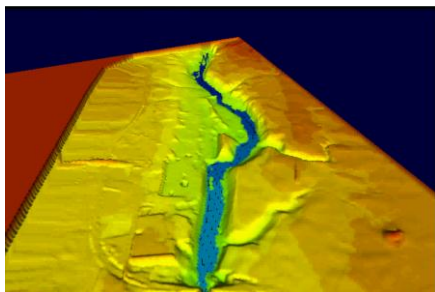


Confidential Client, Co. Kildare Flood Risk Assessment & Management Study

AWN Consulting were commissioned to undertake a Flood Risk Assessment and Management (FRAM) Study for an existing industrial facility in Co. Kildare. The study was undertaken in accordance with the guidelines produced by the Department of the Environment, Heritage and Local Government (DoEHLG) - The Planning System and Flood Risk Management Guidelines for Planning Authorities, November 2009.

The initial Stage 1 assessment - flood risk identification entailed the collation of available flood risk information, the identification of gaps within data collected and the identification of flooding that may affect the study area.



The Stage 2, initial flood risk assessment confirmed the sources and extents of flooding. This assessment made use of existing information to establish the broad baseline position for existing and likely future levels of flood risk for the study area, and to identify information gaps and anomalies.

The Stage 3 assessment involved Topographical Surveys, Hydrological Analysis and Hydraulic Analysis (Flood Model Exercise). Following this, hydraulic simulations were undertaken for the following scenarios:

- 1% AEP Flood Event (Extent of Flood Zone A)
- 0.1% AEP Flood Event (Extent of Flood Zone B)

DHI MIKE 11 1D computer modelling software was used for the hydraulic analysis. 1D models simulate the flow of water in one dimension only; along the direction of the river flow. Following completion of the above AWN Consulting provided the following key outputs:

- Plan showing site/study area and watercourses / structures
- Plan showing the relevant flood zones (A, B and C)
- Cross reference between site and flood levels
- Assessments of all sources of flooding
- Potential impacts of flooding on / off site
- Proposals for surface water management plans
- Recommendations on flood alleviation measures (if required)