Flood Risk Assessment

7 DIAMOND ROAD, HILLINGTON, HA4 0PF

October 2022

INTRODUCTION

This Flood Risk Assessment has been compiled to support the Householder Planning Application (Ref: 15190/APP/2022/1264) for a ground floor rear extension.

Planning policy and guiding

Government planning guidance states that an FRA is required for sites which are:

• Flood Zone 2 or 3 including minor development and change of use,

• More than 1 hectare in Flood Zone 1,

• Less than 1 ha in Flood Zone 1, including a change of use in development type to a more vulnerable class (for example from commercial to residential), where they could be affected by sources of flooding other than river and the sea (for example surface water drains or reservoirs),

• In an area within Flood Zone 1 which has critical drainage problems as notified by the Environment Agency.

This site is located within Flood Zone 2, therefore required FRA in accordance with the NPPF. The objective of this FRA is to demonstrate that the proposals are acceptable in terms of flood risk.

7 Diamond Road has a large private rear garden of about 18m long x 7.4m wide. At the end of the garden are two rather large sheds with combined floor area of 40 sqm.

Number 7 Diamond Road a semi-detached house, the surrounding area is of a predominantly residential character.

The proposed development is for 22.5 sqm ground floor rear extension following demolition of an old existing one with floor area of 7.2 sqm. In fact the net additional area from demolition and new build is only 15 sqm.

A flood zone map detailed by Environment Agency indicates that the 7 Diamond Road is within a flood zone 2 area. (The map indicates the property has a “Medium” risk of flooding.) and a 1 in 100 year risk. Due to this assessment the following mitigation measures will be addressed and incorporated to reduce any flood risk.

As with the building form, the design of this rear extension is a simple design constructed from brickwork walls externally with flat roof with maximum height of 3m and gutter height of 2.5m.

A stepped DPC is to be installed min 150mm above ground level to comply with building regulations. Rigid rockwool insulation batts are to be used, non corrosive stainless steel ties and sand & cement render to internal wall finishes.

The new floor levels within the proposed development will be set no lower than the existing levels, flood proofing of the new extension will be addressed where appropriate. The following flood proofing, resilience and resistance techniques, will be included in accordance with “ Improving the flood performance of new buildings.

7 Diamond Road, Ruislip, HA4 0PF

Scale 1:1250

7 Diamond Road	Location Plan	Date: April 2022
Ruislip		1:1250/ A4 Paper
HA4 0PF		Dwg No.HA4/OS

Loay Engineering Ltd.

Hadson House, Suite 2
432 Edgware Road, W2 1EG
www.Loayengineering.co.uk
Loay@Loayengineering.co.uk
Tel:07890020000

Flood map for planning

Your reference	Location (easting/northing)	Created
Flood Risk Zone 2	**512118/185714**	**5 Oct 2022 22:31**

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

This means:

- you must complete a flood risk assessment for development in this area
- you should follow the Environment Agency's standing advice for carrying out a flood risk assessment (see www.gov.uk/guidance/flood-risk-assessment-standing-advice)

Notes

The flood map for planning shows river and sea flooding data only. It doesn't include other sources of flooding. It is for use in development planning and flood risk assessments.

This information relates to the selected location and is not specific to any property within it. The map is updated regularly and is correct at the time of printing.

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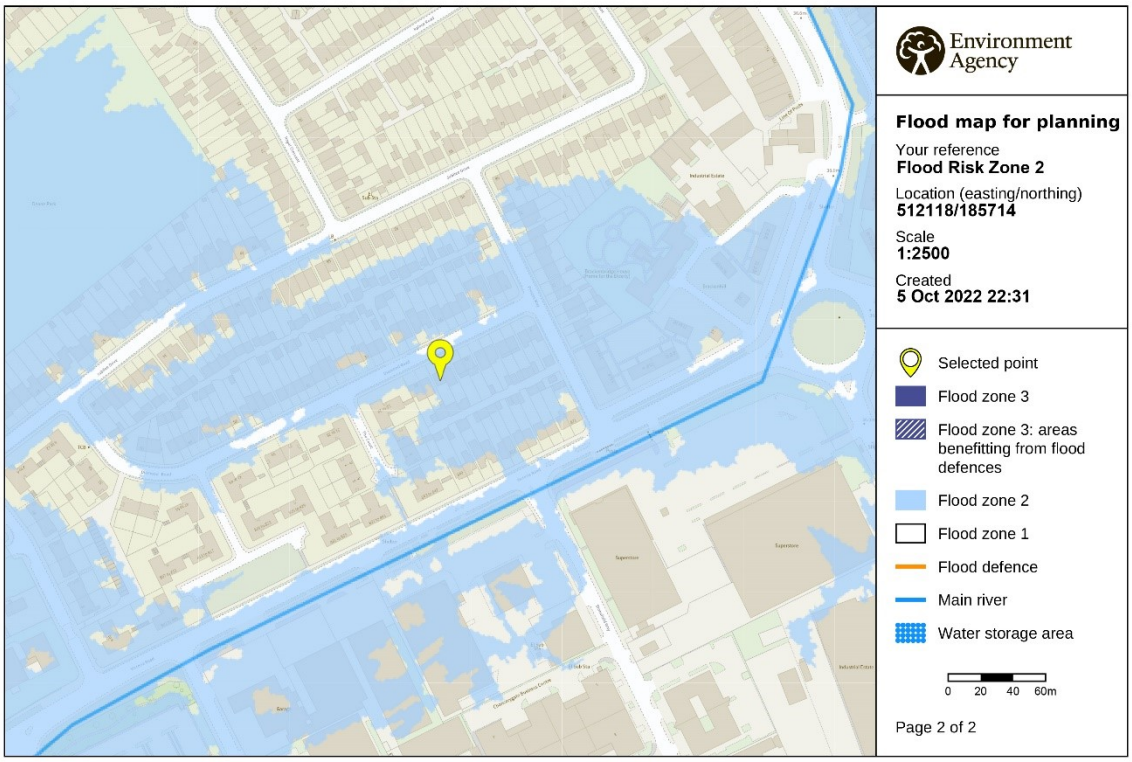

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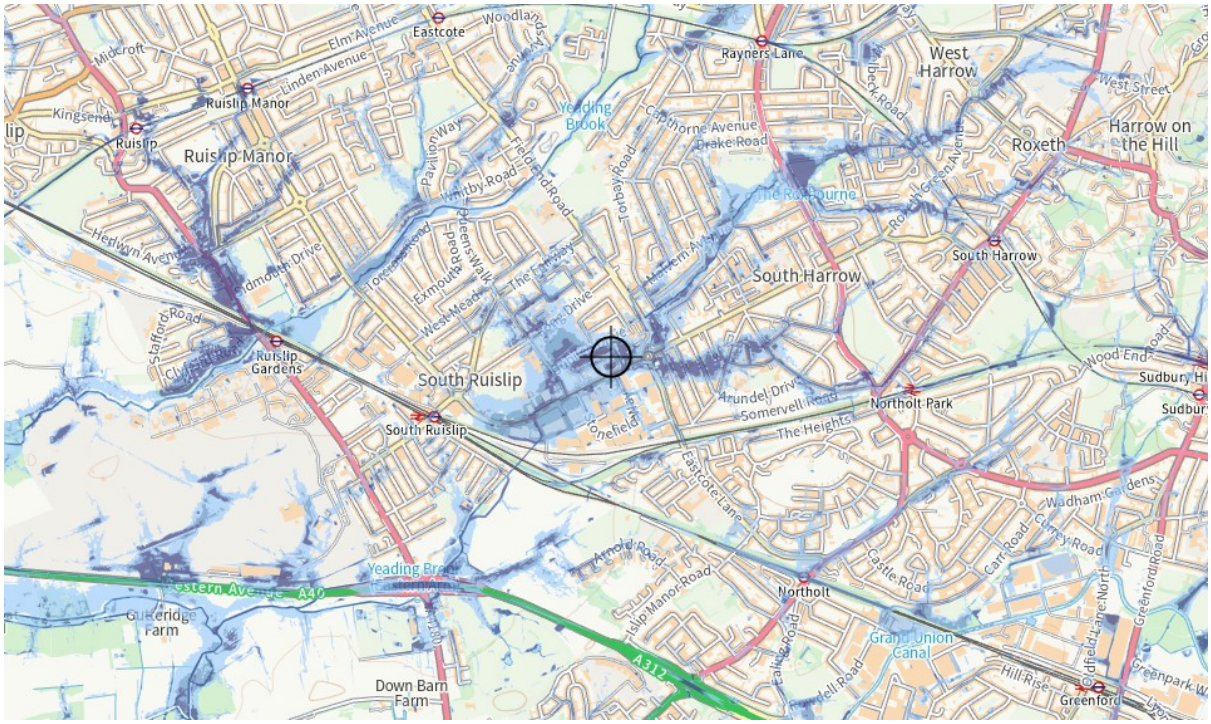


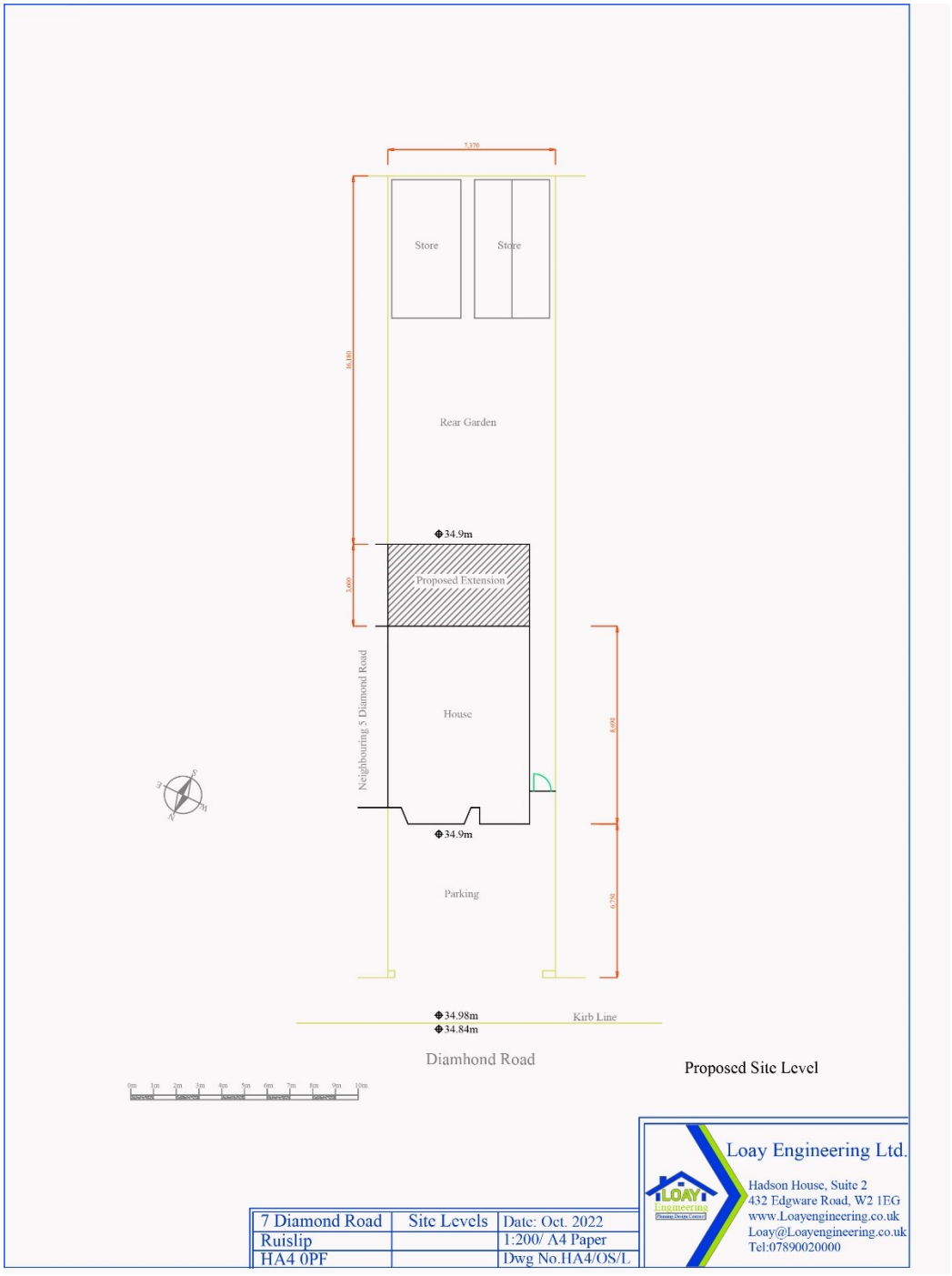
Surface water and other sources of flooding.

Rivers and the sea: Very Low Risk

The Canal and River Trust (CRT) generally maintains canal levels using reservoirs, feeders and boreholes and manages water levels by transferring it within the canal system

Very low risk means that this site has a chance of flooding of less than 0.1% each year.

Road, site and proposed extension levels.



Surface water – Low Risk

This flood risk summary reports the highest risk from surface water within a 20 metre radius of this property. Low risk means that this area has a chance of flooding of between 0.1% and 1% each year.

FLOOD RESILIENT & RESISTANCE MEASURES

Foundations

The foundations will be designed by an engineer to suit the localised ground conditions. But generally durable materials should be used that are not affected by water and promote easy draining and drying.

Floor Level & Construction

The floor level of this rear extension will be no lower than the existing floor level of the house and will be designed as a hardcore bed of at least 100mm thick of well compacted inert material, blinded with fine material to provide a smooth base. Minimum 150mm thick ground supporting concrete floor or a suspended concrete floor with adequate (at least 1200 gauge) damp proof membrane and rigid closed cell insulation. 60mm screed with floor finish on top.

External Walls:

The proposals are for a masonry cavity wall. A dense facing brick or engineering brick with thoroughly filled mortar joints (1:3 cement sand) and filled concrete cavity to be used below ground and concrete blockwork with stainless steel wall ties are to be used to reduce water penetration and minimise corrosion. Walls will be finished internally with standard gypsum plasterboard as a sacrificial material, and partial fill rigid closed cell cavity insulation.

A stepped DPC is to be installed min 150mm above ground level to comply with building regulations.

Internal Walls:

All new internal walls are to be a metal stud as opposed to timber. Walls will be finished internally with standard gypsum plasterboard as a sacrificial material, and partial fill rigid closed cell cavity insulation.

Doors & Windows

The proposed extension double glazed sealed door thresholds will be at the same level of the existing doors of the existing basement flat and all effort should be made to ensure a good fit and seal to the frames. All should be solid core, not hollow, any other timbers used should be hard wood, avoid MDF at low levels.

Fittings

All proposed fittings should be durable and are not easily affected by water and can be easily cleaned. There should be gaps behind the fittings to facilitate drainage and allow drying if necessary, and there should be high quality workmanship in application of the fittings.

Services

All new electrical services, boilers and communications wiring should be installed above flood level for ground floors to minimise damage to electrical services and allow speedy re-occupation with raised sockets, and controls such as thermostats should be placed above flood level.

As the extension is mainly a new kitchen generally the sockets will be set out above the kitchen base units at high level approximately 1.0m, those lower will still be 200mm above finish floor level. All supplies to be run as a high level ring and drop down where required.

Flood Warnings

It is recommended that the occupier be registered with the Environment Agency's issue for flood alerts and they also put a flood plan in place. In the event of a flood the residents can move to safe refuge above the flood level.

Drainage & waste

All new waste pipes to exit the building above the DPC level and drop vertically into existing waste system, thus ensuring it is well above the flood zone limit. No external main drainage changes are required, all existing surface/soil pipes are to be retained. The site is located within an area that is predominantly London clay which would indicate that the potential for soil infiltration would be negligible and that the existing surface water would be discharged via a surface water drain into the local public sewer system.

The increase in surface water run-off from the development approximately 0.2L/s will be minimal and unlikely to have any overall detrimental effects upon the system. However we will install water butts to catch the increased surface water and assist the retention and reduce peak flow rates.

Conclusion

The proposed extension is a minor development. Flood and Coastal Defence Appraisal Guidance gives guidance on the application of sea level changes to projects. This site is not mapped as influenced by tidal flooding.

The following conclusions can be drawn, the site is located within Flood Zone 2 and is at low risk from flooding. The proposed development is considered to be a minor development with a negligible increase in flood risk elsewhere.