

## FLOOD RISK ASSESSMENT (FRA)

**Site: 150 Fairway Avenue, Uxbridge UB7 7AP**

**Local Planning Authority: London Borough of Hillingdon**

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### 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 x 4m (32m<sup>2</sup>)**, 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.

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### 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.*

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#### **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.

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#### **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.

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## **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.

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## **8. Mitigation Measures**

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

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### **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 32m<sup>2</sup> 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.

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### **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**.

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## 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 x 4m garden office is acceptable in flood-risk terms.**