


## CFRAMS

RIVER DODDER CATCHMENT  
FLOOD RISK MANAGEMENT PLAN

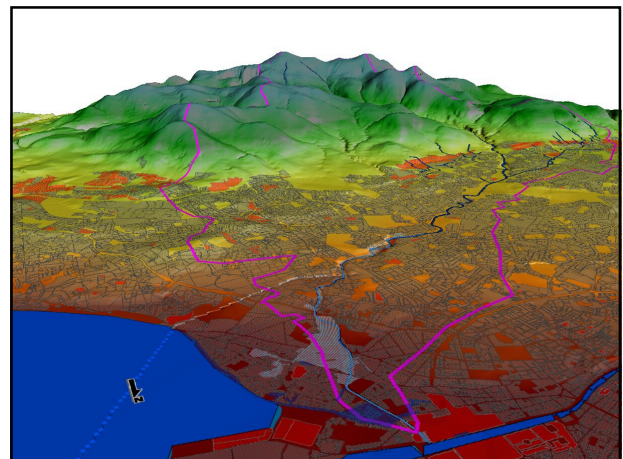


Dodder Catchment  
Draft Flood Risk Assessment  
and Management Plan

July 2011 RPS

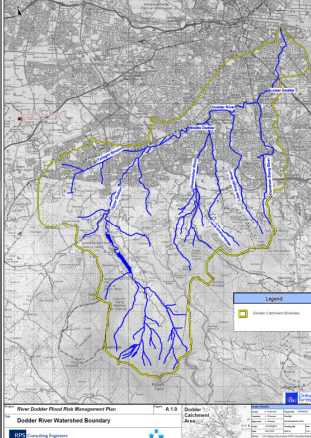
- ▣ Catchment
- ▣ Flood
- ▣ Risk
- ▣ Assessment and
- ▣ Management
- ▣ Study

**Gerard O'Connell**  
Projects Manager



### Dodder Catchment

- ▣ 121 sq. kilometres (47 sq. miles)
- ▣ Three LA's DCC, SDCC and DLRC
- ▣ 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)

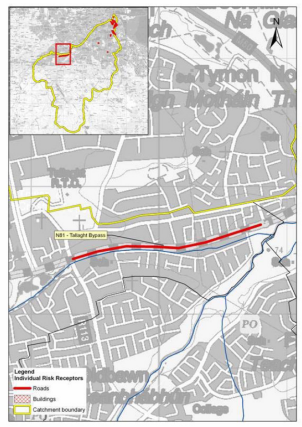
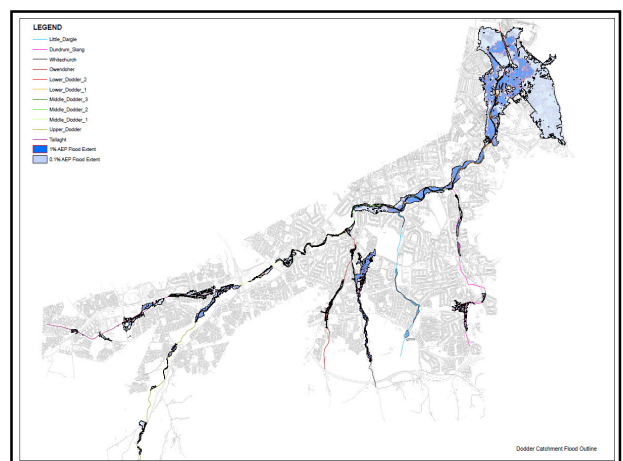
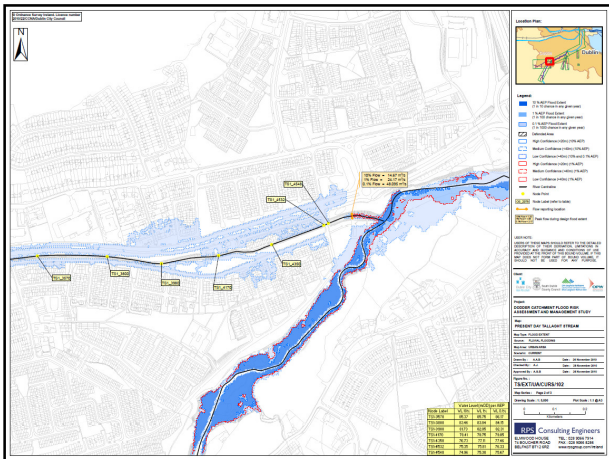


Figure 6-4 Individual risk receptors in the Dodder Catchment

### 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

### 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%.
	a Human Life. Minimise health and safety risk of flood risk management options
Social (+30%)	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
	a Safeguard and promote sustainable land use in keeping with WFD
Environmental & Heritage (+30%)	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
	a Ensure flood risk management options are operationally viable and to minimise maintenance required.
Technical (+10%)	b Ensure flood risk management options are technically and logistically viable
	c Ensure flood risk managed effectively into the future
	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](http://www.dublincity.ie)