

## Flood Modelling

Glanville has extensive experience of completing site-specific Flood Risk Assessments (FRAs) which are fully compliant with the National Planning Policy Framework (NPPF) and regional Strategic Flood Risk Assessments (SFRAs).

Planning policy steers new development towards areas at the lowest probability of flooding. However, flood mapping published by the Environment Agency and Local Planning Authorities can often be produced without the benefit of detailed modelling, to a low degree of accuracy. This can suggest land is at a higher risk of flooding than may be the case in reality, which could restrict potential development opportunities and pose considerable difficulties in securing planning permission if such issues as flood mitigation / compensation, flood function and emergency planning cannot be agreed.

We have invested in state-of-the-art computer software and have developed the capability to undertake 1-D and 2-D flood modelling. Using primarily ISIS and TUFLOW we can produce models to accurately establish and understand the extent of flood risk. This allows us to develop flood management solutions to protect existing property and successfully promote schemes for development.

Our modellers are also experienced designers who can produce schemes which not only work technically, but can be delivered in practice.

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Structural Engineering



Civil Engineering



Transport and Highways



Geomatics (Land Surveying)



Building Surveying

## Flood Mapping & Channel Surveys



Glanville continues to work closely with the Environment Agency (EA) in support of its surveying and flood mapping activities. Projects have included extensive channel surveys, flood plain mapping and the establishment of Global Navigation Satellite System (GNSS) derived benchmarks and threshold levels.

As experts on the approved EA specification for flood and channel related surveys, Glanville is well positioned to provide a diverse range of public and private sector clients with robust survey data in a wide variety of formats for flood mapping, channel modelling and flood risk assessment purposes, including 3-D CAD models, 2-D cross-sections and user-specific ASCII formats, such as EACSD v3.2, ISIS and HEC-RAS.

Our surveyors are often called upon to establish robust ground level mapping for development sites, undertake hydrographic surveys of inland waterways and channels and assess silt levels in ponds, lakes and rivers. Recently Glanville has surveyed many locks on the River Thames, providing full 3-D CAD models and plans of underground services for use by EA facility managers.

The Geomatics team has invested heavily in the latest integrated surveying equipment and technology to enable these surveys to be undertaken more efficiently and more safely within these often harsh working environments.

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