

Settlement: Llangarron & Llanwarne

Location of Investigation

Figure 1: Large Scale Map showing the location of Llangarron

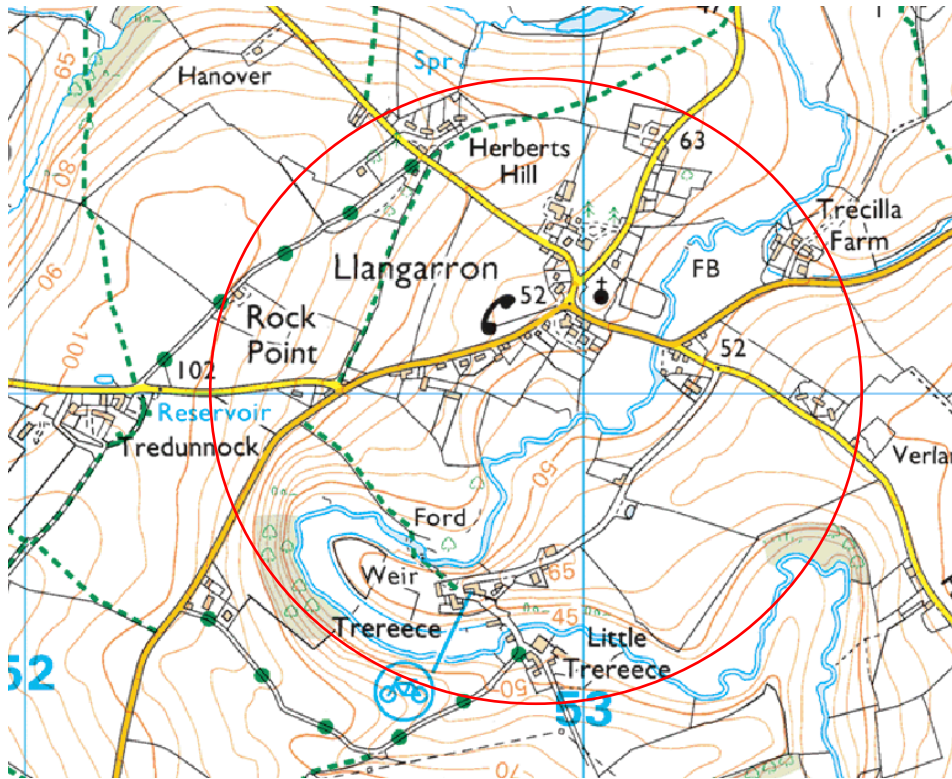


Figure 2: Large Scale Map showing the location of Llanwarne

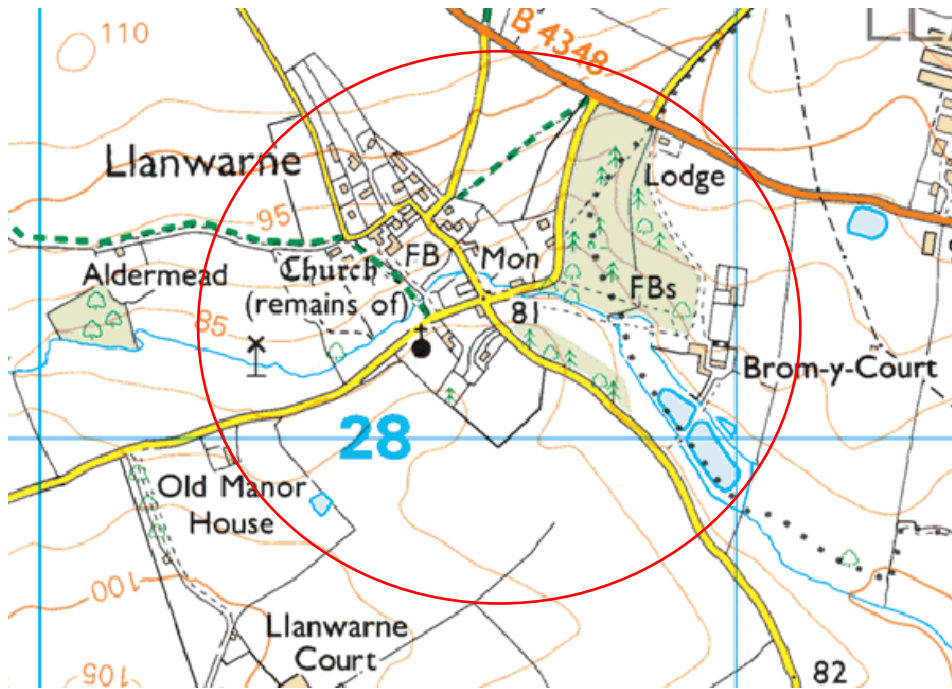


Figure 3: Environment Agency's Flood Map for Planning (Rivers and Sea) for Llanwarne, June 2021



Figure 4: Environment Agency's Surface Water Flooding Map for Llanwarne, June 2021

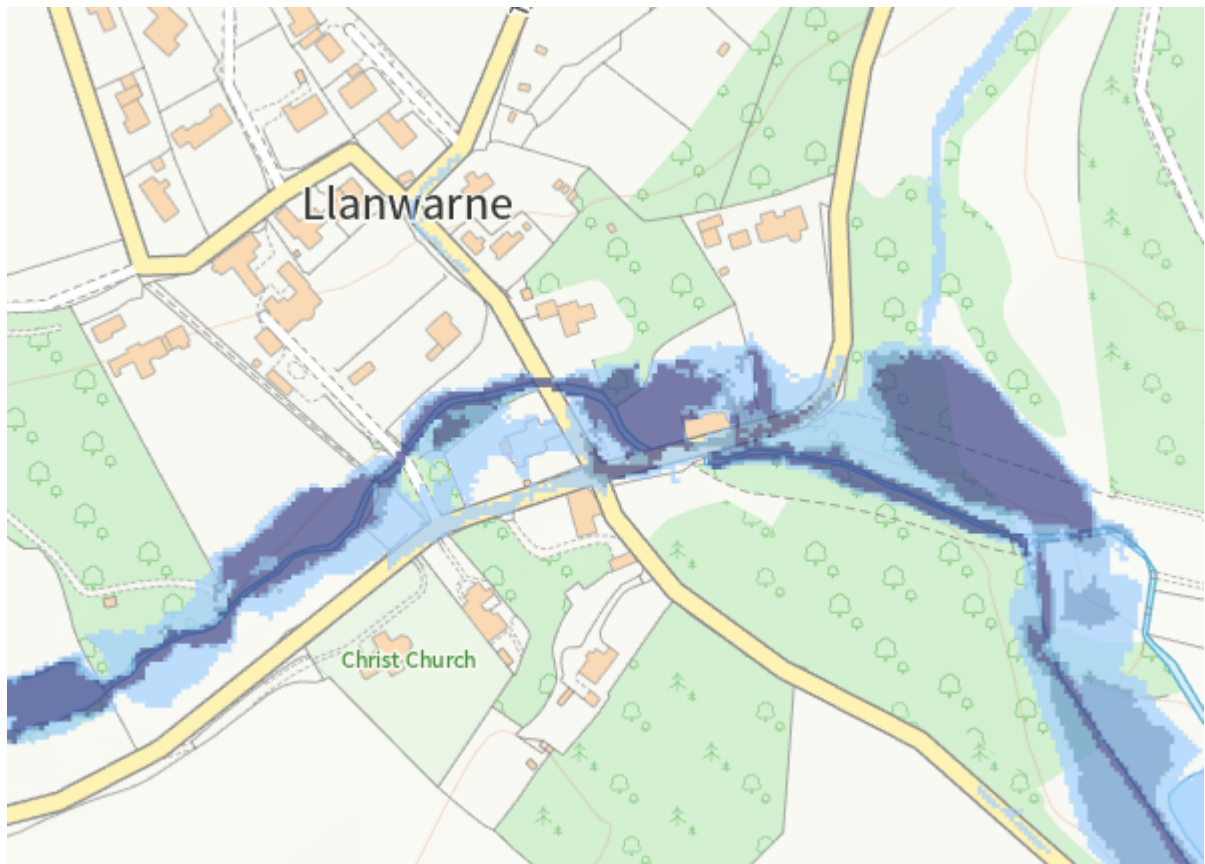


Figure 5: Historic Mapping circa 1888 showing a hydraulic ram driven by The Gamber

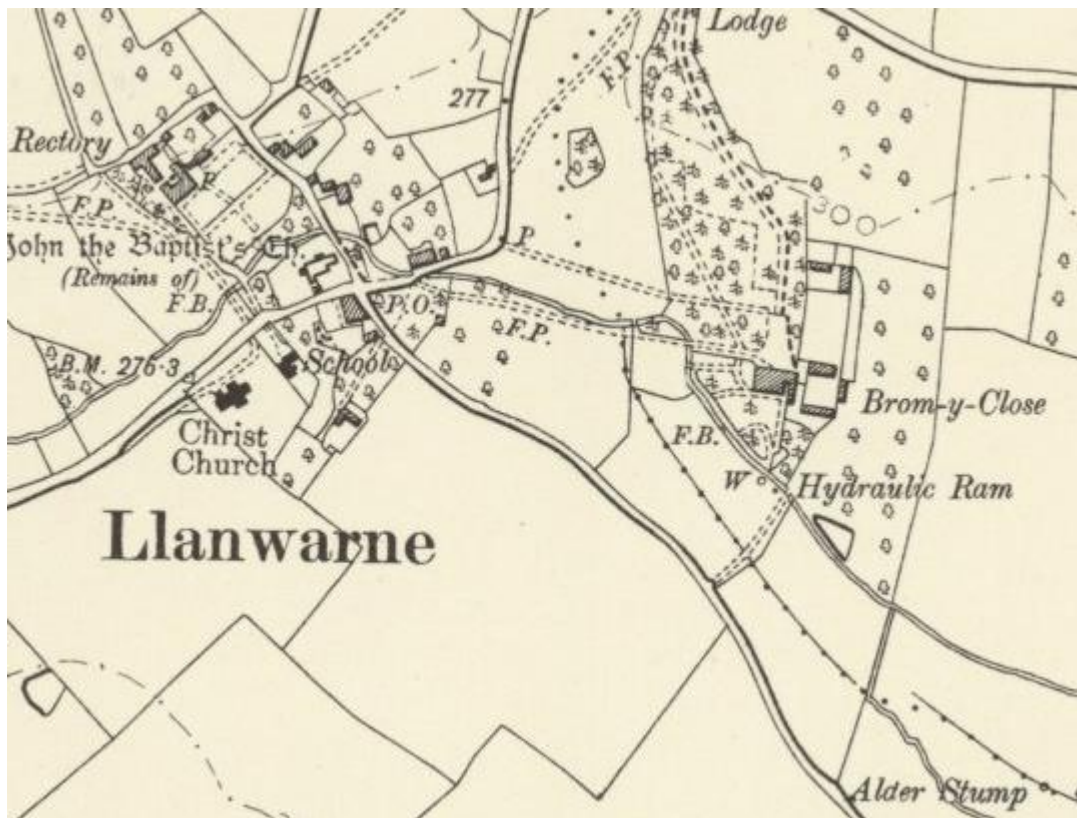
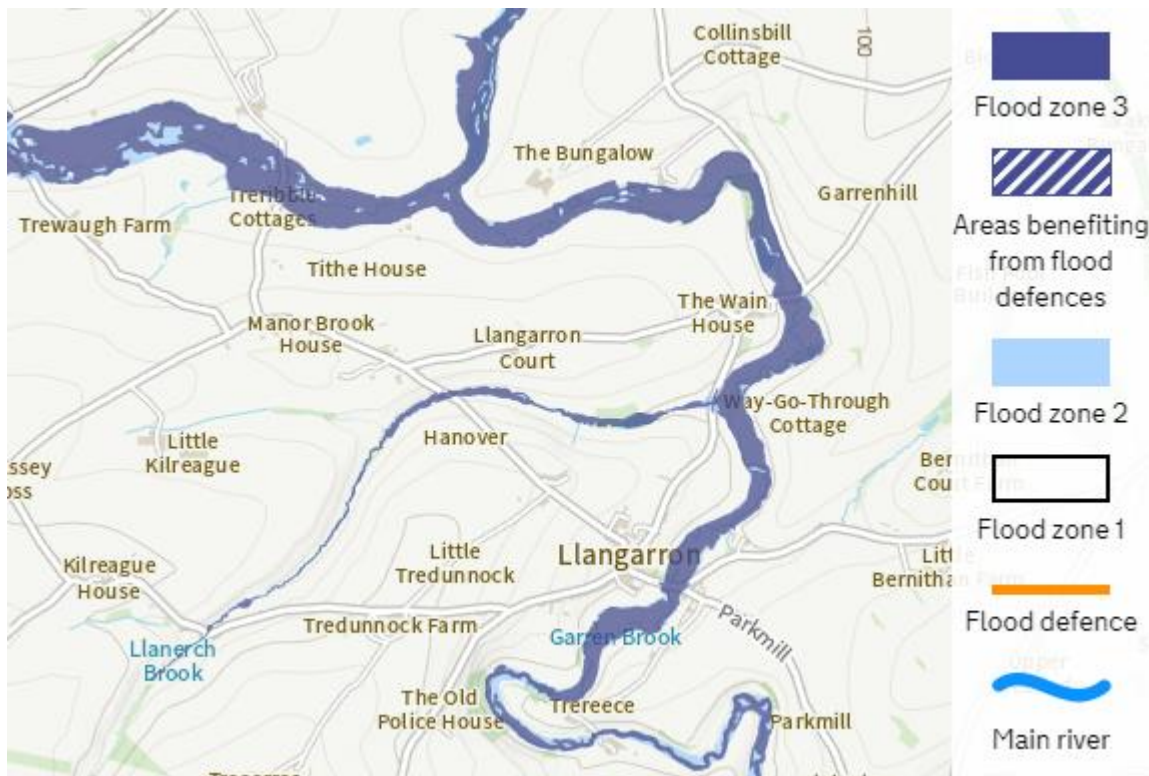


Figure 6: Environment Agency's Flood Map for Planning (Rivers and Sea) for Llangarron, June 2021



Date of key flood events	26 <sup>th</sup> October 2019 16 <sup>th</sup> February 2020 23 <sup>rd</sup> December 2020
Authorities with Flood Risk Management duties or functions relating to the event	Herefordshire Council (Land Drainage Authority)

The Gamber Brook is an upstream tributary of the Garren Brook. Both brooks are designated as Ordinary Watercourses which fall under the statutory supervision of Herefordshire Council Land Drainage Authority.

## Key Flood Events

**Flood Type:** Fluvial

**Watercourse Catchment:** Gamber and Garren Brooks

Fluvial flooding of two properties and a parish church occurred in Llanwarne, from the Gamber Brook. The flooding episodes occurred during each of the reported storms. The flooding lasted up to 6 hours.

There were four accounts of internal flooding from the Garren Brook, in Llangarron from the Garron Brook during the February 2020 event. One of these properties flooded in all three events. Flood depths were recorded as varying from less than 2ft to 4ft. Flooding was also recorded in gardens and outbuildings with depths of up to 5ft reported. The duration of the flood persisted up to 2 days.

One of the properties recalled previous flooding noting it as an annual occurrence with increased severity in the years 1990, 2006, 2015 and 2019. HC records some history of flooding in Llangarron but not in the vicinity of the two properties identified in the 2020 event.

Respondents ascribe the source of flooding to both surface water runoff and to an overflowing watercourse. Descriptive text is also provided identifying that the flood mechanism was a bridge which was unable to cope with the flows from the brook and that water backed up and flowed around a wall.

Fluvial flooding was also reported at a farm, from an upstream tributary of the Garren Brook.

There were also reports of internal flooding at one other property in Llanwarne, which is in Flood Zone 1.

<b>Number of Internally Flooded Properties related to key flood event</b>	9
<b>Number of Internally Flooded Properties during most acute flood</b>	9
<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 the properties which flooded internally in Llanwarne are adjacent to Flood Zone 3 of the Garren Brook. The Gamber Brook has been diverted for industrial purposes; accordingly floodwater can spill away from the watercourse when the brook breaks it's banks.

The Surface Water Flood Map identifies an area of flood risk which appears to be fluvial water flow route which passes by the property adjacent to the Garren Brook on the southern side. No other areas of flood risk are shown nearby other than those which coincide with watercourses or areas of fluvial flood risk.

The properties that flooded from the Gamber Brook are also in Flood Zone 3.

**Damage to Cultural Heritage Sites:** St John the Baptist Church is a listed property within the Flood Zone.

### Previous reports of floods

Prior to the flood events in February and December 2020, flood events have been recorded as having occurred in 1990, 1999, 2006, 2015 and October 2019.

### Previous Flood Risk Studies

There are no flood risk studies previously undertaken at this location.

### Conclusions

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