# Low Crosby

Location, development and flood history







# Where is Low Crosby?

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- Low Crosby is a village located about 7km north-east of Carlisle.
- The village is situated on the north bank of the River Eden.
- Low Crosby is located on the former Stanegate Roman road.
- Hadrian's Wall passes approx. 2km to the north, with Hadrian's Wall Path located within the village.

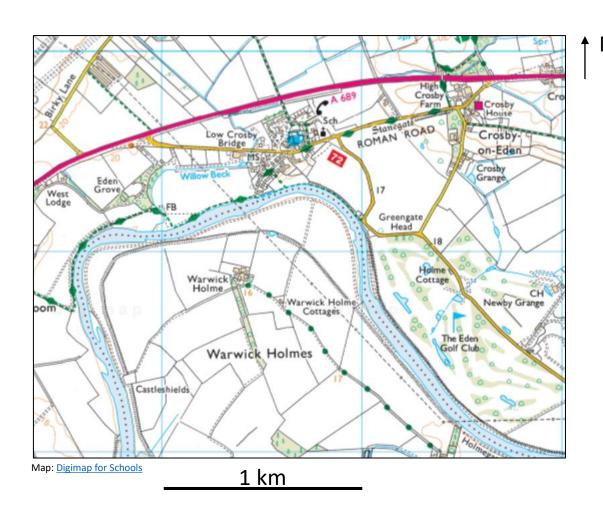
### ources:

- https://www.cumbria.gov.uk/eLibrary/Content/Internet/544/3887/6729/6733/4279482729.pdf
- https://www.postcode-info.co.uk/low-crosby-info-54219.html





## The Village of Low Crosby

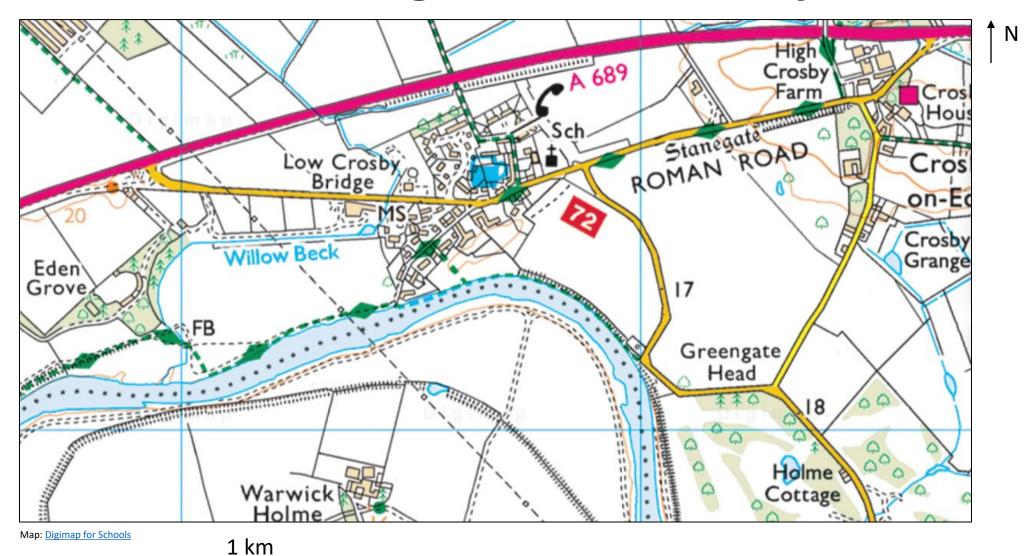


- Notice that the village is situated on flat ground on the north bank of a river meander.
- There is a small stream, Willow Beck, that drains land north of Low Crosby and discharges into the River Eden, west of Low Crosby.
- Willow Beck skirts the north and western sides of the village.
- Low Crosby is a residential village with no large commercial enterprises.





# The Village of Low Crosby







# **Low Crosby - flood history**



Source: Environment Agency

- There are 110 residential properties in Low Crosby.
- Low lying and situated on the banks of the River Eden, the village is prone to flooding.
- In recent decades, Low Crosby has suffered serious flooding in 1968, 1995, 2005 and 2009.
- In 2015, Storm Desmond caused severe flooding. Most recently, Storm Ciara caused flooding in 2020.





# Recent flood events affecting Low Crosby

| Flooding Event | Number of<br>Properties<br>Flooded | Peak Flow in<br>River Eden at<br>Sheepmount<br>(m <sup>3</sup> /s) <sup>†</sup> | Peak Flow in<br>River Eden at<br>Warwick Bridge<br>(m³/s) | Peak Flow in<br>River Eden at<br>Great Corby<br>(m <sup>3</sup> /s) | Peak Flow in River Irthing at Greenholme (m³/s) |
|----------------|------------------------------------|---|---|---|---|
| March 1968     | Unknown                            | 1200*   | 1104  | -   | 189   |
| February 1995  | Unknown                            | 950   | 812   | -   | 26  |
| January 2005   | >60                                | 1516  | -   | 1373  | 205   |
| November 2009  | 5                                  | 1029  | -   | 816   | 198   |
| December 2015  | >58**                              | 1680  | -   | 1490  | 229   |

<sup>\*</sup>based on an extrapolation, not directly from recorded data at this gauging station. \*\*58 in Low Crosby and more nearby.

Source: Cumbria County Council



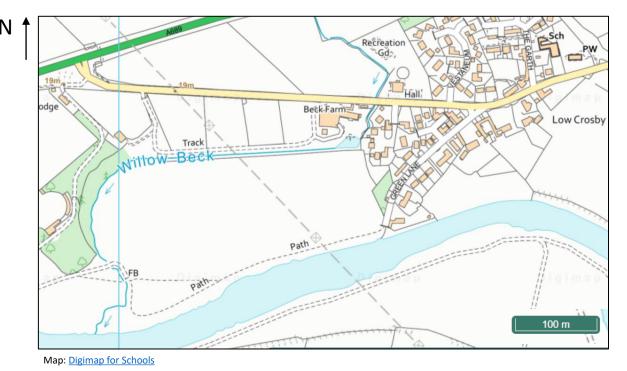


<sup>\*2007</sup> Viability Study by Jacobs

<sup>†</sup> Flows for past events taken from CEH National River Flow Archive <a href="http://nrfa.ceh.ac.uk/data/search">http://nrfa.ceh.ac.uk/data/search</a>

# Why is Low Crosby prone to flooding?

There are three main reasons why Low Crosby is prone to flooding



- 1. The River Eden overtops its banks during periods of exceptionally high flow (due to high rainfall/snowmelt).
- 2. During high flow, water from the River Eden flows up the Willow Beck causing the village to flood.
- 3. Surface water flooding following an intense storm or period of heavy rain.





# **Defending Low Crosby**



Source: Environment Agency

- Following the floods of 2005, a new defence scheme was constructed in 2009-11 to reduce flood risk.
- A 380m long earth embankment was constructed to the east of Low Crosby.
- This scheme included a sump chamber designed to accommodate a temporary pump. This is because the surface water drainage systems cannot discharge freely, so a pump is required.





## What happened in 2015?



Source: Environment Agency

- In December 2015, much of the UK was affected by a major storm, named by the Met Office as Storm Desmond.
- The flood level on the River Eden was 0.6m higher than in 2005.
- The 2015 event was of significantly greater magnitude than past events and the flow in the River Eden was the highest recorded.



