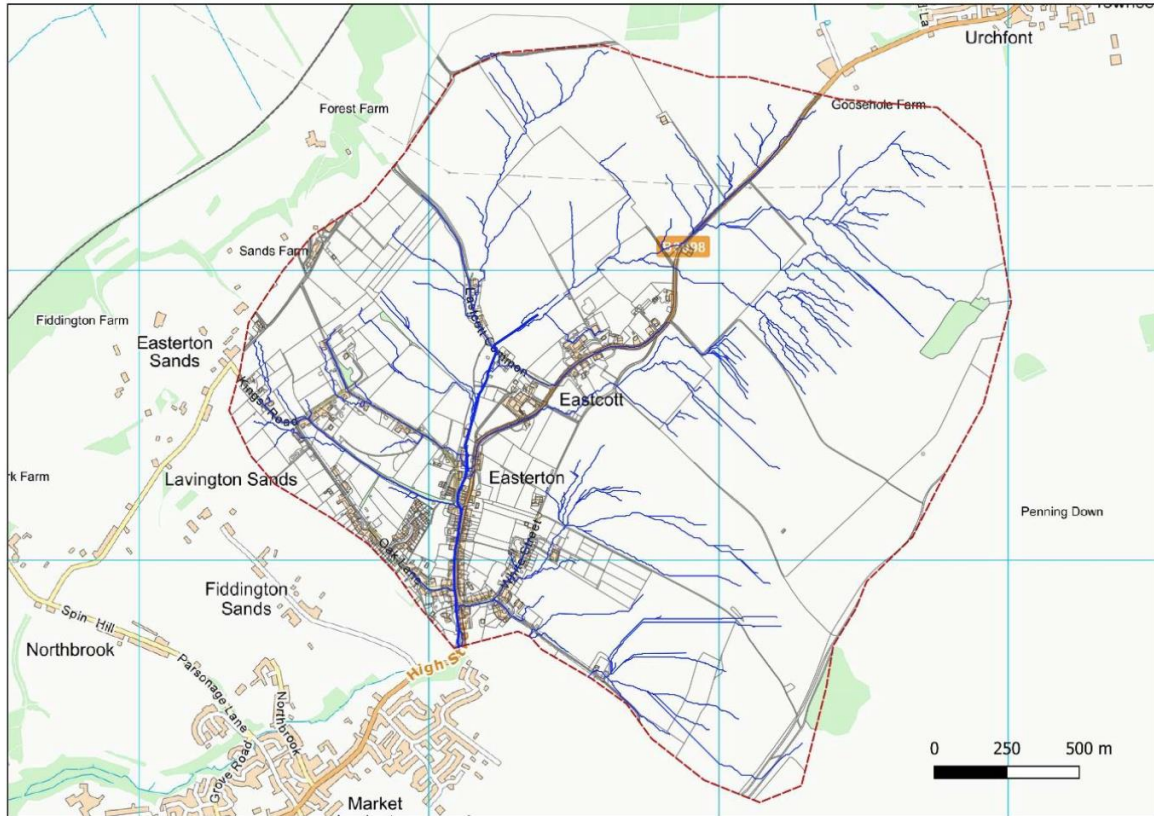


# Easterton Parish Council

## Flood Working Group

### Flooding Overview



*(runoff and flow pathways draining to Easterton Village)*

**Research into Local Government and Newspaper Archives has shown that flooding in Easterton happened 45 times in 55 years. Floods more serious than the 28th March event have occurred in the past and they will happen again!**

#### 1. The Catchment:

- The catchment is approximately 1000 Acres or 404.686 Hectares in extent.
- The geology of the catchment consists of Middle Chalk Lower Chalk and Upper Greensand. The majority of the catchment is Upper Greensand.
- The Catchment is primarily arable with areas of grass and a small amount of impermeable surface in the built up areas of the village.

- Highway drainage serves adopted roads but there are no surface water sewers and disposal of roof water is primarily by way of soakaways .
- The majority of the village has adopted foul water drainage but there are a number of areas which remain dependent on Septic Tanks. These are in Kings Road, Eastcott and the Clay.

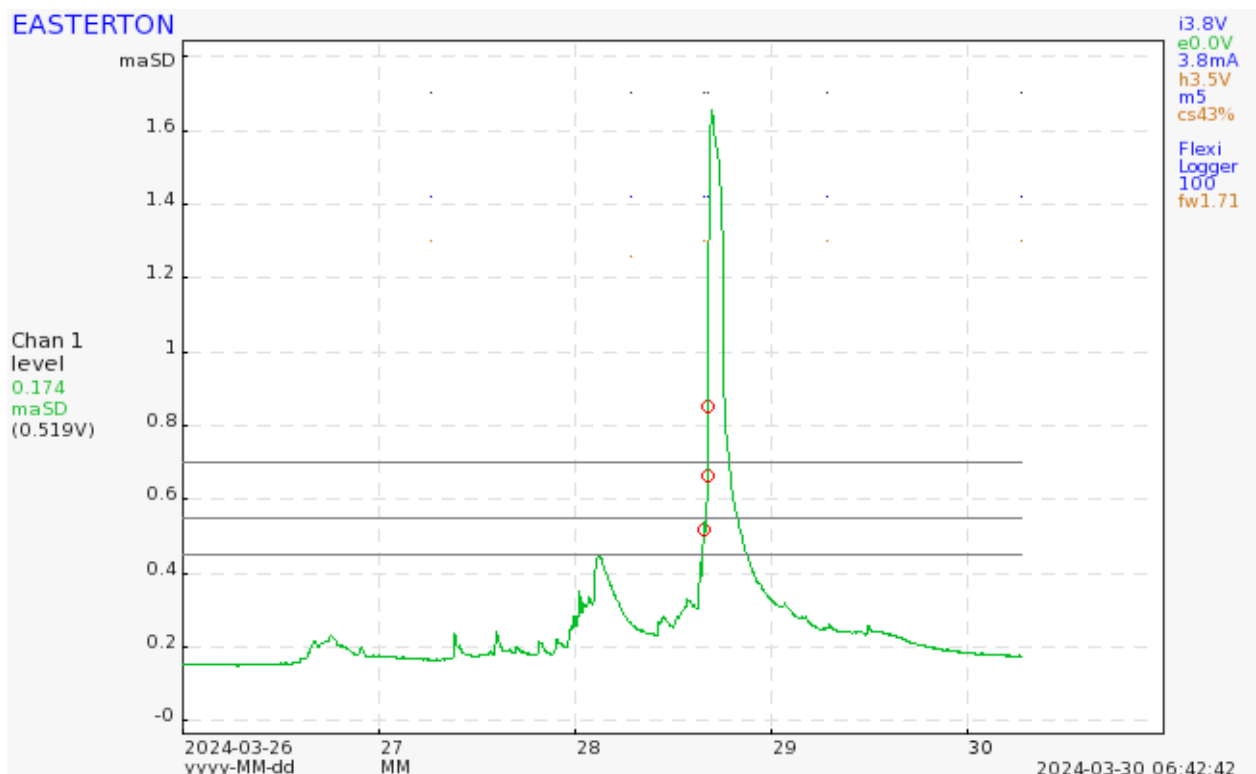
## 2. Storm Return Periods

Flood Defences are normally designed to deal with storms of particular return periods

The term "100-year flood" is used in an attempt to simplify the definition of a flood that statistically has a 1-percent chance of occurring in any given year. Likewise, the term "100-year storm" is used to define Rainfall Intensity. A rainfall event that statistically has this same 1 percent chance of occurring.

No detail records are available for the flood event on the 28<sup>th</sup> March as the Parish lost its power supply due to lightning strikes. Current Building Regulations Part H indicate that for a 1 in 100 year storm a rate of rainfall of 50mm per hour should be assumed.

## 3. Hydrograph 28<sup>th</sup> March Storm Representation.



This is not a true Hydrograph as the graph depicts depth rather than rate of flow. However, it is a good representation of the particular storm. The catchment was saturated and the

storm was of sufficient intensity and duration to overwhelm the capacity of the downstream pipe to be able to cope with the resulting flow.

This resulted in severe flooding to a number of properties in Eastcott Common.

#### **4. Black and Veatch Report**

This report considered a number of options. Two possible interventions at Eastcott Common were analysed. These were a 9000 M3 flood storage area and secondly a 6000 M3 flood storage area. If properly designed they would have the added advantage of trapping silt. This is otherwise deposited downstream of the Village Hall.

The flood storage areas would not begin to operate until the capacity of the downstream infrastructure was exceeded. The base flow and flows arising from 'normal' rain events would simply pass through the storage area.

The consequence of providing storage reduces the severity of flood events and will also reduce their frequency.

#### **5. Dr Peter Stone Report**

This report includes a number of recommendations. The first is to install relatively minor works, which are in effect leaky dams, upstream of Eastcott Common. These, together with some amendments to land use practices, would have two effects. Firstly they would hold back a certain amount of flood water and secondly they would reduce the peak flows from the catchment.

The second part of his report makes recommendations which are aimed at increasing or maintaining the capacity of the stream through the length of the High Street.

The land owners of the catchment above Eastcott Common have been informed of the proposals to create leaky dams and are 'in principle' supportive. They have understandably raised questions over the cost of construction of such structures and their long term maintenance.

It was hoped that the creation of leaky dams and other minor changes would have been funded via the Governments Farm Subsidy schemes. That appears to be uncertain at the time of writing.

#### **6. Recommendations**

The recommendations have been framed to recognise the various amounts of work and the relative costs of each of the options.

Those contained within Dr Stone's report can be achieved relatively quickly and at minimal cost, subject to the agreement of the land owners and financial support from the relevant statutory bodies.

The option to provide 9000 M3 of flood storage should be pursued and the Parish Council should request the EA and WC to revisit and update the Black and Veatch Report.

This will be a longer term project as the purchase of approximately 1 Acre of land will be necessary. The scheme would need to be included in the WC and EA capital programmes and arrangements made for the ongoing maintenance of the flood storage structures.

Without all the works included in the recommendations being put into place Easterton can expect similar floods to that which occurred on the 28<sup>th</sup> March 2024

## **7. The Future**

The criteria upon which the decision was made not to provide any form of substantial flood defence for the village has changed several times since 2010.

Not least, the government now recognises the implications of global warming and any flood defence project must allow for a 30% increase in rainfall intensity over the lifetime of any flood defence structure.