



# Water

**ROD** Dollymount Promenade and Flood Protection scheme, Dublin.

Roughan & O'Donovan delivers water services and flood protection schemes across the UK and Ireland.

## Experience

Roughan & O'Donovan (ROD) delivers a wide range of water services to clients. Our experience extends from early phase strategic analyses and project scoping to designing and implementing infrastructure solutions.

Schemes such as the Dollymount Promenade and Flood Protection scheme and the Carysfort Maretime Flood Defence scheme demonstrate our capability in the design and contract administration of flood defence schemes.

## Expertise

- Sustainable drainage systems (SuDS)
- Flood risk assessment
- Flood alleviation and flood defence
- Integrated catchment modelling
- Natural floodplain management
- Natural water retention measures



# Projects

## Section of the North Western Transport Corridor, Northern Ireland - A6 Dungiven to Drumahoe Dualling Scheme – Munreery Culvert

ROD was engaged to upgrade the existing Munreery culvert, previously identified as an obstacle to fish passage. Our team undertook a hydraulic assessment of the culvert and was successful in obtaining schedule 6 approval for a series of baffles to allow the migration of sensitive fish species without adversely increasing flood risk. The measures introduced on the channel morphology had significant positive impacts for meeting our obligations under the Water Framework Directives (WFD).

## South Dublin County Development Plan Strategic Flood Risk Assessment (SFRA)

As part of the South Dublin SFRA, ROD completed a strategic hydromorphological assessment of major rivers. The assessment will support the delineation of floodplain boundaries, using morphological features to identify functional riparian zones. It will also provide the basis for sustainable zoning policies that provide 'room for the river' and allow river systems to return to a state of equilibrium, with rich biodiversity, developed ecosystem service provision and resilience to future shocks, such as climate change. This approach will aid in meeting our objectives under the Water Framework and Floods Directives.

## Dollymount Promenade and flood protection

ROD undertook the feasibility study, preliminary design, and detailed design for this combined promenade, cycleway and flood defence project.

The flood defence design incorporated:

- Demountable barriers
- Flood defence gates
- An earth flood bund
- Extensive repairs to the existing sea wall
- 582m of new, reinforced concrete sea defence wall

## Newcastle, Rathcoole and Saggart Surface Water Drainage Study

South Dublin County Council has engaged ROD to prepare a Surface Water Drainage Study to assess the impact of increased surface water run-off from areas zoned for development in the Local Area Plan. The study will include an assessment of the existing public surface water networks serving the towns of Newcastle, Rathcoole and Saggart, and determine the capacity uplift requirements to facilitate the areas zoned for development in the County Development Plan and Local Area Plans.

A detailed investigative review will examine existing public surface water sewers and channels to identify future remediation works to allow for the additional areas zoned for development. It will consider the impact of climate change and, where possible, the introduction of sustainable drainage systems.

## Howth Surface Water Culvert Replacement

ROD has been commissioned by Fingal County Council for the Surface Water Culvert Rehabilitation works at Howth, County Dublin. The culvert, which runs the entire length of Main Street, collapsed in 2016, causing major structural and financial damage to surrounding dwellings, businesses, and the local highway network.

ROD has been instructed to undertake a full detailed assessment of the culvert, including a detailed hydraulic review of the existing culvert and surrounding network, as well as a detailed intrusive survey to map and examine the current condition of the culvert. This work will inform our detailed design proposal for the surface water culvert replacement.