



Flood Risk Assessment for Planning

Prepared for:

Domville Properties Ltd

September 2020

Our reference:

89932-Mialex-HighSt

Location:

34A High Street
Northwood
Middlesex
HA6 1BN



Document Issue Record

Project: Flood Risk Assessment for Planning

Client: Domville Properties Ltd

Location: 34A High Street, Northwood, Middlesex HA6 1BN

Application: Change of use from Class B1a Office to Class C3 Dwelling houses

Our reference: 89932-Mialex-HighSt

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Key Facts

Flood Risk Posed:

- The site is situated within Flood Zone 1 when using the Environment Agency Flood Map for Planning (Rivers and Sea).
- Alternative Flood Zone mapping is also available from the West London Strategic Flood Risk Assessment (SFRA), where an additional Flood Zone 3a is defined for Surface Water – based on the modelled 1:100 year (1% chance) risk of flooding from surface water extent.
- The EA Surface Water Flood Map (and the West London Strategic Flood Risk Assessment Risk of Flooding from Surface Water mapping) suggests that the site is at a “Low”, “Medium” and “High” risk of flooding from surface water.
- The Environment Agency risk of flooding from surface water maps show that for the key 1:100 year (1% chance) surface water event, the maximum depth of flooding on site is 0.30m to 0.60m.
- The proposal is for the change of use of the existing building, as such there will be no increase in built footprint and therefore no loss of potential surface water storage. Floodplain compensation is therefore not required.
- No records of surface water flooding the vicinity of the site have been provided.
- No information has been provided to suggest that a groundwater incident has occurred at the site, and the West London SFRA mapping indicates that the site lies within an area with a less than 25% susceptibility to groundwater flooding. The site is shown to be outside of areas identified as having an increased potential for elevated groundwater.
- No information has been provided to suggest that the site is susceptible to sewer surcharge flooding. The West London SFRA shows that Thames Water have 41-60 records of flooding from sewer flooding within the postcode area the site falls within.
- The site is situated partially within the maximum inundation extent on the EA Reservoir Inundation Map.

Flood Risk Management:

- The proposal is for the change of use of the existing building and will not increase the built footprint on site.
- There will be no increase in the impermeable coverage on site post development, and therefore there will be no change to the existing drainage system on site.
- Flood proofing of the development will be incorporated as appropriate.
- It is recommended that demountable flood defence barriers are installed up to 600mm above ground level, to defend ground level doorways and low windows.

Introduction

Unda Consulting Limited have been appointed by Domville Properties Ltd (hereinafter referred to as “the applicant”) to undertake a Site Specific Flood Risk Assessment (FRA) for Planning at 34A High Street, Northwood, Middlesex HA6 1BN (hereinafter referred to as “the site”). The FRA has been undertaken in accordance with the National Planning Policy Framework (NPPF) and the associated technical guidance.

The site appears to be located within Flood Zone 1 as defined by the Environment Agency (EA) on their Flood Map for Planning. Under the National Planning Policy Framework (NPPF), a FRA is required if a proposed development:

- includes building or engineering works in Flood Zone 2 or 3;
- includes building or engineering works on land classified by the Environment Agency as having critical drainage problem;
- changes the use of land or buildings in a location at risk of flooding from rivers or the sea, or with critical drainage problems;
- changes the use of land or buildings in a way that increases the flood vulnerability of the development where it may be subject to other sources of flooding;
- is larger than 1 hectare.

Given that the proposed development is located in Flood Zone 1 (Low Risk of flooding from rivers or the sea) and the site is under 1ha in area, a FRA would not normally be required under the NPPF. However, it is understood that the site falls within an area at potential risk of surface water flooding. The assessment should demonstrate to the Local Planning Authority (LPA) and EA how flood risk will be managed now and over the development's lifetime, taking climate change into account, and with regard to the vulnerability of its potential users.

The objectives of a FRA to support a planning application are to establish:

- whether the proposed development is likely to be affected by current or future flooding from any source;
- whether it will increase flood risk elsewhere;
- whether the measures proposed to deal with these effects and risks are appropriate.

Existing Situation

Site Usage:

The site is currently occupied by commercial unit at the front of the site, with offices to the rear. Existing plans can be found in Appendix A.

Topography:

Environment Agency LiDAR has been used to assess the topography across the site and wider area. Light Detection and Ranging (LIDAR) is an airborne mapping technique, which uses a laser to measure the distance between the aircraft and the ground surface. Up to 100,000 measurements per second are made of the ground, allowing highly detailed terrain models to be generated at high spatial resolutions. The EA's LIDAR data archive contains digital elevation data derived from surveys carried out by the EA's specialist remote sensing team. Accurate elevation data is available for over 70% of England. The LiDAR technique records an elevation accurate to +/-5cm to 15cm with spatial resolutions ranging from 25cm to 2 metres. This dataset is derived from a combination of the EA's full dataset which has been merged and re-sampled to give the best possible coverage. The dataset can be supplied as a Digital Surface Model (DSM) produced from the signal returned to the LIDAR (which includes heights of objects, such as vehicles, buildings and vegetation, as well as the terrain surface) or as a Digital Terrain Model (DTM) produced by removing objects from the Digital Surface Model. 1m horizontal resolution DTM LiDAR data has been used for the purposes of this study.

Data suggests that the ground topography on site ranges from approximately 65.80mAOD to 66.50mAOD, with the site sloping generally down from east to west.



Figure 1: Aerial view of the site and immediate surrounding area (Source: Google Earth)

Geology and Soil:

The British Geological Survey (BGS) Map indicates that the bedrock underlying the site is Lambeth Group – Clay, Silt and Sand. No superficial deposits are shown to underlie the site.

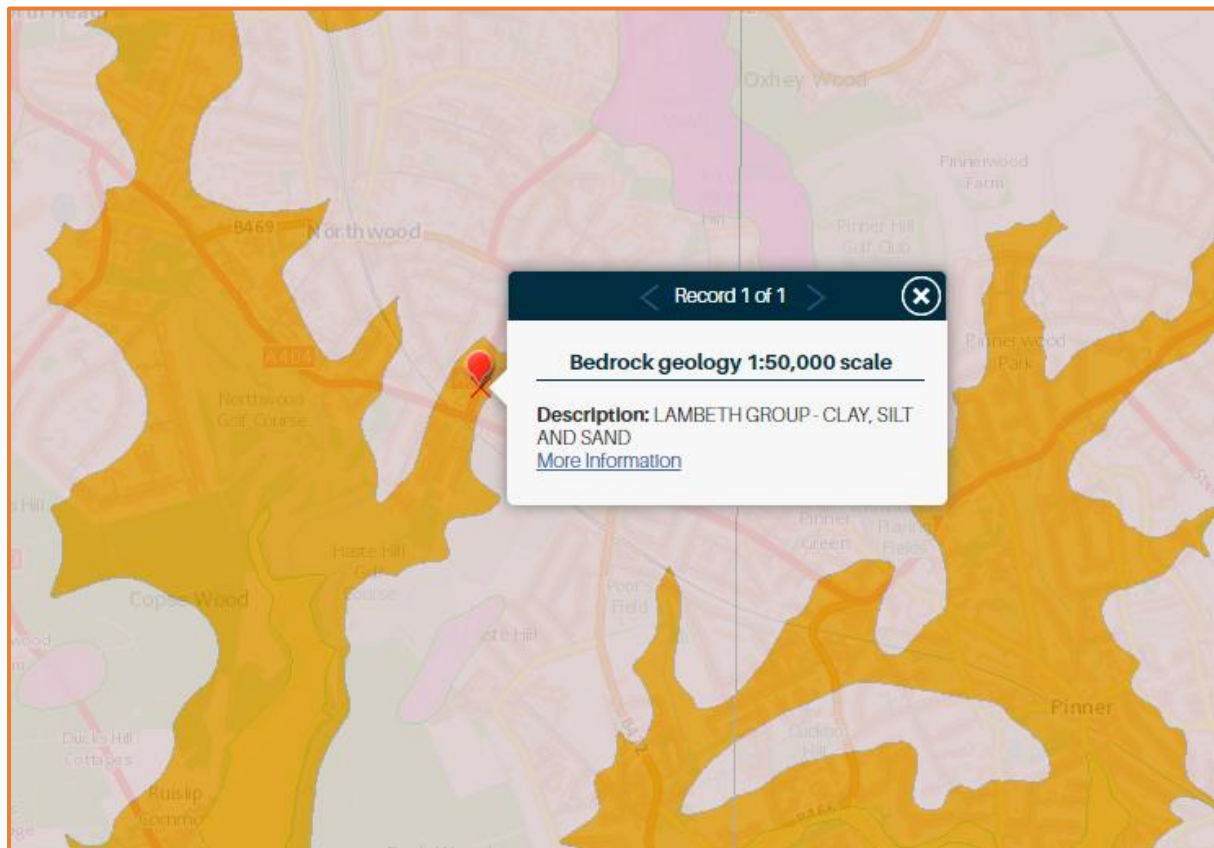


Figure 2: Local bedrock geology (Source: BGS)

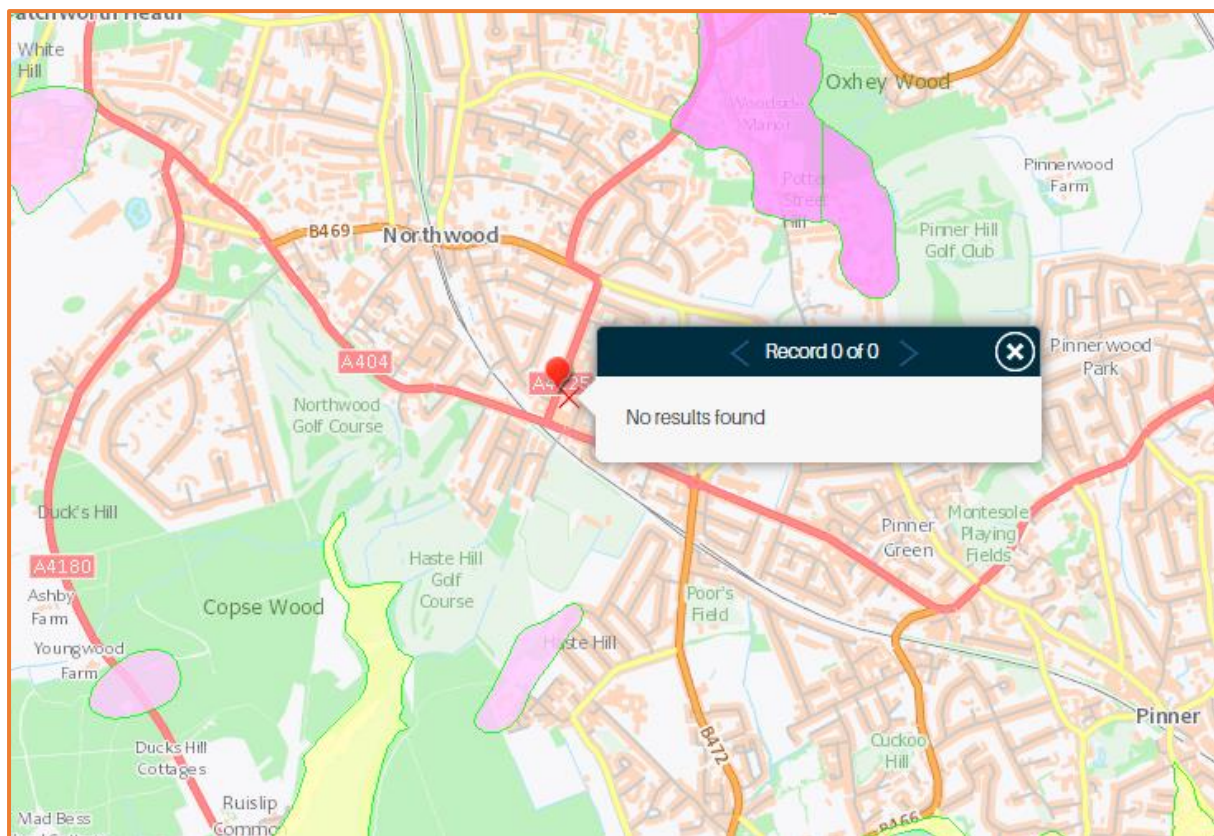


Figure 3: Local superficial geology (Source: BGS)

The soil type in the area taken from the UKSO Website is relatively deep soils with Prequaternary Marine / Estuarine Sand and Silt soil parent material, and a soil texture of Clayey Loam to Silty Loam.

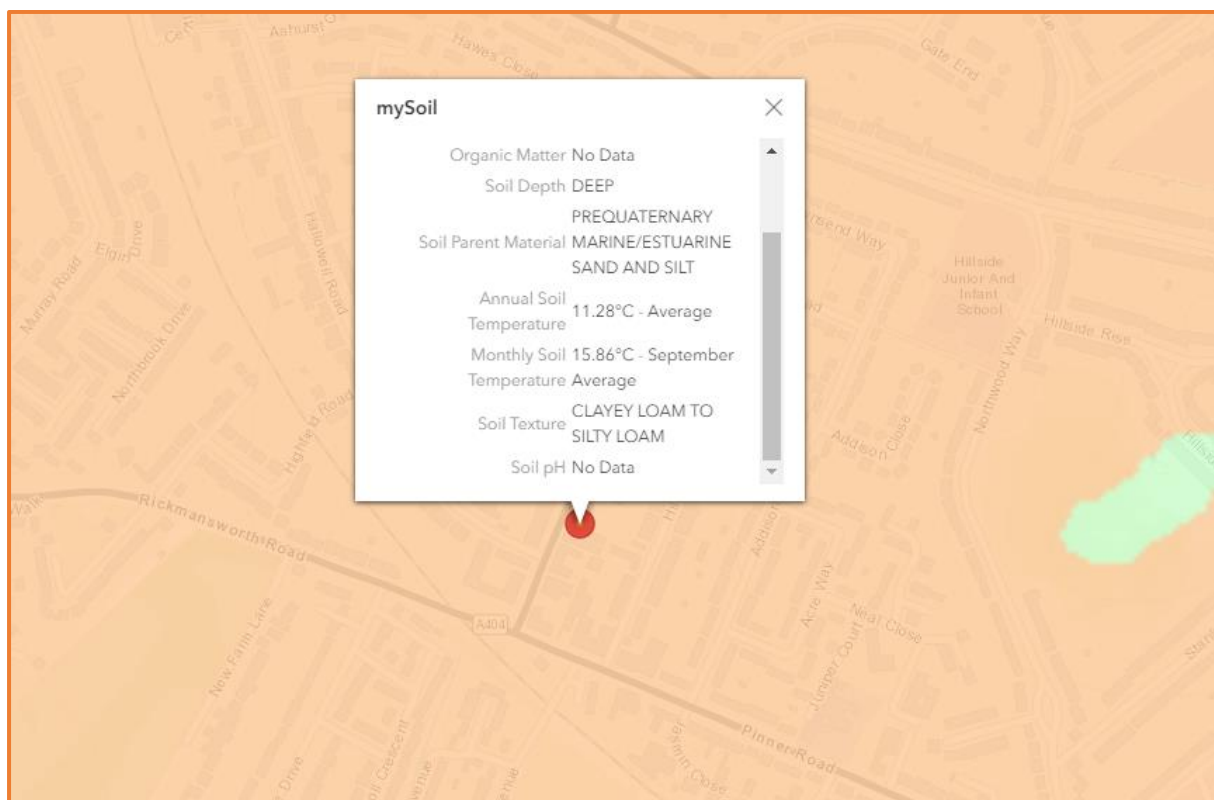


Figure 4: Local soil types (Source: UKSO)

Proposed Development

The proposed planning application is for the Change of use from Class B1a Office to Class C3 Dwelling houses.

Proposed plans are provided in Appendix A.

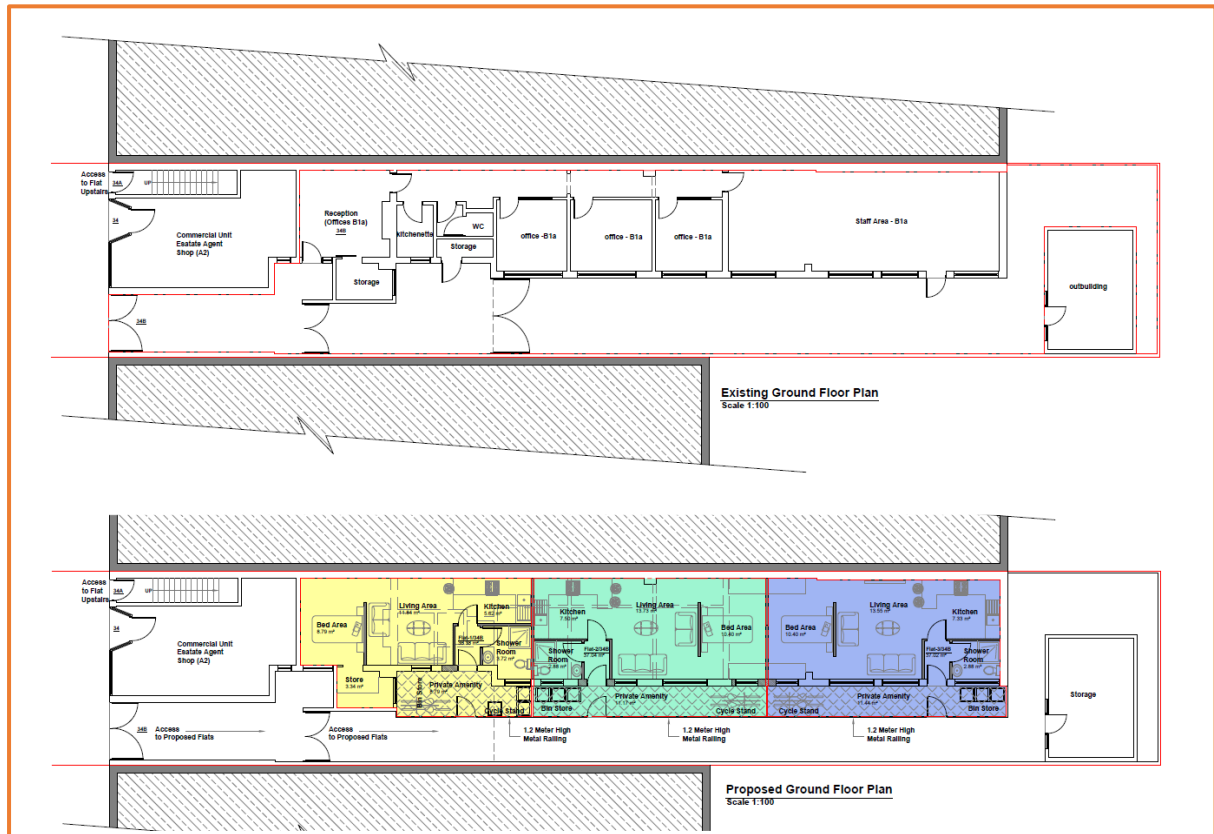


Figure 5: Existing and Proposed Ground Floor Plan (Source: Multi Creation)

Assessment of Flood Risk

Flood Zones:

Within planning, Flood Zones refer to the probability of river and sea flooding, ignoring the presence of defences. They are shown on the Environment Agency's Flood Map for Planning (Rivers and Sea), available on the Environment Agency's web site.

Flood Zone	Definition
Zone 1 Low Probability	Land having a less than 1 in 1,000 annual probability of river or sea flooding. (Shown as 'clear' on the Flood Map – all land outside Zones 2 and 3)
Zone 2 Medium Probability	Land having between a 1 in 100 and 1 in 1,000 annual probability of river flooding; or Land having between a 1 in 200 and 1 in 1,000 annual probability of sea flooding. (Land shown in light blue on the Flood Map)
Zone 3a High Probability	Land having a 1 in 100 or greater annual probability of river flooding; or Land having a 1 in 200 or greater annual probability of sea flooding. (Land shown in dark blue on the Flood Map)
Zone 3b The Functional Floodplain	This zone comprises land where water has to flow or be stored in times of flood. Local planning authorities should identify in their Strategic Flood Risk Assessments areas of functional floodplain and its boundaries accordingly, in agreement with the Environment Agency. (Not separately distinguished from Zone 3a on the Flood Map)

Table 1: Flood Zones

The Flood Zones shown on the Environment Agency's Flood Map for Planning (Rivers and Sea) do not take account of the possible impacts of climate change and consequent changes in the future probability of flooding.

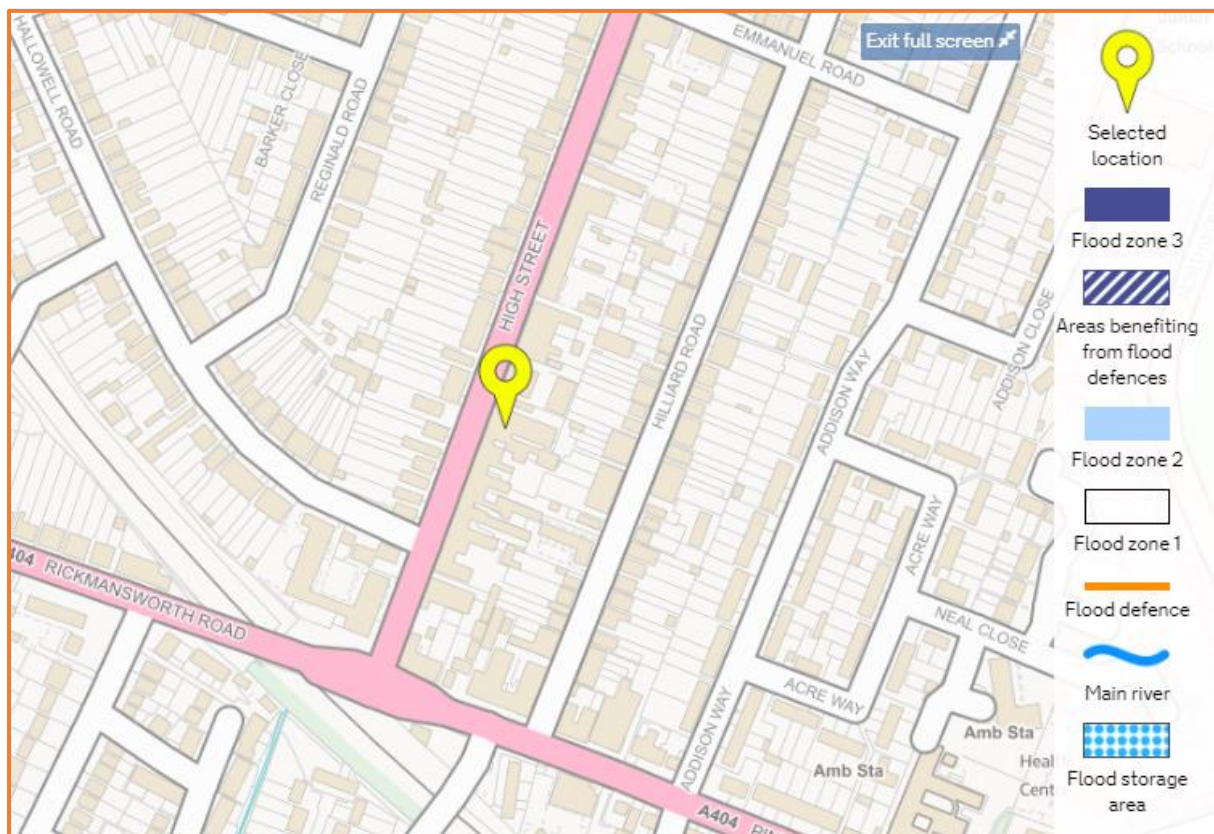


Figure 6: Environment Agency Flood Map for Planning (Rivers and Sea) (Source: EA)

The site is located within Flood Zone 1 (Low Probability), which means it is defined as land having a less than 1:1000 annual probability of river or sea flooding.

However, the site is located within an area at potential risk of surface water flooding, and as such the planning application submitted is required to be accompanied by a FRA which shows that the development can be achieved in a sustainable manner, with an overall reduction of flood risk to the site and surrounding area.

Alternative Flood Zone mapping is also available from the West London Strategic Flood Risk Assessment (SFRA), where an additional Flood Zone 3a is defined for Surface Water – based on the modelled 1:100 year (1% chance) risk of flooding from surface water extent.



Figure 7: West London SFRA Flood Zone 3a Surface Water mapping (Source: West London SFRA)

Fluvial / Tidal:

The site is situated entirely within Flood Zone 1. Flood Zone 1 is defined as land having a less than 1:1000 annual probability of river or sea flooding.

Flood defences:

There are no flood defences in the vicinity of the site. The site is situated entirely within Flood Zone 1 at low risk of fluvial or tidal flooding.

Historical flood events:

No records of flooding at the site previously have been provided.

Pluvial (Surface Water):

Pluvial flooding is the term used to describe flooding which occurs when intense, often short duration rainfall is unable to soak into the ground or to enter drainage systems and therefore runs over the land surface causing

flooding. It is most likely to occur when soils are saturated (or baked hard) so that they cannot infiltrate any additional water or in urban areas where buildings tarmac and concrete prevent water soaking into the ground. The excess water can pond (collect) in low points and result in the development of flow pathways often along roads but also through built up areas and open spaces. This type of flooding is usually short lived and associated with heavy downpours of rain.

The potential volume of surface runoff in catchments is directly related to the size and shape of the catchment to that point. The amount of runoff is also a function of geology, slope, climate, rainfall, saturation, soil type, urbanisation and vegetation.

Pluvial flooding can occur in rural and urban areas, but usually causes more damage and disruption in the latter. Flood pathways include the land and water features over which floodwater flows. These pathways can include drainage channels, rail and road cuttings. Developments that include significant impermeable surfaces, such as roads and car parks may increase the volume and rate of surface water runoff.

Urban areas which are close to artificial drainage systems, or located at the bottom of hill slopes, or in valley bottoms and hollows, may be more prone to pluvial flooding. This may be the case in areas that are down slope of land that has a high runoff potential including impermeable areas and compacted ground.

Pluvial flooding can affect all forms of the built environment, including:

- Residential, commercial and industrial properties;
- Amenity and recreation facilities; and
- Infrastructure, such as roads and railways, electrical infrastructure, telecommunication systems and sewer systems.

This type of flooding is usually short-lived and may only last as long as the rainfall event. However occasionally flooding may persist in low-lying areas where ponding occurs. Due to the typically short duration, this type of flooding tends not to have consequences as serious as other forms of flooding, such as flooding from rivers; however it can still cause significant damage and disruption on a local scale.

The EA Surface Water Flood Map (and the West London Strategic Flood Risk Assessment Risk of Flooding from Surface Water mapping) suggests that the site is at a "Low", "Medium" and "High" risk of flooding from surface water.



Figure 8: Extract from Environment Agency Surface Water Flood Map (Source: EA)

The EA has also produced surface water flood depth mapping for the 1 in 30 year (High Risk), 1 in 100 year (Medium Risk) and 1 in 1000 year (Low Risk) scenarios (high risk, medium risk and low risk respectively).

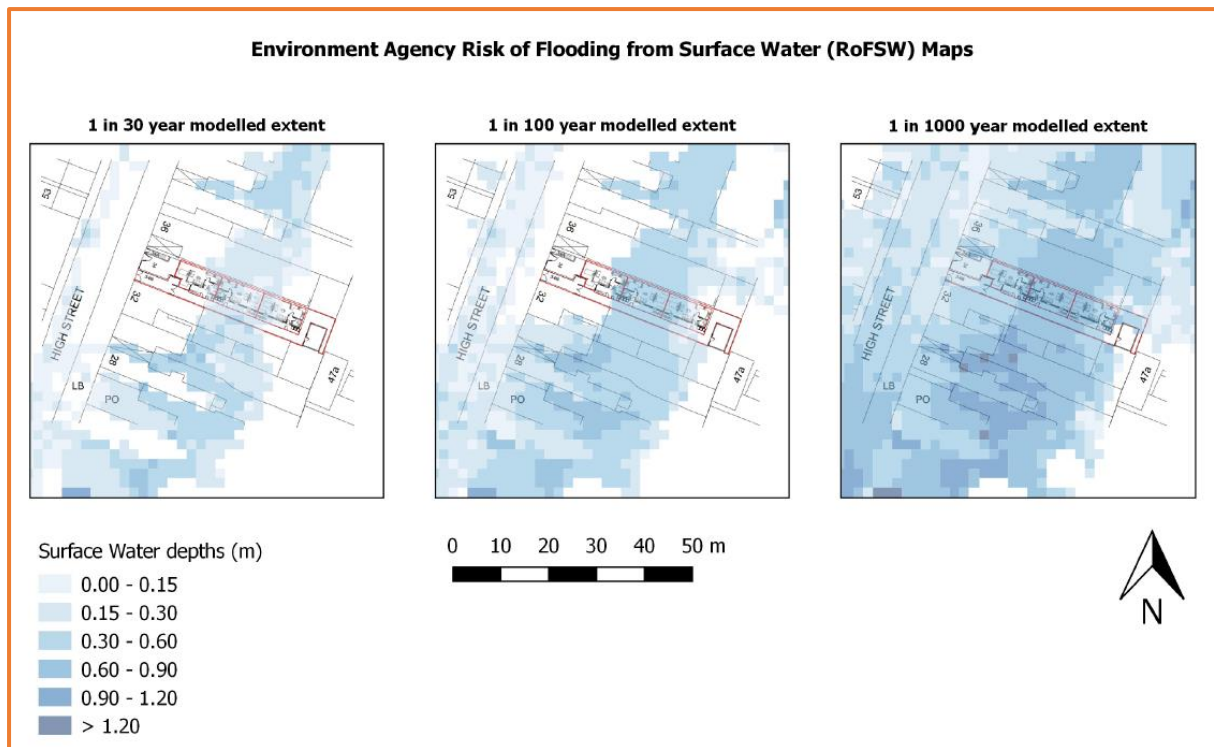


Figure 9: Environment Agency Risk of flooding from Surface Water Flood Depth Maps for High (1:30yr), Medium (1:100yr) and Low (1:1000yr) modelled events (Source: EA)

The Environment Agency risk of flooding from surface water maps show that for the key 1:100 year (1% chance) surface water event, the maximum depth of flooding on site is 0.30m to 0.60m.

For the 1:30 year surface water event, the maximum depth of flooding on site is 0.15m to 0.30m. For the 1:1000 year surface water event, the maximum depth of flooding on site is 0.60m to 0.90m.

The proposal is for the change of use of the existing building, as such there will be no increase in built footprint and therefore no loss of potential surface water storage. Floodplain compensation is therefore not required.

No records of surface water flooding the vicinity of the site have been provided.

Groundwater:

Groundwater flooding occurs as a result of water rising up from the underlying rocks or from water flowing from abnormal springs. This tends to occur after much longer periods of sustained high rainfall. Higher rainfall means more water will infiltrate into the ground and cause the water table to rise above normal levels. Groundwater tends to flow from areas where the ground level is high, to areas where the ground level is low. In low-lying areas the water table is usually at shallower depths anyway, but during very wet periods, with all the additional groundwater flowing towards these areas, the water table can rise up to the surface causing groundwater flooding.

Groundwater flooding is most likely to occur in low-lying areas underlain by permeable rocks (aquifers). These may be extensive, regional aquifers, such as chalk or sandstone, or may be localised sands or river gravels in valley bottoms underlain by less permeable rocks. Groundwater flooding takes longer to dissipate because groundwater moves much more slowly than surface water and will take time to flow away underground.

No information has been provided to suggest that a groundwater incident has occurred at the site, and the West London SFRA mapping indicates that the site lies within an area with a less than 25% susceptibility to groundwater

flooding. The site is shown to be outside of areas identified as having an increased potential for elevated groundwater.

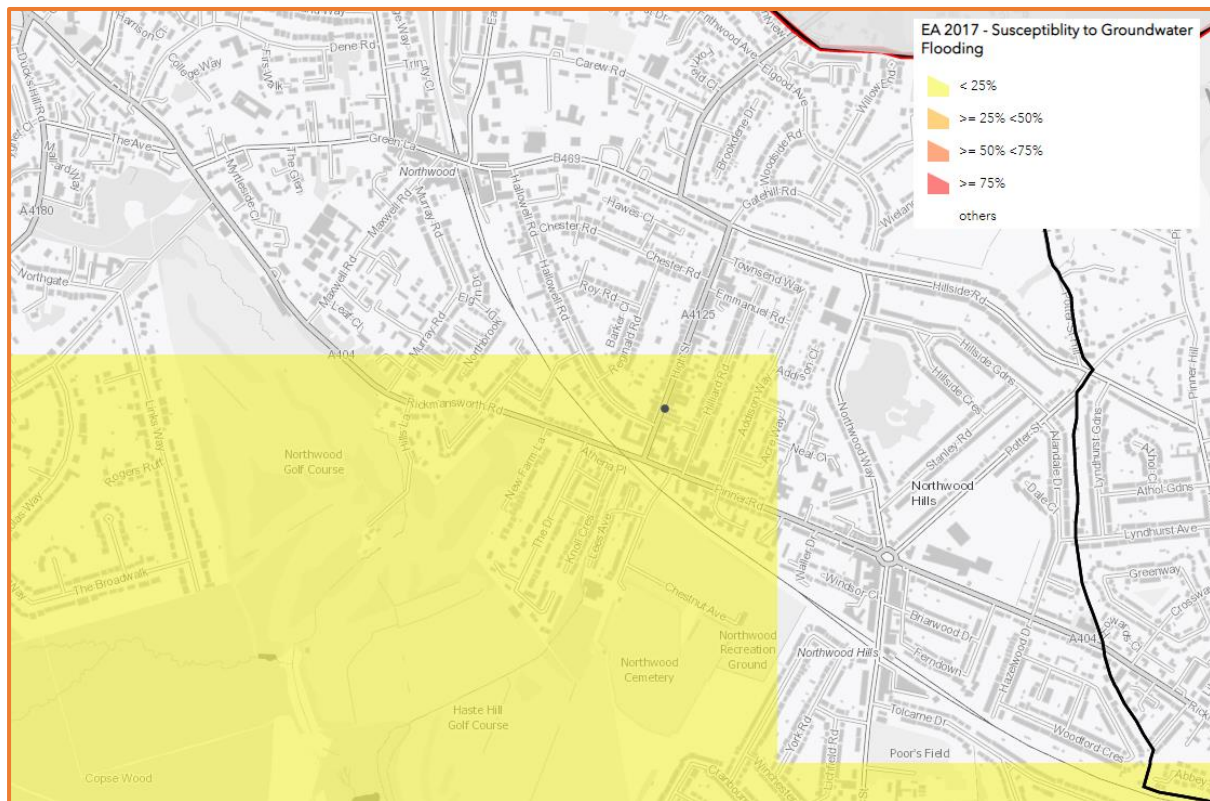


Figure 10: West London SFRA Susceptibility to Groundwater Flooding Map (Source: West London SFRA)

The site is also shown to be within a Source Protection Zone II – Outer Protection Zone.

Sewer Surcharge:

Sewer flooding occurs when the sewer network cannot cope with the volume of water that is entering it. It is often experienced during times of heavy rainfall when large amounts of surface water overwhelm the sewer network causing flooding. Temporary problems such as blockages, siltation, collapses and equipment or operational failures can also result in sewer flooding.

All Water Companies have a statutory obligation to maintain a register of properties/areas which have reported records of flooding from the public sewerage system, and this is shown on the DG5 Flood Register. This includes records of flooding from foul sewers, combined sewers and surface water sewers which are deemed to be public and therefore maintained by the Water Company. The DG5 register records of flood incidents resulting in both internal property flooding and external flooding incidents. Once a property is identified on the DG5 register, water companies can typically put funding in place to address the issues and hence enable the property to be removed from the register. It should be noted that flooding from land drainage, highway drainage, rivers/watercourses and private sewers is not recorded within the register.

No information has been provided to suggest that the site is susceptible to sewer surcharge flooding. The West London SFRA shows that Thames Water have 41-60 records of flooding from sewer flooding within the postcode area the site falls within.

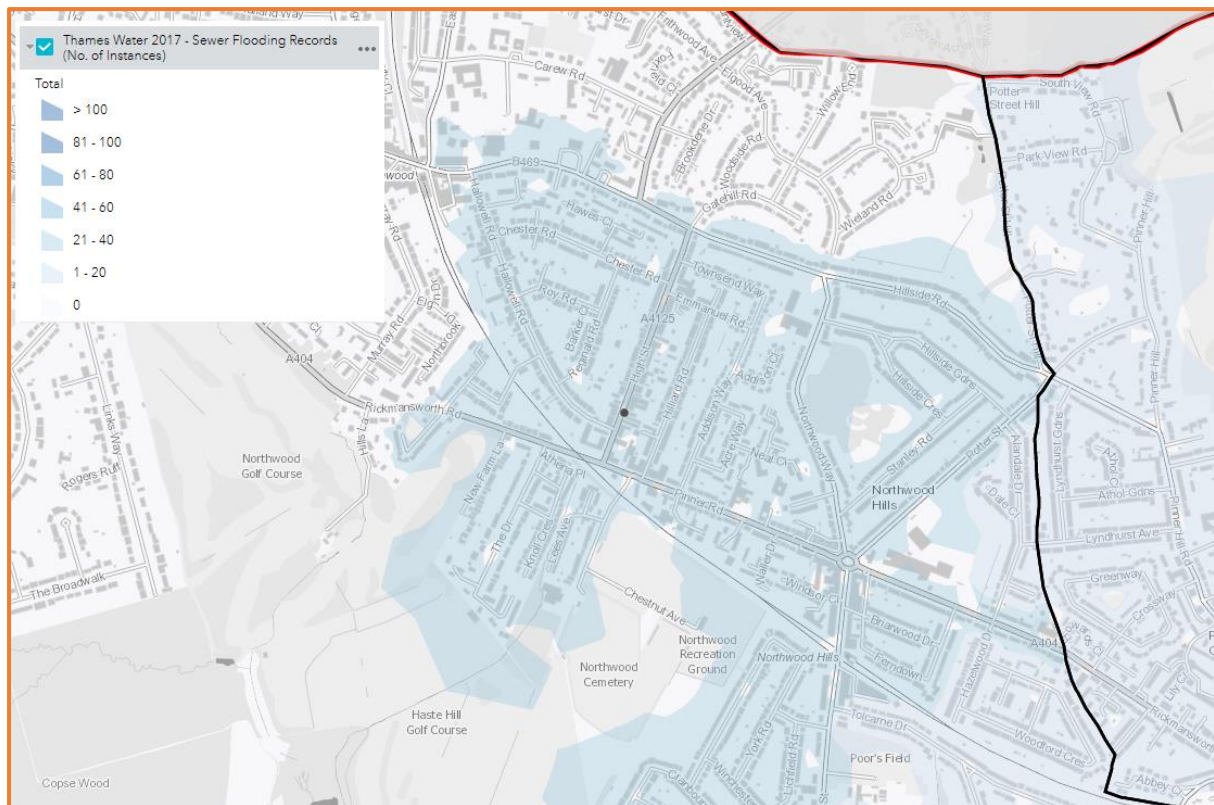


Figure 11: West London SFRA Thames Water Sewer Flooding Records Map (Source: West London SFRA)

Other Sources:

The site is situated partially within the maximum inundation extent on the EA Reservoir Inundation Map. The EA advise on their website that reservoir flooding is extremely unlikely. All major reservoirs have to be inspected by specialist dam and reservoir Engineers. These inspections are monitored and enforced by the EA themselves. The risk to the site from reservoir flooding is therefore minimal and is far lower than that relating to the potential for fluvial flooding to occur.

There do not appear to be any further artificial (man-made) sources of flood risk (such as raised canals) in the vicinity of the site.

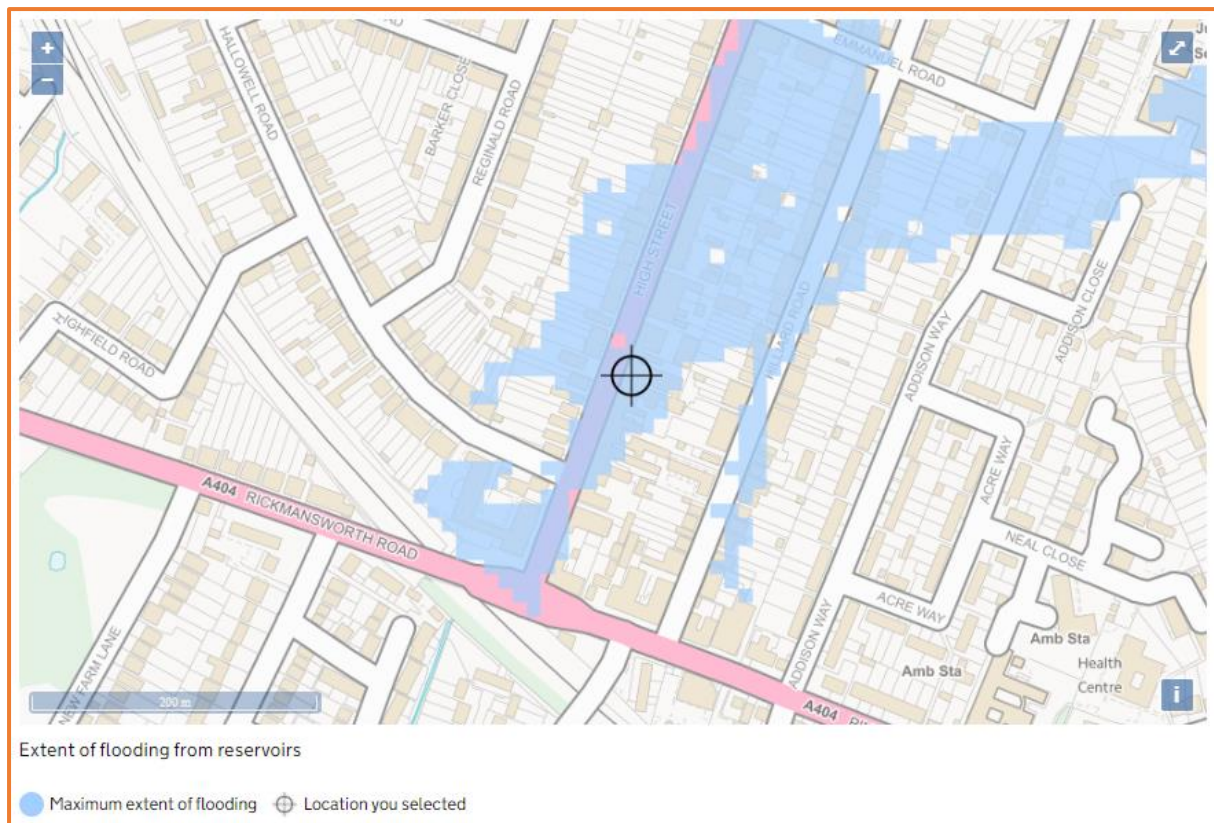


Figure 12: Extract from Environment Agency Risk of Flooding from Reservoirs Map (Source: EA)

Flood Risk Management

Vulnerability to flooding:

The NPPF classifies property usage by vulnerability to flooding.

The existing site usage (Offices) is classified as "less vulnerable".

Post development, the site will become "more vulnerable", as the application is for the Change of use from Class B1a Office to Class C3 Dwelling houses. As such, there will be an increase in vulnerability post development.

EA Standing Advice:

The EA Standing Advice guidance is for domestic extensions and non-domestic extensions where the additional footprint created by the development does not exceed 250m². It should not be applied if an additional dwelling is being created, e.g. a self-contained annex or additional commercial unit.

Physical Design Measures:

The site is shown to be entirely within Flood Zone 1 on the EA Flood Map for planning (Rivers and the Sea). The EA Surface Water Flood Map (and the West London Strategic Flood Risk Assessment Risk of Flooding from Surface Water mapping) suggests that the site is at a "Low", "Medium" and "High" risk of flooding from surface water.

The Environment Agency risk of flooding from surface water maps show that for the key 1:100 year (1% chance) surface water event, the maximum depth of flooding on site is 0.30m to 0.60m.

Given that the proposal is for the change of use of the existing building it is not possible to raise the existing floor levels. With a maximum potential maximum surface water flood depth of 0.60m (for the 1:100 year surface water event), it is recommended that demountable flood defence barriers are installed up to 600mm above ground level, to defend ground level doorways and low windows.

In addition, to help protect against flooding during extreme events, it is recommended that the applicant implement flood resistant design measures into the proposed change of use. These measures may include the following where practical and feasible:

- Waterproof ground floor internal render;
- External walls rendered resistant to flowing to first floor level;
- Exterior ventilation outlets, utility points and air bricks fitted with removable waterproof covers;
- Ground floor electrical ring run from high level;
- Electrical incomer and meter situated at high level;
- Boilers, control and water storage / immersion installed at high level;
- Gas meter installed at high level;
- Plumbing insulation of closed-cell design;
- Non-return valves fitted to all drains and sewer outlets;
- Manhole covers secured;
- Kitchen units of solid, water resistant material;
- Use of MDF carpentry (i.e. skirting, architrave, built-in storage) avoided.

Safe Escape:

The NPPF requires a route of safe escape for all residents and users to be provided from new residential properties in Flood Zone 3. Safe escape is usually defined as being through slow moving fluvial or tidal flood water no deeper than 25cm.

The site is located entirely within Flood Zone 1, but it is located within an area of "Low", "Medium" and "High" risk of flooding from surface water.

In the event of a severe storm warning, an evacuation route for site occupants and users away from the source of flooding is provided. Site users should exit the site to the High Street, and travel north along the High Street (A4125) and then continue west along the A4125 / B469.

Based on the Risk of Flooding from Surface Water flood depth map for the 1:100 year event, the maximum depth of flooding along the High Street (A4125) does not exceed 150mm.

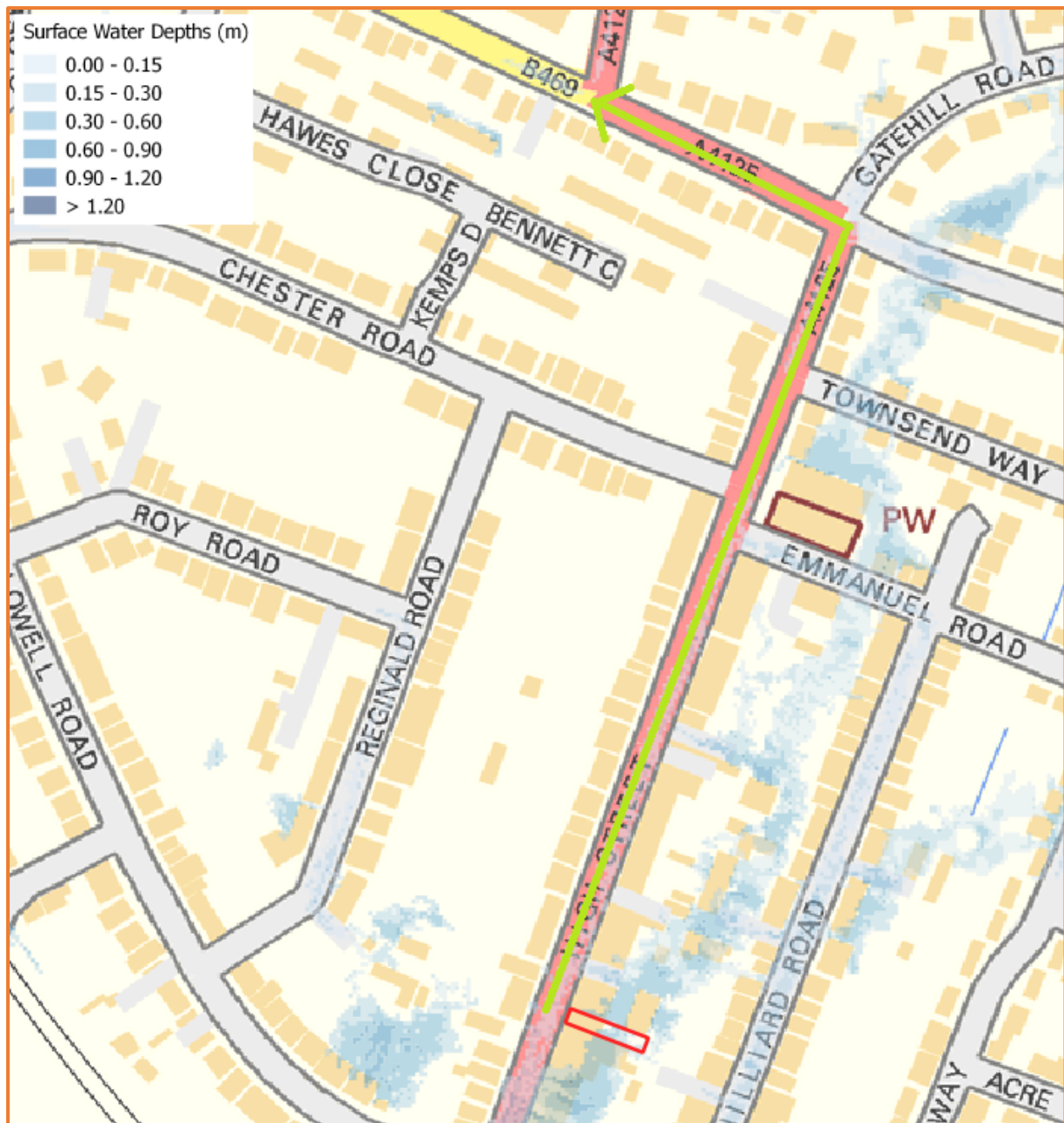


Figure 13: Potential safe egress route from the site (green line) (Source: EA 1:100 year risk of surface water flooding depths overlain onto OS Mapping)

Off-Site Impacts:

Fluvial floodplain storage:

The NPPF requires that where development is proposed in undefended areas of floodplain, which lie outside of the functional floodplain, the implications of ground raising operations for flood risk elsewhere needs to be considered. Raising existing ground levels may reduce the capacity of the floodplain to accommodate floodwater and increase the risk of flooding by either increasing the depth of flooding to existing properties at risk or by extending the floodplain to cover properties normally outside of the floodplain. Flood storage capacity can be maintained by lowering ground levels either within the curtilage of the development or elsewhere in the floodplain, in order to maintain at least the same volume of flood storage capacity within the floodplain.

In undefended tidal areas, raising ground levels is unlikely to impact on maximum tidal levels so the provision of compensatory storage should not be necessary.

For development in a defended flood risk area, the impact on residual flood risk to other properties needs to be considered. New development behind flood defences can increase the residual risk of flooding if the flood defences are breached or overtopped by changing the conveyance of the flow paths or by displacing flood water elsewhere. If the potential impact on residual risk is unacceptable then mitigation should be provided.

The application site is situated within Flood Zone 1. Post development, there will be no loss of fluvial floodplain storage.

The site is located partially within Flood Zone 3a for surface water, however the proposed development is for the change of use of the existing building. As such, there will be no increase in built footprint and therefore no loss of surface water floodplain storage.

As per the West London SFRA, as the development does not decrease the volume of fluvial floodplain or surface water flood area, flood storage compensation does not need to be provided.

Surface Water Drainage:

Based on the plans provided, there will be no increase in built footprint, and no increase in the impermeable coverage on site post development. As such, there will be no change to the existing drainage system on site.

The West London SFRA states that:

"Change of use development, that do not have a bearing in a site's existing drainage regime do not need to provide a drainage strategy as part of the development proposal."

Sequential and Exception Test

The Sequential Test aims to ensure that development does not take place in areas at high risk of flooding when appropriate areas of lower risk are reasonably available. The site is situated in Flood Zone 1 when using the Environment Agency Flood Map for Planning (Rivers and Sea), and partially within surface water Flood Zone 3a. Post development, the site will become “more vulnerable”, as the proposal is for the change of use of the existing offices to residential.

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	✓

Table 2: Flood risk vulnerability and flood zone ‘compatibility’

Using the table above, the proposed application is considered to be suitable within Flood Zone 1. The Sequential and Exception Tests do not need to be applied to minor developments and changes of use.

The West London SFRA also states that:

“changes of use development that are not classified as ‘material change of use’, except for a change of use to a caravan, a mobile home or park home site, or to a camping or chalet site, do not need to apply the Sequential and Exception Tests for the proposed site”.

Conclusion

Unda Consulting Limited have been appointed by Domville Properties Ltd to undertake a Site Specific Flood Risk Assessment (FRA) for Planning at 34A High Street, Northwood, Middlesex HA6 1BN. The FRA has been undertaken in accordance with the National Planning Policy Framework (NPPF) and the associated technical guidance.

The proposed planning application is for the Change of use from Class B1a Office to Class C3 Dwelling houses. The existing permitted site usage (offices) is classified as "less vulnerable" throughout. Post development, the site will become "more vulnerable".

The EA Surface Water Flood Map (and the West London Strategic Flood Risk Assessment Risk of Flooding from Surface Water mapping) suggests that the site is at a "Low", "Medium" and "High" risk of flooding from surface water.

The EA has also produced surface water flood depth mapping for the 1 in 30 year (High Risk), 1 in 100 year (Medium Risk) and 1 in 1000 year (Low Risk) scenarios (high risk, medium risk and low risk respectively).

The Environment Agency risk of flooding from surface water maps show that for the key 1:100 year (1% chance) surface water event, the maximum depth of flooding on site is 0.30m to 0.60m.

For the 1:30 year surface water event, the maximum depth of flooding on site is 0.15m to 0.30m. For the 1:1000 year surface water event, the maximum depth of flooding on site is 0.60m to 0.90m.

The proposal is for the change of use of the existing building, as such there will be no increase in built footprint and therefore no loss of potential surface water storage. Floodplain compensation is therefore not required.

No records of surface water flooding the vicinity of the site have been provided.

No information has been provided to suggest that a groundwater incident has occurred at the site, and the West London SFRA mapping indicates that the site lies within an area with a less than 25% susceptibility to groundwater flooding. The site is shown to be outside of areas identified as having an increased potential for elevated groundwater.

No information has been provided to suggest that the site is susceptible to sewer surcharge flooding. The West London SFRA shows that Thames Water have 41-60 records of flooding from sewer flooding within the postcode area the site falls within.

The site is situated partially within the maximum inundation extent on the EA Reservoir Inundation Map.

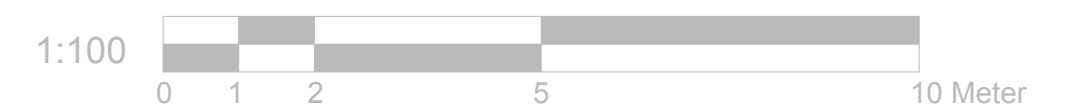
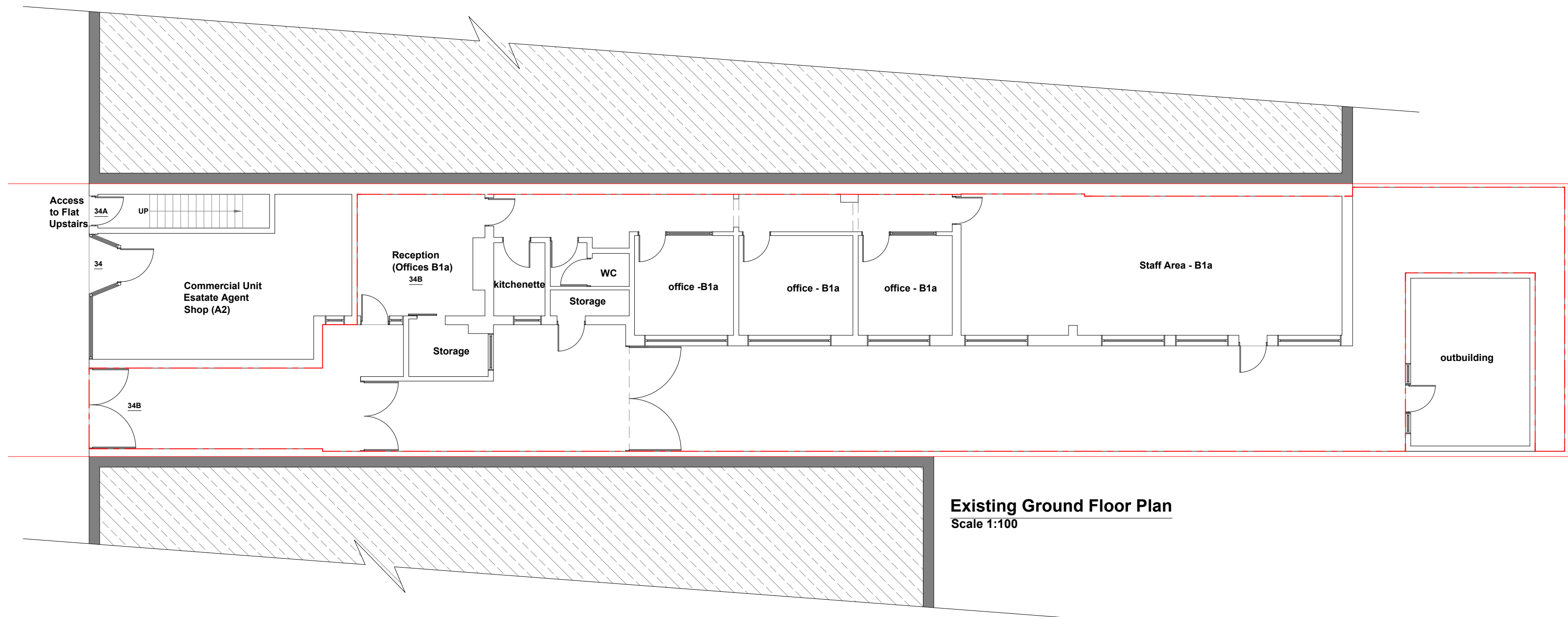
The applicant has confirmed that:

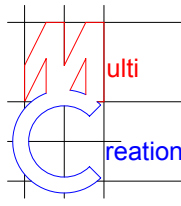
- The proposal is for the change of use of the existing building and will not increase the built footprint on site.
- There will be no increase in the impermeable coverage on site post development, and therefore there will be no change to the existing drainage system on site.
- Flood proofing of the development will be incorporated as appropriate.
- It is recommended that demountable flood defence barriers are installed up to 600mm above ground level, to defend ground level doorways and low windows.

Assuming accordance with these flood risk management measures, Unda Consulting Limited consider the proposed application to be suitable in flood risk terms.

Appendix A

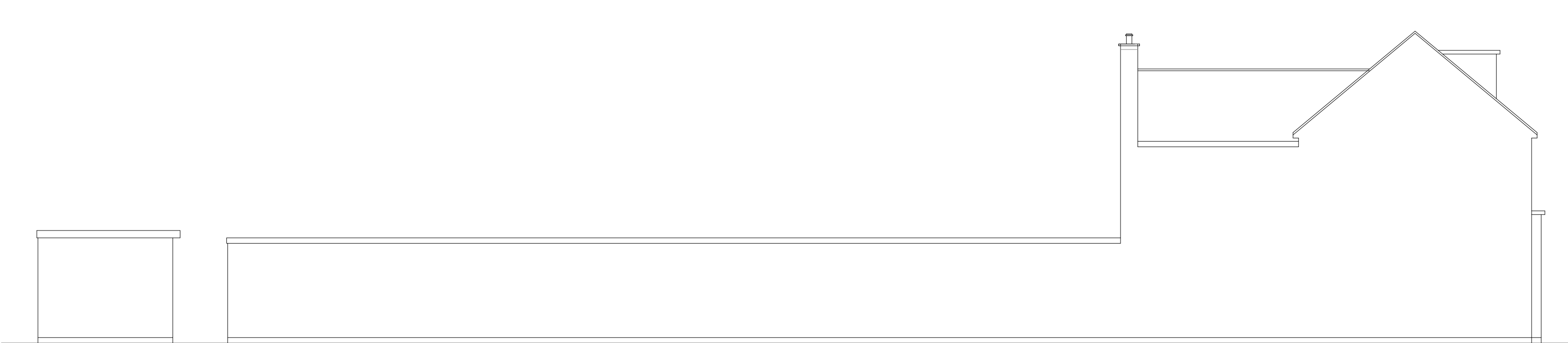
- Existing Plans and Proposed Plans
- Risk of Flooding from Surface Water Maps.



	Project: 34A High Street Northwood Middx. HA6 1DZ	Title: Existing Floor Plans	Scale: 1:100 @ A2 Date: 17/07/2020 Drawing No.: 3281 - 01/BK
			Revision
239 Western Road, Southall, Middx, UB2 5HS Tel: 020 8571 1369 info@multicreation.co.uk			



Existing Rear Elevation
Scale:1:100



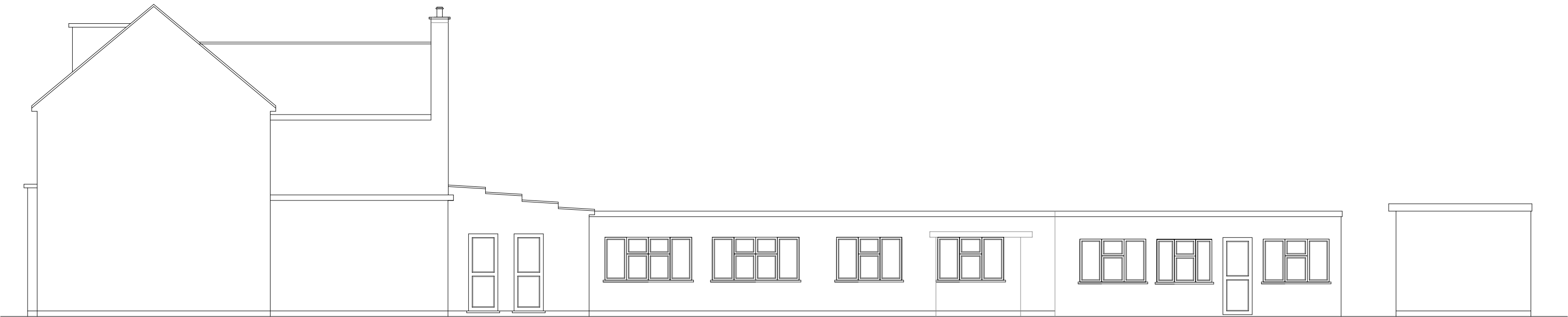
Existing Side Elevation
Scale:1:100



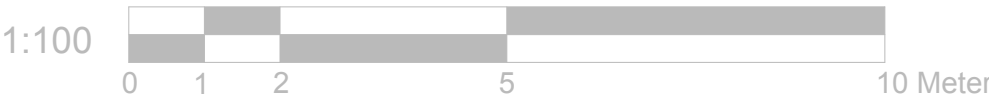
Existing Front Elevation
Scale:1:100



Existing Side Elevation
Scale:1:100



Existing Side Elevation
Scale:1:100

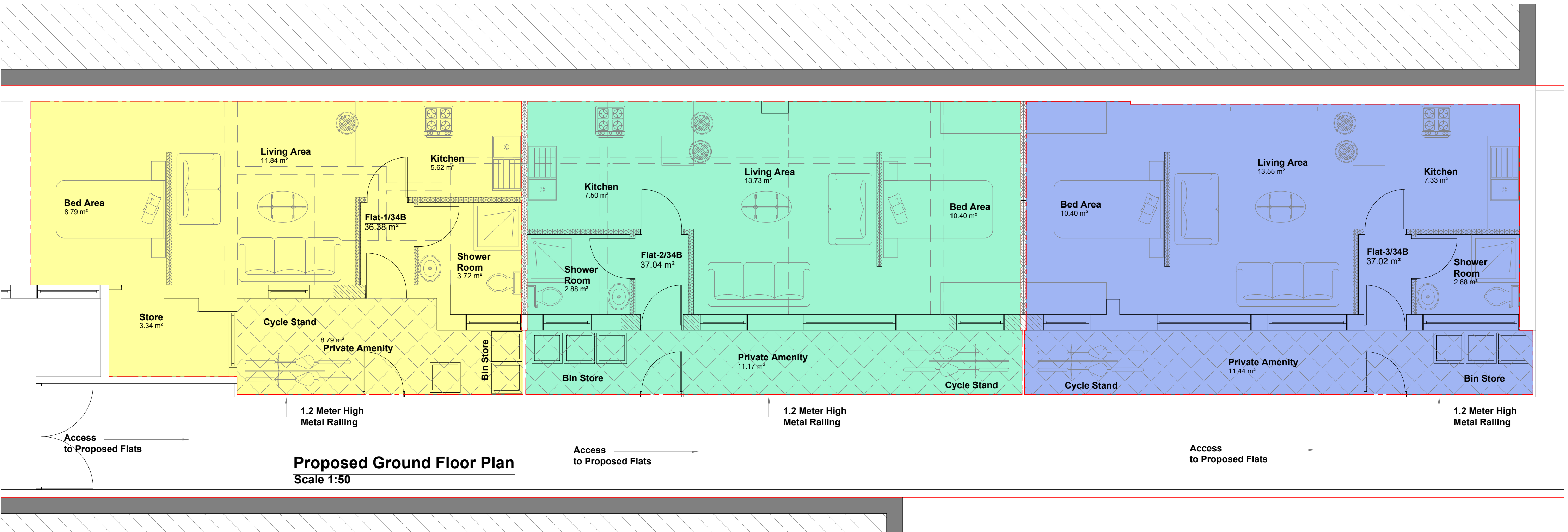
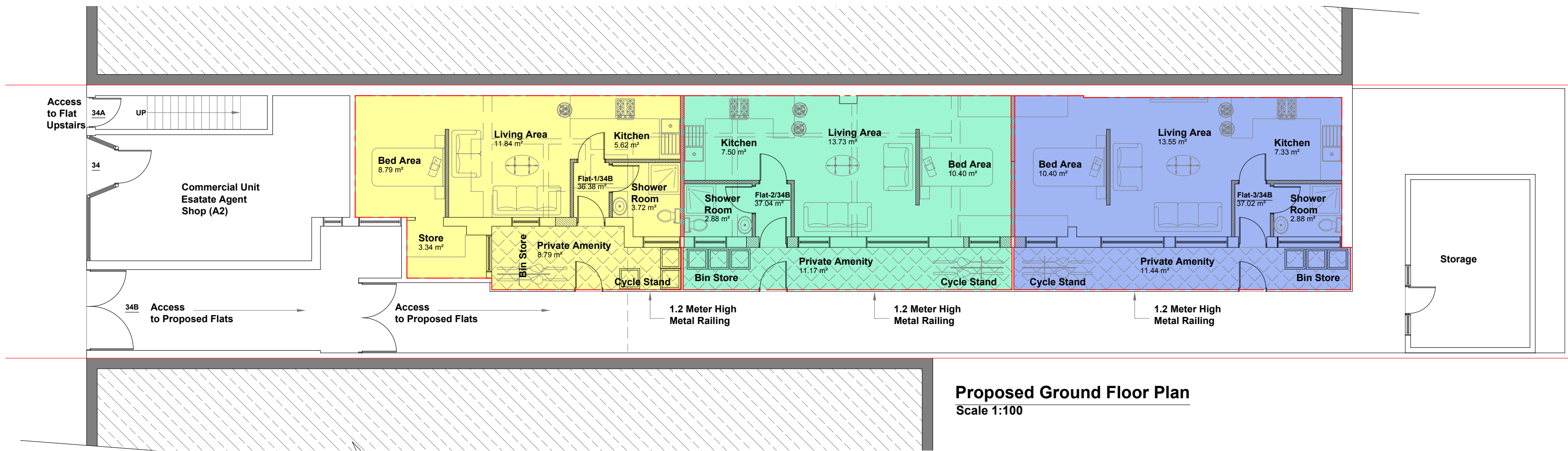


All work to comply with current building regulations and codes of practice

Do not scale from drawings all dimensions to be checked on site before the start of any work

Proposed External Finish Materials to Match Existing External Finish Materials

	Project: 34A High Street Northwood Middx. HA6 1DZ	Title: Existing Elevations	Scale: 1:100 @ A2
			Date: 17/07/2020
			Drawing No.: 3281 - 02/BK
			Revision
239 Western Road, Southall, Middx, UB2 5HS Tel: 020 8571 1369 info@multicreation.co.uk			



Flat No.	Bedrooms	Floor Area	Amenity Area
1	Studio / 1 Per	36.38m ²	8.79m ²
2	Studio / 1 Per	37.04m ²	11.17m ²
3	Studio / 1 Per	37.02m ²	11.44m ²



	Project: 34A High Street Northwood Middx. HA6 1DZ	Title: Proposed Floor Plans	Scale: 1:100/50 @ A2
			Date: 17/07/2020
			Drawing No.: 3281 - 03/BK
			Revision
239 Western Road, Southall, Middx, UB2 5HS Tel: 020 8571 1369 info@multicreation.co.uk			



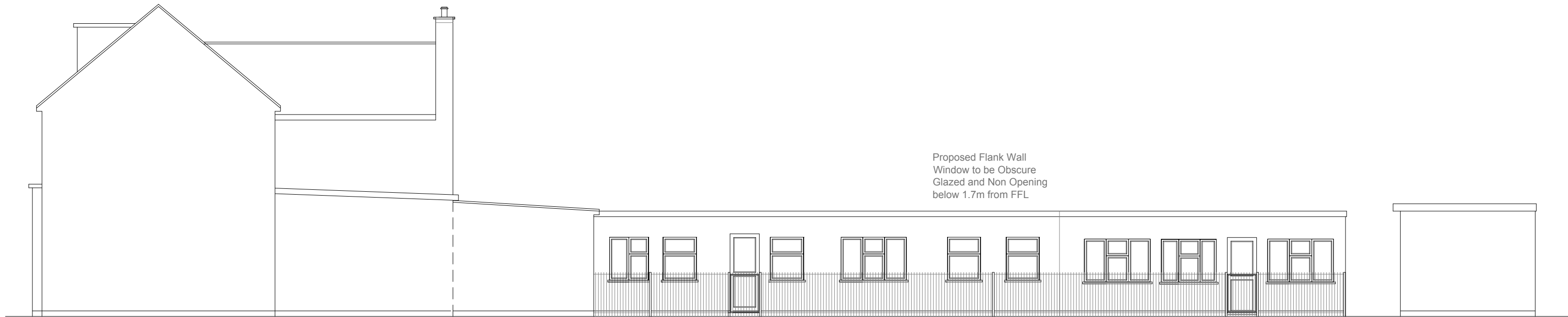
Proposed Rear Elevation
Scale:1:100



Proposed Side Elevation
Scale:1:100

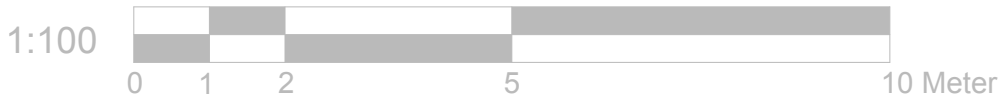


Proposed Front Elevation
Scale:1:100



Proposed Side Elevation
Scale:1:100

Proposed Flank Wall
Window to be Obscure
Glazed and Non Opening
below 1.7m from FFL

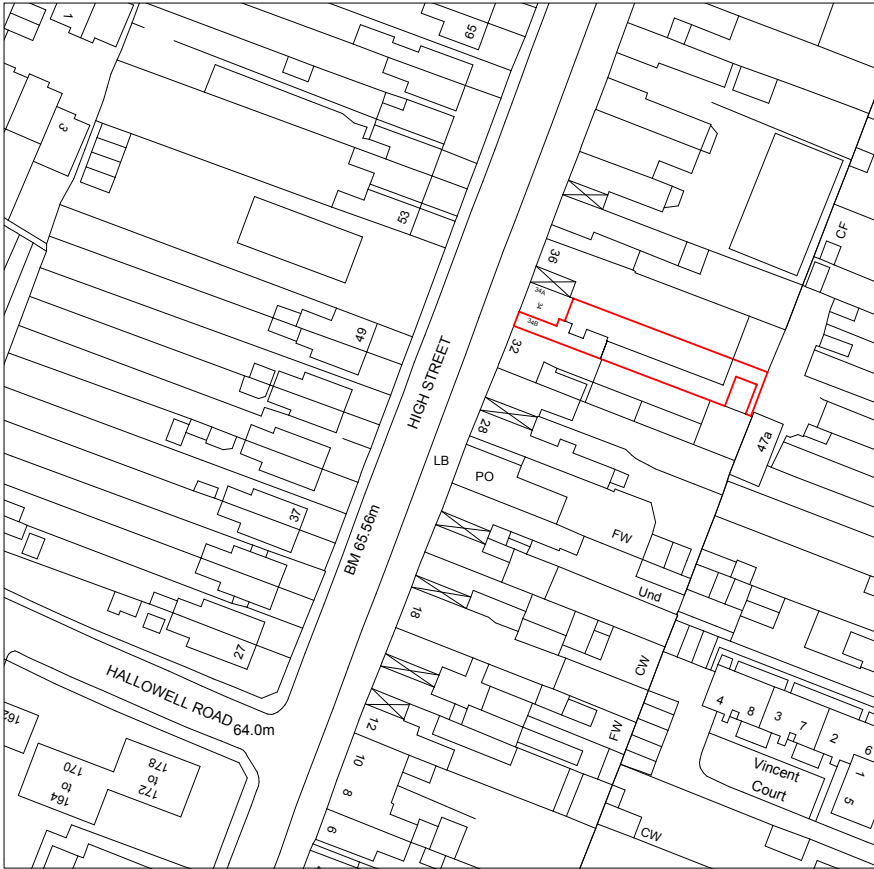


All work to comply with current building regulations and codes of practice

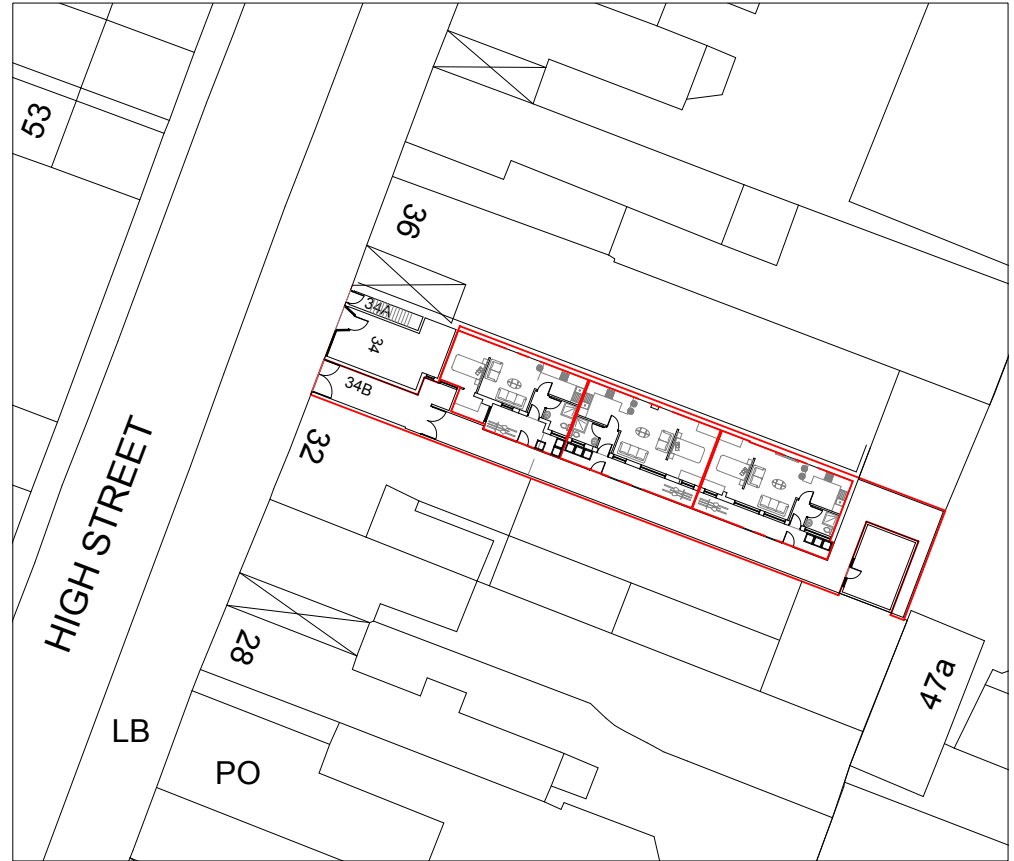
Do not scale from drawings all dimensions to be checked on site before the start of any work

Proposed External Finish Materials to Match Existing External Finish Materials

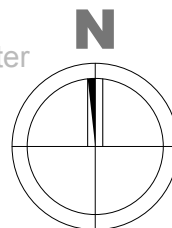
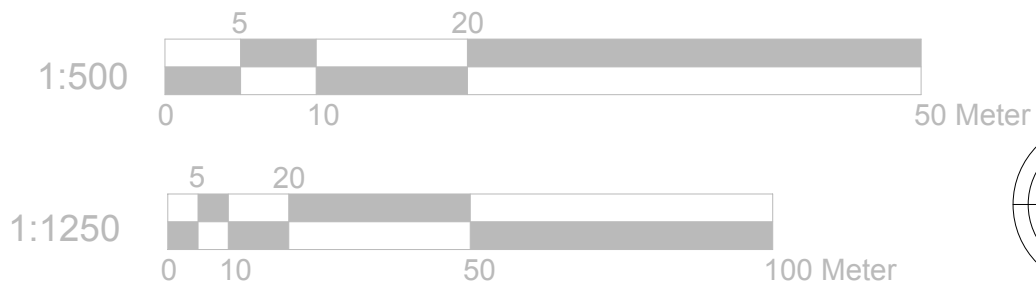
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	34A High Street	Proposed Elevations	Date: 17/07/2020						
	Northwood		Drawing No.: 3281 - 04/BK						
	Middx.		Revision						
	HA6 1DZ		<table border="1"><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr></table>						
239 Western Road, Southall, Middx, UB2 5HS		Tel: 020 8571 1369		info@multicreation.co.uk					

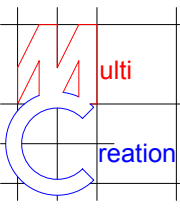


Location Plan
Scale 1:1250

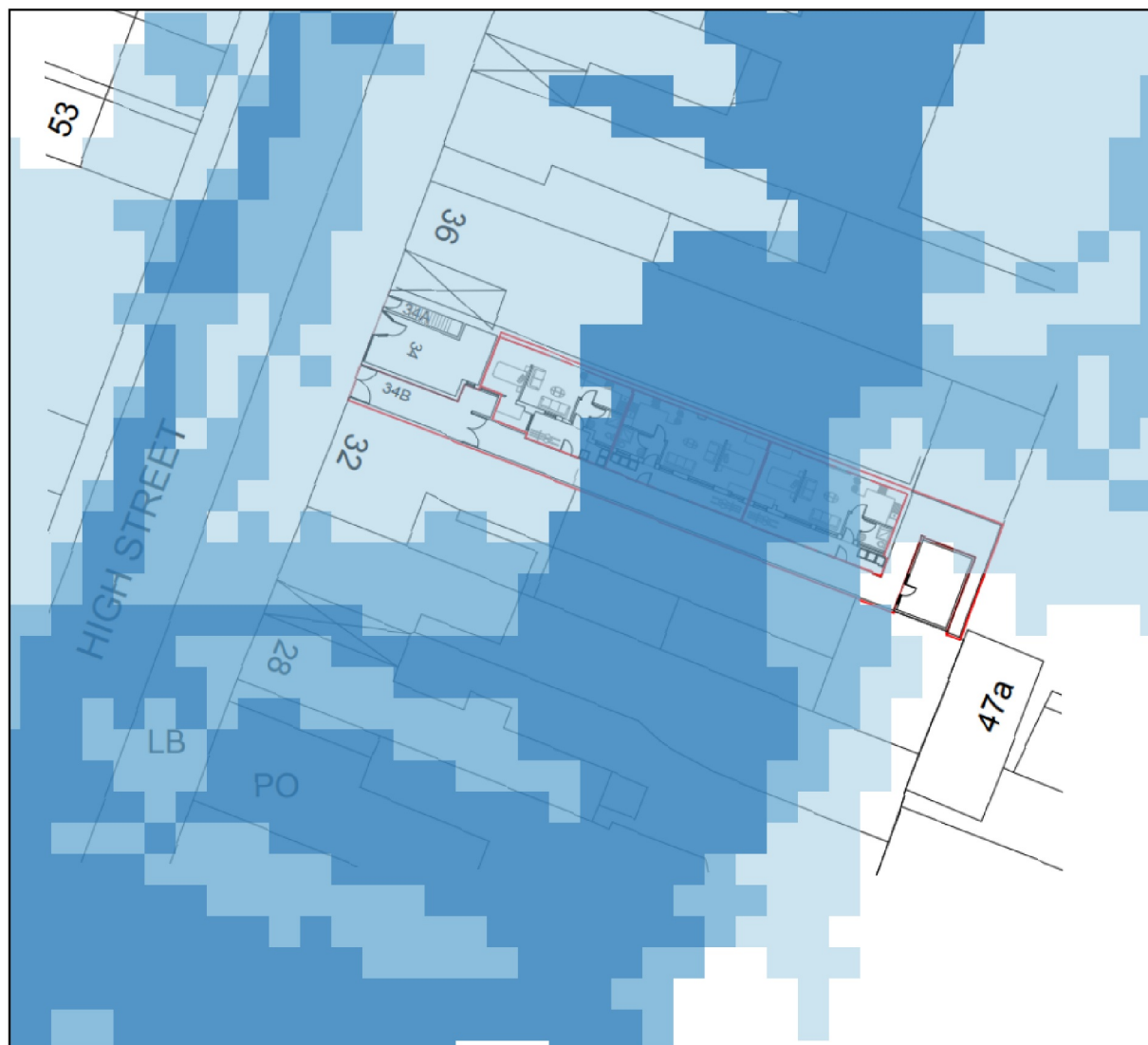


Block Plan
Scale 1:500



	Project:	Title:	Scale: 1:500/1250 @ A4
	34A High Street	Location Plan	Date: 17/07/2020
	Northwood	Block Plan	Drawing No.: 3281 - 05/BK
	Middx.		Revision
	HA6 1DZ		
239 Western Road, Southall, Middx, UB2 5HS Tel: 020 8571 1369 info@multicreation.co.uk			

Environment Agency Risk of Flooding from Surface Water (RoFSW) Extents



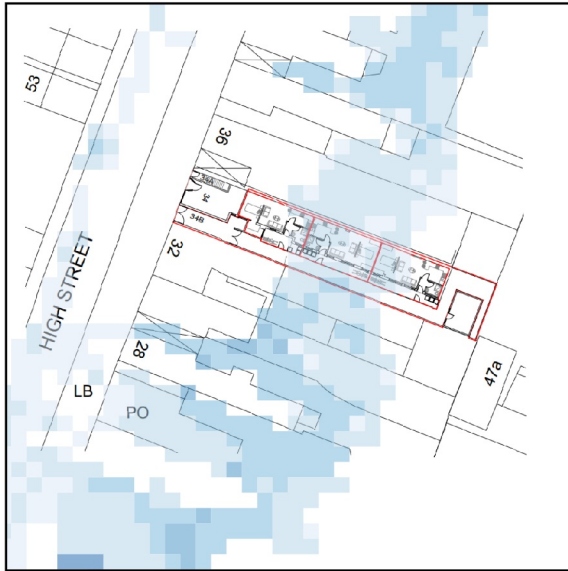
- Surface water extent for a 1:30 year flood event
- Surface water extent for a 1:100 year flood event
- Surface water extent for a 1:1000 year flood event

0 10 20 30 40 50 m



Environment Agency Risk of Flooding from Surface Water (RoFSW) Maps

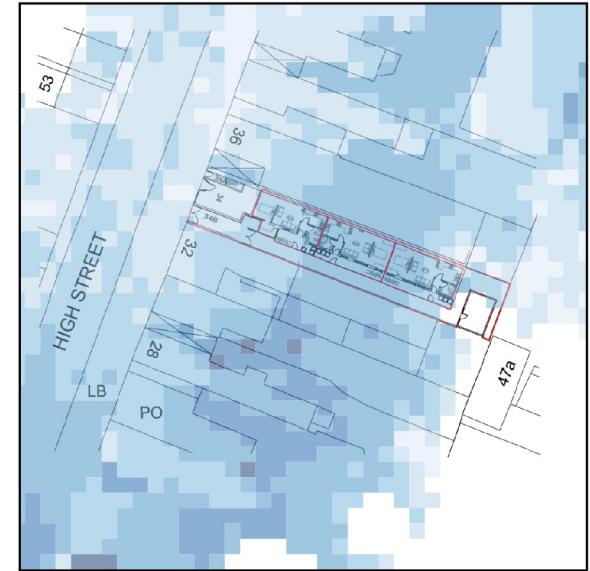
1 in 30 year modelled extent



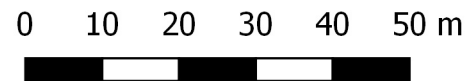
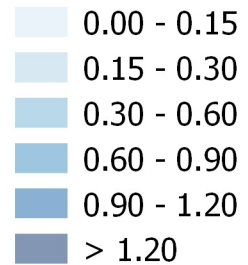
1 in 100 year modelled extent



1 in 1000 year modelled extent



Surface Water depths (m)



**Environment Agency Risk of Flooding from Surface Water (RoFSW)
1 in 30 year extent**



Surface Water Depths (m)

- 0.00 - 0.15
- 0.15 - 0.30
- 0.30 - 0.60
- 0.60 - 0.90
- 0.90 - 1.20
- > 1.20

0 5 10 15 20 25 m



**Environment Agency Risk of Flooding from Surface Water (RoFSW)
1 in 100 year extent**



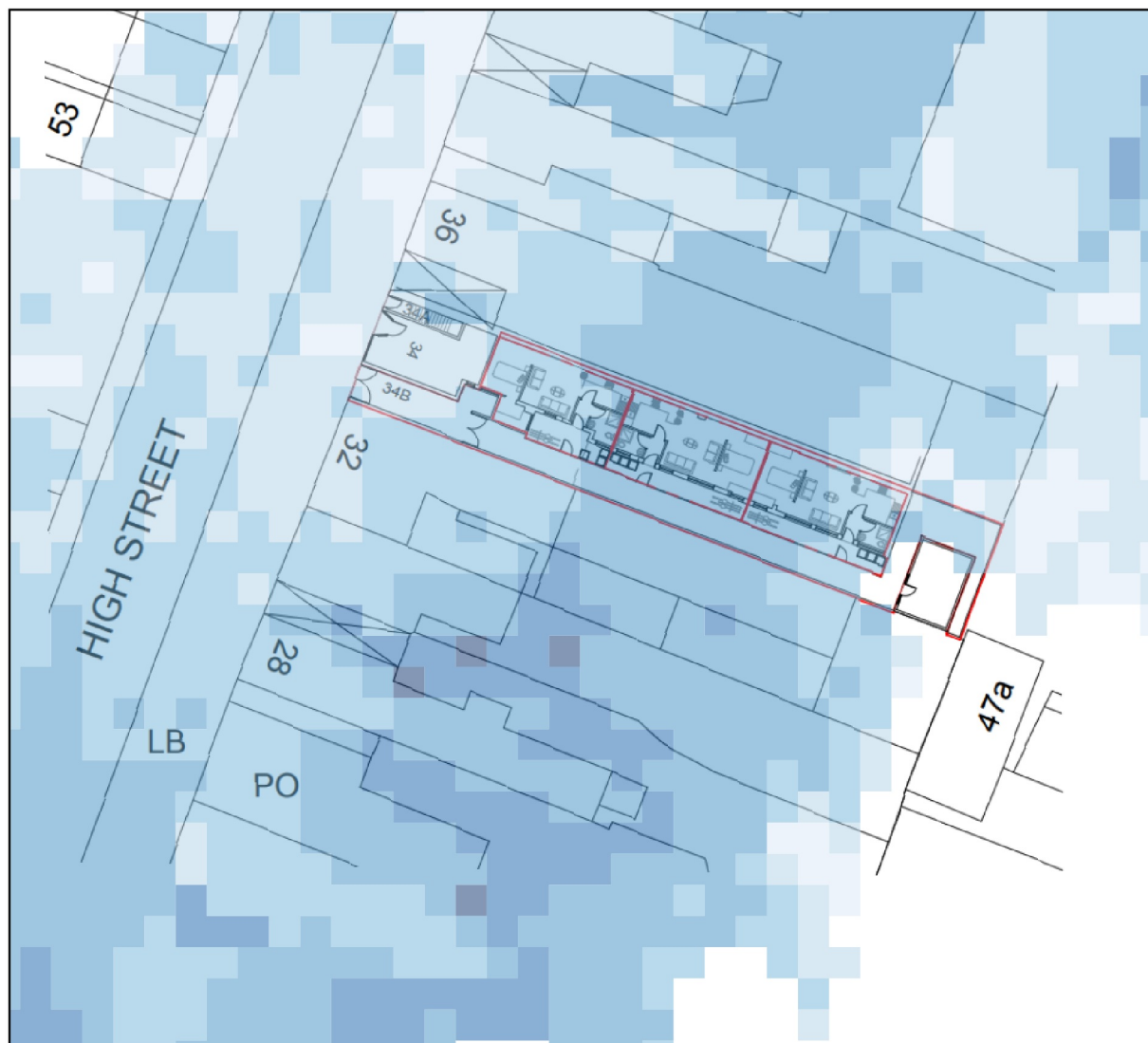
Surface Water Depths (m)

- 0.00 - 0.15
- 0.15 - 0.30
- 0.30 - 0.60
- 0.60 - 0.90
- 0.90 - 1.20
- > 1.20

0 5 10 15 20 25 m



**Environment Agency Risk of Flooding from Surface Water (RoFSW)
1 in 1000 year extent**



Surface Water Depths (m)

- 0.00 - 0.15
- 0.15 - 0.30
- 0.30 - 0.60
- 0.60 - 0.90
- 0.90 - 1.20
- > 1.20

0 5 10 15 20 25 m

