



Flood Risk Assessment for Planning

Prepared for:

Mr Dana Hussain

February 2021

Our reference:

90161-Ehsan-StationGrill

Location:

Station Grill
Cripsey Rd
Oxford
Oxfordshire
OX2 0AH



Document Issue Record

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Client: Mr Dana Hussain
Application: Erection of a single storey rear extension to include a toilet
Location: Station Grill, Cripsey Rd, Oxford, Oxfordshire OX2 0AH
Our reference: 90161-Ehsan-StationGrill
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1. Key Facts

1.1 Flood Risk Posed:

- EA Flood Zone 2 (Medium).
- The risk would appear to be fluvial from various sources which include the River Thames and its tributaries. The River Thames is located 100m to the west of the site.
- No Flood Storage Areas located in close proximity to the site.
- Not located within a Functional Floodplain.
- The site is located outside any historical flood extents.
- The site is not located within an Internal Drainage Board (IDB) area.
- Risk of pluvial flooding would appear to be "Very Low" to "Low".
- The site is located within a Critical Drainage Area.
- No further information has been provided to suggest that the site is susceptible to groundwater or sewer surcharge flooding.

1.2 Flood Risk Mitigation:

- The proposed development fits within EA standing advice for non-domestic extensions.
- The additional footprint created by the development will not exceed 250m².
- No additional or new units or dwellings will be created as part of the development.
- Flood proofing of the house will be incorporated as appropriate.
- The applicant will register with the free Environment Agency Floodline Alert Direct service.

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

2. Introduction

Unda Consulting Limited have been appointed by Mr Dana Hussain (hereinafter referred to as “the applicant”) to undertake a Flood Risk Assessment for the proposed development at Station Grill, Cripsey Rd, Oxford OX2 0AH (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 purpose of the study is to support a planning application for the proposed development.

The site appears to be located within Flood Zone 2 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.

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.

- 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.

3. Existing Situation

3.1 Site Usage:

The site is occupied by a single storey building which operates as a café.



Figure 1: Street view of the site (Source: Oxford Mail)

A map showing the site location is presented below in Figure 2.



Figure 2: Aerial photograph of site and surrounding area (Source: Google Earth)

3.3 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 our 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. 2.0m 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 is approximately 57.6m AOD.

3.3 Geology and Soil:

The British Geological Survey (BGS) Map indicates that the bedrock underlying the site is Oxford Clay Formation and West Walton Formation (undifferentiated) - Mudstone. Sedimentary Bedrock formed approximately 157 to 166 million years ago in the Jurassic Period.

The superficial deposits underlying the site is Alluvium - Clay, Silt, Sand and Gravel. Superficial Deposits formed up to 2 million years ago in the Quaternary Period.

The soil type in the area is taken from UKSO data, the site is deep Riverine Clay, Sands and Gravels with a clay to sandy loam soil texture.

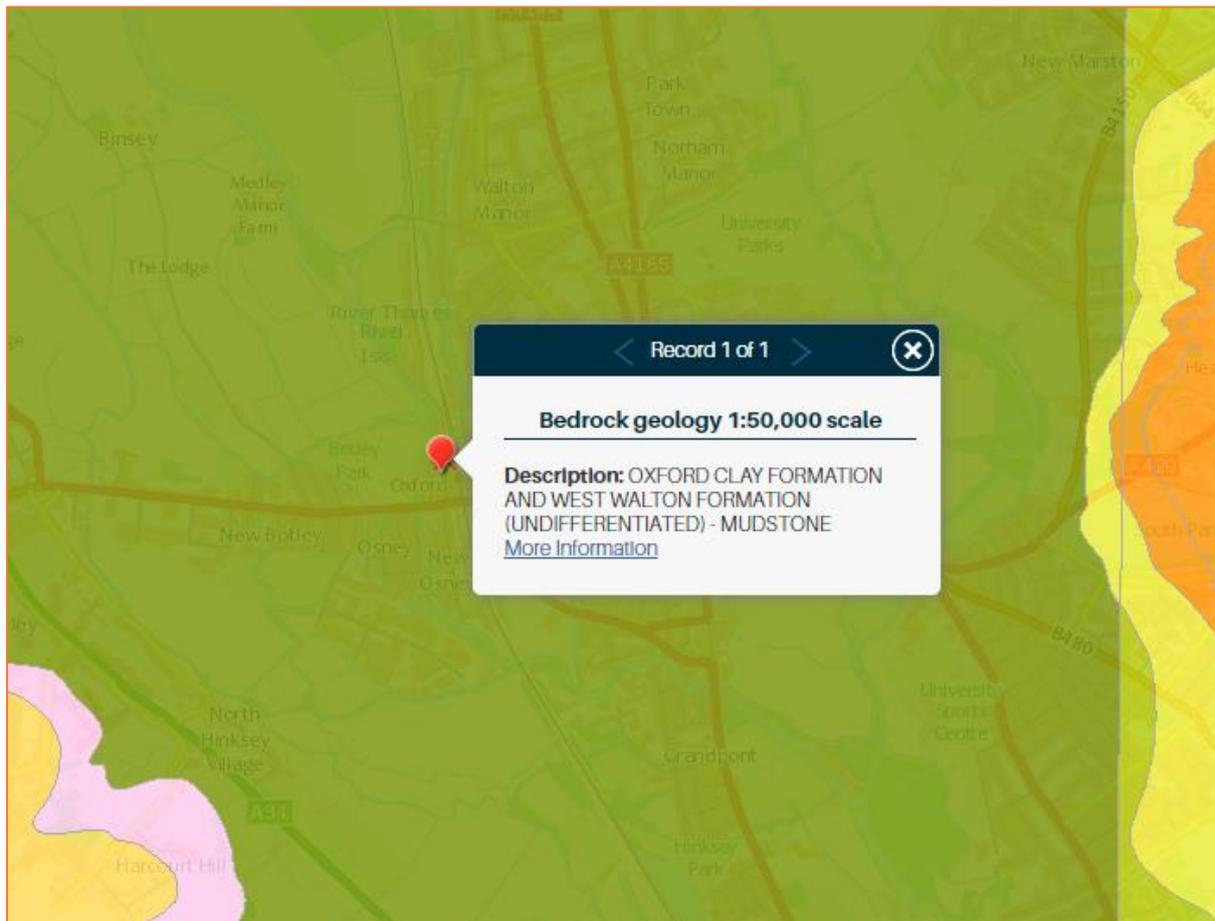


Figure 2: Local bedrock geology (Source: BGS)

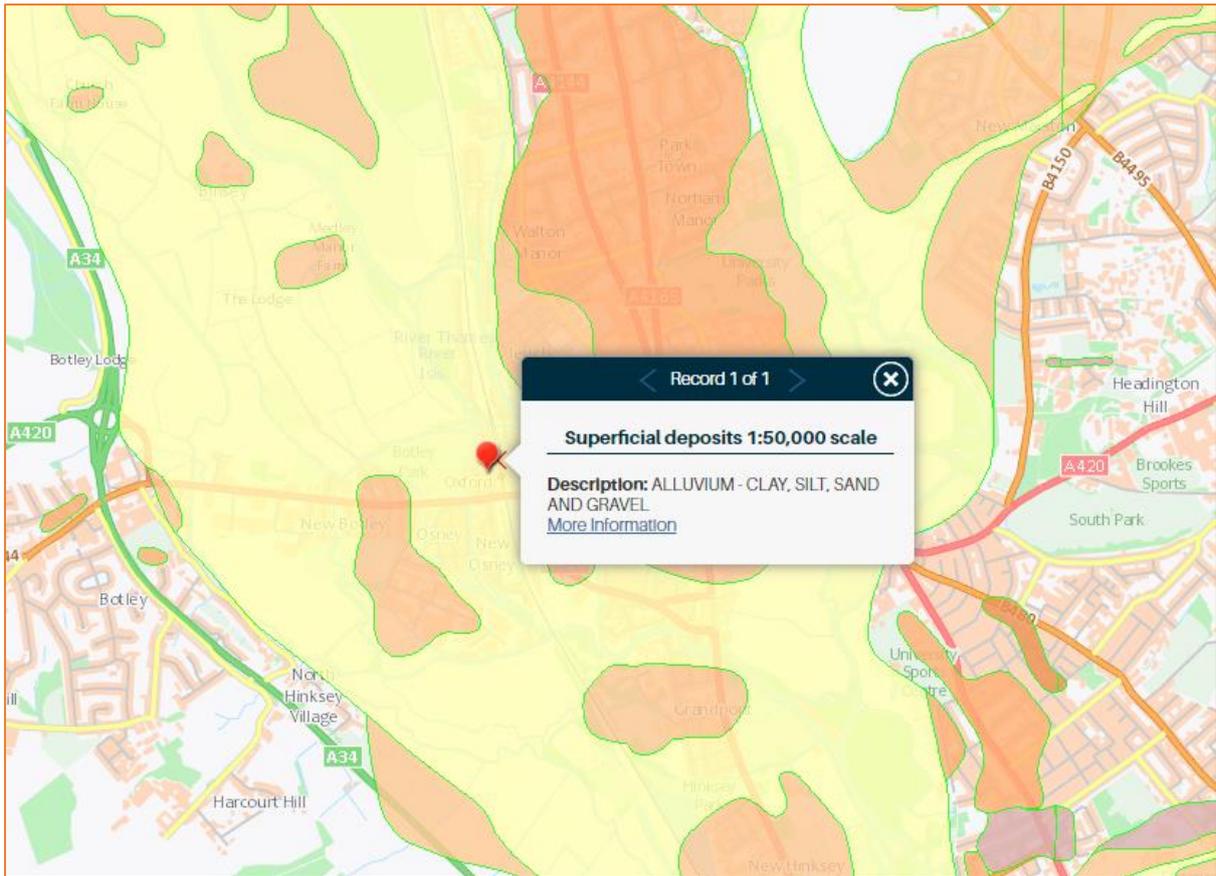


Figure 3: Superficial deposits geology (Source: BGS)



Figure 4: Local soil types (Source: UKSO)

4. Development Proposal

The proposed application is for an erection of a single storey rear extension to include a toilet. Proposed plans can be found in the report Appendix.

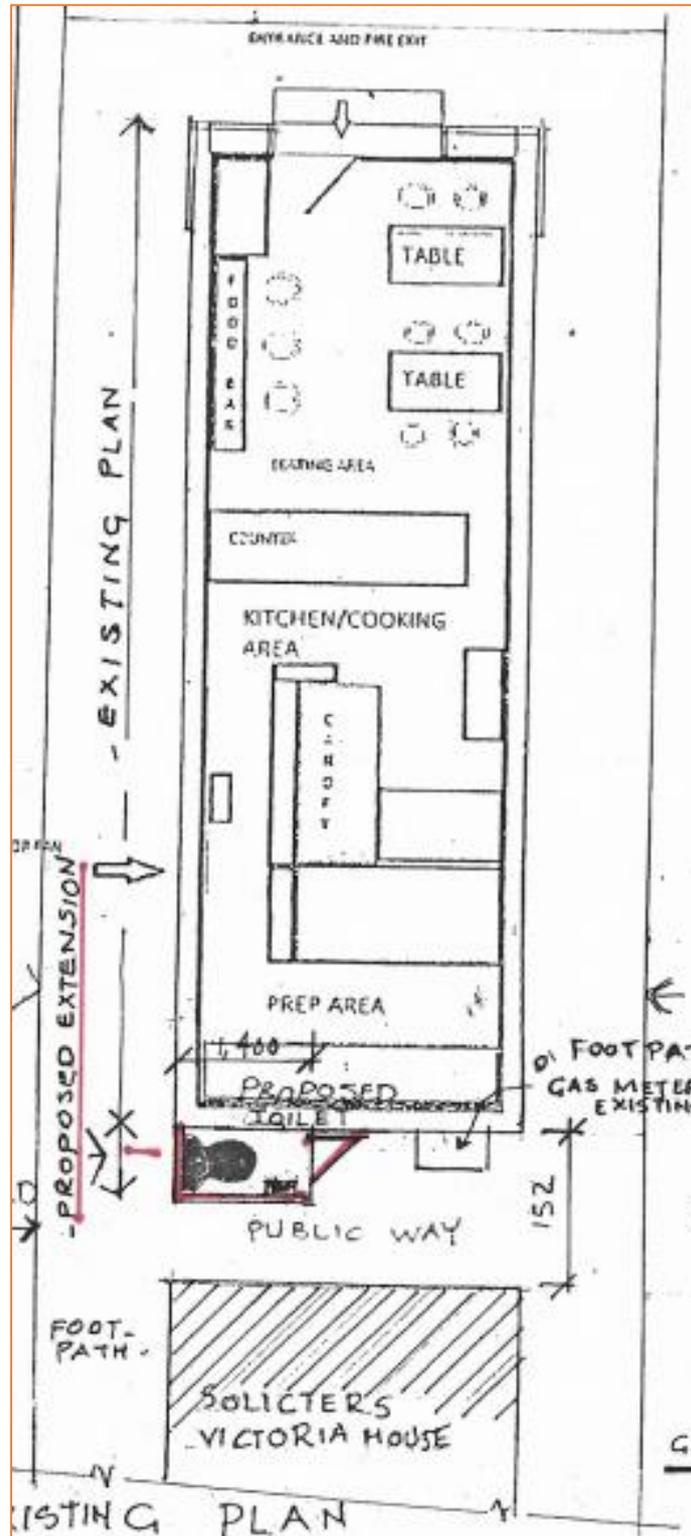


Figure 5: Proposed plans (Source: supplied by the client)

5. Assessment of Flood Risk

5.1 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 website.

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.

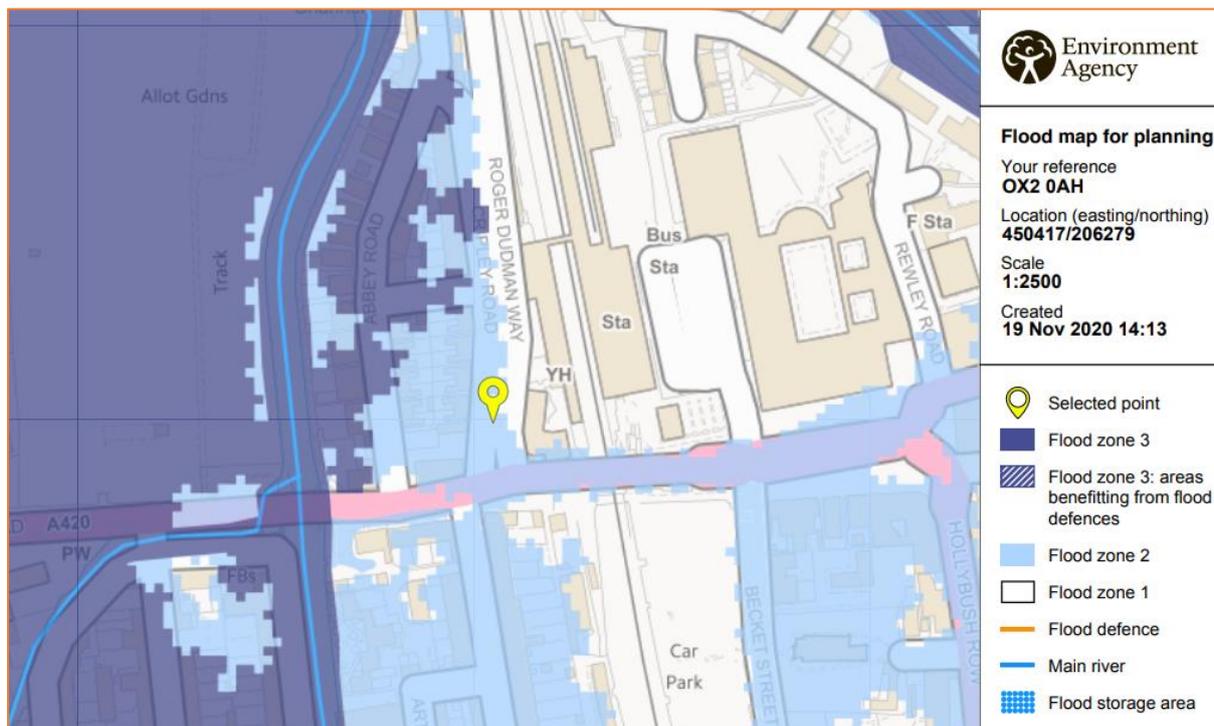


Figure 6: Environment Agency Flood Map for Planning (Rivers and Sea) (Source: EA)

The site is located within Flood Zone 2 (Medium Probability), which means it is defined as land having between a 1 in 100 and 1 in 1000 annual probability of fluvial or tidal flooding.

The risk would appear to be fluvial from various sources which include the River Thames and its tributaries. The River Thames is located 100m to the west of the site.

5.2 Fluvial / (River Thames and tributaries):

The River Thames flows into the city from the North-West, passing through Wolvercote before entering the western side of the city centre. The River Thames and the River Cherwell flow through wide, flat floodplain corridors upstream, through, and downstream of Oxford City. During times of high water, out-of-bank flow causes flooding across these low lying floodplains covering vast areas. This out of bank flow potentially impacts the urban areas of New Botley, Osney, New Hinksey, South Hinksey, Grandpont, Wolvercote, Summertown and New Marston.

5.2.2. 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 are no Flood Storage Areas located in close proximity to the site.

5.2.3. Functional Floodplain:

A Functional Floodplain (Flood Zone 3b) is defined as a land where water has to flow or be stored in times of flood. A Flood Zone 3b is where only water-compatible development and essential infrastructure is recommended.

According to the Oxford City Strategic Flood Assessment Level 1 Update - 2017 the site is not located within Flood Zone 3b - Functional Floodplain.

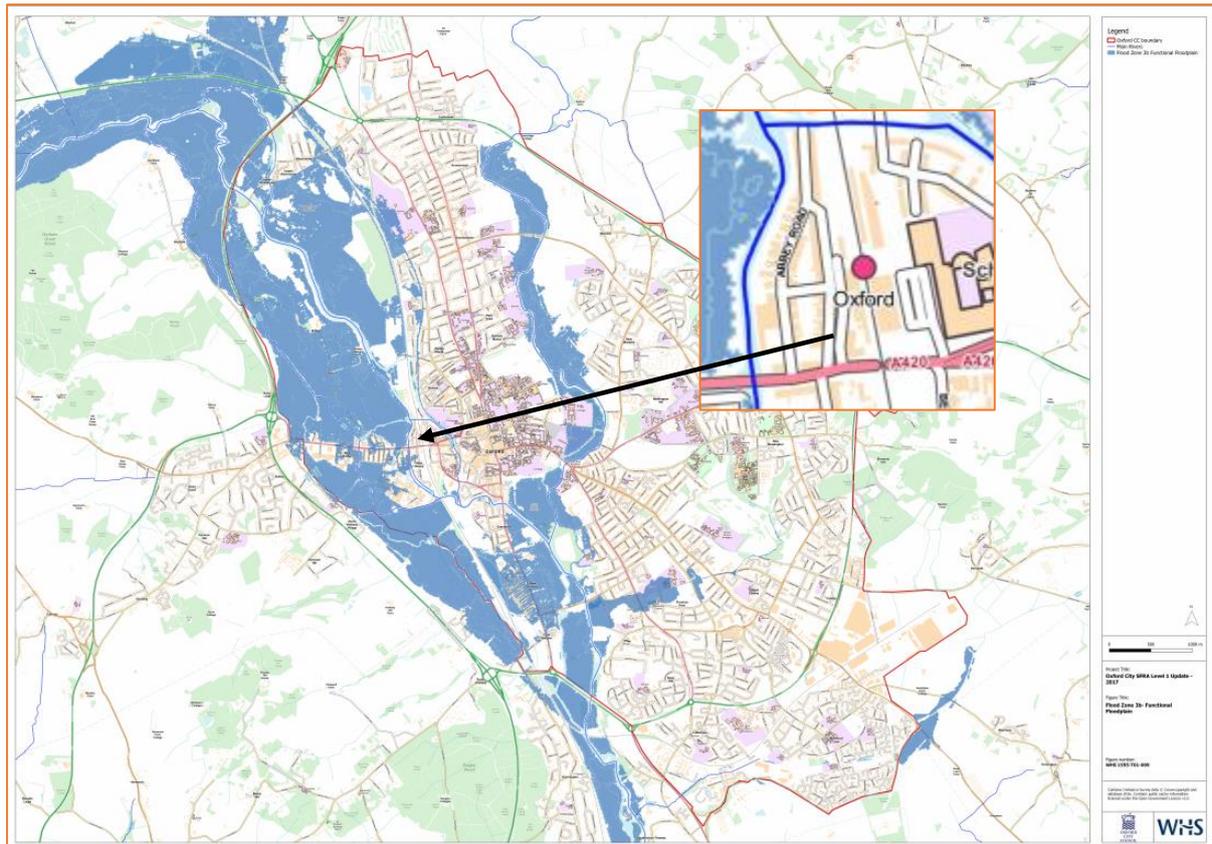


Figure 7: Functional Floodplain Map for Oxford (Source: Oxford City Strategic Flood Assessment Level 1 Update - 2017)

5.2.4 Flood Defences

According to the EA, this location is not currently protected by any formal defences and they do not currently have any flood alleviation works planned for the area.

5.2.5 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.

Flood defences act to defend the site from direct inundation, but there is residual risk from each (failure) and overtopping (exceedance) of flood defences.

The site does not benefit from the presence of flood defences.

5.2.6 Historical flood events:

The EA have no records of historical flooding having affected the site.

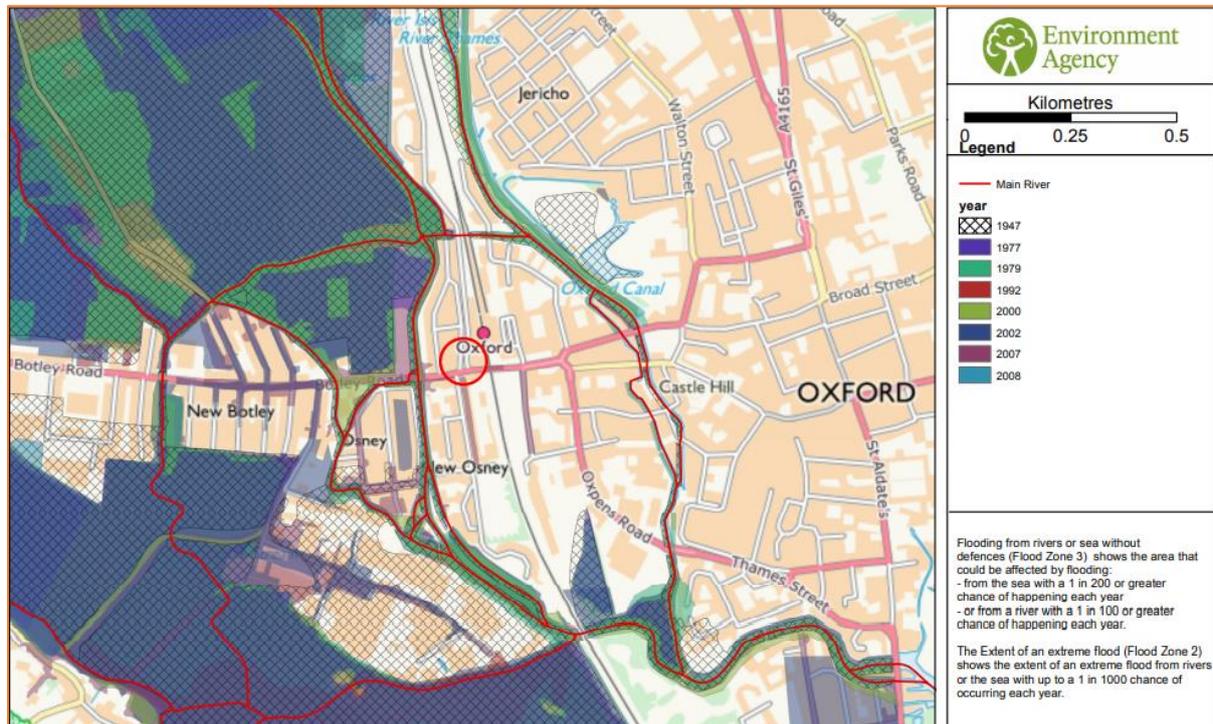


Figure 8: Historical Flood Map centred on Cripsey Road (Source: EA)

5.2.7 Internal Drainage Boards:

Each internal drainage board (IDB) is a public body that manage water levels in an area, known as an internal drainage district, where there is a special need for drainage. The Board maintains many miles of watercourses, rivers and associated infrastructure such as pumping stations and other structures. IDBs undertake works to reduce flood risk to people and property, and manage water levels for agricultural and environmental needs within their district.

The site is not located within an Internal Drainage Board (IDB) area.

5.3 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 are 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 postcode. 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 Risk of Flooding from Surface Water Map suggests that the site lies in an area of “Very low”, to “Low” risk of flooding from surface water.

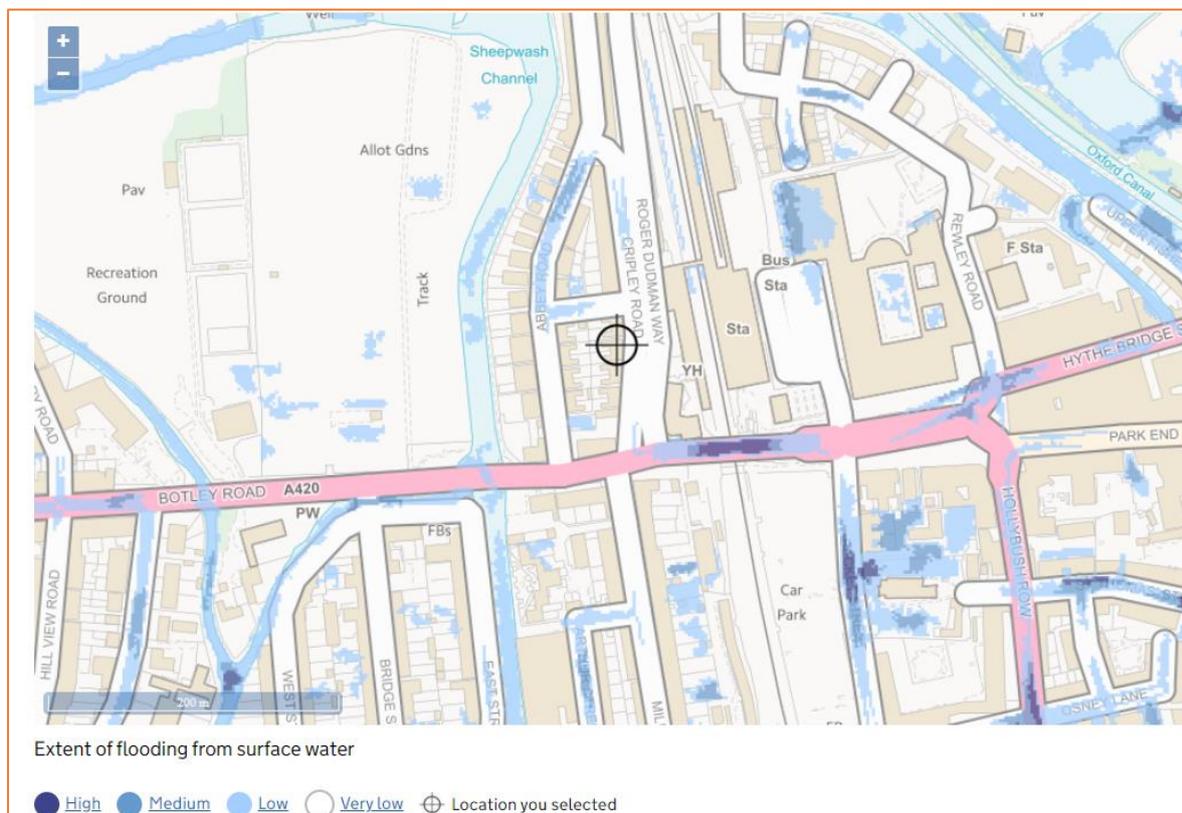


Figure 9: Extract from Environment Agency Surface Water Flood Map centred on Postcode (Source: EA)

5.3.1 Critical Drainage Area

A Critical Drainage Area (CDA) is an area that has critical drainage problems and which has been notified to the Local Planning Authority as such by the Environment Agency in line with the National Planning Policy Framework (NPPF). In these locations there is a need for surface water to

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.

According to the Strategic Flood Risk Assessment for Oxford City March 2011, the sewerage undertaker for Oxford, Thames Water, holds records of flooding issues relating to surface and foul water sewers. Thames Water was consulted and provided the up to date information. The records provided show flood incidents on a postcode area basis during the last 10 year period. This data does not provide the specific location of each incident and is therefore of limited use for providing location specific information.

Postcode	Properties flooded by surface water sewers in last ten years	Properties flooded by foul water sewers in the last ten years	Properties flooded by combined sewers in the last ten years	Total
OX1 2	1	0	0	1
OX2 0	1	6	0	7
OX2 6	0	2	1	3
OX2 8	0	1	0	1
OX4 3	0	1	0	1
OX4 4	0	1	0	1
OX4 6	0	1	0	1
OX4 7	0	1	0	1
Total	2	13	1	16

Table 2: Thames Water Figures on Flooding from Sewers (Source: Oxford City SFRA - March 2011)

Of the 16 flood incidents recorded within the Thames Water data, 13 of these incidents were attributed to foul water flooding and therefore, it is assumed that the surface water flood risk from the surface water sewer network, as reported by Thames Water, within the city is low.

No further information has been provided to suggest that the site is susceptible to sewer surcharge flooding.

5.6 Other Sources:

Reservoirs with an impounded volume in excess of 25,000 cubic metres (measured above natural ground level) are governed by the Reservoirs Act and are listed on a register held by the Environment Agency. The site lies just outside the maximum inundation extent on the EA Reservoir Inundation Map. The EA also advise on their website that reservoir flooding is extremely unlikely. There has been no loss of life in the UK from reservoir flooding since 1925. All major reservoirs have to be inspected by specialist dam and reservoir Engineers. In accordance with the Reservoirs Act 1975 in England, 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 / tidal flooding to occur. The Environment Agency Reservoir Flood Map

illustrated below, illustrates the largest area that might be flooded if the storage area were to fail and release the water it is designed to hold during a flood event.

Records of flooding from reservoirs and canals are erratic as there is no requirement for the Environment Agency to provide information on historic flooding from canals and raised reservoirs on plans. In particular, the NPPF does not require flood risk from canals and raised reservoirs to be shown on the Environment Agency flood zones.

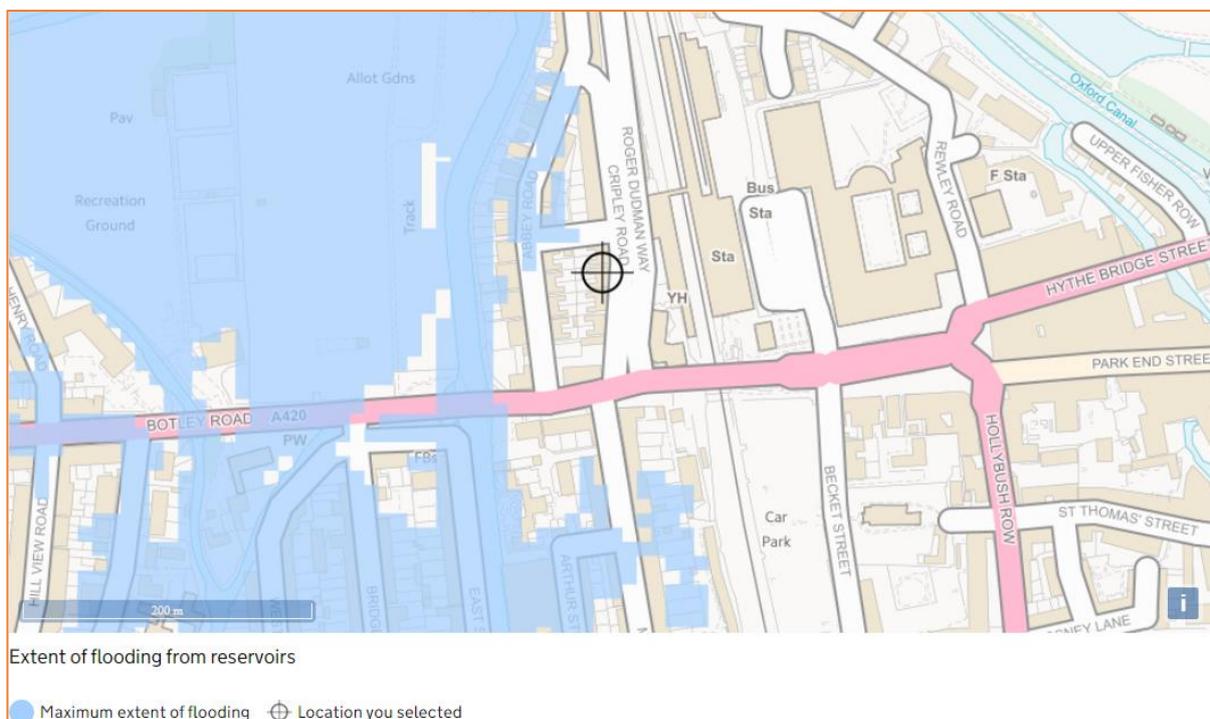
Overflows from canals can be common as they are often fed by land drainage, and often do not have controlled overflow spillways. Occasionally, major bank breaches also occur, leading to rapid and deep flooding of adjacent land.

According to the Strategic Flood Risk Assessment for Oxford City March 2011, the Oxford Canal runs north south from Coventry to Oxford for approximately 77km before joining the River Thames between Jericho and New Osney. During the final 800m through Jericho the canal and Castle Mill Stream run parallel and in some places are within 5 metres of each other. There are no other canals within the city limits.

The Oxford Canal, Castle Mill Stream and River Thames are linked through a series of locks and spills which enable the management of canal water levels and boat passage between the canal and the river system.

Although British Waterways have not identified any historic occurrences of flood risk associated with the canal within Oxford City, the common assets between canal and river system and the proximity of the canal to the watercourses comprise a potential source of flooding.

No further information has been provided to suggest the site is susceptible to from the failure of canals or other artificial infrastructure from the risk of flooding.



6.Flood Risk Management

6.1 Vulnerability to flooding:

The NPPF classifies property usage by vulnerability to flooding.

The existing site usage is classified as "less vulnerable" throughout, as it is a cafe and hot food takeaway (non-domestic property).

Post development, the site will remain "less vulnerable", as the application is for the extension of the existing non-domestic property. Accordingly, it is considered that the vulnerability of the site as a whole is not increased post development.

6.2 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 annexe or additional commercial unit.

No additional units will be created as part of the development. The proposed application is for the construction of an extension which does not exceed 250m². As such, the development as a whole is considered to fit within EA standing advice for non-domestic extensions.

6.3 Physical Design Measures:

Given that the proposed application is for an extension to the existing non-domestic property (and will not introduce any additional or separate units), finished floor levels will be set no lower than existing floor levels.

To help protect against flooding during extreme events, the applicant has agreed to implement flood resistant design measures into the proposal, 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;
- Waterproof ground floor internal render;
- External walls rendered resistant to flooding to first floor level;
- Exterior ventilation outlets, utility points and air bricks fitted with removable waterproof covers;
- Boilers, control and water storage / immersion installed at first floor level or above;
- Gas meter installed at first floor level or above;
- 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;

The applicant should also consider the use of demountable flood defence barriers to defend ground level doorways and low windows.

6.4 Safe Escape and Flood Action Plan:

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 flood water no deeper than 25cm.

However, it should be noted that the proposed application is for the extension of the existing non-residential property. No new units or additional dwellings will be created as part of the development. Safe escape is not a requirement under the EA Standing Advice guidance is for non-domestic extensions.

6.5 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 an Environment Agency Flood Alert Area. 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 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:

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: EA Flood Warning Service

6.6 Flood Plan:

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

Before a flood:

- 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.
- Know how to turn off electricity and water supplies to the site.
- 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.

During a flood:

- Activate the evacuation plan and evacuate the site.
- Remove cars from the site if there is sufficient warning and the water levels are not rising rapidly.

- Switch off water and electricity for the site.
- Tune into your local radio station on a battery or wind-up radio.
- 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 and water checked by qualified engineers before switching them back on.

6.7 Off-Site Impacts:**6.7.1 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 site is situated in Flood Zone 2 when using the Environment Agency Flood Map for Planning (Rivers and Sea). The application is for an extension of less than 250m², and therefore there will be no unacceptable loss of floodplain storage.

6.7.2 Surface Water Drainage:

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;
7. Attenuation of rainwater in ponds or open water features with controlled discharge into the local watercourse.

Due to the small scale of the development, a full Surface Water Drainage Strategy is not required at this stage of planning. However, SuDS features will be incorporated into the development where practically possible or will utilise the existing arrangement on site.

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

7. 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 within Flood Zone 2 when using the Environment Agency Flood Map for Planning (Rivers and Sea).

Post development, the site will remain "less vulnerable", as the application is for an extension to an existing non-domestic property.

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 3: Flood risk vulnerability and flood zone 'compatibility'

Using the table above, the proposed application is considered to be suitable within Flood Zone 2.

The Sequential and Exception Tests do not need to be applied to minor developments and changes of use (this application is for 'minor development' – a non-domestic extension).

8. Discussion and Conclusions

Unda Consulting Limited have been appointed by Mr Dana Hussain (hereinafter referred to as “the applicant”) to undertake a Flood Risk Assessment for the proposed development at Station Grill, Cripsey Rd, Oxford OX2 0AH. The FRA has been undertaken in accordance with the National Planning Policy Framework (NPPF) and the associated technical guidance.

The purpose of the study is to support a planning application for the proposed development.

The existing site usage is classified as “less vulnerable” throughout, as it is a cafe and hot food takeaway (non-domestic property). Post development, the site will remain “less vulnerable”, as the application is for the extension of the existing non-domestic property. Accordingly, it is considered that the vulnerability of the site as a whole is not increased post development.

The site is located within Flood Zone 2 (Medium Probability), which means it is defined as land having between a 1 in 100 and 1 in 1000 annual probability of fluvial flooding.

The risk would appear to be fluvial from various sources which include the River Thames and its tributaries. The River Thames is located 100m to the west of the site.

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

According to the Oxford City Strategic Flood Assessment Level 1 Update - 2017 the site is not located within Flood Zone 3b - Functional Floodplain.

According to the EA, this location is not currently protected by any formal defences and they do not currently have any flood alleviation works planned for the area.

The EA has confirmed that following examination of their records of historic flooding, they have no record of flooding affected the site.

The site is not located within an Internal Drainage Board (IDB) area.

The EA Risk of Flooding from Surface Water Map suggests that the site lies in an area of “Very low”, to “Low” risk of flooding from surface water.

According to the Oxford City Strategic Flood Assessment Level 2 the site is located within a Critical Drainage Area.

No further information has been provided to suggest that the site is susceptible to groundwater or sewer surcharge flooding.

Given that the proposed application is for an extension to the existing non-domestic property (and will not introduce any additional or separate units), finished floor levels will be set no lower than existing floor levels.

Safe escape is not a requirement under the EA Standing Advice guidance is for non-domestic extension.

The applicant has confirmed that:

- The proposed development fits within EA standing advice for non-domestic extensions.
- The additional footprint created by the development will not exceed 250m².
- No additional or new units or dwellings will be created as part of the development.
- Flood proofing of the house will be incorporated as appropriate.
- The applicant will register with the free Environment Agency Floodline Alert Direct service.

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

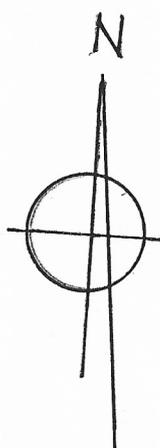
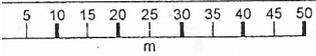
Appendix

- Location Plan;
- Existing Plan;
- Proposed Plan.

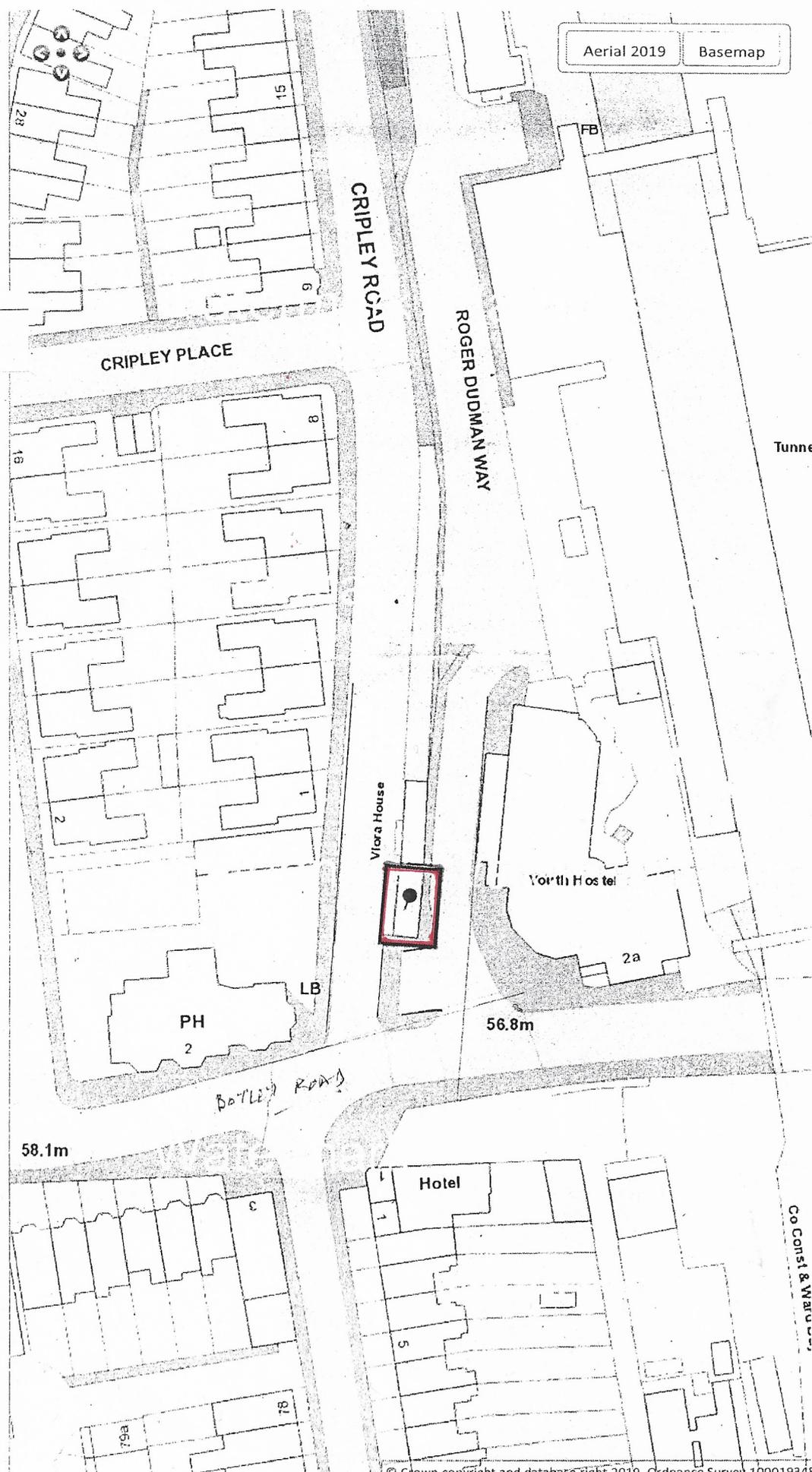
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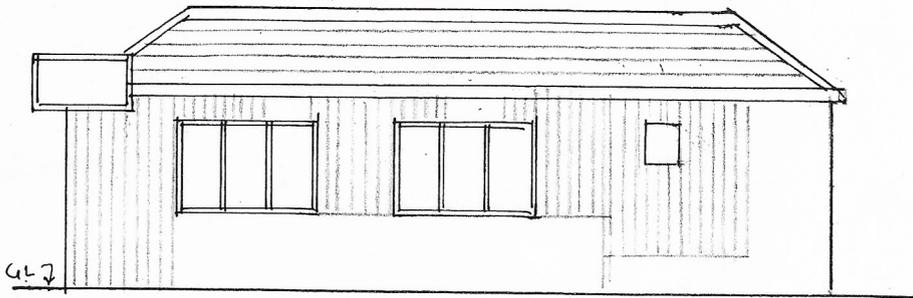
STATION GRILL,
CRIPLEY ROAD, OXFORD
OXFORDSHIRE,
OX2 0AH

LOCATION PLAN
SCALE 1:1250

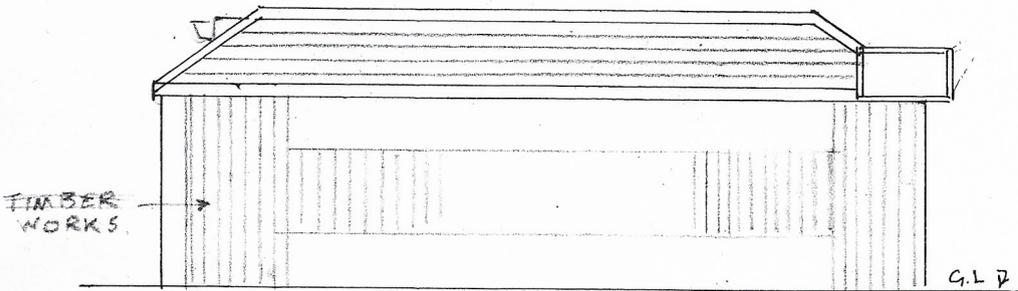


Aerial 2019 Basemap

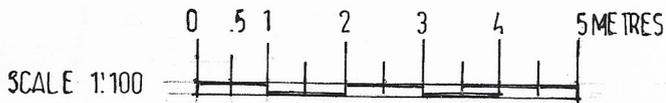




SIDE ELEVATION 1.
EXISTING

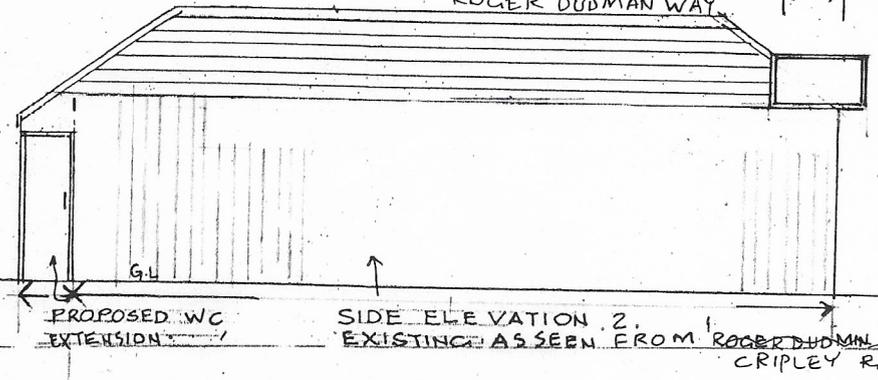
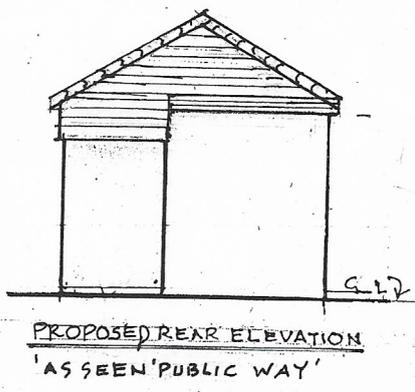
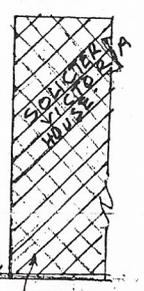
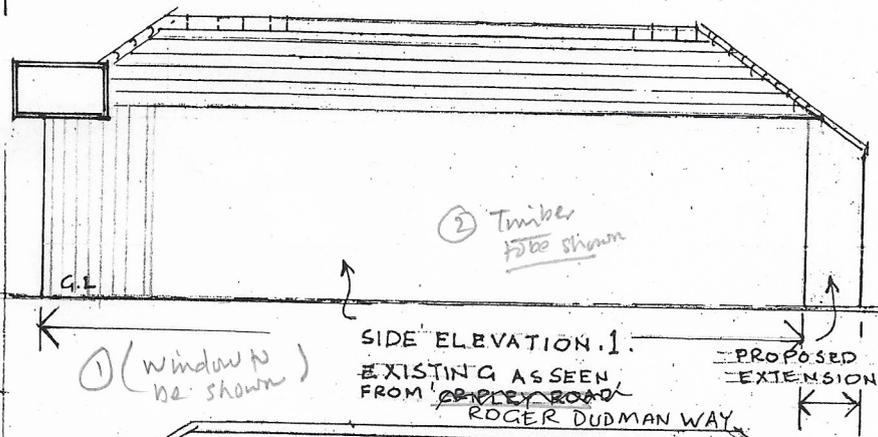
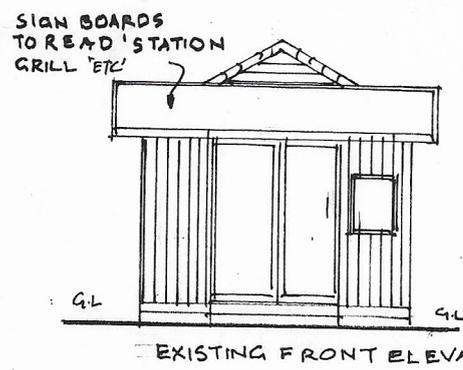
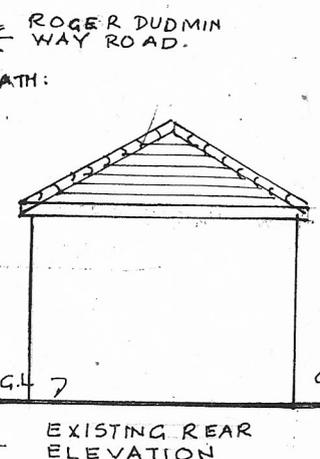
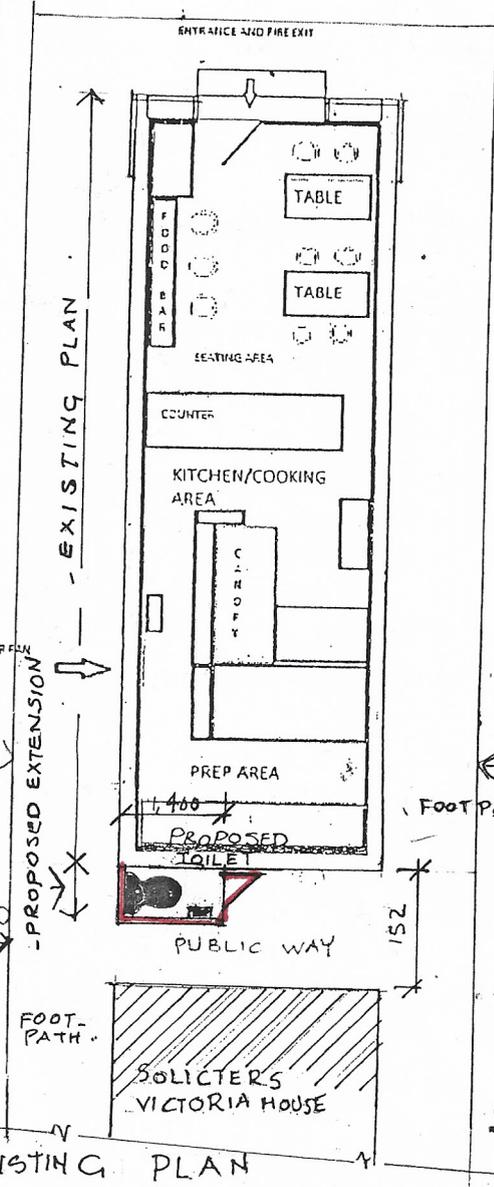
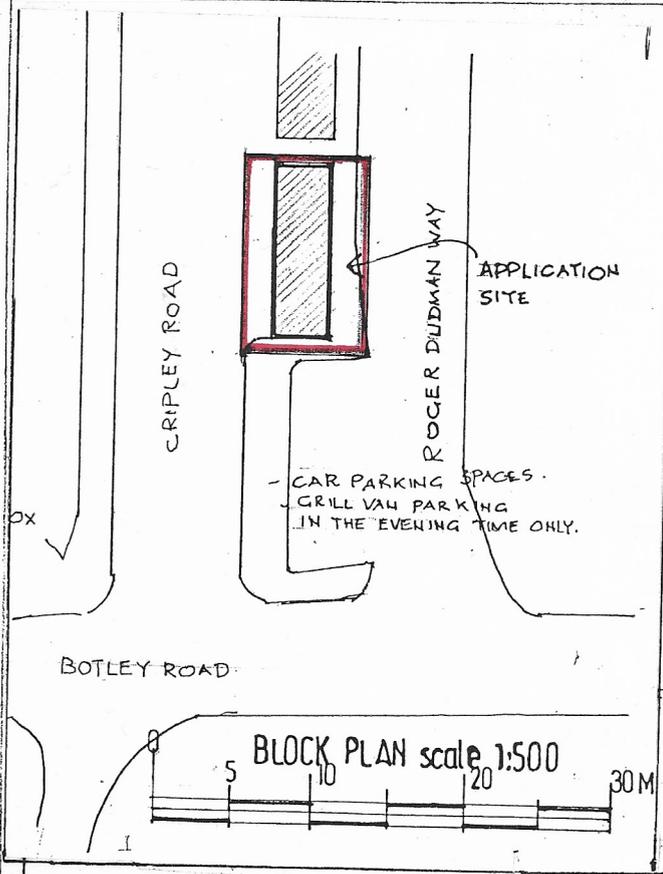


SIDE ELEVATION 2.
EXISTING



STATION GRILL CRIPLEY ROAD OXFORD
 PROPOSED ^{TOILET} AT REAR OF STATION GRILL.
 SCALE 1:100

SK2



STATION GRILL CRIPEY ROAD OXFORD
PROPOSED TOILET AT REAR OF STATION GRILL.
SCALE: 1:100