

Flood Risk Assessment

Site: 178 Boundary Road, London, N22 6AJ

Development: Single-storey rear extension + loft conversion (minor/householder)

LPA / LLFA: London Borough of Haringey



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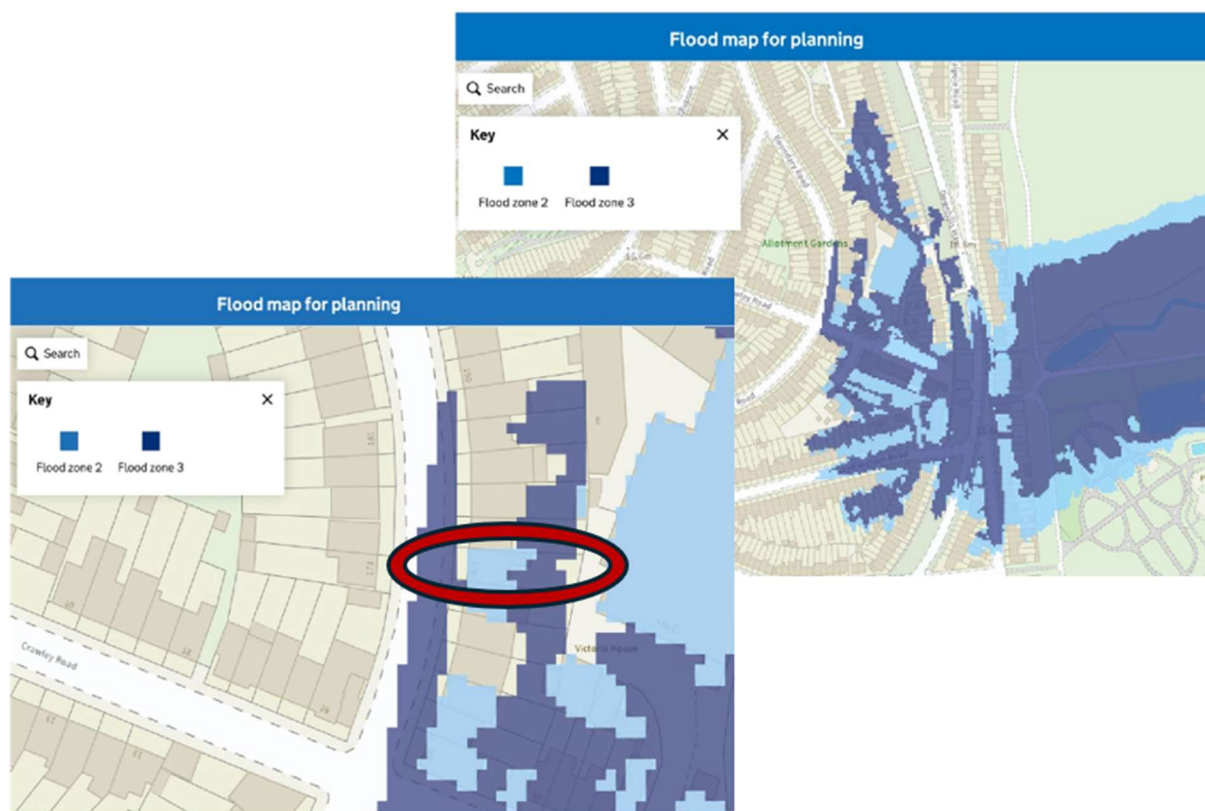
1. Introduction

This Flood Risk Assessment (FRA) has been prepared in support of proposed minor development comprising a loft conversion and a rear extension at 178 N22 6AJ within the London Borough of Haringey.

Haringey's Local Validation List requires a Flood Risk Assessment for all proposals for new development (including minor development) located within Flood Zones 2 and 3, and where development may be subject to other sources of flooding.

The purpose is to demonstrate that:

- the proposal will be safe for its lifetime, and
- the development will not increase flood risk elsewhere, particularly from surface water runoff, through a proportionate drainage/SuDS approach (see SuDS Statement below).



2. Site description and proposal

The site comprises an existing residential dwelling with a rear garden. The proposal includes:

- a single-storey rear extension, increasing roof area at ground-floor level; and
- a loft conversion, which typically results in negligible additional impermeable area (roof alterations drain via existing/new downpipes).

3. Policy context and proportionality

- This is minor householder development (extension/loft conversion). Under national guidance, householder development is exempt from the Sequential Test.
- The borough evidence base identifies that in urban areas the principal flood risk issue is often surface water, so surface water management is the key focus for this application.

4. Flood Risk Vulnerability

The site is an existing dwellinghouse. “Buildings used for dwelling houses” are classified as More Vulnerable development in NPPF Annex 3.

5. Environment Agency mapping position

Flood Zones (rivers and sea) – Flood Map for Planning

EA Flood Map for Planning show Flood Zones 2 and 3 present within the wider area (notably to the east), but the residential streets where the property sits appear outside the mapped Flood Zones 2 and 3, indicating Flood Zone 1 for the application site location (low probability of river/sea flooding).

Conclusion (planning): The proposal is appropriate in principle with respect to fluvial/tidal flooding, subject to standard good-practice mitigation and confirmation on the final plan extract used in the submission.

5.1 Rivers and the sea (fluvial/tidal)

The EA long-term risk service indicates the yearly chance of flooding from rivers and the sea at this location is Very Low at present day, and Low in the future assessment period shown by the service (2036–2069).

The EA Flood Map for Planning extracts (Appendix A) also show the site is located within mapped Flood Zones 2 and 3. As the site spans multiple flood zone extents, the FRA adopts a precautionary approach and assesses the proposals on the basis of the higher probability area (Flood Zone 3) for design and mitigation purposes.

5.2 Surface water (pluvial)

The EA long-term risk service identifies that the highest flood risk at this location is from surface water.

The service indicates the yearly chance of flooding from surface water is High at present day and remains High in the future assessment period shown by the service (2040–2060).

For context, EA guidance describes “High” surface water risk as a greater than 3.3% (1 in 30) annual chance of flooding.

Accordingly, the drainage/SuDS measures in Section 7 are a key component of ensuring the development is safe and does not worsen off-site flood risk.

5.3 Groundwater

The EA long-term risk service states that this location is outside a groundwater flood alert area.

Given no basement formation is proposed, and excavation is limited to typical foundation works associated with a minor extension, groundwater flooding is not anticipated to be the controlling risk mechanism for the development.

5.4 Reservoirs

The EA long-term risk service states that there is a risk of flooding from reservoirs in this area.

Reservoir flooding is a low-probability/high-consequence risk. The proposed development does not increase reservoir flood risk; however, the site’s flood response measures (refuge strategy and occupant preparedness) remain relevant and are set out in Section 6.

6. Flood Risk Mitigation and Safety Measures

Mitigation measures are proposed to ensure the development remains safe and that flood risk is not increased elsewhere.

6.1 Development layout and vulnerability reduction

- The proposal is for extension/alteration to an existing dwellinghouse, not a new dwelling.
- No basement accommodation is proposed.
- The loft conversion provides enhanced refuge potential at higher levels during a flood event.

6.2 Finished Floor Levels and internal resilience

- The proposed rear extension shall be constructed with a finished floor level no lower than the existing ground floor FFL.
Existing FFL:
Proposed extension FFL:
- A detailed level survey will confirm FFLs and external levels to ensure appropriate resilience specification.

6.3 Resistance and resilience (floodproofing)

The following measures will be incorporated to reduce flood damage and speed recovery:

- Use of flood-resilient materials at lower levels of the rear extension (e.g., tiled/solid floors, moisture-resistant finishes) up to a defined resilience datum.
- Positioning of key services (electrics/consumer unit/boiler controls where applicable) above predicted flood impact levels where feasible.
- Consideration of non-return valves or similar measures on drainage connections to reduce sewer backflow during surcharge events.
- Air vents to be located as high as possible.
- Using Flood proof doors and windows, to ensure that no flood water enters the dwellings.
- Electricity consumer units to be located as high as possible, with all feeds to go down the building from the ceiling.
- All water, electricity and gas meters to be located, as high as possible.
- Heating systems such as boiler units and ancillary devices to be located, as high as possible.
- New Walls will have closed-cell cavity insulation and a damp proof course up to 900 millimetres above ground level.

6.4 Safe access, egress and flood response

- A safe refuge strategy is provided via upper floors (including the loft level).
- Occupants will be advised to register for flood warnings and maintain a simple household flood plan.

6.5 “No increase in flood risk elsewhere”

- The proposal does not involve land raising that would displace flood water storage across the plot.
- The rear extension footprint will be designed to avoid obstruction of any potential flow routes identified at detailed stage.
- Surface water runoff will be managed so that post-development runoff rates/volumes are not increased (Section 7).

7. Surface Water Drainage and SuDS Strategy

Given the site is within Flood Zones 2/3 and Haringey’s drainage expectations, a proportionate SuDS approach is proposed.

7.1 Existing and proposed impermeable area

- Existing impermeable area (roof + hardstanding): 60m² + 15m²

- Proposed additional impermeable area (extension roof): 24m²
- Proposed rear permeable paving to patio 22 m²
- Net change: 15m² - 24 m² = 9 m² Net gain.

7.2 Proposed SuDS measures (proportionate householder package)

A combination of the following measures will be implemented (final selection subject to ground conditions and buildability):

- Water butts / rainwater harvesting for roof drainage reuse.
- Permeable paving for any new/altered hardstanding where feasible.

7.3 Exceedance routing

The site will maintain safe exceedance routing such that extreme rainfall exceeding system capacity will overland flow away from building thresholds where practicable and not towards neighbouring properties.

8. Construction Phase Flood Risk

During construction:

- Materials will be stored away from areas most susceptible to flooding.
- Temporary drainage and housekeeping will be maintained to avoid blocking gullies/drains.
- Site operatives will follow a basic flood response procedure, including weather monitoring during periods of elevated risk

9. Summary and Conclusion

The site at 178 Boundary Road N22 6AJ lies within Flood Zones 2 and 3. In accordance with Haringey's validation requirements, a Flood Risk Assessment has been prepared for this minor development. A precautionary approach has been taken by assessing the proposals on the basis of the higher risk designation (Flood Zone 3). Flood mitigation and drainage measures are included to ensure:

- the development is safe for its lifetime,
- a safe refuge/flood response is available, and
- the works will not increase flood risk elsewhere through displacement or increased runoff,

consistent with national standing advice for minor extensions in Flood Zones 2 and 3.

On this basis, the proposed loft conversion and rear extension are considered acceptable in flood risk terms, subject to the implementation of the mitigation and drainage measures set out in this FRA.