

## Settlement: Brimfield

### Location of Investigation

Figure 1: Large Scale Map showing the location of Brimfield

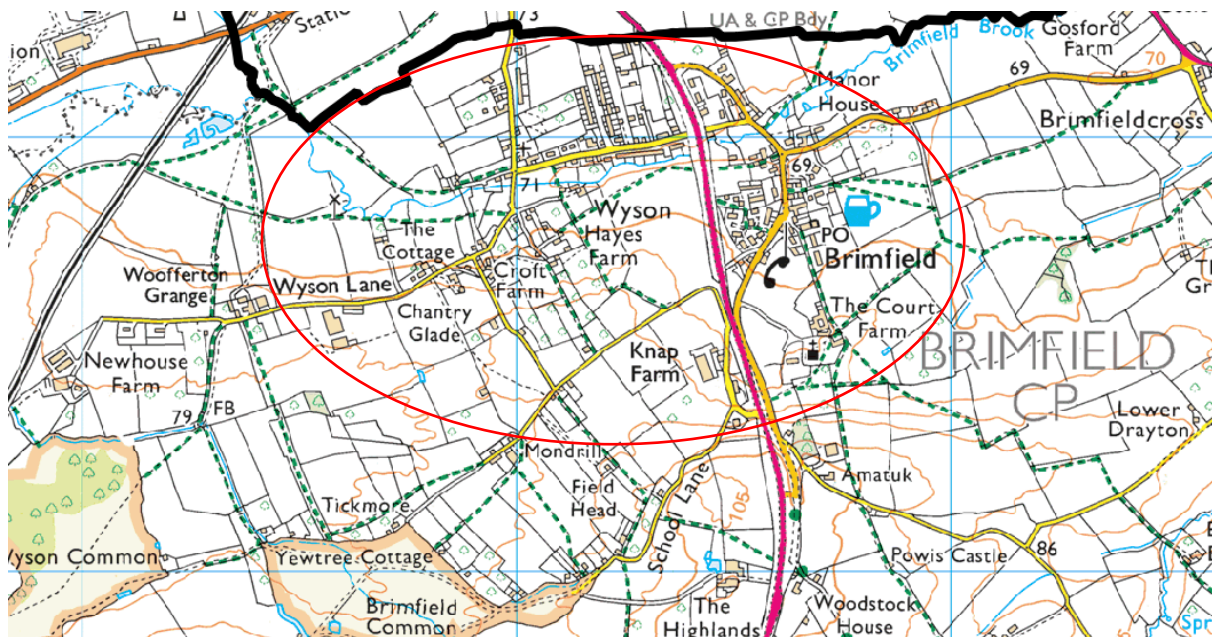
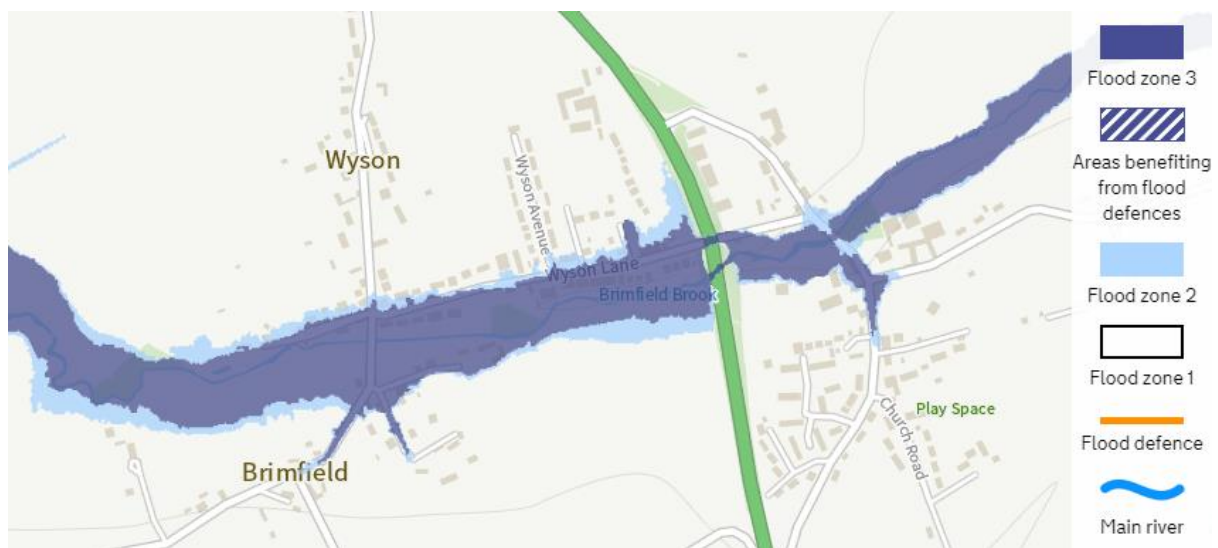


Figure 2: Environment Agency's Flood Map for Planning (Rivers and Sea), June 2021



Date of key flood event	October 26 <sup>th</sup> 2019 & February 16 <sup>th</sup> 2020
Authorities with risk management duties or functions relating to the event	Herefordshire Council (Land Drainage Authority)

Brimfield Brook is designated as an Ordinary Watercourse which therefore falls under the regulatory supervision of Herefordshire Council Land Drainage Authority.

## Key Flood Event

**Flood Type:** Fluvial

**Watercourse Catchment:** Brimfield Brook is a tributary of the River Teme.

Three properties in Brimfield are reported internal flooding during February 2020 and one recorded internal flooding in 2019. Depths of up to 3ft were recorded and lasted less than 1 day.

During the 2020 flood event a maximum of eight further properties experienced minor flooding in their garages only, but these garages are integral to the homes. The same 8 properties are recorded as flooding in 2007.

Sandbags were delivered to a property on 26th October 2019.

Herefordshire Council records identify an extensive history of flooding in this location, primarily in 2007. Herefordshire Council has previously undertaken flood investigations in Brimfield.

<b>Number of Internally Flooded Properties related to key flood event</b>	4
<b>Number of Internally Flooded Properties during most acute flood</b>	15
<b>Impact on Strategic Highway Network</b>	None reported
<b>Impact on Critical Services</b>	None reported
<b>Health Risks</b>	No injuries or loss of life were reported

## Description of Flooding

The Flood Map for Planning indicates that all the properties that flooded are within Flood Zone 3 of the Brimfield Brook. The Surface Water Flood Map does not show any significant areas of flood risk which do not coincide with areas of flood risk identified on the Flood Map for Planning. This indicates that the source of flood risk in the area is fluvial flows from the Brimfield Brook.

It is also noted that the Brimfield Brook discharges into the River Teme downstream of the village, so flood levels in the Teme may also contribute to flood risk in Brimfield.

The respondent who provided information on flood mechanism for the event in 2020 refers to the brook, but also suggests surface water from adjacent fields may be a factor.

The Herefordshire Flood Alleviation Strategy (2010) investigated flooding at Brimfield. There were several issues identified in that study, including constrictions in the channel of the Brimfield Brook. Following this report, a hydraulic assessment was completed to identify the impact of removing or upsizing a farm access bridge, it was concluded that the impacts would be minimal.

One property was affected by surface water runoff.

**Damage to Cultural Heritage Sites:** Out of 7 listed buildings within Brimfield, 1 is located with the Flood Zone.

## Previous reports of floods

Prior to the 16<sup>th</sup> February 2020, there have been records of flooding in 2007 and 26<sup>th</sup> October 2019.

## Previous Flood Risk Studies

Hydrologic Report (2009).

Herefordshire Flood Alleviation Strategy (2010).

WSP Flood Storage Calculations (2016).

Site visits to inform Natural Flood Management Works (2019).

## Conclusion

A hydraulic modelling study has not been carried out due to resource limitations. Flood storage calculations were however completed to quantify the scale of the storage that may be needed to attenuate flood water and reduce flood risk. The study focussed on earlier proposals to formalise flood storage adjacent to some Canal Syphons west of the village. The BBC masts site was also considered, the calculations indicated that the storage area would most likely need to be so large that it would become classed as a reservoir under the Reservoir Act 1975.

A Property Flood Resilience (PFR) scheme is to be undertaken and DEFRA grant funding has been secured for the surveys to be carried out this financial year. It is noted that two of the houses in the flood zone have already installed measures that have performed well during floods.

Natural Flood Management measures have been implemented on the Brimfield Brook that will slow down the runoff rate within the river catchment.