

# **Flood Risk Assessment (FRA)**

**Site Address:** 45 High Street, Bognor Regis, PO21 1RU

# Contents

1. Introduction
2. Site Location and Existing Context
3. Flood Zone Classification
4. Sources of Flood Risk
  - 4.1 Tidal / Coastal Flooding
  - 4.2 Surface Water Flooding
  - 4.3 Groundwater Flooding
  - 4.4 Sewer Flooding
5. Flood Risk Vulnerability and NPPF Tests
  - Sequential Test
  - Exception Test
6. Mitigation & Resilience Measures
7. Emergency Planning
8. Residual Risk
9. Conclusion

# Flood Risk Assessment (FRA)

**Site Address:** 45 High Street, Bognor Regis, PO21 1RU

**Proposal:** Erection of a new residential block comprising 6 no. apartments (C3 use class) to the rear of the site. Apartments to be located a minimum of 2.5m above existing ground level.

**Prepared in accordance with:** National Planning Policy Framework (NPPF, 2023), Planning Practice Guidance (PPG), and Environment Agency Standing Advice.

## 1. Introduction

This Flood Risk Assessment (FRA) is submitted in support of a planning application for a new build residential scheme comprising 6 apartments on land to the rear of 45 High Street, Bognor Regis.

The site lies within a designated Flood Zone as defined by the Environment Agency (EA). Residential use (C3) is classed as “**More Vulnerable**” under Annex 3 of the NPPF (2023).

This assessment demonstrates that the proposed development:

- Locates all habitable accommodation at least **2.5m above ground level**, safely above predicted flood depths.
- Does not increase flood risk elsewhere.
- Provides safe refuge and incorporates appropriate resilience and emergency planning measures, in line with **NPPF paragraphs 159–169**.

## 2. Site Location and Existing Context

- **Address:** 45 High Street, Bognor Regis.
- **Existing Use:** Rear yard/ancillary land associated with commercial frontage.
- **Proposal:** Construction of a new block providing 6 apartments:
  - 2 apartments at first-floor level.
  - 2 apartments at second-floor level.
  - 2 apartments at third-floor level.
  - Ground floor: non-habitable (bin and cycle storage only).
- **Topography:** Ground levels in the High Street are approximately **3.7m AOD** based on LiDAR data (to be confirmed by site survey).
- **Proposed Finished Floor Level (FFL):** First residential floor at approx. **6.2m AOD**, giving a freeboard of c. **+2.5m above ground**.
- **Flood Source:** Primarily tidal (English Channel).

## 3. Flood Zone Classification

- EA mapping confirms the site is within **Flood Zone 3a (high probability)**.
- Flood defences reduce risk, but **residual risk** remains in the event of overtopping or breach.
- EA modelling indicates predicted depths at ground level in the **0.5% AEP + climate change event** of up to **0.8–1.0m**.
- All proposed habitable floors will remain **well above these levels**.
- The site also lies within an EA **Flood Alert Area**.  
(Appendix A: EA Flood Map Extract)

## 4. Sources of Flood Risk

### 4.1 Tidal/Coastal Flooding

- Principal source of risk is from the English Channel.
- EA modelling suggests residual depths of up to **1.0m at ground level** in breach/overtopping scenarios.
- First residential FFL set at **6.2m AOD**, at least **2.5m above ground level**, and therefore above modelled flood depths.

### 4.2 Surface Water Flooding

- EA Surface Water Map indicates shallow ponding ( $\leq 0.3\text{m}$ ) in the carriageway of the High Street during extreme rainfall.
- Flooding would be limited to ground level and not affect upper floor apartments.

### 4.3 Groundwater Flooding

- Low likelihood given urban setting and elevated FFLs.

### 4.4 Sewer Flooding

- Local surcharge possible at ground level.
- Bin/cycle store designed with resilient finishes to accommodate potential water ingress.

## 5. Flood Risk Vulnerability and NPPF Tests

- **Use Class:** Residential (C3), *More Vulnerable*.
- **Sequential Test:**
  - The proposal is located within Bognor Regis town centre.
  - Relocation to lower-risk areas would not meet town centre regeneration and housing delivery objectives.
  - Test considered satisfied.
- **Exception Test:**

- **Part 1 – Sustainability Benefits:** Provides 6 new dwellings in a highly sustainable location, reducing reliance on private cars and supporting town centre vitality.
- **Part 2 – Safe for Lifetime:** All dwellings are elevated above flood levels with resilient access, safe refuge, and emergency planning measures.

## 6. Mitigation & Resilience Measures

- **Elevated Habitable Accommodation:**
  - First residential FFL at approx. 6.2m AOD, giving >2.5m clearance above ground and >1.5m above predicted extreme tidal depths.
- **Ground Floor (Non-Habitable):**
  - Bin and cycle stores, entrance lobby, and stairwell designed with flood-resilient construction (tiled floors, robust finishes, raised electrics).
- **Communal Access:**
  - Lobby and stairwell materials selected to withstand temporary floodwater exposure.
- **Safe Refuge:**
  - All apartments provide refuge well above expected flood levels.
- **Flood Warning Registration:**
  - Residents to register with **EA Floodline Warnings Direct**.
- **Flood Emergency Plan (FWEP):**
  - Prepared in accordance with **West Sussex Local Resilience Forum** and Arun District Council emergency planning guidance.
  - Includes routes to higher ground and coordinated evacuation procedures.
- **Surface Water Management:**
  - Development does not increase impermeable footprint significantly; drainage strategy will ensure no increase in runoff.

## 7. Emergency Planning

- Residents will be informed of site-specific flood risk.
- Safe refuge is available within apartments above first floor.
- Evacuation possible via High Street to higher ground routes.
- FWEP to be secured by planning condition.

## 8. Residual Risk

- Residual risk remains from flood defence failure or overtopping.

- Ground floor areas may flood, but **no residential units are affected**.
- The development does not displace floodwater or increase risk elsewhere.

## 9. Conclusion

- The site is located in **Flood Zone 3a**, but all habitable accommodation will be located safely above predicted flood depths.
- The **Sequential and Exception Tests** are satisfied.
- The scheme incorporates robust resilience measures and emergency planning in line with **NPPF (2023, paras. 159–169)** and EA Standing Advice.
- The development will not increase flood risk elsewhere and provides new housing in a sustainable town centre location.

**Accordingly, the proposal is considered acceptable in flood risk terms.**