

# Section 50 Applications

Arup are experienced in applying for consent under Section 50 of the Arterial Drainage Act, 1945



## Introduction

It is a requirement by law for anyone wishing to construct, replace or alter a Bridge or Culvert to apply to the Office of Public Works for consent to do so. This requirement arises from Section 50 of the Arterial Drainage Act, 1945 and is known as a 'Section 50' application.

Any such application needs to be accompanied by supporting documentation illustrating that the proposed bridge or culvert meets certain criteria, including:

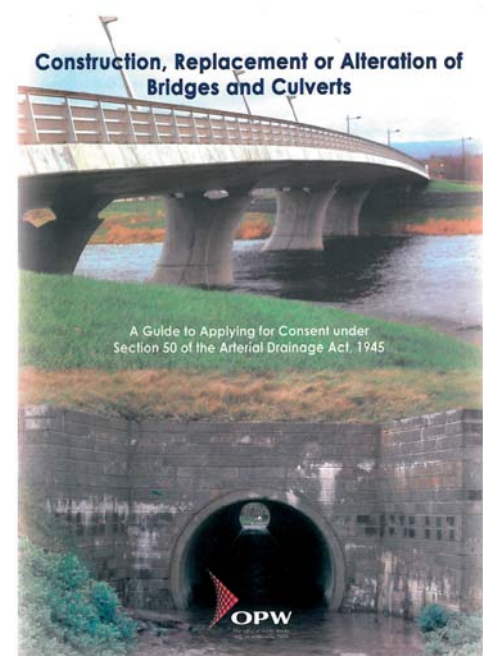
- Has sufficient hydraulic capacity to convey a 1 in 100 year flow without significantly impacting the watercourse
- Meets certain Tidal constraints if in a tidal zone
- Does not adversely affect adjacent dwellings and infrastructure
- Meet certain minimum geometric dimensions

The Section 50 application documentation normally takes the form of:

- Drawings, including plans and sections of the proposed structure, details of the watercourse and floodplain
- Photographs of the watercourse and floodplain etc.
- Hydrological and hydraulic analysis/calculations (including hydraulic modelling where necessary)

Arup have significant expertise in the preparation of such applications and can provide all the relevant services associated with it.

In addition to Section 50 applications, Section 9 of the Arterial Drainage (Amendment) Act 1995, requires that permission be sought from the Office of Public Works by anyone wishing to alter any part of a previously constructed Arterial Drainage Scheme (including a Flood Defence Scheme). Again, Arup can provide the full range of services associated with a Section 9 Application.



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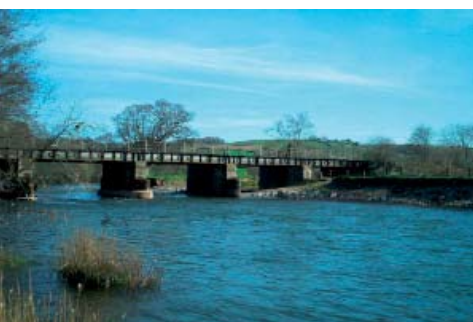


## Case Study 1 Douglas Village Shopping Centre

Arup was appointed by a private developer to carry out civil, structural, mechanical and electrical design for the redevelopment of Douglas Village Shopping Centre in Cork. As part of the development, an existing culvert conveying the Tramore River through the site had to be diverted. A Section 50 Application was made to the OPW and, as part of the application, and hydraulic study was carried out.

The scope of the study included:

- Review of the capacity of the existing culvert.
- Desk study including historic analysis of tidal levels
- Hydrological derivation of flows, including inclusion of an increase in urban development within the catchment which would alter the runoff from the catchment
- Hydraulic modelling of water levels using ISIS
- Consideration of maintenance issues to do with siltation to the culverts
- Liaison with the OPW to ensure their requirements for the Section 50 application were met.



## Case Study 2 Residential Development at Rathkeale adjacent to the River Deel

Flood risk assessment and advice for the development of a 250 unit residential development at Rathkeale, Co. Limerick.

A Section 50 application was prepared which included hydrological analysis using the FSR and hydraulic modelling in ISIS. Suitable mitigation measures such as rearrangement of the site to minimise flood risk, and design of river berms to reduce impacts on river levels, were proposed.