

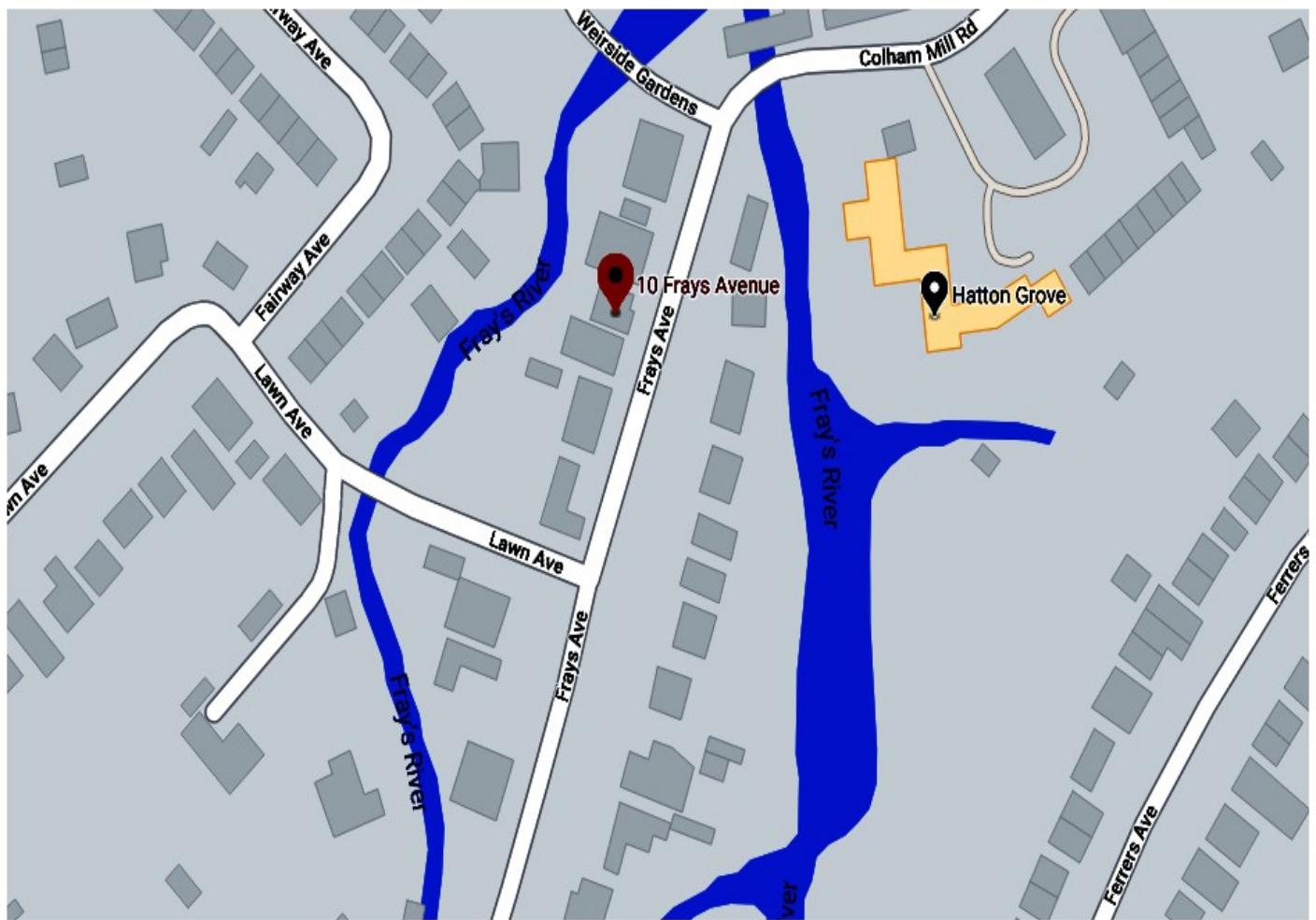
Three Counties Flood Risk Assessment

MARGARET'S COTTAGE SANDHURST GLOUCESTER GL2 9NP TEL/ 01452 730818 email: david@three-counties-flood-risk-assessment.co.uk

FLOOD RISK ASSESSMENT

**PROPOSED MINOR DEVELOPMENT AT :
10 FRAYS AVENUE WEST DRAYTON MIDDLESEX UB7 7AF**

DATED; 1 OCTOBER 2020



GEOGRAPHICAL LOCATION



SITE LOCATION



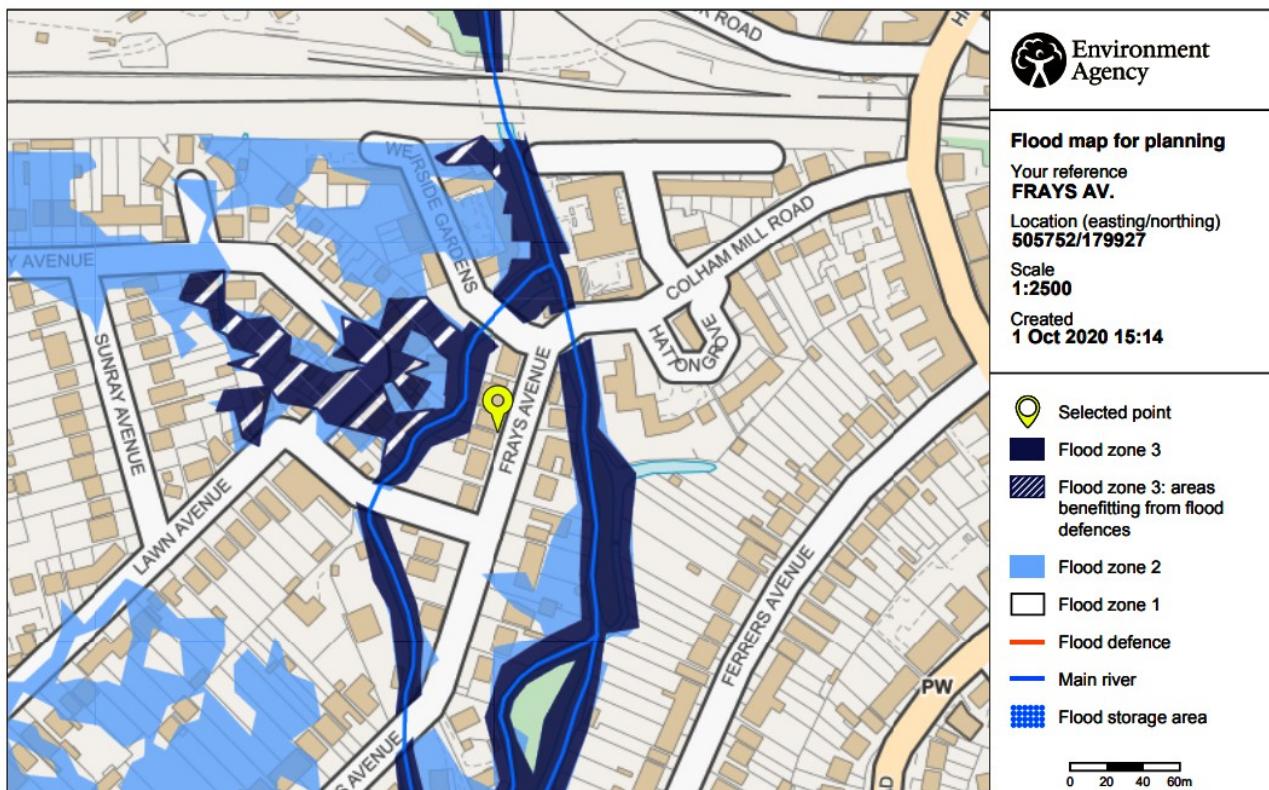
Flood map for planning

Your reference
FRAYS AV.

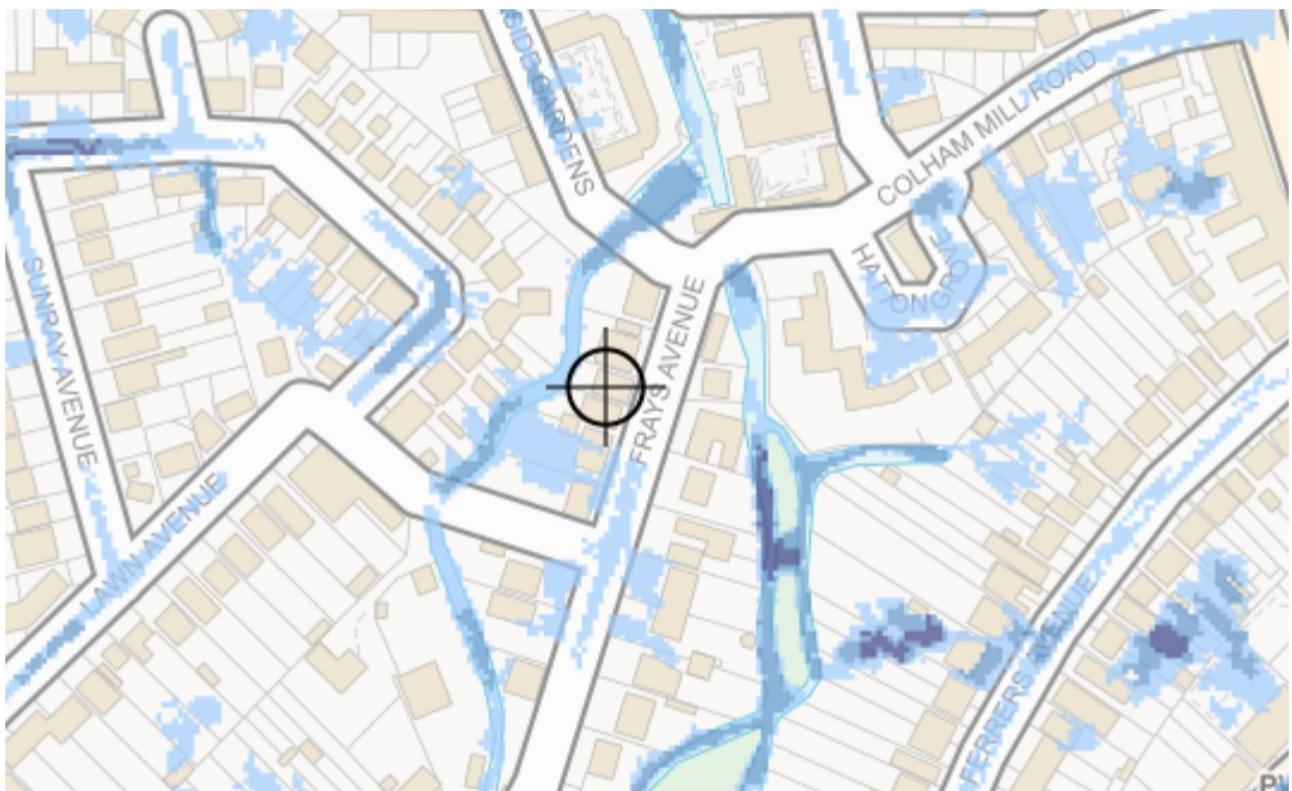
Location (easting/northing)
505752/179927

Created
1 Oct 2020 15:14

Your selected location is in flood zone 1, an area with a low probability of flooding.



ENVIRONMENT AGENCY SURFACE WATER FLOOD MAP



Extent of flooding from surface water

 [High](#)  [Medium](#)  [Low](#)  [Very low](#)  Location you selected

HIGH , MEDIUM AND LOW RISK CATEGORIES SHOW THE SAME READING.

THE LEGEND WITH THE MAPPING SAYS THE SITE IS AT VERY LOW RISK.

**PROPOSED MINOR DEVELOPMENT AT 10 FRAYS AVENUE WEST DRAYTON
MIDDLESEX UB7 7AF. SINGLE STOREY SIDE EXTENSION AND PART REAR
EXTENSION TOGETHER WITH FRONT EXTENSION.**

FLOOD RISK ASSESSMENT / DESK TOP STUDY

This report is compiled for a planning application . Detailed plans are supplied by the applicant within the application.

It is written under the criteria within the National Planning Policy Framework (NPPF) and the Environment Agency (EA) Guidance notes to local authorities.

Under the NPPF criteria the proposal is looked upon as a “minor development”. Its classification is “more vulnerable” as it involves residential usage. A loft extension is also involved in the application but this is not considered in this FRA as these works would be done in “air space” above the ground floor of the building.

Ancillary works will also be carried out on the inside of the building and the extra space provided by the new works will make enough room for another bedroom.

EA mapping shows the site is in Flood Zone 1 but Flood Zone 3 and Flood Zone 2 lie nearby so it is quite normal for a local authority to ask for a flood risk assessment to be carried out due to this having to consider climate change and the sustainable lifetime of the proposed works which is 100years.

The Criteria

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.

Under NPPG it states that minor developments are unlikely to cause significant flood risk unless they :

- Have an adverse effect on a watercourse , flood plain or its flood defences
- Would Impede access to flood defence and management facilities, or
- Where the cumulative impact of such developments would have a significant effect on local flood storage capacity or flood flows .

None of the above applies in this case.

The NPPG 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.

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.

This is a minor extension to the property and should be set at the same level as the existing ground floor level of the house. The footprint of the ground floor extension works are circa 30q.metres.

Surface water threat

EA mapping (above) shows the threat is very low.

The West of London Strategic Flood Risk Assessment mapping .

This shows :

- ◆ The site is just outside a flood alert area.
- ◆ It is also just outside a flood warning area.
- ◆ The threat to the site is from the Frays River which runs to the East and West of the site.
- ◆ There is no history of previous flooding in the area as recorded on the mapping.
- ◆ The SFRA mapping also shows that there is no threat from surface water.
- ◆ There could be a tendency for localised groundwater flooding.

- ◆ The site does not lie over a source protection zone.
- ◆ Reservoir flooding would not effect the site

Sustainable drainage

There is sufficient permeability within the superficial deposits that soakaways could be used for run off from the extensions. The applicant may wish to use existing services to the house from the main road in which case interceptors should be fitted to ensure that only clean water enters the receptor. Flow control devices should also be fitted to make sure there is no “surge” into the receptor. Backflow from any drainage should be prevented by the use of non return valves.

Another possibility is to use over capacity water butts to collect the run off . Also a French Drain should be installed to collect any overtopping from the butts at time of extreme storms. The French Drain should run to the lawn area for attenuation.

If the option is for soakaways then ground tests would need to be carried out tests for permeability and to access the level of groundwater at the site.

Flood Resilience Measures

This has to be considered at this stage due to climate change possibly affecting the flood risk threat in the next 100years.

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

- Both the inside and outside of the extension works should be coated with flood resilient material to a height 400mm above the ground level.
- The electrical wiring should drop from the ceiling to sockets 400mm above ground level.
- All drainage and waste pipes would 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 extension to abort 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 in the property.
- Covers should be available to prevent inundation of air bricks .

Flood Evacuation

It is recommended the proposed development should be a subscriber to the EA Floodline initiative which gives a three phase warning system. 1. Be aware of a possible flood threat. 2.

Prepare to evacuate.3. Get out.

However in the FRAs we compile all over the country we make it clear that there is only one method of safe evacuation. That is to get out when the escape route is still dry .

The Floodline initiative may give occupants of the site a misconception as to how long they should stay on site before going. We consider that the sight of advancing floodwater can create panic particularly to the old ,infirm and the disabled and children as well.

Better to go at the first warning when everything can be done in a controlled and orderly manner and in the dry. If the flood waters do not actually reach the site then nothing is lost .

But there is a big gain in terms of safety. It will also show the evacuation plan works and will give everybody concerned the confidence of knowing the site owners value their safety.

As part of the evacuation procedure a predetermined sanctuary in the dry should be decided upon and agreed with the local authority.

Also by using the first floor as “safe haven” during a flood event is not necessarily the answer . The reason being that vital services -such as water , gas and electricity- to the premises could be knocked out by the floods and this could cause major disruption to the safety and well being of occupants .

We have used this methodology on many occasions for FRAs throughout the country . We have had no objections from the local authorities involved in all the FRAs recommending this form of early evacuation

Quite simply it is better “to be safe than sorry” particularly when human lives are at stake.

Compensation

The footprint of the proposed extension works is so minimal that it would not have a significant effect on local flood storage capacity or flood flows. It does not lie in Flood Zone 3b

CONCLUSION

Although the site is not under threat today there is a slight question mark about its future because of climate change – if that proves to happen.

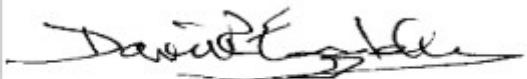
However flood resilience measures have been recommended to counter this possibility. And a robust evacuation programme will be in place throughout the sustainable lifetime of the proposed development.

These will provide long-term safety for the occupants and sustainable drainage has also been recommended--as per the criteria-to make sure there are no offsite implications.

I see no reason why this application should attract any objections from the point of view of

any perceived flooding.

Signed

A handwritten signature in black ink, appearing to read "David Eggleton".

David Eggleton
Managing Director.