



The Daylight Lab

Design - Planning - Daylight & Sunlight Consultants.

FLOOD RISK ASSESSMENT

DECEMBER 2023, REF: 2362/FRA

APPLICANT:

Mr Gary Cleaver

SITE ADDRESS:

21 Castle Street
Dover
Kent CT16 1PT

AUTHOR:

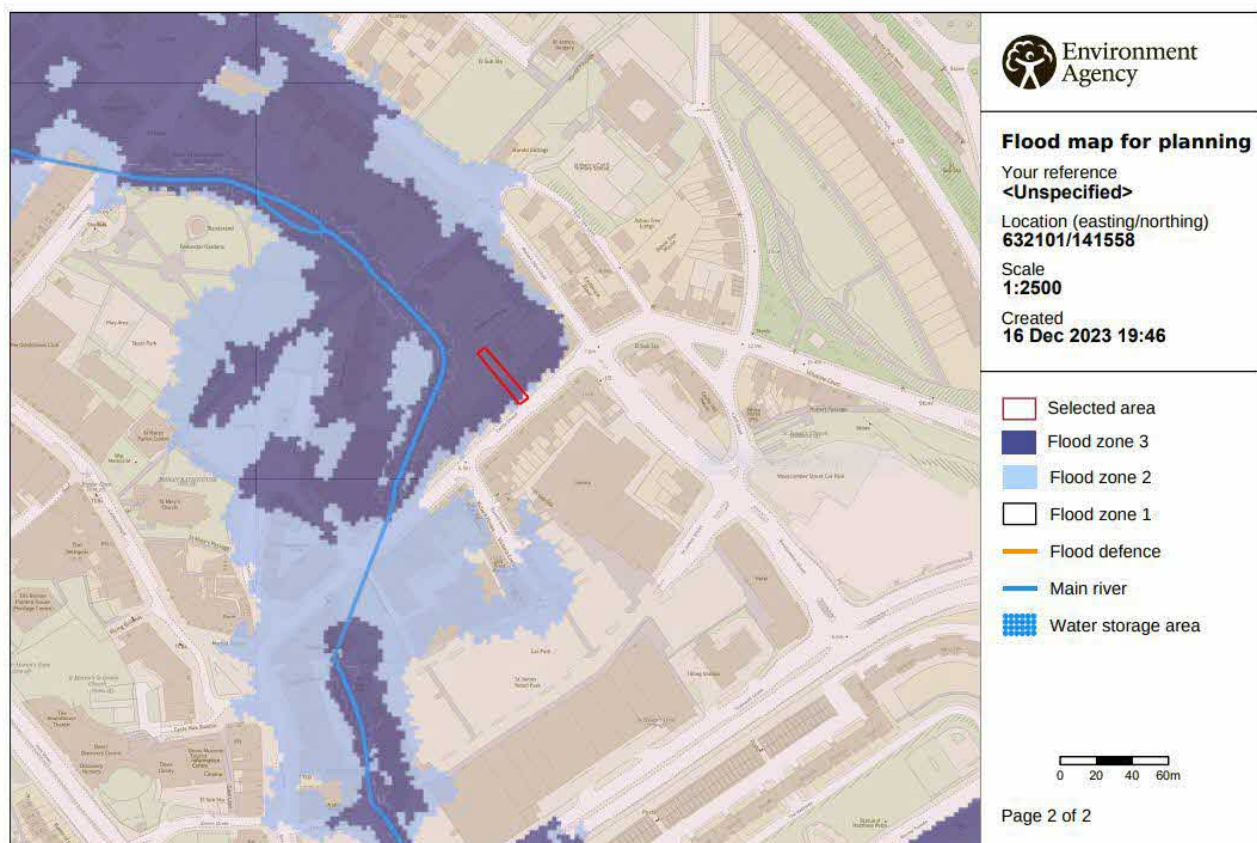
William Pottinger

REVISIONS:



1. Development Site & Location

- 1.1. The site comprises a Grade II listed mid terrace property over 5 stories, from lower-ground to roof, located at No.21 Castle Street, Dover, CT16 1PT. A location plan is included on the accompanying drawing 2213/TP01.
- 1.2. The Environment Agency Flood Map for Planning (Rivers and Sea) defines the site as being within Flood Zone 3, an area with a high probability of flooding. This comprises land which is assessed as having a 1% or greater annual probability of river flooding or 0.5% greater annual probability of sea flooding.
- 1.3. The River Dour runs approximately 55m away from the property to the east, and the English Channel lies approximately 340m away to the south.
- 1.4. Castle Street runs along the front of the site, elevated approximately 6.4m above sea level and falling outside of any flood risk zone. The upper-ground floor sits approximately 0.5m higher, at approximately 6.9m above sea level, and the lower-ground floor and garden sit approximately 2.2m lower, at approximately 4.2m above sea level.



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Figure 1. Environment Agency flood risk map.

2. Development Proposal

- 2.1. It is proposed to convert the property from office use back to its original use as a single family dwelling, therefore becoming classified as “more vulnerable”. Please see the accompanying

drawings “2361-TP-01-EXISTING PLANS” and “2361-TP-02-PROPOSED PLANS” for full details of the proposal.

3. Sequential and Exception Tests

3.1. The proposals are classed as a minor development involving a change of use, so sequential and exception tests are not required.

4. Site Specific Flood Risk

4.1. The site and surrounding land to the rear lies within the flood zone of the River Dour, however Castle Street to the front lies outside of any flood risk zone. As the upper-ground floor is raised above Castle Street by approximately 0.5m, it is determined that flood risk from the river only applies to the lower-ground floor level, which is at a similar level to the garden and land behind.

4.2. The risk of flooding from the sea is considered low due to Castle Street forming a natural flood barrier. Regardless, it is also concluded that any risk only applies to the lower-ground floor level for the reasons set out above.

5. Mitigation

5.1. Due to the building being Grade II listed physical measures such as raising floor levels or thresholds would be unsuitable.

5.2. Instead, the proposal seeks to mitigate risk to future inhabitants through providing the main living space at upper-ground floor which sits approximately 0.5m above the level of Castle Street, which is itself outside of any flood risk zone. Sleeping accommodation will be located at 1st floor level and above, and the basement shall be used for kitchen and home office use only.

5.3. In case of the need to escape the lower-ground floor during a flooding event, there is safe access to the upper-ground floor via an internal staircase that is open to the main entrance hallway (meaning there are no doors that can be locked or blocked shut along the route).

5.4. All electrical cables, sockets and switches within the lower-ground floor will be placed a minimum of 1m above floor level.

5.5. The boiler shall be located at upper-ground floor level.

5.6. Manholes at lower-ground floor level will be fitted with sealed covers and non-return valves fitted in all drains.

6. Conclusion

6.1. The proposal will not increase flood risk elsewhere.

6.2. The proposal will be safe for future habitation due to the elevation of all principal habitable space above the lower-ground floor, coupled with the various other mitigation measures listed above.



William Pottinger, The Daylight Lab, December 2023