55 Hillfield Rd,
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Green Roof Design and Water management

Presented by Proficiency Ltd
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Prepared by Proficiency

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Proficiency
Design & Build

1.0 Introduction

The proposed design emphasizes sustainability, biodiversity, and flood risk mitigation through a comprehensive water management strategy that avoids placing additional strain on neighboring sites or existing drainage infrastructure.

The development is a small-scale extension, and the proposed building works will result in only a minor reduction of the existing natural drainage surface. According to the current flood risk map on the government website (details provided below), the area's flood depths are unspecified, and the site is not within a designated flood zone. Therefore, it is assumed that the flood risk is below the minimum threshold. All necessary measures will be thoroughly evaluated to meet the site's specific requirements, ensuring that the client avoids unnecessary expenses for systems that are not required.

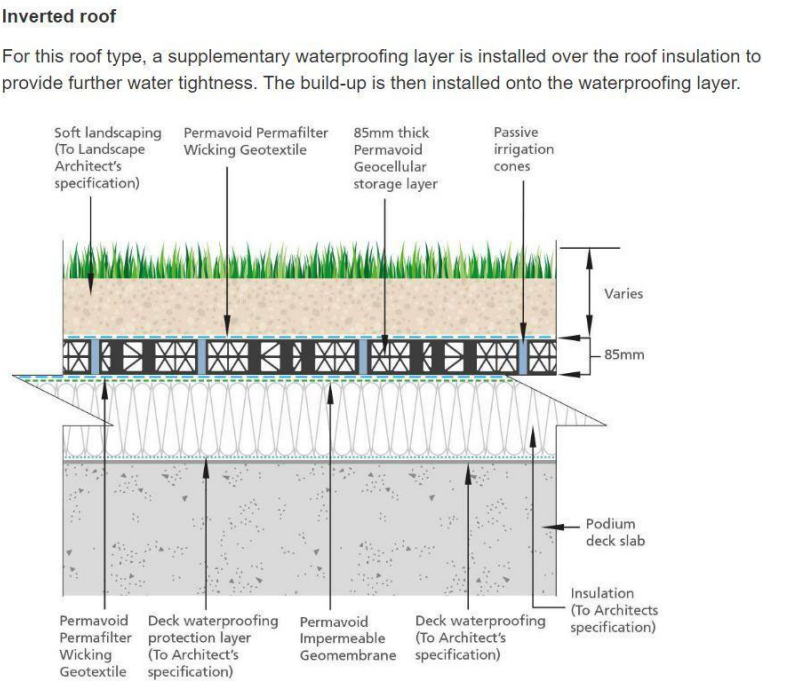
The project specify a green/blue roof system, by sky gardens or similar contractor , that will temporarily store rainwater, helping to control stormwater runoff and alleviate pressure on drainage systems. A substrate depth of at least 150mm will support vegetation and enhance water retention. Rainwater harvesting system will be integrated into the roof to collect water thereby reducing surface runoff and easing demand on local drainage systems. Where required, following detail review with the specialist contract , sustainable water storage tanks may also be installed to manage excess water. Further flood resilience measures include raised door thresholds, water-resistant materials, self-closing air bricks, and raised curbs to direct water away from the building during heavy rainfall. Sustainable Urban Drainage Systems (SUDS) , permeable tiles will be used for outdoor surfaces such as driveways and pathways, facilitating natural drainage and minimizing surface water accumulation.

The absence of basement dwellings eliminates the risk of basement flooding, while raised thresholds and flood-resistant barriers will provide added protection against water ingress. This integrated approach ensures effective water management while minimizing any negative impact on surrounding properties and drainage infrastructure.

2.0 Design Intent and Green Roof System Detail

Blue/green roof system, by skygarden or similar.

Green/blue roof typical detail



Domestic Green Roof systems types, by skygarden or similar.

3.0 Contextual Analysis

Flood Map

Environment Agency

Flood map for planning

Your reference	Location (easting/northing)	Created
<Unspecified>	**524973/185263**	**27 Sep 2024 12:14**

Your selected location is in flood zone 1, an area with a low probability of flooding.

You will need to do a flood risk assessment if your site is **any of the following:**

- bigger that 1 hectare (ha)
- In an area with critical drainage problems as notified by the Environment Agency
- identified as being at increased flood risk in future by the local authority's strategic flood risk assessment
- at risk from other sources of flooding (such as surface water or reservoirs) and its development would increase the vulnerability of its use (such as constructing an office on an undeveloped site or converting a shop to a dwelling)

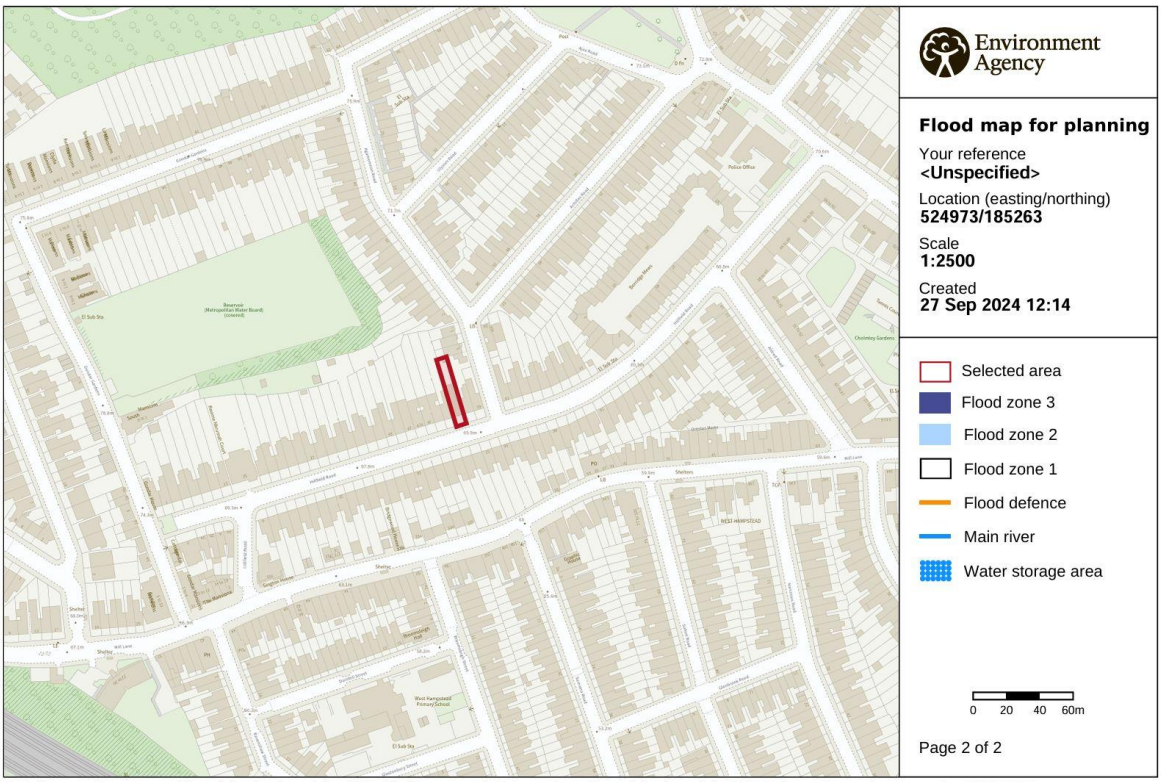
Notes

The flood map for planning shows river and sea flooding data only. It doesn't include other sources of flooding. It is for use in development planning and flood risk assessments.

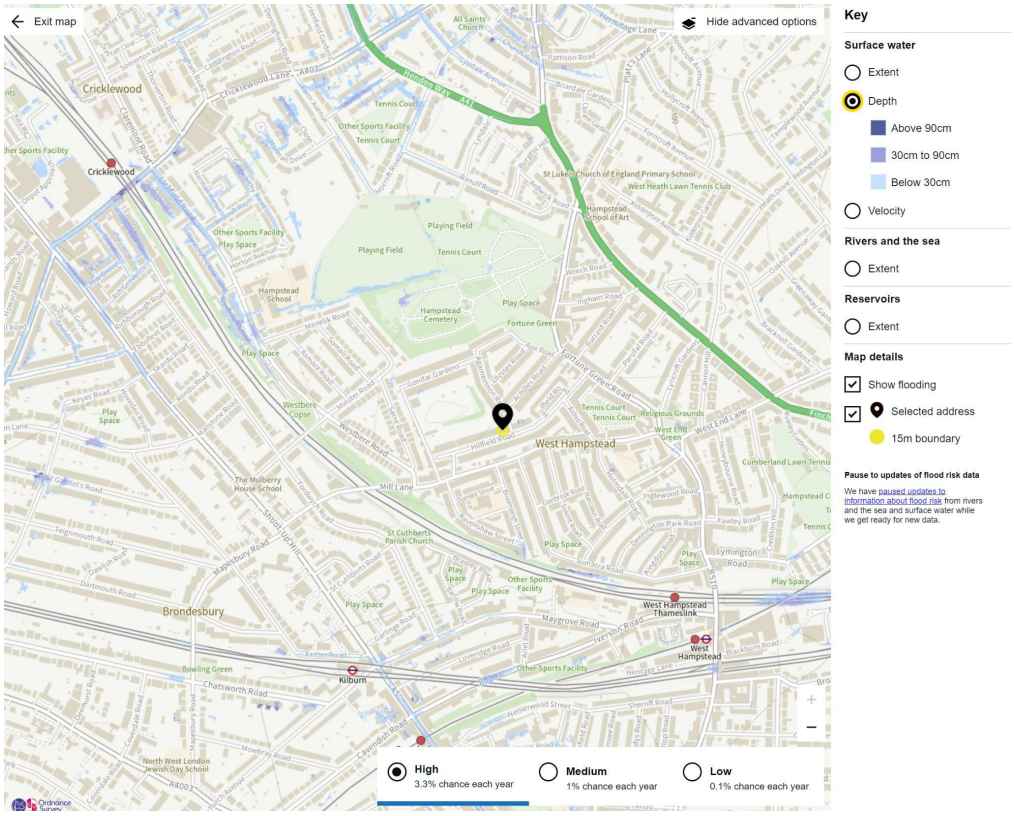
This information relates to the selected location and is not specific to any property within it. The map is updated regularly and is correct at the time of printing.

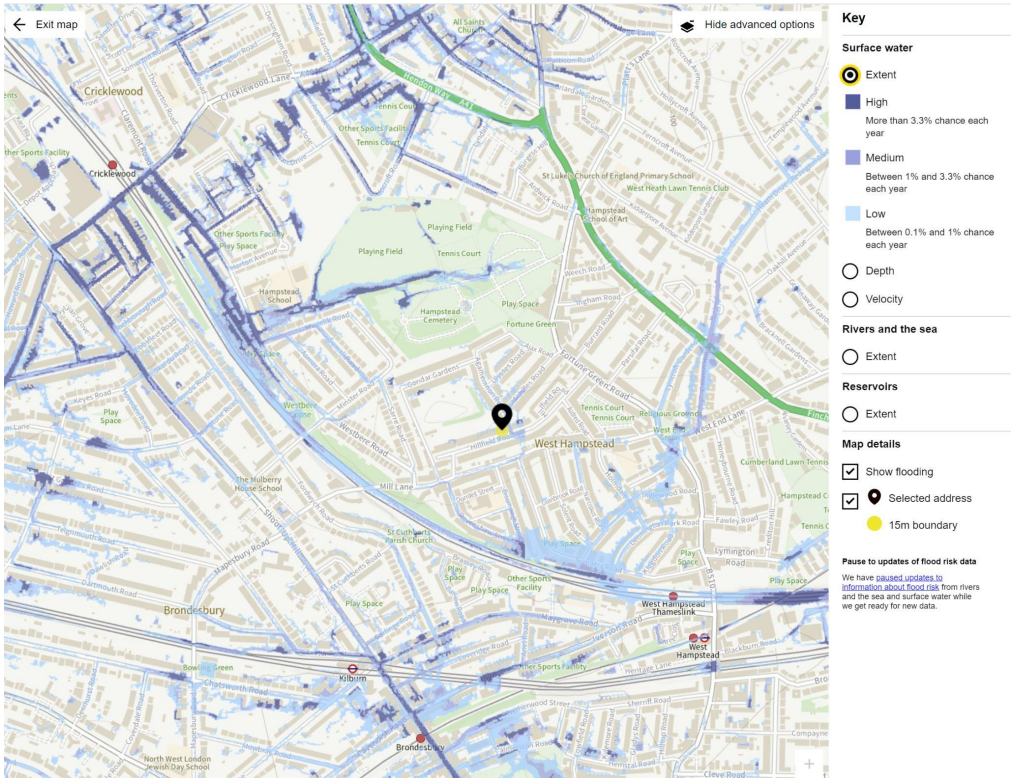
Flood risk data is covered by the Open Government Licence **which** sets out the terms and conditions for using government data. https://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/

The site is in a flood zone 1.



The current flood risk map on the government website does not specify flood depths. The area is not within any designated flood zone, so it is assumed that the risk is below the minimum threshold.





Maps source
https://check-long-term-flood-risk.service.gov.uk/map?easting=524976&northing=185254&map=SurfaceWater#