

# Technical design note

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| Project name       | Ysgol Y Deri 2                             |          |   |
| Design note title  | Flood Consequence Assessment Addendum Note |          |   |
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| Date               | 27 January 2023                            | Approved | ✓ |

## 1. Introduction

This technical note has been prepared as an initial response to planning comments received from Vale of Glamorgan (ref: HE/SP/GTD/L5/1) in reference to planning application No. 2022/01113/RG3 Land at Lower Cosmeston Farm, Lavernock.

## 2. Planning comments

The planning response highlighted:

***“...we do not accept that the FCA demonstrates that, in respect of flood risk, the proposed scheme will offer a means of flood warning and evacuation as stated in the report. We therefore recommend additional information is requested demonstrating that surface water flooding of the access/egress to the site is acceptable for the proposed development.”***

## 3. Planning comments response

As mentioned in the Flood Consequences Assessment report (dated September 2022) and agreed within the planning response, the proposed development site is flood free. The element of flood risk that the planning response refers to is the historic flooding of Lavernock Road and Fort Road, which is outside of the development.

The section 19 report on previous flooding of Lavernock Road and Fort Road (due to be published March 2021) has not been issued at the time of writing. The planning response indicates that the Local Highway Authority have no immediate plans to improve the highway drainage in the area of identified flooding and any new highway works will be designed to the criteria contained in DMRB CG501, which stipulates the requirement of no flooding up to the 1 in 5 year event.

Additional work is required to determine potential depth, velocity, duration and frequency of potential flooding of portions of Lavernock and Fort Road in close proximity to the development site. The LLFA will be key to providing such information on recent flood events, in addition to NRW.

As there are potential instances of site users and visitors being on site during a flood event large enough to flood portions of Lavernock and Fort Road, a Hydraulic Modelling Assessment and Flood Warning and Evacuation Plan will be provided, and included in operational management plans, to provide guidance to site users and visitors in the event of a flood event.

The Hydraulic Modelling Assessment and Flood Warning and Evacuation Plan will include the following:

- » Summary of flood risk at the site;
- » Confirmation of any passive flood protection measures;
- » Proposed flood warning mechanism and procedure; and
- » Outline of recommended response by site occupants upon receipt of a flood warning, including recommended 'safe' evacuation route.

Details of warning and evacuation plans for the site and the hydraulic modelling results for the access/ egress will be developed, agreed and submitted prior to commencing construction and would detail the procedure to be followed once a flood warning or alert is received from NRW. This will ensure safe access and egress during the periods where the road may be flooded.

## 4. Summary

We conclude that the proposed development site itself, situated in Flood Zone A and as such is not at risk of flooding.

It is accepted that portions of Lavernock Road and Fort Road are subject to flood risk (as noted from recent flood events) and as such a Hydraulic Modelling Assessment and Flood Warning and Evacuation Plan should be produced for the site to mitigate that risk.

It is anticipated that the concerns of the planning authority have been managed by the confirmation that a Hydraulic Modelling Assessment and Flood Warning and Evacuation Plan will be produced prior to a start on site and these elements can be conditioned as part of any planning approval.

## 5. Further actions

Identified in the technical note are further actions that can be taken forward and conditioned as part of any planning approval, these are:

- » Undertake a Direct Rainfall Runoff Model to confirm risk to the site and surrounding areas. This will be undertaken for a wide range of events and will generate depth, velocity and hazard ratings for informing the FWEP,
- » Flood Warning and Evacuation Plan