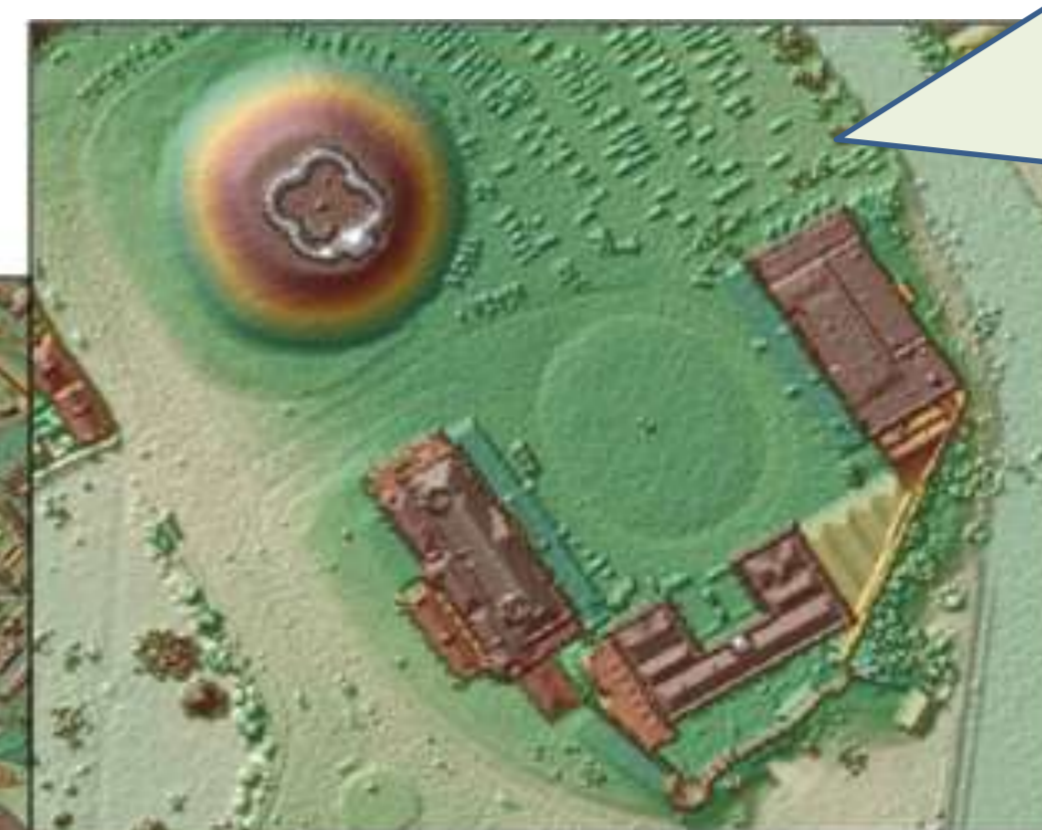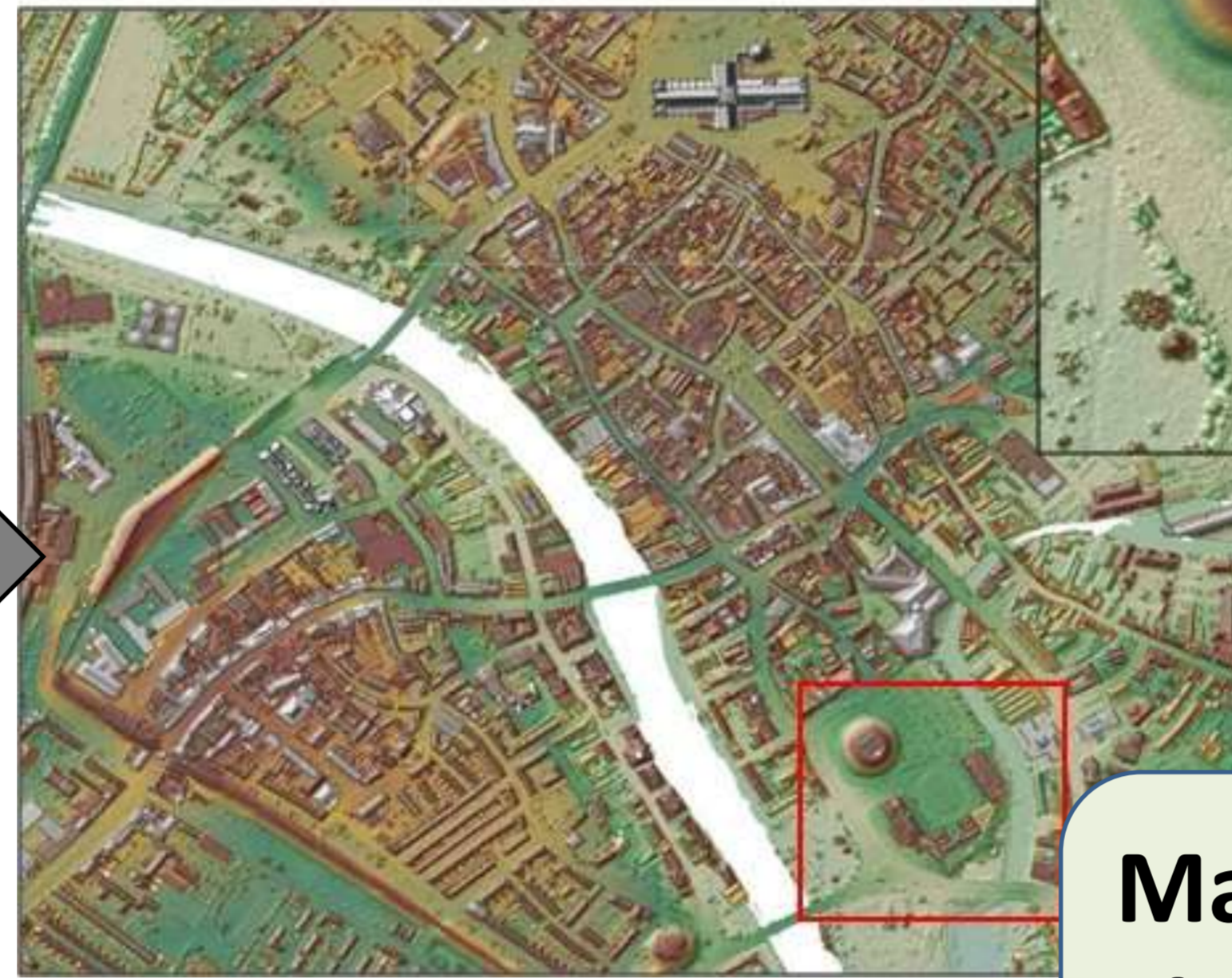# How do we make a flood map for rivers?

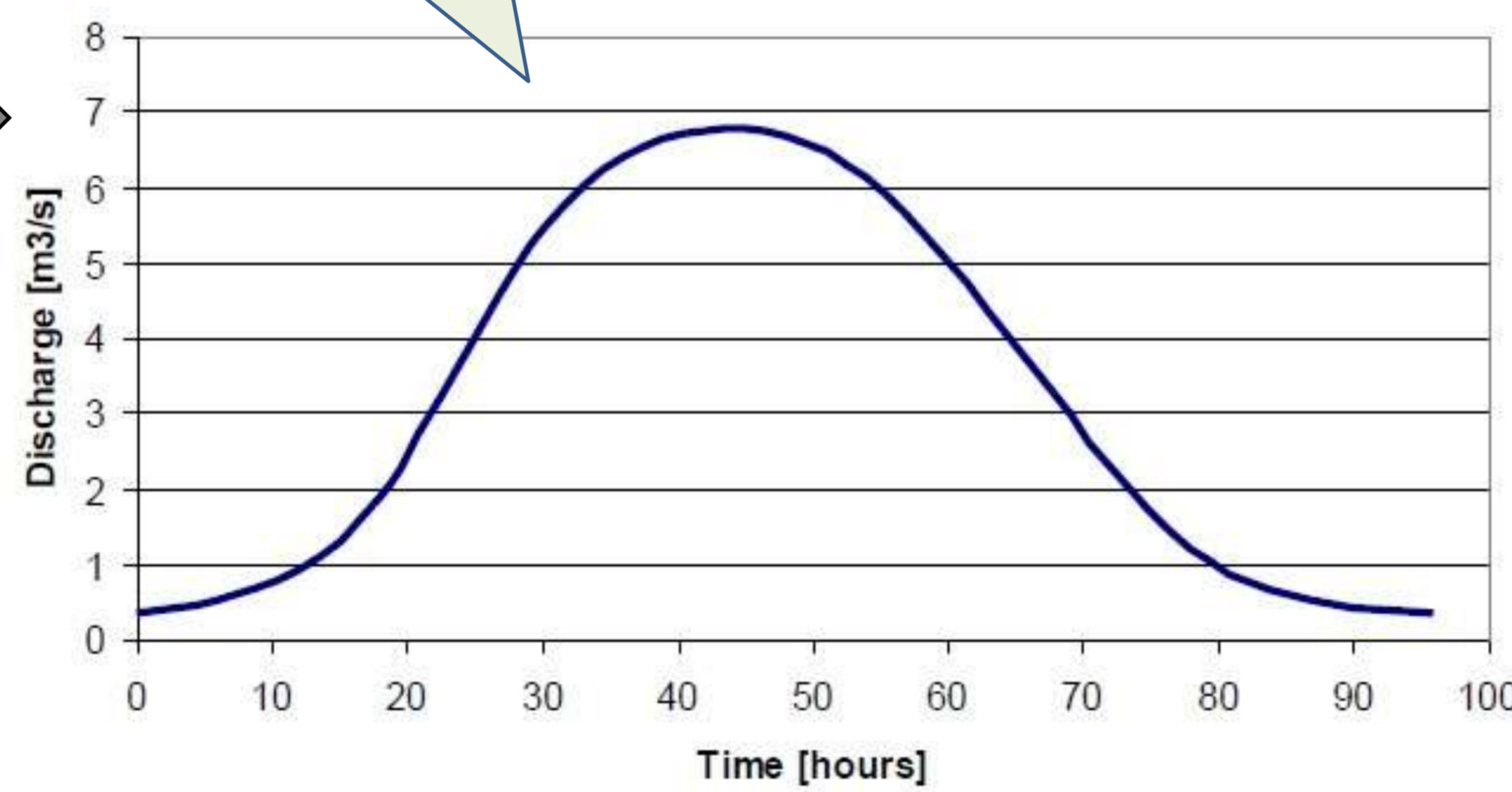We survey the area and create a 3D map of the floodplain

LIDAR images (3D digital images taken from the air)
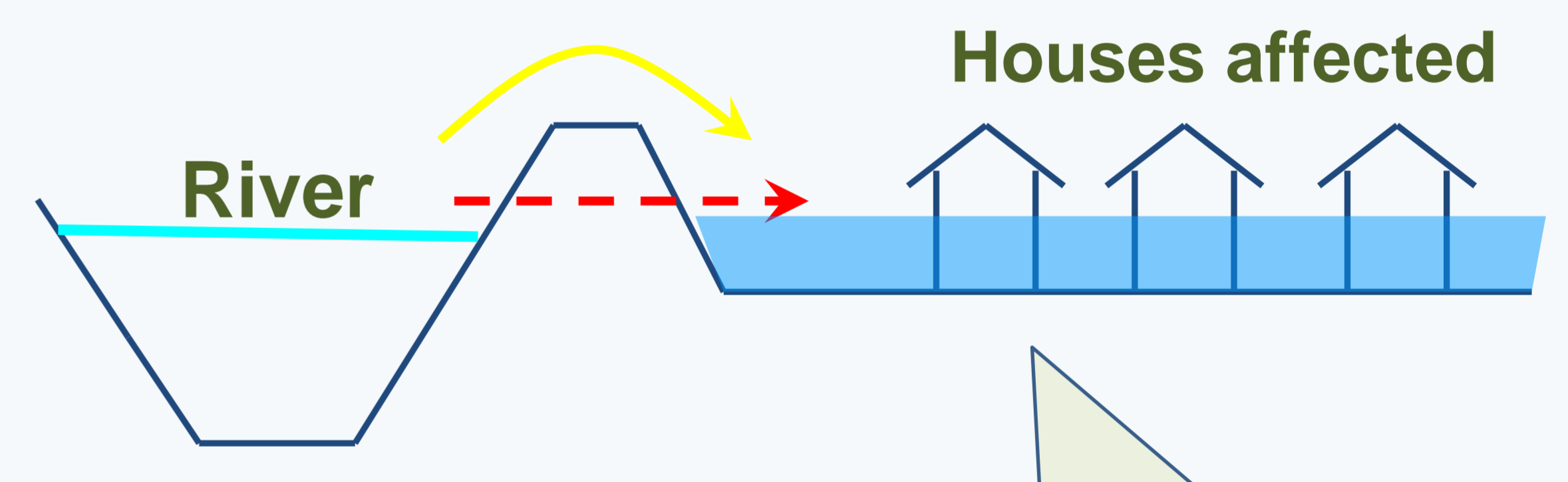
Manual surveys are done on rivers and floodplains

We build computer models that simulate water movement through a channel and across a floodplain.

Different amounts of rainfall are simulated in the models to see what the affect on the river height is.
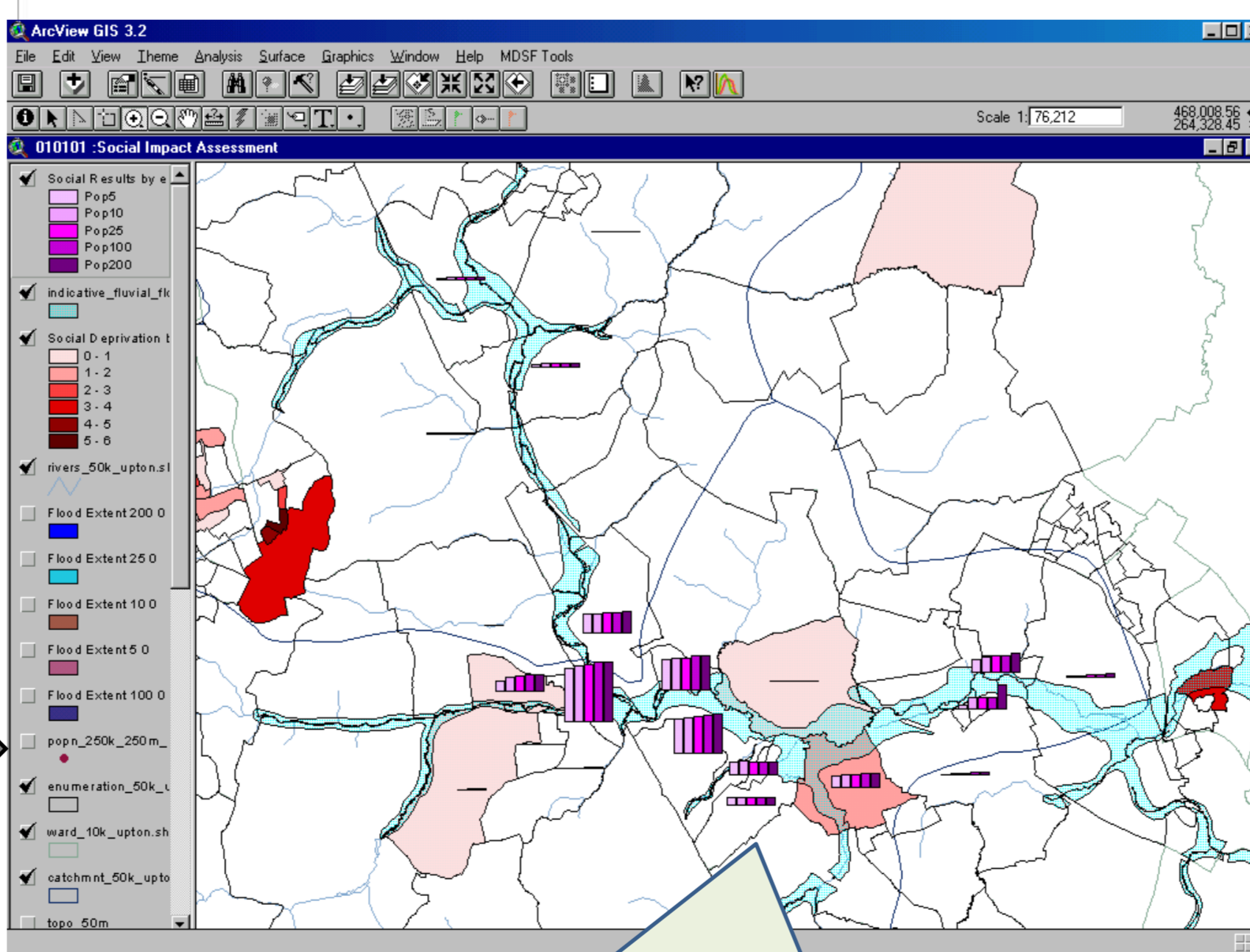
Route of the water

Houses affected

River

We model when the river is high enough to flow over banks or flood defences and flow towards houses.

The model outputs are used to create maps, which we check and publish.

Our maps show the annual chance or probability of a flood.

We do detailed verification of maps.