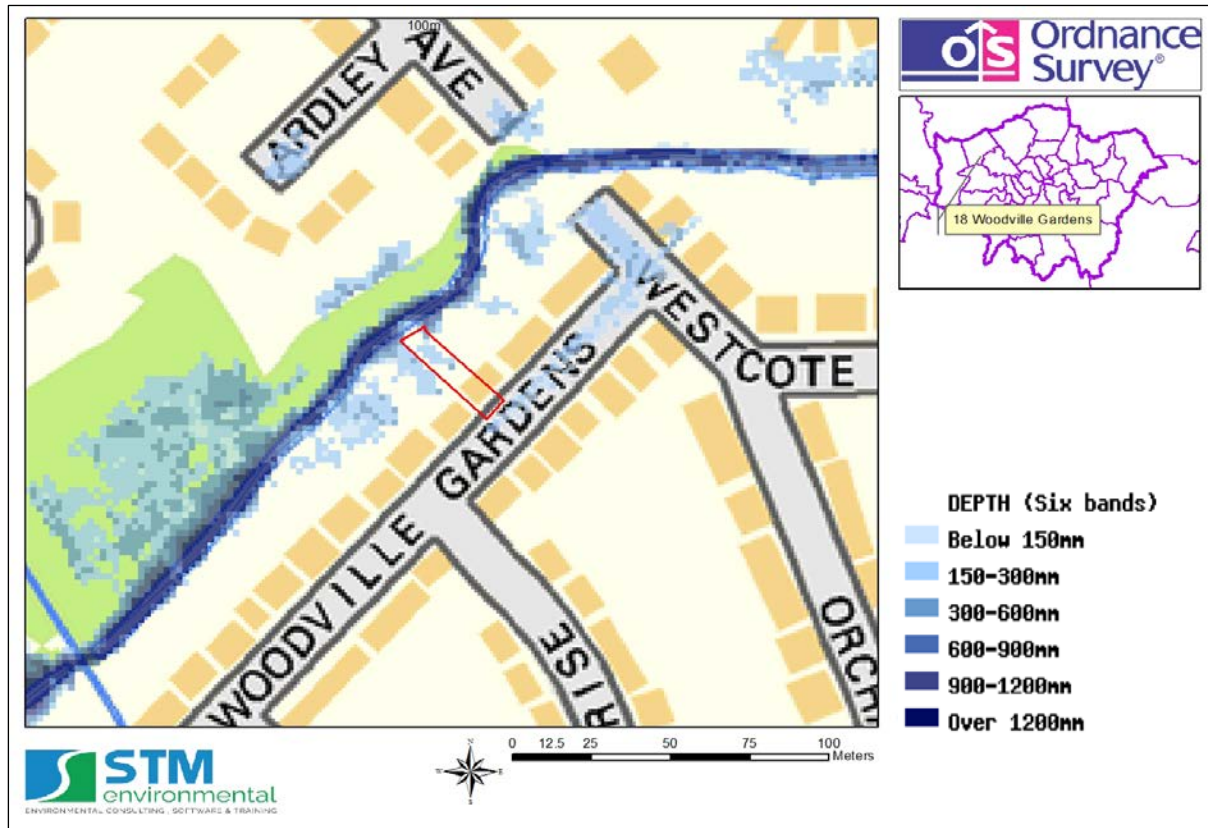


16.5.2 EA Flood Zone

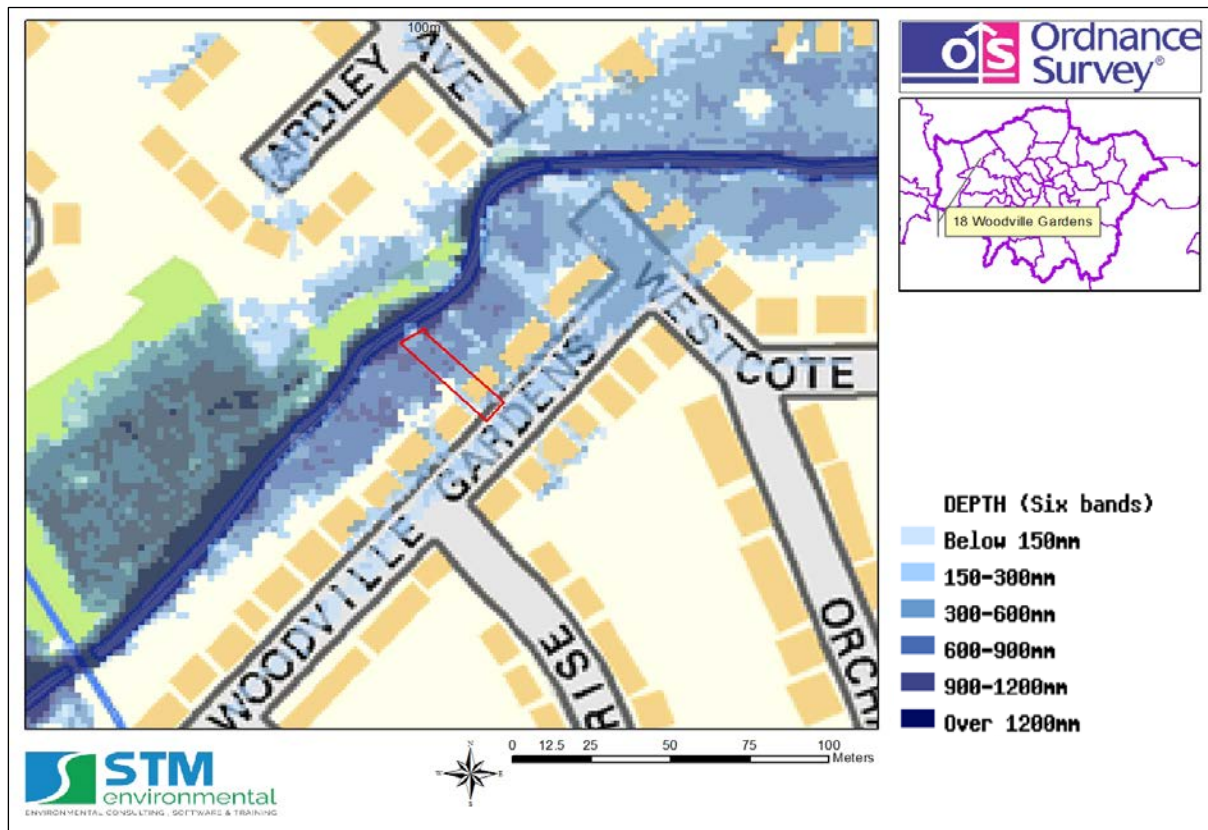


16.6 Appendix 6 – Surface Water Flood Extent and Depth Maps

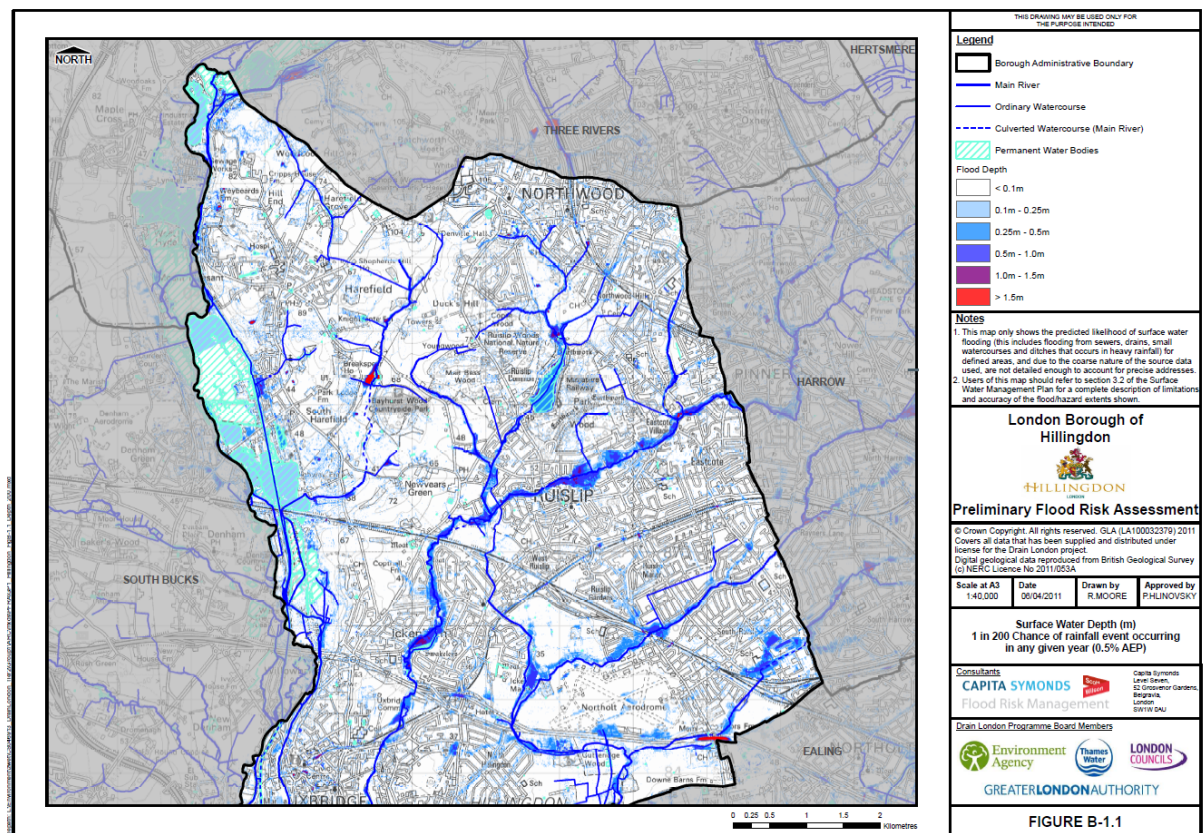
16.6.1 Map showing surface water Flood Extents & Depth by rainfall return period 1-100 Year (Source: EA, 2016).



16.6.2 Predicted surface water Flood Depth and extent for the 1 in 1000-year return period (Source: EA, 2016).

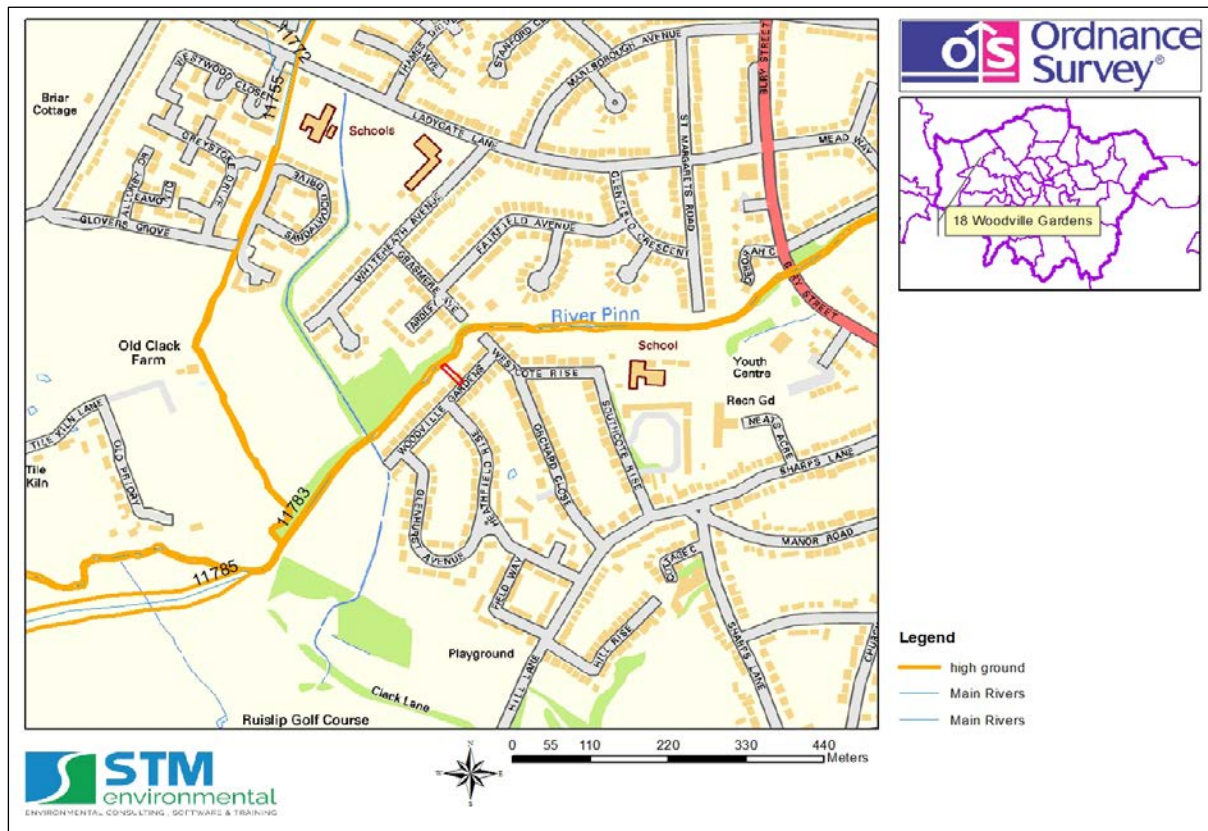


16.6.3 Predicted surface water flood depth for the 1 in 200 year return period (Source: London Borough of Hillingdon Council - PRFA 2011).

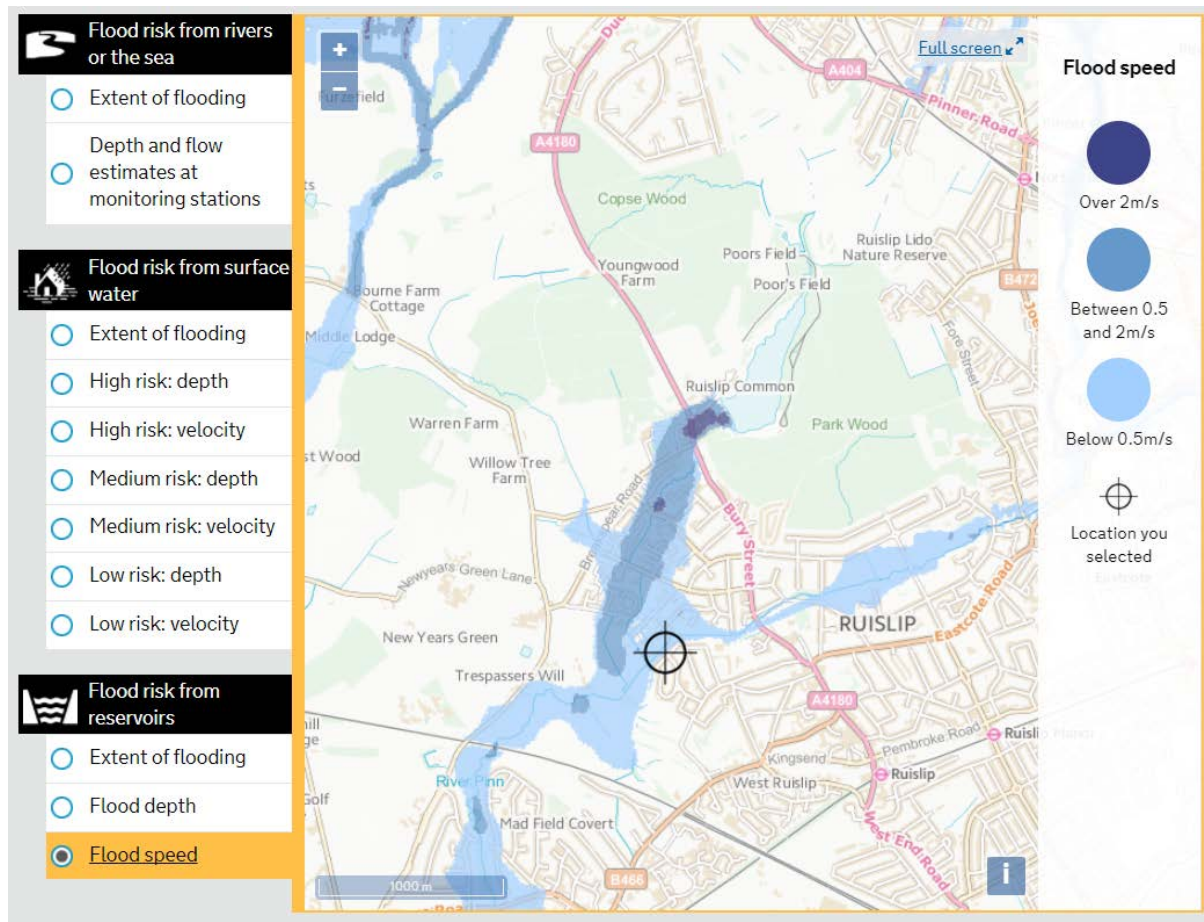


16.7 Appendix 7 –Flood Defence And Reservoir Flood Risk Maps

16.7.1 EA Map showing areas benefitting from flood defences

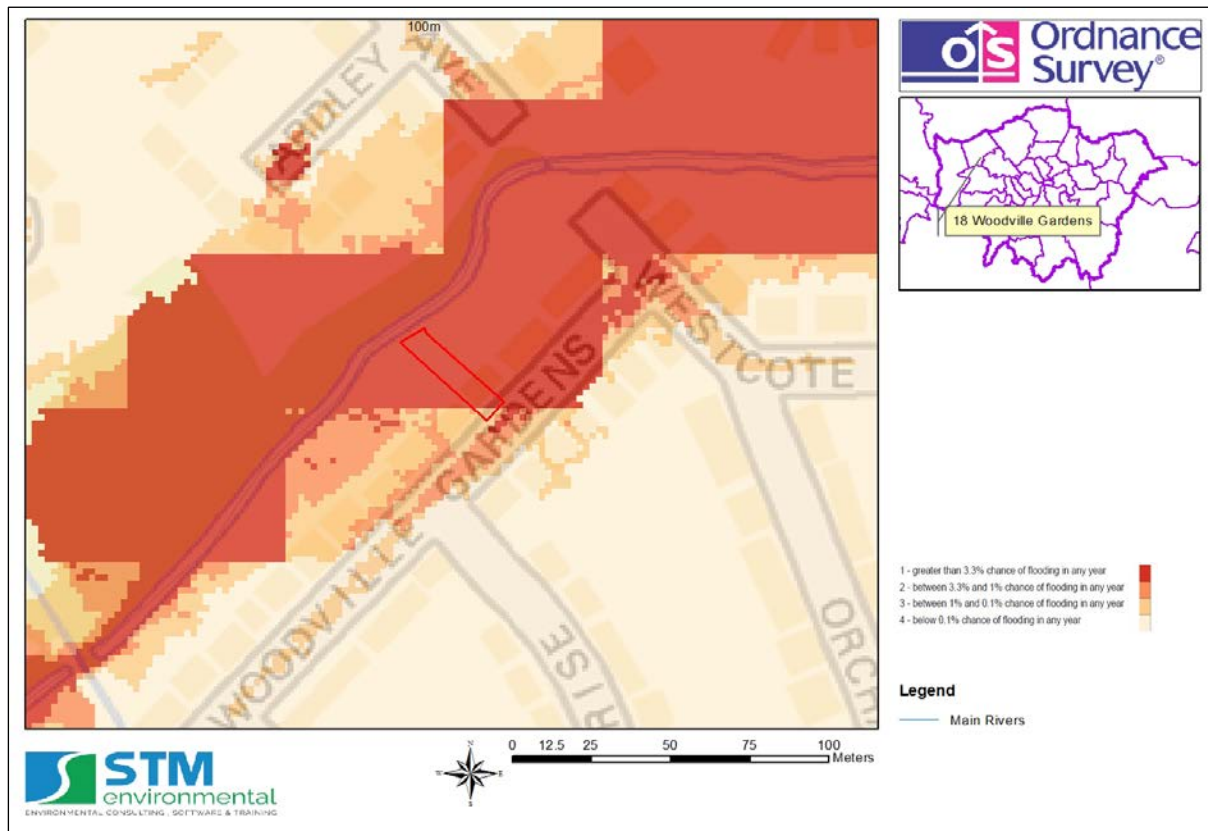


16.7.2 Reservoir Flood Risk Map – Nature Reserve Ruislip Lido

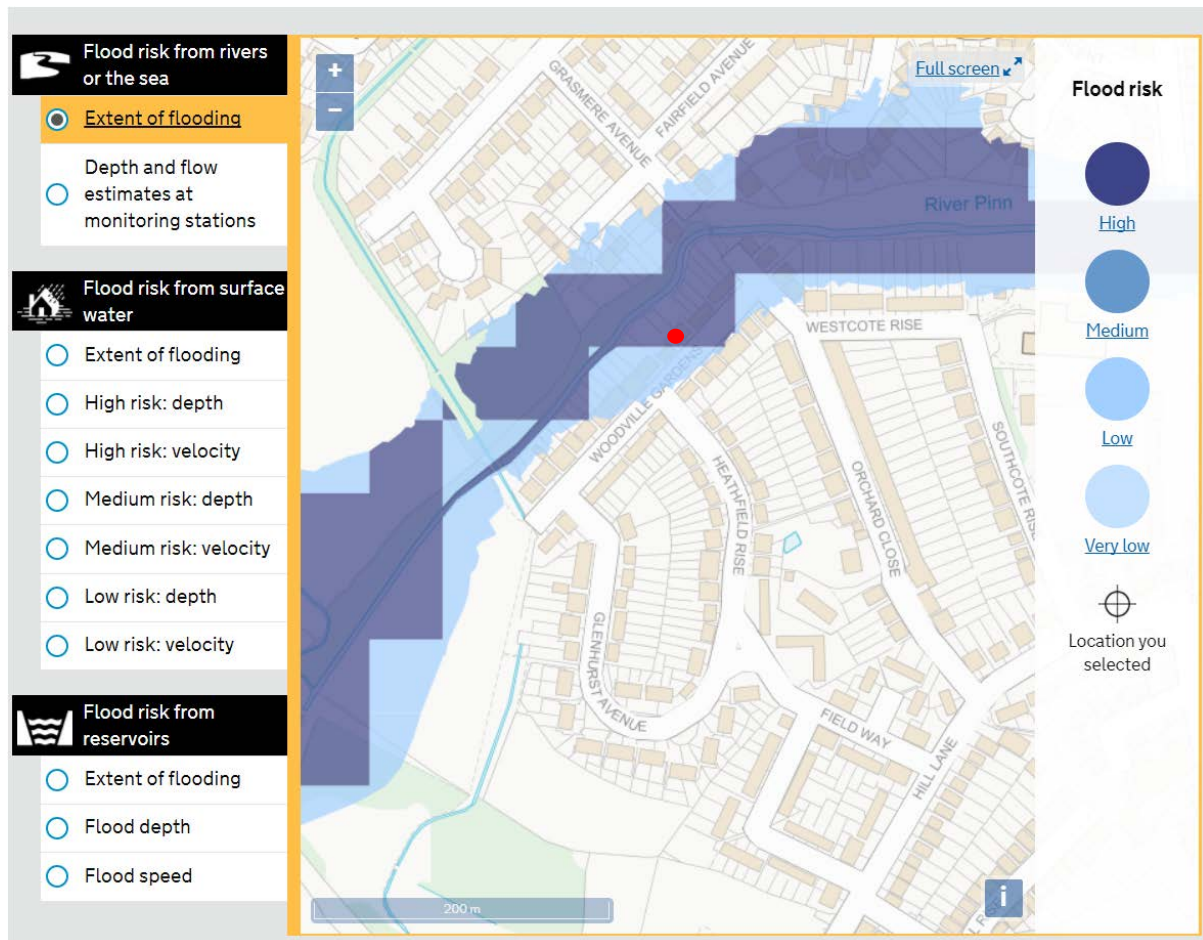


16.8 Appendix 8 – Flood Risk Maps

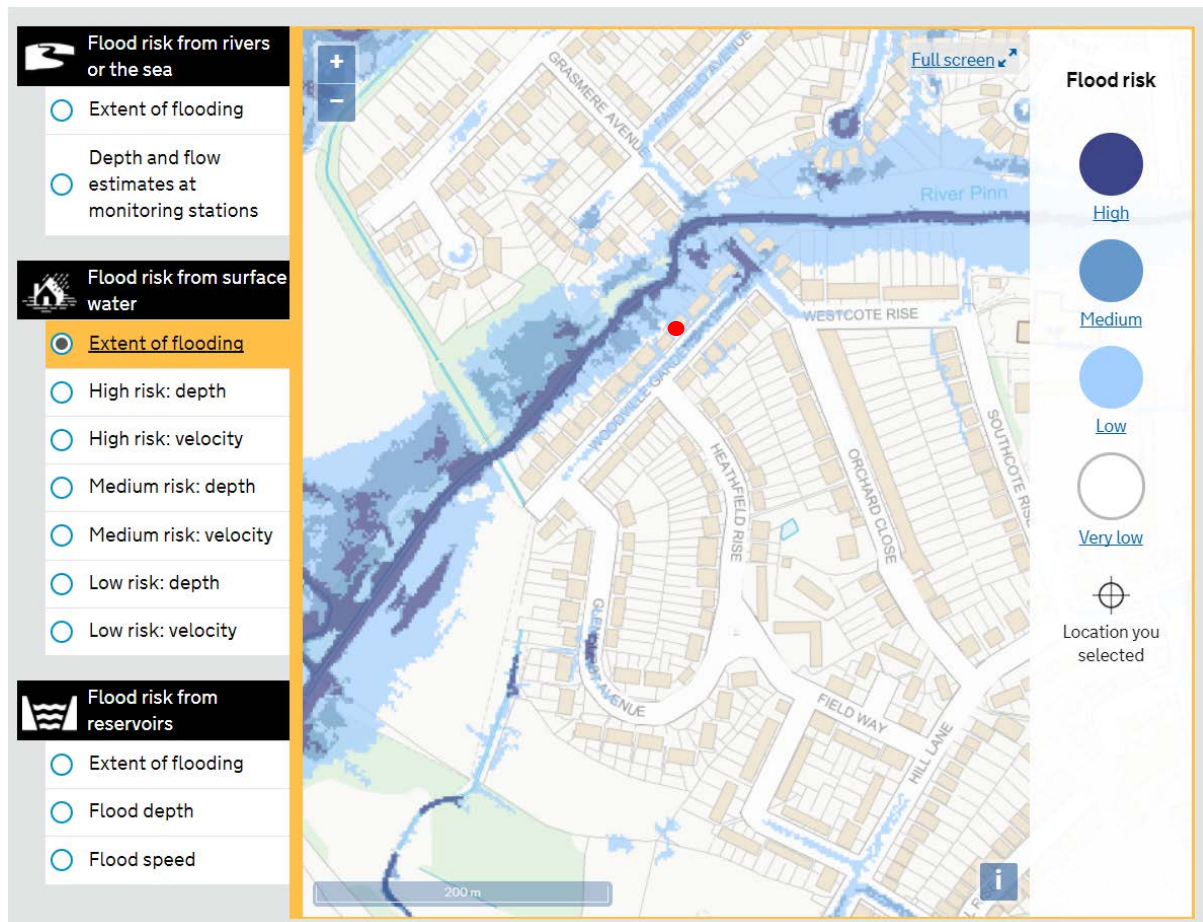
16.8.1 Risk of Flooding from Multiple Sources Map



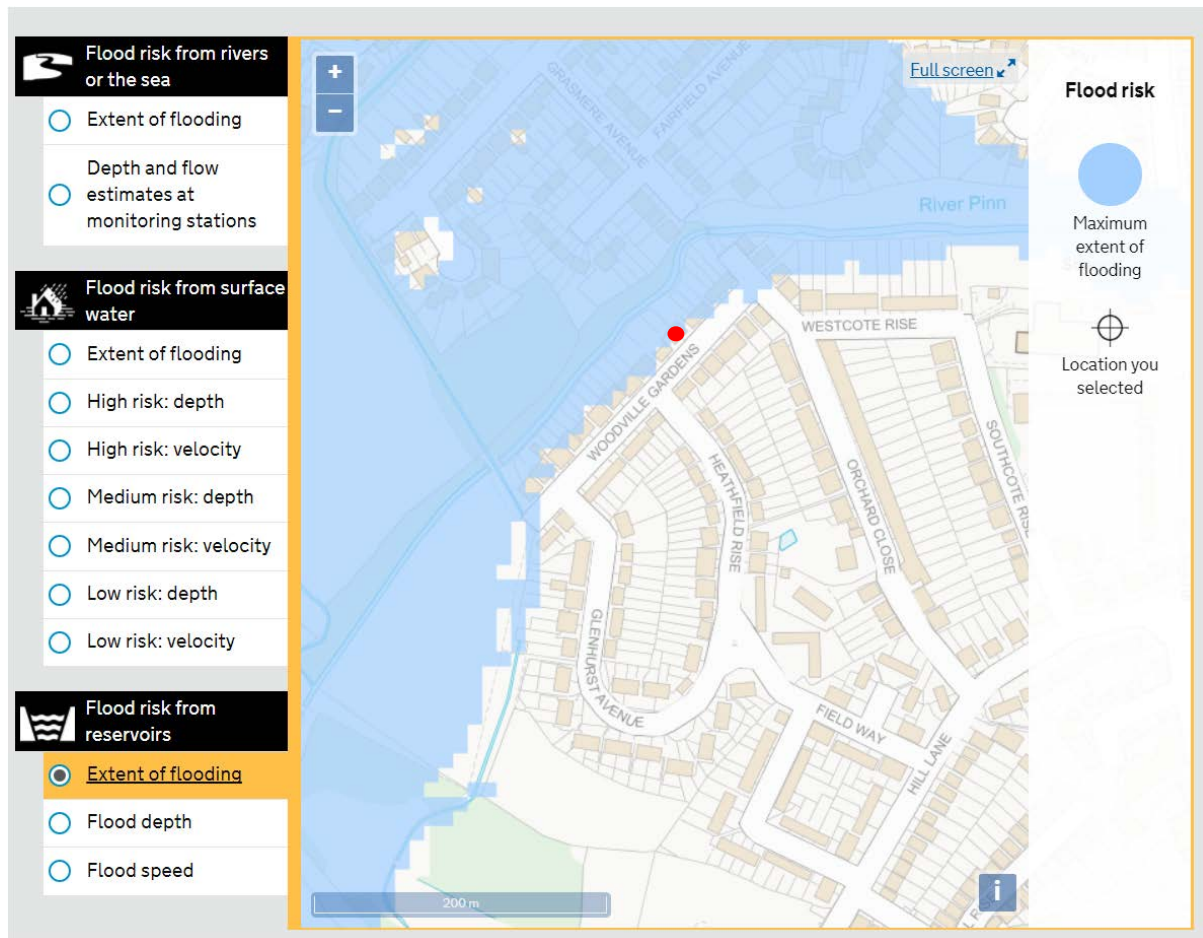
16.8.2 Long Term Flood Risk Maps – Rivers and Sea



16.8.3 Long Term Flood Risk Maps – Surface Water

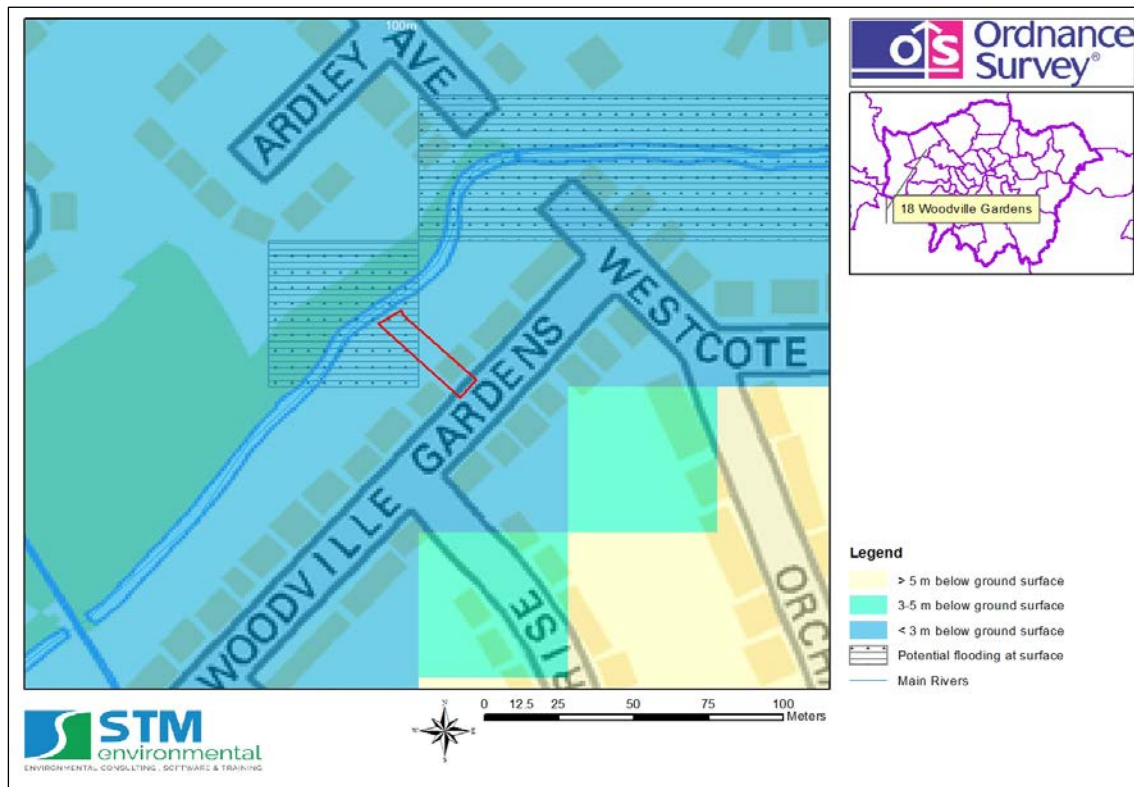


16.8.4 Long Term Flood Risk Maps – Reservoir Flooding

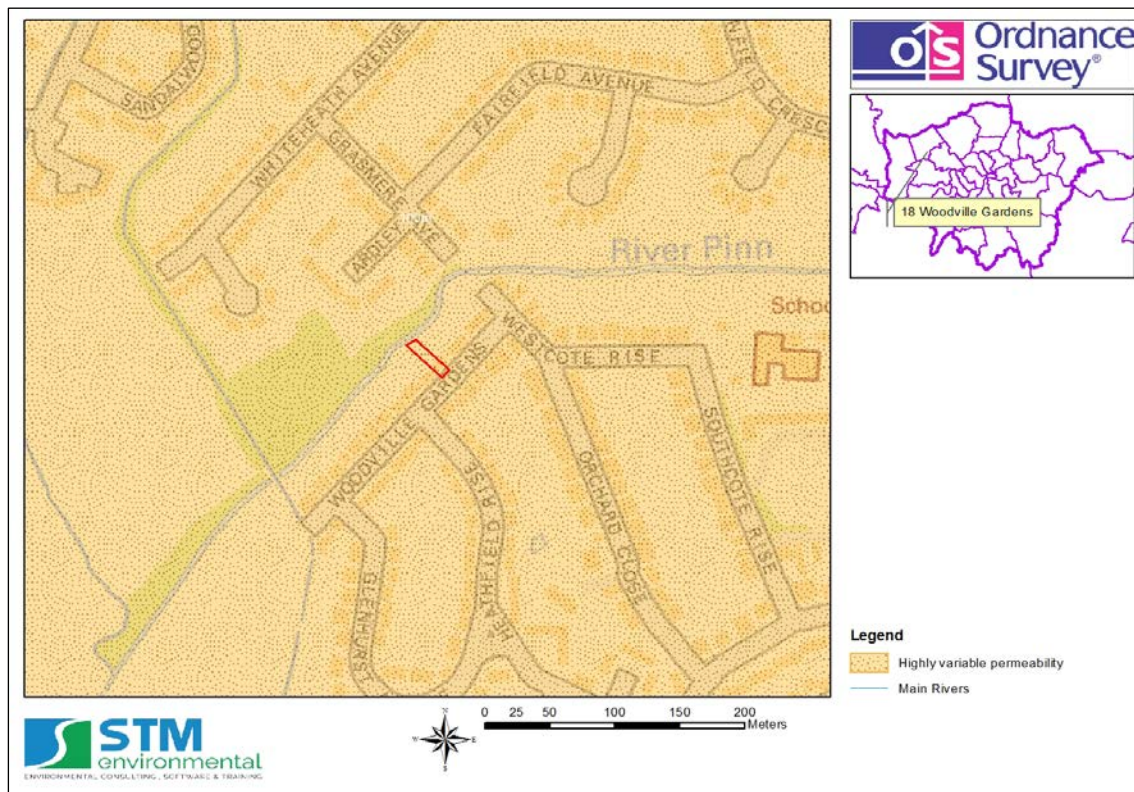


16.9 Appendix 9 – Groundwater Flood Susceptibility Map

16.9.1 Depth to groundwater and Potential for Groundwater Flooding at surface



16.9.2 Drainage Potential

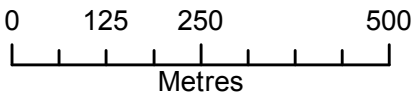


16.10 Appendix 10 - EA Product 4 (Detailed Flood Risk) Data

Flood Map for Planning centred on 18 Woodville Gardens, Ruislip, HA4 7ND - 12/09/2017 - HNL59165BC



Environment Agency
2 Bishops Square Business Park
St Albans Road West
Hatfield
Hertfordshire
AL10 9EX



Legend

Main Rivers

Flood Map for Planning

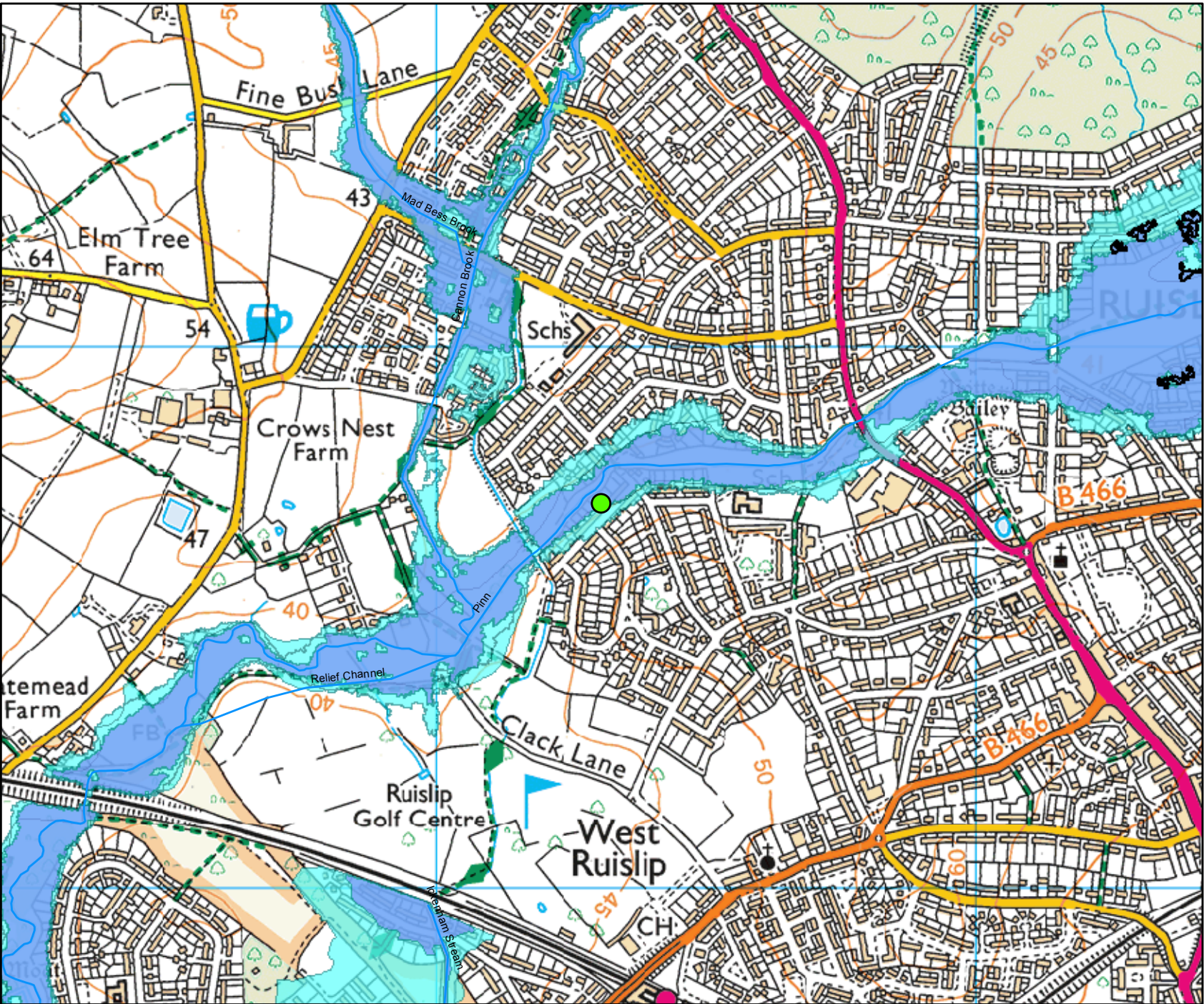
- Flood Storage Area
- Areas Benefiting from Flood Defences
- Flood Zone 3
- Flood Zone 2

Flood Map for Planning (assuming no defences)

Flood Zone 3 shows the area that could be affected by flooding:
- from the sea with a 1 in 200 or greater chance of happening each year
- or from a river with a 1 in 100 or greater chance of happening each year.

Flood Zone 2 shows the extent of an extreme flood from rivers or the sea with up to a 1 in 1000 chance of occurring each year.

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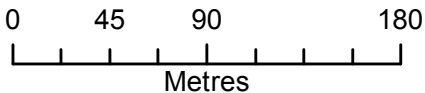


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Detailed FRA centred on 18 Woodville Gardens, Ruislip, HA4 7ND - 12/09/2017 - HNL59165BC



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Alchemy,
Bessemer Road,
Welwyn Garden City,
Hertfordshire,
AL7 1HE



Legend

Main Rivers

Defended Flood Outlines

- 1 in 2 year (50%) Defended
- 1 in 5 year (20%) Defended
- 1 in 10 year (10%) Defended
- 1 in 20 year (5%) Defended

The data in this map has been extracted from the River Pinn Mapping Study (JBA, 2015). This model has been designed for catchment wide flood risk mapping. It should be noted that it was not created to produce flood levels for specific development sites within the catchment. Modelled outlines take into account catchment wide defences.

Flood risk data requests including an allowance for climate change will be based on the 1 in 100 flood plus 20% allowance for climate change, unless otherwise stated. You should refer to 'Flood risk assessments: climate change allowances' to check if this allowance is still appropriate for the type of development you are proposing and its location. You may need to undertake further assessment of future flood risk using different allowances to ensure your assessment of future flood risk is based on best available evidence.

<https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances>

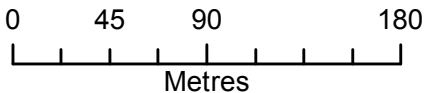
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Hertfordshire,
AL7 1HE



Legend

Main Rivers

Defended Flood Outlines

- 1 in 30 year (3.33%) Defended
- 1 in 50 year (2%) Defended
- 1 in 75 year (1.33%) Defended
- 1 in 100 year (1%) Defended

The data in this map has been extracted from the River Pinn Mapping Study (JBA, 2015). This model has been designed for catchment wide flood risk mapping. It should be noted that it was not created to produce flood levels for specific development sites within the catchment. Modelled outlines take into account catchment wide defences.

Flood risk data requests including an allowance for climate change will be based on the 1 in 100 flood plus 20% allowance for climate change, unless otherwise stated. You should refer to 'Flood risk assessments: climate change allowances' to check if this allowance is still appropriate for the type of development you are proposing and its location. You may need to undertake further assessment of future flood risk using different allowances to ensure your assessment of future flood risk is based on best available evidence.

<https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances>

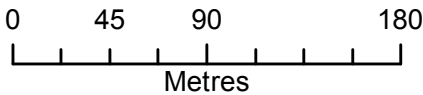
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Legend

Main Rivers

Defended Flood Outlines

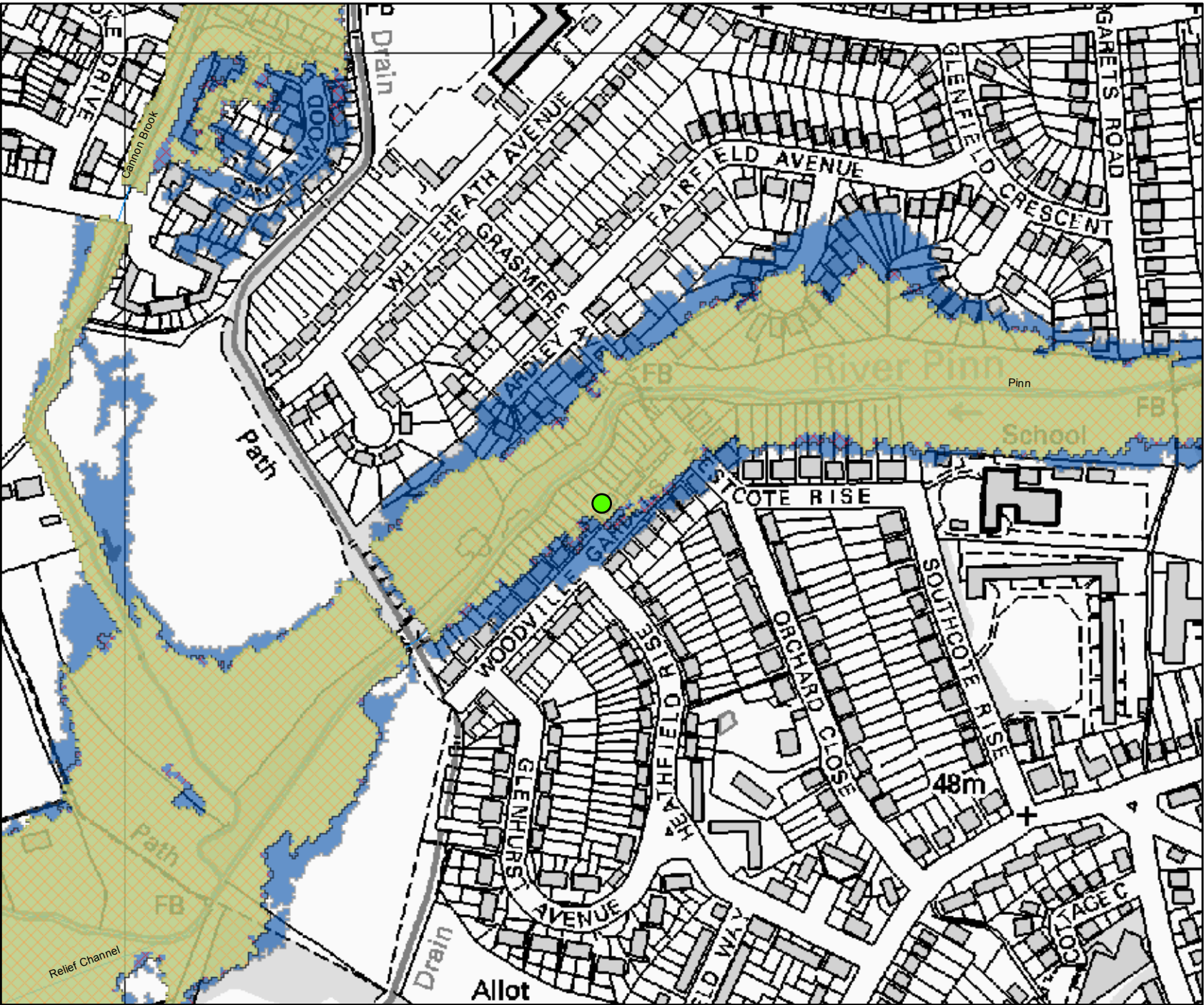
- 1 in 100 year + 20% (*CC) Defended
- 1 in 250 year (0.4%) Defended
- 1 in 1000 year (0.1%) Defended

The data in this map has been extracted from the River Pinn Mapping Study (JBA, 2015). This model has been designed for catchment wide flood risk mapping. It should be noted that it was not created to produce flood levels for specific development sites within the catchment. Modelled outlines take into account catchment wide defences.

Flood risk data requests including an allowance for climate change will be based on the 1 in 100 flood plus 20% allowance for climate change, unless otherwise stated. You should refer to 'Flood risk assessments: climate change allowances' to check if this allowance is still appropriate for the type of development you are proposing and its location. You may need to undertake further assessment of future flood risk using different allowances to ensure your assessment of future flood risk is based on best available evidence.

<https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances>

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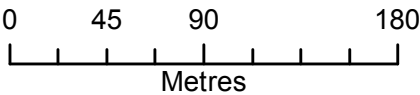


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Legend

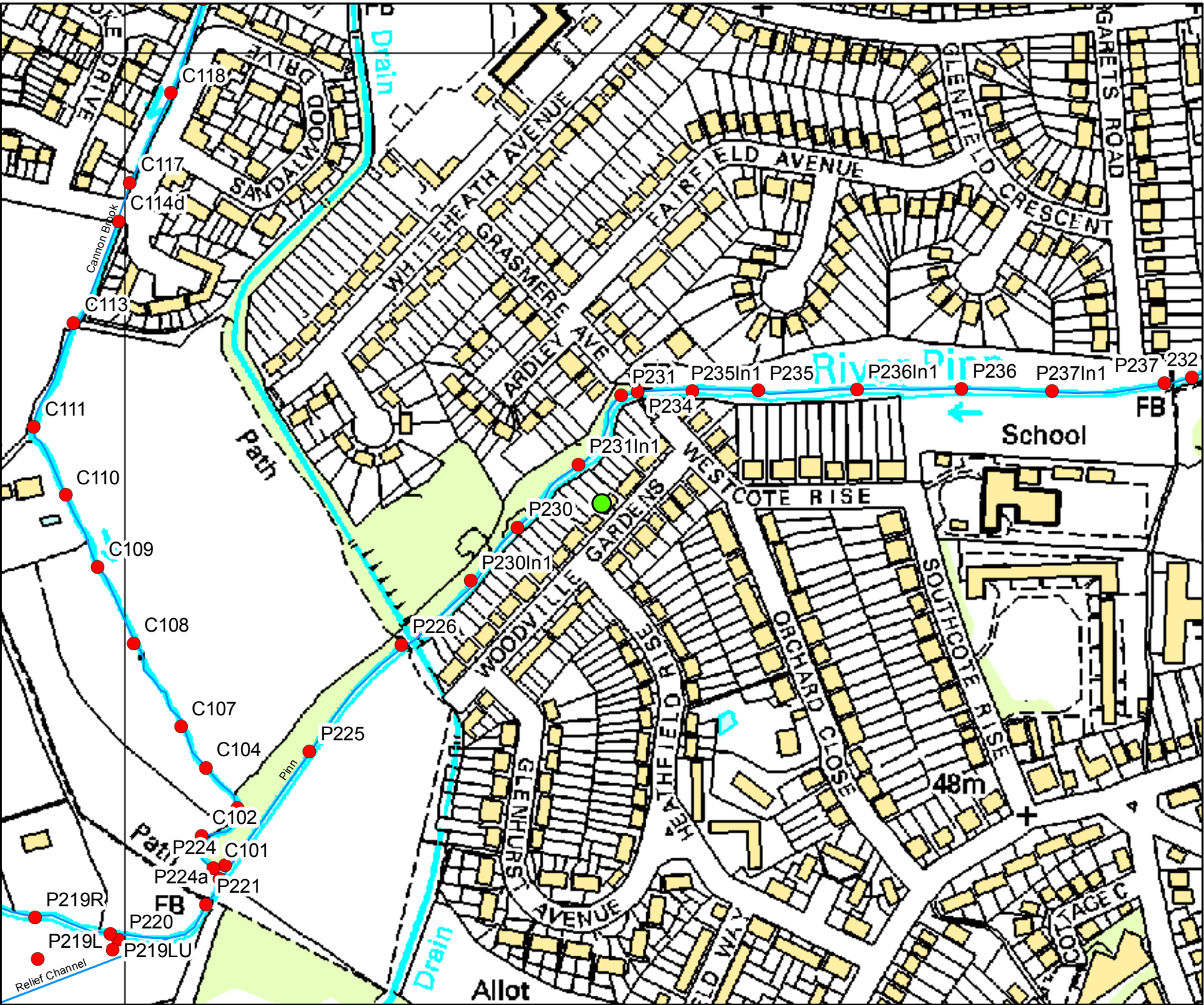
Main Rivers

1D Node Results

Nodes

The data in this map has been extracted from the River Pinn Mapping Study (JBA, 2015). This model has been designed for catchment wide flood risk mapping. It should be noted that it was not created to produce flood levels for specific development sites within the catchment. Modelled outlines take into account catchment wide defences. Flood risk data requests including an allowance for climate change will be based on the 1 in 100 flood plus 20% allowance for climate change, unless otherwise stated. You should refer to 'Flood risk assessments: climate change allowances' to check if this allowance is still appropriate for the type of development you are proposing and its location. You may need to undertake further assessment of future flood risk using different allowances to ensure your assessment of future flood risk is based on best available evidence. <https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances>

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Environment Agency ref: HNL59165 BC

The following information has been extracted from the River Pinn Mapping Study (JBA, 2015)

Flood risk data requests including an allowance for climate change will be based on the 1 in 100 flood plus 20% allowance for climate change, unless otherwise stated. You should refer to 'Flood risk assessments: climate change allowances' to check if this allowance is still appropriate for the type of development you are proposing and its location. You may need to undertake further assessment of future flood risk using different allowances to ensure your assessment of future flood risk is based on best available evidence.

<https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances>

Caution:

This model has been designed for catchment wide flood risk mapping. It should be noted that it was not created to produce flood levels for specific development sites across the entire catchment.

All flood levels are given in metres Above Ordnance Datum (mAOD)

All flows are given in cubic metres per second (cumecs)

MODELLED FLOOD LEVEL

Node Label	Easting	Northing	Return Period										
			2 yr	5 yr	10 yr	20 yr	30 yr	50 yr	75 yr	100 yr	250 yr	100yr + 20%	1000yr
232.00	508692	187789	39.91	40.11	40.21	40.28	40.31	40.37	40.42	40.46	40.56	40.61	41.11
P237	508674	187785	39.86	40.06	40.15	40.22	40.26	40.33	40.37	40.41	40.52	40.58	41.09
P237In1	508601	187780	39.82	40.01	40.11	40.18	40.21	40.27	40.32	40.36	40.47	40.53	41.07
P236	508542	187782	39.78	39.97	40.07	40.15	40.18	40.25	40.30	40.34	40.46	40.52	41.06
P236In1	508475	187781	39.74	39.94	40.04	40.12	40.15	40.22	40.28	40.32	40.43	40.50	41.05
P235	508411	187781	39.69	39.90	40.02	40.10	40.14	40.21	40.26	40.31	40.43	40.49	41.05
P235In1	508368	187780	39.64	39.86	39.97	40.05	40.09	40.17	40.23	40.27	40.40	40.46	41.02
P234	508332	187780	39.60	39.80	39.92	40.00	40.04	40.12	40.18	40.24	40.38	40.45	41.04
P231	508322	187778	39.59	39.80	39.91	39.99	40.03	40.11	40.16	40.21	40.35	40.43	41.04
P231In1	508294	187733	39.55	39.75	39.87	39.95	39.98	40.06	40.12	40.16	40.30	40.38	41.02
P230	508254	187692	39.51	39.71	39.83	39.92	39.95	40.04	40.10	40.14	40.28	40.36	41.01
P230In1	508224	187658	39.47	39.69	39.81	39.90	39.94	40.03	40.09	40.14	40.28	40.36	41.01
P229	508195	187628	39.42	39.63	39.74	39.82	39.85	39.94	39.99	40.04	40.18	40.25	40.89
P226	508179	187616	39.34	39.51	39.59	39.64	39.66	39.70	39.72	39.75	39.80	39.83	40.01
P225	508120	187547	39.27	39.42	39.50	39.55	39.57	39.61	39.64	39.66	39.72	39.75	39.97
P224	508065	187473	39.21	39.36	39.43	39.48	39.51	39.55	39.57	39.59	39.65	39.68	39.93
P224a	508061	187464	39.21	39.36	39.43	39.48	39.51	39.55	39.57	39.59	39.65	39.68	39.93
P221	508053	187448	39.19	39.32	39.40	39.45	39.48	39.52	39.55	39.58	39.64	39.67	39.93
P220	507996	187425	39.12	39.25	39.33	39.39	39.42	39.47	39.51	39.54	39.61	39.65	39.92
P219RU	507991	187429	39.12	39.25	39.33	39.39	39.42	39.47	39.51	39.54	39.61	39.65	39.92
P219R	507942	187439	39.07	39.21	39.30	39.37	39.40	39.45	39.49	39.52	39.59	39.63	39.91
P219LU	507992	187419	39.12	39.25	39.33	39.39	39.42	39.47	39.51	39.54	39.61	39.65	39.92
P219L	507944	187413	39.04	39.18	39.27	39.33	39.36	39.41	39.45	39.48	39.57	39.61	39.90
C118	508030	187973	39.92	39.95	39.97	40.00	40.02	40.04	40.08	40.16	40.29	40.37	40.76
C117	508003	187915	39.62	39.68	39.73	39.77	39.79	39.83	39.89	39.99	40.14	40.23	40.68
C114d	507996	187890	39.56	39.62	39.66	39.70	39.72	39.75	39.82	39.89	40.02	40.09	40.39
C113	507967	187824	39.46	39.53	39.58	39.62	39.65	39.68	39.74	39.80	39.91	39.97	40.23
C111	507941	187757	39.37	39.46	39.53	39.58	39.60	39.63	39.68	39.73	39.81	39.86	40.07
C110	507962	187713	39.29	39.42	39.50	39.55	39.57	39.61	39.64	39.68	39.74	39.78	39.97
C109	507982	187666	39.26	39.41	39.48	39.54	39.56	39.60	39.63	39.65	39.71	39.74	39.96
C108	508006	187617	39.25	39.40	39.48	39.53	39.55	39.59	39.62	39.64	39.70	39.73	39.95
C107	508036	187563	39.25	39.40	39.47	39.52	39.55	39.59	39.62	39.64	39.70	39.73	39.95
C104	508052	187537	39.25	39.39	39.47	39.52	39.54	39.59	39.61	39.64	39.69	39.72	39.95
C103	508073	187511	39.24	39.38	39.46	39.51	39.53	39.57	39.60	39.62	39.68	39.71	39.95
C102	508050	187493	39.22	39.37	39.44	39.49	39.51	39.55	39.57	39.59	39.65	39.68	39.93
C101	508057	187472	39.21	39.36	39.43	39.48	39.51	39.55	39.57	39.59	39.65	39.68	39.93

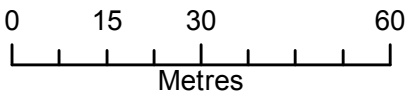
MODELLED FLOWS

Node Label	Easting	Northing	Return Period										
			2 yr	5 yr	10 yr	20 yr	30 yr	50 yr	75 yr	100 yr	250 yr	100yr + 20%	1000yr
232.00	508692	187789	5.21	5.83	6.06	6.14	6.16	6.17	6.17	6.18	6.17	6.16	6.16
P237	508674	187785	5.21	5.83	6.06	6.14	6.16	6.17	6.17	6.18	6.17	6.16	6.16
P237In1	508601	187780	5.29	6.84	7.57	8.08	8.32	8.75	9.03	9.24	9.67	9.91	10.81
P236	508542	187782	5.29	6.72	7.18	7.52	7.66	7.92	8.05	8.15	8.45	8.70	9.77
P236In1	508475	187781	5.36	6.80	7.57	8.05	8.30	8.77	8.99	9.17	9.62	9.86	11.00
P235	508411	187781	5.36	7.02	7.48	7.60	7.64	7.79	8.04	8.25	8.75	8.99	10.06
P235In1	508368	187780	5.36	7.12	8.39	9.32	9.63	10.03	10.22	10.35	10.80	11.19	15.05
P234	508332	187780	5.36	7.12	8.40	9.48	9.94	10.66	11.01	11.13	11.21	11.22	11.37
P231	508322	187778	5.36	7.12	8.40	9.48	9.94	10.66	11.01	11.13	11.21	11.22	11.37
P231In1	508294	187733	5.35	7.05	8.12	9.05	9.48	10.43	11.11	11.66	12.76	12.96	13.08
P230	508254	187692	5.35	6.85	7.78	8.30	8.62	9.11	9.50	9.91	10.93	11.28	12.26
P230In1	508224	187658	5.16	5.94	6.28	6.52	6.69	6.98	7.20	7.41	7.93	8.15	8.75
P229	508195	187628	5.35	7.10	8.39	9.52	10.06	11.22	12.08	12.81	14.82	15.93	23.85
P226	508179	187616	5.35	7.10	8.39	9.52	10.06	11.22	12.08	12.81	14.82	15.93	23.85
P225	508120	187547	5.35	6.81	7.63	8.31	8.67	9.32	9.79	10.22	11.10	11.61	14.47
P224	508065	187473	4.14	5.22	5.80	6.30	6.50	7.02	7.43	7.82	8.65	9.03	10.42
P224a	508061	187464	5.87	7.63	8.41	8.94	9.13	9.68	10.17	10.72	11.83	12.26	13.85
P221	508053	187448	5.87	7.63	8.32	8.67	8.80	9.03	9.19	9.35	9.86	10.13	11.35
P220	507996	187425	5.87	7.63	8.39	8.77	8.91	9.15	9.30	9.40	9.66	9.82	10.96
P219RU	507991	187429	4.14	5.07	5.26	5.34	5.36	5.38	5.40	5.41	5.44	5.46	5.61
P219R	507942	187439	4.14	4.64	4.64	4.67	4.69	4.72	4.74	4.76	4.79	4.80	4.85
P219LU	507992	187419	1.74	2.58	3.25	3.82	4.04	4.53	4.79	4.96	5.23	5.38	7.34
P219L	507944	187413	1.86	2.74	3.44	4.04	4.32	4.82	5.12	5.30	5.45	5.52	6.70
C118	508030	187973	0.61	0.74	0.84	0.93	0.99	1.07	1.22	1.56	2.16	2.55	4.54
C117	508003	187915	0.61	0.74	0.84	0.93	0.99	1.07	1.22	1.56	2.16	2.55	4.80
C114d	507996	187890	0.61	0.74	0.84	0.93	0.99	1.07	1.22	1.56	2.16	2.55	4.80
C113	507967	187824	0.61	0.74	0.83	0.93	0.99	1.07	1.22	1.55	2.16	2.55	4.81
C111	507941	187757	0.63	0.76	0.87	0.98	1.04	1.13	1.23	1.58	2.20	2.61	4.90
C110	507962	187713	0.63	0.76	0.87	0.98	1.04	1.13	1.23	1.57	2.20	2.60	4.90
C109	507982	187666	0.63	0.76	0.87	0.97	1.03	1.12	1.22	1.57	2.20	2.60	4.74
C108	508006	187617	0.65	0.78	0.90	1.01	1.08	1.18	1.27	1.58	2.18	2.56	4.37
C107	508036	187563	0.64	0.78	0.90	1.01	1.08	1.18	1.26	1.52	2.01	2.32	3.21
C104	508052	187537	0.64	0.78	0.90	1.01	1.07	1.18	1.40	1.71	2.13	2.37	2.89
C103	508073	187511	1.07	1.34	1.56	1.71	1.82	2.05	2.25	2.44	2.78	2.93	3.29
C102	508050	187493	1.72	2.36	2.91	3.33	3.53	3.94	4.23	4.45	4.91	5.04	5.23
C101	508057	187472	1.73	2.42	2.63	2.66	2.66	2.68	2.74	2.89	3.19	3.24	3.56

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Legend

— Main Rivers

2D Node Results: Heights

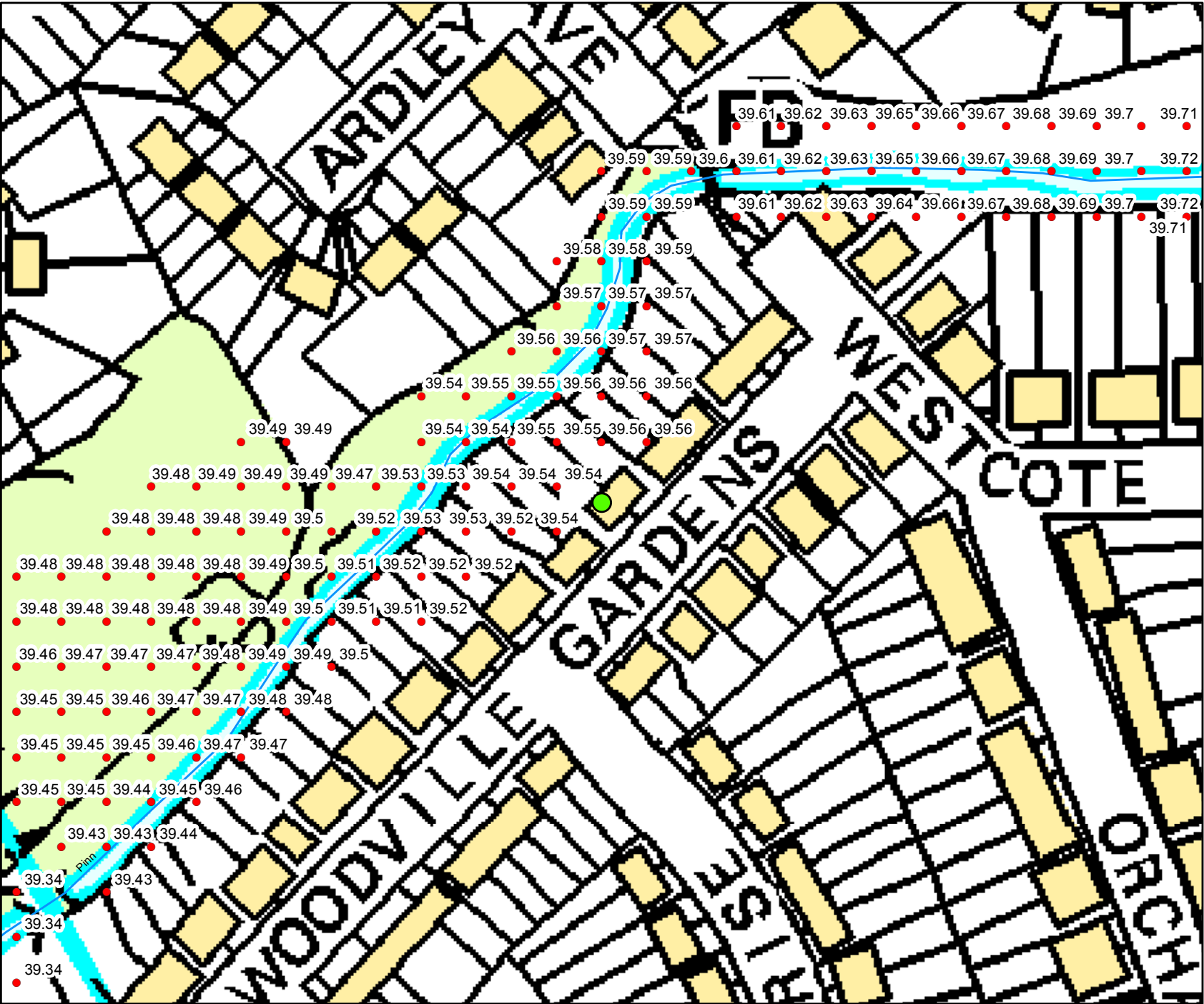
• 1 in 2 year (50%) Defended

The data in this map has been extracted from the River Pinn Mapping Study (JBA, 2015). This model has been designed for catchment wide flood risk mapping. It should be noted that it was not created to produce flood levels for specific development sites within the catchment. Modelled outlines take into account catchment wide defences.

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<https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances>

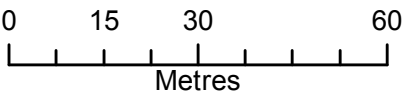
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Legend

— Main Rivers

2D Node Results: Heights

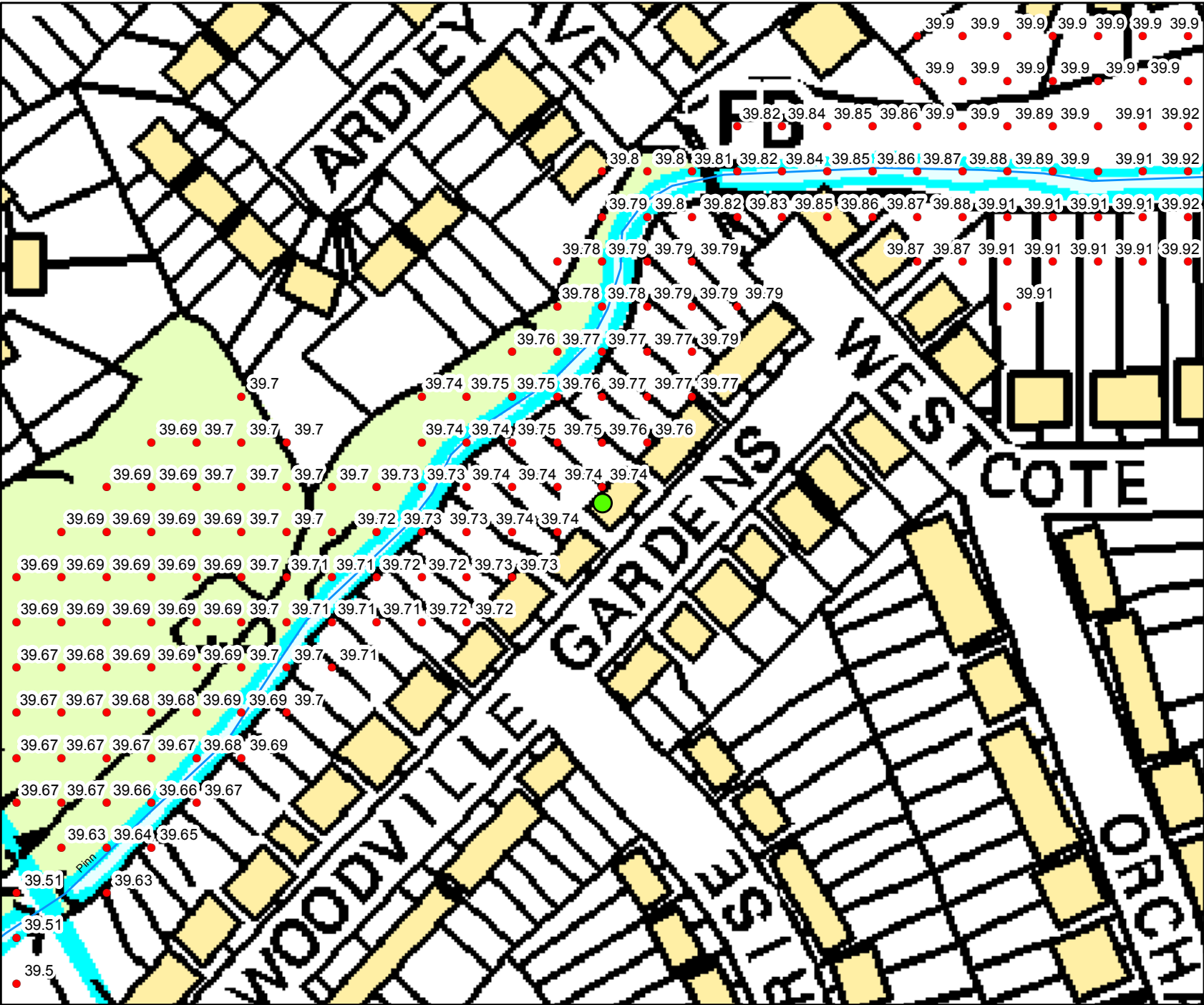
• 1 in 5 year (20%) Defended

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<https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances>

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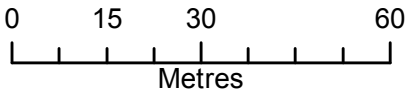


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2D Node Results: Heights

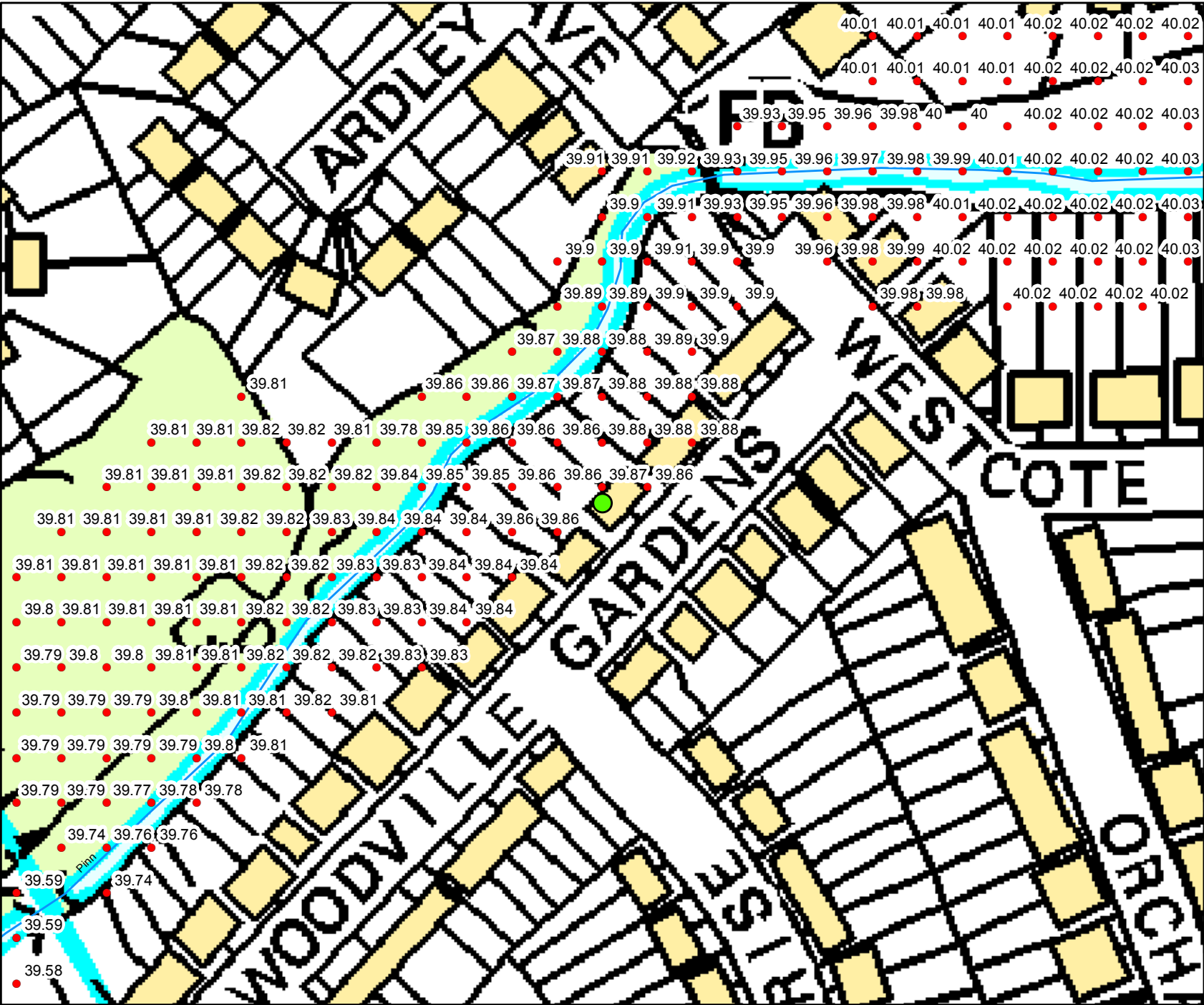
• 1 in 10 year (10%) Defended

The data in this map has been extracted from the River Pinn Mapping Study (JBA, 2015). This model has been designed for catchment wide flood risk mapping. It should be noted that it was not created to produce flood levels for specific development sites within the catchment. Modelled outlines take into account catchment wide defences.

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<https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances>

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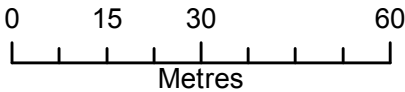


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2D Node Results: Heights

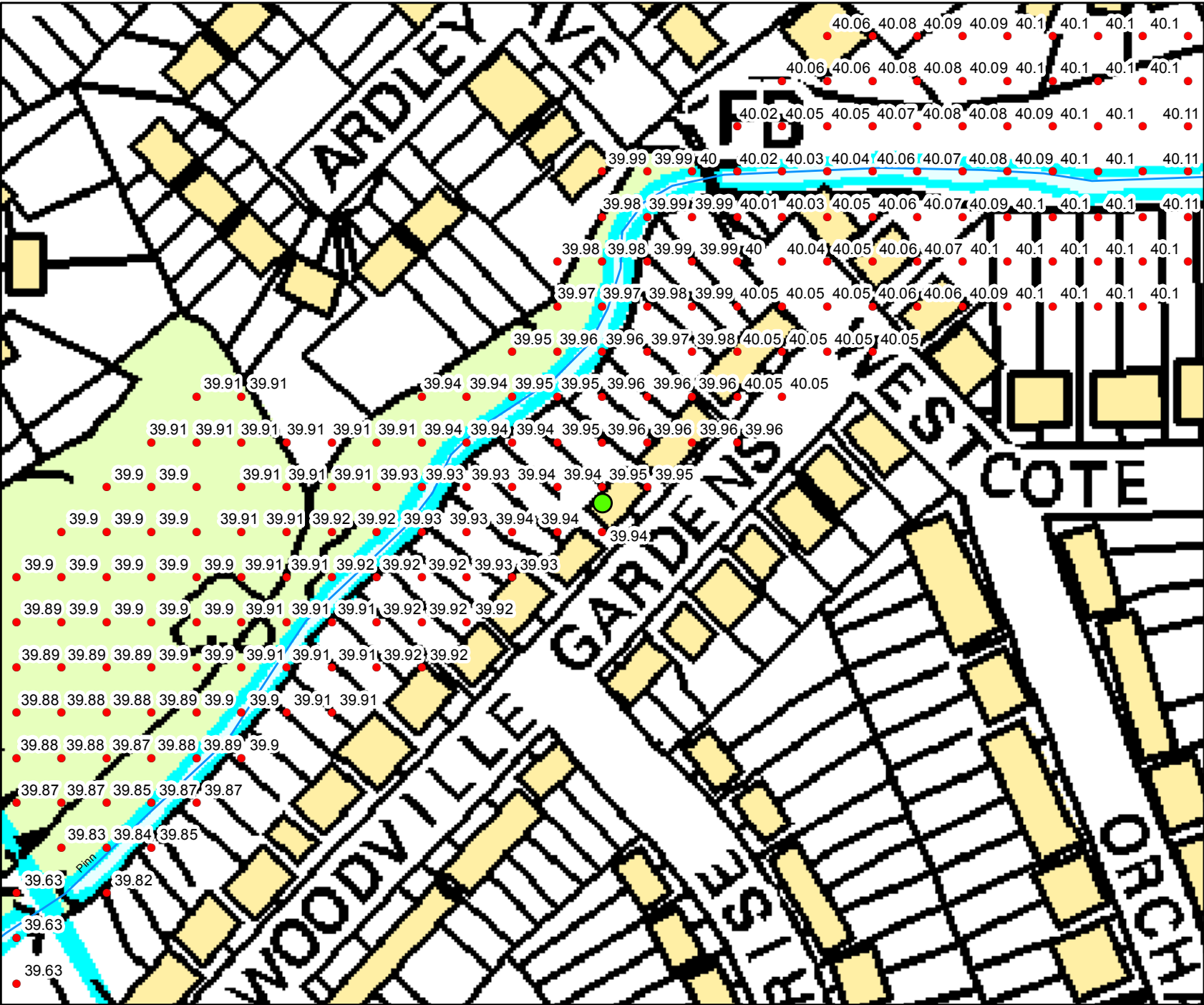
• 1 in 20 year (5%) Defended

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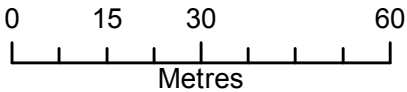
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2D Node Results: Heights

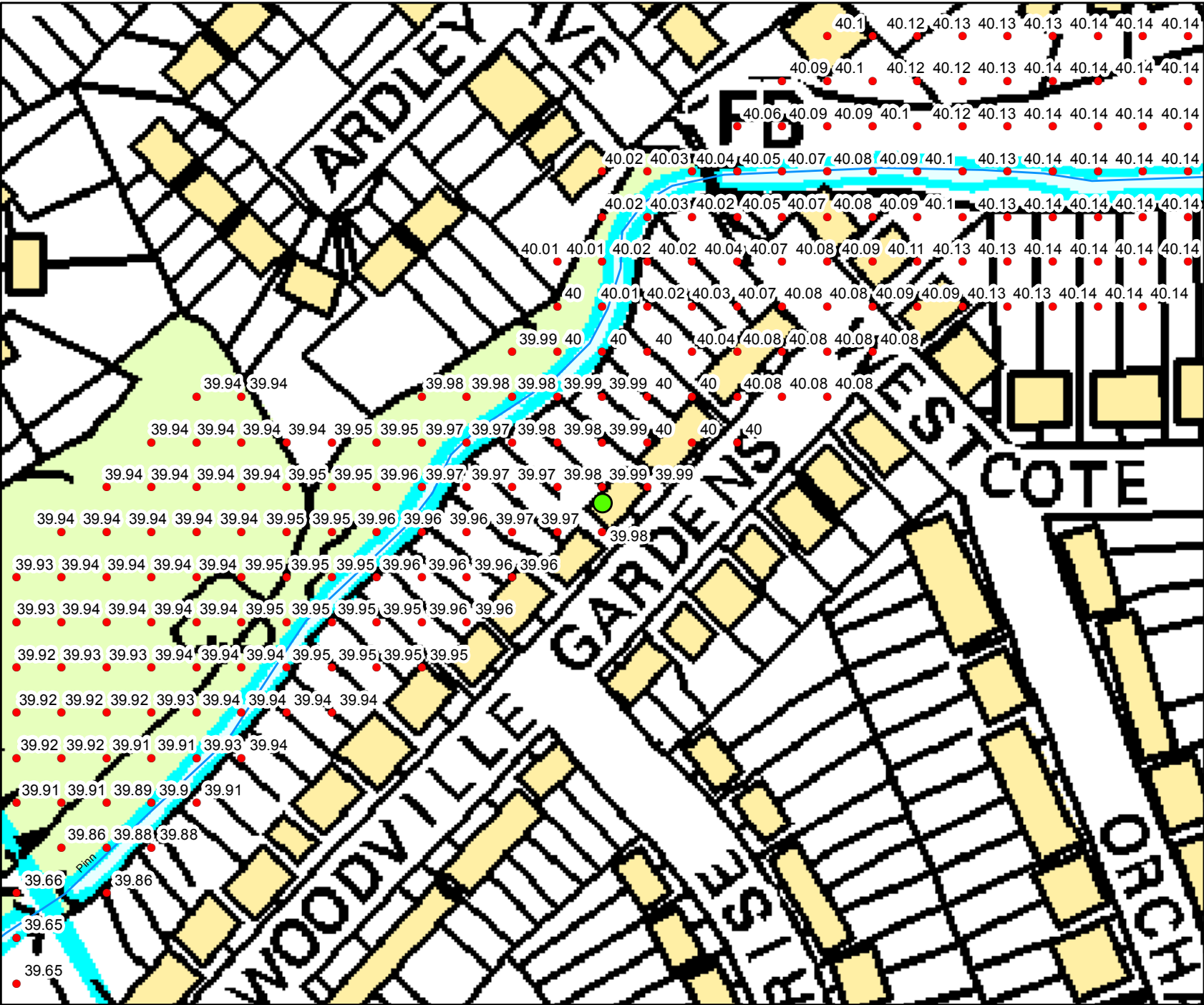
● 1 in 30 year (3.33%) Defended

The data in this map has been extracted from the River Pinn Mapping Study (JBA, 2015). This model has been designed for catchment wide flood risk mapping. It should be noted that it was not created to produce flood levels for specific development sites within the catchment. Modelled outlines take into account catchment wide defences.

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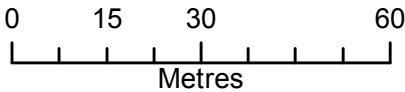
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2D Node Results: Heights

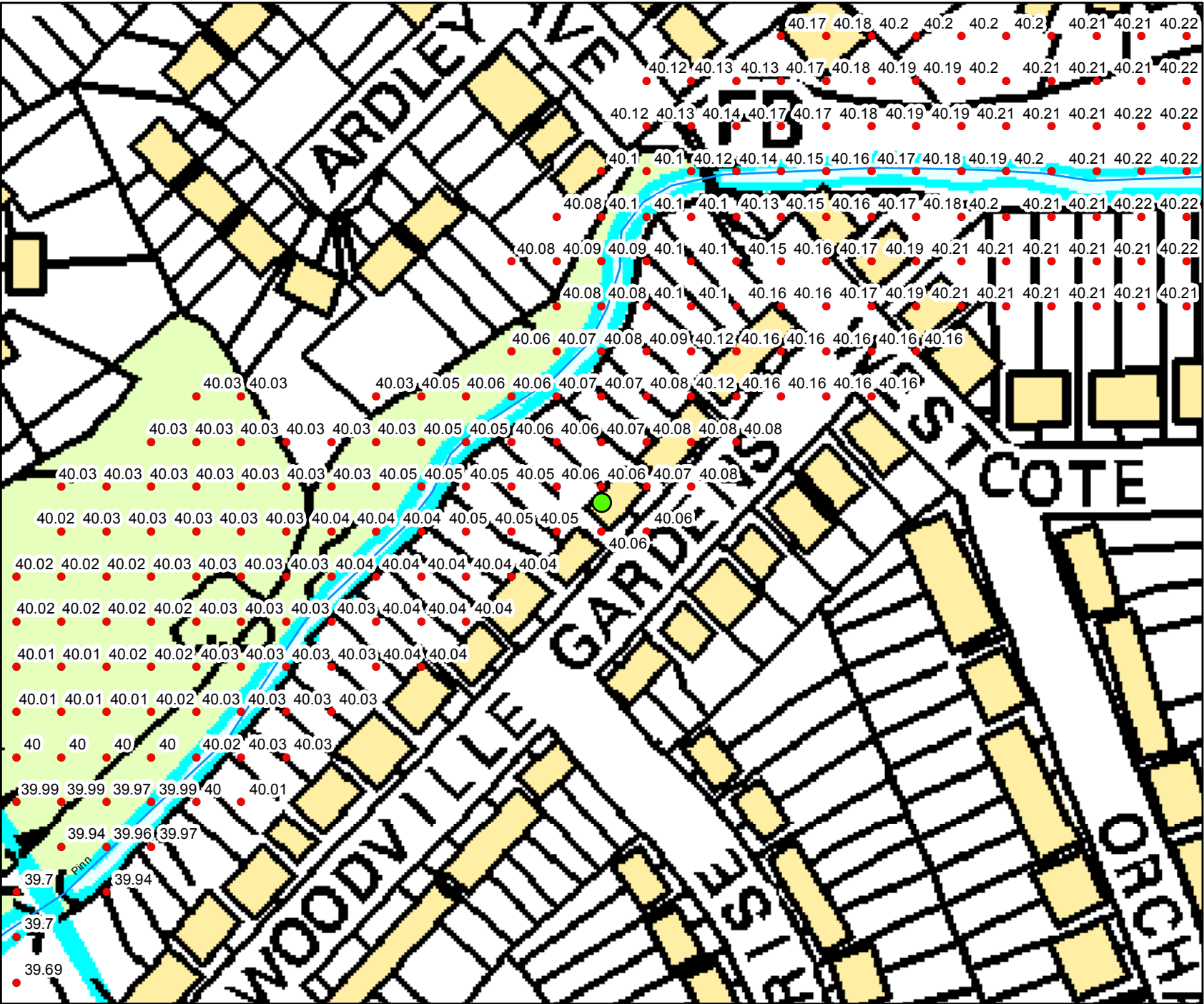
• 1 in 50 year (2%) Defended

The data in this map has been extracted from the River Pinn Mapping Study (JBA, 2015). This model has been designed for catchment wide flood risk mapping. It should be noted that it was not created to produce flood levels for specific development sites within the catchment. Modelled outlines take into account catchment wide defences.

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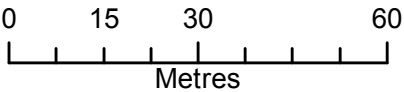


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2D Node Results: Heights

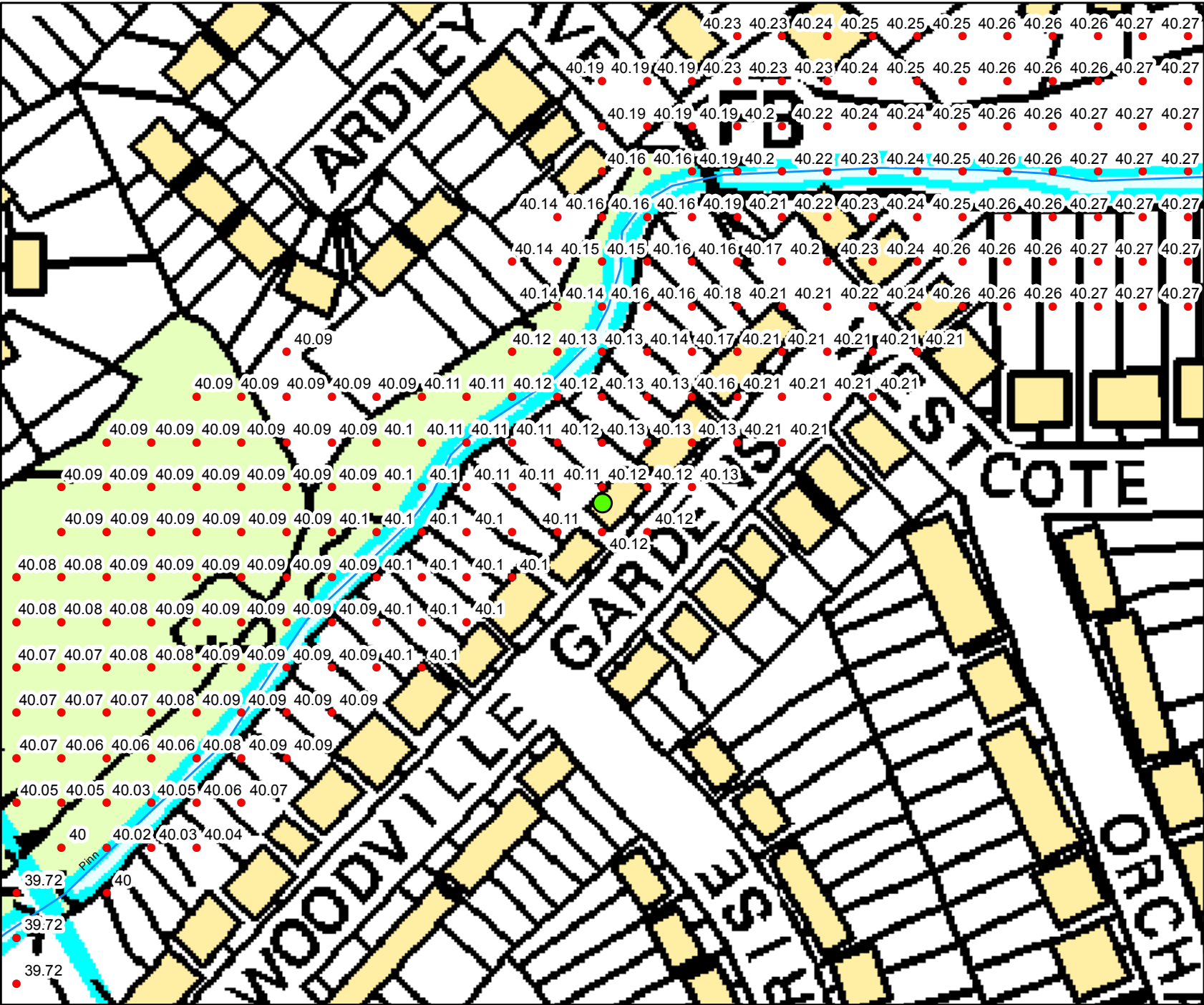
• 1 in 75 year (1.33%) Defended

The data in this map has been extracted from the River Pinn Mapping Study (JBA, 2015). This model has been designed for catchment wide flood risk mapping. It should be noted that it was not created to produce flood levels for specific development sites within the catchment. Modelled outlines take into account catchment wide defences.

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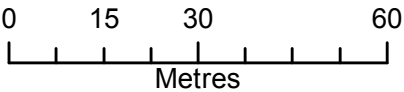


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2D Node Results: Heights

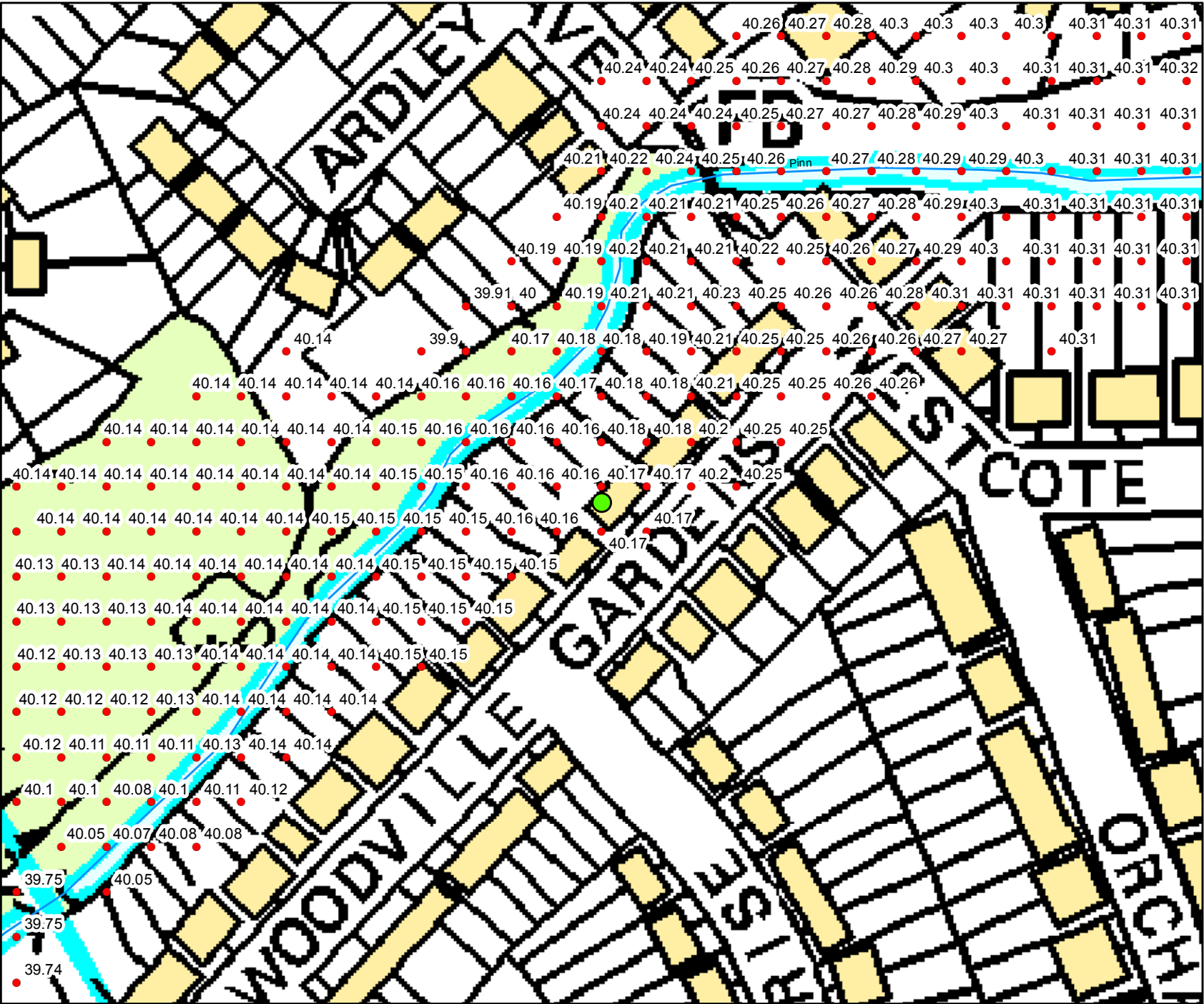
• 1 in 100 year (1%) Defended

The data in this map has been extracted from the River Pinn Mapping Study (JBA, 2015). This model has been designed for catchment wide flood risk mapping. It should be noted that it was not created to produce flood levels for specific development sites within the catchment. Modelled outlines take into account catchment wide defences.

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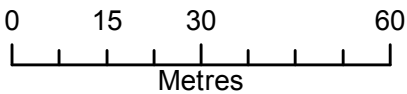


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— Main Rivers

2D Node Results: Heights

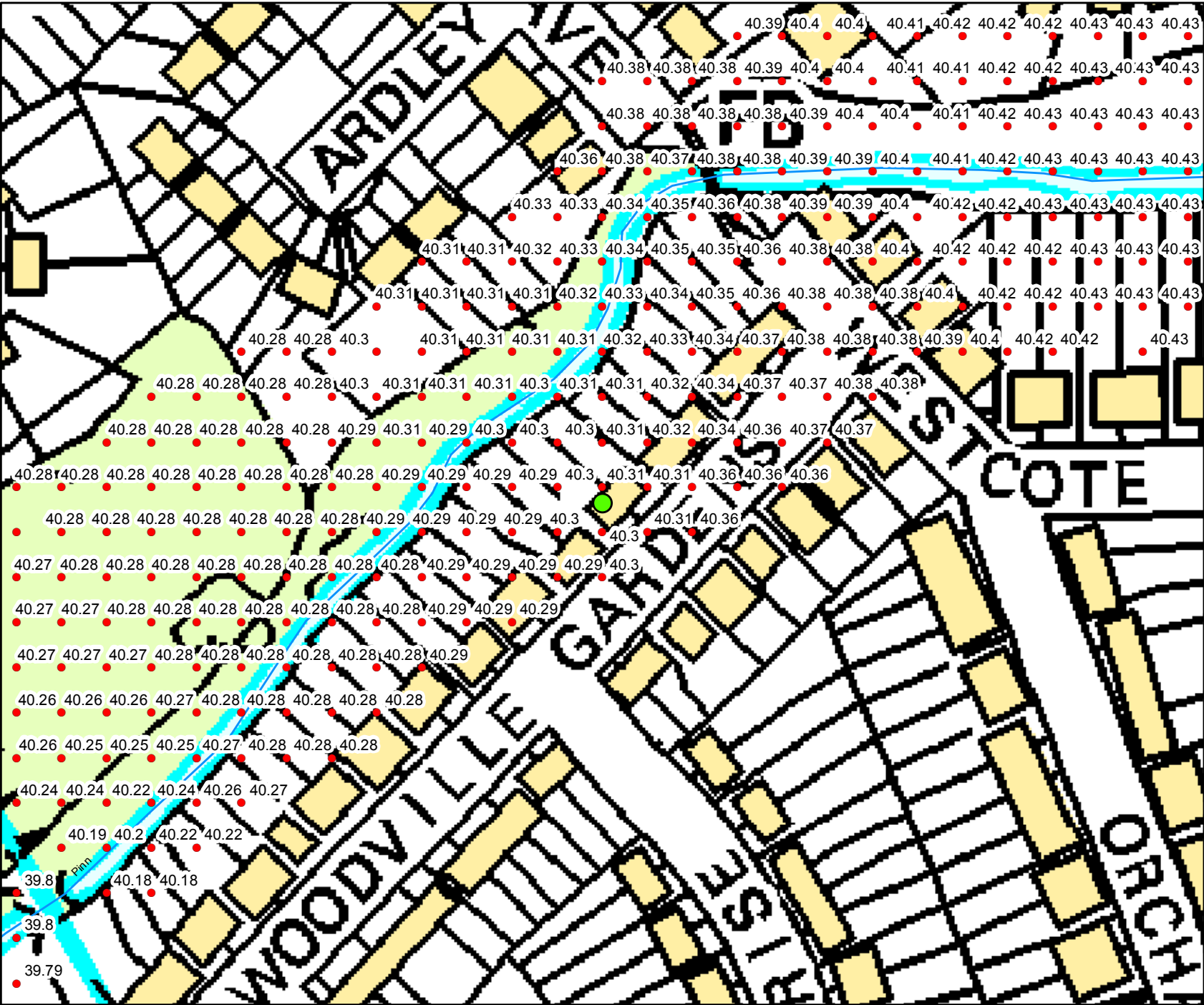
• 1 in 100 year + 20% (*CC) Defended

The data in this map has been extracted from the River Pinn Mapping Study (JBA, 2015). This model has been designed for catchment wide flood risk mapping. It should be noted that it was not created to produce flood levels for specific development sites within the catchment. Modelled outlines take into account catchment wide defences.

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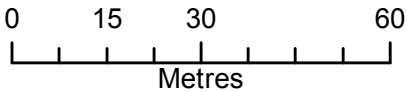


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2D Node Results: Heights

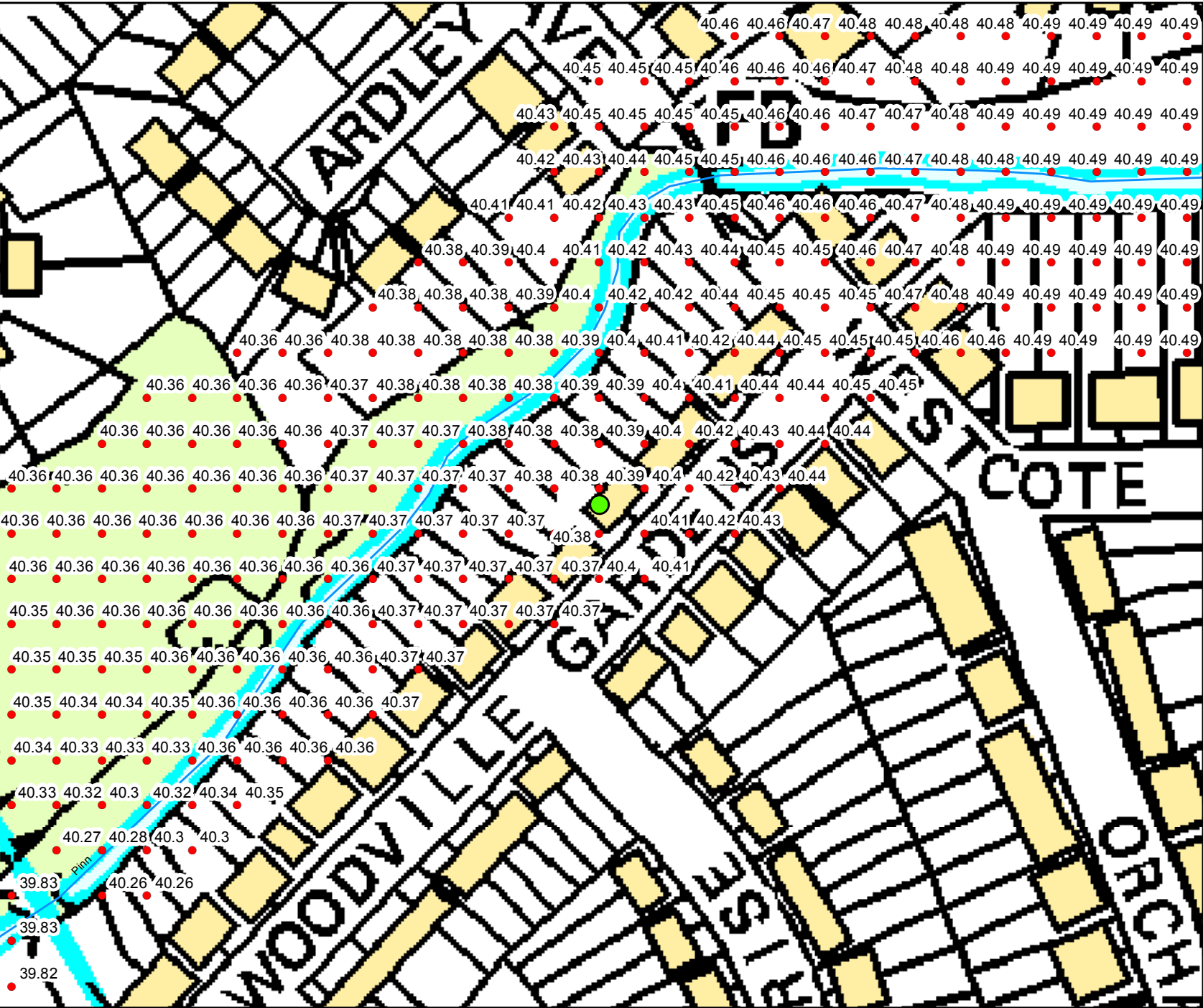
• 1 in 250 year (0.4%) Defended

The data in this map has been extracted from the River Pinn Mapping Study (JBA, 2015). This model has been designed for catchment wide flood risk mapping. It should be noted that it was not created to produce flood levels for specific development sites within the catchment. Modelled outlines take into account catchment wide defences.

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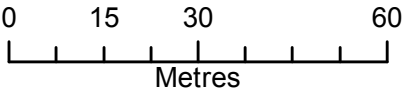
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Legend

— Main Rivers

2D Node Results: Heights

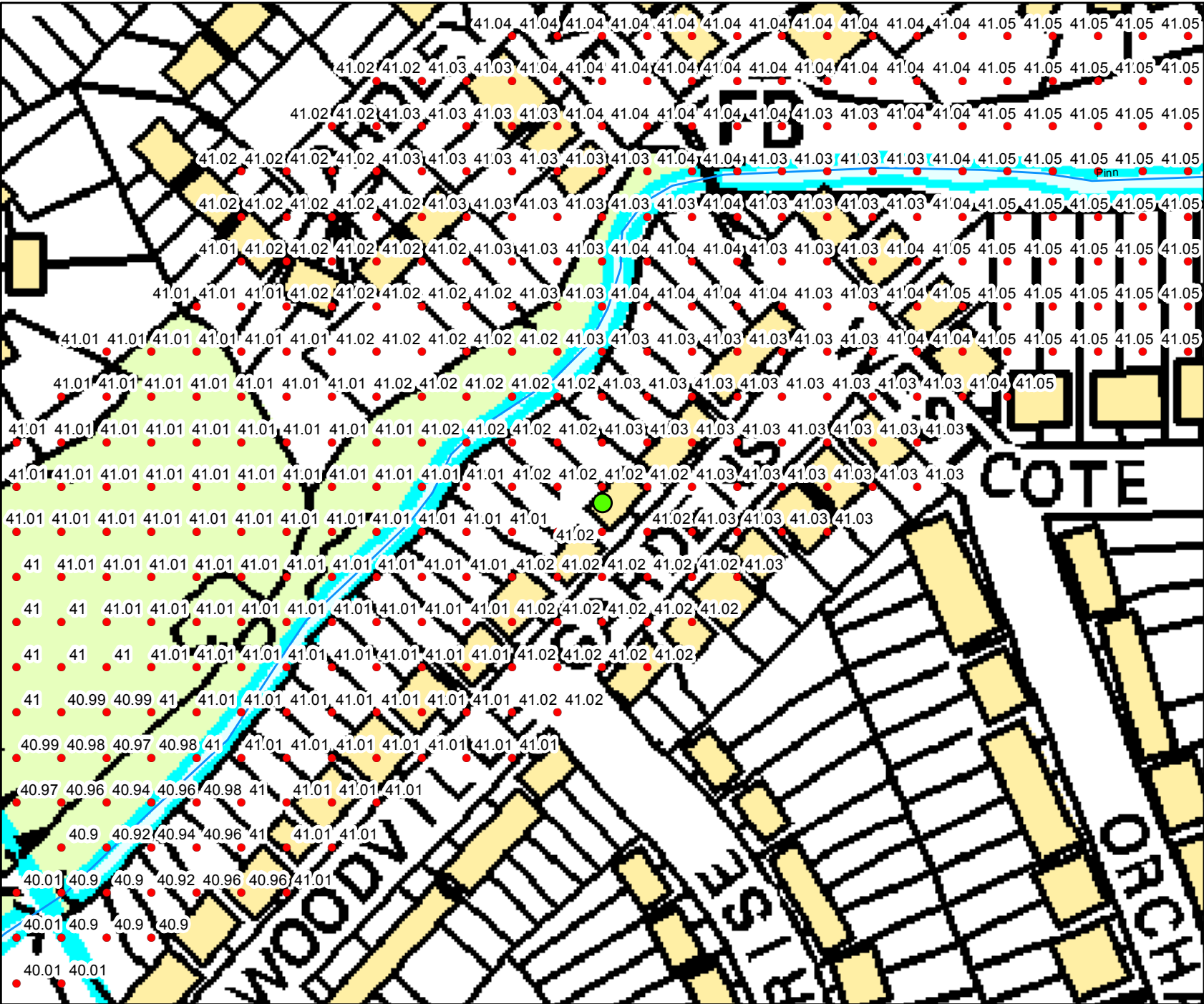
• 1 in 1000 year (0.1%) Defended

The data in this map has been extracted from the River Pinn Mapping Study (JBA, 2015). This model has been designed for catchment wide flood risk mapping. It should be noted that it was not created to produce flood levels for specific development sites within the catchment. Modelled outlines take into account catchment wide defences.

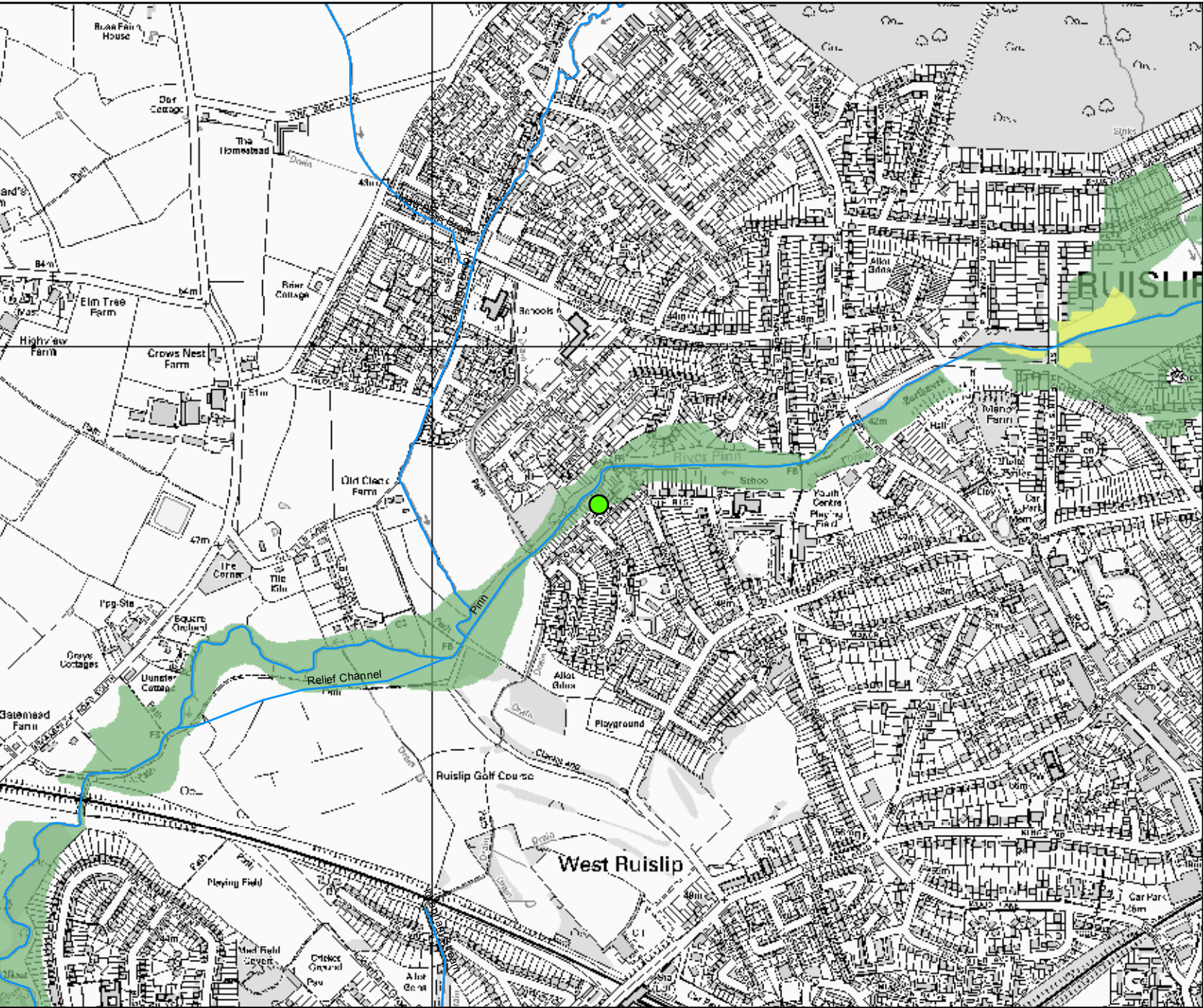
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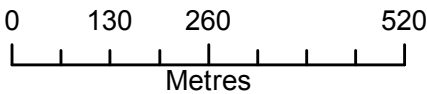
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Flood Map for Planning centred on 18 Woodville Gardens, Ruislip, HA4 7ND - 13/09/2017 - HNL59165BC



Environment Agency
2 Bishops Square Business Park
St Albans Road West
Hatfield
Hertfordshire
AL10 9EX



Legend

— Main Rivers

Flood Event Outlines

- 2009
- 1999
- 1977

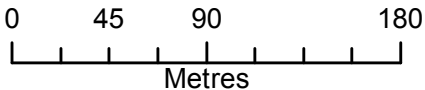
The historic flood event outlines are based on a combination of anecdotal evidence, Environment Agency staff observations and survey. Our historic flood event outlines do not provide a definitive record of flooding. It is possible that there will be an absence of data in places where we have not been able to record the extent of flooding. It is also possible for errors occur in the digitisation of historic records of flooding.

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Structures and Defences centred on 18 Woodville Gardens, Ruislip, HA4 7ND - 13/09/2017 - HNL59165BC



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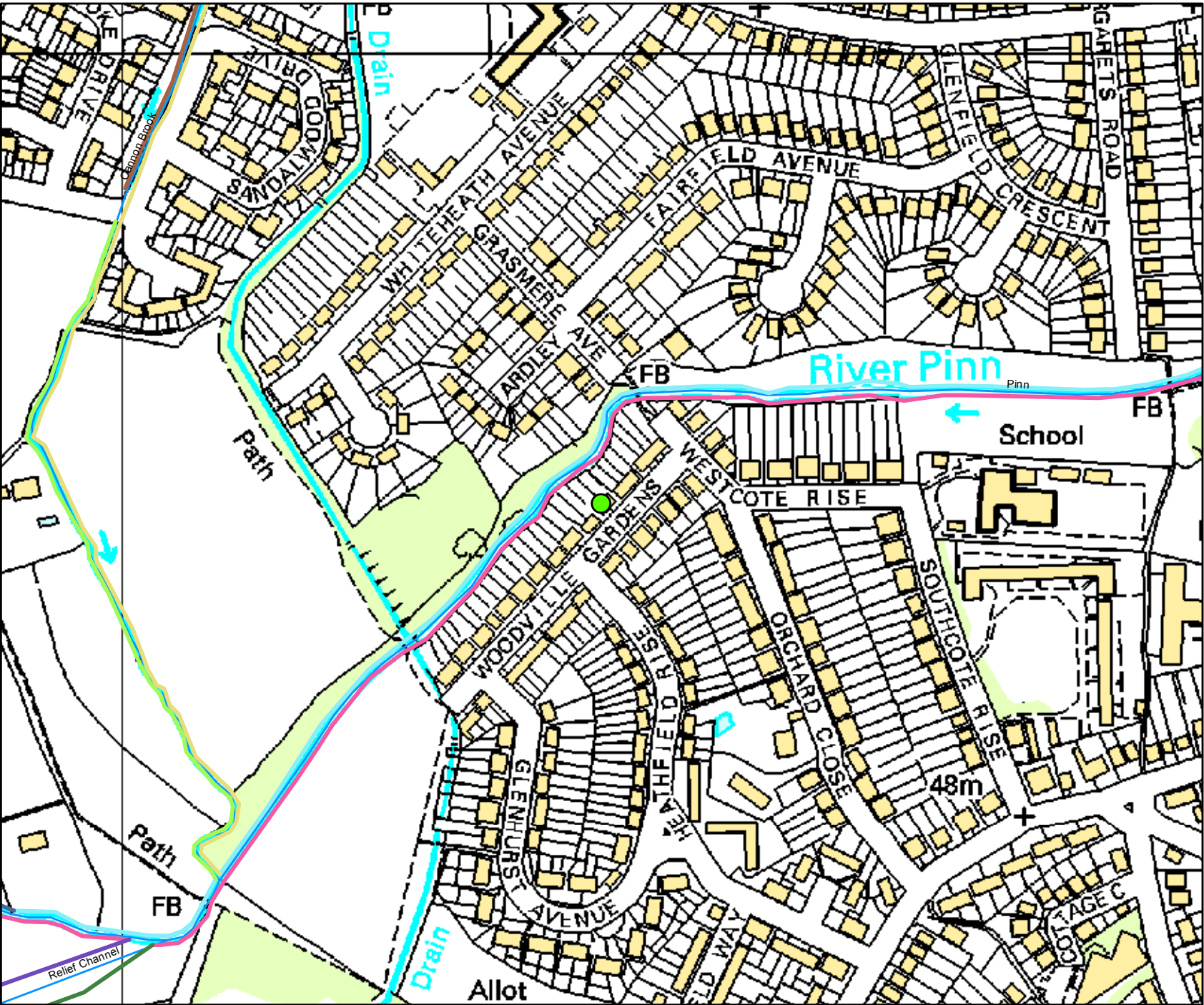
NAFRA_DEFENCE

ASSET_ID

- 11525
- 46092
- 46093
- 82985
- 86655
- 122619
- 153562
- 153590

The following information on defences has been extracted from the Asset Information Management System (AIMS)

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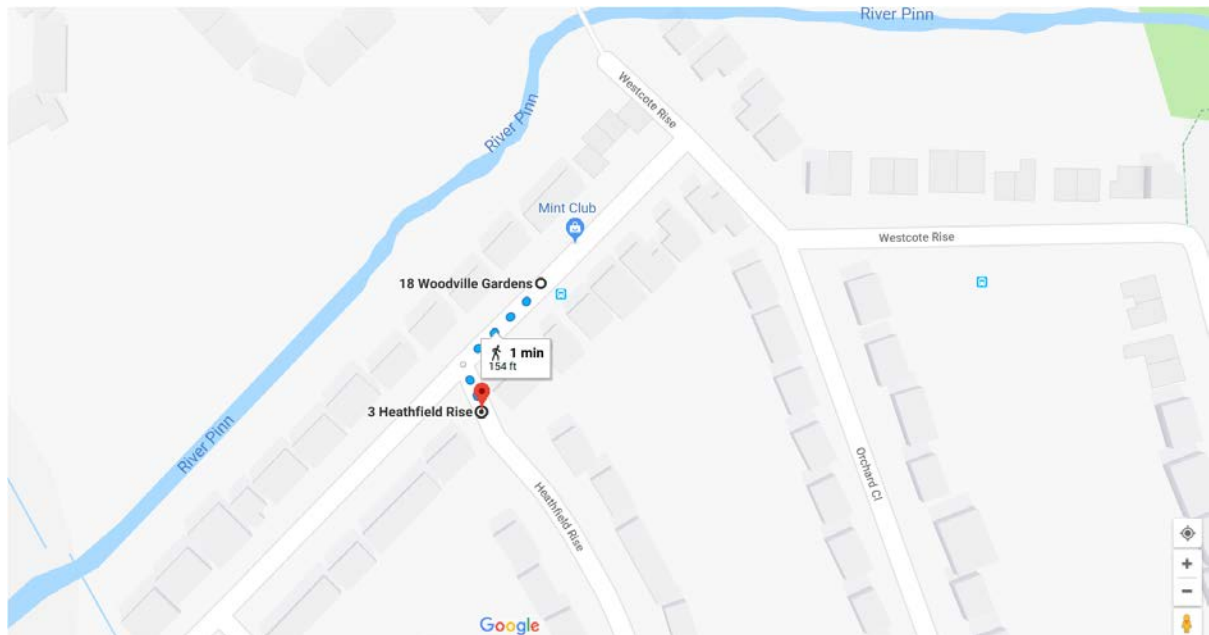
Environment Agency ref: [HNL59165BC](#)

The following information on defences has been extracted from the Asset Information Management System (AIMS)

Defences

Asset ID	Asset Type	Asset Protection	Asset Comment	Asset Description	Design Standard of protection (years)	Downstream Crest Level	Upstream Crest Level	Condition of Defences (1=Good, 5 = Poor)
82985	high_ground	fluvial	Natural Vegetated Channel	Natural Bank	2	39.3	41.4	2
46092	high_ground	fluvial	Natural Vegetated Channel	Natural Bank	2	39.4	40	No data
153590	high_ground	fluvial	Natural Vegetated Channel	Natural Bank	2	39.6	42.3	3
46093	high_ground	fluvial	Natural Vegetated Channel	Natural Bank	2	40	41	No data
122619	high_ground	fluvial	Natural Vegetated Channel	Natural Bank	2	37.9	41.3	2
86655	high_ground	fluvial	Man-Made trapezoidal channel to relieve flow in Pinn. Channel shortens 2 meanders in channel.	River Pinn Flood Relief Channel	2	38.6	38.4	4
11525	high_ground	fluvial	Man-Made trapezoidal channel to relieve flow in Pinn. Channel shortens 2 meanders in channel.	River Pinn Flood Relief Channel	2	38.2	38.2	4
153562	high_ground	fluvial	BANK PROTECTION. CORRUGATED STEEL D/S. U/S: CONCRETE SLAB WALL	Bank protection.	2	38.8	39.3	3

16.11 Appendix 11 – Safe Egress to Flood Zone 1 Map



16.12 Appendix 12 – Calculation of Flood Hazard Rating

Table 3: Flood Hazard Rating Scores – based on DF score of 0

Depth/ Velocity	0.2 5	0.5 0	0.7 5	1.0 0	1.2 5	1.5 0	1.7 5	2.0	2.25	2.50
0.0	0.1 3	0.2 5	0.3 8	0.5 0	0.6 3	0.7 5	0.8 8	1.00	1.13	1.25
0.5	0.2 5	0.5 0	0.7 5	1.0 0	1.2 5	1.5 0	1.7 5	2.00	2.25	2.50
1.0	0.3 8	0.7 5	1.1 3	1.5 0	1.8 8	2.2 5	2.6 3	3.00	3.38	3.75
1.5	0.5 0	1.0 0	1.5 0	2.0 0	2.5 0	3.0 0	3.5 0	4.00	4.50	5.00
2.0	0.6 3	1.2 5	1.8 8	2.5 0	3.1 3	3.7 5	4.3 8	5.00	5.63	6.25
2.5	0.7 5	1.5 0	2.2 5	3.0 0	3.7 5	4.5 0	5.2 5	6.00	6.75	7.50
3.0	0.8 8	1.7 5	2.6 3	3.5 0	4.3 8	5.2 5	6.1 3	7.00	7.88	8.75
3.5	1.0 0	2.0 0	3.0 0	4.0 0	5.0 0	6.0 0	7.0 0	8.00	9.00	10.0
4.0	1.1 3	2.2 5	3.3 8	4.5 0	5.6 3	6.7 5	7.8 8	9.00	10.1	11.2
4.5	1.2 5	2.5 0	3.7 5	5.0 0	6.2 5	7.5 0	8.7 5	10.0	11.2	12.5
5.0	1.3 8	2.7 5	4.1 3	5.5 0	6.8 8	8.2 5	9.6 3	11.0	12.3	13.7

Table 4: Summary of Scores

	Score From	Score To	Flood Hazard	Description
	<0.75	0.75	Low	Exercise Caution
Class 1	0.75	1.5	Moderate	Danger for some
Class 2	1.5	2.5	Significant	Danger for most

Class 3	2.5	20.0	Extreme	Danger for all
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Table 5: Values for Debris Factor for different flood depths

Depths	Pasture/Arable Land	Woodland	Urban
0 to 0.25	0	0	0
0.25 to 0.75	0.5	1	1
d>0.75 and/or v > 2	0.5	1	1

-  The “danger to some” category includes vulnerable groups such as children, the elderly and infirm. “Danger: Flood zone with deep or fast flowing water”
-  The “danger to most” category includes the general public.
-  The danger to all category includes the emergency services.

A flood emergency plan is considered to be an acceptable way of managing flood risk where the flood hazard has been given a “very low hazard” rating. In some instances, flood emergency plans may also be acceptable where the rating is “danger for some”. However, it is unlikely to be an acceptable way of managing residual flood risk where the hazard to people classification is “danger for most” or “danger for all”.

16.13 Appendix 13 – Decision Notice



Mark Pottle
Suite A
128 Manor Way
Ruislip HA4 8HR

Application Ref: 42132/APP/2017/2018

TOWN AND COUNTRY PLANNING ACT 1990 (AS AMENDED)

REFUSAL OF PLANNING PERMISSION

The Council of the London Borough of Hillingdon as the Local Planning Authority within the meaning of the above Act and associated Orders **REFUSES** permission for the following:-

Description of development:

Part single, part two storey rear extension and single storey side/rear extension

Location of development: 18 Woodville Gardens, Ruislip

Date of application: 01 June 2017

Plan Numbers: See attached Schedule of plans

Permission is refused for the reason(s) listed on the attached schedule:-

Head of Planning and Enforcement

Date: 27 July 2017

- NOTES:
- (i) Please also see the informatives included in the Schedule of Reasons.
 - (ii) Should you wish to appeal against this decision please read the attached sheet which explains the procedure.

TOWN AND COUNTRY PLANNING ACT 1990 (AS AMENDED)

REFUSAL OF PLANNING PERMISSION

Application Ref: 42132/APP/2017/2018

SCHEDULE OF REASONS

- 1 · The proposal fails to demonstrate this development should be sited in an area with a high probability of flooding and that flood risk is suitably mitigated and is therefore contrary to Policy EM6 of the Hillingdon Local Plan: Part One - Strategic Policies (November 2012), Policies OE7 and OE8 of the Hillingdon Local Plan: Part Two - Saved UDP Policies (November 2012) Policy 5.12 of The London Plan (2016), the National Planning Policy Framework (March 2012) and the Planning Practice Guidance (March 2014).

INFORMATIVES:

- 1 · In dealing with the application the Council has implemented the requirement in the National Planning Policy Framework to work with the applicant in a positive and proactive way. The Council's supports pre-application discussions. We have however been unable to seek solutions to problems arising from the application as the principal of the proposal is clearly contrary to our statutory policies and negotiation could not overcome the reasons for refusal.

SCHEDULE OF REASONS

Standard Informatives

- 1 The decision to REFUSE planning permission has been taken having regard to all relevant planning legislation, regulations, guidance, circulars and Council policies, including The Human Rights Act (1998) (HRA 1998) which makes it unlawful for the Council to act incompatibly with Convention rights, specifically Article 6 (right to a fair hearing); Article 8 (right to respect for private and family life); Article 1 of the First Protocol (protection of property) and Article 14 (prohibition of discrimination).

- 2 The decision to REFUSE planning permission has been taken having regard to the policies and proposals in the Hillingdon Unitary Development Plan Saved Policies (September 2007) as incorporated into the Hillingdon Local Plan (2012) set out below, including Supplementary Planning Guidance, and to all relevant material considerations, including The London Plan - The spatial development strategy for London consolidated with alterations since 2011 (2016) and national

Part 1 Policies:

PT1.BE1 (2012) Built Environment

Part 2 Policies:

AM14	New development and car parking standards.
BE13	New development must harmonise with the existing street scene.
BE15	Alterations and extensions to existing buildings
BE19	New development must improve or complement the character of the area.
BE20	Daylight and sunlight considerations.
BE21	Siting, bulk and proximity of new buildings/extensions.
BE22	Residential extensions/buildings of two or more storeys.
BE23	Requires the provision of adequate amenity space.
BE24	Requires new development to ensure adequate levels of privacy to neighbours.
BE38	Retention of topographical and landscape features and provision of new planting and landscaping in development proposals.
HDAS-EXT	Residential Extensions, Hillingdon Design & Access Statement, Supplementary Planning Document, adopted December 2008
LPP 3.5	(2016) Quality and design of housing developments

SCHEDULE OF REASONS

guidance.

END OF SCHEDULE

Address:

Residents Services
London Borough of Hillingdon
3 North Civic Centre, High Street, Uxbridge UB8 1UW
Tel: 01895 250230
www.hillingdon.gov.uk

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SCHEDULE OF PLANS

Flood Risk Assessment - received 16 Jul 2017

Location Plan (1:1250) - received 01 Jun 2017

3831/01 - received 01 Jun 2017

3831/02 - received 01 Jun 2017

RIGHTS OF APPLICANTS AGGRIEVED BY DECISION OF LOCAL PLANNING AUTHORITY

TOWN AND COUNTRY PLANNING ACT 1990 (AS AMENDED)

Appeals to the Secretary of State

- If you are aggrieved by the decision of your local planning authority to refuse permission for the proposed development or to grant it subject to conditions, then you can appeal to the office of the First Secretary of State under Section 78 of the Town and Country Planning Act 1990.
- As this is a decision to refuse planning permission for a householder application, if you want to appeal against your local planning authority's decision then you must do so within **12 weeks** of the date of this notice.
- Appeals must be made using a form which you can get from the Planning Inspectorate at Customer Support Unit, Room 3/15 Eagle Wing, Temple Quay House, 2 The Square, Temple Quay, Bristol, BS1 6PN or online at www.planningportal.gov.uk/pcs.
- The Secretary of State can allow a longer period for giving notice of an appeal, but he will not normally be prepared to use this power unless there are special circumstances, which excuse the delay in giving notice of appeal.
- The Secretary of State need not consider an appeal if it seems to him that the local planning authority could not have granted planning permission for the proposed development or could not have granted it without the conditions they imposed, having regard to the statutory requirements, to the provisions of any development order and to any directions given under a development order.
- In practice, the Secretary of State does not refuse to consider appeals solely because the local planning authority based their decision on a direction given by him.

Purchase Notices.

- If either the local planning authority or the office of the First Secretary of State refuses permission to develop land or grants it subject to conditions, the owner may claim that he can neither put the land to a reasonably beneficial use in its existing state nor render the land capable of a reasonably beneficial use by carrying out of any development which has been or would be permitted.
- In these circumstances, the owner may serve a purchase notice on the Council (District Council, London Borough Council or Common Council of the City of London) in whose area the land is situated. This notice will require the Council to purchase his interest in the land in accordance with the provisions of Part VI of the Town and Country Planning Act 1990.