

Technical NOTE

BDP.

Civil ENGINEERING

PROJECT Monmouth Health and Wellbeing Centre

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SUBJECT **Flood Consequence Assessment**

INTRODUCTION

The purpose of this technical note is to provide a brief summary of the flood consequence assessment for the new development.

SOURCES OF FLOODING

For the purposes of this assessment this has been broken down into the following potential sources:

- Flooding from Rivers and Sea; and
- Flooding from Surface Water; and

Additional information is required to assess against other potential sources such as groundwater.

Flooding from Rivers and Sea

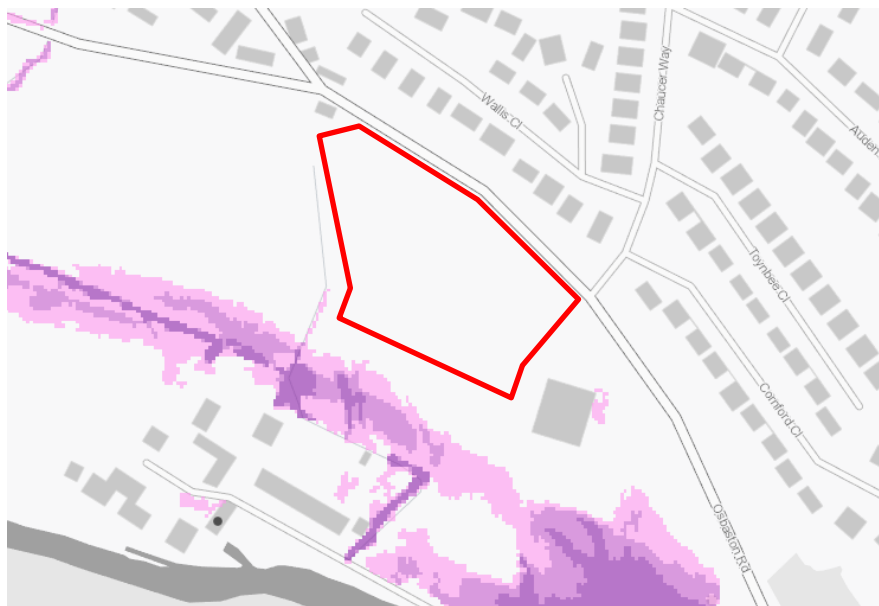
The River Monnow is located to the south of the site development and is classed as a Main River. This creates high, medium and low flood risk to the southern boundary of the site. This is in Flood Zone 3 which is noted as having a combined 1% risk of flooding from rivers and the sea including climate change. Any developments within this zone are only to be less vulnerable by exception or water compatible which for ease are noted below.



Less vulnerable development	<p>General industrial, employment, commercial and retail development.</p> <p>Transport and utilities infrastructure.</p> <p>Car parks.</p> <p>Mineral extraction sites and associated processing facilities (excluding waste disposal sites).</p> <p>Public buildings including libraries, community centres and leisure centres (excluding those identified as emergency shelters).</p> <p>Places of worship.</p> <p>Cemeteries.</p> <p>Equipped play areas.</p> <p>Renewable energy generation facilities (excluding hydro generation).</p>
Water compatible development	<p>Boatyards, marinas and essential works required at mooring basins.</p> <p>Development associated with canals.</p> <p>Flood defences and management infrastructure.</p> <p>Open spaces (excluding equipped play areas).</p> <p>Hydro renewable energy generation.</p>

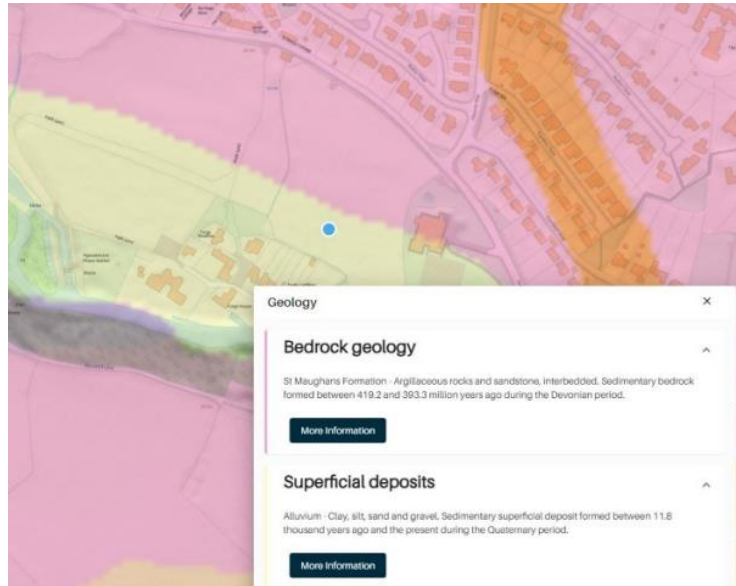
Flooding from Surface Water

As can be seen from the image below there is surface water & small watercourse flooding occurring outside the western and southern sections of the site proposal. Within the site itself no flooding occurs from surface water sources.



Additional Notes

It should be noted that the development is not in an area benefitting from Flood Defences. The site also has no flood risk from Reservoirs. The site has a superficial geology that consists of Alluvial Fan Deposits and is overlain by a bedrock of Sandstone. This would infer potential for infiltration to be utilised for the surface water drainage of the site.



Finally it is also worth noting the below image being recorded flood extents showing up to half the site having a recorded flood extent.



CONCLUSION

The southern portion of the site falls within the area at highest risk of flooding. The proposed development (healthcare building) is considered to be “highly vulnerable” so would not be acceptable to be located within this zone. However this area could be used for “less vulnerable” land uses, such as car parking and/or SuDS features/landscaped areas. We would suggest that raising levels should be avoided as the current topography forms part of the floodplain, and raising levels would mean having to provide an alternative area elsewhere as compensation for the removed floodplain.