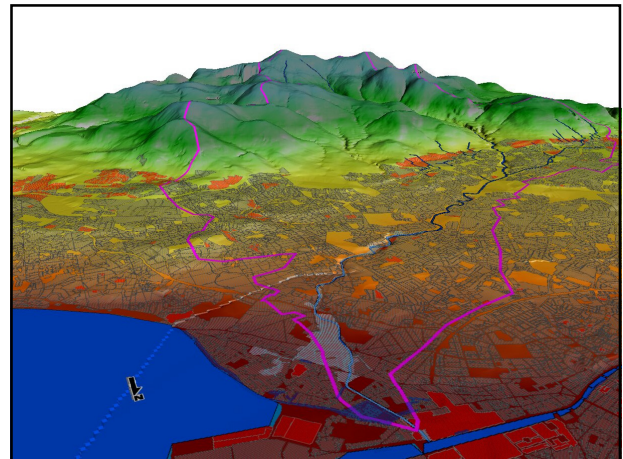


CFRAMS

- ▣ Catchment
- ▣ Flood
- ▣ Risk
- ▣ Assessment and
- ▣ Management
- ▣ Study

Gerard O'Connell
Projects Manager



Dodder Catchment

- ▣ 121 sq. kilometres (47 sq. miles)
- ▣ Three LA's DCC, SDCC and DLRCC
- ▣ Main Channel 19km d/s two reservoirs
- ▣ Tallaght Stream 5 km
- ▣ Owendoher 10 km
- ▣ Whitechurch 8 km
- ▣ Little Dargle 8 km
- ▣ Dundrum Slang 8 km
- ▣ Tidal Region 2 km
- ▣ Very steep with a history of flooding (gradient 1:115)

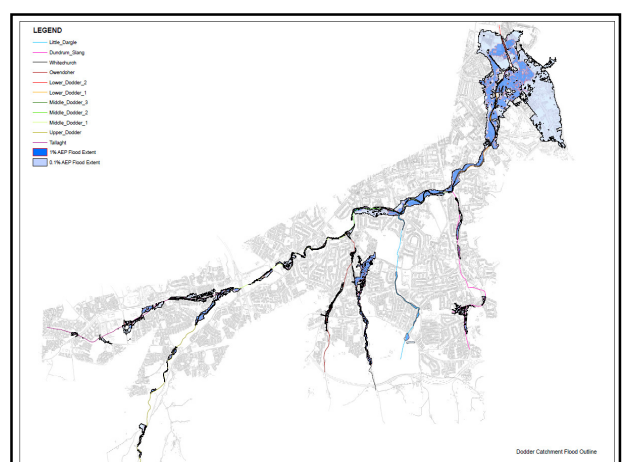
Information

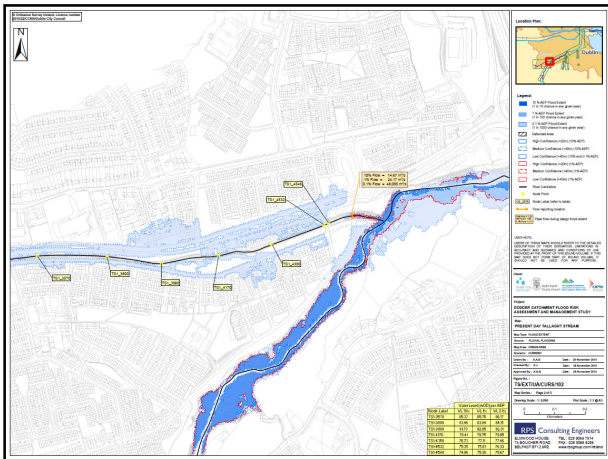
- ▣ Hydrometric Data
- ▣ Survey data, property registers
- ▣ Environmental areas
- ▣ Geotechnical surveys
- ▣ Defence Asset Data
- ▣ Flooding History
- ▣ Previous studies
- ▣ Individual Risk Receptors (IRR), hospitals, fire stations etc.
- ▣ Surveys
Cross-sectional survey, Bridge & culvert survey, Weir Survey, Defence Asset Survey, Silt surveys, Large inlet surveys, Light Detection And Ranging (LiDaR)

Figure 6-4 Individual risk receptors in the Dodder Catchment

Mapping & defining floodplains

- ▣ Development of historical flood maps
- ▣ Developing flood extent (risk) maps for 10, 100 (200 tidal) and 1,000 year modelled events (10%, 1% and 0.1% AEP)
- ▣ Development of flood hazard maps (properties, risk receptors & major infrastructure under threat)
- ▣ Defence failure scenario's, protected areas
- ▣ Risk analysis for Climate Change
- ▣ Sensitivity tests for uncertainty





Development of Flood Risk Scenario's & Options

- Do nothing
- Tidal Barrage
- Improvement to channel conveyance
- Relocation of properties *
- Flood Warning system*
- Culverting*
- Diversion of watercourses
- Catchment wide SuDS*
- Proactive Maintenance
- Reactive Maintenance
- Overland Floodways
- Public Awareness Campaign
- Rehabilitation of existing defences
- Deculverting/ replacing bridges
- Individual property protection
- Upstream Storage
- Walls and Embankments

Legend

- Blue line: River Catchment
- Blue area: Properties at risk - FRAEP
- Red area: Residential
- Yellow area: Commercial

Multi Criteria Analysis

Core Criteria	Objective
Economic (+30%)	a. Ensure flood risk management expenditure is risk based Benefit Cost Ratio. 10.0=+30%, 1.0=0%, 0.1=-30%.
Social (+30%)	a. Human Life. Minimise health and safety risk of flood risk management options
	b. Protect key infrastructure
	c. Protect existing, and where possible create new waterside access and recreational and community facilities
	d. Maintain, and where possible increase, existing waterside access for fishing
Environmental & Heritage (+30%)	a. Safeguard and promote sustainable land use in keeping with WFD
	b. Support the achievement of good ecological status/good ecological potential (GES/GEP) under the WFD. Particularly morphology as a supporting element to ecological status
	c. Protect the flora and fauna of the catchment and, where possible, enhance biodiversity. Remove Alien Species
	d. Protect, and where possible enhance, fisheries within the catchment
	e. Protect, and where possible enhance, landscape character and visual amenity
	f. Protect and where possible enhance known features of cultural heritage importance and their settings
Technical (+10%)	a. Ensure flood risk management options are operationally viable and to minimise maintenance required.
	b. Ensure flood risk management options are technically and logistically viable
	c. Ensure flood risk managed effectively into the future
Other	a. No increase in flood risk to other areas

- Overall scenario must score positive to become viable option
- Benefit Cost Ratio ≥ 1

Project Status

- Public Information days were held in 3 locations in June and July of last year
- Structural Options Identified on Lower Dodder Whitechurch, and Little Dargle
- Draft Final Report
- 3 Month Public Consultation
- Review by LA's and OPW
- Adopted by LA's and incorporated into development plans.
- Further Information on www.dublincity.ie