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Flood Risk Assessment

78 Highertown,
Truro, TR1 3QD

For: Richard Pearce

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Contents

1 Introduction and Brief

1.1 Bailey Partnership (Consultants) LLP has been appointed by Richard Pearce to prepare a Flood Risk Assessment to re-develop an existing residential property at number 78 Highertown, Truro TR1 3QD.

1.2 The proposed development is to demolish the existing building and garage, which will be replaced with a new two storey building consisting of a ground floor and lower ground floor, along with re-landscaping the existing garden and driveway.

1.3 This site-specific flood risk assessment has been prepared to support the planning application to Cornwall County Council.

1.4 This FRA reviews the potential flood risk to the proposed development and identifies whether there are any flooding or surface water management issues that may warrant further consideration or may affect the feasibility of the proposed development. This FRA includes a qualitative appraisal of existing flood risk and potential impacts the development will have on flood risk elsewhere, along with possible measures to reduce flood risk.

1.5 This document has been prepared for the exclusive use of Richard Pearce unless agreed otherwise in writing by Bailey Partnership, no other party may use, make use of or rely on the contents of this document.

2 Site Description

2.1 The curtilage is located to the North of the A390, just East of Penwerris Road, Truro. The site address is 78 Highertown, Truro, TR1 3QD. The grid reference is SW80574486. A site location plan is provided in Figure 2-1.

Figure 2-1: Site Location Plan

2.2 The site is generally flat, and currently consists of an existing detached dwelling and garage.

2.3 The site has residential properties directly to the north, east and west, with access directly onto the A390 to south.

Existing Drainage

2.4 The details of the existing drainage system is not known at the time of writing this report.

2.5 South West Water sewer mapping was consulted, with the closest public sewers identified being an existing 150dia combined sewer running east approximately 120m to the east, and two dedicated foul sewers approximately 30-40m both to the north east and north west of the site. The SWWIM mapping can be seen in Figure 2-2 below, however the background mapping was not available at the time of writing this report.

Figure 2-2: Public Sewer Mapping (SWWIM Mapping)

It is therefore possible that foul drainage connects to any of the public sewers identified in Figure 2-2 via unmapped drainage. Surface water is possibly connected to the existing combined sewer in the east via unmapped drainage, but is more likely discharged via on site soakaways.

3 Proposed Development

3.1 The proposed development includes a new two storey residential building, with the lower ground floor being mostly subterranean. To the south of the property will be a new driveway - refer to Figure 3-1 below.

Figure 3-1 Proposed Development

4 Existing Risk of Flooding

4.1 The Environment Agencies' online flood risk mapping was consulted: Providing a general indication on the area's long term flood risk from rivers, the sea, surface water and reservoirs. The EA designates the risk according return period, as follows:

a. High: greater than 1 in 30 year (3.3%).
b. Medium: between 1 in 100 year (1%) and 1 in 30 year (3.3%).
c. Low: between 1 in 1000 year (0.1%) and 1 in 100 year (1%).
d. Very Low: less than 1 in 1000 year (0.1%).

4.2 The EA's flood risk for this site is considered to be Flood Zone 1 with a very low risk of flooding (less than 1 in 1000 year (0.1%)) and is summarised in this section below.

4.3 To our knowledge there are no records of historic flooding events on the development.

Fluvial and Tidal (River and Sea)

4.4 The EA online mapping shows a very low risk (less than 0.1%) of flooding from rivers or the sea. Refer to figure 4-1 below:

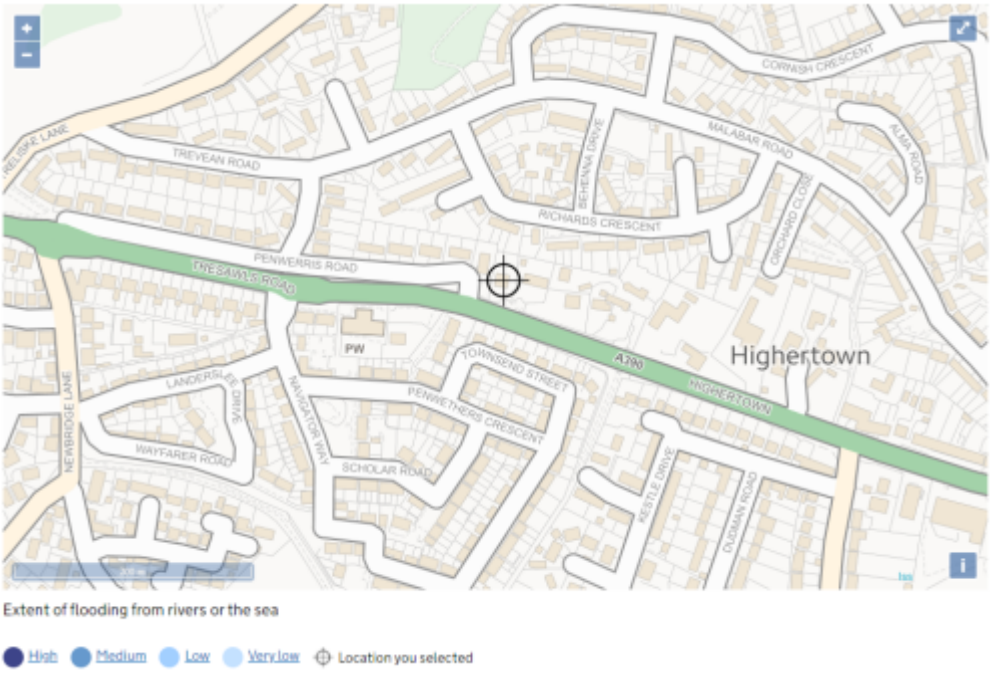

Figure 4-1 EA Flood Mapping (Rivers or Sea)

Surface Water Flooding

4.5 The EA online mapping shows a very low risk (less than 0.1%) of flooding from surface water.

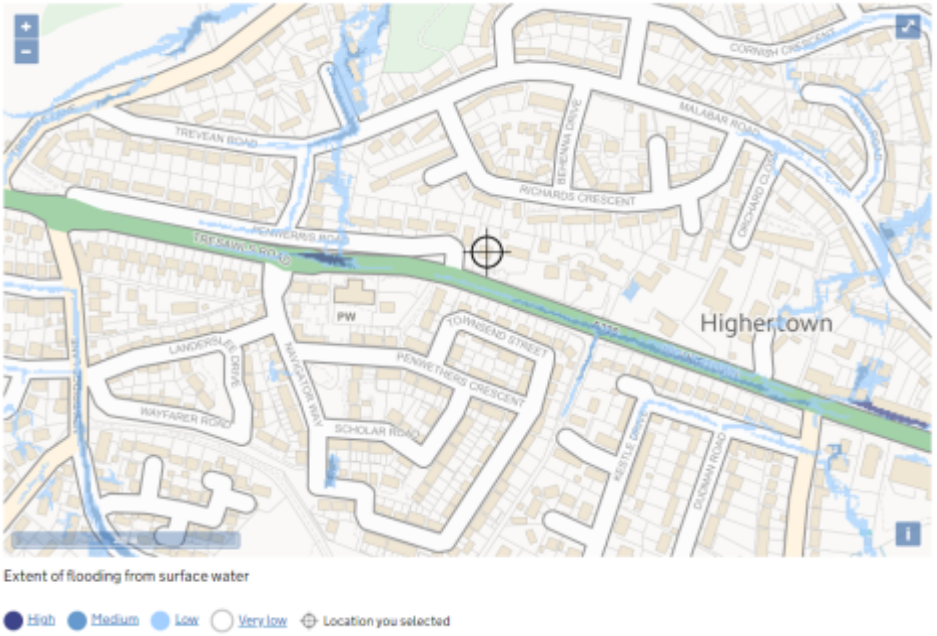

Figure 4-2 EA Flood Mapping (Surface Water)

Groundwater Flooding

4.6 EA flood mapping suggests there is no risk of flooding from groundwater.

Flooding from Infrastructure

4.7 EA flood mapping indicates there is no risk of flooding from reservoirs - refer to Figure 4-3 below.

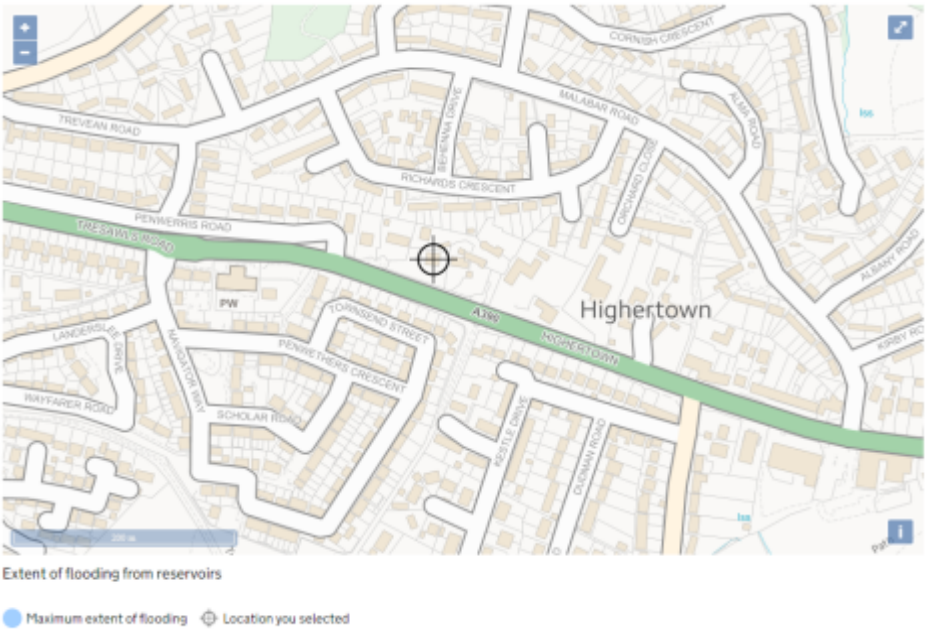

Figure 4-3 EA Flood Mapping (Reservoirs)

Critical Drainage Area (CDA)

4.8 The EA and Cornwall Council's Local Flood Risk Management Strategy identifies the area of Truro - Kenwyn, Allen and Tregolls Road as being a Critical Drainage Area (CDA). Based on their advice, all off-site surface water discharges from developments should mimic greenfield performance up to a maximum 1 in 10 year discharge rate. A copy of the CDA requirements is in Appendix A.

Summary of Existing Flood Risk

4.9 Based on the available information the existing site is considered to have a very low risk of flooding from all sources.

Flood Exceedance

4.10 In the case of system exceedance, flood water flows from the development would head South towards the A390.

5 Residual Risk of Flooding

5.1 Fluvial and tidal flooding - Based on flood risk mapping the proposed site has a very low risk of flooding from rivers and the sea. The flood risk to these areas will not be affected by the proposed works.

5.2 Surface water flooding - Surface water discharge should be controlled and discharged in accordance with the criteria outlined in the CDA requirements.

5.3 Flooding from sewers - There is no known history of flooding from sewers in the immediate vicinity of the proposed sites.

5.4 Groundwater flooding - EA mapping indicates no risk of flooding from groundwater flooding.

5.5 Flooding of adjacent and downstream sites - The appropriate management of surface water runoff will provide a betterment to the existing surface water drainage regime and will not adversely affect the risk of flooding on adjacent or downstream sites.

5.6 Flooding from reservoirs - EA mapping indicates no risk of flooding from reservoirs. This will not be affected by the proposed developments.

6 Conclusion

6.1 EA mapping indicates the development to be in Flood Zone 1 designated as an area at low risk of localised flooding from surface water.

6.2 Detailed drainage design will be carried out to comply with the overall criteria outlined in this Flood Risk Assessment, with supporting calculations and drawings to be issued to the Planning Authority, Cornwall Council and/or Environment Agency as part of the planning conditions process.

6.3 Sustainable urban drainage systems should be utilised where possible.

6.4 Separate systems for surface water and foul water discharge will be proposed.

6.5 The development proposals and surface water disposal principles outlined in this Flood Risk Assessment are not considered to create or increase the flood risk to the proposed, or adjacent sites.

Appendix A

Critical Drainage Area Information