Three Counties Flood Risk Assessment

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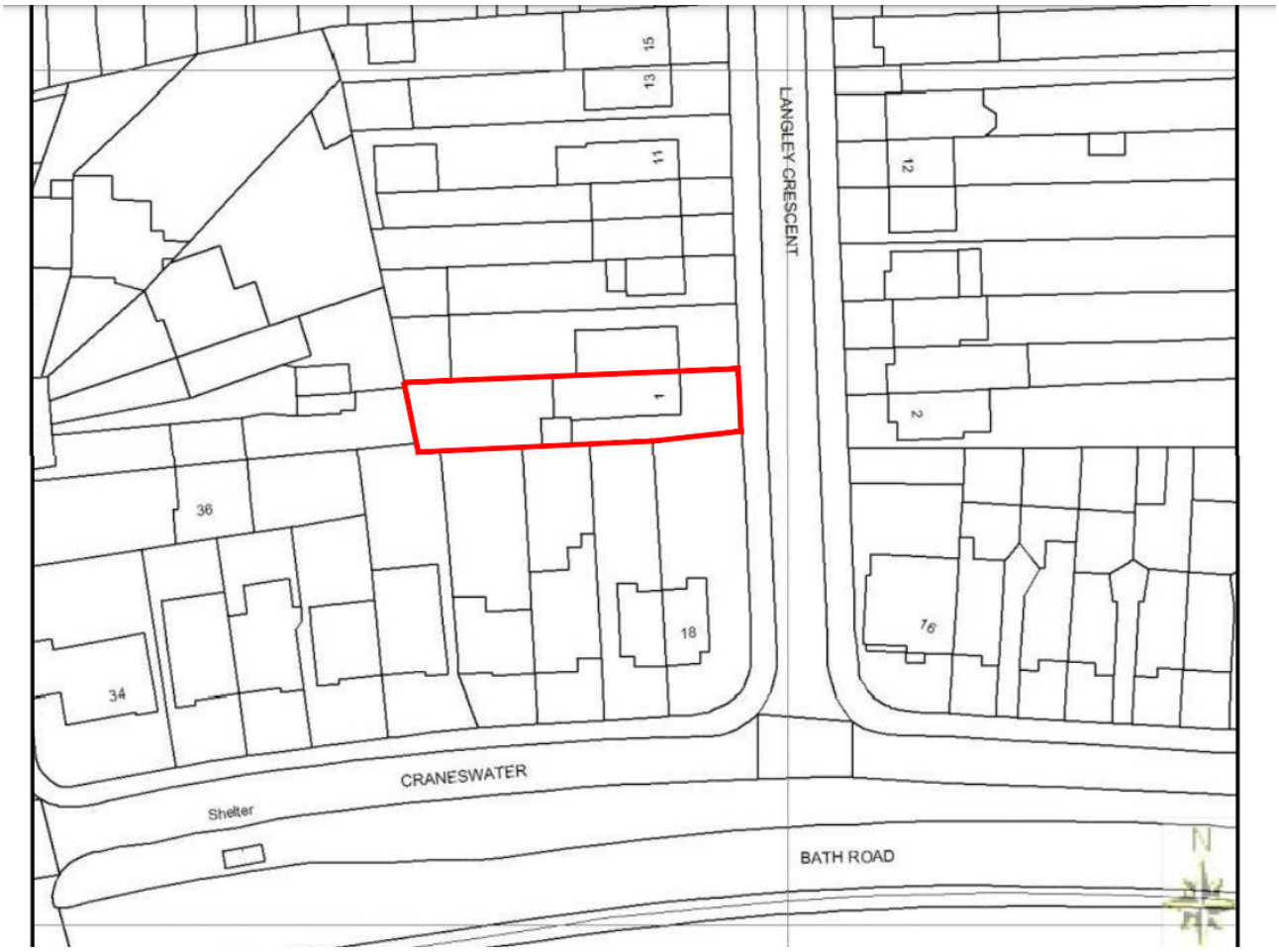
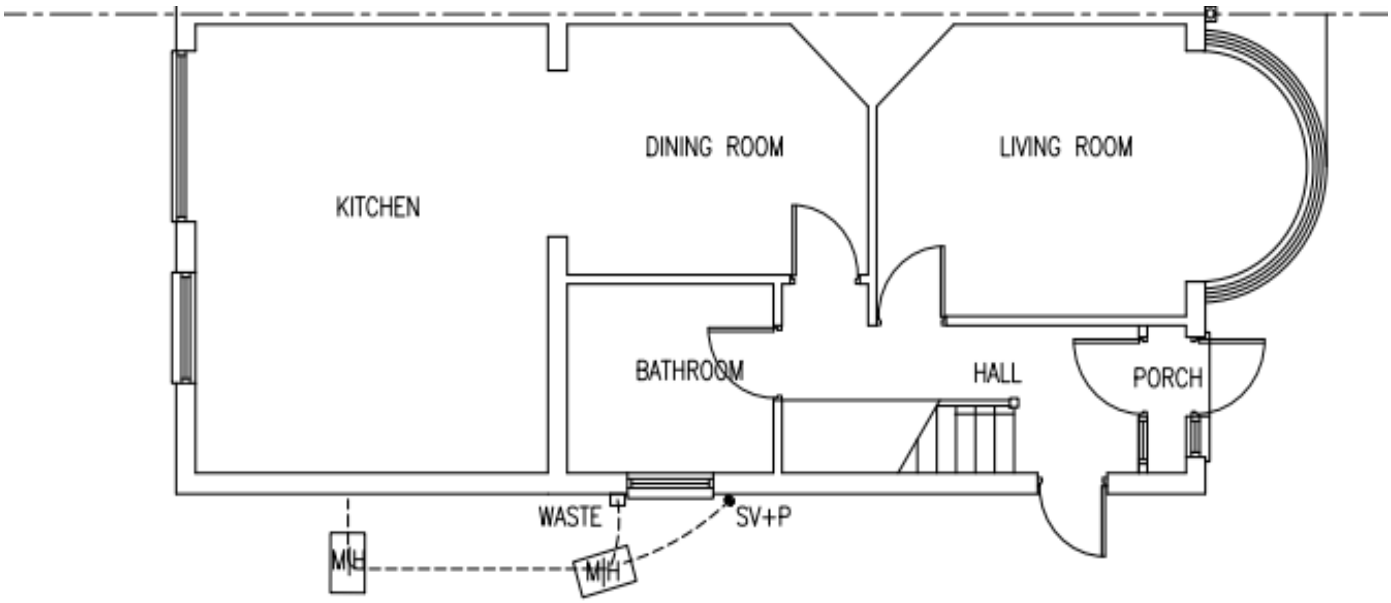
FLOOD RISK ASSESSMENT FOR MINOR DEVELOPMENT

1 LANGLEY CRESCENT HARLINGTON UB3 5HL

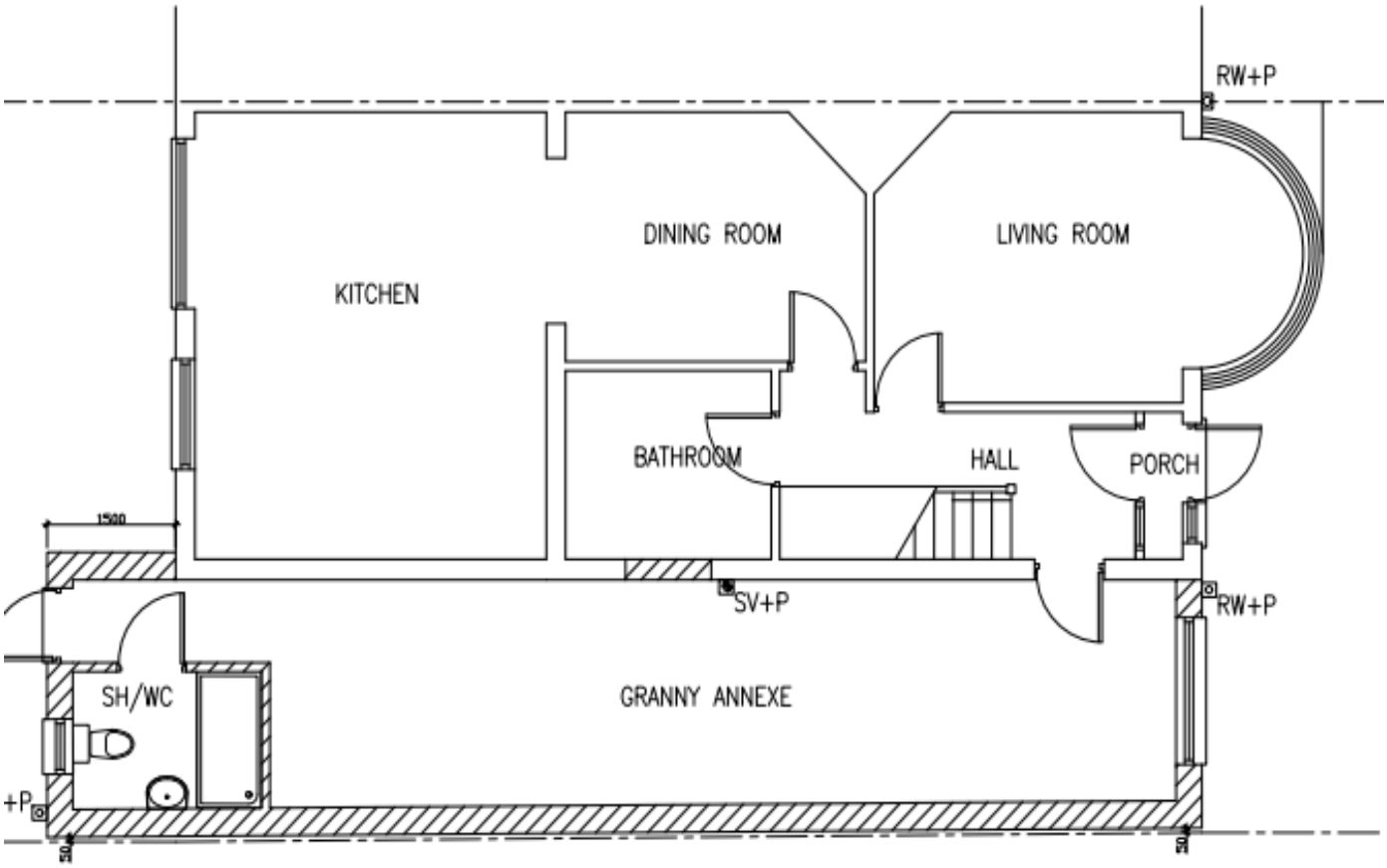
DATED : 11 SEPTEMBER 2024


15
13
11
LANGLEY CRESCENT
12
1
2
36
18
16
34
CRANESWATER
Shelter
BATH ROAD
N

SITE MAP



Existing Ground Floor Plan

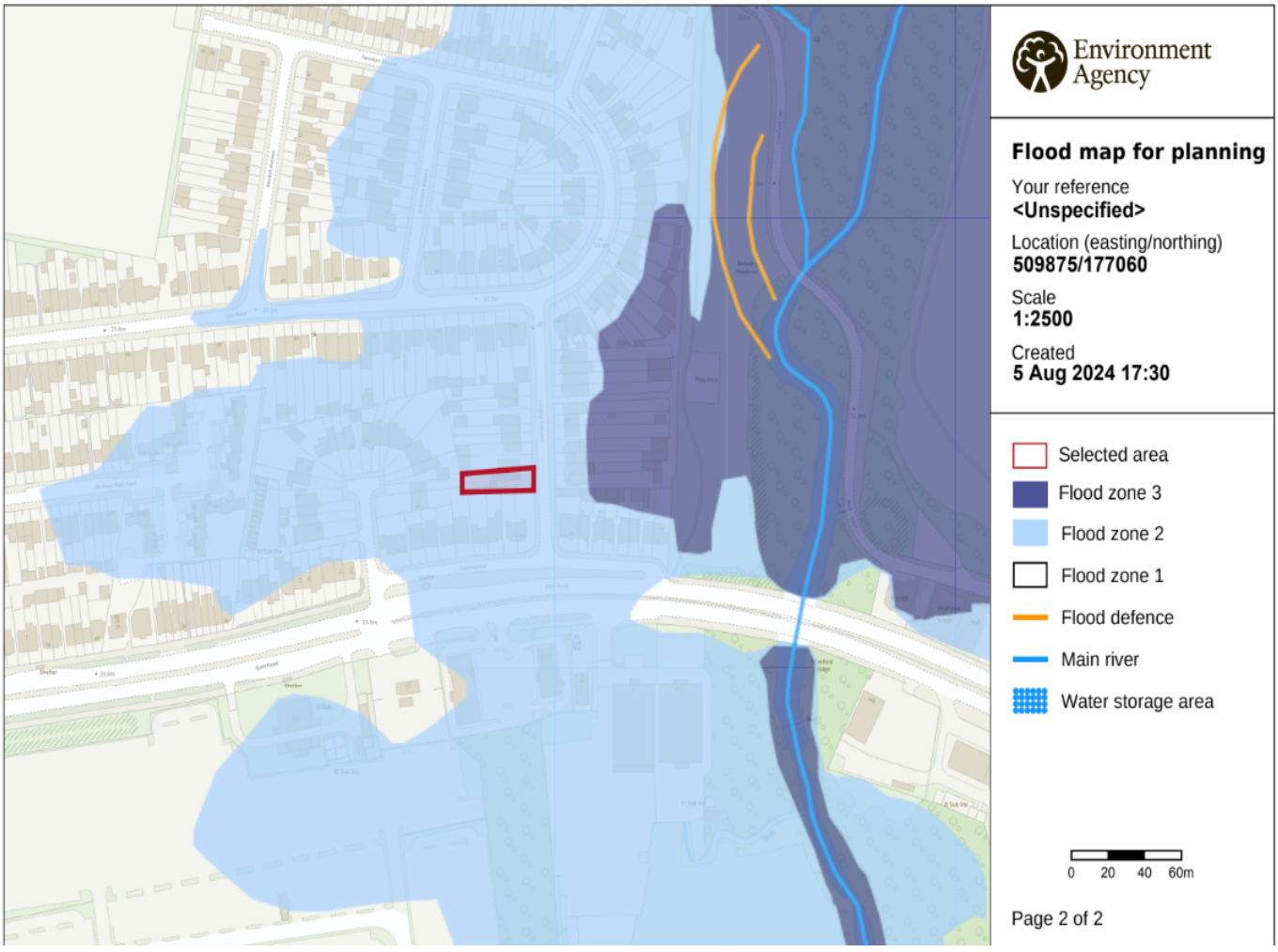


Proposed Ground Floor Plan

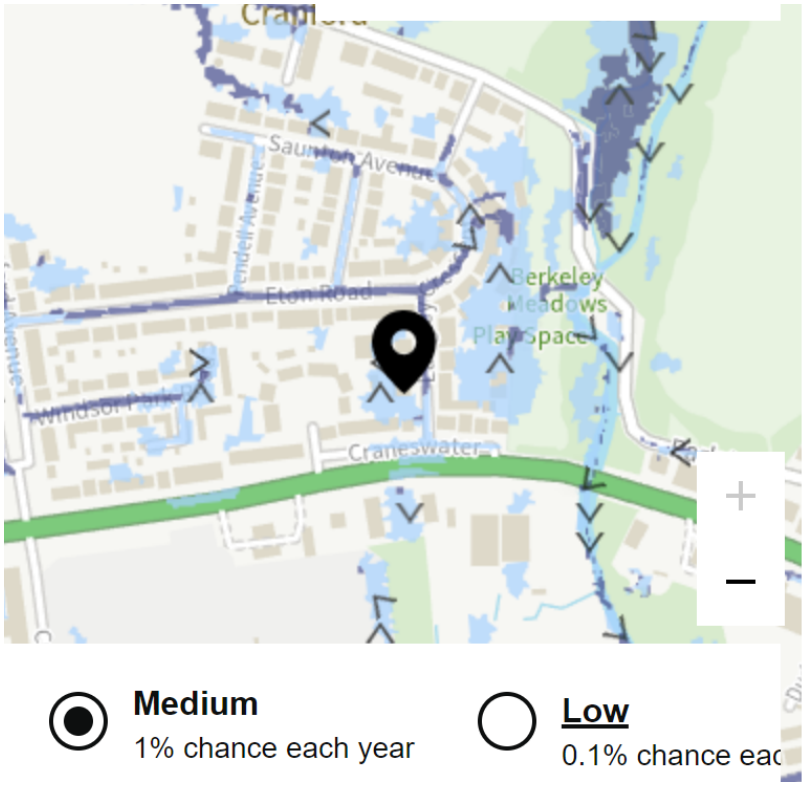
Flood map for planning

Your reference	Location (easting/northing)	Created
<Unspecified>	**509875/177060**	**5 Aug 2024 17:30**

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



ENVIRONMENT AGENCY MAPPING FOR SURFACE WATER



MEDIUM CATEGORY REPRESENTS THE 1 IN 100 YEAR FLOOD RETURN PERIOD WHICH IS THE SUSTAINABLE LIFETIME OF THE PROPOSED DEVELOPMENT (100 YEARS)

ERECTION OF A SINGLE STOREY EXTENSION TO THE SIDE OF A RESIDENTIAL DEVELOPMENT,AN EXTENSION TO BE USED AS A GRANNY ANNEXE, AT 1 LANGLEY CRESCENT HARLINGTON UB3 5HL

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 proposed site lies in fluvial Flood Zone 2. This puts it at a medium risk of flooding.

The category of risk for the proposed development is “more vulnerable” due to its residential usage.

It is intended to build a grannie annexe on the side of the house, This will include a bedroom for the occupant.

The EA mapping to consider the threat from surface water shows that there would be below 300mm of water at the site during the sustainable lifetime of the property which is 100 years. However during that time consideration has to be given to climate change which could effect this level.

There is ease of ingress and egress to the extension from a porch in close proximity to the extension on the ground floor of the main house as shown on the plans. This enables the occupant of the flat to be taken to the outside of the building quickly should the need arise.

Emergency vehicles would be able to gain access to the site in case they are needed.

In its mapping a litany from the EA considers the significant sources of flooding as follows below.

- The threat from rivers and the sea is “low.”
- There is unlikely to be any surface water rising to the surface from a

groundwater source

- Any threat from Reservoirs is unlikely.
- There is a “high” threat from surface water.

There are no impounded sources of water near enough to the site to pose a threat.

The Criteria

The proposal is considered to be a minor development under NPPF.

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. The footprint of the extension is below that ceiling.

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 forResidential/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 due to the occupant not being faced with problems with steps at entry level to the extension.

Flood Resilience measures would be required for the proposed buildings and recommendations for this are listed below. These are included to also consider the safety of the occupant during the sustainable lifetime of the proposed new build and also to protect the fabric of the building during the next 100 years. Also to consider climate change.

Flood Resilience Measures

- Both the inside and outside 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 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 extensions 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 in the extension should be connected to the mains box so that this controls all electrics to the whole property.

Evacuation Procedures

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

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.

It is better to be safe not sorry especially when lives are at stake.

Sustainable Drainage.

Water butts will be used for water harvesting run off from the new build. In times of exceptional or prolonged storms the butts may be subject to over topping. A French Drain will be used to transmit the surplus water to an on-site garden border or vegetable garden. On site attenuation will take place both from the French drain and the border.

Any new pathways or access ways to the property should be of permeable material.

There will be no offsite implications with this methodology being used.

Private impended sources of water
There are none close enough to the site to be a threat.

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.

This was when two anti-cyclones swept over the country creating the “great storm of 2007” remembered by people all over the country.

Hundreds if not thousands of homes which had no history of flooding were invaded by surface water. The EA described the devastation as of “biblical” proportions. It was recorded that the equivalent of three months rain fell in 14 hours.

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.

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

Should an event occur such as in 2007 it is recommended that those still in the property should wait out the storm and not evacuate the property. It would be too dangerous to do so.

In such a case storm water and groundwater could be affected.

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.

CONCLUSION

The site of the proposed development is located in Flood Zone 2 which is a mdeium flood risk area. However due to the nature of the proposal , A granny annexe, special measures will be introduced to protect the safety of the occupant with safety and flood resiliece measures as well as a fail-safe evacuation procedure.

In the event of the occupant being in the house on her own the family will provide a mobile phone number to the EA for the floodline initiative to make sure that due diligence is observed to look after the occupant in the proposed development and to make sure a member of the family is available to help her. on site,

This should be triggered on the first call from the EA

Signed

David Eggleton
Managing Director