

Further information:

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Project Description number:

EVY0238

Project Type

Flood Risk/Consequence Assessment

Flood Forecasting

Detailed Design

Calibration & Optimisation

Flood Map Challenges

Scour & Geomorphology

Water Framework Directive

Environmental Impact Assessment

Training

Marine and Coastal

Key Words:

Flood Map Challenge

Flood Risk Assessment

Fluvial Modelling (ISIS-TUFLOW)

Client and stakeholders:

Oxfordshire County Council

Jacobs

East Witney Flood Map Challenge

Edenvale Young were commissioned to re-calibrate a model of East Witney to update the existing flood map and subsequently challenge a development scheme.



Illustration 1: East Witney flooding in July 2007

Project Details

This study was commissioned to investigate the flood risks associated with building an embankment across the floodplain for a road construction scheme.

The objectives of the study were to:

- Recalibrate an existing model,
- Use the re-calibrated model to determine flood risk,
- Use the results to investigate whether a road construction scheme was feasible in terms of flood risk.

The existing ISIS-TUFLOW model showed that the

floodplain was not at risk of flooding up to and including a 1 in 100 year flood event.

Re-calibration of the existing model was undertaken using historical flood levels and photographs.

The re-calibrated model showed that the floodplain is at risk of flooding, and even with drainage culverts below the embankment the road building scheme would not be feasible from a flood risk perspective.

The Sequential Test applied to the site resulted in the rejection of the scheme as it was located in Flood Zone 3b but not classed as essential infrastructure.