

FLOOD RISK ASSESSMENT FOR MINOR DEVELOPMENT

62 LEAM TERRACE LEAMINGTON SPA

DATED : 16 AUGUST 2021

265575



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Warwickshire, CV8 1LQ
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Job :

Proposed new 2No maisonette
units to rear of 62 Leam Terrace
and adjoining 83 New Street,
Leamington Spa.

Client :

Drawing title :

Location Plan

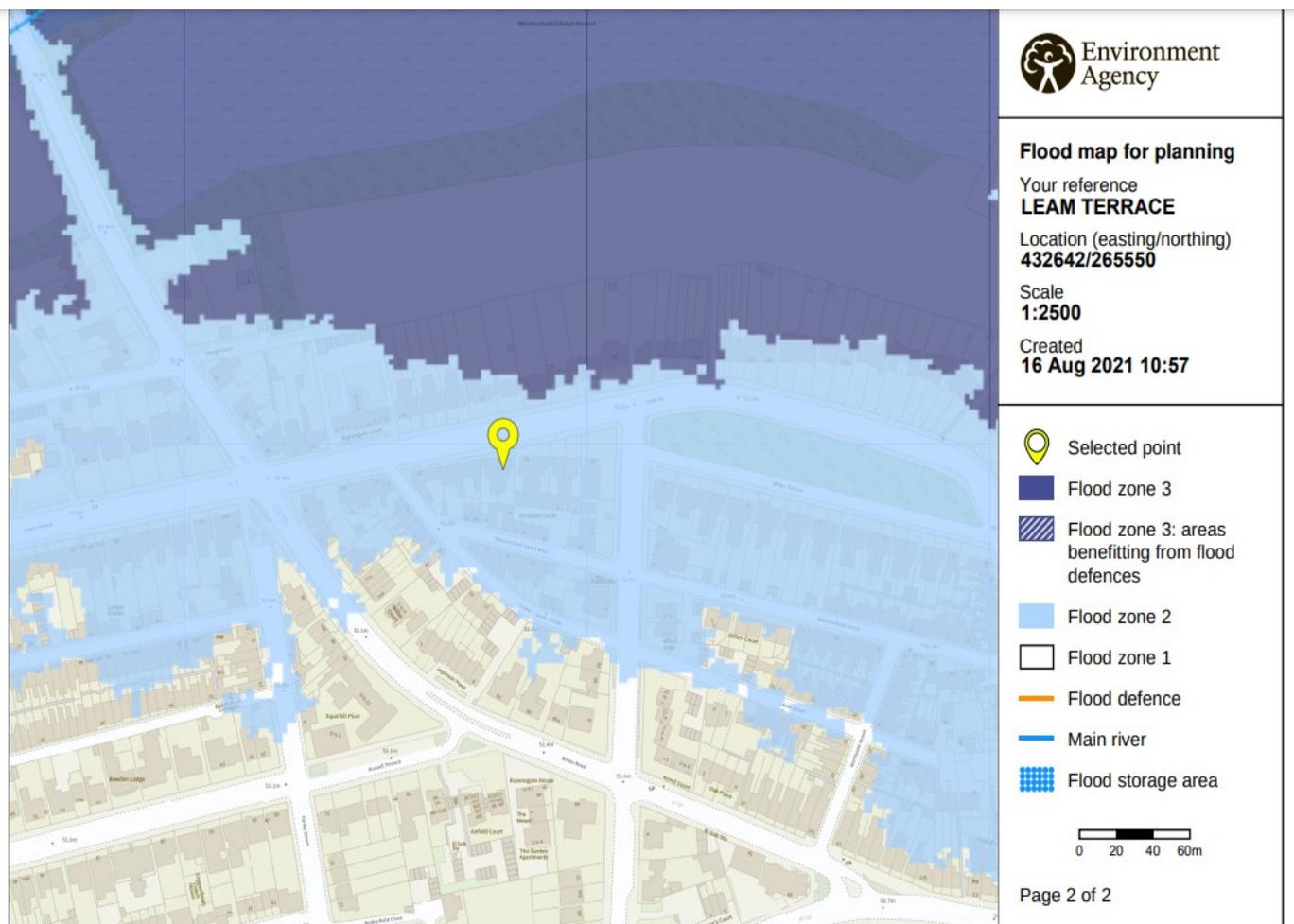
Flood map for planning

Your reference
LEAM TERRACE

Location (easting/northing)
432642/265550

Created
16 Aug 2021 10:57

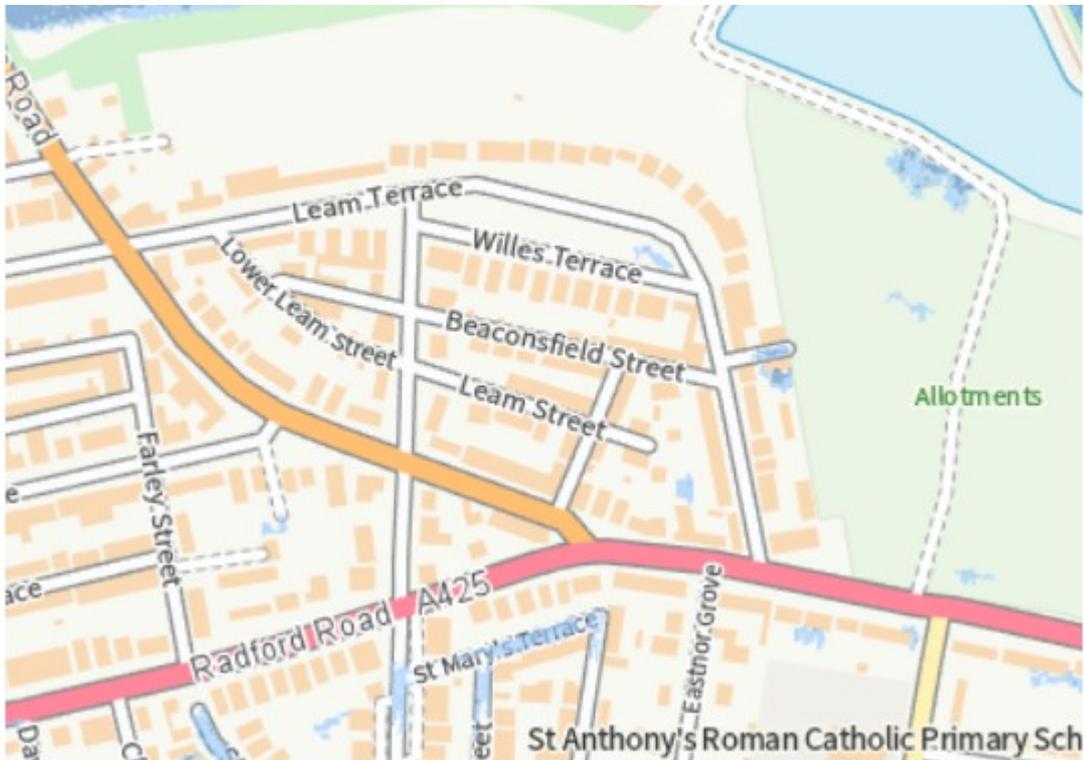
Your selected location is in flood zone 2, an area with a medium probability of flooding.



SURFACE WATER FLOOD RISK

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

NO RISK

MEDIUM RISK IS THE EQUIVALENT OF THE 1 IN 100 YEAR FLOOD RETURN

PROPOSED MINOR DEVELOPMENT. 2 MAISONETTES TO THE REAR OF 62 LEAN TERRACE LEAMINGSTON SPA CV31 1BQ.

This report is compiled to accompany a planning application . Detailed plans re provided by the client within the application..

All criteria with-in the National Planning Policy Framework(NPPF) and its guidelines (NPPG) are covered in this report as well as the Environment Agency (EA) Advisory Notes to Local Authorities.

The site is shown on Environment Agency mapping as being in flood zone 2

The proposal is for the development of two maisonettes to the rear of the property one of them for the use of a family member. The proposed development lies in flood zone 2, this according to EA mapping .

As this would form part of a residential property it would be considered a “more vulnerable” development.

Within EA surface water mapping the flood risk to the site is said to be “ low.” The mapping shows it is very low and below 300mm which is acceptable for safe passage by DEFRA.

Flood Classification

.Under NPPF this is considered to be a minor development allowable under a guideline dealing with extensions under 250sq.m. within the curtilage of the existing property.

Under NPPF the increase in footprint I does not to warrant the consideration of the sequential test but a flood risk assessment is required to show that occupants will be safe and that there will be no offsite implications due to this proposal.

The guidance notes state that minor developments are unlikely to raise significant flood risk issues unless:

They would have an adverse effect on a watercourse , flood plain or its flood defences.

They would impede access to flood defence and management facilities or;

Where the cumulative impact would have such an effect on local flood storage capacity or flood flows.

The proposed development would not conflict with any of the above.

Floor Levels and flood resilience measures

This is a minor development set in Flood Zone 2. . This report has to consider the sustainable lifetime of the proposed development which is 100 years .

Because of that it is recommended that the finished floor levels of the maisonettes be set at 300mm above ground level .

Flood Resilience measures

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 proposed building should be coated with flood resilient material to a height 200mm above the ground floor level
- The electrical wiring should drop from the ceiling to sockets 300mm above ground floor 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 new build 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.
- Breather bricks should be fitted with covered to prevent ingress of water. These cove should be removed quickly after flooding has abated to help the property drying out.

Surface water threat

EA mapping (above) shows the threat is very low

Groundwater

BGS information was researched and this showed that the sub-terrain is conducive to soakaways. See mapping and legend below.



LEGEND BELOW

Superficial deposits

- ALLUVIUM - CLAY, SILT, SAND AND GRAVEL
- BOSWORTH CLAY MEMBER - CLAY AND SILT
- OADBY MEMBER - DIAMICTON
- THRUSSINGTON MEMBER - DIAMICTON
- BAGINTON SAND AND GRAVEL FORMATION - SAND AND GRAVEL
- HEAD - CLAY, SILT, SAND AND GRAVEL
- RIVER TERRACE DEPOSITS, 1 - SAND AND GRAVEL
- RIVER TERRACE DEPOSITS, 2 - SAND AND GRAVEL
- RIVER TERRACE DEPOSITS, 4 - SAND AND GRAVEL

A borehole record from near the site showed that groundwater was encountered 4.5 metres below the surface.

Reservoir threat

There is a slight threat from this source but the EA considers this is hardly likely to happen when the history of husbandry of reservoirs is taken into consideration throughout the country.

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.

After all it is better to be “safe than sorry” especially when lives are at stake.

Compensation

This is not required as the site is not in the functional flood plain

Flood Risk Vulnerability

A NPPF chart is shown below which shows this this proposed minor development is considered to be appropriate in Flood Zone 2.

Flood Zones	Flood Risk Vulnerability Classification				
	Essential infrastructure	Highly vulnerable	More vulnerable	Less vulnerable	Water compatit
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:

✓ Development is appropriate

X Development should not be permitted.

CONCUSION

This is very much a minor development but a flood risk assessment is essential for such a development however big or small it may be. As things stand today the risk to the proposed development is low but climate change has to be considered during the sustainable lifetime of the property which is 100years .

This why flood resilience measures and a flood evacuation procedure have been included in this report.

All relevant criteria within the NPPF and the EA Advisory notes to local authorities have been considered and used in this study report.

I consider with all the recommendations as made that this proposal is acceptable

Signed

A handwritten signature in black ink, appearing to read "David Eggleton", written over a horizontal line.

David Eggleton
Managing Director.