

# Strategic Flood Risk Assessment (SFRA)

Arup is at the forefront of best practice in the assessment of flood risk.



## Strategic Flood Risk Assessment

Flooding issues can have a significant impact on the viability and masterplanning of our towns and cities.

The appropriate assessment of flood risk at each stage of the planning and development process is critical to sustainable development.

Arup is at the forefront of best practice in the assessment of flood risk. The expertise of Arup staff was used to produce both the Practice Guide to Planning Policy Statement 25 and CIRIA Publication C624: 'Development and flood risk: guidance for the construction industry'. The latter provides detailed guidance on the preparation of flood risk assessments in accordance with:

- PPS25 (England)
- TAN15 (Wales)
- SPP7 (Scotland)

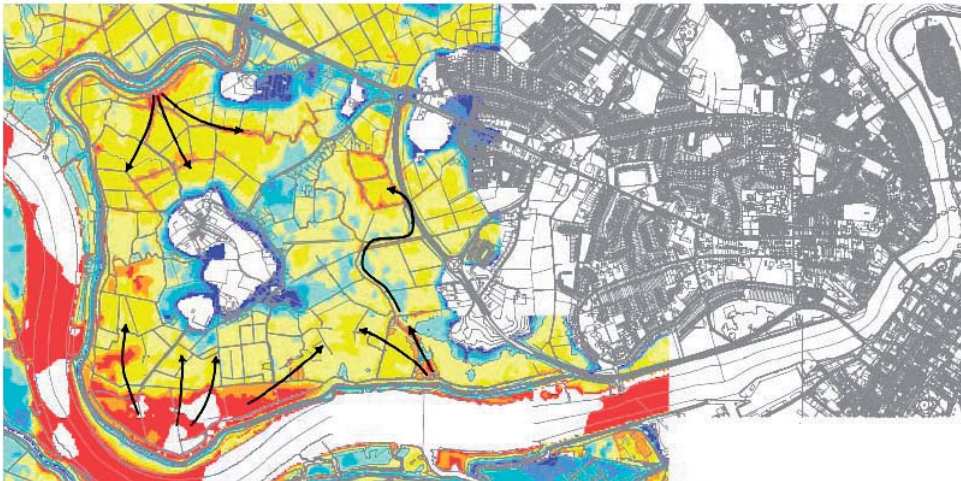
## Arup has a wealth of experience in undertaking Strategic Flood Risk Assessments (SFRA).

We can provide:

- An improved understanding of flood risk issues within the Strategic Area under consideration
- Strategic assessments of flood risk
- Advice to Planning Authorities on the implementation of the guidelines on 'The Planning System and Flood Risk Management' and ensure that Local Authorities are compliant with all relevant legislation and guidance.
- Specialist hydrological and hydraulic modeling expertise
- Production of Flood Hazard Mapping
- Design of mitigation measures to deal with flood risk to the area proposed for development and assess whether these measures can satisfactorily reduce the risks to an acceptable level while not increasing flood risk elsewhere
- Guidance on how surface water should be managed
- Sustainable development solutions
- Strategic Environmental Assessment

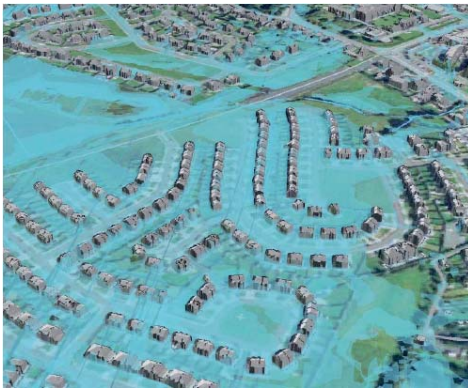


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## Caherdavin Strategic Flood Risk Assessment

Arup's SFRA gave Limerick County Council a greater understanding of flood risk issues when considering development in this area of Limerick. Flood risks due to tide (including overtopping and breaching), rivers, drainage systems and groundwater were assessed. A surface water analysis identified and sized suitable drainage measures. A flood storage strategy, addressing capital and maintenance issues, was developed with the Client.



## Mullingar Surface Water Management Plan

Arup were appointed to look into options for and the flood risk implications of the development of a 6km<sup>2</sup> area in the north suburbs of Mullingar. A LiDAR survey was commissioned to provide adequate definition for combined 1D and 2D modelling of the study area.



## NE Yorkshire Strategic Flood Risk Assessment

The SFRA maps risk from fluvial flooding, coastal flooding, overland flow, groundwater, and sewer flooding. Lidar data and modelled flood levels were used to produce flood depth maps in key settlements where future development pressure is anticipated. Rapid Inundation Zone maps were also produced to show breach risks. Arup developed guidance to promote consistent decision-making with regard to flood risk for areas identified for future development.



## Thames Estuary 2100

The flood risk assessment and management plan for London and the Thames Estuary takes account of the existing and predicted future assets estimated in the trillions of euro and a population of over 8 million people. The diverse nature of land use in the city required extensive assessment. The plan had to be sustainable, inclusive of all stakeholders and address the issues of a changing climate and varying socio-economic scenarios