

**PROPOSED MINOR DEVELOPMENT :**  
**SMALL RESIDENTIAL EXTENSION AT 27 BARRETT STREET**  
**OXFORD**

**DATED : 8 JANUARY 2024**



**BLOCK PLAN**

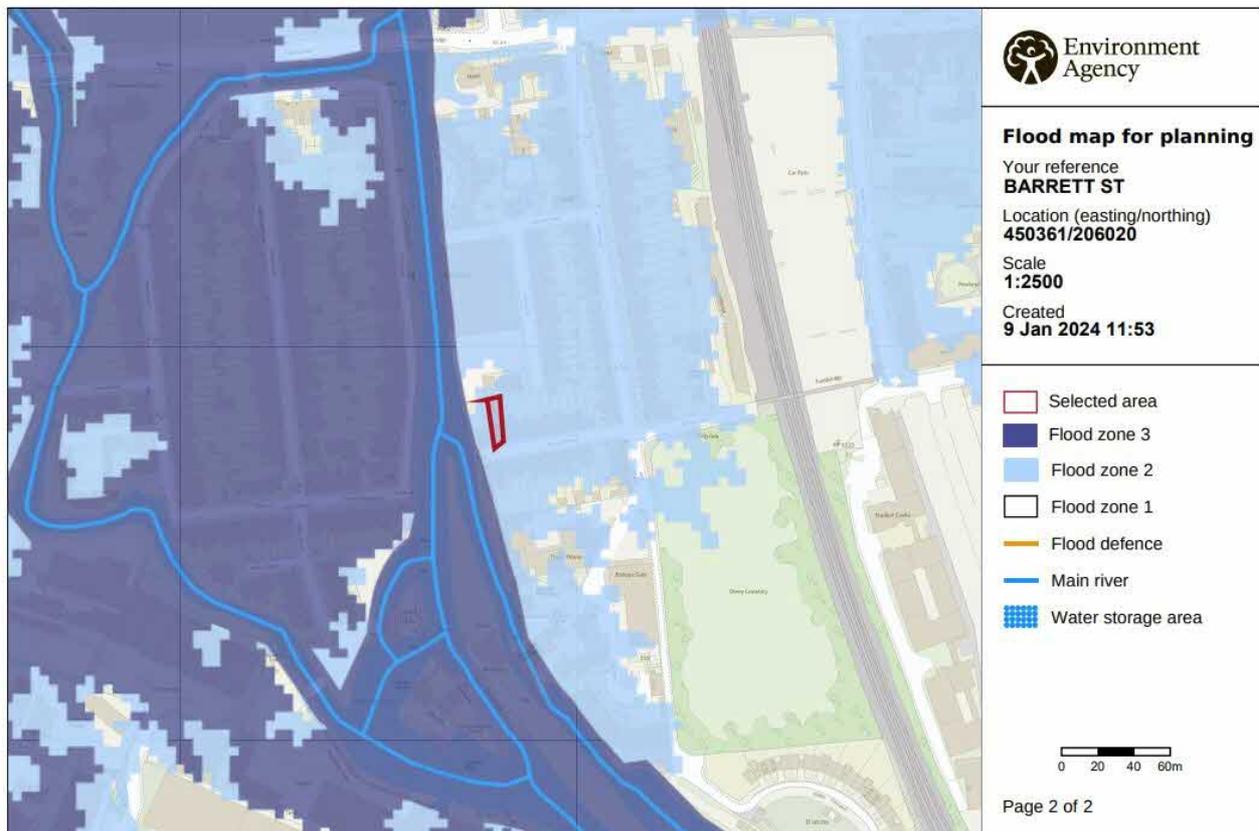
# Flood map for planning

Your reference  
**BARRETT ST**

Location (easting/northing)  
**450361/206020**

Created  
**9 Jan 2024 11:53**

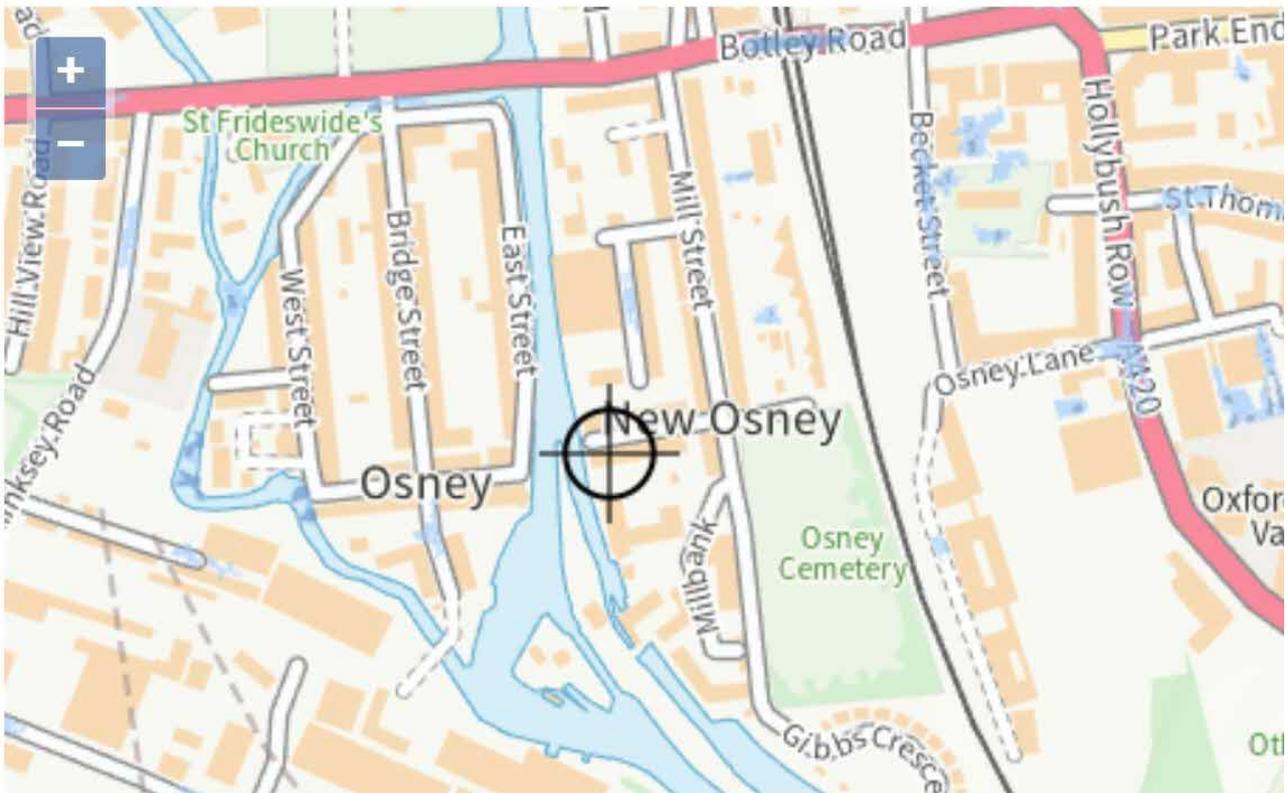
**Your selected location is in flood zone 2, an area with a medium probability of flooding.**



# ENVIRONMENT AGENCY FLOOD MAPPING FOR SURFACE WATER.

Flood risk

Medium risk: depth



Surface water flood risk: water depth in a medium risk scenario

Flood depth (millimetres)

● Over 900mm ● 300 to 900mm ● Below 300mm ⊕ Location you selected

**MEDIUM CATEGORY IS THE EQUIVALENT OF THE 1 IN 100 YEAR FLOOD RETURN.**

**FLOOD THREAT IS LOW – IF ANY AT ALL.**

**PROPOSED MINOR DEVELOPMENT AT 21 BARRETT STREET  
OXFORD OX2 0AT. THE PROPOSED CONSTRUCTION OF A  
RESIDENTIAL EXTENSION WITH A FOOTPRINT BELOW 250  
SQUARE METRES.**

**FLOOD RISK ASSESSMENT / DESK TOP STUDY.**

This report is compiled to accompany a planning application. Detailed plans are provided to the planning department by the applicant.

It adheres to the criteria within the National Planning Policy Framework (NPPF) and its guidance notes as well as the Environment Agency (EA) Advice notes to local authorities.

According to the EA flood mapping for planning the site lies within Flood Zone 2 which is not the worst category for flood risk. This report falls into a special section within the NPPF dealing with extensions with a footprint below 250sq.metres,

Under this criteria the NPPF considers such proposals are looked upon as minor development which does not require the sequential test or the exception test,

EA flood mapping also includes a legend providing a list on sources of possible flooding.

In this case the legend states :

- The threat from rivers and the sea is “low”
- The threat from surface water is also low. The mapping confirms this and shows that the threat to the site under assessment is very low – if any at all.
- The EA also states that any flooding from groundwater is unlikely in this area
- There could be a threat from reservoir malfunction but the EA is on record as saying that this is hardly likely to happen due to the history of

husbandry and inspection of reservoirs throughout the county.

## **Criteria**

The NPPF definition of minor development is as follows :

Minor non residential extensions:: industrial/commercial/leisure etc. extensions with a footprint less than 250 m2.

Alterations:: development that does not increase the size of buildings e.g. alterations to the external appearance. householder development: For example; sheds, garages, games rooms etc. within the curtilage of the existing dwelling, in addition to physical extensions in the existing dwelling itself.

NPPF criteria states that minor development of this nature does not qualify for either the sequential or exception tests but that a flood risk assessment must be compiled.

According to the EA's advices the minimum requirements for an FRA that is submitted to the Local Planning Authority for Residential/Industrial/Commercial extensions less than 250m2 within Flood Zone 2 and 3 should confirm that:

Floor levels within the proposed development will be set no lower than existing levels.

**AND**

Flood proofing of the proposed development has been considered by the applicant and will be incorporated where appropriate.

**OR**

Floor levels within the extension will be set 300mm above the known or modelled 1%(1 in 100 chance each year) river flood level or 0.5% (1 in 200 chance each year) tidal and coastal flood level. This must be demonstrated by a plan to OS Datum/GPS showing finished floor levels relative to the known or modelled flood level. It is considered that the first option is applicable in this case.

These are minor works less than 250sq.metres and should be set at the same level as existing.

## **Flood Resilience Measures**

These are considered necessary due to the fact that the occupants and the property need to be protected during the sustainable lifetime of the proposed works which is 100 years as it is an extension for residential usage.

Possible climate change has to be considered.

It is recommended that the external doors of the extension should be made flood proof and that further flood resilience measures be taken.

- ◆ Both the inside and exterior of the extension works should be coated with flood resilient material to a height 400mm above the ground floor level.
- ◆ The electrical wiring should drop from the ceiling to sockets 400mm above ground floor level.
- ◆ All drainage and waste pipes should be fitted with 'non-return valves' to prevent the ingress of contaminated water back into the building.
- ◆ No metal piping should be used under the extensions to avoid future corrosion.
- ◆ The mortar mix should include flood protective material including the foundations.
- ◆ The ground floor should be of concrete rather than wood.
- ◆ The electrics should be connected to the mains box so that this controls all electrics to the whole property.

## **Sustainable Drainage**

Although the EA considers that groundwater is hardly likely to be a problem in this area mapping from Soilscape, the national authority on soil conditions, does show that a feature of the subsurface is that it contains a naturally high groundwater level.

But it also states that groundwater filters through the ground to watercourses in the area.

It has to be said that due to the limited size of the extension the increase in run off from the site would be minimal.

It is therefore recommended that over capacity water butts be used for water harvesting. The water gathered could be used for washing and flushing toilets in the property and also for external washing of vehicles as well as cleaning outside furniture and the windows.

There could be overtopping of the butts in an extreme storm so a French drain should also be installed for any overtopping to be transmitted to a garden border for on-site attenuation to take place.

### **Offsite implications**

There would be none with the recommendations as made.

### **Private sources of impounded water sources.**

None were located locally.

### **Residual Risk/ Pluvial**

This deals with incidents occurring that are outside the normal capacity of a flood risk assessment, basically, freak occurrences.

The only source of this could be flooding from pluvial affects. Such as the “great storm” of 2007 and also the countrywide flooding of 2023/2024

This was when in 2007 two anti-cyclones swept over the country creating the “great storm of 2007” and more recently another deluge in 2023/2024

Both were described as being of “biblical proportions”

Hundreds of homes which had no history of flooding, were invaded by surface water.

However, it is also very important to remember that the Met. Office provides specialist forecasts to the emergency services and other government departments, as well as to the international community and has continuous operational capability.

This enables the Met Office to provide an immediate response to customers

requiring meteorological information to deal with a variety of environmental incidents.

The National Severe Weather Warning Service provides severe weather alerts and warnings to the general public and emergency responders, giving up to four days advance notice of disruptive weather conditions. These are updated daily in the run up to the weather event and include maps showing the risk of disruption across the UK.

The Extended Warning Direct (EWD) service also takes advantage of more recent developments in technology and allows contact to be made through mobile phones and PC's. Information concerning the category of flood warning is also sent to the emergency services and local authorities who may need to mobilise and implement evacuation procedures.

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4 days' notice of extreme conditions would be more than adequate for residents to prepare for pluvial events.

Having said that, the 2007 storm affected such a large area of the country that it would not be particularly relevant to a single site alone and it would be anomalous within the remit of a standard flood risk assessment to include such detail as a definitive source of flooding.

### **Evacuation Procedure**

This is not considered necessary as the site lies next door to Flood Zone 1 which would afford dry evacuation from the site.

### **Compensation**

This is not necessary as the site does not fall into Flood Zone 3.

The NPPF guidance notes includes a table for flood risk vulnerability and this shows that under the criteria the site is acceptable for the development proposed. It is shown below

**Table 2: Flood risk vulnerability and flood zone ‘incompatibility’**

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

Key:

✓ Exception test is not required

## CONCLUSION

This report agrees with the EA legend that there is little threat from rivers and the sea, surface water, or groundwater and although the site is in an area that could be threatened by reservoirs the EA is on record as saying that this is hardly likely to happen.

The site lies in flood zone 2 but this could alter during its sustainable lifetime which is why flood resilience measures have been included in this report,

All criteria within the NPPF and the EA |Advisory notes to local authorities has been considered and used where relevant to compile this report.

Signed



David Eggleton  
Managing Director