

Maesteg and Llynfi Valley Regeneration Growth Area

Flood Consequences and Drainage Appraisal

02/03/2020

205261

Introduction

1. A Flood Consequences and Drainage Appraisal has been undertaken by Vectos to support the promotion of the Maesteg and Llynfi Valley Regeneration Growth Area.
2. The Technical Advice Note (TAN) 15: Development and Flood Risk and the Planning Policy Wales (PPW) document provide guidance regarding planning policy in Wales. Both the TAN 15 and PPW, advocate that developments should be steered away from areas of high flood risk and located into areas of low flood risk.

Flood Risk – Fluvial and Tidal

3. According to the National Resource Wales long term flood risk maps, the majority of the site is located in Zone A (see Figure 1) on the Development Advice Map (DAM). This is classified as a zone that is considered to be at little or no risk of fluvial or coastal flooding.

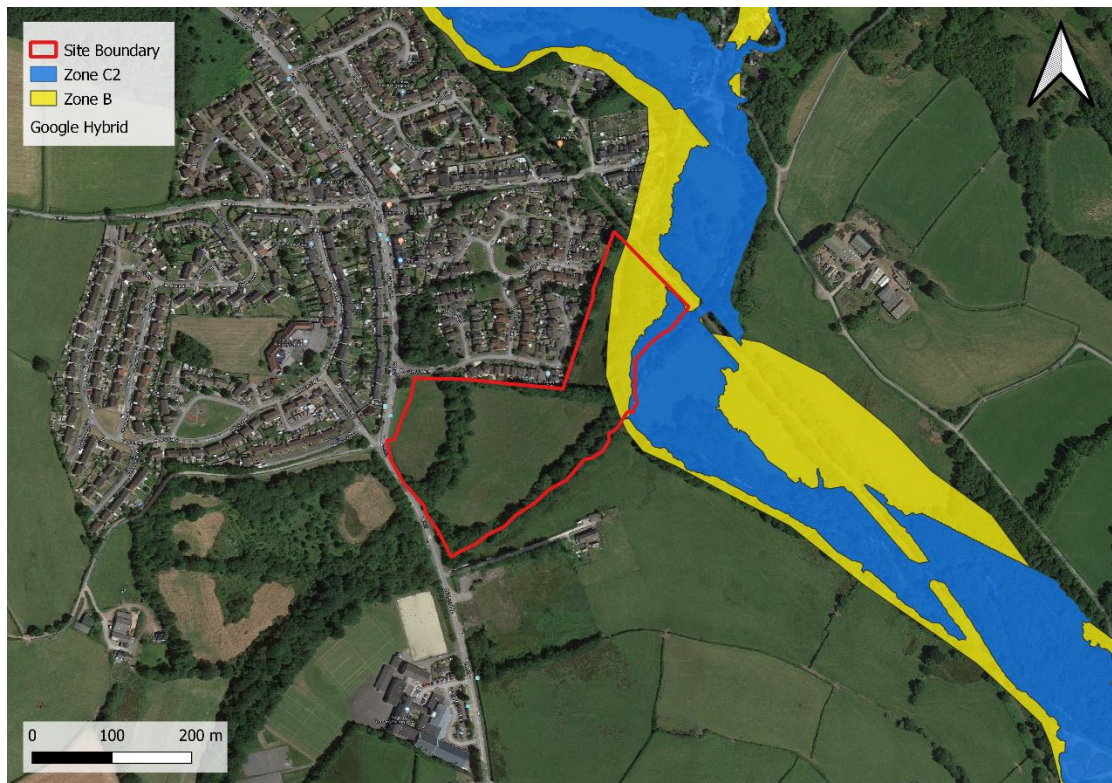


Figure 1: Development Advice Map showing Zone C2 and Zone B

4. The River Llynfi flows past the north-east site boundary. This results in part of the site being located in Zone C2 (land with a 1 in 1,000 or greater annual probability of river flooding without significant flood defences) and Zone B (areas known to have flooded in the past based on British Geological Survey (BGS) drift data). However, all development will be located within Zone A, which is in line with the requirements of PPW and TAN 15.

Flood Risk – Other Sources

5. Surface water flooding is a result of overland flow that can follow a rainfall event, before runoff enters a major watercourse or sewer, for example.
6. The surface water flood extents as shown on the National Resource Wales long term flood risk maps show that majority of the site is not affected by this source of flooding (i.e. very low risk, with an annual probability of flooding of less than 1 in 1,000). An extract of this is presented in Figure 2.

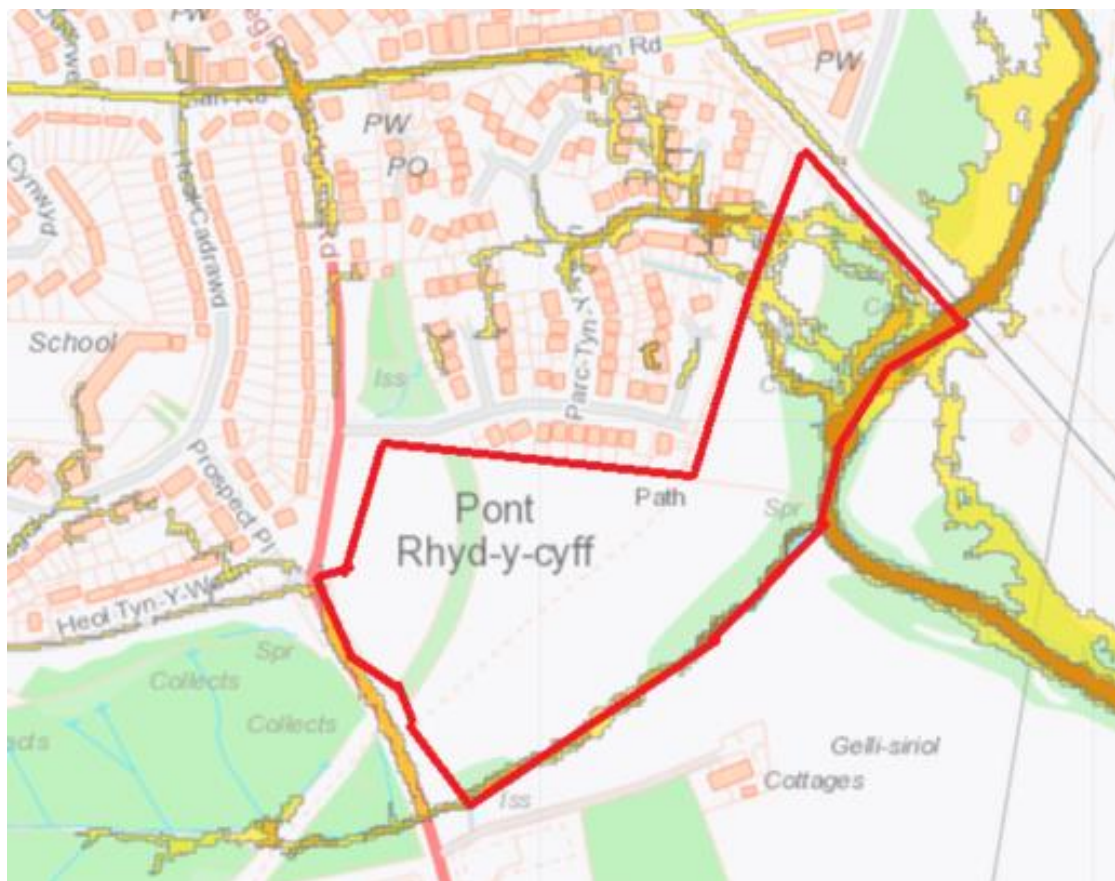


Figure 2: Surface water flood extents. Brown (high risk), orange (medium risk), yellow (low risk)

7. The north-east part of the site is also shown to be susceptible to surface water flooding. Several flow paths are shown that drain into the River Llynfi. As outlined previously, no development will be located in this part of the site and surface water flooding is not considered to be a development constraint.

Surface Water

8. In accordance with TAN 15, the proposed development must also result in no detrimental impact off site in terms of surface water runoff from the development. This would be managed via the implementation of Sustainable Drainage Systems (SuDS), which would be discussed in detail in a SuDS Approval Body (SAB) application.
9. Surface water will be disposed of in accordance to the Sustainable Drainage Hierarchy. This will be informed by a site investigation to determine whether infiltration would be an appropriate means of surface water management. Should this not be practical, it is likely that surface water will be disposed to the River Llynfi, following attenuation to greenfield rates.
10. It is considered that a SuDS strategy is deliverable on the site in accordance with the requirements of TAN 15 and the SAB.

Foul Drainage

11. It is proposed that foul water will be disposed of via connection into an existing public foul sewerage system currently serving the residential area to the north of the site.

Conclusion

12. The site is mostly located within DAM Zone A, and although parts of the site are in Zone C2, all development will be steered into Zone A.
13. Surface water runoff from the site will be managed using SUDS in accordance with the sustainable drainage hierarchy via restriction to greenfield runoff rates prior to discharge in the River Llynfi.
14. Given the above, from a flood consequence and drainage perspective, Maesteg and Llynfi Valley Regeneration Growth Area is capable of delivering development which is compliant with PPW and TAN 15.