2D modelling to assess reservoir safety - Lamorbey Park

Objectives
- Assessment of the overtopping velocities and depth for the 0.1% AEP, 0.01% AEP, and PMF Events.
- Assessment of no. of properties protected by reservoir operation.

Model proving
- Current NFFS rating used to derive discharge coefficient at the outlet weir structure.
- No flow date recorded for high events, both current NFFS rating and model not validated.

Developing a terrain data
- A composite LiDAR (0.5m and 1m resolution) has informed the base model base elevations.
- Topographic survey used to update the composite LiDAR
  - Cross-section of the River Shuttle and River Cray
  - Lamorbey embankment.

Outputs
- Flow and water levels throughout the study area
- Distribution of velocities along the embankment

Key points
- HEC-RAS 2D was a robust model to perform the simulation of these larger events
- Developing of a terrain model using topographic survey. This was carry out using features built in the HEC-RAS software and other GIS and hydraulic model software
- Time for building the model was relative fast and short simulation time.
- More detail will need to be added if the model is used for flood mapping purposes for higher AEP% than those used in this assessment.