Flood Risk Assessment for Planning

Prepared for:
Miri Shtini

September 2022

Location:
Land adjacent 24 Leaholme Way
Ruislip
HA4 7RA

Our reference:
92470-Shtini-LeaholmeWay_010922_v1

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Document Issue Record

Project:	Flood Risk Assessment for Planning
Client:	Miri Shtini
Location:	Land adjacent 24 Leaholme Way, Ruislip, HA4 7RA
Application:	Erection of a 3-bedroom detached house together with a double garage and amenity space
Our reference:	92470-Shtini-LeaholmeWay_010922_v1
Version:	010922_v1

Lead Consultant:	Mr Edward Bouët
Authorisation:	Mrs Emma Jeffery

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Key Facts

Flood Risk Posed:

- EA Flood Zone 3 (High Risk).
- The risk would appear to be predominantly fluvial, and originates from the Cannon Brook, some 35m to the east of the site.
- Modelled flood levels have been requested from the EA for use within this report.
- The EA Surface Water Flood Map suggests that the site lies within an area of "High" risk of flooding from surface water.
- No information has been provided to suggest that the site has flooded previously from groundwater flooding.
- No information has been provided to suggest that the site has flooded previously from sewer surcharge flooding.

Flood Risk Management:

- Floor levels will be set at least 300mm above suitable modelled 1:100 / 1:200 year plus allowance for climate change flood level.
- Flood proofing of the ground floor will be incorporated as appropriate.
- No sleeping accommodation will be situated at ground floor level.
- A flood warning and evacuation plan will be implemented post development.
- The applicant will register with the free Environment Agency Floodline Warnings Direct service.
- The development will utilise Sustainable Drainage Systems (SuDS) design in accordance with the NPPF for Planning Applications and the drainage hierarchy.
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Assuming accordance with these flood risk management measures, Unda Consulting Limited consider the proposed application to be suitable in flood risk terms.

Introduction

Unda Consulting Limited have been appointed by Hugo Prince on behalf of Miri Shtini (hereinafter referred to as "the applicant") to undertake a Site Specific Flood Risk Assessment (FRA) for Planning at Land adjacent 24 Leaholme Way, Ruislip, HA4 7RA (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, as well as relevant Local Policies.

The site appears to be located within Flood Zone 3 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 application site is located in Flood Zone 3 (High Risk of flooding from rivers or the sea), and includes building works, the applicant is required to submit a FRA under the NPPF. 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 existing site is an undeveloped plot of land adjacent to the existing no. 24.

Figure 1: View of the front of the site (Source: Google Earth)

Figure 2: Site location plan (Source: Miri Shtini)

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 ±0.3m every 2m. This dataset is derived from a combination of the 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. 1.0m horizontal resolution DTM LiDAR data has been used for the purposes of this study.

LiDAR remotely sensed digital elevation data suggests that the ground topography on site ranges approximately 44.43mAOD in the south (front) of the site to 45.16mAOD in the north (rear) of the site.

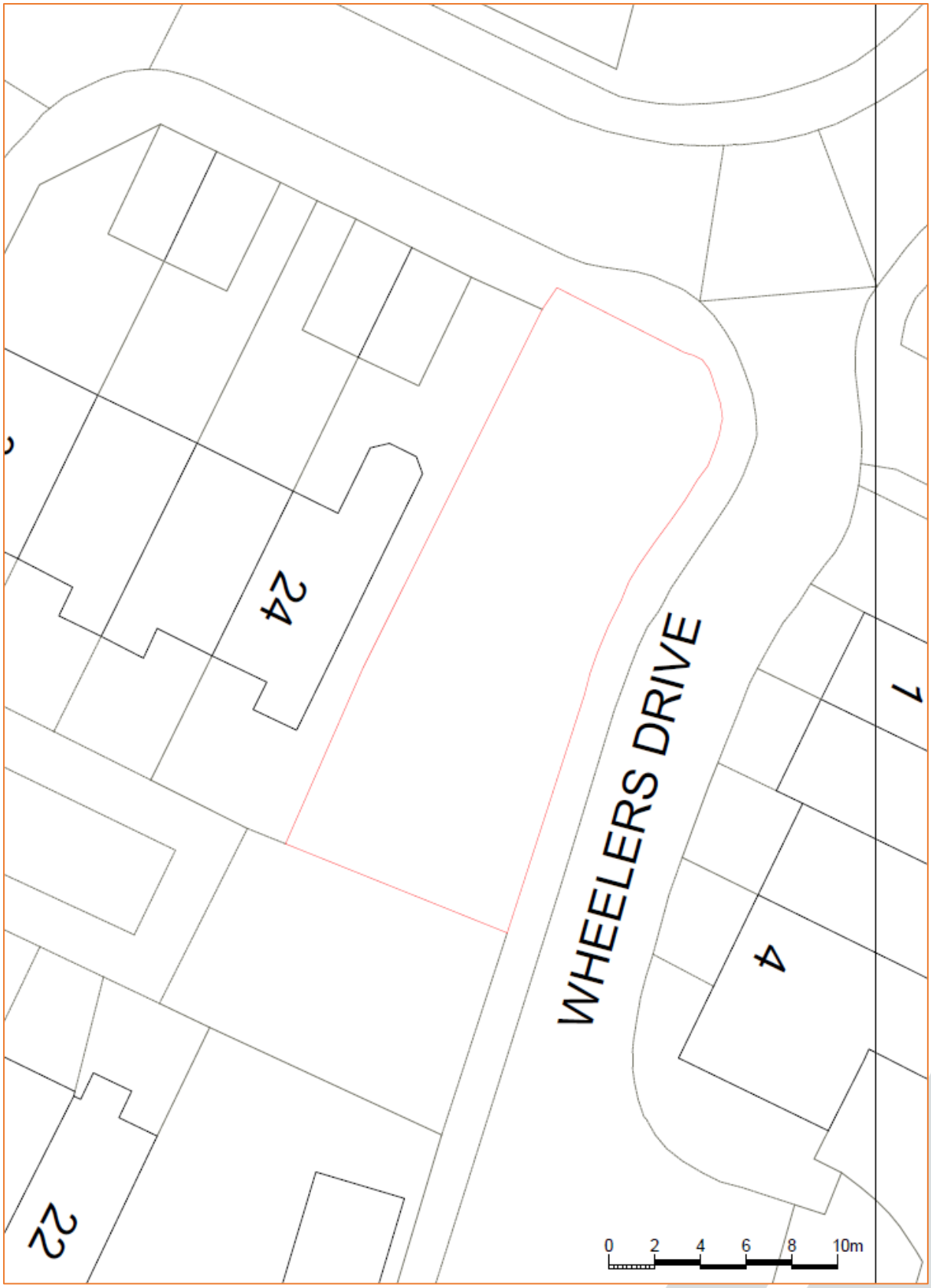


Figure 3: Site location plan (Source: Miri Shtini)

Geography and Soil:

The British Geological Survey (BGS) Map indicates that the bedrock underlying the site is Lambeth Group formation – Clay, Silt, and Sand, with no superficial deposits recorded.

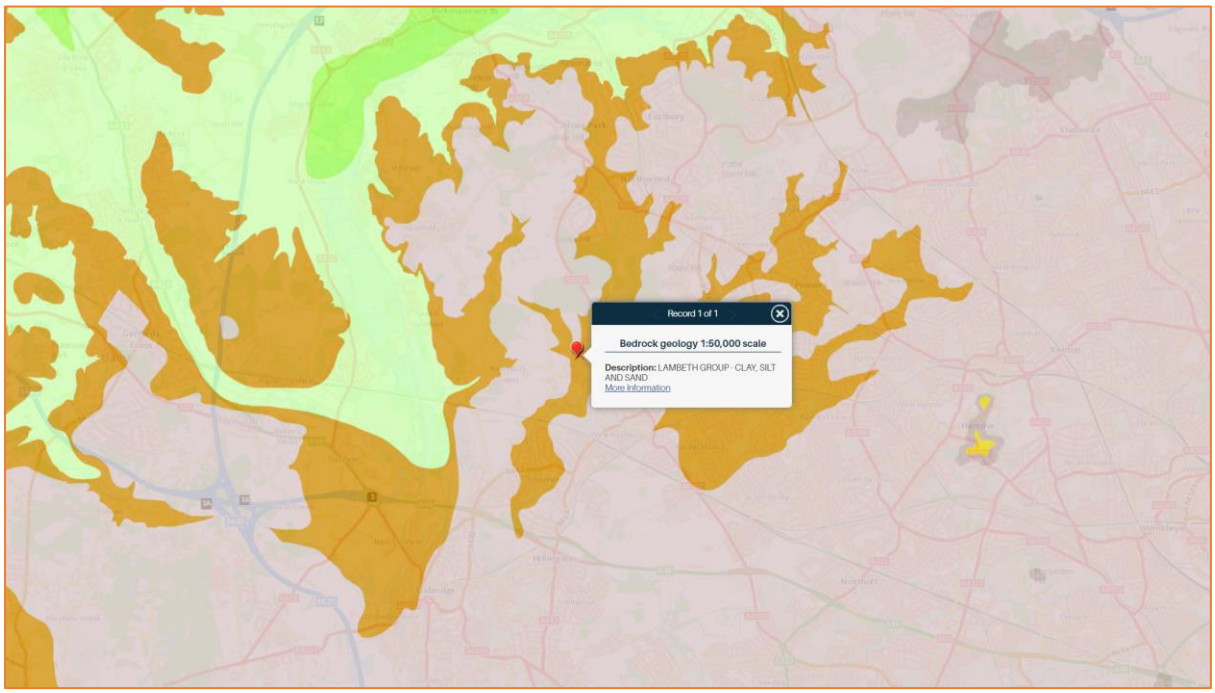


Figure 5: Bedrock geology (Source: BGS)

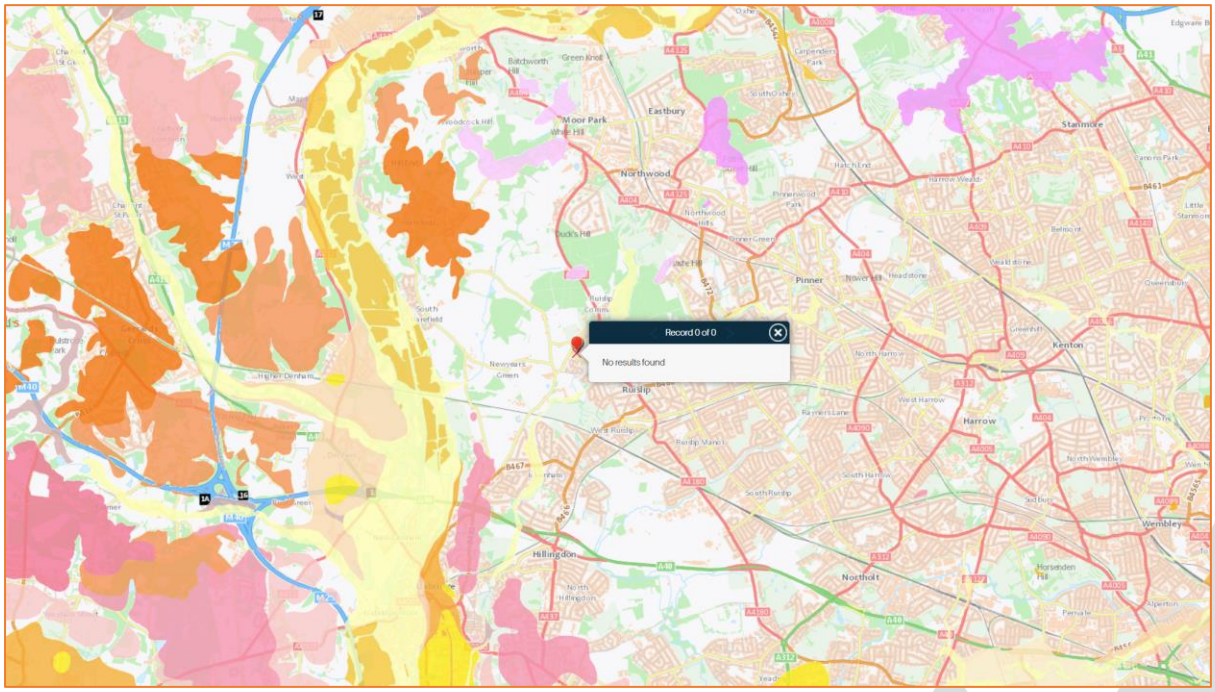


Figure 6: Superficial Deposits (Source: BGS)

Proposed Development

The proposed planning application is for the erection of a 3-bedroom detached house together with a double garage and amenity space.

Proposed plans are provided in the report Appendix.

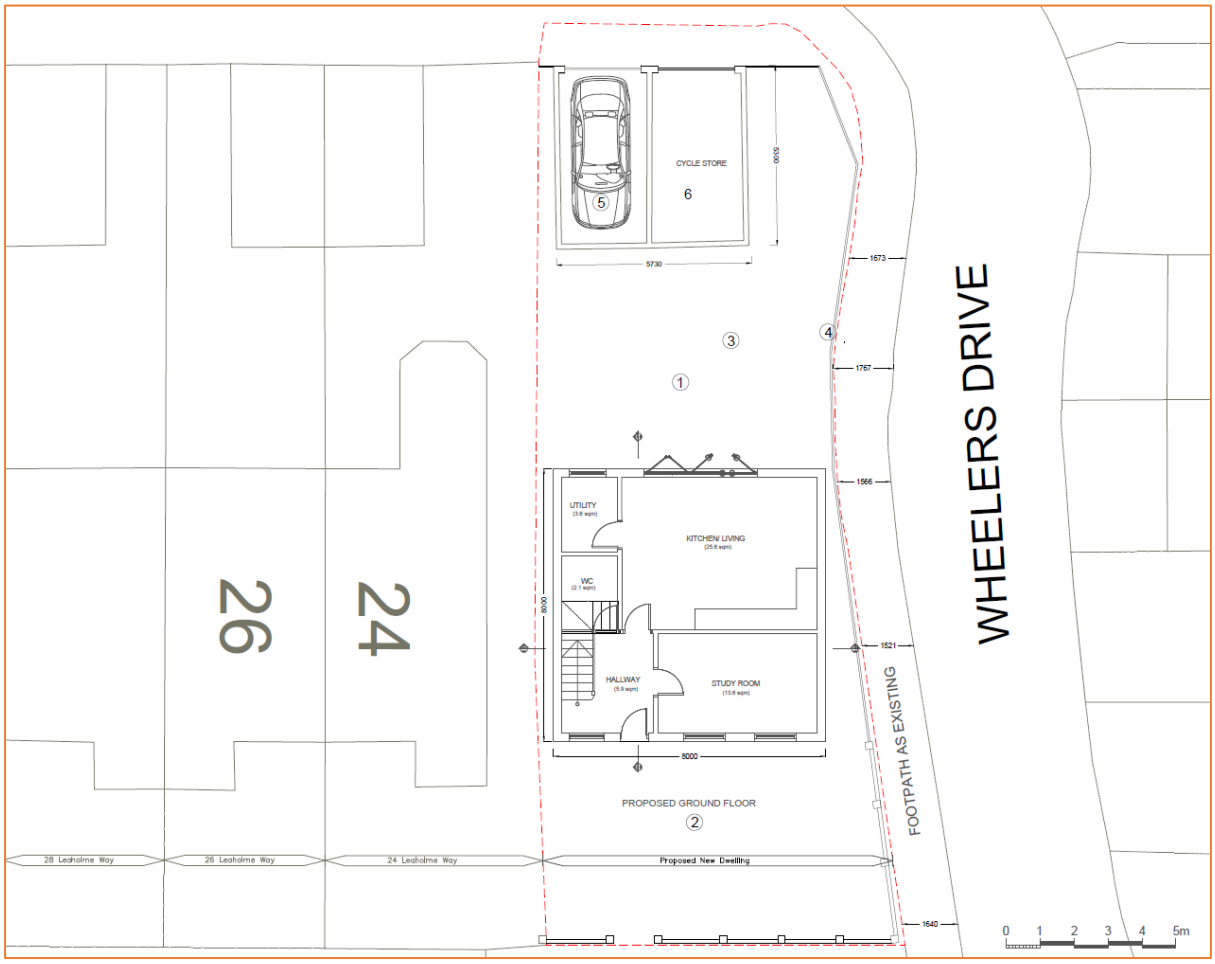


Figure 8: Proposed site plan (Source: Miri Shtini)

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.

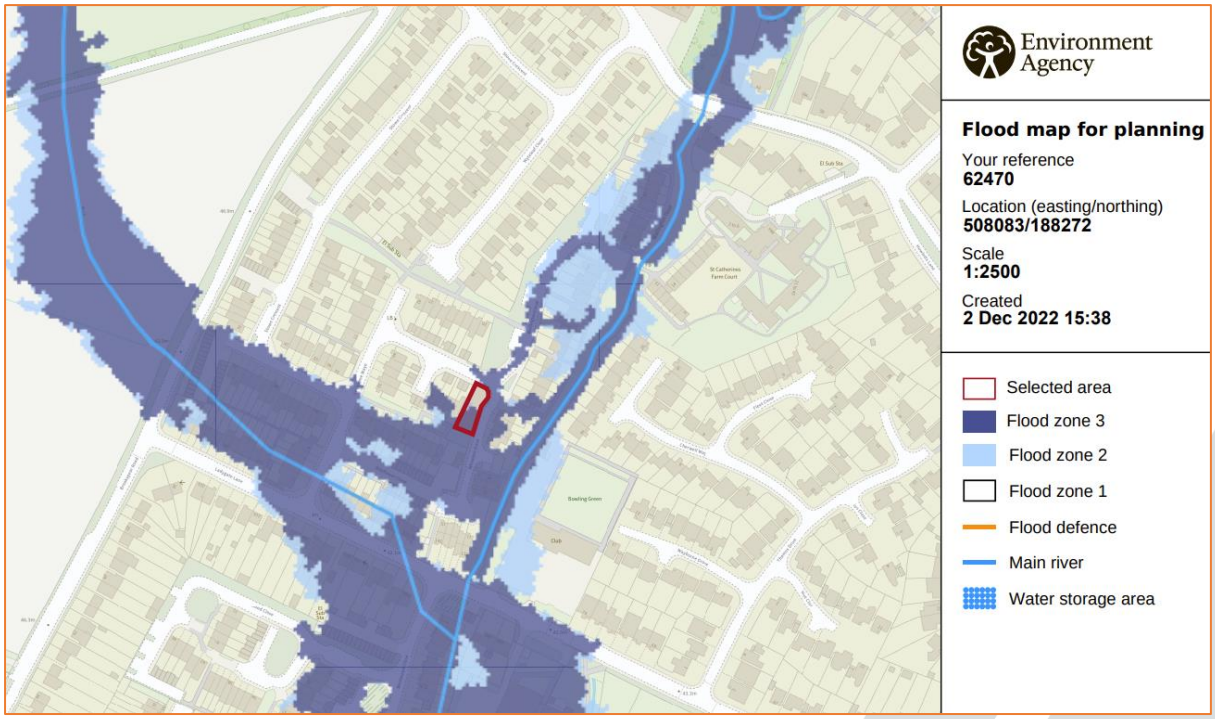


Figure 9: Environment Agency Flood Map for Planning (Rivers and Sea) (Source: EA)

The site is located within Flood Zone 3 (High Probability), which means it is defined as land having a 1 in 100 or greater annual probability of fluvial flooding; or having a 1 in 200 or greater annual probability of tidal flooding.

The risk would appear to be predominantly fluvial, and originates from the Cannon Brook, some 35m to the east of the site.

Fluvial (Cannon Brook):

The Cannon Brook flows in a south-westerly direction, approximately 35m east of the site. It flows into the River Pinn approximately 750m south of the site.

Modelled flood levels and extents:

Modelled flood levels have been requested from the EA for use within this report.

Flood Storage Areas:

Flood Storage Areas are areas that act as a balancing reservoir, storage basin or balancing pond. Their purpose is to attenuate an incoming flood peak to a flow level that can be accepted by the downstream channel. It may also delay the timing of a flood peak so that its volume is discharged over a longer time interval. Flood storage areas do not completely remove the chance of flooding and can be overtopped or fail in extreme weather conditions.

According to Environment Agency data, there no Flood Storage Areas located in close proximity to the site.

Functional Floodplain:

Areas subject to flooding up to (and including) once in every 20 years (5% annual exceedance probability (AEP)) on average have been delineated as 'Zone 3b Functional Floodplain'. These are areas that are subject to relatively frequent flooding, and may be subject to fast flowing and/or deep water.

Flood Defences:

A flood defence or EA Asset is any man-made or natural feature – such as a raised defence, retaining structure, channel, pumping station or culvert – that performs a flood defence or land drainage function.

According to the EA there are no Environment Agency maintained raised defences that defend the site directly.

Residual risk (breach or overtopping of flood defences):

Breaching of flood defences can cause rapid inundation of areas behind flood defences as flow in the river channel discharges through the breach. A breach can occur with little or no warning, although they are much more likely to concur with extreme river levels or tides when the stresses on flood defences are highest. Flood water flowing through a breach will normally discharge at a high velocity, rapidly filling up the areas behind the defences, resulting in significant damage to buildings and a high risk of loss of life. Breaches are most likely to occur in soft defences such as earth embankments although poorly maintained hard defences can also be a potential source of breach.

Overtopping of flood defences occurs when water levels exceed the protection level of raised flood defences. The worst case occurs when the fluvial or tidal levels exceed the defence level as this can lead to prolonged flooding. Less severe overtopping can occur when flood levels are below defence levels, but wave action causes cyclic overtopping, with intermittent discharge over the crest level of the defence. Flood defences are commonly designed with a freeboard to provide protection against overtopping from waves. The risk from overtopping due to exceedance of the flood defence level is much more significant than the risk posed by

wave overtopping. Exceedance of the flood defence level can lead to prolonged and rapid flooding with properties immediately behind the defences at highest risk.

No flood defences act to defend the site from direct inundation, meaning there is negligible residual risk from beach and overtopping of flood defences.

Historical flood events:

Historical flood records and extents have been requested from the Environment Agency for use within this report.

Pluvial (Surface Water):

Pluvial (surface water) flooding happens when rainwater does not drain away through the normal drainage systems or soak into the ground, but lies on or flows over the ground instead.

In 2013 the EA, working with Lead Local Flood Authorities (LLFAs), produced an updated Flood Map for Surface Water. It is considered to represent a significant improvement on the previous surface water flood maps available, both in terms of method and representation of the risk of flooding. The modelling techniques and data used and considerably improved, and also incorporated locally produced mapping where this is available to represent features best modelled at a local scale.

The Flood Map for Surface Water assesses flooding scenarios as a result of rainfall with the following chance of occurring in any given year (annual probability of flooding is shown in brackets):

- 1:30 (3.3%)
- 1:100 (1%)
- 1:1000 (0.1%)

The mapping below shows the Risk of Flooding from Surface Water centred on the site. Please note that the EA do not consider this information suitable to be used to identify the risk to individual properties or sites. It is useful to raise awareness in areas which may be at risk and may require additional investigation.

The EA Surface Water Flood Map suggests that the site lies within an area of “High” risk of flooding from surface water.

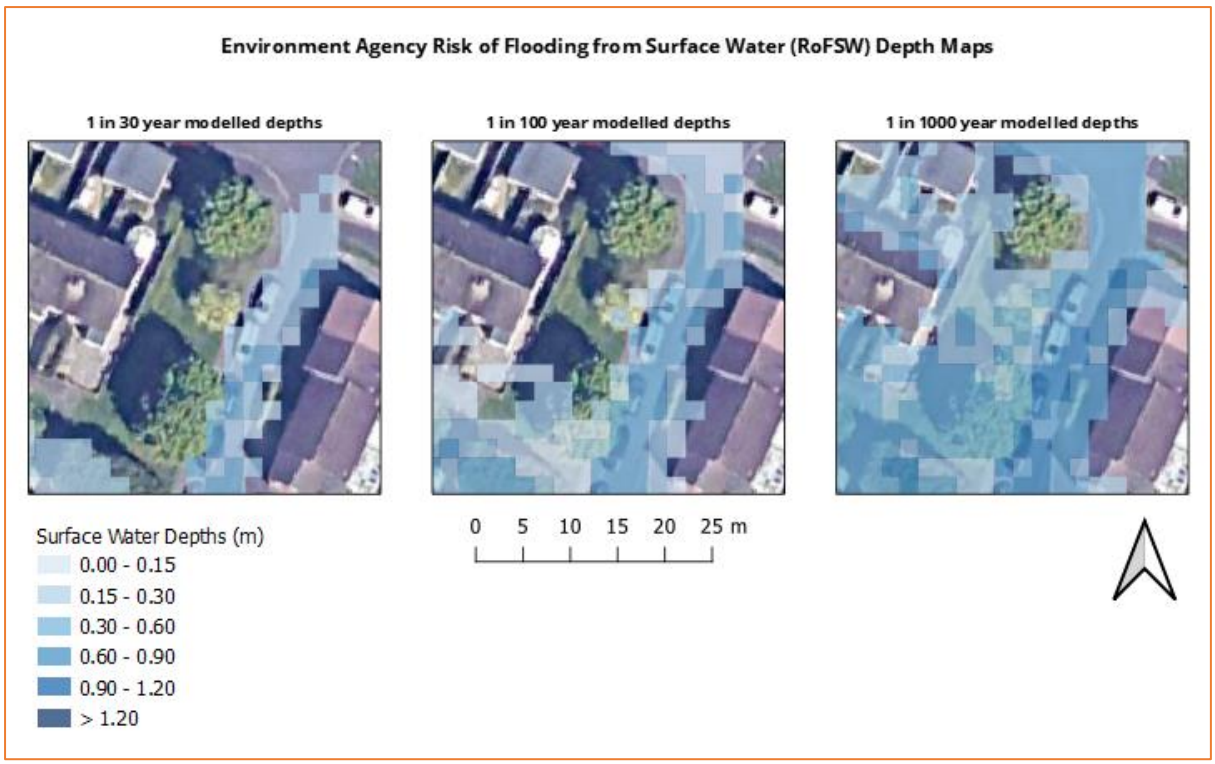


Figure 12: Extract from Environment Agency Surface Water Flood Map (Source: EA)

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 the site has flooded previously from groundwater flooding, and no basements are proposed as part of the development.

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 has flooded from sewer surcharge flooding previously.

Other Sources:

The site is within the inundation extent on the EA Reservoir Inundation Map when there is also flooding from rivers. The EA also 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.

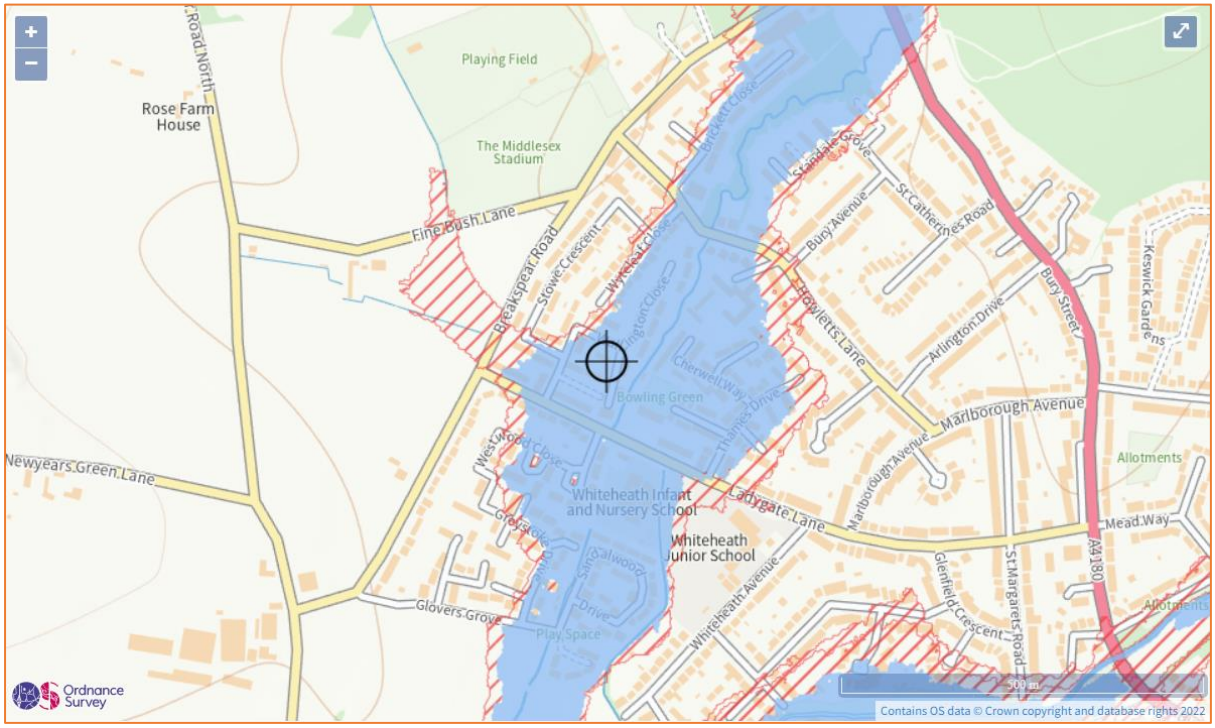


Figure 14: Extract from Environment Agency Reservoir Inundation Map (Source: EA)

Flood Risk Management

Vulnerability to flooding:

The NPPF classifies property usage by vulnerability to flooding.

Post development, the site will become “more vulnerable”. The proposed development is for construction of a new residential dwelling.

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 250m^2. 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 NPPF requires new residential floor levels be set at least 300mm above suitable modelled 1:100 / 1:200 year plus allowance for climate change flood level.

To help protect against flooding during extreme events, the applicant has agreed to implement flood resistant design measures into the proposed dwelling, in consultation with the Local Authority building control department. These measures can include the following:

- Waterproof screed used on floors;
- Closed-cell foam used in wall cavities;
- Sealing of any gaps with water resistant sealants, around windows and doors;
- Ground floor on separate circuit;
- Ground floor electrical main ring and electrical sockets run from 600mm above ground floor;
- Boilers, control and water storage / immersion installed at least 600mm above ground floor;
- Gas meter installed at least 600mm above ground floor;
- Waterproof ground floor internal render;
- External walls rendered resistant to flooding;
- All exterior service points sealed;
- Non-ferrous flood defence windows;
- Plumbing insulation of closed-cell design;
- Non-return valves fitted to all drain and sewer outlets;
- Manhole covers secured;
- Anti-syphon fitted to all toilets;
- New kitchen units of solid, water resistant material;
- Use of MDF carpentry (i.e. skirting, architrave, built-in storage) avoided at ground floor level;
- Stairs of solid hardwood construction with wood faces treated to resist water penetration;
- All external doors to be flood proof / flood defence doors, or 600mm demountable flood defence barriers installed if flood proof doors are not practical or other planning constraints prevent it;
- New wiring or electrical circuit run from ceiling, with raised sockets at least 600mm above ground level.

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 though slow moving flood water no deeper than 25cm.

The site is situated in Flood Zone 3 when using the Environment Agency Flood Map for Planning (Rivers and Sea). In the case of an extreme flood event without warning, occupants and users should seek refuge on the upper floors of the building.

Flood Warning:

The EA is responsible for issuing flood warnings. Flood warnings are issued to the emergency services and local authorities. Both private individuals and organisations can sign-up to receive warnings via phone, text or email. This system of receiving warnings is currently voluntary.

Advice regarding severe flood warnings will generally be given during weather forecasts on local radio and TV. In the case of extreme events, warnings can also be disseminated via door to door visits by the police or locally appointed flood wardens.

The site lies within Flood Zones 3. The EA issue flood warnings/alerts to specific areas when flooding is expected. It is recommended that the applicant registers online with the free Environment Agency Floodline Warnings/Alert Direct service at https://www.gov.uk/sign-up-for-flood-warnings to receive flood warnings by phone, text or email.

The flood warning service has three types of warnings that will help you prepare for flooding and take action:

Flood Warning	**Flood Alert**	**Flood Warning**	**Severe Flood Warning**
			
What it means?	Flooding is possible. Be prepared.	Flooding is expected. Immediate action required.	Severe flooding. Danger to life.
When it's used?	Two hours to two days in advance of flooding.	Half an hour to one day in advance of flooding.	When flooding poses a significant threat to life.
What to do?	Be prepared to act on your flood plan. Prepare a flood kit of essential items. Monitor local water levels and the flood forecast on our website.	Move family, pets and valuables to a safe place. Turn off gas, electricity and water supplies if safe to do so. Put flood protection equipment in place.	Stay in a safe place with a means of escape. Be ready should you need to evacuate from your home. Co-operate with the emergency services. Call 999 if you are in immediate danger.

Table 3: Flood Warnings

Flood Plan:

It is recommended that the applicant and future owners, occupiers and Landlords of the dwelling prepare a flood plan to protect life and property during a flood event:

Before a flood:

- Find out if you are at risk of flooding.
- Find out if you can receive flood warnings.
- Prepare and keep a list of all your important contacts to hand or save them on your mobile phone.
- Think about what items you can move now and what you would want to move to safety during a flood such as pets, cars, furniture, and electrical equipment.
- Know how to turn off gas, electricity and water supplies .
- Prepare a flood kit of essential items and keep it handy. It can include copies of important documents, a torch, a battery-powered or wind-up radio, blankets and warm clothing, waterproofs, rubber gloves and a first aid kit including all essential medication.
- Consider buying flood protection products such as flood boards and airbrick covers to help reduce flood water getting into your property.

During a flood:

- Tune into your local radio station on a battery or wind-up radio.
- Fill jugs and saucepans with water.
- Grab your flood kit - if you have prepared one.
- Collect blankets, torch, first aid kit, medication and food.
- Move important documents, personal items, valuables, and lightweight belongings upstairs or to high shelves.
- Raise large items of furniture, or put them in large bags if you have them.
- Move people, outdoor belongings, cars and pets to higher ground.
- Switch off water, gas and electricity at mains when water is about to enter your home. Do not touch sources of electricity when standing in water.
- Fit flood protection products, if you have them, for example flood boards, airbrick covers, sandbags.
- Put plugs in sinks and baths. Weigh them down with a pillowcase or plastic bag filled with soil.
- If you do not have non-return valves fitted, plug water inlet pipes with towels or cloths.
- Move your family and pets upstairs or to a high place with a means of escape.
- Listen to the advice of the emergency service and evacuate if told to do so.
- Avoid walking or driving through flood water. Six inches of fast-flowing water can knock over an adult and two feet of water can move a car.

After a flood:

- If you have flooded, contact your insurance company as soon as possible.
- Take photographs and videos of your damaged property as a record for your insurance company.
- If you don't have insurance, contact your local authority for information on grants and charities that may help you.
- Flood water can contain sewage, chemicals and animal waste. Always wear waterproof outerwear, including gloves, wellington boots and a face mask.
- Have your electrics, central heating and water checked by qualified engineers before switching them back on.

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.

Surface Water Drainage Strategy:

The development will utilise Sustainable Drainage Systems (SuDS) design in accordance with the NPPF for Planning Applications and the drainage hierarchy as follows:

1. Store rainwater for later use;
2. Infiltration techniques;
3. Attenuate rainwater by storing in tanks for gradual release;
4. Discharge rainwater direct into watercourse;
5. Discharge rainwater into surface water sewer;
6. Discharge rainwater into a combined sewer;

As such, any change in surface water runoff from the site will likely be negligible.

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 3 when using the Environment Agency Flood Map for Planning (Rivers and Sea).

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	✗	Exception Test required	✓	✓
Zone 3b	Exception Test required	✗	✗	✗	✓

Table 4: Flood risk vulnerability and flood zone 'compatibility'

Conclusion

Unda Consulting Limited have been appointed by Hugo Prince on behalf of Miri Shtini (hereinafter referred to as "the applicant") to undertake a Site Specific Flood Risk Assessment (FRA) for Planning at Land adjacent 24 Leaholme Way, Ruislip, HA4 7RA (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, as well as relevant Local Policies.

The proposed planning application is for the erection of a 3-bedroom detached house together with a double garage and amenity space.

Post development, the site will become "more vulnerable". The proposed development is for construction of a new residential dwelling.

The site is located within Flood Zone 3 (High Probability), which means it is defined as land having a 1 in 100 or greater annual probability of fluvial flooding; or having a 1 in 200 or greater annual probability of tidal flooding.

The risk would appear to be predominantly fluvial, and originates from the Cannon Brook, some 35m to the east of the site.

Modelled flood levels have been requested from the EA for use within this report.

The EA Surface Water Flood Map suggests that the site lies within an area of "High" risk of flooding from surface water.

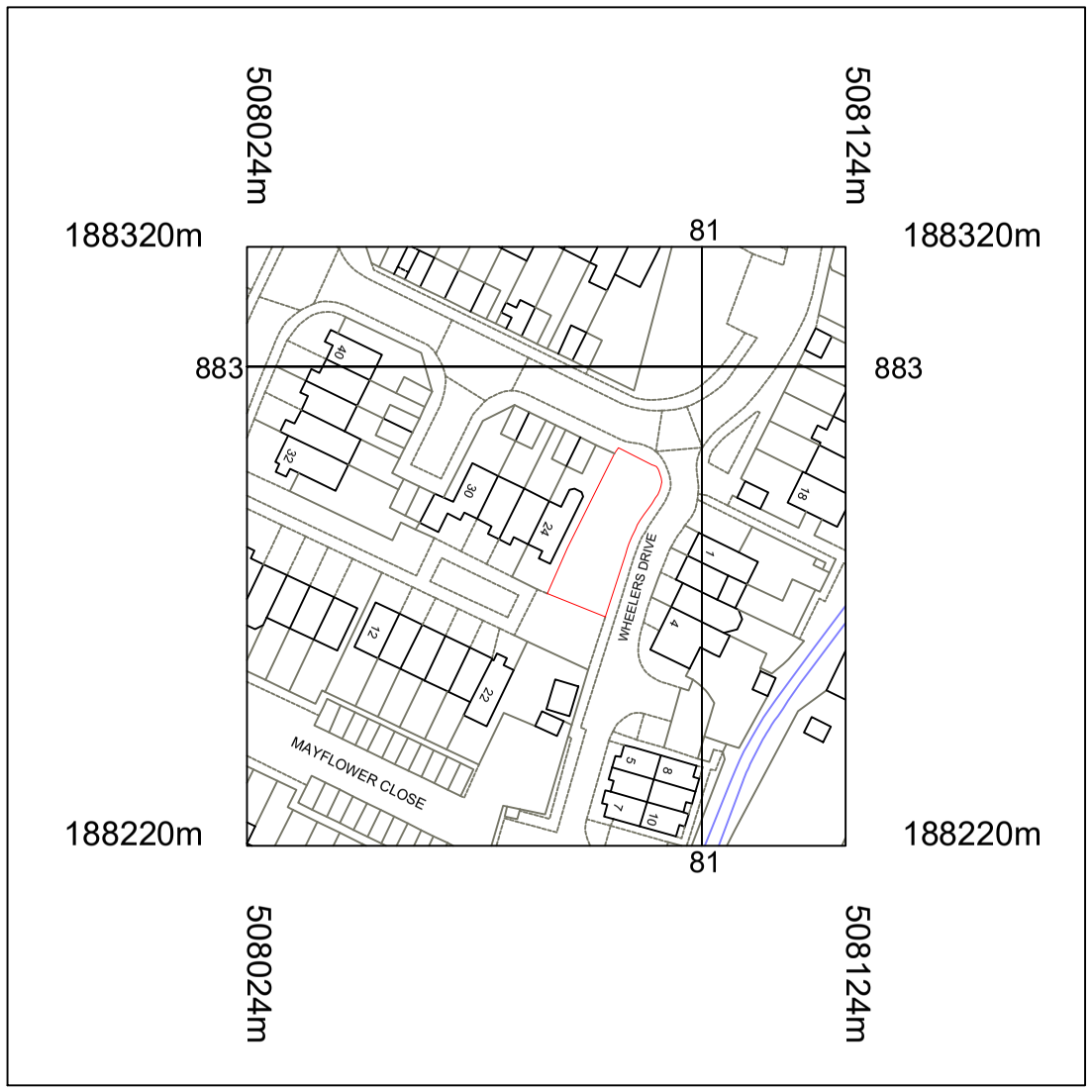
The applicant has confirmed that:

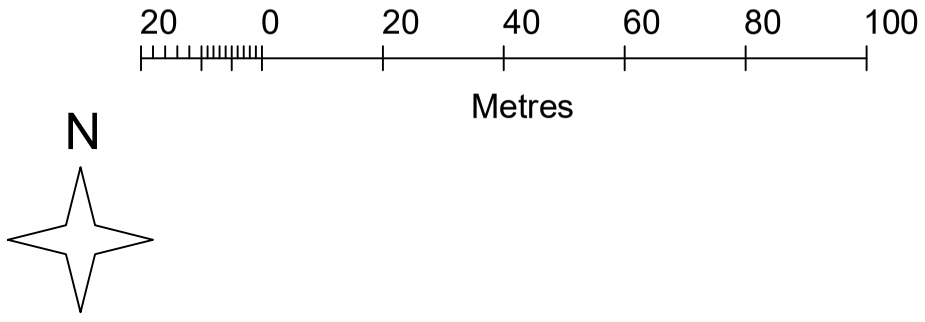
- Floor levels will be set at least 300mm above suitable modelled 1:100 / 1:200 year plus allowance for climate change flood level.
- Flood proofing of the ground floor will be incorporated as appropriate.
- No sleeping accommodation will be situated at ground floor level.
- A flood warning and evacuation plan will be implemented post development.
- The applicant will register with the free Environment Agency Floodline Warnings Direct service.
- The development will utilise Sustainable Drainage Systems (SuDS) design in accordance with the NPPF for Planning Applications and the drainage hierarchy.

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

Appendix

- Existing and proposed plans;
- EA Pluvial flood mapping;
- EA Flood Map for Planning.





NOTES

Do not scale this drawing.

The purpose of this drawing is for planning.

Purpose of Issue	Rev	Date	Authorised
Full Planning Application	2	Sep. 22	
Planning Pre-application	1	Mar. 21	

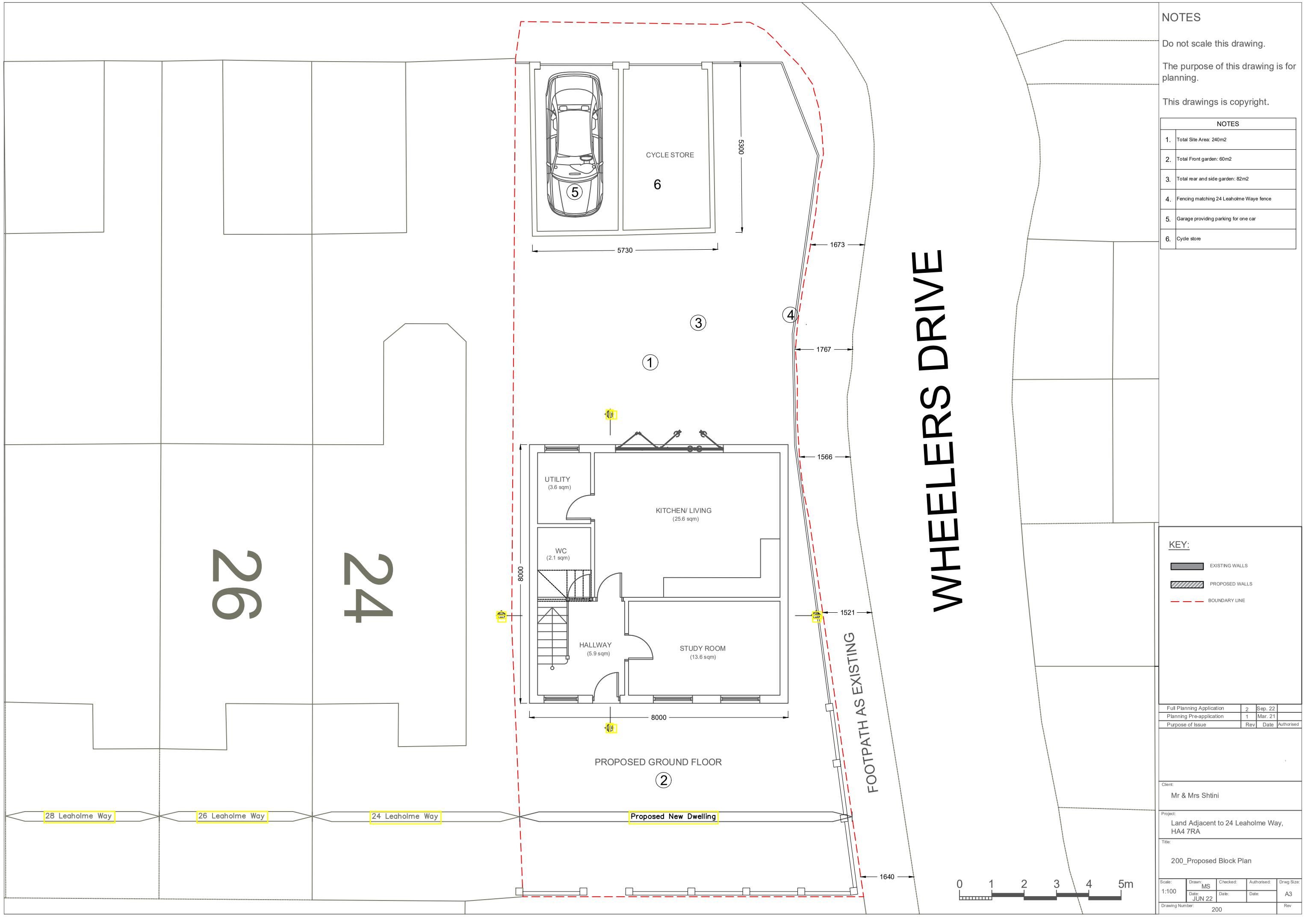
Client:
Mr & Mrs Shtini

Project:
Land Adjacent to 24 Leaholme Waye, HA4 7RA

Title:
100_Block & Location Plan

Scale:	Drawn:	Checked:	Authorised:	Dwg Size:
1:200 & 1:1250	MS			A3
	Date: JUN 22	Date:	Date:	

Drawing Number: 100 Rev A



NOTES

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The purpose of this drawing is for planning.

This drawings is copyright.

NOTES	
1.	Total Site Area: 240m2
2.	Total Front garden: 60m2
3.	Total rear and side garden: 82m2
4.	Fencing matching 24 Leaholme Waye fence
5.	Garage providing parking for one car
6.	Cycle store

KEY:

EXISTING WALLS

PROPOSED WALLS

BOUNDARY LINE

Full Planning Application	2	Sep. 22	
Planning Pre-application	1	Mar. 21	
Purpose of Issue	Rev	Date	Authorised

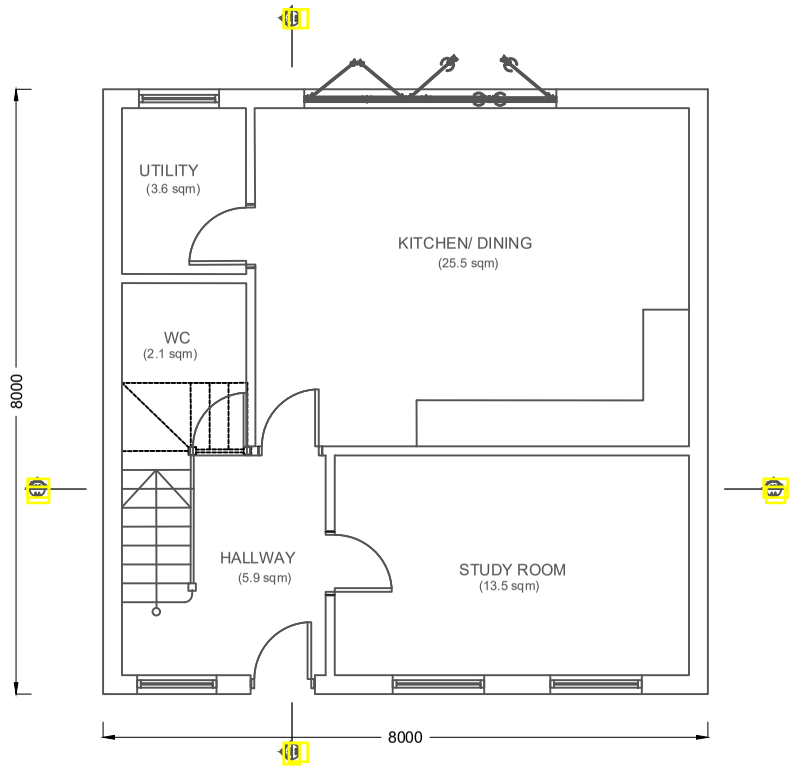
Client:
Mr & Mrs Shtini

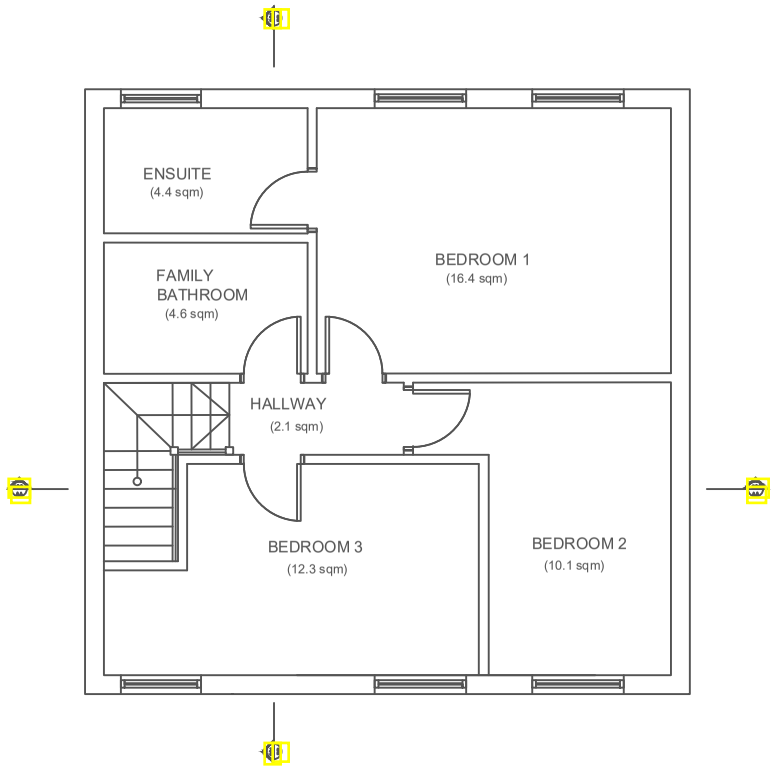
Project:
Land Adjacent to 24 Leaholme Way, HA4 7RA

Title:
200_Proposed Block Plan

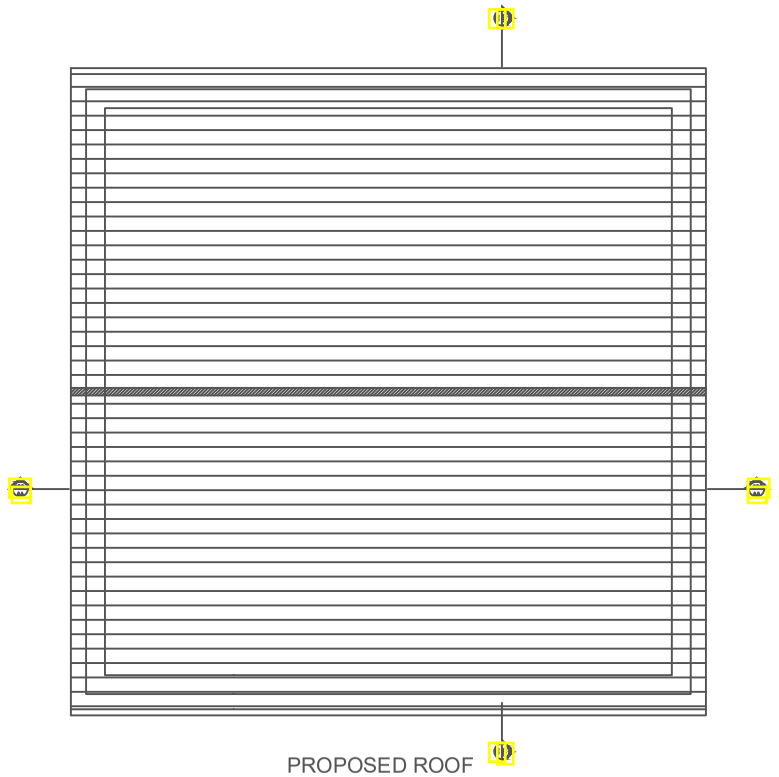
Scale:	Drawn:	Checked:	Authorised:	Drwg Size:
1:100	MS			A3
	Date: JUN 22	Date:	Date:	

Drawing Number: 200 Rev

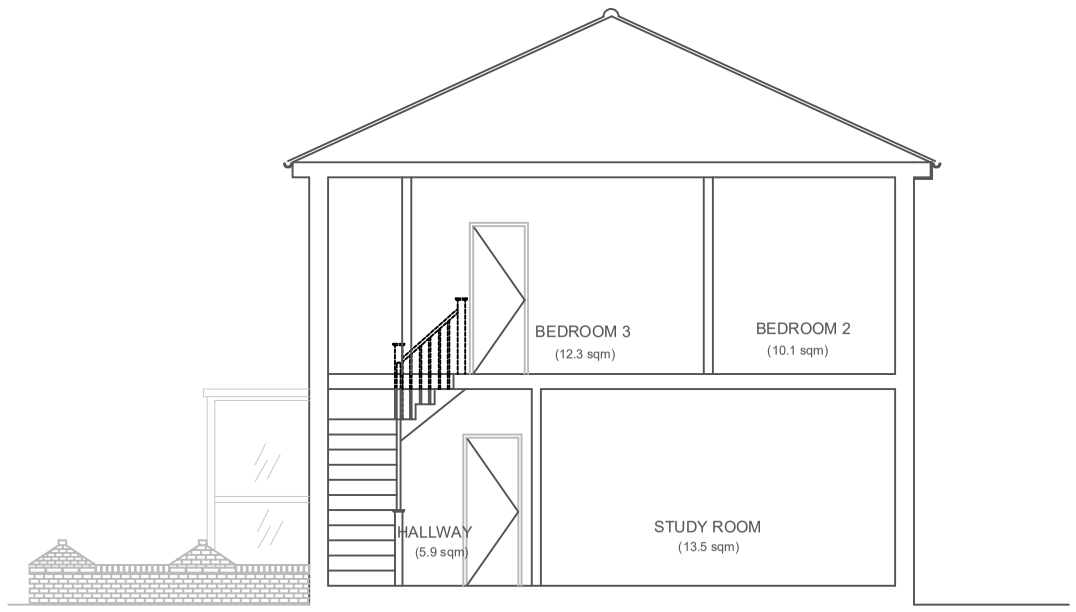




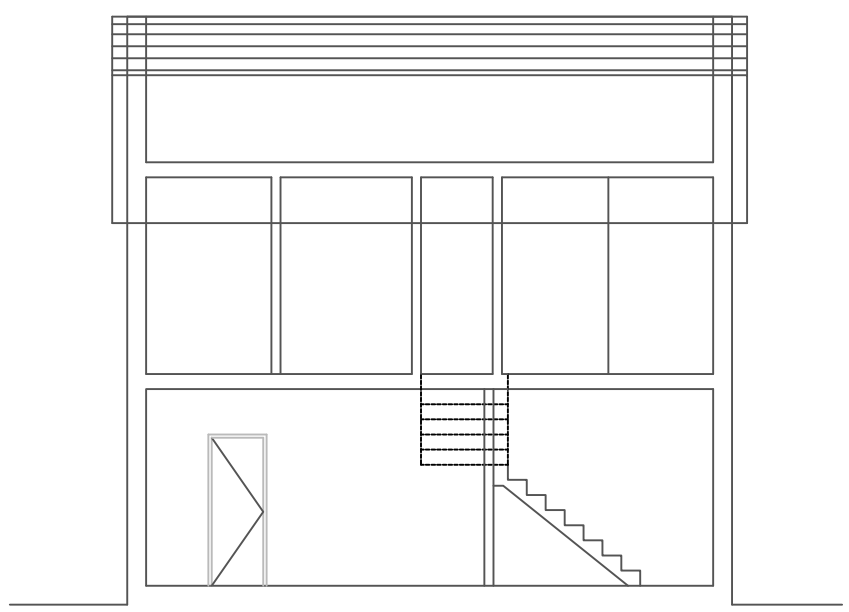
PROPOSED FIRST FLOOR



PROPOSED ROOF



PROPOSED SECTION A-A



PROPOSED SECTION B-B

0 1 2 3 4 5m

NOTES

Do not scale this drawing.

The purpose of this drawing is for planning.

This drawings is copyright.

ROOM AREA TABLE	
ROOM	AREA
STUDY ROOM	13.5
KITCHEN/DINING	25.6
UTILITY	3.6
WC	2.1
HALLWAY	5.9
BEDROOM1	16.4
BEDROOM 1 EN-SUITE	4.4
BEDROOM 2	10.1
BEDROOM 3	12.3
FAMILY BATHROOM	4.6
HALLWAY	2.1
	100.6

KEY:

EXISTING WALLS

PROPOSED WALLS

BOUNDARY LINE

Purpose of Issue	Rev	Date	Authorised
Full Planning Application	2	Sep. 22	
Planning Pre-application	1	Mar. 21	

Client:
Mr & Mrs Shtini

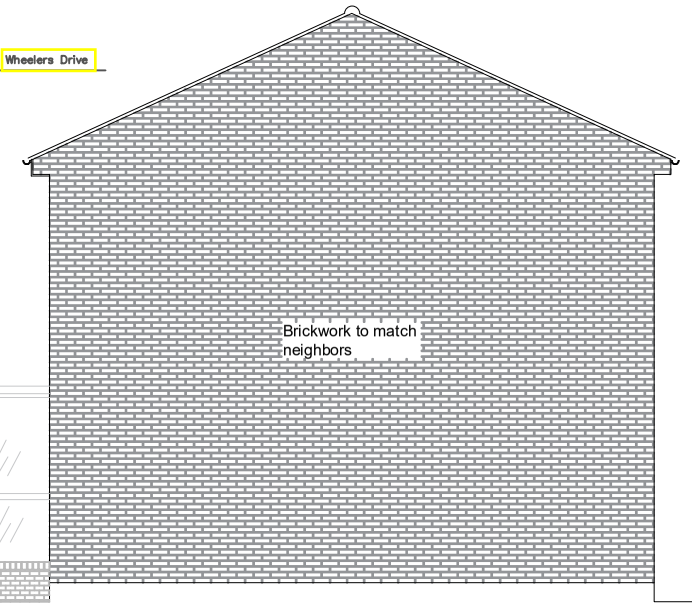
Project:
Land Adjacent to 24 Leaholme Waye, HA4 7RA

Title:
201_Proposed Plans and Sections

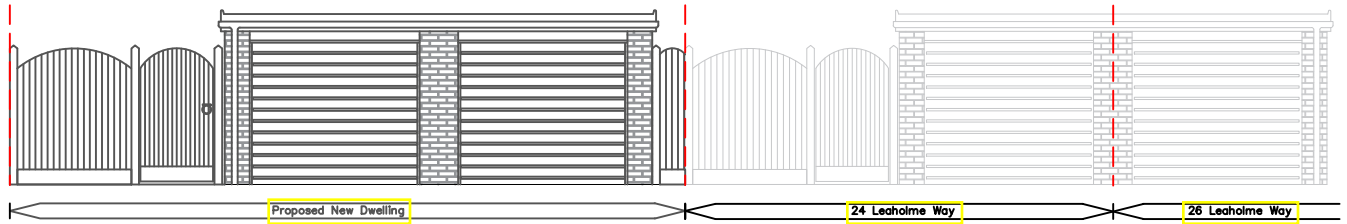
Scale:	Drawn:	Checked:	Authorised:	Drwg Size:
1:100	MS			A3
	Date: SEP 22	Date:	Date:	

Drawing Number: 201 Rev

PROPOSED FRONT ELEVATION



PROPOSED SIDE ELEVATION



GARAGE PROPOSED REAR ELEVATION

PROPOSED REAR ELEVATION

0 1 2 3 4 5m

NOTES

Do not scale this drawing.

The purpose of this drawing is for planning.

KEY:

EXISTING WALLS

PROPOSED WALLS

BOUNDARY LINE

Purpose of Issue	Rev	Date	Authorised
Planning Pre-application	1	Mar. 21	
Full Planning Application	2	Sep. 22	

Client:
Mr & Mrs Shtini

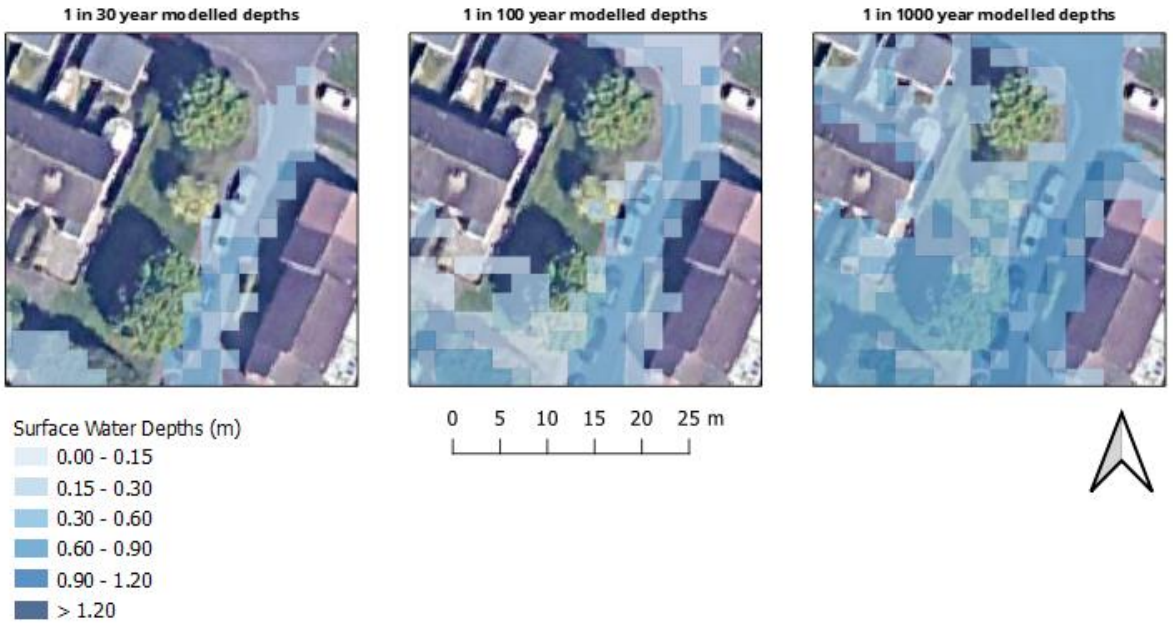
Project:
Land Adjacent to 24 Leaholme Waye, HA4 7RA

Title:
202_Proposed Elevations

Scale:	Drawn:	Checked:	Authorised:	Drwg Size:
1:100	MS			A3
	Date: JUN 22	Date:	Date:	

Drawing Number: 202 Rev

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



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

Flood map for planning

Your reference	Location (easting/northing)	Created
62470	**508083/188272**	**2 Sep 2022 15:38**

Your selected location is in flood zone 3, an area with a high probability of flooding.

This means:

- you must complete a flood risk assessment for development in this area
- you should follow the Environment Agency's standing advice for carrying out a flood risk assessment (see www.gov.uk/guidance/flood-risk-assessment-standing-advice)

Notes

The flood map for planning shows river and sea flooding data only. It doesn't include other sources of flooding. It is for use in development planning and flood risk assessments.

This information relates to the selected location and is not specific to any property within it. The map is updated regularly and is correct at the time of printing.

Environment Agency

Flood map for planning

Your reference
62470

Location (easting/northing)
508083/188272

Scale
1:2500

Created
1 Sep 2022 15:38

- Selected area
- Flood zone 3
- Flood zone 2
- Flood zone 1
- Flood defence
- Main river
- Water storage area

0 20 40 60m