

Flood Risk Assessment

Description of Works: Proposed single storey side extension and garage conversion to habitable space. Proposed retaining wall where shown to retain and improve side access and accommodate sloped lawn.

On Behalf of: Nick Davies

Date: October 2025

1. Introduction

1.1 This Flood Risk Assessment has been prepared to accompany a Householder Planning Application at **35 Petworth Drive**. The assessment is based on the National Planning Policy Framework (NPPF) and considers all relevant flood risk sources as defined by the Environment Agency (EA) and the local lead flood authority, West Sussex County Council.

1.2 This document confirms that the proposed development, being a minor extension to an existing residential property, is considered a "less vulnerable" development and will not increase the risk of flooding on-site or elsewhere.

2. Use

2.1 The property at **35 Petworth Drive** is an existing residential property (Use Class C3). The proposed works will result in an extension to the existing residential use and will not change the overall use class of the property. The proposed works will not increase the number of bedrooms beyond that which the existing drainage system can adequately serve.

3. Flood Risk

3.1 An initial flood risk check was undertaken using the Environment Agency's online flood maps for the property, highlighting the following:

- **Rivers and Sea:** The property is in an area with a "**very low risk**" of flooding from rivers and the sea, meaning there is a less than 0.1% chance of flooding each year. The site is located in **Flood Zone 1**, the lowest flood risk zone.
- **Surface Water:** The property is identified as being within a "**medium risk**" area for flooding from surface water, meaning there is between a 1% and 3.3% chance of flooding each year. West Sussex County Council, as the Lead Local Flood Authority (LLFA), manages this risk.
- **Reservoirs:** The risk of flooding from reservoirs is highlighted as "**unlikely**" in this area.
- **Groundwater:** The risk of flooding from groundwater is also highlighted as "**unlikely**" in this area.

3.2 The Environment Agency's Flood Risk from Surface Water Map for the site is shown below.

This map indicates that while the immediate vicinity is at medium risk, the proposed location of the extension itself is not directly within an identified flow path or area of pooling.

4. Mitigation

4.1 The proposed development will increase the hard-standing surface area (the footprint of the extension). Therefore, mitigation measures are necessary to ensure that surface water runoff is managed on-site and does not increase the risk of flooding to neighboring properties.

4.2 The following mitigation measures are proposed to ensure the development is safe and resilient from surface water flooding:

- **Sustainable Drainage System (SuDS) via a soakaway:** A soakaway will be provided to manage surface water runoff from the new roof and any hard-standing areas. This will be designed and sized by a specialist engineer in accordance with Building Regulations (Part H) and BRE Digest 365 to ensure it is appropriate for the ground conditions and anticipated rainfall volume.
- **Drainage Channels:** To protect the new accessible ground floor bedroom and kitchen, drainage channels will be installed at the thresholds of all external doors. These channels will be connected to the new soakaway to prevent any potential surface water from entering the building.
- **Retention of Existing Drainage:** Existing surface water drainage will be retained where it is not impacted by the proposed works. The proposed retaining wall will be designed to ensure that it does not disrupt existing drainage paths or increase runoff to surrounding areas.

4.3 Finished Floor Levels (FFLs): The finished floor level of the new ground floor extension will be set at or above the existing dwelling's finished floor level to protect against any surface water flooding.