

FLOOD RISK ASSESSMENT (FRA)

Site: 150 Fairway Avenue, Uxbridge UB7 7AP

Local Planning Authority: London Borough of Hillingdon

1. Introduction

This Flood Risk Assessment (FRA) has been prepared to accompany a householder planning application for a proposed **garden office** in the **rear garden** of:

150 Fairway Avenue

Uxbridge

UB7 7AP

The applicant proposes a **single-storey detached garden office measuring 8m × 4m (32m²)**, ancillary to the main dwelling.

The **Environment Agency Flood Map for Planning extract** supplied by the applicant confirms that the **rear garden lies within Flood Zone 2** (medium probability of flooding).

Flood map

Because part of the site is in Flood Zone 2, a **Flood Risk Assessment is required** under NPPF and Environment Agency Standing Advice.

2. Site Description

- Existing site: two-storey residential dwelling with front and rear gardens.
 - Proposed development: a timber-framed or similar garden room located **entirely within the rear garden**, approx. **8 metres x 4 metres**
 - The garden is generally flat with permeable soft landscaping.
 - There are no watercourses within the red line boundary, but the garden is within a mapped flood-risk zone.
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3. Flood Zone Classification

The provided Flood Map confirms:

- **Selected location: Flood Zone 2**

- Medium probability of flooding: **between 1% and 0.1% annual probability of river flooding**
 - Fluvial (river) flooding is the main source of risk.
 - No flood defences or storage areas exist within the immediate red line area.
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4. Flood Risk Vulnerability Classification

The proposed garden room is:

- **Ancillary to the main residential dwelling**
- Used as a **home office / gym**

Under the NPPF vulnerability categories, this is a “**Less Vulnerable**” use.

Less Vulnerable development is acceptable in Flood Zone 2.

5. Sequential Test & Exception Test

Because this is **minor householder development within the curtilage of an existing dwelling**, national guidance confirms:

- **Sequential Test is not required**
- **Exception Test is not required**

The development introduces no additional residential units and no sleeping accommodation.

6. Sources of Flooding

6.1 Fluvial (River) Flooding – Main Source

The EA map states clearly that the rear garden is within **Flood Zone 2**, therefore exposed to medium fluvial flood risk during extreme rainfall / river overflow events.

Flooding in this zone is typically **shallow to moderate depth** in garden areas, depending on the specific flood event.

6.2 Surface Water Flooding

Localised ponding could occur during intense rainfall, especially if ground infiltration is reduced.

This risk is manageable due to available garden area and SuDS options.

6.3 Groundwater Flooding

No local history is known; risk considered **low**.

6.4 Sewer Flooding

Possible during extreme rainfall but **unchanged** by the proposed development.

6.5 Reservoir Flooding

No specific risk flagged by the EA.

7. Flood Risk to the Development

The garden office is non-habitable and elevated relative to surrounding garden (once mitigation is applied).

The primary risk is to the structure and contents—**not life safety**.

There is **no risk of people being trapped**, because access to the main house (safe refuge) is immediate.

8. Mitigation Measures

To satisfy EA Standing Advice and reduce flood risk, the following measures will be implemented:

8.1 Raised Finished Floor Level (FFL)

- The garden office FFL will be set **a minimum of 300mm above existing garden ground level**.
 - If the LPA/EA provide modelled flood levels, the FFL will be set **300mm above 1% AEP + climate change level**.
 - Thresholds and doors will include suitable weather-resistant detailing.
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8.2 Flood-Resilient Construction

- Water-resistant materials used for the first **600mm** of wall height (e.g., treated timber, cement board, waterproof membranes).
- Electrical sockets placed **min. 450mm above FFL**.
- Flooring: moisture-resistant sub-base and recoverable finishes (vinyl/tiles).

- No plasterboard below 600mm unless moisture-resistant.
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8.3 Surface Water & SuDS Strategy

Roof runoff from the 32m² building will be managed on site using:

- **Soakaway crate** or rubble soakaway sized according to BRE365 (final design by contractor/engineer).
- **Permeable gravel** or **permeable paving** around the perimeter.
- No new impermeable pathways exceeding minimal access area.
- Water directed **away from boundaries and neighbour properties** via gentle landscaping falls.

This ensures **no increase in runoff** from the site.

8.4 Floodplain Storage & Ground Levels

- No ground-raising in wider garden.
 - No changes will impede overland flow routes.
 - Building sits on **pads or low plinth**, allowing the wider garden to continue functioning as informal floodplain storage.
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8.5 Safe Access & Flood Warning

- Access to the main house is always available.
 - Users sign up to **EA Flood Warnings**.
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9. Residual Risk

Residual risks include:

- Extreme flood events beyond modelled design levels
- Blocked drainage systems
- Climate change increasing rainfall severity

These risks are acceptable because:

- Building is non-habitable

- FFL is raised
- Materials are resilient
- Access to main dwelling remains safe
- No occupants remain inside during severe weather

Residual risk is **minor and manageable**.

10. Impact on Flood Risk Elsewhere

The proposal **will not increase flood risk elsewhere** because:

- No significant ground raising
 - Soakaway / permeable area used
 - Floodplain storage retained
 - Runoff rates will not increase
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11. Conclusion

This FRA confirms that:

1. The garden office site lies within **Flood Zone 2** as shown on the EA map.
2. The development is **small-scale, householder, non-habitable** and classed as **Less Vulnerable**.
3. Sequential and Exception Tests **do not apply**.
4. Mitigation measures (raised FFL, resilient construction, SuDS, safe access) ensure it is **safe for its lifetime**.
5. The development **does not increase flood risk elsewhere**.
6. The proposal is in accordance with **NPPF, Environment Agency Standing Advice**, and **Hillingdon FRA guidance**.

The proposed 8m × 4m garden office is acceptable in flood-risk terms.