

Settlement: Hoarwithy

Location of Investigation

Figure 1: Large Scale Map showing the location of Hoarwithy

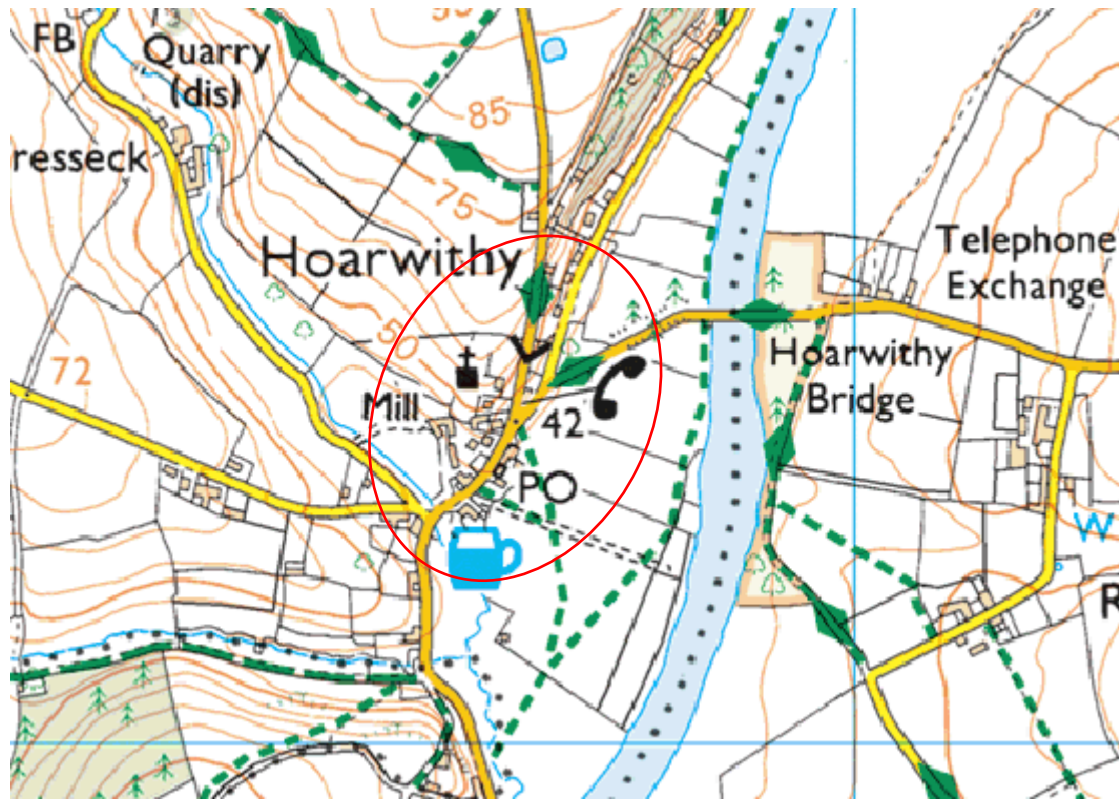
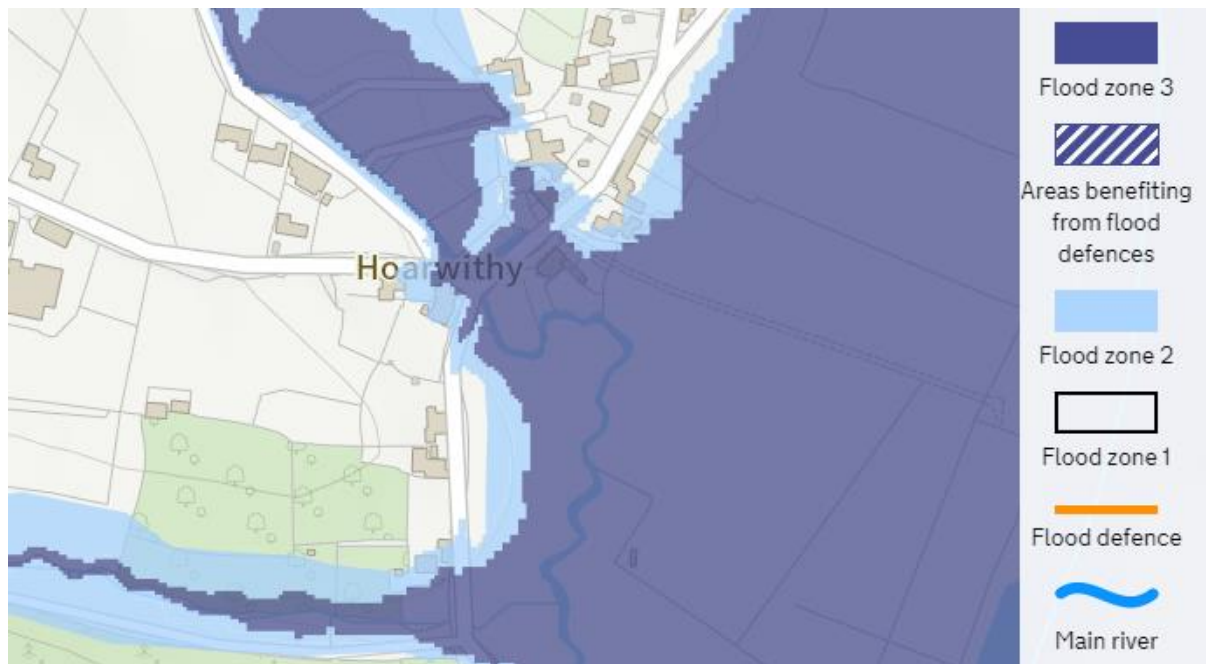


Figure 2: Environment Agency's Flood Map for Planning (Rivers and Sea), June 2021



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| Date of key flood event | February 16 th 2020 |
| Authorities with risk management duties or functions relating to the event | Herefordshire Council (Land Drainage Authority) Environment Agency |

Wiggle Brook is designated as an Ordinary Watercourse which therefore falls under the regulatory supervision of Herefordshire Council Land Drainage Authority. The River Wye is a Main River which therefore falls under the regulatory supervision of the Environment Agency.

Key Flood Event

Flood Type: Fluvial

Watercourse Catchment: Wiggle Brook is a tributary of the River Wye.

Seven properties recorded internal flooding in Hoarwithy during February 2020 with depths varying from 1ft to 5ft. One property experienced flooding in areas raised above external ground level and reached a depth of between 2ft and 3ft. The flooding duration recorded was between 1 and 4 days. There was one instance of basement flooding reported.

Previous flooding was noted by two properties. Herefordshire Council records for this location identify some history of flooding at this location.

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| Number of Internally Flooded Properties related to key flood event | 7 |
| Number of Internally Flooded Properties during most acute flood | 7 |
| Impact on Strategic Highway Network | None reported |
| Impact on Critical Services | None reported |
| Health Risks | No injuries or loss of life were reported |

Description of Flooding

All the properties that reported flooding are within or close to Flood Zone 3 and both respondents who provided information on the source of flooding indicated an overflowing watercourse (although one of these also identified a blocked gully). The only description of a flood mechanism provided by respondents, states that water from the river passed over the floodplain towards the property. This is also supported by the duration of flooding. Flood durations of up to 4 days are likely to indicate influence from a larger watercourse like the River Wye than from a smaller one such as the Wriggle Brook.

The River Wye is the primary source of flood risk in Hoarwithy. However, because the Wriggle Brook is aligned on a gentle gradient as it meanders across the River Wye floodplain downstream of the highway, water in the brook slows down. Reports indicate that during some types of storm, the highway culvert can surcharge causing water to spill across the road.

The flow capacity of the Wriggle Brook as it crosses the River Wye flood plain is governed by the level of the River Wye. During times of low flow, fluvial flooding from the Wriggle Brook is unlikely. Conversely the likelihood of the brook surcharging increases when the Wye has broken its banks or is in flood.

Residents have suggested that there may be some benefits in installing a swale across the flood plain. The benefits of any such works would need to be quantified. The swale could become inundated with

flood water from the River Wye, which could in turn reduce its' effectiveness. Gentle ground lowering over a wide strip is likely to have a better effect than installing a bypass ditch.

A site inspection in April 2021 identified that the bed level of the brook could be impeding the flow of water through the highway culvert, on the downstream side.

Anecdotal reports suggest that the Wriggle Brook presents a flood risk to three properties and causes nuisance flooding of the highway.

Damage to Cultural Heritage Sites: 1 listed property is within the Flood Zone.

Previous reports of floods

Prior to the 16th February 2020 flood, previous reports of flood were recorded as having occurred in 2007, 2012 and October 2019.

Previous Flood Risk Studies

None recorded.

Conclusions

The kerbs at the highway culvert could be lowered but arguably this would have marginal impact and it would make episodes of highway flooding more common.

The landowner has expressed a willingness to engage with the community to facilitate the installation of a swale. Funding would need to be raised to facilitate a flood alleviation scheme.

Herefordshire Council LLFA have identified a requirement to promote delivery of a feasibility study on the Wriggle Brook. DEFRA grant funding is being sought to undertake this feasibility study based on of the existing fluvial flood risk in the village of Hoarwithy. Further governance reports will be required prior to any formal application for funding.