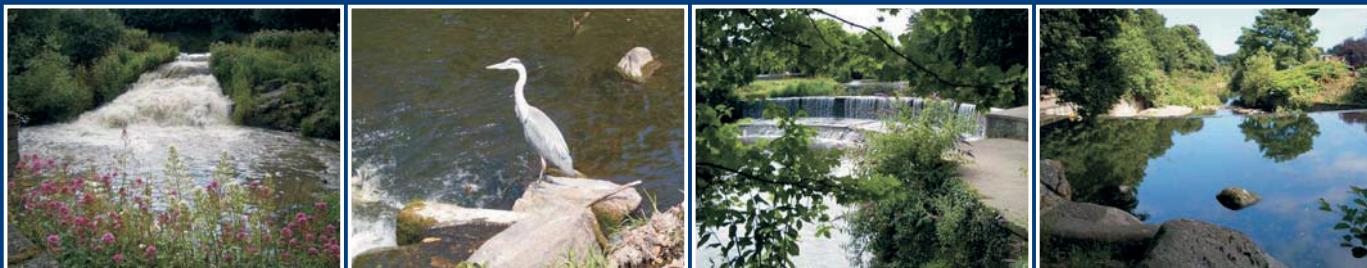


# DODDER CATCHMENT FLOOD RISK MANAGEMENT PLAN



## SEA STATEMENT



# **Dodder Catchment Flood Risk Assessment and Management Study**

## **Strategic Environmental Assessment**

### **SEA Statement**

# **DOCUMENT CONTROL SHEET**

Client	Dublin City Council					
Project Title	Dodder Catchment Flood Risk Assessment and Management Study					
Document Title	SEA Statement					
Document No.	IBE0064SEASstatement					
This Document Comprises	DCS	TOC	Text	List of Tables	List of Figures	No. of Appendices
	1	1	74	1	1	1

Rev.	Status	Author(s)	Reviewed By	Approved By	Office of Origin	Issue Date
D01	Draft	K.Smart	A.Jackson	G.Glasgow	Belfast	07.11.2014



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# 1 INTRODUCTION

## 1.1 BACKGROUND

This is the Strategic Environmental Assessment (SEA) Statement prepared as part of the SEA in relation to the Dodder Flood Risk Management Plan (FRMP) in accordance with national and European Union (EU) legislation. This document provides information on the decision-making process and documents how environmental considerations, the views of consultees and the recommendations of the Environmental Report (and the assessment carried out under Article 6 of the Habitats Directive) have been taken into account by, and have influenced, the Dodder Catchment FRMP.

Dublin City Council (DCC) was appointed as contracting authority to complete a Catchment-based Flood Risk Assessment and Management (CFRAM) Study for the River Dodder catchment which incorporates the relevant areas of Dublin City Council, Dun Laoghaire-Rathdown County Council (DLRCC) and South Dublin County Council (SDCC). Dublin City Council was appointed with the approval of the Office of Public Works (OPW), SDCC and DLRCC.

The extent of the Dodder catchment is illustrated in Figure 1.1. The assessment of potential impacts in the SEA ER included impacts within the catchment area plus impacts on downstream receptors such as Dublin Bay.

## 1.2 LEGISLATIVE CONTEXT

SEA is required under *EU Council Directive 2001/42/EC on the Assessment of the Effects of Certain Plans and Programmes on the Environment* (the SEA Directive) and transposing Irish Regulations (*the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (SI No. 435 of 2004)*) as amended by SI 200 of 2011 (hereafter referred to as simply the SEA Regulations); and the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (SI 436 of 2004), as amended by SI 201 of 2011. Its purpose is to enable plan-making authorities to incorporate environmental considerations into decision-making at an early stage and in an integrated way throughout the plan-making process.

The overall aim of the SEA Directive is to:

*‘provide a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development.’*

The SEA of the Dodder Catchment FRMP has been undertaken in accordance with the requirements of the directive and regulations and, where relevant, has sought to meet the requirements of the associated best practice guidance. Guidance has been prepared by Irish government departments

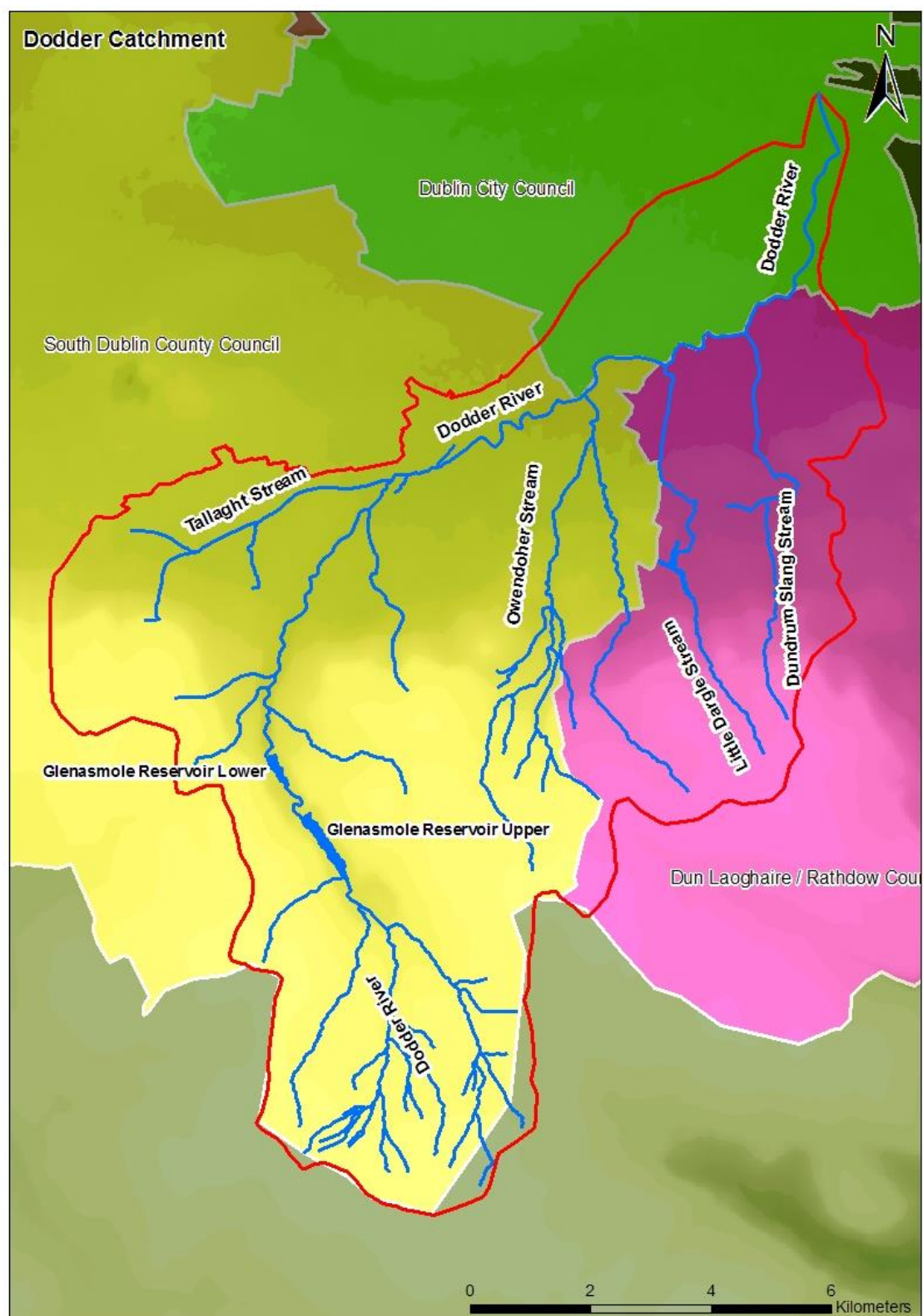


and agencies to assist SEA practitioners in interpreting the requirements of the SEA Directive and Regulations. Key guidance includes:

- Article 8 (Decision Making) of EU Directive 2001/42/EC on Strategic Environmental Assessment as amended, Circular Letter PL 9/2013 Department of Environment, Community and Local Government. Available at <http://www.environ.ie>;
- Further Transposition of EU Directive 2001/42/EC on Strategic Environmental Assessment (SEA) Circular Letter PSSP 6/2011 Department of Environment, Community and Local Government. Available at: <http://www.environ.ie>;
- Development of Strategic Environmental Assessment (SEA) Methodologies for Plans and Programmes in Ireland. Synthesis Report. 2003. Environmental Protection Agency. Available at: <http://www.epa.ie>;
- GISEA Manual, Current Practice And Potential On The Application Of Geographic Information Systems As A Support Tool In Strategic Environmental Assessment Of Irish Land Use Plans 2009 Environmental Protection Agency. Available at: <http://www.epa.ie>;
- Implementation of SEA Directive (2001/42/EC). Assessment of Certain Plans and Programmes on the Environment. Guidelines for Regional Planning Authorities. November 2004. Department of Environment, Heritage and Local Government. Available at: <http://www.environ.ie>;
- Strategic Environmental Assessment and Climate Change: Guidance for Practitioners, May 2004, Environmental protection Agency. Available at <http://www.epa.ie>;
- Strategic Environmental Assessment (SEA) Checklist - Consultation Draft. January 2008 (updated 6th September 2011). Environmental Protection Agency. Available at: <http://www.epa.ie>;
- Strategic Environmental Assessment (SEA) Pack. (Updated in 18th April 2013). Environmental Protection Agency. Available at <http://www.epa.ie>;
- EPA (2012) Integrated Biodiversity Impact Assessment best practice guidance; Streamlining HDA, SEA and EIA Processes, Best Practice Guidance.

This SEA Statement has been prepared in accordance with Schedule 2, Section 16(2) of the SEA Regulations. The adopted Dodder Catchment FRMP and SEA Statement are available for download on the Dodder CFRAM Study page of Dublin City Council's website: <http://www.dublincity.ie/main-menu-services-water-waste-and-environment-water-projects/river-dodder-catchment-flood-risk>. They

were also on public display at Dublin City Council, Dun Laoghaire-Rathdown County Council and South Dublin County Council offices from DATE to DATE and notices were published in X newspapers.



**Figure 1.1** Dodder catchment

## 1.3 STRUCTURE AND CONTENT OF SEA STATEMENT

### 1.3.1 Purpose and content of SEA Statement

The main purpose of the SEA Statement is to provide information on the decision-making process for the Dodder Catchment FRMP in order to illustrate how decisions were taken, thereby making the process more transparent. In doing so, the SEA Statement documents how the recommendations of both the Environmental Report and the Natura Impact Statement, as well as the views of the statutory consultees and all other submissions received during consultation, have influenced the preparation of the final Dodder Catchment FRMP. The SEA Statement also provides information on the arrangements put in place for monitoring and mitigation. The SEA Statement is available to the public, along with the Environmental Report, the Natura Impact Report and the final FRMP.

In accordance with Article 9 of the SEA Directive, and with section 13Q of the Planning and Development (Strategic Environmental Assessment) Regulations, 2004 (as amended); this SEA Statement has been prepared to outline 'Information on the Decision'. This document summarises the information required as outlined in Table 1.1.

**Table 1.1** Information summarised in SEA Statement

SEA Legislative Requirement	Section of SEA Statement
How environmental considerations have been integrated into the plan (Article 16(2)(b)(ii)).	Section 3 and Section 5
How the SEA Environmental Report has been taken into account during the preparation of the plan (Article 16(2)(b)(ii)(I)).	Section 5
How the submissions and observations have been taken into account during preparation of the plan (Article 16(2)(b)(ii)(II)).	Section 4 and Appendix A
How any consultations have been taken into account during preparation of the plan (Article 16(2)(b)(ii)(III)).	Section 4 and Appendix A
The reasons for choosing the plan adopted in light of other reasonable alternatives dealt with (Article 16(2)(b)(iii)).	Section 6
The measures decided upon to monitor the significant environmental effects of implementation of the plan (Article 16(2)(b)(iv)).	Section 7

### 1.3.2 Structure of SEA Statement

The SEA Statement consists of eight sections as detailed in Table 1.2

**Table 1.2** Structure of SEA Statement

Section	Contents
1	Introduction
2	Summary of the key facts
3	Summary of the SEA process
4	Integration of consultation responses into the final plan
5	Influence of environmental considerations on the final plan
6	Rationale for selection of plan components
7	Measures to monitor significant environmental effects of implementation of the adopted plan
8	Conclusions

## 2 SUMMARY OF THE KEY FACTS

The key facts in relation to the Dodder Catchment FRMP are summarised in Table 2.1.

**Table 2.1** Key facts in relation to the Dodder Catchment FRMP

Title of the plan	Dodder Flood Risk Management Plan
Purpose of the plan	<p>To address existing, and predicted future increases, in flood risk in the Dodder catchment.</p> <p>The purpose of the Dodder CFRAM Study was to assess the spatial extent and degree of flood hazard and risk within the Dodder catchment, to examine the existing and predicted future pressures that could impact on this risk, and to develop a long term strategy for managing the risk that is socially, environmentally and economically sustainable. The key outputs from the study are flood hazard and risk maps and the Dodder Catchment FRMP which contains measures for flood risk management.</p>
What prompted the plan	<p>The River Dodder has overtopped its banks on numerous occasions, most notably during the 1986 'Hurricane Charlie' fluvial event, in 2002 in conjunction with a tidal event, and in 2011 during widespread flooding resulting from heavy rainfall. During these events, extensive damage was caused in the lower reaches of the catchment where the river flows through south Dublin to the confluence with the Liffey Estuary, a nutrient sensitive area under the Urban Waste Water Treatment Directive (91/271/EEC).</p> <p>In response to this, and following approval from the Office of Public Works (OPW), South Dublin County Council (SDCC) and Dun Laoghaire-Rathdown County Council (DLRCC), Dublin City Council (DCC) was appointed as contracting authority to complete a Catchment-based Flood Risk Assessment and Management (CFRAM) Study for the River Dodder catchment which incorporates the relevant areas of Dublin City Council, Dun Laoghaire-Rathdown County Council and South Dublin County Council.</p> <p>The Dodder CFRAM Study was one of the first pilot CFRAM Studies undertaken under the CFRAM Programme, which is at the core of the delivery of the Flood Policy adopted by the Irish Government in 2004, shifting the emphasis in addressing flood risk towards a catchment-based, proactive approach for identifying and managing existing, and potential future, flood risk. These studies were developed to meet the requirements of the EU Directive on the assessment and management of flood risks</p>

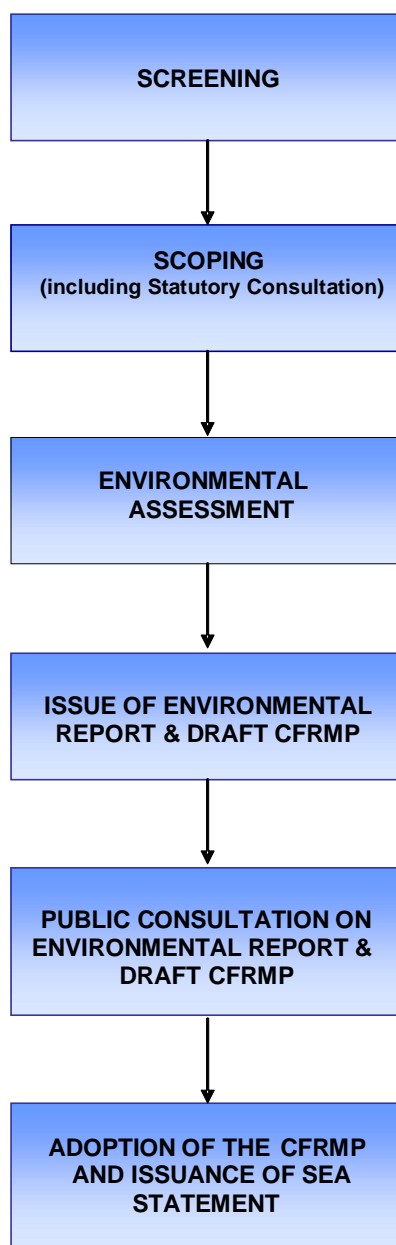
	(the Floods Directive). The Floods Directive was transposed into Irish law by the European Communities (Assessment and Management of Flood Risks) Regulations, 2010 (SI No. 122 of 2010) as amended by SI 200 of 2011; and the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (SI 436 of 2004), as amended by SI 201 of 2011. River Basin District (RBD) level CFRAM Studies have been initiated since 2011 in all RBDs. The Dodder catchment is part of the Eastern CFRAM Study area.
Coverage of the plan	The Dodder Catchment FRMP covers the Dodder River and its tributaries the Tallaght, Owendoher, Little Dargle and Dundrum Slang streams. The Dodder is itself a tributary of the River Liffey. The process also considers potential impacts, both positive and negative, on downstream receptors, for example, Dublin Bay.
Date when plan will come into effect	The final plan came into effect on <b>DATE</b> .
Update frequency	The plan will be reviewed and updated on a six yearly cycle.
Main contact	<p>Dodder CFRAM Study Project Manager</p> <p>Dublin City Council</p> <p>68-70 Marrowbone Lane</p> <p>Dublin 8</p> <p><b>Email:</b></p> <p><b>Web:</b> <a href="http://www.dublincity.ie/main-menu-services-water-waste-and-environment-water-projects/river-dodder-catchment-flood-risk">http://www.dublincity.ie/main-menu-services-water-waste-and-environment-water-projects/river-dodder-catchment-flood-risk</a>.</p>

### 3 SUMMARY OF THE SEA PROCESS

SEA is a process for evaluating, at the earliest appropriate stage, the environmental effects of plans or programmes before they are adopted. It also gives the public and other interested parties an opportunity to comment and to be kept informed of decisions and how they were made. An early consideration of environmental concerns in the planning process creates an opportunity for environmental factors to be considered explicitly alongside other factors such as social, technical or economic aspects.

The SEA process is broadly comprised of the steps outlined in Figure 3.1. The key stages of the SEA process, and the associated outputs required, comprise:

- **Screening:** to determine the need or otherwise for SEA of a specific plan or programme. *Output required = screening decision.*
- **Scoping:** to identify the aspects of the plan or programme that are relevant to the SEA and the related key environmental issues that need to be considered. *Output required = Scoping Report and consultation with Statutory Authorities.*
- **Environmental assessment and evaluation** of the plan or programme: to identify, predict, evaluate and mitigate the potential impacts of the plan or programme and reasonable alternatives. *Output required = Environmental Report.*
- **Consultation, revision and adoption activities:** to seek public opinion on the draft plan or programme and outcome of the SEA process; influence the content of the final plan or programme and document the outcomes of the SEA process. *Output required = Consultation with the public and Statutory Authorities on the Environmental Report accompanying the draft plan or programme, and the SEA Post-Adoption Statement (i.e. this document), accompanying the final plan or programme.*
- **Post-adoption activities:** subsequent monitoring of the impacts of the plan or programme during its implementation to inform the future revision and SEA of the plan or programme. *Output required = Implementation of SEA monitoring regime.*



**Figure 3.1** Overview of SEA Process

Within this framework, the following sections describe how each stage of the SEA process has been integrated with the development of the Dodder Catchment FRMP.

### 3.1.1 Screening

The need for SEA of the Dodder Catchment FRMP was established prior to the commencement of the Dodder CFRAM Study when a screening assessment was undertaken by the OPW for the overall CFRAM Programme.



Flood Risk Management Plans, including the Dodder Catchment FRMP, fall under Annex II of the SEA Directive and need to be 'screened' to determine whether they require SEA depending on the characteristics of the plan/programme, the magnitude of the potential effects and the vulnerability of the area(s) likely to be affected as set out in Schedule 2A of the SEA Regulations (DEHLG, 2004).

A Screening Statement was prepared by the OPW (OPW, 2007) setting out the reasons why SEA is required for all FRMPs as follows:

- The FRMP may provide a framework for development consent for projects of a significant scale;
- The FRMP may influence other plans to a significant degree;
- The relevance of the FRMP for the integration of environmental considerations and the promotion of sustainable development; and
- The value and vulnerability of the study area in respect of its built and natural environment.

### **3.1.2 Scoping**

The primary objective of the scoping stage, which began in 2007, was to establish a decision-making framework (the SEA objectives) that could be used to evaluate the impact of the Dodder Catchment FRMP on the environment. It comprised:

- Identification of the baseline environmental conditions within the Dodder catchment for the following topics:
  - Biodiversity, flora and fauna;
  - Topography;
  - Water quality;
  - Landuse, landscape and visual amenity;
  - Hydrology and tidal conditions;
  - Material assets;
  - Cultural heritage;

- Population and human health;
  - Air/climatic factors;
  - Soil and geology.
- Identification of the key environmental and social issues relevant to flooding and flood risk management, and those issues/topics not relevant to the SEA process.
- Identification of an initial suite of environmental objectives, sub-objectives, indicators and targets proposed to form the decision-making framework for the next stage of the SEA process and to be used to inform the assessment of flood risk management options.

A Scoping Report, documenting the scoping process, was published for consultation in June 2008. It was issued to the statutory authorities for SEA in Ireland and made available to the public on the Dodder CFRAM Study page of Dublin City Council's website. All identified stakeholders were directly notified of the publication of this report. Comments were invited until December 2008. The comments and submissions received in relation to the Scoping Report informed the development of the draft Dodder Catchment FRMP as well as the SEA Environmental Report.

### **3.1.3 Environmental Assessment and Evaluation**

This stage of the SEA required the assessment and evaluation of the draft Dodder Catchment FRMP to identify the significant effects of the plan and identify any mitigation required to offset identified adverse effects.

The SEA objectives, targets and indicators and monitoring requirements were refined. The SEA process was fully integrated with the development and identification of flood risk management options and the initial measures screening and multi-criteria analysis (MCA) process. Details of the stages of the process that are particularly relevant to the SEA are as follows:

- For each objective it was important to understand and define the existing baseline conditions against which changes resulting from a flood risk management option could be predicted. On this basis, baseline conditions were defined for each SEA objective (using the defined indicators). This was based on the environmental baseline information described in the Environmental Report. The presence of environmental indicators (i.e. environmental receptors) within the floodplain was determined using GIS where possible and the proportion of each indicator affected was determined where appropriate.

- As part of the initial screening of potential flood risk management measures, the environmental implications of each measure were considered. Each measure was scored in terms of environmental impact. Any measures with unacceptable environmental consequences were not brought forward as possible options.
- As part of the subsequent option development process, relevant environmental constraints and opportunities were taken into account during the identification of engineering options.
- SEA formed a key part of the detailed MCA of the flood risk management options. An assessment of each proposed flood risk management option within each defined geographic area was undertaken using the flood risk management objectives to determine the environmental effects of the option and inform the decision-making process.

### **3.1.3.1 Environmental assessment of the FRMP recommendations**

#### **3.1.3.1.1 Preferred options**

The preferred options outlined in the draft FRMP were assessed in detail to identify any significant environmental effects.

The approach used for assessing the preferred options was both baseline-led, where quantitative information was available, and objective-led, where quantitative information was unavailable.

Where negative effects were identified, actions to mitigate those negative effects were recommended, if appropriate. Also, in some instances where positive effects and opportunities for enhancement were identified, relevant actions to maximise the potential positive effects were recommended.

#### **3.1.3.2 Alternative options**

The option development process considered a broad range of possible flood risk management measures. These possible measures represent alternative flood management options. These measures were screened and developed, first into 45 scenarios and then into six preferred options. They underwent the MCA process whereby they were assessed in terms of whether their effects were likely to be positive, negative or neutral in relation to the flood risk management objectives, including environmental criteria.

#### **3.1.3.3 Monitoring**

A monitoring framework, to both monitor the predicted effects of implementation of the flood risk management options and to update the baseline in order to inform the six yearly review cycle of the

Dodder Catchment FRMP, was developed. The monitoring framework is based on the SEA objectives, targets and indicators. Monitoring will also help to identify unforeseen effects of the Dodder Catchment FRMP, and ensure that where these effects are adverse, that action is taken to reduce or offset them.

The proposed monitoring framework will commence as soon as the Dodder Catchment FRMP is implemented and will be revised periodically to take into account new monitoring methods and increased understanding of the environmental baseline.

#### **3.1.3.4 Cumulative effects of options**

The effect of the plan components in isolation were assessed as well as an additional qualitative assessment of potential cumulative effects. In addition, consideration of potential interactions between the plan components and other plans and strategies, external to the draft Dodder Catchment FRMP, was also undertaken.

#### **3.1.3.5 Assessing the strategic recommendations and policies**

A range of preparedness measures were considered as part of the MCA process at the scale of the Dodder catchment including:

- Proactive maintenance;
- Reactive maintenance;
- Flood forecasting;
- Public awareness;
- Flood warning.

Dublin has developed a number of elements for forecasting. These range from a full system for coastal flooding and partial systems for fluvial (several river gauges) and pluvial (an increasing number of linked rain gauges). The OPW has begun the process of undertaking a strategic review of options for flood forecasting and warning (FFW) in Ireland which will look at the possibility of using rainfall radar forecasting techniques which could provide additional response time to Local Authorities and the emergency services. Further consideration will be given to this option for the Dodder catchment on completion of this strategic review. Any resulting worthwhile measures can be incorporated into the FRMP during the six-yearly review process.

The maintenance element of the system and its defences is a key support measure to both existing and proposed hard defences and to the safeguarding of channel conveyance. As part of the Dodder CFRAM Study, a maintenance plan was prepared incorporating a sediment transport model which assists in reviewing the geomorphic changes that occur within the catchment. The plan has reviewed the existing maintenance programmes undertaken by the three Local Authorities and the riparian landowners and proposed a strategy to manage maintenance across the catchment more effectively. It provides the participating Local Authorities with a tool to enable them to direct risk-based detailed inspections and prioritised maintenance programmes to manage effectively the reaches of the Dodder within their respective operational controls. The maintenance plan should be implemented, in conjunction with the FRMP components, in order to reduce the risk of debris obstructing channel flow and/or the failure of flood defences.

#### **3.1.3.6 Consultation**

The draft Dodder Catchment FRMP was published for consultation on 6<sup>th</sup> March 2012, along with the accompanying SEA Environmental Report and Natura Impact Statement, for a period of 12 weeks. The documents were issued to the statutory authorities for SEA in Ireland and made available to the public on the Dodder CFRAM Study page of Dublin City Council's website as well as in hard copy at the offices of Dublin city Council, Dun Laoghaire Rathdown County Council and South Dublin County Council. Notification was published in **X newspapers**. The comments and submissions received in relation to the Scoping Report informed the finalisation of the Dodder Catchment FRMP and are recorded in this SEA Statement.

#### **3.1.3.7 Adoption of the plan**

The Dodder Catchment FRMP was approved/adopted by Dublin City Council on **DATE**, by Dun Laoghaire-Rathdown County Council on 13<sup>th</sup> October 2014 and by South Dublin County Council on **DATE**. The document, along with this SEA Statement, were issued to the statutory authorities for SEA in Ireland and made available to the public on the Dodder CFRAM Study page of Dublin City Council's website as well as in hard copy at the offices of Dublin city Council, Dun Laoghaire Rathdown County Council and South Dublin County Council. Notification was published in **X newspapers**.

#### **3.1.3.8 Post-adoption activities**

The monitoring framework established by the process will be used to assess the impacts of the implementation of the Dodder Catchment FRMP. This will be used to inform the future revision of the Dodder Catchment FRMP on a six-yearly basis.

### 3.2 APPROPRIATE ASSESSMENT

The Habitats Directive provides legal protection for habitats and species of European importance. The main aim of the Habitats Directive is “to contribute towards ensuring biodiversity through the conservation of natural habitats of wild fauna and flora in the European territory of the Member States to which the treaty applies” (92/43/EEC). Actions taken in order to fulfil the Directive must be designed to “maintain or restore, at a favourable conservation status, natural habitats and species of wild fauna and flora of Community interest” (92/43/EEC).

The Directive provides for the creation of protected sites, SACs, for a number of habitat types and certain species of flora and fauna. The Directive also seeks to establish Natura 2000, a network of protected areas throughout Europe. SACs, together with SPAs designated under the Birds Directive (79/409/EEC), form the Natura 2000 network. The Directive was incorporated into Irish law by the European Communities (Natural Habitats) Regulations (SI No. 94 of 1997) under Regulation 31 (Annex 1.2).

An assessment is required under the Habitats Directive for any plan or project likely to have a significant effect on a Natura 2000 site. Article 6, paragraphs 3 and 4 of the Habitats Directive state that:

*6(3) Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.*

*6(4) If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.*

*Where the site concerned hosts a priority natural habitat type and/or a priority species, the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest.*

This means that, where the implementation of the proposed development is likely to have a significant effect on a Natura 2000 site, the Local Authority must ensure that an appropriate assessment is carried out in view of that site's conservation objectives. The proposed development can only be approved if it has been ascertained that it will not adversely affect the integrity of the Natura 2000 sites concerned or, in the case of a negative assessment and where there are no alternative solutions, the scheme can only be approved for reasons of overriding public interest.

An 'Appropriate Assessment' of the impacts of the Dodder Catchment FRMP on the Natura 2000 sites within and adjacent to the Dodder catchment was undertaken. This assessment considers whether the recommendations of the Dodder Catchment FRMP are likely to have an effect on the ecological integrity of the Natura 2000 sites within the catchment.

The Appropriate Assessment (AA) process has been integrated with the SEA process. The requirements and value/sensitivity of the Natura 2000 sites within the Dodder catchment were established at the scoping stage and this information was used to inform the option assessment and SEA process. A key objective of the SEA requires the protection, and potential enhancement of these sites, and potential impacts on these sites have been considered within the decision-making process. The AA was undertaken in two stages:

- Screening – to identify whether the plan components are likely to give rise to significant adverse effects on Natura 2000 sites within the Dodder catchment, based on an initial assessment and precautionary approach. The results of this assessment are fully documented within an AA Screening Report. The National Parks and Wildlife Service (NPWS) were consulted throughout the undertaking of this assessment. The report was issued to the NPWS in November 2010 for review and comment.
- Appropriate Assessment – following the screening stage, a detailed assessment of the plan components identified as likely to give rise to significant adverse impacts on the Natura 2000 sites within the catchment was undertaken. Following more detailed analysis, this stage concludes whether any of the plan components would have an adverse effect on the ecological integrity of Natura 2000 sites. The results of this assessment are fully documented within a detailed Natura Impact Statement. NPWS were consulted for their comments during the undertaking of this assessment.

## 4 INTEGRATION OF CONSULTATION INTO THE FINAL PLAN

In the SEA Regulations, consultation is specifically required at the scoping stage with the nominated environmental authorities, and then with the wider public when the Environmental Report and the draft Plan are put on public display. Finally, the SEA Statement and the adopted Plan must go on public display at the end of the Plan-making process. This section describes the statutory and non-statutory consultation that has taken place over the course of the planning process.

The development of the Dodder Catchment FRMP has been guided by a study steering committee comprising members of Dublin City Council, South Dublin County Council, Dun Laoghaire – Rathdown County Council and the OPW.

In addition, the involvement of external parties (both stakeholders and the general public) has been essential to the development of the Dodder Catchment FRMP and accompanying documents. It has been important to both meet statutory requirements for consultation with relevant parties and ensure that the knowledge, experience and views of stakeholders and the general public were taken into account throughout the process.

The objectives of the programme of stakeholder engagement and public consultation undertaken throughout the Dodder CFRAM Study were to:

- Meet regulatory requirements for consultation under the SEA and Floods Directives;
- Contribute to the success of the Dodder CFRAM Study by:
  - Raising awareness of flood risk management issues within the Dodder catchment;
  - Informing the development of the FRMP by identifying and, where possible and/or appropriate, addressing the concerns of external parties; and
  - Ensuring the completed FRMP is ‘owned’ by the local community; influences related decisions, plans and strategies (e.g. development planning); and is successfully implemented in the future.

It has been essential to ensure that information relating to the study was made available to stakeholders and the general public throughout its development. This has been achieved by ongoing activities as well as phase-specific activities – including the development and dissemination of promotional materials and the planning, execution and promotion of events including:



- The creation and maintenance of a dedicated Dodder FRAM Study webpage on Dublin City Council's website  
<http://www.dublincity.ie/WaterWasteEnvironment/waterprojects/Pages/RiverDodderCatchmentFloodRiskAssessmentManagementStudy.aspx>;
  - Progress reports and study updates regularly published on the project webpage;
  - All publicly available project technical reports also published on the project webpage.
- The provision of a dedicated email address ([dodder@rpsgroup.com](mailto:dodder@rpsgroup.com)) enabling direct communication with the project team;
- The identification of stakeholders;
- The development of an information leaflet/brief;
- Stakeholder workshops, public open days and one-to-one meetings;
- Notifications in relevant newspapers;
- The development and dissemination of press releases.

## 4.1 STAKEHOLDER ENGAGEMENT ACTIVITIES

From the beginning of the study in 2007, a range of statutory, non-statutory and local organisations were identified as stakeholders and were invited to get involved in the development and future implementation of the Dodder Catchment FRMP. These stakeholders included:

- Key operating authorities within the catchment such as engineers and planners from Dublin City Council, Dún Laoghaire-Rathdown County Council and South Dublin County Council;
- Environmental bodies;
- Government departments and agencies;
- Local political representatives;
- Non-governmental organisations; and
- Local business and industry representatives.

A list of the key stakeholders involved in the Dodder CFRAM Study is included in Table 4.1.

**Table 4.1** SEA Stakeholders

<b>Environmental Authorities</b>	<b>Secondary Stakeholders</b>
Environmental Protection Agency (EPA)	Inland Fisheries Ireland
Dept. of Environment Community & Local Government (DECLG)	BirdWatch Ireland, Dodder Valley Project
Dept. of Communications Marine and Natural Resources (DCMNR)	Dublin Transport Office (DTO) / Iarnród Éireann / Dublin Bus
Department of Arts, Heritage and the Gaeltacht (DAHG)	Dodder Anglers Group
<b>Primary Stakeholders</b>	Dublin Naturalists Field Club
Office of Public Works (OPW)	Bat Conservation Ireland
Dublin City Council (DCC)	Geological Survey of Ireland
- Dublin Cities Heritage Office	An Taisce, The National Trust for Ireland
- Dublin City Planning	Waterways Ireland
South Dublin County Council (SDCC)	Irish Wildlife Trust
Dun Laoghaire-Rathdown County Council (DLRCC)	National Roads Authority (NRA)
River Basin District - Eastern Region (ERBD)	Electricity Supply Board (ESB)
Eastern Region Fisheries Board (ERFB)	Sustainable Water Network (SWAN)
National Parks and Wildlife Service (NPWS)	Coillte
The Heritage Council	Teagasc
	Marine Institute
	Irish Farmers Association (IFA)
	Dublin Chamber of Commerce
	Resident's Associations
	Anglers Associations
	Inland Fisheries Ireland
	Met Eireann

Opportunities provided to interested stakeholders to participate in the development of the FRMP included:

- Issue of an introductory information brief to all potentially interested parties seeking data and their views on the key issues within the Dodder catchment;
- Individual meetings with stakeholders as needed throughout the study to discuss available data; identify key constraints and opportunities and relationships with other relevant plans and strategies; and review key outputs such as the draft flood maps;
- A key stakeholder workshop held in January 2008 to discuss progress and seek feedback on the developing outputs of the study;
- Invitations to comment on project outputs such as:
  - Environmental Scoping Report (RPS, 2008) published for formal consultation in June 2008;
  - Draft Dodder Catchment FRMP and SEA Environmental Report published for formal consultation on 6<sup>th</sup> March 2012 and available online and in hard copy at:
    - Dublin City Council offices (Civic offices, Wood Quay, Dublin 2);
    - Dun Laoghaire Rathdown County Council offices (County Hall, Marine Road, Dun Laoghaire);
    - South Dublin County Council offices (County Hall, Tallaght, Dublin 24).
- Attendance and presentations at relevant conferences and forums such as the National Hydrology Conference.

All feedback, submissions and comments received from these stakeholders has contributed to the development of the final plan.

## **4.2 PUBLIC CONSULTATION ACTIVITIES**

Members of the public were kept informed of study activities via updates on the Dodder FRAM Study webpage and were welcome to contact the study at any time via the dedicated study email address.

To ensure that the general public was made aware of the study and had sufficient opportunity to express their views and comment on its draft outputs, a series of public information and consultation days were held at key locations around the catchment in June/July 2010 at which the draft flood maps and preliminary flood risk management options were presented (Table 4.2). Three events were held, which were well-publicised in the national and local media and were advertised locally.

**Table 4.2** Public information and consultation days

Date	Location
30 <sup>th</sup> June 2010	South Dublin County Council's Tallaght Library, Tallaght
1 <sup>st</sup> July 2010	Dublin City Council's main foyer, Civic Office, Wood Quay
28 <sup>th</sup> July 2010	Wilfield/Guilford Conference Suite, Mount Herbert Hotel, Herbert Road, Sandymount

The consultation on the draft Dodder Catchment FRMP and accompanying SEA Environmental Report was the most significant opportunity for both stakeholders and the general public to influence the content of the Dodder Catchment FRMP. This document was available on the Dodder FRAM Study webpage and in hard copy at the following Dublin City Council, Dún Laoghaire-Rathdown County Council and South Dublin County Council offices throughout the catchment (Civic Offices, Wood Quay, Dublin 8; County Hall, Marine Road, Dun Laoghaire, County Dublin; County Hall, Tallaght, Dublin 24) between 6<sup>th</sup> March 2012 and 8<sup>th</sup> June 2012. Consultees were invited to comment in writing either by letter or email.

Following completion of the 12 week consultation period, all responses received regarding the draft Dodder Catchment FRMP and its SEA ER were considered during the finalisation of the Dodder Catchment FRMP. The influence of consultation and environmental considerations on the plan finalisation process is summarised in this SEA Statement.

### 4.3 SUMMARY OF SUBMISSIONS

A summary of the submissions received on the SEA Environmental Report and draft Dodder Catchment FRMP is provided in Table 4.3.

**Table 4.3** Summary of submissions

Stakeholder type	No. of submissions
Members of the public	20
Local groups	7
Government departments/agencies	4

Stakeholder type	No. of submissions
Local Authorities	2
NGOs	2
Politicians	3
Other	3
<b>Total</b>	<b>41</b>

## 4.4 KEY ISSUES RAISED IN THE SUBMISSIONS

The submissions made that are relevant to the SEA and HDA processes are copied into a table in Appendix A. Where appropriate, responses to the comments made are provided and any actions taken are recorded.

Sections 4.4.1 to 4.4.18 summarise the key issues raised in the written submissions and how they have influenced the plan-making process.

### 4.4.1 Generalisations

**Key Issue:** Some stakeholders highlighted very specific environmental features or characteristics of the catchment.

**Response:** The purpose of the SEA process is to ensure that environmental considerations are integrated into the preparation of the Plan. SEA topics were considered strategically rather than in relation to specifics, for example, biodiversity and flora and fauna were considered as a whole rather than by individual habitats or species. It is considered that the SEA process achieves its purpose in relation to the consideration of the SEA topics in the development of the FRMP. Where specific inaccuracies were highlighted, these have been addressed in this SEA Statement where appropriate or have been addressed in the response table in Appendix A. However, it is not the intention to re-write sections of the SEA Environmental Report where doing so would not influence the outcome of the assessment.

**Influence:** No changes resulted from these observations.

### 4.4.1 Suggested changes to flood risk management options

**Key Issue:** Some stakeholders suggested changes to some of the flood risk management options.

**Response:** Suggested changes to flood risk management options were analysed by the study team. These resulted in the following amendments which are discussed further in Section 5.3:

- Shanagarry/Smurfit Weir flood cell: there were various submissions made in relation to the location of proposed defences in this flood cell. Investigation revealed additional information about the interaction between out-of-bank flows and overland flows originating from further upstream. By ensuring that flooding is contained at Shanagarry, it has been possible to reduce the defences downstream. The new proposal for flood defences in this flood cell also addresses submissions regarding defences at Clonskeagh House, Scully's Field, the park at Milltown Road and the Packhorse Bridge.
- Orwell Gardens flood cell: there were submissions made regarding the simulation of flooding to the properties along Orwell Road and the properties in Orwell Gardens. Investigation revealed that additional defences are needed in the Orwell Gardens area.

**Influence:** These two options were changed to varying degrees due to the suggestions made by stakeholders.

#### 4.4.2 Further assessment at detailed design phase

**Key Issue:** Many stakeholders expressed concern about potential environmental and social impacts associated with the options outlined in the draft plan and queried whether these would be looked at again when the detailed design of the proposed flood risk management options has been developed.

**Response:** The detailed design will require additional environmental assessment which will include Environmental Impact Assessment (EIA), in accordance with the EU EIA Directive (85/337/EEC), as well as project-level AA. Both processes will consider cumulative impacts. It is possible that some of the investigative works, prior to planning permission being sought, may in their own right require EIA and AA to be undertaken due to the sensitive locations along the River Dodder.

**Influence:** The SEA mitigation measures were amended to more strongly indicate that the next phase of the process further considers potential impacts, including cumulative and in-combination impacts.

#### 4.4.3 Integration between SEA/HDA and the Plan

**Key Issue:** Comments were received stating that the integration between the Plan and the SEA/HDA process was not always adequately highlighted.

**Response:** The SEA and HDA processes were on-going throughout the development of the FRMP for the Dodder catchment, with the SEA, HDA and Plan teams working closely together to identify potential environmental issues/constraints at the earliest possible stage in the Plan making process. The SEA, HDA and FRMP teams were fully integrated throughout the development of the FRMP,

ensuring that potential environmental impacts, both positive and negative, associated with the implementation of the FRMP have been given due consideration in its preparation.

The SEA and HDA teams were involved in the following plan-related activities:

- Development of the alternatives considered in the draft FRMP, SEA and HDA;
- Early identification of environmental sensitivities in the Dodder catchment in order to avoid impacts on the environment;
- Multi-criteria analysis of the entire suite of proposed options;
- Recommendation of mitigation measures to address the potential impacts arising from the alternatives considered in the draft FRMP;
- Development of a monitoring plan to track the environmental performance of the final FRMP once implemented;
- Review of submissions; and
- Screening of proposed changes to the final FRMP to determine if further significant environmental effects are likely to arise.

**Influence:** No changes resulted from these observations beyond what was already taking place.

#### 4.4.4 Cumulative effects

**Key Issue:** Some stakeholders stated the importance that the potential effects of the proposed options be assessed in the context of potential cumulative and in-combination effects, taking into account construction, operation and maintenance aspects and coordination of single and multiple proposed works. Some stated that the mitigation measures should be carefully monitored to ensure the potential for cumulative effects in particular are minimised in the construction and maintenance and dredging elements proposed to ensure that water quality and biodiversity in particular are not adversely affected during the implementation of the plan.

**Response:** The SEA and HDA assessments considered the potential for cumulative and in-combination effects between the preferred options proposed in the draft FRMP as well as between the preferred options and other plans, programmes and projects. The mitigation measures outlined in the SEA ER and NIS cover construction, operational and maintenance aspects of works arising from the FRMP and require that the appropriate surveys and environmental assessment be carried out and inform appropriate mitigation. Monitoring and plan review are specific requirements of the SEA process and are described in Section 9.5 of the SEA ER. At the next phase of the process, the detailed design phase, EIA will be undertaken and will consider the options cumulatively. The AA process, which also applies to the next phase of the process, will also assess cumulative impacts. This

SEA Statement explicitly requires that the potential cumulative and in-combination effects of the concurrent implementation of flood management options be considered and that mitigation measures implemented are carefully monitored to ensure that the potential for cumulative effects with other measures is minimised. This SEA Statement also includes a recommendation to include a cumulative environmental sensitivity / vulnerability map for the plan area, highlighting areas more sensitive to cumulative effects, in the next cycle of flood risk management planning.

**Influence:** The SEA mitigation measures were amended to more strongly indicate that the next phase of the process considers cumulative and in-combination impacts.

#### 4.4.5 Baseline data and data gaps

**Key Issue:** A number of submissions highlighted sources of information that were not referenced in the SEA Environmental Report and newer sources of information.

**Response:** In all instances, the most up-to-date data available was used to develop the baseline and to undertake the assessment. The assessments will not be re-applied using data which has subsequently become available, for example, the Census 2011 population figures as these were deemed to have negligible or no influence on proposals.

It is not considered likely that the fact that the following data sources were not referenced in the SEA ER will have any effect on the overall assessment of the options against the SEA objectives, targets and indicators which was strategic in scope and focused on receptor types as a whole (e.g. biodiversity, flora and fauna) rather than on individual receptors (e.g. specific habitat and species types). However, a number of sources of information are noted in Section 5.7 that should be considered in later flood risk management planning cycles in relation to the Dodder as well as during the EIA and AA processes which will take place during the detailed design phase of the Dodder project:

**Influence:** The sources of information referenced will be considered in later flood risk management planning cycles in relation to the Dodder as well as during the EIA and AA processes which will take place during the detailed design phase of the Dodder flood risk management options.

#### 4.4.6 Further investigations

**Key Issue:** Some stakeholders requested that further investigations be carried out including:

- The issue of the erosion of gravels from Bohernabreena and how this could be exacerbating flooding in the catchment;
- The issue of the improvement of rain gauge information;



**Response:** There are a number of new rain gauges in the catchment since the beginning of the Dodder CFRAM Study. Rainfall radar data is also being utilised. Further consideration of these topics will take place when options are being considered at catchment scale as part of the Eastern CFRAM study.

**Influence:** No changes resulted from these observations.

#### 4.4.7 Other plans and programmes

**Key Issue:** Some stakeholders requested that additional information be included in the SEA ER in relation to the objectives of other relevant plans and programmes.

**Response:** It is considered that the SEA process achieves its strategic purpose in relation to the consideration of the objectives of other plans and programmes. It is not the intention to re-write sections of the SEA Environmental Report where doing so would not influence the outcome of the assessment.

**Influence:** No changes resulted from these observations.

#### 4.4.8 Objectives, targets and indicators

**Key Issue:** some suggestions were made in relation to the SEA objectives, targets and indicators:

- for PHH1, safe drinking water and bathing water areas should be considered as objectives;
- for C1, this objective is unclear and while it is included as a climate change objective this is not reflected in the targets or indicators;
- for S1, it is unclear how protecting soil function can be monitored using area at risk from flooding;
- Consideration should be given to separating “Air and Climate” as distinct SEA topics and subsequently in SEA objectives. Whilst it is acknowledged that air can reasonably be screened out, climate issues have potential to impact on flood frequency and magnitude.

**Response:** The objectives, targets and indicators used in the SEA ER were developed in consultation with stakeholders and will not be changed at this stage of the process, nor will the assessment be re-run. However, these recommendations will be considered during the six-yearly review of the Dodder Catchment FRMP.

**Influence:** These recommendations will be taken on board during the six-yearly review of the Dodder Catchment FRMP.

#### 4.4.9 Spread of invasive species

**Key Issue:** Some stakeholders pointed out that Japanese Knotweed has colonised large tracts of the Dodder river bank crowding out indigenous species. Himalayan Balsam is also present. These invasive species reduce the solidity of the river bank and are contributing to flood issues. Other plants with deeper roots would hold the bank together more effectively but are absent.

**Response:** Giant Knotweed, Japanese Knotweed and Himalayan Balsam are listed as invasive species in Schedule 3 of the European Communities (Birds and Natural Habitats) Regulations, 2011. During the next phase of the study, the detailed design phase, a method statement will be prepared detailing mitigation measures that will be implemented to prevent the further spread of these species within the catchment during the construction phase. A section on management practices with respect to alien species has also been added to the Maintenance Plan.

**Influence:** A section on mitigation of invasive species has been added to the SEA mitigation in Section 5.3.2.9. A section in relation to the spread of invasive species has been added to the SEA mitigation measures. A section on management practices with respect to alien species has also been added to the Maintenance Plan.

#### 4.4.10 Flood preparedness

**Key Issue:** Some stakeholders asked how they can be prepared for future floods.

**Response:** The OPW website [www.flooding.ie](http://www.flooding.ie) provides practical advice in relation to assessing whether a home/property is at risk from flooding, preparing for a flood, some protection measures that can be taken, how to clean up after a flood and who to contact for more information or in an emergency. The OPW have also updated their 'plan, prepare, protect' booklet which can be found online and in the offices of Local Authorities.

**Influence:** The above information is referenced in the final FRMP.

#### 4.4.11 Maintenance Plan

**Key Issue:** Some stakeholders asked that protocols be agreed with all relevant stakeholders in relation to agreeing a maintenance plan for the river in order to resolve potential conflicting objectives, and that the maintenance plan be subject to AA to ensure that all future operations are fully compliant with the Habitats Directive.

**Response:** As part of the Dodder CFRAM Study, a maintenance plan was prepared. The existing maintenance programmes undertaken by the three Local Authorities and the riparian landowners was reviewed and a strategy proposed to manage maintenance across the catchment more effectively. It provides the participating Local Authorities with a tool to enable them to direct risk-based detailed inspections and prioritised maintenance programmes to manage effectively the reaches of the Dodder within their respective operational controls.

**Influence:** No changes resulted from these observations beyond what was already taking place.

#### 4.4.12 The loss of existing floodplain

**Key Issue:** A number of submissions expressed concern about the possible negative effects of cutting the river off from areas of natural floodplain through the erection of walls and embankments as proposed in the draft FRMP. One area that was mentioned many times was Scully's Field in Milltown.

Specific objectives in the relevant County and City Development Plans that are related to this issue include:

- GCO40: To develop a number of parks, open spaces and amenities, including the Dodder Linear Park;
- GCO45: Specific measures concerning the Dodder Linear Park.

**Response:** As a direct result of these submissions, the proposed option at Scully's Field was re-visited. No defences are now proposed for Scully's Field apart from two flood gates, one into the field and one for the walkway. The new proposals at Scully's Field are compatible with the above objectives. Also, the Dodder CFRAM team have liaised with the proposed Dodder Cycle Route Project Team this initiative can be accommodated.

**Influence:** The design of the option at Scully's Field has been radically changed to be more in line with stakeholder suggestions.

#### 4.4.13 Health and safety issues associated with potentially faster flows

**Key Issue:** Many stakeholders were concerned that the addition of stretches of walls and embankments along the Dodder River could have the effect of canalising the river which might in turn lead to faster flows during flood events which could pose a significant health and safety risk.

**Response:** A number of the proposed flood defences were re-examined as a result of comments made on the draft Dodder Catchment FRMP. As a result of additional investigations, it was possible to

re-configured some of the defences and move them back from the river as far as practical so as to maintain the maximum area of floodplain, for example, at Scully's Field.

**Influence:** Some flood defences were re-configured and moved back from the river as far as practical so as to maintain the maximum area of floodplain.

#### 4.4.14 Flooding moved downstream

**Key Issue:** Several stakeholders suggested that the overall effect of the draft flood risk management options outlined in the draft Dodder Catchment FRMP would be to move flooding issues downstream.

**Response:** Detailed computer modelling of the river network and its response to flows and flood risk management options has demonstrated that the flood risk management options will not lead to flooding downstream.

**Influence:** No changes resulted from these observations.

#### 4.4.15 October 2011 flood event

**Key Issue:** Many stakeholders pointed out that the analysis that took place to develop the draft Dodder Catchment FRMP and supporting documentation took place before the significant flood event of 24<sup>th</sup> October 2011. They questioned whether any of the analysis would be re-run using data and information from the event. Many pointed out that the emotional stress associated with the threat of flooding has been particularly heightened for them following the flood event in October 2011.

**Response:** An over-arching report on the October 2011 flood event was undertaken under the Eastern CFRAM Study. This report is available on the Eastern CFRAM Study website downloads page on [www.eascframstudy.ie](http://www.eascframstudy.ie). The Dodder model will be re-run with data available from the 2011 event during the Dodder Catchment FRMP review cycle and the development of the second cycle Dodder Catchment FRMP.

**Influence:** No changes resulted from these observations beyond what was already taking place.

#### 4.4.16 Climate Change

**Key Issue:** A small number of submissions were received in relation to the issue of climate change in the context of its effects on flood risk management planning.

**Response:** A factor in the technical assessment of all potential options was the sustainability and adaptability of the option to future flood risk and climate change. An objective was therefore considered under the technical criteria which assessed the ability of each of the proposed options to

be adapted at a later date as more about the effects of climate change are established. This is reflected in the technical objective where an option is assessed against its adaptability to account for flood risk from middle range and high end future flood scenarios.

**Influence:** No changes resulted from these observations.

#### 4.4.17 Consultation activities

**Key Issue:** Some stakeholders stated that they were not aware of how and where to view the Dodder suite of documents. In particular, people were unaware that they were available online. Many stakeholders requested that further consultation take place during the design stage so that there are opportunities to adjust to new information and needs. Some stakeholders stressed the importance that agreement is reached with the relevant experts before works are undertaken, for example, the IFI should be consulted and their agreement sought where proposals include measures such as channel realignment and silt removal which have the potential to significantly negatively affect fish and fish habitat.

**Response:** Reasonable efforts were made to publicize the availability of the plan documents in the Local Authority offices and online. The steps taken are summarised in Section 4.2.

The next stage of the work, the detailed design phase, includes requirements for EIA and AA. The AA process requires consultation with key statutory stakeholders while the EIA process requires consultation with statutory stakeholders and the public. Therefore, through these processes, stakeholders and the public will be given the opportunity to view the more detailed proposals and comment on them in order to influence them before they are implemented. Mitigation measures specified in the ER include a requirement to undertake surveys in relation to fisheries and a requirement to ensure agreement with IFI in relation to the method statement, detailed plans and timing of works before any works commence. The results of these assessments and of consultations will inform and influence the detailed design and implementation of flood management measures.

**Influence:** No changes resulted from these observations.

#### 4.4.18 Enforcement

**Key Issue:** A number of submissions highlighted concerns with regards to enforcement of existing legislation, including litter laws.

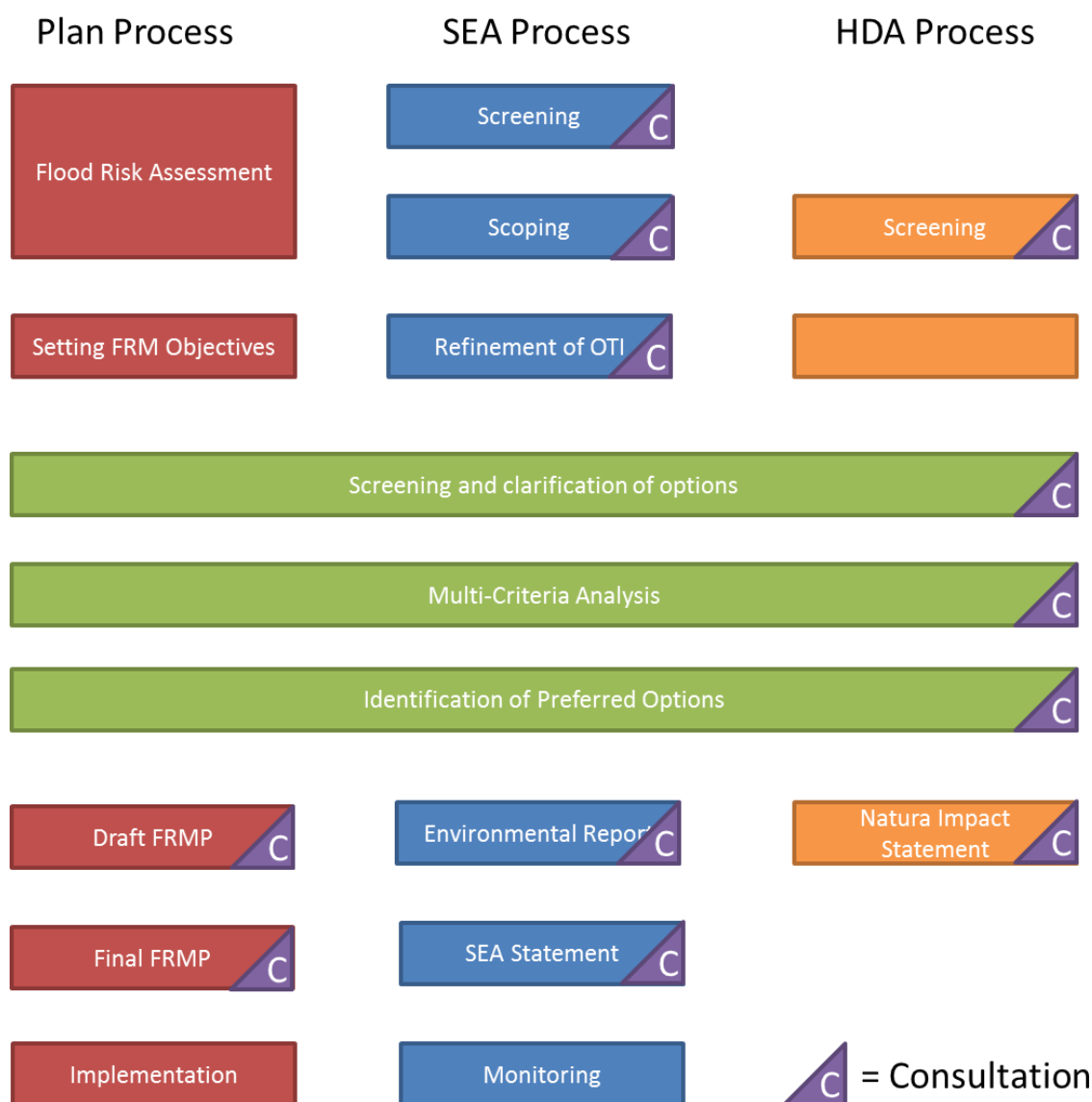
**Response:** Enforcement of existing legislation is recognised as being a very important element in the management of flood risk generally.

**Influence:** This issue has been added to the SEA mitigation measures.

## 5 INFLUENCE OF ENVIRONMENTAL CONSIDERATIONS IN THE FINAL PLAN

### 5.1 PARALLEL PROCESSES

The SEA process took place in conjunction with the preparation of the FRMP and the HDA process. Thus, from the outset, considerations of the environmental consequences of the alternatives have been taken into account. At a formal level, the process involved a series of workshops, presentations, discussions and meetings between the SEA, HDA and Plan Teams as well as with statutory consultees, non-statutory stakeholders and organisations and the public. The iterative process ensured that the SEA/HDA and the preparation of the FRMP were well integrated in order to meet the environmental objectives and the objectives of the Plan (Figure 5.1).



**Figure 5.1** Integration of the plan making and environmental assessment processes

The SEA and HDA processes have ensured that potential environmental impacts (both negative and positive) associated with the implementation of the FRMP have been given due consideration throughout its preparation.

**Table 5.1** Taking account of environmental considerations in the plan

Environmental consideration	How has this been accounted for in the Plan
Identification of environmental sensitivities, constraints and opportunities in the Dodder catchment.	The identification of baseline conditions during the scoping process ensured a comprehensive understanding of the receiving environment, both now and in the future. This understanding of constraints and opportunities was used to inform option identification.
Consideration of environmental sensitivities in the option identification and assessment process, and subsequently in the selection of the preferred options.	<p>The incorporation of 11 SEA objectives in the suite of 15 flood risk management objectives ensured that environmental sensitivities were influential in option identification and assessment and in subsequent assessment of the options and measures in the FRMP.</p> <p>In addition, feedback from consultation activities and formal reviews of the FRMP and SEA documents have been considered and accounted for in these documents.</p>
Requirement to avoid or reduce impacts on the receiving environment.	<p>Recommended mitigation measures are detailed in the SEA ER and incorporated into the final plan in chapter 7.</p> <p>An overview of the recommended mitigation measures is provided in Section 5.5 of this SEA Statement.</p>
Requirement to prepare a monitoring programme under Article 10 of the SEA Directive.	<p>The environmental monitoring programme required by the SEA has been incorporated into the final plan in Appendix F.</p> <p>An overview of the content of the monitoring programme is provided in Section 7 of this SEA Statement.</p>

## 5.2 ENVIRONMENTAL OBJECTIVES

The SEA process was fully integrated with the development and identification of flood risk management options and the comprehensive multi-criteria analysis process.

The SEA objectives used for the assessment of the Dodder Catchment FRMP comprised 11 of the 15 flood risk management objectives used during the option assessment process to determine the preferred flood risk management options. The other objectives were technical and economic in nature. The 11 objectives are outlined in Table 5.2 and details of the associated indicators and targets are presented in the SEA ER.

**Table 5.2** SEA Objectives

SEA Code	Objective	Sub-objective
<b>PHH1</b>	Minimise risk to human health and life	Minimise risk to human health and life in the local community from flooding
<b>MA1</b>	Protect key infrastructure	Minimise risk to residential and commercial infrastructure
		Minimise risk from flooding to transport infrastructure
		Minimise risk to other key infrastructure such as vulnerable buildings (e.g. hospitals), utility infrastructure (e.g. WWTPs, WTPs, power stations, telecom exchanges etc), social infrastructure and areas of significant employment
<b>MA2</b>	Protect existing, and where possible create new, waterside access and recreational facilities	Protect existing, and where possible create new, waterside access for recreation, including fishing, as well as recreation facilities.
<b>W1</b>	Safeguard and promote sustainable land use in keeping with the WFD	Minimise risk of flooding of potentially polluting sites e.g. WWTPs, IPPCs, contaminated lands, landfills etc.



SEA Code	Objective	Sub-objective
<b>W2</b>	Support the achievement of good ecological status/ potential (GES/GEP) under the WFD. Particularly morphology as a supporting element to ecological status	Maintain, and where possible restore, natural, fluvial and coastal processes/morphology in support of proposed measures under the WFD.
<b>W3</b>	Protect, and where possible enhance, fisheries within the catchment	Maintain existing, and where possible create new, habitat supporting fisheries and maintain or enhance connectivity
<b>BFF1</b>	Protect the flora and fauna of the catchment and, where possible, enhance biodiversity	Avoid damage to, and where possible enhance, internationally and nationally designated sites of nature conservation importance.
		Avoid loss of legally protected species and other known species of conservation concern, or damage to or loss of habitats supporting legally protected species and other known species of conservation concern, and where possible enhance
		Avoid damage or loss of existing riverine, wetland and coastal habitats, and where possible create new habitat, to maintain naturally functioning ecosystems.
<b>L1</b>	Protect, and where possible enhance, landscape character and visual amenity	Protect, and where possible enhance, the character of existing designated Landscape Protection Zones within the catchment.
		Protect, and where possible enhance, existing landscape character within the catchment.
		Protect, and where possible enhance, views into/from important scenic areas and routes within the catchment

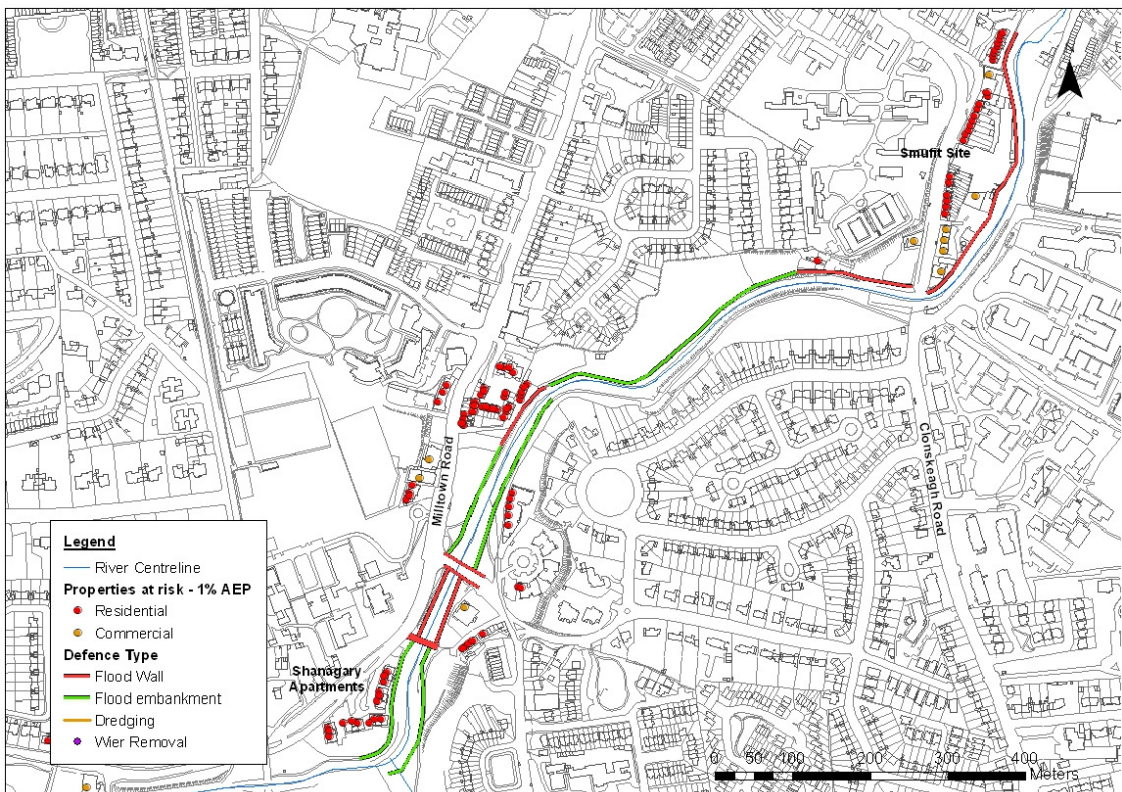
SEA Code	Objective	Sub-objective
<b>CH1</b>	Protect and where possible enhance features of cultural heritage importance and value, including their settings	Avoid damage or loss of buildings and structures on the National Inventory of Architectural Heritage including their setting and heritage value, within the catchment
		Avoid damage or loss of archaeological features listed on the Record of Monuments and Places, including their setting and heritage value, within the catchment.
<b>C1</b>	No increase in flood risk to other areas	Avoid increase in flood risk to other areas due to flood risk management options (i.e increased channel conveyance or channel diversion effects) taking the possible impacts of climate change into account
<b>S1</b>	Protect soil function	Avoid loss of soil from erosion

### 5.3 SCREENING OF CHANGES TO OPTIONS IN FINAL FRMP

Amendments to two of the preferred Flood Risk Management Options are recommended in the final FRMP. These are the options at Shanagarry/Smurfit Weir and Orwell Gardens. Tables 5.1 and 5.2 screen these amendments to determine whether additional assessment is required with respect to the SEA and HDA assessments.

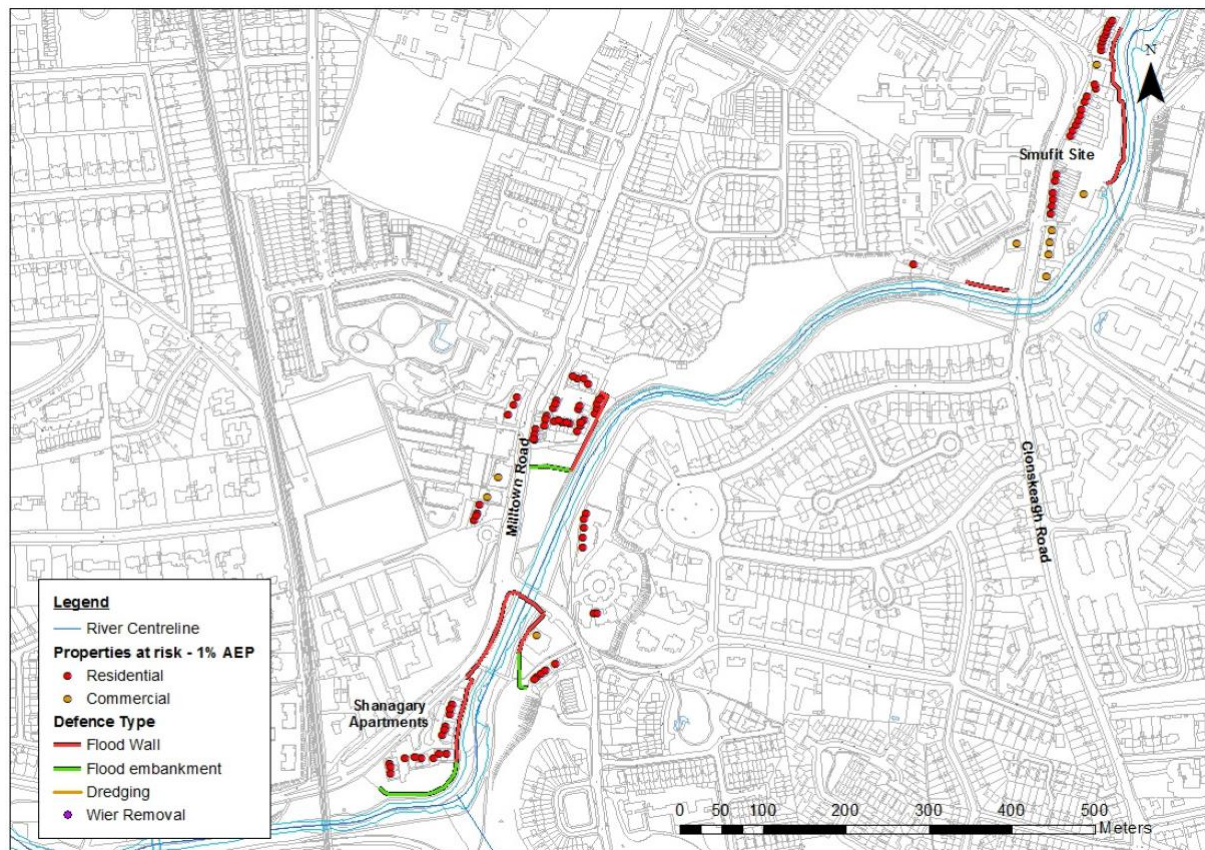
While there will be some change in the magnitude of effects associated with the amended options, these are generally positive. It is therefore concluded that no additional assessment is required though all of the mitigation identified in the SEA ER and Natura Impact Assessment still apply.

**Figure 5.2** Screening of amended Shanagarry/Smurfit Weir option

Assessment Unit		Dodder AU, Shanagary Apartments and Smurfit Site APSRs			
Water bodies		Dodder			
Preferred flood risk management option		Hard Defences			
Flood risk (1% AEP event)					
Flood mapping shows that 100 residential and commercial properties are located within the 1% AEP fluvial event flood extent. This risk occurs from out of bank flooding from the River Dodder.					
Receiving Environment					
Properties		Utility Assets (No)	Transport Routes (length km)	Agricultural Land (hectares)	Social Amenity (No)
Residential (No)	Commercial (No)				
90	10	0	1.36	0	0
Other features and receptors					
<ul style="list-style-type: none"><li>• 1 CSO at Whitebeam Road</li><li>• 5 listed monuments including water mills, a bridge and a house</li><li>• Land cover – discontinuous urban fabric</li><li>• Fishery habitat is good for all salmonid life stages throughout most of the Dodder system</li><li>• No designated protected areas in the vicinity</li><li>• Areas of woodland and parkland</li><li>• WFD ecological status is poor</li><li>• WFD objective is to restore to at least good status by 2021 (extension due to highly impacted sites)</li></ul>					
Original option details					
The map shows an indicative line of the location and extent of the flood defences proposed by the preferred option which would involve the construction of <b>450m of flood walls</b> and <b>1,130m of flood embankments</b> at an average 1.4m above ground level and the upgrading of Milltown Bridge and Shanagarry footbridge parapets.					
					

### Amended option details

The amended option shows a significant reduction in the length of flood walls and embankments. The length of flood wall required is reduced from 450m to 250m and the length of embankment is reduced from 1,130 m to 120m.



### Environmental Impacts

SEA Objectives	Impact	Significance	Mitigation	Screening	Further Assessment?
Population and Human Health (PHH)	+	√√√	No	No change	No
Infrastructure (MA1)	+	√√√	No	No change	No
Social amenity (MA2)	-	X	Yes	Yes – less negative	No
Contamination (W1)	+	√√√	No	Yes – slightly less positive	No
WFD (W2)	+ / -	X	Yes	Yes – less negative	No
Fisheries (W3)	+ / -	X	Yes	Yes, less negative	No
Flora & fauna (BFF)	+ / -	XX	Yes	Yes, less negative	No
Landscape (L)	-	XX	Yes	Yes – less negative	No
Cultural heritage (CH)	+	√√√	No	No change	No
Flood risk (C)	0	0	No	No change	No
Soil (S)	+	√√√	No	Yes – slightly less positive	No

## Discussion

### Population and Human Health (PHH)

There is no change associated with the amended option as it still achieves the same level of protection in relation to this objective. Therefore, no additional assessment is required though all of the mitigation identified in the SEA ER and Natura Impact Statement still applies.

### Infrastructure (MA1)

There is no change associated with the amended option as it still achieves the same level of protection in relation to this objective. Therefore, no additional assessment is required though all of the mitigation identified in the SEA ER and Natura Impact Statement still applies.

### Social amenity (MA2)

Though the impact of the amended option is still likely to be negative in relation to this objective due to restricted access to the river, the amended option will have less impact than the original option as there are fewer defences. Therefore the amended option performs better in relation to this objective. No additional assessment is required though all of the mitigation identified in the SEA ER and Natura Impact Statement still applies.

### Contamination (W1)

The amended option will still reduce the risk of contamination of river water (from sources such as garden chemicals), though to a lesser extent than the original option as more land area is allowed to flood in the amended option. Therefore the amended option still performs positively in relation to this objective, though perhaps slightly less so than the original option. No additional assessment is required though all of the mitigation identified in the SEA ER and Natura Impact Statement still applies.

### WFD (W2)

Though the impact of the amended option is still likely to be negative in relation to this objective, the reduced flood walls and embankments place less of a hydromorphological pressure on the river than the original option. Therefore the amended option performs better in relation to this objective. No additional assessment is required though all of the mitigation identified in the SEA ER and Natura Impact Statement still applies.

### Fisheries (W3)

Though the impact of the amended option is still likely to be negative in relation to this objective, the reduced flood walls and embankments place of a hydromorphological pressure on the river than the original option. Therefore the amended option performs better in relation to this objective. No additional assessment is required though all of the mitigation identified in the SEA ER and Natura Impact Statement still applies.

### Biodiversity, Flora and Fauna (BFF)

Though the impact of the amended option is still likely to be negative in relation to this objective, the reduced flood walls and embankments will results in less disturbance and removal of habitats than the original option. Therefore the amended option performs better in relation to this objective. No additional assessment is required though all of the mitigation identified in the SEA ER and Natura Impact Statement still applies.

### Landscape (L)

There will still be some impact on landscapes and views in the area associated with the amended option, though the reduced flood walls and embankments in the amended option will reduce these impacts in comparison with the original option. Therefore, no additional assessment is required though all of the mitigation identified in the SEA ER and Natura Impact Statement still applies.

### Cultural Heritage (CH)

No change due to amended option as it still achieves the same level of protection in relation to this



objective. Therefore, no additional assessment is required though all of the mitigation identified in the SEA ER still applies.

**Flood risk (C)**

No change due to amended option as it will not cause flood risk in other areas of the Dodder catchment. Therefore, no additional assessment is required though all of the mitigation identified in the SEA ER still applies.

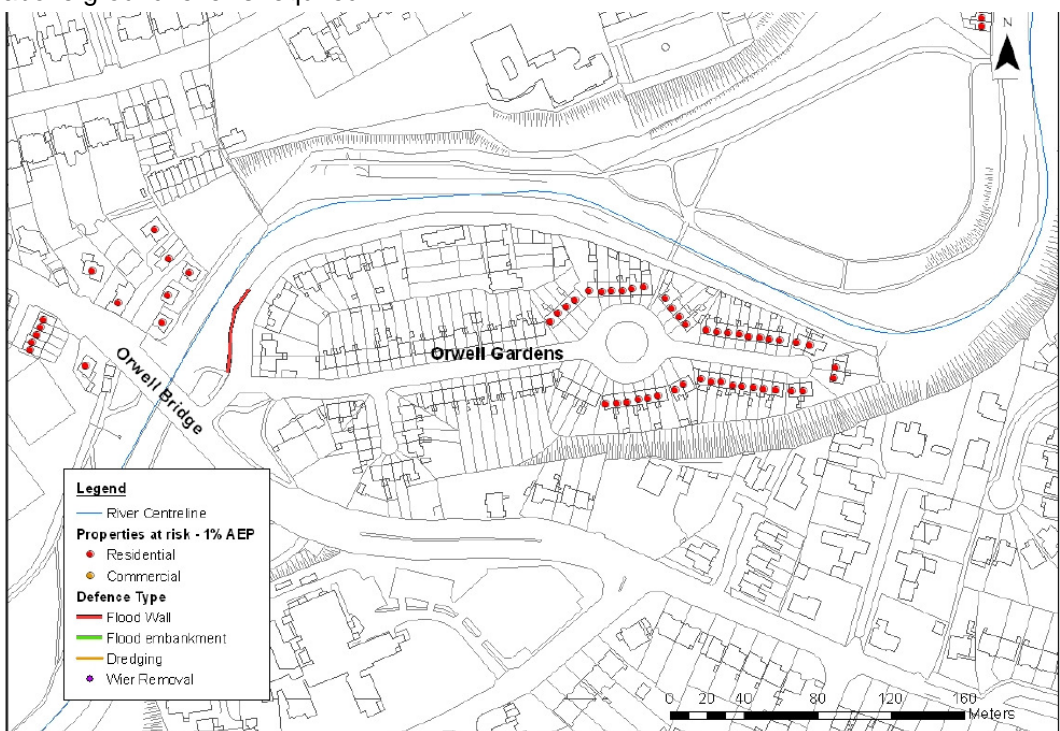
**Soil (S)**

The amended option will reduce the risk of erosion in the area, though to a lesser extent than the original option as more land area is allowed to flood in the amended option. Therefore, no additional assessment is required though all of the mitigation identified in the SEA ER and Natura Impact Statement still applies.

**Screening conclusion**

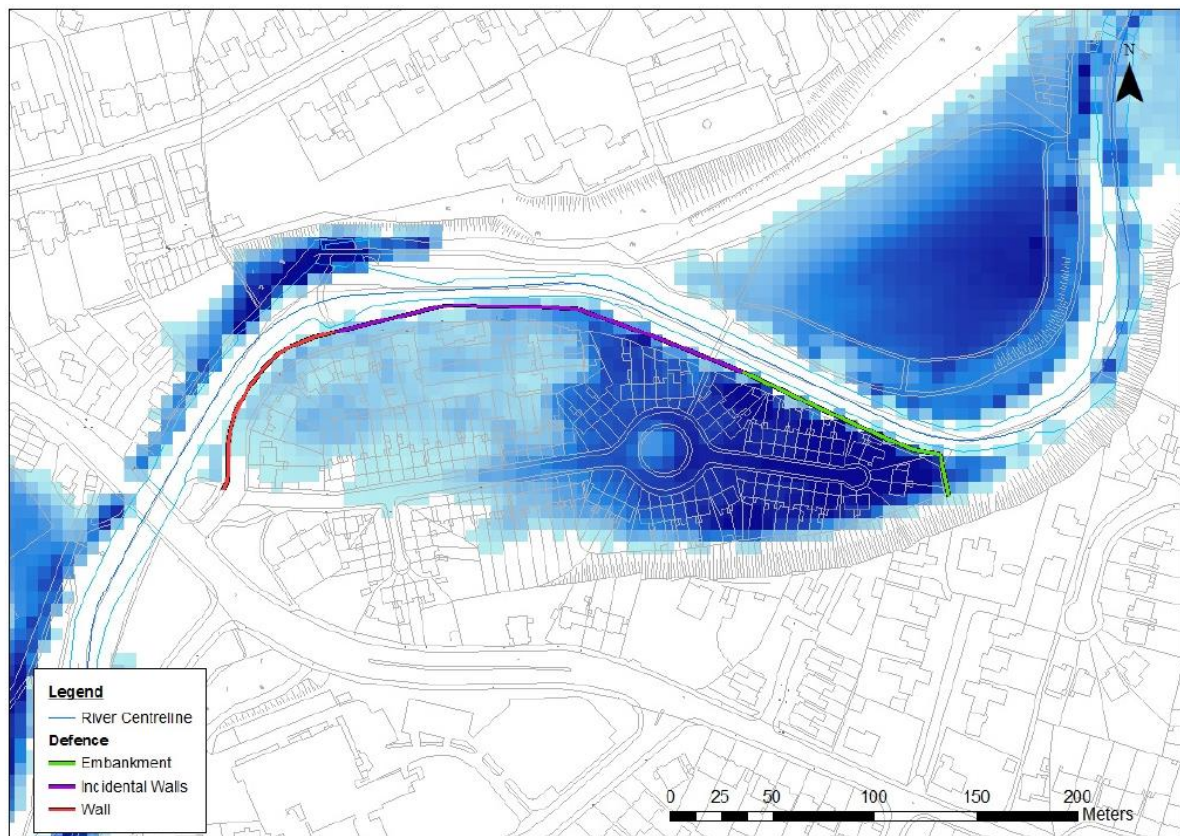
While there will be some change in the magnitude of effects associated with the amended options, these are generally positive. It is therefore concluded that no additional assessment is required though all of the mitigation identified in the SEA ER and Natura Impact Assessment still apply.

**Figure 5.3** Screening of amended Orwell Gardens option

Assessment Unit		Dodder AU, Orwell Gardens APSR			
Water bodies		Dodder			
Preferred flood risk management option		Hard Defences			
Flood risk (1% AEP event)					
The flood extent maps show that 44 residential properties are at risk from flooding from the River Dodder during a 1% AEP fluvial event. The hydraulic model shows that the flood risk is from the right hand bank downstream of Orwell Bridge and flows through Orwell Gardens.					
Receiving Environment					
Properties		Utility Assets (No)	Transport Routes (length km)	Agricultural Land (hectares)	Social Amenity (No)
Residential (No)	Commercial (No)				
44	0	0	0.312	0	0
Other features and receptors					
<ul style="list-style-type: none"><li>• 3 bridges</li><li>• Land cover – discontinuous urban fabric</li><li>• Fishery habitat is good for all salmonid life stages throughout most of the Dodder system</li><li>• No designated protected areas in the vicinity</li><li>• No protected views or prospects</li><li>• No listed monuments</li><li>• WFD ecological status is poor</li><li>• WFD objective is to restore to at least good status by 2021 (extension due to highly impacted sites)</li></ul>					
Original option details					
It is recommended to replace this masonry wall at Orwell Gardens with a reinforced concrete flood defence wall. The map shows an indicative line of the location and extent of the flood wall that would protect Orwell Gardens during a 1% AEP event. The flood wall of 60m and approximately 1m above ground level is required.					
					

### Amended option details

The amended option shows an additional 24m of flood walls and 29m of embankment. However, the wall and embankment are already in place. During the detailed design stage, the suitability and any upgrade requirements, of the wall and embankment will be assessed.



### Environmental Impacts

SEA Objectives	Impact	Significance	Mitigation	Screening	Further Assessment?
Population and Human Health (PHH)	+	√√√	No	No change	No
Infrastructure (MA1)	+	√√√	No	No change	No
Social amenity (MA2)	0	-	No	No change	No
Contamination (W1)	+	√√√	No	No change	No
WFD (W2)	+	√	Yes	No change	No
Fisheries (W3)	+	√	Yes	No change	No
Flora & fauna (BFF)	+ / -	√	Yes	No change	No
Landscape (L)	-	X	Yes	No change	No
Cultural heritage (CH)	0	-	No	No change	No
Flood risk (C)	0	-	No	No change	No
Soil (S)	+	√√√	No	No change	No

### Discussion

#### Population and Human Health (PHH)

There is no change associated with the amended option as it still achieves the same level of protection in relation to this objective. The additional wall and embankment shown in the amended



option are already in place. Therefore, no additional assessment is required though all of the mitigation identified in the SEA ER and Natura Impact Statement still applies.

**Infrastructure (MA1)**

There is no change associated with the amended option as it still achieves the same level of protection in relation to this objective. The additional wall and embankment shown in the amended option are already in place. Therefore, no additional assessment is required though all of the mitigation identified in the SEA ER and Natura Impact Statement still applies.

**Social amenity (MA2)**

There is no change associated with the amended option as it still has the same impact on this objective. The additional wall and embankment shown in the amended option are already in place. Therefore, no additional assessment is required though all of the mitigation identified in the SEA ER and Natura Impact Statement still applies.

**Contamination (W1)**

There is no change associated with the amended option as it still has the same impact on this objective. The additional wall and embankment shown in the amended option are already in place. Therefore, no additional assessment is required though all of the mitigation identified in the SEA ER and Natura Impact Statement still applies.

**WFD (W2)**

There is no change associated with the amended option as it still has the same impact on this objective. The additional wall and embankment shown in the amended option are already in place. Therefore, no additional assessment is required though all of the mitigation identified in the SEA ER and Natura Impact Statement still applies.

**Fisheries (W3)**

There is no change associated with the amended option as it still has the same impact on this objective. The additional wall and embankment shown in the amended option are already in place. Therefore, no additional assessment is required though all of the mitigation identified in the SEA ER and Natura Impact Statement still applies.

**Biodiversity, Flora and Fauna (BFF)**

There is no change associated with the amended option as it still has the same impact on this objective. The additional wall and embankment shown in the amended option are already in place. Therefore, no additional assessment is required though all of the mitigation identified in the SEA ER and Natura Impact Statement still applies.

**Landscape (L)**

There is no change associated with the amended option as it still has the same impact on this objective. The additional wall and embankment shown in the amended option are already in place. Therefore, no additional assessment is required though all of the mitigation identified in the SEA ER and Natura Impact Statement still applies.

**Cultural Heritage (CH)**

There is no change associated with the amended option as it still has the same impact on this objective. The additional wall and embankment shown in the amended option are already in place. Therefore, no additional assessment is required though all of the mitigation identified in the SEA ER and Natura Impact Statement still applies.

**Flood risk (C)**

There is no change associated with the amended option as it still has the same impact on this

objective. The additional wall and embankment shown in the amended option are already in place. Therefore, no additional assessment is required though all of the mitigation identified in the SEA ER and Natura Impact Statement still applies.

**Soil (S)**

There is no change associated with the amended option as it still has the same impact on this objective. The additional wall and embankment shown in the amended option are already in place. Therefore, no additional assessment is required though all of the mitigation identified in the SEA ER and Natura Impact Statement still applies.

**Screening conclusion**

There is no change associated with the amended option as it still achieves the same level of protection and the additional wall and embankment proposed are already in place. It is therefore concluded that no additional assessment is required though all of the mitigation identified in the SEA ER and Natura Impact Assessment still apply.

## 5.4 SUMMARY OF ASSESSMENT

The integration of the SEA process within the development of the plan ensured that, where possible, the proposed food risk management options met the requirements of the SEA objectives set out in Table 5.2. Where possible, options that could give rise to significant negative environmental effects (i.e. failing to meet the minimum targets set out for each of the SEA objectives) were not favoured during the option selection process.

The SEA identified that the proposed flood risk management options could give rise to a number of positive environmental effects, but also some negative environmental effects that could not be avoided through the selection of alternative options. In addition to the SEA conclusions, the detailed AA identified additional potentially significant effects on the Natura sites within and adjacent to the Dodder catchment.

The screening of the changes to the options made between draft and final FRMP stage concluded that, while there will be some change in the magnitude of effects associated with the amended options, these are generally positive. In other words, the amended options perform better in terms of the SEA objectives than the original options. Therefore, it was not necessary to proceed to re-evaluation under the SEA and HDA processes.

### 5.4.1 Summary of effects

This SEA has identified that the following components of the Dodder Catchment FRMP could give rise to the following potentially significant effects significant (i.e. likely to have a major or moderate positive or negative effect) relative to baseline conditions, as summarised in Tables 9.1 to 9.6 of the SEA ER. This summary of effects includes consideration of the amendments made to the options between the draft and final FRMPs.

#### **Lower Dodder - Donnybrook APSR (hard defences)**

- significant negative effects relating to biodiversity, flora and fauna, landscape character and visual amenity;
- significant positive effects relating to population and human health, infrastructure, contamination, cultural heritage and soil;
- minor negative effects relating to social amenity, WFD objectives and fisheries.

#### **Orwell Gardens APSR (hard defences) (option amended in final Dodder Catchment FRMP, no change to effects)**

- significant positive effects relating to population and human health, infrastructure, contamination, cultural heritage and soil;
- minor negative effects relating to landscape character and visual amenity;

**Shanagary Apartments and Smurfit Site APSR (hard defences) (option amended in final Dodder Catchment FRMP, changes to effects shown in red text)**

- significant negative effects relating to landscape character and visual amenity as well as biodiversity, flora and fauna, **though these effects are likely to be less significant since the option was amended between draft and final FRMP stage;**
- significant positive effects relating to population and human health, infrastructure and cultural heritage;
- significant positive effects relating to contamination and soil, **though perhaps to a slightly lesser extent in the amended option;**
- minor negative effects relating to social amenity, WFD objectives and fisheries **though these effects are likely to be less significant since the option was amended between draft and final FRMP stage.**

**St Endas Residential and Tara Hill Residential APSR (hard defences, dredging and removal of weirs)**

- significant negative effects relating to WFD objectives, fisheries, biodiversity, flora and fauna and landscape character and visual amenity;
- significant positive effects relating to population and human health, infrastructure and contamination;
- minor negative effects relating to social amenity.

**Little Dargle AU (embankments)**

- significant positive effects relating to population and human health, infrastructure, contamination, cultural heritage and soil;

**Dodder Catchment (support measures on a catchment-wide scale)**

- significant positive effects relating to population and human health and cultural heritage.

## 5.5 SUMMARY OF MITIGATION

Mitigation was recommended in the SEA ER in relation to predicted negative effects. The recommended mitigation is summarised below incorporating additions and amendments (red text) as a result of comments and submission on the draft FRMP, the SEA ER and the Natura Impact Statement.

This mitigation is included in Chapter 7 of the Dodder Catchment FRMP and is therefore adopted and will be considered as part of any works that take place.

### 5.5.1 Principal mitigation

#### Further assessment at detailed design stage

- The predicted negative effects should be considered further during the next stage of option development, when details of the option (e.g. visual appearance, alignment of flood defences) can be optimised through detailed feasibility studies and design in order to limit identified impacts on sensitive receptors as well as to maximise opportunities to enhance the environment and social amenity. Where this can be successfully achieved, the implementation of mitigation measures can give rise to a reduction in the significance of the identified negative environmental effects.
- Appropriate survey work should be carried out to inform the detailed design and any necessary mitigation measures.
- Appropriate licences, for example under the Wildlife Acts or derogations under the Habitats Regulations, should be applied for in advance of applying for planning permission or Part 8, and should be accompanied by the relevant survey information.

#### Avoid impacts by selecting alternative options and/or design solutions

- This has been undertaken for all locations and options through the option development and integrated multi-criteria analysis process. Environmental constraints and opportunities highlighted through the SEA process were used to screen out environmentally unacceptable flood risk management measures at each location and then inform the identification and development of options, prior to the detailed option assessment process. This process ensured that the options selected from the multi-criteria analysis process were generally those that scored highest in terms of the SEA objectives and that the likely impacts of the preferred flood risk management options could potentially be minimised.

### 5.5.2 General mitigation

General mitigation measures recommended include:

- The objectives of the Eastern River Basin Management Plan should be considered during the detailed design phase;
- Enforcement of relevant existing legislation, for example litter laws, should be considered an important element in the management of flood risk generally;
- In the event of the risk of a flood event in the river all flood relief works should cease;
- The development of a cumulative environmental sensitivity / vulnerability map for the Plan area, highlighting areas more sensitive to cumulative effects, should be considered. Where this exercise has already been carried out for the respective Planning Authorities at a County level in SEA ER's of land use plans, this should be referenced.

### 5.5.3 Mitigation at the works stage

- Environmentally sensitive techniques should be utilised wherever possible;
- Generally, areas to be coffer dammed and dewatered should be kept to a minimum;
- Except where absolutely necessary, machinery should operate from the bankside and not in-stream;
- Works should only be carried out after a method statement, detailed plans and timing of works have been agreed with NPWS and Inland Fisheries Ireland;
- Works in environmentally sensitive areas should be undertaken outside of the main breeding seasons;
- No activity associated with the project should be undertaken during very wet weather (**generally defined as 25mm or more of rainfall in a single day**).
- Temporary flood defences should be in place during the course of construction when the removal of existing structures exposes the area to an increased risk of flooding;
- Biodegradable fuels and lubricants should be used where possible;
- Machinery should not be re-fuelled or lubricated near the river;
- Fuels, lubricants and hydraulic fluids for equipment used on the construction site, as well as any solvents, oils, and paints should be carefully handled to avoid spillage, properly secured against

unauthorised access or vandalism, and provided with spill containment according to codes of practice;

- Any spillage of fuels, lubricants or hydraulic oils should be immediately contained and the contaminated soil removed from the site and properly disposed of;
- Waste oils and hydraulic fluids should be collected in leak-proof containers and removed from the site for disposal or re-cycling;
- Raw or uncured waste concrete should be disposed of by removal from the site;
- Wash down water from exposed aggregate surfaces, cast-in-place concrete and from concrete trucks should be trapped on-site to allow sediment to settle out and reach neutral pH before clarified water is released to the river or drain system or allowed to percolate into the ground. Where possible pre-cast concrete or sheet piles should be used;
- Foul drainage from site offices etc. should be connected to a local sewer or removed to a suitable treatment facility or discharged to a septic tank system constructed in accordance with EPA guidelines;
- If temporary toilet facilities are used, the location of these facilities must be suitable and they must be maintained by a licensed contractor;
- Generally, wastes associated with construction, operation and maintenance works should be managed in accordance with national waste legislation where relevant and appropriate;
- Issues that may arise post-construction should be investigated and mitigated;
- Work should be planned to take account of the time of year of previous floods and tide forecasts.

#### **5.5.4 General environmental mitigation**

- All projects resulting from the Dodder Catchment FRMP should be subject to appropriate assessment screening and if necessary appropriate assessment;
- No trees should be removed between 1<sup>st</sup> March and 31<sup>st</sup> August as per the Wildlife Act (exemptions for trees that pose a significant health and safety risk and trees that are likely to fall into the river and cause a blockage downstream under Irish legislation but this is superseded by European legislation in instances where the tree, for example, provides habitat which is essential to designated species);



- The provision/application of appropriate buffer zones between designated ecological sites and proposed projects associated with the implementation of the Plan should be considered;
- Potential future protected area boundary changes should be considered.

#### **5.5.5 Mitigation in relation to fisheries (from assessment table)**

- A Fisheries Enhancement and Rehabilitation Programme should be developed. The application of basic in-stream enhancement techniques to develop suitable spawning and nursery habitats for fish should be considered. This could be achieved through the addition of rubble mats and gravel at carefully selected points. Over-deepening at key points would also be effective in creating holding areas (pools) for older and larger fish;
- Aquatic ecology assessment should be undertaken before works begin. The design of the defences and maintenance regime should consider the requirements of fisheries and possibly the creation of suitable fishery habitat. This could include avoiding carrying out works during fish migration season or incorporating habitat creation in the design;
- Fisheries enhancement and rehabilitation should be considered outside of areas of proposed works as well as within them;
- Fisheries rehabilitation should be carried out with professional expertise and with the assistance and advice of Inland Fisheries Ireland. Local angling groups should be included in the process.

#### **5.5.6 Mitigation in relation to lamprey and salmonids**

- The removal of any weirs should be carried out gradually and in stages to prevent the washing away of marginal silt deposits where juvenile lamprey are found as well as the potential displacement of juvenile salmonids;
- No in-stream works, including weir removal should be carried out during the period October to June inclusive without the agreement of Inland Fisheries Ireland;
- Before any area is de-watered, suitable juvenile lamprey habitat, and suitable salmonid nursery habitat in adjacent areas of river should be identified if present;
- Following installation of coffer dams, the enclosed waters should be electrofished by an operator (licensed by NPWS and Department of Communications, Energy and Natural Resources) if lamprey and/or salmonids are present. All lamprey and juvenile salmonids captured should be

transferred to selected nearby habitat. All other fish should be released to the river. While awaiting transfer, captured fish should be held in the river in a perforated bin or in an aerated container;

- Pumps used for de-watering should be provided with mesh screens to avoid taking in fish.

#### **5.5.7 Mitigation in relation to birds and bats**

- Pre-construction surveys should be conducted by suitable qualified ecologists of all works way-leaves, depot areas, storage areas and other works areas for nesting bird and bat species. Should any important species be found during the surveys, project engineers should be informed and appropriate mitigation measures should be agreed between the surveying ecologist and the project engineers having consulted with NPWS;
- Where possible hedges, trees and riparian vegetation should not be removed during the nesting season (i.e. 1<sup>st</sup> March to 31<sup>st</sup> August as per the Wildlife Act).

#### **5.5.8 Mitigation in relation otters and badgers**

- Pre-construction surveys should be conducted by suitable qualified ecologists of all works areas for evidence of otters and badgers. Should any of these be found during the surveys, project engineers should be informed and appropriate mitigation measures should be agreed between the surveying ecologist and the project engineers having consulted with NPWS;
- Every effort should be made to ensure that suitable riparian habitat is left along the watercourse to enable the river to act as a wildlife corridor. Where this is not possible mammal ledges and artificial otter holts should be considered.

#### **5.5.9 Mitigation of suspended solids pollution**

- Special measures are required to prevent the large volumes of fine sediments which may have accumulated upstream of weirs (identified for removal) from being released into the river and further downstream into the estuary. The method whereby this should be achieved should be agreed with IFI prior to commencement of the works. It is likely that the most effective method would be to remove fine sediment deposits prior to removal of the weir using suction dredging. The work should be carried out only at low flows and silt blankets or other silt filtering measures should be put in place across the river downstream of the works area. Dredged sediments should be disposed of in a location where they cannot erode into adjacent watercourses;
- Where construction of flood defences poses a significant risk of suspended solids and other pollution, the area of the proposed works should be isolated using coffer dams. If de-watering is necessary to allow works to proceed, water pumped from the contained area should be passed

through a settlement pond or pre-fabricated settlement tanks with oil interceptor before being discharged to the river;

- For construction activities close to the river bank, eroded sediments should be retained on site with erosion and sediment control structures such as sediment traps, silt fences and sediment control ponds. Sediment ponds and grit/oil interceptors should be placed at the end of drainage channels;
- No in-stream works should be carried out during the period October to June inclusive without the agreement of Inland Fisheries Ireland;
- The removal of sedimats (if used) should occur as necessary when they have become embedded with silt. The frequency at which this will occur is not possible to predict but is likely to be every three to four days during the work phase;
- Bankside silt fences should be replaced regularly;
- In the event of the risk of a flood event in the river, the silt fences will be removed;
- Increased scouring effects of flood defence structures downstream, including within the Liffey Estuary, should be considered.

#### **5.5.10 Mitigation in relation to invasive species**

- During the next phase of the study, the detailed design phase, a method statement should be prepared detailing adequate mitigation measures that will be implemented to prevent further spread of alien species within the catchment during the construction phase;
- Invasive species encountered in works phase should be appropriately disposed of.

#### **5.5.11 Mitigation in relation to the maintenance plan**

- Protocols should be agreed with all relevant stakeholders in relation to agreeing proactive and reactive maintenance plans for the river in order to resolve potential conflicting objectives. The maintenance plan should be subject to AA to ensure that all future operations are fully compliant with the Habitats Directive.

#### **5.5.12 Mitigation in relation to cultural heritage**

- Structures of cultural heritage value which are earmarked for works in the plan should be appropriately restored and not re-instated with concrete. Cultural heritage structures should be

preserved as much as possible, including views of them. A conservation architect should be engaged in relation to such works.

#### **5.5.13 Mitigation in relation to landscape**

- Landscape Character Assessment should be undertaken at detailed design stage;
- Landscape screening options should be considered at detailed design stage.

#### **5.5.14 Mitigation in relation to cumulative and in-combination effects**

- The potential cumulative and in-combination effects of the concurrent implementation of flood risk management options should be considered at detailed design phase. Relevant mitigation measures should be implemented.

### **5.6 GUIDELINES**

The following guidelines should be consulted during the detailed planning of the works phase.

- Requirements for the protection of fisheries habitat during construction and development works at river sites developed by the Eastern Regional Fisheries Board.
- Best practice toolkit of freshwater morphology measures developed by the Freshwater Morphology Programmes of Measures and Standards (POMS) study under the Shannon International River Basin District (ShIRBD) project.
- Good practice guidelines on the control of water pollution from construction sites developed by the Construction Industry Research and Information Association (CIRIA).
- Pollution prevention guidelines in relation to a variety of activities developed by the Environmental Agency (EA), the Scottish Environmental Protection Agency (SEPA) and the Northern Ireland Environment Agency (NIEA).
- Recommendations from the EU with regard to preserving wetlands and green river banks for the natural attenuation of flow [http://www.ieep.eu/assets/902/GI\\_Case\\_Analysis\\_4\\_-\\_Freshwater\\_and\\_Wetlands.pdf](http://www.ieep.eu/assets/902/GI_Case_Analysis_4_-_Freshwater_and_Wetlands.pdf).

## 5.7 DATA SOURCES

The following sources should be considered in later flood risk management planning cycles in relation to the Dodder as well as during the EIA and AA processes which will take place during the detailed design phase of the Dodder flood risk management options

- [www.myplan.ie](http://www.myplan.ie) website - includes information on land use zoning for Local Authorities;
- Aquifer classification map – the issue of rejected recharge occurs where aquifers have low permeability, storage and transmissivity which may contribute to greater surface runoff during storm events;
- Soil permeability – this is of relevance to flood risk e.g. gley soils are typically of low permeability and will contribute to greater surface runoff. Reference should be made to the GSI SURGE data for Dublin;
- Recommendations from the EU with regard to preserving wetlands and green river banks for the natural attenuation of flow [http://www.ieep.eu/assets/902/GI\\_Case\\_Analysis\\_4\\_-\\_Freshwater\\_and\\_Wetlands.pdf](http://www.ieep.eu/assets/902/GI_Case_Analysis_4_-_Freshwater_and_Wetlands.pdf);
- River Dodder Biodiversity Study, 2010 (Mary Tubridy and Associates, 2010);
- Management of Knotweed along the Dodder, 2011 ( Mary Tubridy and Associates, 2011);
- Management Plan for Bushy Park, 2006 (Mary Tubridy and Associates, 2006);
- County-level biodiversity plans;
- The Flora Protection Order 1999 (SI 94 of 1999) - offers protection for a number of the rare plants that occur along the Dodder;
- Landscapes of Desire – Parks, Colonialism and Identity in Victorian and Edwardian Ireland (Brück and Tierney, 2009) UCD/Heritage Council publication;
- The Great White Fair – The Herbert Park Exhibition of 1907 (Siggins, 2007);
- Bushy Park Landscape Management Plan, 2008 (MosArt 2008);
- North Bull Island Special Amenity Area Plan, 2009;

- Dublin City Council's Dublin City Biodiversity Action Plan, 2008 - 2012;
- The history of Bushy Park and its owners has been documented by Dublin City Libraries with reference to Dublin City Archives and the National Library of Ireland and is available on the Ask About Ireland website: <http://www.askaboutireland.ie/reading-room/history-heritage/big-houses-of-ireland/the-shaws-ofdublin/the-shaw-family-and-bushy/>.
- Water Supply Project – Dublin Region Draft Plan especially as it effects the operation of the reservoirs in the Dodder catchment;
- The River Dodder Habitat Management Plan 2007;
- Greater Dublin Strategic Drainage Strategy;
- IEEP Green Infrastructure In-depth Case Analysis. Theme 4: Freshwater and Wetlands Management and Restoration;
- DCC habitats data for parklands;
- DCC data in relation to Natura 2000 sites;
- The Dublin Bay Water Quality Management Plan, Environmental Research Unit, 1991;
- Information on the wetlands of Dublin Bay.

## 5.8 OBJECTIVES, TARGETS AND INDICATORS

The following points regarding the objectives, targets and indicators should be considered during the six-yearly review of the Dodder Catchment FRMP:

- for PHH1, safe drinking water and bathing water areas should be considered as objectives;
- for C1, this objective is unclear and while it is included as a climate change objective this is not reflected in the targets or indicators;
- for S1, it is unclear how protecting soil function can be monitored using area at risk from flooding;
- Consideration should be given to separating "Air and Climate" as distinct SEA topics and subsequently in SEA objectives. Whilst it is acknowledged that air can reasonably be screened out, climate issues have potential to impact on flood frequency and magnitude.



## 6 RATIONALE FOR SELECTION OF PLAN COMPONENTS

Details of the reasons for the selection of the component elements of the Dodder Catchment FRMP in preference to the available alternatives are presented in Tables 6.1 and 6.2.

The selection of the preferred option for each geographical area was based on the performance of options during the MCA process and the overall MCA score. All flood risk management options with positive MCA scores were carried forward to the final stage of the process – the identification of the preferred options.

This process also ensured that the environmental considerations required under the SEA process were considered and embedded within the overall decision and plan-making process. However, given the different weightings of the flood risk management objectives, the preferred options were not necessarily the options with the highest SEA scores. However, the preferred options were only selected following a comparison of the relative performance of the option in terms of its potential social, economic and environmental impacts against the alternative options considered.



**Table 6.1** Description of rationale for the selection of plan components and alternatives considered

Location	Preferred option	Alternatives considered	Reasons for selection	Highest SEA score?
<b>Catchment</b>				
Dodder catchment	Support measures - SuDS, asset surveys, maintenance, early coastal warning and public awareness along with monitoring and policy measures	N/A	All of these measures are always applicable	N/A
<b>Analysis Unit (AU)</b>				
Dodder	None found	Hard defences Hard defences with improved channel conveyance Hard defences with upstream storage Hard defences with channel diversion Hard defences with tidal barrage Hard defences with improved channel conveyance and upstream storage Hard defences with improvement of channel conveyance and upstream storage and tidal barrage	None of the options were cost beneficial	N/A

Location	Preferred option	Alternatives considered	Reasons for selection	Highest SEA score?
		<p>Hard defences with improvement of channel conveyance and channel diversion</p> <p>Hard defences with improvement of channel conveyance and upstream storage and tidal barrage</p> <p>Hard defences with upstream storage and channel diversion</p> <p>Hard defences with upstream storage and channel diversion and tidal barrage</p> <p>Hard defences with improvement of channel conveyance and upstream storage and channel diversion</p> <p>Hard defences with improvement of channel conveyance and upstream storage and channel diversion and tidal barrage</p>		
Tallaght Stream and tributary	None found	<p>Hard defences</p> <p>Improvement of channel conveyance</p>	None of the options were cost beneficial	N/A
Owendoher and Whitechurch streams	None found	<p>Hard defences</p> <p>Hard defences with improved channel conveyance</p> <p>Hard defences with upstream storage</p> <p>Hard defences with channel diversion</p> <p>Hard defences with improved channel conveyance and</p>	None of the options were cost beneficial	N/A

Location	Preferred option	Alternatives considered	Reasons for selection	Highest SEA score?
		upstream storage  Hard defences with improved channel conveyance and channel diversion  Hard defences with upstream storage and channel diversion  Hard defences with improved channel conveyance and upstream storage and channel diversion		
Little Dargle	Hard defences (32m of earth embankment approximately 1m high at the downstream extent of the stream)	Channel diversion  Upstream storage  Improved channel conveyance  Channel diversion and upstream storage	None of the other options were cost beneficial	No
Dundrum Slang	None found	Hard defences  Improved channel conveyance  Hard defences and improved channel conveyance	None of the options were cost beneficial	N/A
<b>Areas of Potentially Significant Risk (APSR)</b>				
Lower Dodder - Donnybrook	Hard defences	None	Only option that came through the option development process	Yes
Orwell Gardens	Hard defences	None	Only option that came	Yes

Location	Preferred option	Alternatives considered	Reasons for selection	Highest SEA score?
			through the option development process	
Shanagarry Apartments and Smurfit Site	Hard defences	None	Only option that came through the option development process	Yes
St Enda's Residential and Tara Hill Residential	Hard defences, dredging, removal of weirs and channel improvements	Hard defences Hard defences with improved channel conveyance	Only option with a BCR > 1, had highest SEA score	Yes
Donnybrook to the railway bridge	None found	-	-	-
Orwell Road	None found	-	-	-
Dundrum Road Upper	None found	-	-	-
Dundrum Road Lower	None found	-	-	-
Dundrum and Sandyford Bypass	None found	-	-	-

**Table 6.2** Description of rationale in relation to Individuals Risk Receptors

Individual Risk Receptor	Importance	Likely FRM Option	Alternatives Considered
AIB Centre Ballsbridge (off Merrion Road and Serpentine Road)	National Importance	Will be protected by APSR level option	None
AVIVA Rugby & Soccer Stadium	National Importance during certain fixtures and Concerts	Will be protected by APSR level option	None
Royal Dublin Society (RDS)	National Importance during Show jumping and some other events. Concerts and football matches also staged there	Will be protected by APSR level option	None
Shelbourne Park Dog Track	Regional Interest (Protected by current defence works)	Will be protected by APSR level option	None
Marian College School	Local Receptor. Parking and facilities here occasionally for AVIVA stadium.	Will be protected by APSR level option	None
American, Israeli and Czech Republic Embassy's on Northumberland Road.	National Receptor	Will be protected by APSR level option	None
Church of Ireland, Anglesea Road.	Local Receptor	Will be protected by APSR level option	None
Dublin Bus, Beaver Row, Donnybrook.	Local/South City Receptor	Will be protected by APSR level option	None
Dart Line at Lansdowne Road Bridge and Serpentine Avenue	Local and Regional Receptor	Will be protected by APSR level option	None

Individual Risk Receptor	Importance	Likely FRM Option	Alternatives Considered
crossing.			
Merrion Cricket Pitch Occasionally used as parking for events in RDS.	Local Receptor	Will be protected by APSR level option	None
Leinster and Old Wesley Rugby football ground, Donnybrook.	Local/Regional and very occasionally national receptor	Will be protected by APSR level option	None
Major Roadways disrupted. Shelbourne Road, Merrion Road, Northumberland Road, Donnybrook Road (N11), Stillorgan Road (N11), Clonskeagh Road.	Local/Regional Receptors	Will be protected by APSR level option	None
Dundrum Shopping Centre & Theatre	Local Receptor on Dundrum Slang	Localised flood defences Did not receive a positive MCA score	None, the option for this IRR are very specific
ESB sub-station, Dodder Road Lower,	Local Receptor - feeds Mount Carmel Hospital and local grid for a distance of up to 4km around it. Breakdown would probably cause a few hours power disruption	Localised flood defences or relocation of sub-station. Short term arrangements for temporary road diversion. Did not receive a positive MCA score	None, the option for this IRR are very specific
N81, Tallaght Bypass,	Regional Receptor - can be flooded from Tallaght Stream	Short term arrangements for temporary road diversion. Did not receive a positive MCA score	None, the option for this IRR are very specific

## **7 MEASURES TO MONITOR SIGNIFICANT ENVIRONMENTAL EFFECTS OF IMPLEMENTATION OF THE ADOPTED PLAN**

Article 10 of the SEA Directive requires that monitoring be carried out in order to identify, at an early stage, any unforeseen adverse effects due to implementation of a plan or programme, and to be able to take remedial action.

In response to this requirement, a monitoring framework has been proposed for the plan, based on the SEA objectives and their associated framework of indicators and targets, utilising the data obtained as part of the SEA.

The purpose of the monitoring is twofold: to monitor the predicted significant negative effects of the Dodder Catchment FRMP; and to monitor the baseline environmental conditions for all SEA objectives and inform the six yearly update of the Dodder Catchment FRMP necessary to meeting the requirements of the EU Flood Directive. Regular monitoring will also help to identify any unforeseen effects of the FRMP and ensure that where these effects are adverse, action can be taken to avoid, reduce or offset them.

Monitoring will commence as soon as the Dodder Catchment FRMP is implemented. The framework itself will be reviewed and revised during the six-yearly review of the Dodder Catchment FRMP with the monitoring findings also being recorded at this stage. The review will take into account new available monitoring data/methods and any improved understanding of the environmental baseline and receptors potentially affected by the Dodder Catchment FRMP.

Where existing monitoring is not already being undertaken and is required to support the implementation of the Dodder Catchment FRMP, the OPW, Dublin City Council, Dun Laoghaire – Rathdown County Council, South Dublin County Council and Fingal County Council will be responsible for identifying an appropriate monitoring body and ensuring that the monitoring is carried out.

The monitoring framework is outlined in Table 7.1. It is included in Appendix E of the Dodder Catchment FRMP and is therefore adopted and will be implemented as part of the FRMP.

**Table 7.1** Environmental monitoring framework for the Dodder Catchment FRMP

SEA Code	Objective	Sub-objective	Indicator	Target	Dataset	Data source	Frequency of updates (Responsible authority)
<b>PHH1</b>	Minimise risk to human health and life	Minimise risk to human health and life in the local community from flooding	Number of properties at risk from flooding	No increase in number of properties at risk from flooding	Residential properties (GIS dataset)	An Post Geodirectory  Flood risk maps	Quarterly (An Post)  Every 3 years (CFRAM team)
<b>MA1</b>	Protect key infrastructure	Minimise risk to residential and commercial infrastructure	Number of residential and commercial buildings at risk from flooding	No increase in number of residential and commercial buildings at risk from flooding	Commercial properties (GIS dataset)	An Post Geodirectory  Flood risk maps	Quarterly (An Post)  Every 3 years (CFRAM team)
		Minimise risk from flooding to transport infrastructure	Length of road and rail infrastructure and navigation at risk from flooding	No increase in length of road, rail and navigation at risk from flooding.	Road network (GIS dataset)	Local Authorities	Unknown (Local Authorities)
		Minimise risk to other key infrastructure such as vulnerable buildings (e.g. hospitals), utility infrastructure (e.g. WWTPs, WTPs, power stations, telecom exchanges etc), social infrastructure and areas of significant employment	Number of vulnerable buildings, utility infrastructure assets, social infrastructure and areas of significant employment at risk from flooding.	No increase in the number of vulnerable buildings, utility infrastructure assets, social infrastructure and areas of significant employment at risk from flooding	Utility assets, (GIS datasets)	RBD Projects	Every 6 years (Local authorities)
<b>MA2</b>	Protect existing, and where possible create new, waterside access and recreational facilities	Protect existing, and where possible create new, waterside access for recreation, including fishing, as well as recreation facilities.	No of social amenity areas protected/created. Length of bankside rendered accessible/inaccessible. Area of social value protected/created.	No decrease in area/length/number social amenity areas, accessible bankside, social value.	Social amenity areas (none designated as yet)  Parklands, open ground (visual inspection of maps)	OSI	Every 2-5 years (OSI)
<b>W1</b>	Safeguard and promote sustainable land use in keeping with the WFD	Minimise risk of flooding of potentially polluting sites e.g. WWTPs, IPPCs, contaminated lands, landfills etc.	Area/Number of potentially polluting sites protected.	No increase in the number of these sites at risk from flooding	WWTPs, WTPs, IPPCs, Section 4s, Mines, Landfills (GIS datasets)	RBD Projects	Every 6 years (Local authorities)



SEA Code	Objective	Sub-objective	Indicator	Target	Dataset	Data source	Frequency of updates (Responsible authority)
<b>W2</b>	Support the achievement of good ecological status/potential (GES/GEP) under the WFD. Particularly morphology as a supporting element to ecological status	Maintain, and where possible restore, natural, fluvial and coastal processes/morphology in support of proposed measures under the WFD.	Number of water bodies achieving GES/GEP	No constraint to the achievement of GES/GEP in all water bodies by 2015.	WFD Water Body Status Layers (GIS datasets)	RBD Projects	Every 3 years (EPA, local authorities)
<b>W3</b>	Protect, and where possible enhance, fisheries within the catchment	Maintain existing, and where possible create new, habitat supporting fisheries and maintain or enhance connectivity	Area of suitable habitat supporting salmonid and other fisheries and number of upstream barriers	No reduction in the area of salmonid habitat and provision of no new upstream barriers	Assumed the whole Dodder was good fishery Barriers to migration (GIS dataset)	RBD Projects	Unknown (Local authorities, NPWS)
<b>BFF1</b>	Protect the flora and fauna of the catchment and, where possible, enhance biodiversity	Avoid damage to, and where possible enhance, internationally and nationally designated sites of nature conservation importance.	Reported conservation status of designated sites relating to flood risk management	No deterioration in conservation status	SACs, SPAs, NHAs, pNHAs (GIS datasets)	NPWS	At least every 6 years (NPWS)
		Avoid loss of legally protected species and other known species of conservation concern, or damage to or loss of habitats supporting legally protected species and other known species of conservation concern, and where possible enhance	Reported population sizes and/or areas of suitable habitat supporting legally protected species and other known species of conservation concern 'target species'	No decrease in existing population sizes and/or areas of suitable habitat for target species	The status of EU Protected habitats and species in Ireland (Report)	NPWS	Every 6 years (NPWS)
		Avoid damage or loss of existing riverine, wetland and coastal habitats, and where possible create new habitat, to maintain naturally functioning ecosystems.	Area of riverine, wetland and coastal habitat protected or created/restored	No net loss or permanent damage to existing riverine, wetland and coastal habitats	Extent of proposed works (GIS datasets)	Dodder CFRAMS	Every 3-6 years (Local Authorities, NPWS)

SEA Code	Objective	Sub-objective	Indicator	Target	Dataset	Data source	Frequency of updates (Responsible authority)
L1	Protect, and where possible enhance, landscape character and visual amenity	Protect, and where possible enhance, the character of existing designated Landscape Protection Zones within the catchment.	Character of lengths of waterway corridor qualifying as a Landscape Protection Zones within the catchment	No adverse impact on character of lengths of waterway corridor qualifying as a Landscape Protection Zones	Development plans (reports and maps)	Local Authorities	Every 6 years (Local authorities)
		Protect, and where possible enhance, existing landscape character within the catchment.	Compliance with landscape character objectives as relevant to flood risk management measures	No adverse impact on landscape character objectives	Development plans (reports and maps)	Local Authorities	Every 6 years (Local authorities)
		Protect, and where possible enhance, views into/from important scenic areas and routes within the catchment	Quality of views in scenic areas and routes within the catchment	No deterioration in quality of views into/from scenic areas and routes	Development plans (reports and maps)	Local Authorities	Every 6 years (Local authorities)
CH1	Protect and where possible enhance features of cultural heritage importance and value, including their settings	Avoid damage or loss of buildings and structures on the National Inventory of Architectural Heritage including their setting and heritage value, within the catchment	Numbers of listed features, including their setting and heritage value, at risk from flooding	No damage to or loss of listed features, including their setting and heritage value and/or no increase in flood risk for features sensitive to the impacts of flooding.	National Inventory of Architectural Heritage (GIS dataset)	DEHLG	Ongoing (DEHLG)
		Avoid damage or loss of archaeological features listed on the Record of Monuments and Places, including their setting and heritage value, within the catchment.	Numbers of features listed on the RMP, including their setting and heritage value, at risk from flooding.	No damage to or loss of listed features, including their setting and heritage value and/or no increase in flood risk for features sensitive to the impacts of flooding.	Record of Monuments and Places (GIS dataset)	DEHLG	Ongoing (DEHLG)
C1	No increase in flood risk to other areas	Avoid increase in flood risk to other areas due to flood risk management options (i.e increased channel conveyance or channel diversion effects) taking the possible impacts of climate change into account	Other areas at risk from flooding	No non-intentional increase in flood risk to other areas	Flood extents (GIS datasets)	Dodder CFRAM Study	Every 6 years (CFRAM team)

SEA Code	Objective	Sub-objective	Indicator	Target	Dataset	Data source	Frequency of updates (Responsible authority)
S1	Protect soil function	Avoid loss of soil from erosion	Area at risk from flooding	No increase in area at risk from flooding	Land cover (GIS dataset)	CORINE 2006	Every 4-5 years approx. (EU, OSI)

## 8 CONCLUSIONS

The SEA process has been fully integrated into the development of the Dodder Catchment FRMP and this, together with the HDA process, has ensured that any potentially significant environmental impacts associated with implementation of the Dodder Catchment FRMP have been identified and given appropriate consideration.

The development of the Dodder Catchment FRMP has been guided by a steering group comprising of representatives from the OPW, Dublin City Council, Dun Laoghaire – Rathdown County Council and South Dublin County Council and the EPA, thus enabling these key stakeholders to be at the heart of the preparation of the plan. Furthermore, an extensive programme of stakeholder engagement and public participation, including formal consultation in relation to the SEA Scoping Report, draft FRMP and SEA ER and HDA screening and Natura Impact Statement has provided opportunities for all interested parties to influence the development of the Final Dodder Catchment FRMP.

The SEA has identified that the proposed flood risk management options could give rise to a number of positive environmental effects, but also some negative environmental effects that cannot be avoided through the selection of alternative options. However, these effects are likely to be limited in their scope and duration and appropriate measures have been identified to mitigate them during the detailed design stage (mitigation has been recommended for all identified negative effects, whether significant or minor). The mitigation is included in Chapter 7 of the adopted FRMP and will be considered as part of any works being implemented under the FRMP. Overall, the benefit of the Dodder Catchment FRMP in reducing flood risk to people, property and the environment are significant.

In addition to the SEA conclusions, the detailed HDA process has identified potentially significant effects on Natura 2000 sites within the Dodder Catchment FRMP. Recommendations have been made to address these, including project-specific AA at the scheme level.

A monitoring network has been outlined with the purpose of monitoring the predicted significant effects of the Dodder Catchment FRMP, and monitoring the baseline environmental conditions for all SEA objectives. The framework will be reviewed and revised during the six-yearly review of the plan. This is included in Appendix F of the adopted FRMP. Monitoring will commence as soon as the Dodder Catchment FRMP is implemented.

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Environmental Protection Agency website ([www.epa.ie](http://www.epa.ie))



## **APPENDIX A**

## **CONSULTATION**

Sub	Summary of comment	Response	Action
1	<i>Mitigation - Infrastructure</i> Structures associated with the national road network should be protected.	Protecting key infrastructure, including transport infrastructure, is a key objective outlined in the Environmental Report (MA1ii).	No further action
3	<i>Conservation - fish</i> Wild fish stocks have been lost in the Dodder river system and are not replaceable. Nature should be allowed to take its course so that the fish stocks will replenish in time.	Protecting, and where possible enhancing, fisheries within the Dodder catchment is a key objective outlined in the Environmental Report (W3) and mitigation measures were included in the Environmental Report and draft plan to achieve this objective.	No further action
35	<i>Impacts during construction phase</i> Concerns have been raised regarding the increased flood risk that will arise during the construction time. These risks are referenced in the SEA under the heading 'Recommended mitigation actions' in section 9.4.3, e.g. 'No activity associated with the project should be undertaken during very wet weather. Temporary flood defences should be at least maintained, if safe to do so'. We further suggest the following recommendations <ul style="list-style-type: none"> <li>• Temporary flood defences should be in place during the course of construction when the removal of existing structures expose the area to an increased risk of flooding.</li> <li>• Work should be planned to take account of the time of year of previous floods and tide forecasts.</li> </ul>	-	These have been added to the mitigation section in the SEA Statement
30	<i>SEA – ER - Benefit Cost Ratio</i> Question the status of the BCR in the SEA. I understand that it is an absolute condition in the decision process for determination of acceptable defence proposals, but this does not appear to be explicitly defined, or justified anywhere. The condition appears to be that the cost of a defence proposal must be less than the estimated insurance savings from protected properties. This appears to negate and supersede the whole purpose of the SEA and its multi criteria assessment (MCA) process, which is to allow for all relevant factors, including environmental damage, to be taken into account. As is, in the ASPRs, the BCRs quoted are very marginal (in APSR Shanagarry to Smurfits it is only 1.03, a benefit of 3.7 million euro, a cost of 3.5m). The implication is that if mitigation costs go up, the proposal is refused. For example, in the case of a National Monument, such as the 17th century Packhorse Bridge in Milltown, if traditional restoration 'upgrading' is too expensive, it implies unsuitable measures might have to be used. The same may apply to more expensive rerouting or type of defence structures to maximise environmental or amenity mitigation, or that old granite riverwalls must be demolished and replaced rather than restored. I submit that the definition and justification for the use of this BCR in the SEA should be included in the Final Report. I also submit, that it should include an appeal element, whereby special cases may be made for lower BCRs to allow for exceptional mitigation instances.	The BCR is included in the ER assessment tables only to give the reader a more complete picture of the option. The BCR was not considered during the assessment described in the ER. The use of the BCR to support decisions made at optioneering phase is standard practice but many other sources of information are also used. Its purpose is to remove options from consideration that are expensive compared to the damage that would be done in their absence.	No further action
30	<i>SEA – ER - assessment</i> Environmental Mitigation; The Dodder has two aspects. One is of critical flood risk, which is being addressed in this Study, the other, as an invaluable asset of amenity, landscape and habitat, particularly as a unique 'rural' asset in the urban areas of Dublin. A key aspect of the SEA should then be, to balance the requirements of flood alleviation with conservation of existing environmental amenity.	One of the objectives of the SEA process is to protect, and where possible enhance, landscape character and visual amenity. The purpose of SEA as a whole is to ensure that environmental and social consequences of the flood plan are considered before the plan is adopted.	No further action
30	<i>SEA – ER - assessment</i> Section 9.4.2 of the SEA is a summary of significant effects of the preferred options. For example, for both the APSRs DS Donnybrook and Shanagarry to Smurfits it identifies 'significant negative effects relating to biodiversity, flora and fauna, landscape character and visual amenity'. It categorises 'social amenity' as minor, which should be included as also significant, due to the overall loss of amenity for walkers and cyclists on the Dodder river banks.	The SEA ER recognises that there is an impact on social receptors associated with the options. The assessment of the severity of that impact will not now be changed. However, the mitigation measures recommended in the SEA ER include that predicted negative effects should be considered further during the next stage of option development, when details of the option (e.g. visual appearance) can be optimised through detailed feasibility studies and design in order to limit identified impacts on sensitive receptors.	No further action
30	<i>SEA – ER - NTS</i> The conclusion of the non-technical summary refers to these significant negative effects but states, 'these effects are likely to be limited in their scope and duration and appropriate measures have been identified to mitigate these effects in the next stage of option development'. This is not a legitimate conclusion, as there is no basis in the SEA to show these effects will be limited in scope or duration.	The assessment of the severity of negative impacts in the SEA ER will not now be changed. However, the mitigation measures recommended in the SEA ER include that predicted negative effects should be considered further during the next stage of option development, when details of the option (e.g. visual appearance, alignment of flood defences) can be optimised	No further action

Sub	Summary of comment	Response	Action
	There will of necessity, be irrevocable negative effects in these proposals, which can only be minimised. As for appropriate measures Section 9.4.3 lists recommended mitigation actions, which are aspirational but only of value if implemented.	through detailed feasibility studies and design in order to limit identified impacts on sensitive receptors.	
30	<i>SEA ER</i> In Tables 9.1 and 9.3 of the SEA. These are the full version descriptions of the APSRs DS Donnybrook and Shanagarry to Smurfits. In their discussion sections, on Flood Risk, they both assert that 'the design of this option will ensure that it will not cause flood risk elsewhere in the Dodder catchment'. I suggest this is a contradictory statement. It appears to be aspirational, yet draws a conclusion. Stopping the extensive flooding in these areas could cause flooding up or downstream, no matter how well designed. The only way to be sure is to test model a range of defences. If this has been done, I submit the test results must be included in the Final Plan. If not, then these statements should be amended to, for example 'will aim to ensure '.	The assessment of the severity of negative impacts in the SEA ER will not now be changed. However, the mitigation measures recommended in the SEA ER include that predicted negative effects should be considered further during the next stage of option development, when details of the option can be optimised through detailed feasibility studies and design in order to limit identified impacts on sensitive receptors.	No further action
28	<i>SEA – ER - monitoring</i> The proposed monitoring programme should be sufficiently robust to assess the effects on the receiving environment during implementation of the Plan. This monitoring should be linked where relevant and appropriate with CFRMP objectives monitoring and monitoring of the effectiveness of specific preferred options/ measures implemented.	The proposed monitoring programme was designed to piggy-back as far as possible on existing monitoring regimes to promote coordination and to avoid duplication of efforts. The programme will be reviewed and revised during the six-yearly review of the Dodder Catchment FRMP which will ensure it remains robust.	No further action
28	<i>SEA ER - consultation</i> It should be clarified whether Met Eireann were consulted, given their importance in weather / climate forecasting. The role played by Met Eireann should also be described in this regard.	Met Eireann were consulted with during the process. They advised on potential climate change within the Dodder catchment during the study, particularly with reference to likely changes in rainfall.	No further action
28	<i>SEA – ER - NTS</i> You are referred to the requirements of the SEA Directive and Regulations (Schedule 2(J) of S.I. No. 435 of 2004) in relation to the content to be included in a Non- Technical Summary. The NTS should be reviewed in this regard.	No changes being made to SEA ER	No further action
28	<i>SEA</i> Your attention is brought to the amended SEA Regulations, which should be referenced and integrated into the Plan and SEA process. Amending SEA Regulations were signed into Irish law on 3rd May 2011, amending the original SEA Regulations.	At the time of writing the main bulk of the report, these were not published. Future documents will reference these.	The SEA Statement references the most up-to-date regulations.
28	<i>SEA ER</i> In Section 3.2, it is not clear whether this section is providing the objectives of the CFRAM Study rather than the Plan. It is the Plan rather than the Study which is subject to SEA.	-	This SEA Statement explicitly states that the FRMP is the subject of the SEA.
28	<i>SEA ER</i> Section 9 Assessment of the CFRMP Recommendations and Section 11 of the SEA ER - Conclusions and Recommendations, should set out the predicted likely significant effects and proposed SEA mitigation measures and also where relevant, the proposed Habitats Directive Assessment mitigation measures.	The predicted likely significant effects of the options proposed in the draft FRMP are assessed in Table 9.1 to Table 9.5 of the ER and summarised in Section 9.4.2. Mitigation measures are outlined in Section 9.4.2 to Section 9.4.7. Section 9.6 of the ER outlines the proposed HAD mitigation measures.	The predicted likely significant effects and proposed mitigation measures are re-iterated in the SEA Statement.
28	<i>SEA ER</i> The reference to the GDSDS should be reviewed as it was adopted in 2005. In the context of the recent Census 2011, recent environmental legislation including Flood Risk Management Guidelines, the relationship between the GDSDS and the Plan should be updated where appropriate.	The Dodder catchment was not part of the GDSDS and the SEA ER incorporated all relevant current data and legislation.	No further action
28	<i>SEA - ER</i> Section 3 should include a list of relevant environmental objectives set by other relevant Plans and Programmes. Consideration should be given to summarising the policies/objectives in key influential Plans/Programmes responsible for protecting environmental vulnerabilities / sensitivities other than flooding, such as biodiversity, water quality to be taken into account to ensure these aspects in particular are accounted for in any planned flood relief works proposed in implementing the Plan during its lifetime.	The SEA, HDA and Plan teams were fully integrated throughout the development of the draft FRMP, ensuring that potential environmental impacts associated with the implementation of the FRMP have been given due consideration in its preparation. Objectives of other plans and programmes are included in the SEA ER.	No further action
28	<i>Links with Other Plans and Programmes</i>	Proposals in the Dodder Catchment FRMP maintain all existing	No further action

Sub	Summary of comment	Response	Action
	<p>Section 5 - Links with Other Plans and Programmes lists a number of other influential Plans / Programmes and is noted. Clarification should, however, be given regarding the status of the GDSDS in the context of the above. In Section 5.3, the objectives of the Eastern RBMP and in particular the measures proposed for the Dodder Water Management Unit should be described here. The Eastern RBMP identifies the following measure for the River Dodder “Determine if compensation flow can be set considering flood protection requirements. In the first cycle examine any weirs or obsolete structures to assess their impact on ecology.” The compatibility of these measures with flood risk mitigation objectives should be assessed.</p> <p>The following plans and programmes should also be considered:</p> <ul style="list-style-type: none"> <li>Water Supply Project – Dublin Region Draft Plan especially if it effects the operation of the reservoirs in the Dodder catchment;</li> <li>the River Dodder Habitat Management Plan 2007, and;</li> <li>the Dublin Bay Water Quality Management Plan, Environmental Research Unit, 1991.</li> </ul> <p>Any measures in these Plans, which could influence flood risk management measures proposed in the Plan, should be considered and assessed.</p>	<p>weirs except for two at Whitechurch where upstream and downstream aquatic environmental sections appear to be separated.</p> <p>The current flood plan recommends maintenance of existing compensation river flows from the Bohernabreena reservoirs.</p> <p>All of the plans have been considered and the proposed Dodder Catchment FRMP will have little or no recognisable effect on them.</p>	
28	<p><i>SEA – ER – geographic scope</i></p> <p>In Section 6.3.2 Scoping, the geographic scope of the SEA should be clearly set out. Clarification should be given whether the Plan area includes all or part of Dublin Bay for example.</p>	-	This SEA Statement explicitly outlines the geographic scope of the SEA.
28	<p><i>SEA – ER - Environmental Baseline</i></p> <p>In the environmental baseline, as described in Section 7 Environmental Baseline, the description of the “flashy regime” of the Dodder should be accompanied by a hydrograph or a flow duration curve to show evidence of this characteristic of the River Catchment where possible.</p>	This information is included in the Hydrology Report (ref Figure 4.2) which forms part of the suite of documents associated with the Dodder Catchment FRMP. This information has not been re-presented in this SEA Statement.	No further action
28	<p><i>SEA – ER - Environmental Baseline</i></p> <p>Consideration should be given to separating “Air and Climate” as distinct SEA topics and subsequently in SEA objectives. Whilst it is acknowledged that Air can reasonably be screened out, climate issues have potential to impact on flood frequency and magnitude.</p>	Climate change effects were scoped out at the scoping stage as it was deemed that they would not influence, or be affected by, the recommendations of the Dodder Catchment FRMP.	Discussed in SEA Statement
28	<p><i>SEA – ER - OTI</i></p> <p>There are some issues that should be considered for the SEA Objectives, Targets and Indicators (Section 8):</p> <ul style="list-style-type: none"> <li>for PHH1, safe drinking water and bathing water areas should be considered as objectives;</li> <li>for C1, this objective is unclear and while it is included as a climate change objective this is not reflected in the targets or indicators;</li> <li>for S1, it is unclear how protecting soil function can be monitored using area at risk from flooding.</li> </ul>	The OTI table was developed at the scoping stage and in consultation with stakeholder and will not be changed for the first planning cycle. SEA code C1 is an indicator to monitor flood risk in other areas outside of the project construction areas mentioned in the Plan. The target is to try to decrease flood risk in other areas as well. Regarding S1, erosion or deposition of soils will increase flood risk in the area of their deposition/erosion. A Sediment Transport Model was developed for the study including areas where erosion/deposition are most likely to occur and these form part of the Maintenance Plan for the river catchment.	This SEA Statement recommends that these recommendations be taken on board during the six-yearly review of the Dodder Catchment FRMP.
28	<p><i>SEA – ER – assessment</i></p> <p>Consideration should be given to describing how the individual risk receptors were addressed within the SEA ER.</p>	Options were not proposed in the draft FRMP in relation to the individual risk receptors and therefore there was nothing to assess in the ER. IRR were identified but not assessed. The majority of them fall within an APSR which was assessed however. The Individual Risk Receptors listed in page 43/44 of Draft FRMP were all areas at flood risk and protection of these up to the 1 in 100 year flood level was one of the three primary criteria of the Plan.	No further action
28	<p><i>Other plans - RBMPs</i></p> <p>Relevant cross-reference should be made between the relevant components of the Programme of Measures of the ERBD RBMP and the CFRMP to avoid conflicting objectives and to maximise mutual benefits. Any constraints the RBMP might set on the Draft Plan should be highlighted.</p>	The mitigation measures included in Section 9 of the ER explicitly require that the objectives of the Eastern RBMP be considered before any planned works are carried out.	No further action
28	<p><i>SEA</i></p> <p>The preferred options in total recommend c. 2478m of flood walls to construct and 1513m of embankments to alleviate flooding within the Plan area, as well as the dredging of 702m of the</p>	The SEA and HDA assessments considered the potential for cumulative / in-combination effects between the preferred options proposed in the draft FRMP.	No further action



Sub	Summary of comment	Response	Action
	Whitechurch channel. The potential effects of these proposed works should be assessed in the context of potential cumulative / in-combination effects, taking into account construction, operation and maintenance aspects and coordination of single and multiple works proposed to be carried out.	The mitigation measures outlined in the ER cover construction, operational and maintenance aspects of works arising from the FRMP.	
28	<i>SEA</i> The mitigation measures which are to be put in place should be carefully monitored to ensure the potential for cumulative effects in particular are minimised in the construction and maintenance and dredging elements proposed to ensure water quality and biodiversity in particular are not adversely affected in the implementation of the Plan.	Monitoring and plan review are specific requirements of the SEA process and are described in Section 9.5 of the SEA ER.	No further action
28	<i>Conservation - BFF</i> The Plan should provide for protection, management, and as appropriate, enhancement of existing wetland habitats where flood protection/management measures are necessary.	The SEA, HDA and Plan teams were fully integrated throughout the development of the draft FRMP, ensuring that potential environmental impacts associated with the implementation of the FRMP have been given due consideration in its preparation.	No further action
28	<i>Conservation - BFF</i> You are referred to the requirements of the European Communities (Birds and Natural Habitats) Regulations 2011, (S.I. No. 477 of 2011), which should be taken into account and reflected in the final Plan.	The SEA, HDA and Plan teams were fully integrated throughout the development of the draft FRMP, ensuring that potential environmental impacts associated with the implementation of the FRMP have been given due consideration in its preparation.	No further action
28	<i>Conservation - BFF</i> Other relevant legislation that should be taken into account include the Habitats and Birds Directives, the Wildlife Acts, the Environmental Liability Directive, etc.	The SEA, HDA and Plan teams were fully integrated throughout the development of the draft FRMP, ensuring that potential environmental impacts associated with the implementation of the FRMP have been given due consideration in its preparation.	No further action
28	<i>Conservation - BFF</i> The Plan should include a commitment to protect SACs, Habitats Directive Annex I habitats and Annex II and Annex IV species and their key habitats which occur within and adjoining the Plan area from potential adverse effects likely to arise during the implementation of the Plan. The Plan should also include a commitment to protect SPAs, Birds Directive Annex I species, and regularly occurring migratory bird species and their habitats, and to avoid pollution or deterioration of important bird habitats outside SPAs during implementation, including construction, operation and maintenance.	The SEA, HDA and Plan teams were fully integrated throughout the development of the draft FRMP, ensuring that potential environmental impacts associated with the implementation of the FRMP have been given due consideration in its preparation.	No further action
21	<i>Conservation – BFF / amenity</i> In addition, the proposed hard landscape defences in the form of earth mounding, proposed immediately downstream of the Dundrum road bridge will impact greatly on the existing public open space at Smurfit Site (Clonskeagh Park), both visually in relation to obstruction of views of the river and by encroaching onto the adjoining public park. This will result in a loss of amenity open space and subsequent realignment of park features and will seriously impact on the social amenity value of the park. As stated in the SEA, the design of the defences should consider options for increasing social amenity value within the proposed embankments perhaps incorporating landscaping and ecology elements in the design to maximise the potential positive opportunities for social amenity. This approach should also be extended to encompass the adjoining open spaces and could include alteration to existing ground levels to reduce impact of embankments.	The SEA, HDA and Plan teams were fully integrated throughout the development of the draft FRMP, ensuring that potential environmental impacts associated with the implementation of the FRMP have been given due consideration in its preparation.	No further action
28	<i>HDA</i> The Plan also should include a clear Policy/Objective that sets out a requirement for AA Screening for proposed projects which will emerge during the implementation of the Plan.	Mitigation measures specified in the ER require that any works arising from the FRMP are subject to appropriate assessment, for example, EIA and AA, including associated consultation activities	No further action
28	<i>AA</i> The potential for cumulative/in-combination effects associated with other relevant Plans / Programmes / Projects should also be highlighted and assessed for specific projects and combinations of projects.	The SEA and HDA assessments considered the potential for cumulative / in-combination effects between the preferred options proposed in the draft FRMP and with other relevant plans and strategies and projects.	No further action
28	<i>Conservation - BFF</i> You are referred to the Water Framework Directive Register of Protected Area, and in particular those protected areas relating to biodiversity. The Plan should include a commitment for the protection of these areas occurring within and adjacent to the Plan area.	The SEA, HDA and Plan teams were fully integrated throughout the development of the draft FRMP, ensuring that potential environmental impacts associated with the implementation of the FRMP have been given due consideration in its preparation. The WFD is referenced and discussed in the SEA ER and will	No further action

Sub	Summary of comment	Response	Action
		not be re-produced in the document.	
28	<p><i>Conservation - BFF</i></p> <p>The Plan should include objectives for the protection of NHAs (including pNHAs) National Parks, Nature Reserves, Wildfowl Sanctuaries, Refuges for Fauna or Flora and sites proposed for designation from potential adverse effects associated with the implementation of the Plan. In addition, species protected under the Wildlife Acts including protected flora (Flora (Protection) Order, 1999 – S.I. No. 94 of 1999) should be taken into account.</p>	The SEA, HDA and Plan teams were fully integrated throughout the development of the draft FRMP, ensuring that potential environmental impacts associated with the implementation of the FRMP have been given due consideration in its preparation. The OTI were prepared with the input of stakeholders and provide for the protection of nationally and internationally protected habitats and species.	No further action
28	<p><i>Options - proposal</i></p> <p>The Plan should promote the provision/application of appropriate buffer zones between designated ecological sites and proposed projects associated with the implementation of the Plan. Potential boundary changes to designated sites made during the lifetime of the Plan should also be provided for and taken into account in the Plan. Where the application of buffer zones is being considered, the National Parks and Wildlife Service (NPWS) of the Department of Arts, Heritage and the Gaeltacht (DAHG) should be consulted. Inland Fisheries Ireland should also be consulted where fisheries protection is a potential issue.</p>	The principal mitigation recommendation in the ER is that potential negative effects should be considered further during the next stage of option development, when details of the options can be optimised through detailed feasibility studies and design in order to limit identified impacts on sensitive receptors.	No further action
28	<p><i>Options – waste management</i></p> <p>The Plan should promote that wastes associated with construction, operation and maintenance works carried out in implementing the Plan and the associated preferred flood risk alleviation options be managed in accordance with national waste legislation, where relevant and appropriate. This should also include appropriate disposal of invasive species encountered in works proposed to be carried out.</p>	Mitigation measures specified in the ER include specific measures relating to the control of wastes during construction as well as adherence to the Construction Industry Research and Information Association's good practice guidelines on the control of water pollution from construction sites.	Added to SEA Statement mitigation measures
28	<p><i>SEA – ER – flow regime</i></p> <p>An investigation of what impacts any of the flood risk management options put forward will have on the flow regime of the Dodder should be carried out in implementing the Plan. The hydrological regime is an important quality element in the implementation of the WFD and Environmental Flows will become increasingly important in the process of identifying and designating Heavily Modified Waterbodies such as the Dodder. Significant changes in hydromorphology can affect the ecological status of a waterbody and should be considered.</p>	The SEA, HDA and Plan teams were fully integrated throughout the development of the draft FRMP, ensuring that potential environmental impacts associated with the implementation of the FRMP have been given due consideration in its preparation. The SEA and HDA assessments considered the potential hydromorphological effects associated with the proposed flood management options and recommended mitigation measures where appropriate.	No further action
26	<p><i>Options - mitigation</i></p> <p>An Overall Fisheries Enhancement and Rehabilitation Programme should form part of the recommended mitigation actions.</p>	-	Added to the mitigation measures in the SEA Statement
8	<p><i>Conservation – BFF</i></p> <p>Embankments will see the total destruction of the existing flora and fauna along the river and is not acceptable.</p>	It was recognised in the Environmental Report that hard defences can have negative impacts on flora and fauna and relevant mitigation is included in the SEA.	No further action
8	<p><i>Conservation – amenity</i></p> <p>It has been an objective of local authorities for years to improve and enhance the amenity value of the river with particular emphasis on developing a linear park along the river. Erecting flood barriers would negatively affect this objective, create serious environmental problems and would not be necessary.</p>	It was recognised in the SEA ER that hard defences can have negative impacts on amenity and flora and fauna and relevant mitigation is included in the SEA.	No further action
8	<p><i>Conservation – BFF, landscape, amenity</i></p> <p>Walls and embankments require major construction work and can change the landscape, river views can be lost. Trees and habitat can be lost and pathways. Therefore they should be minimised.</p>	It was recognised in the SEA ER that hard defences can have negative impacts on amenity and BFF and relevant mitigation is included in the SEA.	No further action
8	<p><i>Conservation - amenity</i></p> <p>The Dodder poses flood risk but is also an amenity which should be preserved and maintained as much as possible while the flood risk is reduced or eliminated.</p>	It was recognised in the SEA ER that hard defences can have negative impacts on amenity and flora and fauna and relevant mitigation is included in the SEA.	No further action
8	<p><i>Conservation – cultural heritage</i></p> <p>There should be no interference with any of the bridges over the river. For example, the Packhorse Footbridge dates from the 17<sup>th</sup> century and is said to be the oldest in Dublin. Work is proposed to its</p>	It was recognised in the SEA ER that hard defences can have negative impacts on cultural heritage and relevant mitigation is included in the SEA.	Added to mitigation measures in SEA Statement

Sub	Summary of comment	Response	Action
	parapet to strengthen it against floods. It is important that it is properly restored and not reinstated with concrete. There are also many old granite river walls that should be restored rather than replaced by concrete. The many mill races along the river should be preserved, including views of them.		
9	<i>Conservation - fish</i> Of main concern is the preservation of the wild brown trout fishery and the migratory fishery in the lower reaches. Gravel being dumped in the pools and wild fish being displaced by flood waters must stop.	The protection of fisheries is an objective of the SEA and several mitigation measures have been proposed in relation to fisheries included the development of a fisheries enhancement and rehabilitation programme.	No further action
21	<i>SEA ER</i> Section 9.4.3 of the SEA ER recommends undertaking aquatic ecological surveys and biodiversity surveys for flora and fauna as mitigation measures. These surveys should not be considered a form of mitigation; they should be carried out in advance of any detailed design work to assess potential impacts of any proposals on habitats and species of high nature conservation value and on fisheries interests. The results of the survey work should be used to inform the detailed design of flood defence works and any necessary mitigation measures with respect to biodiversity.	Wording issue	Amended mitigation section in SEA Statement
22	<i>SEA ER - baseline data</i> ...there were gaps in the information available. It is vital therefore before any firm project proposals are designed and submitted for Part 8 that the necessary survey work of flora and fauna is carried out at the appropriate time of the year by competent persons. This will enable modifications to be made to preliminary plans and any licences required under the Wildlife Acts to be applied for if necessary. Biodiversity Officers from the three Local Authority areas and local NPWS staff should also be involved in this process as they may have local knowledge and help avoid adverse impacts on biodiversity.	The SEA, HDA and Plan teams were fully integrated throughout the development of the draft FRMP, ensuring that potential environmental impacts associated with the implementation of the FRMP have been given due consideration in its preparation. The SEA and HDA assessments considered the potential for significant effects on biodiversity arising from the proposed flood management options and recommended mitigation measures where appropriate. These included appropriate surveys and assessments of any works arising from the FRMP as well as associated consultation activities.	No further action
22	<i>Conservation - BFF</i> Prior to any of the proposed works commencing it should be noted that where there are impacts on protected species and their habitats, resting or breeding places, licenses may be required under the Wildlife Acts or derogations under the Habitats Regulations. This is not apparent from the documents submitted. It is advisable that such licences are applied for in advance of going for planning permission or Part 8. In particular bats and otters are strictly protected under annex IV of the Habitats Directive...Licences under the Wildlife Acts will be required for impacts on Badgers, nesting birds and protected plants. Where possible hedges, trees and riparian vegetation should not be removed during the nesting season (i.e. March 1st to August 31st). Birds' nests can only be intentionally destroyed under licence issued under the Wildlife Acts of 1976 and 2000. In order to apply for any such licenses or derogations as mentioned above a detailed survey should be submitted to NPWS which should have been carried out by appropriately qualified person/s. It should be noted that licence applications make take some time to process and in some instances licence applications may be refused.	The principal mitigation recommendation in the ER is that potential negative effects should be considered further during the next stage of option development, when details of the options can be optimised through detailed feasibility studies and design in order to limit identified impacts on sensitive receptors, and where necessary surveys and assessments can take place.	Added to the SEA mitigation section
22	<i>Conservation - BFF</i> Every effort should be made to ensure that suitable riparian habitat is left along the watercourse to enable the river to act as a wildlife corridor. Where this is not possible mammal ledges should be constructed and artificial otter holts considered.	The ER requires that opportunities for enhancement of the environment be maximised during implementation of the options proposed in the FRMP.	Added to SEA mitigation section
22	<i>Conservation – water quality</i> Construction work should not be allowed impact on water quality and measures should be put in place to prevent sediment and/or fuel runoff from getting into watercourses which could adversely impact on species in the watercourse. The mitigation proposed, including the use of silt traps, would be essential in this regard particularly for the proposed dredging and removal of weirs.	Mitigation measures specified in the ER include specific measures relating to the control of potential sources of pollution during construction as well as adherence to the Construction Industry Research and Information Association's good practice guidelines on the control of water pollution from construction sites.	No further action
22	<i>Conservation - BFF</i> You should note that in accordance with article 6.3 of the Habitats Directive, all projects resulting from this CFRMP should be subject to appropriate assessment screening and if necessary appropriate assessment.	The SEA, HDA and Plan teams were fully integrated throughout the development of the draft FRMP, ensuring that potential environmental impacts associated with the implementation of the FRMP have been given due consideration in its preparation. The SEA and HDA assessments considered the potential for significant effects on biodiversity arising from the proposed flood management options and recommended mitigation measures	No further action



Sub	Summary of comment	Response	Action
		where appropriate. These included appropriate surveys and assessments such as EIA and HDA.	
32	<i>SEA – ER - NTS</i> In the Executive Summary (page iii) the characterisation of the attributes and usage of the catchment's parklands is too limited and overly emphasises angling pursuits. The initial conceptual analysis of the parklands omits biodiversity and habitats, other recreational pursuits and historical attributes (although there is analysis in the report) which gives an incomplete impression of the full document.	The SEA objectives include biodiversity, amenity and cultural heritage. It is a strategic assessment. It is not the intention to re-write sections of the ER where doing so would not influence the outcome of the assessment.	No further action
32	<i>SEA – ER - Monitoring</i> There is a commitment to develop indicators arising from landscape character objectives (4e). It is unclear how the indicators will be monitored to determine success.	Landscape character and visual amenity is one of the environmental criteria under which each proposed flood defence project is scored. Maintaining existing long term landscape character would give a zero score under this category. Improving the landscape character would give a positive score and therefore be more likely to be included in any proposed scheme. Monitoring of the landscape character would be carried out for a number of years after construction works to ensure the local environment had recovered. Any new embankments/walls will be monitored on a yearly basis. The indicator is compliance with landscape character objectives. This is likely to be a qualitative assessment made by the plan reviewers.	No further action
32	<i>Mitigation - landscape</i> In order to fulfil Objective L1, a Landscape Character Assessment is necessary.	Mitigation measures specified in the Environmental Report include a requirement to consider landscape issues before any works commence as well as consultation with relevant stakeholders.	Landscape Character Assessment added to SEA mitigation in SEA Statement
32	In terms of the assessment of scenarios in section 9, the consideration of the effects on landscape may be incomplete. In the 'do-nothing' scenario (9.2), it could be argued that, rather than a neutral on landscape character, that character would change by the potential for repeated and sustained flooding.	This would not change the overall results of the SEA.	No further action
32	In relation to SEA Section 9.4.3 and mitigation, it is stated that, 'The works in environmentally sensitive areas should be undertaken outside of the main breeding season'. It is unclear to which species this refers, but some do not coincide and some breed throughout the year. Also, the prohibition on works in 'very wet weather' should be clearly defined, and criteria set to describe weather conditions which render works to be ceased.	This is a general statement and as such requires that the breeding requirements of all relevant species are considered during the planning of any works. The necessity to prohibit works in very wet weather will be decided at the planning of works stage. Sensitive areas would be surveyed in advance of works to ensure that breeding seasons were not interfered with. Very wet weather is normally defined as 25mm or more of rainfall in a single day.	Additions made to SEA statement
32	Also in this section, it is stated that 'No trees should be removed prior to the 1st September as per the Wildlife Act (exemptions for unsafe trees and urban trees)'. It is unclear to what exemption is referred to for urban trees and the 'unsafe' trees. This interpretation of the legislation is incorrect and requires amendment in consultation with this Division and NPWS as to what specific trees are included for removal in this plan. The exemption for removal of trees which pose a threat to human health and safety exists in certain instances under Irish legislation, but it is superseded by European legislation in instances where the tree, for example, provides habitat which is essential to designated species. Furthermore, the dates given are incorrect with the Irish legislation, which covers 1 March to 31 August only.	Usually the restriction on removal of trees is normally for the period 1st March – 31st August. However, if trees pose a significant health and safety risk, they can be removed but would be surveyed if possible prior to this. Trees that are likely to fall into the river and cause a blockage downstream would also fall into this category.	Amended in SEA Statement mitigation section
32	In relation to 9.4.7, it is stated that, 'Some of the proposed defences may require more detailed assessment than what is recommended here'. The detailed design will require assessment at the level required, and will include Environmental Impact Assessment and Appropriate Assessment. The EIA process is required for the project on a cumulative basis, and should not be undertaken in a sectional approach, which could lead to project-splitting. The AA process must also be carried out to assess cumulative impacts. It is possible that some of the investigative works, prior to planning permission being sought for this project, may also in their own right require EIA/AA to be undertaken, due to the sensitive locations along the River Dodder.	The project will comply with all the environmental and Habitats Directive legislation and cumulative and in-combination effects will be considered.	Discussed in SEA Statement
32	We endorse the Report of Task Group Findings as presented at the River Dodder CFRAMS SEA Stakeholders Workshop (24/01/08) in relation to Group 3 – Landscape and visual amenity. In particular, the statement that: 'The Parks Departments of all three local authorities have a major role to play.' We propose that a Steering Group should be set up to include parks professionals from the three local	A representative from each Parks Department will be contacted as a major stakeholder during the detailed planning stage of each construction project which falls out of the Plan. Where the flood cell borders two Local Authorities, a meeting with	No further action



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	authorities to provide for this recommendation.	representatives from both Parks Departments will be sought.	
32	In 9.6, there should be discussion of the impacts, if any, of the flood alleviation on the condition and integrity of the wetlands of Dublin Bay, which are specific Conservation Interests of the Natura sites listed.	No significant impacts on the wetlands of Dublin Bay are foreseen by the implementation of the Plan as the same volume of flood water will reach Dublin Bay in only a slightly shortened time frame.	No further action
	<b>Comments on the AA Report</b>		
28	AA - NIS The focus of the consideration of potential “in-combination effects” in the Habitats Directive should consider the likely additional impact of other relevant plans, programmes and projects on the integrity of Natura 2000 sites. Consideration however should be given to summarising the influence of key plans / programmes in Section 9.4.8.2, in terms of assessing likely potential for cumulative effects in this section also.	The influence of key plans and programmes will be used to assess individual alleviation projects falling out of the Dodder Catchment FRMP. Current plans with a major influence are Development Plans, the ERBD Plan and a new Plan for a Dodder cycle track.	No further action
28	AA - NIS In Section 9.6 Habitats Directives Assessment, it appears that all the mitigation measures listed address issues arising during the construction phase. Clarification should be given on the extent to which post construction mitigation measures have also been considered, for example, increased scouring effect of flood defence structures downstream including the Liffey estuary.	Post-construction monitoring of mitigating measures will be carried out on a yearly basis. Increased scouring during future floods is unlikely to have a significant effect as current flood defences contain greater than 90% of flood waters.	Added to mitigation
32	We have concerns about the potential impacts on alteration of the wetlands which are the Qualifying Interests of the Natura sites downstream at Dublin Bay. We also are concerned about the cumulative impacts with other projects, notably River Tolka and River Dodder (Phase 1) Estuary Flood Works, and that these are fully assessed. These should be included in Appendix C, along with the following plans which went through public consultation: <ul style="list-style-type: none"> <li>North Bull Island Special Amenity Area Plan, 2009</li> <li>DCC Biodiversity Action Plan 2008-2012</li> <li>Bushy Park Landscape Management Plan 2008</li> </ul>	The AA screening outlines that flood alleviation work up in the River Dodder will not significantly alter the hydrology or water quality of the estuarine or coastal water body and therefore it was screened out as it is unlikely to impact on the condition and integrity of the qualifying features of the Natura 2000 sites listed.  The assessment determined that there would be no significant alteration to either hydrology or water quality to Dublin Bay, either alone or in combination with other projects or plans.  The river Tolka had an environmental plan during and post construction. The river Dodder phase 1 is in the tidal region of the lower Dodder and as such would have no long term effects downstream of it.	No further action
32	Our concern is that the Appropriate Assessment of the Study has been carried out in accordance to the Habitats Directive insofar as AA is an iterative process. According to the Document Control Sheet for the Appropriate Assessment Report, the final revision of the AA Report issued 05/08/2011. A comparison of the Document Control Sheets for the Appropriate Assessment Report and the Draft Flood Risk Assessment and Management Plan shows that there have been 3 no. subsequent revisions of the Plan without any further Appropriate Assessment (30/11/2011; 27/01/2012; 29/02/12). It is unclear what changes were made to the main Plan, but it would be expected that revisions required additional assessment.	The Appropriate Assessment of the Study has been carried out in accordance to the Habitats Directive insofar as AA in an iterative process. The Document Control Sheet was unfortunately not updated appropriately to reflect this.	No further action
32	It is stated in 1.5 that there was liaison between the SEA and Habitats Assessment Teams throughout the process. The author of the SEA report reviewed the AA report. The SEA report was revised on 29/02/12, coinciding with the final revision of the main Plan. Why is this not the case then with the AA report?	The Document Control Sheet was unfortunately not updated appropriately to reflect this.	No further action
32	In terms of Identification of Potential Impacts (3.4 in the AA Report), it is stated that ‘The potential impacts to Natura 2000 sites from the identified preferred options are impacts related to changes in water level’. This narrow focus precludes analysis of the specific impacts of the preferred options in terms of changes in water volumes, water quality, removal and replacement of soft embankments with hard defences, loss or disturbance of habitat and interaction of effects.	The focus of the assessment of the preferred options included a broad range of potential pressures including changes in water volumes, water quality, removal and replacement of soft embankments with hard defences, loss or disturbance of habitat and interaction of effects. However, following the assessment it was determined that ‘The potential impacts to Natura 2000 sites from the identified preferred options are impacts related to changes in water level’.	No further action
32	In the analysis of impacts on habitats of a higher altitude Natura 2000 site above the flood cell, while there is no hydrological impact of course, alteration of habitat suitability can result in loss, disturbance and fragmentation of habitat. This can have upstream impacts, where species can no longer make the	The appropriate assessment concluded that the preferred options would not result in alteration of habitat suitability,	No further action

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	connections that once occurred or are deterred from doing so. There is a suggestion of lack of time and information available to make the assessment (3.5). We agree that the precautionary principle applies if so. We are in agreement with the sites selected for shortlisting to Stage 2 (3.6).	disturbance nor fragmentation of habitat.	
32	For each site, the first line states, 'Apart from the support measures...' Where is the assessment of the impacts of the support measures? Some of these, mainly Sustainable Urban Drainage Systems (SUDS) and maintenance measures, can certainly have impacts, both positive and negative. Where are these described? Will there be further AA reports for SUDS projects and maintenance strategies?	The focus of the assessment of the preferred options included a broad range of potential pressures including changes in water volumes, water quality, removal and replacement of soft embankments with hard defences, loss or disturbance of habitat and interaction of effects. Application of SUDS was not seen as a negative to the integrity of the Natura 2000 sites relevant to this assessment.	No further action
32	There is no reference to the potential impacts of transfer of invasive species by soil movements and dredging. I refer also to the Habitat Regulations 2011 (partially commenced) and the need for mitigation measures to be compliant with this legislation.	This will be included in a method statement issued by the contractor as required under mitigation measures in the SEA ER.	Alien species mitigation added to SEA Statement
32	I suggest that Table 4.2 be reconciled with Table 3.2 in relation to hydrological impacts.	The SEA ER will not be re-visited where it will not affect the overall assessment.	No further action
32	The mitigation measures proposed are mainly concerned with the management of aquatic species and in-stream environments. The management of terrestrial species and the bankside environment should be in consultation with this Division and the NPWS. In particular, Measure 3 proposes to operate machinery in bankside areas, which can cause considerable impacts to designated species under the Birds and Habitats Directive and to local biodiversity and species designated under the Wildlife Act. The loss of bankside vegetation can have consequent decreases in biodiversity of parklands which are interconnected habitats. These impacts should be assessed and described, in compliance with Article 10 of the Habitats Directive. The impacts on terrestrial species include fauna such as kingfisher and bats and also impacts on flora which support them should be described. I understand that a full flora and fauna survey is underway this year.	Measure 3 – operation of machinery in bankside areas will occur in built up urban areas where there minimal risk to designated species under the Birds and Habitats Directive and to local biodiversity and species designated under the Wildlife Act. Full surveys will be carried out before works take place and all appropriate assessments such as EIA and AA. Method statements will be developed in consultation with key stakeholders.	No further action
34	<i>Conservation - fish</i> At St Enda's Park there is a risk of damage to important fish nurseries.	There is an objective within the SEA in relation to the protection of fish and fish habitat.	No further action
34	<i>Conservation - Amenity</i> The proposed flood prevention work on the sections of the Dodder bank between Dartry Park and Beaver Road would have significant negative environmental consequences. This is acknowledged in the Environmental Report. This section of the River is of very high amenity value and it is feared that the proposed major works would have a very detrimental effects in what is a very well used parkland area.	The assessment includes biodiversity and amenity.	No further action
34	The other site at risk on the former Smurfit mill on the eastern side of the Clonskeagh Road is now in a state of severe dilapidation and can only have a value as development land. Again rather than bending the river bank to suit such a development interest we consider it makes more sense to bend the developers' plans to suit the river.	SEA mitigation applies	No further action
34	<i>Reduction of run-off</i> Planning regulations should prohibit the complete covering of front gardens in hard surfaces. The use of sustainable drainage systems such as SUDS standard in new developments should be required and a priority for renewal of existing waste water Systems.	SEA mitigation and listed regulations and guidance in relation to planning and development applies.	No further action
34	<i>Loss of character and amenity</i> The building of high walls as flood defences reduces the public amenity of the river.	There is an objective within the SEA in relation to amenity.	No further action
34	<i>Amenity</i> The councils should use the opportunity presented by the flood defence works to improve the recreational and transport benefits that the river system could bring. The introduction of special pedestrian and cycle lane facilities on sections from Beaver Road to Clonskeagh Road. From the Dropping Well to Dartry Park and from Springfield Avenue to the Old Bridge Road in Rathfarnham would bring huge benefits by turning the full section of the lower reaches of the Dodder into a continuous linear park. The sections of park currently closed to cyclists should be opened up and if the route could be continued all the way down to the Ringsend area it could be connected to the new Grand Canal Cycle route. Opening this route to pro-social use will also reduce anti-social behaviours such as	The potential to increase amenity while constructing defences is included in the Environmental Report.	No further action

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	dumping which heightens flood risk. The cutting back of overgrowth will also reduce the amount of debris which is collected in its branches and allow a freer flow of the river.		
35	The flooding of October 2011 has caused devastation to the residents, particularly to the significant number of elderly people who live in our community. Many people have not returned yet to their homes and some may never return. In the aftermath there continues to be stress and trauma relating to remedial work on houses, living in temporary accommodation, issues with insurance companies regarding payment of claims, increased insurance costs, lack of flood cover and the ever existing threat that this could happen again at any time. The on-going emotional and physical effects of having to live with the threat of another similar event, every time we have a period of intense rainfall, is one that can only be alleviated by the provision of a robust system of infrastructural measures designed to protect our homes from further such occurrences.	Agree.	Complete process
41	For the purposes of dealing with specific flood risk assessment in the planning system, all forms of flooding (not just fluvial and coastal) should be taken into account when assessing flood risk. The flood extent maps should not be used to suggest that an area is free from flooding, as there are other sources of flooding such as groundwater, pluvial flood risk, infrastructure / sewer failure and overflows from dams. Article 7.3 of the Floods Directive states that 'flood risk management plans shall address all aspects of flood risk management focusing on prevention, protection, preparedness, including flood forecast and early warning systems and taking into account the characteristics of the particular river basin or sub-basin. Flood risk management plans may also include the promotion of sustainable land use practices, improvement of water retention as well as the controlled flooding of certain areas in the case of a flood event'.	The FRAM programme is concerned with fluvial and coastal flooding only. Article 7.3 relates to measures, not to sources of flooding.	No further action
41	<i>Conservation - BFF</i> It will be crucial in the next step of option development that detailed designs be drawn up with mitigation measure put in place which will avoid negative impacts to key sensitive receptors and qualifying habitats.	The key mitigation in the SEA Statement is to this effect. Detailed design and related surveys will further inform mitigation.	No further action
41	<i>Conservation - recreation</i> It should be borne in mind that the development plan contains policies to enhance the Dodder Valley as a recreational corridor.	Links with Dublin City and South Dublin development plans are outlined in the Environmental Report.	No further action
	<b>Data gaps</b>		
28	<i>SEA – ER - assessment</i> Consideration should be given to including a cumulative environmental sensitivity / vulnerability map for the Plan area, which highlights areas more sensitive to cumulative effects. This should be carried out in consultation with the other Plan making partners (Dublin City, South Dublin and Dún Laoghaire - Rathdown County Councils), the Planning Authorities, respectively. Where this exercise has already been carried out for the respective Planning Authorities at a County level in SEA ER's of land use plans, this should be reflected in the Plan as relevant and appropriate to the Plan area. This approach would provide a measure of the potential effects to be considered when planning certain works associated with the alleviation of flood risk.	Consideration will be given to cumulative environmental sensitivity /vulnerability maps for Plan areas prior to any construction works taking place.	Discussed in SEA Statement
28	<i>SEA – ER - Environmental Baseline</i> In Section 7.3.1 Surface Water and 7.13 Existing Key Issues, the causes of the less than good status in water bodies should be described – see the Eastern RBMP and the associated Final Programme of Measure – Dodder Water Management Unit. Some additional issues that should be considered include: <ul style="list-style-type: none"> <li>• nutrient sensitive areas (Liffey Estuary)</li> <li>• bathing water areas (Sandymount Strand, Merrion Strand and Seapoint),</li> <li>• artificial water bodies (Grand Canal – classified as Poor Ecological Potential).</li> <li>• key issues concerning biodiversity should also be dealt with in more detail.</li> </ul>	The causes of less than good status are described in the Eastern RBMP and Dodder WMU action plan which are referenced by the SEA Environmental Report and SEA Statement and therefore will not be produced again.	No further action
35	<i>SEA</i> We would point out that the implementation of the proposed option would also reduce the ongoing emotional stress associated with the <b>threat</b> of flooding which is part of our lives currently and is particularly heightened following the recent devastating flood event in Oct. 2011.	-	This is referenced in the SEA Statement.
28	<i>SEA – ER - Data Gaps and Technical Difficulties</i> It is noted that in Section 6.5 of the SEA ER, certain baseline indicator data dates back to 2006/2007.	The most up-to-date data available at the time was used to prepare the baseline section of the ER.	No further action

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	These data sources should be reviewed/updated accordingly in the context of ensuring the most current data is incorporated into the Plan where possible to allow the most up to date baseline be utilised.		
28	<i>SEA – ER - Data Gaps and Technical Difficulties</i> Consideration should be given to reviewing population effected due to flooding taking into account the recent finalised Census 2011 data. You are also referred to the MyPlan.ie website which contains information on land use zoning for respective Local Authorities. This should provide a basis for recommending and re-zoning / de-zoning lands at significant risk within the Plan area as relevant and appropriate.	This data was not available when the assessment was carried out and the assessment will not now be re-run. There is little if any chance that this updated dataset would in any way affect the conclusions of the assessment.	No further action
28	<i>SEA – ER - Data Gaps and Technical Difficulties</i> This section (and related Appendix B) could be expanded to more explicitly identify key relevant data gaps and consider how these gaps may be addressed in future revisions of the Dodder Catchment FRMP.	Doesn't affect the assessment of the options	Data gaps are discussed in the SEA Statement
28	<i>SEA – ER – data gaps</i> In Section 6.5 Data Gaps and Technical Deficiencies, there would be merits to providing a list of specific datasets that are missing or incomplete so that during the implementation of the Plan and in future reviews these can be addressed.	Doesn't affect the assessment of the options	Data gaps are discussed in the SEA Statement
28	<i>SEA – ER – Environmental Baseline</i> For groundwater related aspects, consideration should be given to providing an aquifer classification map. It is recommended that the issue of rejected recharge be acknowledged in the context of the unproductive aquifers. These aquifers have low permeability, storage and transmissivity which may contribute to greater surface runoff during storm events.	Doesn't affect the assessment of the options	Data gaps are discussed in the SEA Statement
28	<i>SEA – ER – Environmental Baseline</i> In relation to aspects pertaining to soil, it is recommended that the permeability of the soils be summarised, given that from a flood risk perspective this is potentially of greater relevance than soil type. For example gley soils are typically of low permeability and will contribute to greater surface runoff.	Doesn't affect the assessment of the options	Data gaps are discussed in the SEA Statement
28	<i>Other plans - RBMPs</i> Reference should be made to the environmental quality standards used to determine water status in the WFD, including those for chemical status in the Environmental Objectives (Surface Water) Regulations (S.I. No. 272 of 2009). These Regulations provide for the establishment of legally binding quality objectives for all surface waters and environmental quality standards for ecological and chemical status and address the requirements of the Water Framework, Dangerous Substances and Priority Substances Directives. These Regulations also repeal the Phosphorus and Dangerous Substances Regulations.	Doesn't affect the assessment of the options	Data gaps are discussed in the SEA Statement
5	<i>Guidance</i> Attention is drawn to recommendations from the EU with regard to preserving wetlands and green river banks for the natural attenuation of flow <a href="http://www.ieep.eu/assets/902/GI_Case_Analysis_4_-_Freshwater_and_Wetlands.pdf">http://www.ieep.eu/assets/902/GI_Case_Analysis_4_-_Freshwater_and_Wetlands.pdf</a>	Doesn't affect the assessment of the options	Data gaps are discussed in the SEA Statement
10	<i>Issue – Japanese Knotweed</i> Japanese Knotweed has colonised large tracts of the Dodder river bank crowding out indigenous species. Himalayan Balsam is also to be seen on the pathways and against the wall at the back gardens of Whitebeam Road, Clonskeagh. These invasive species reduce the solidity of the river bank and are contributing to flood issues. Other plants with deeper roots would hold the bank together more effectively but are absent. No field work has been undertaken in relation to this issue and there appears to be no plan for an ecological study, assessment or strategic removal of these invasive species.	Doesn't affect the assessment of the options. During the next phase of the study, the detailed design phase, a method statement will be prepared detailing adequate mitigation measures that will be implemented to prevent further spread of these species within the catchment during the construction phase.	Mitigation in relation to invasive species has been added to the SEA Statement and the Maintenance Plan
21	<i>Options - proposal</i> Japanese Knotweed and other knotweed species are present along the River Dodder. The extent of the knotweed along the section managed by DLRCC has been mapped in detail. Stands are present on the southern bank at Orwell Gardens (just downstream of the proposed flood wall) and along the section proposed for flood defences for the Shanagarry Apartments and Smurfit Site. Other invasive species including Himalayan Balsam are also present.	Doesn't affect the assessment of the options. During the next phase of the study, the detailed design phase, a method statement will be prepared detailing adequate mitigation measures that will be implemented to prevent further spread of these species within the catchment during the construction phase.	Mitigation in relation to invasive species has been added to the SEA Statement
21	<i>Review – Giant Knotweed</i>	Doesn't affect the assessment of the options. During the next	Mitigation in relation to invasive species has been



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	Giant Knotweed, Japanese Knotweed and Himalayan Balsam are listed as invasive species in Schedule 3 of the European Communities (Birds and Natural Habitats) Regulations 2011. The flood defence proposals should review in detail the likely effects of proposed works on the distribution of these species. A method statement should be prepared detailing adequate mitigation measures that will be implemented to prevent further spread of these species within the catchment during the construction phase.	phase of the study, the detailed design phase, a method statement will be prepared detailing adequate mitigation measures that will be implemented to prevent further spread of these species within the catchment during the construction phase.	added to the SEA Statement
21	<i>SEA ER – additional information</i> No reference has been made to River Dodder Ecological reports held by DLRCC which provide useful baseline information on features of ecological interest along the section of the Dodder managed by DLRCC including: 1. River Dodder Biodiversity Study 2010 prepared by Mary Tubridy and Associates; 2. Management of Knotweed along the Dodder 2011 prepared by Mary Tubridy and Associates; The first report provides detailed information on features of ecological interests and the second report includes detailed mapping of knotweed species.	Doesn't affect the assessment of the options	Data gaps are discussed in the SEA Statement
22	<i>SEA ER – baseline data</i> In any project for flood alleviation in the Dodder catchment reference should be made to the National Biodiversity Plan, relevant County Biodiversity Action Plans and Dublin City Council's River Dodder Habitat Management Plan 2007.	The SEA, HDA and Plan teams were fully integrated throughout the development of the draft FRMP, ensuring that potential environmental impacts associated with the implementation of the FRMP have been given due consideration in its preparation. The SEA and HDA assessments considered the potential for significant effects on biodiversity arising from the proposed flood management options and recommended mitigation measures where appropriate. These included appropriate surveys and assessments such as EIA and HDA. The National Biodiversity Plan and River Dodder Habitat Management Plan are referenced in the SEA ER.	Data gaps are discussed in the SEA Statement
22	<i>Conservation - BFF</i> The River Dodder contains many species protected under the Wildlife Acts or listed on Annex I of the EC Birds Directive (Directive 2009/147 EC), or Annexes II or IV of the Habitats Directive. These include Kingfishers, (Alcedo atthis) which are listed on annex I of the Birds Directive and protected under the Wildlife Acts of 1976 and 2000, Otters, (Lutra lutra) and bat species which are protected under the Wildlife Acts and listed for strict protection on Annex IV of the Habitats Directive, Badgers, (Meles meles) protected under the Wildlife Acts of 1976 and 2000.	The SEA, HDA and Plan teams were fully integrated throughout the development of the draft FRMP, ensuring that potential environmental impacts associated with the implementation of the FRMP have been given due consideration in its preparation. The SEA and HDA assessments considered the potential for significant effects on biodiversity arising from the proposed flood management options and recommended mitigation measures where appropriate. All of these species are referenced in the SEA ER.	No further action
22	<i>Conservation - BFF</i> ...a number of protected and rare plants occur along the Dodder. It is unfortunate that this fact has not been acknowledged in the CFRAMP documents which lists them as occurring in the Red Data Book but omits to mention they are listed in the Flora Protection Order of 1999 (SI 94 of 1999) and are therefore protected under the Wildlife Acts of 1976 and 2000. The Department recommends that this error is corrected.	The SEA, HDA and Plan teams were fully integrated throughout the development of the draft FRMP, ensuring that potential environmental impacts associated with the implementation of the FRMP have been given due consideration in its preparation. The SEA and HDA assessments considered the potential for significant effects on biodiversity arising from the proposed flood management options and recommended mitigation measures where appropriate. The inclusion of information on the protection status of specific species would not lead to a change in the conclusions of the assessment.	Data gaps are discussed in the SEA Statement
32	<i>SEA - ER</i> For more specific analysis of soils (3.2.2), reference should be made to the GSI SURGE data for Dublin.	The purpose of the SEA process is to ensure that environmental considerations are integrated into the preparation of the plan. It is not the intention to re-write sections of the ER where doing so would not influence the outcome of the assessment.	Data gaps are discussed in the SEA Statement
32	<i>SEA – ER – baseline - BFF</i> Bog orchid (Hammarbya paludosa) is a listed Rare Plant (NPWS, 2012) with protection since 1999 under the Flora Protection Order (S.I. 94 of 1999). The SEA does not state the correct legal protection for this species. Therefore the ability to fulfil Objective BFF1 can be questionable, specifically Sub-objective which states 'Avoid loss of legally protected species and other known species of conservation concern, or damage to or loss of habitats supporting legally protected species and other known species	The purpose of the SEA process is to ensure that environmental considerations are integrated into the preparation of the plan. Biodiversity and flora and fauna were considered on a broad scale, not in terms of individual species or habitats. It is considered that the SEA process achieves its purpose in relation to the consideration of BFF. It is not the intention to re-write sections of the ER where doing so would not influence the	Data gaps are discussed in the SEA Statement

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	of conservation concern, and where possible enhance’.	outcome of the assessment. A more detailed environmental survey of proposed works areas will be carried out prior to construction works. Bog Orchid will be included in the list of protected species if it occurs in or near the proposed works.	
32	<i>SEA – ER – baseline- BFF</i> How is the scheme and the SEA informed by Tubridy (2007) study referred to 7.1.1? The Study should also refer to a report prepared for this Division: Dublin Parks Habitat Study: Management Plan for Bushy Park by M. Tubridy and Associates (2006).	The study team read Tubridy (2007) and included it in their compilation of the Environment Report. There are no proposed works in or adjacent to Bushy Park. The purpose of the SEA process is to ensure that environmental considerations are integrated into the preparation of the plan. Biodiversity and flora and fauna were considered on a broad scale. It is considered that the SEA process achieves its purpose in relation to the consideration of BFF. It is not the intention to re-write sections of the ER where doing so would not influence the outcome of the assessment.	Data gaps are discussed in the SEA Statement
32	<i>SEA – ER- baseline - landscape</i> The SEA report should further assess the effects of the plan on Landscape. In particular, specific descriptions of historical landscapes should be provided in 7.4. Cultural heritage of designed landscapes of public parks is not fully assessed. A brief reference to the importance of the historic 17th Century demesne of Marlay Park is provided in 7.7. No reference or analysis is provided to the designed historic landscapes of Bushy Park (a former demesne as well) or to Herbert Park (site of a historic exhibition), which DCC celebrated the centenary of in 2011. Both parks are of national importance in terms of their associations with nationally important historical figures.	The proposed works in Marlay Park are generally above existing ground level and away from the river bank. There are no proposed works in or adjacent to Bushy Park. Landscape was considered on a scale appropriate to the SEA process. It is considered that the SEA process achieves its purpose in relation to the consideration of landscape in the development of the draft FRMP. It is not the intention to re-write sections of the ER where doing so would not influence the outcome of the assessment. Any works proposed in or near parks will be subject to detailed site-specific assessment and Landscape Character Assessment.	Data gaps are discussed in the SEA Statement
32	<i>SEA – ER- baseline - landscape</i> For further information published on the historic and cultural status of Herbert Park, refer to the UCD/Heritage Council publication (Brück and Tierney, 2009), Landscapes of Desire – Parks, Colonialism and Identity in Victorian and Edwardian Ireland and also (Siggins, 2007), The Great White Fair – The Herbert Park Exhibition of 1907.	Landscape was considered on a scale appropriate to the SEA process. It is considered that the SEA process achieves its purpose in relation to the consideration of landscape in the development of the draft FRMP. It is not the intention to re-write sections of the ER where doing so would not influence the outcome of the assessment. Any works proposed in or near parks will be subject to detailed site-specific assessment and Landscape Character Assessment.	Data gaps are discussed in the SEA Statement
32	<i>SEA – ER- baseline - landscape</i> For further information on Bushy Park, refer to a report prepared for this Division: Bushy Park Landscape Management Plan by MosArt (2008).	There are no proposed works in or adjacent to Bushy Park. Landscape was considered on a scale appropriate to the SEA process. It is considered that the SEA process achieves its purpose in relation to the consideration of landscape in the development of the draft FRMP. It is not the intention to re-write sections of the ER where doing so would not influence the outcome of the assessment. Any works proposed in or near parks will be subject to detailed site-specific assessment and Landscape Character Assessment.	Data gaps are discussed in the SEA Statement
32	<i>SEA – ER- baseline - landscape</i> Bushy Park was the home of the Shaw family, and a former Lord Mayor of Dublin. The history of Bushy Park and its owners has been documented by Dublin City Libraries with reference to Dublin City Archives and the National Library of Ireland and is available on the Ask About Ireland website: <a href="http://www.askaboutireland.ie/reading-room/history-heritage/big-houses-of-ireland/the-shaws-of-dublin/the-shaw-family-and-bushy/">http://www.askaboutireland.ie/reading-room/history-heritage/big-houses-of-ireland/the-shaws-of-dublin/the-shaw-family-and-bushy/</a> . The connections of the Shaw family to George Bernard Shaw are also listed on that website: <a href="http://www.askaboutireland.ie/reading-room/history-heritage/big-houses-of-ireland/Big-houses-of-ireland-fea/everyday-life/bushy-park/">http://www.askaboutireland.ie/reading-room/history-heritage/big-houses-of-ireland/Big-houses-of-ireland-fea/everyday-life/bushy-park/</a>	There are no proposed works in or adjacent to Bushy Park. Landscape was considered at a scale appropriate to the SEA process. It is considered that the SEA process achieves its purpose in relation to the consideration of landscape in the development of the draft FRMP. It is not the intention to re-write sections of the ER where doing so would not influence the outcome of the assessment. Any works proposed in or near parks will be subject to detailed site-specific assessment and Landscape Character Assessment.	Data gaps are discussed in the SEA Statement
32	<i>SEA – ER- baseline – cultural heritage</i> The Department of Arts, Heritage and the Gaeltacht maintains the National Inventory of Architectural Heritage, which includes Gardens. The SEA report should include references to the NIAH and the	Landscape was considered on a scale appropriate to the SEA process. It is considered that the SEA process achieves its purpose in relation to the consideration of landscape and	No further action

Sub	Summary of comment	Response	Action
	report on Bushy Park (DU-50-O-136291). NIAH reports illustrate the value of these public parks and their features as historic landscapes part of Dublin's cultural heritage. In order to fulfil Objective CH1, the Sub-objective should be amended to include Gardens on the NIAH as well. This would include Bushy Park and its features.	cultural heritage in the development of the draft FRMP. It is not the intention to re-write sections of the ER where doing so would not influence the outcome of the assessment. Mitigation measures specified in the ER include a requirement to consider landscape and cultural heritage issues before any works commence as well as consultation with relevant stakeholders. The NIAH is referenced in the SEA ER.	
32	<i>SEA – ER- baseline – cultural heritage</i> I would caution sole reliance on the NIAH as the sole determinant of cultural heritage as it is incomplete in relation to the Gardens category. Only a desktop survey for Gardens was carried out for most of the country, including County Dublin. This is clearly stated on the NIAH website. Therefore, a site-specific field assessment is required for any sites within the study area for this plan. This includes historic built features, such as walls, paths and bridges, of designed landscapes in parks. NIAH site records are incomplete for some of our parks.	Mitigation measures specified in the ER include a requirement to consider landscape and cultural heritage issues before any works commence as well as consultation with relevant stakeholders. The NIAH is referenced in the SEA ER	No further action
32	<i>Mitigation</i> The Landscape section of the report should include reference to specific objectives in the relevant County and City Development Plans and how this plan will affect these objectives. For Dublin City, these include: <ul style="list-style-type: none"> <li>GCO40: To develop a number of parks, open spaces and amenities, including the Dodder Linear Park</li> <li>GCO45: Specific measures concerning the Dodder Linear Park</li> </ul> There may be great potential in this plan to further the delivery of the above objectives, depending on the outcomes. For example, space could be afforded to the development of walking and cycling routes.	The main objectives of the County and City Developments Plans relevant to the Dodder catchment are included in the ER as well as the relevance of the objectives to the Dodder Catchment FRMP.  The Project Team are liaising with the proposed Dodder Cycle Route Project Team and alterations have been proposed in the detailed design to accommodate this initiative.	No further action
32	The habitat values of parks along the river Dodder relate to historic use and current management practices. Two reports have been prepared for Bushy Park for the Parks and Landscape Services Division which should be considered in this plan and in future projects.	BFF was considered on a scale appropriate to the SEA process. It is considered that the SEA process achieves in purpose in relation to the consideration of BFF in the development of the draft FRMP. It is not the intention to re-write sections of the ER where doing so would not influence the outcome of the assessment.	Data gaps are discussed in the SEA Statement
32	The recreational assets to be assessed in the SEA should include the Blue Flag beach and North Bull Island and the beaches of South Dublin Bay, which could be potentially adversely affected by increased sediment and pollution loading.	The potential for downstream sediment impacts is dealt with in the SEA ER and mitigation measures proposed. Mitigating measures have been proposed in the Plan to combat any significant effects to blue flag beaches in the Dodder Bay area.	No further action
32	In Appendix B, Data Sources, the reference to the Dublin City Biodiversity Action Plan should be amended to the correct dates (2008-2012), as this would imply that it is no longer valid. Also, the Heritage Council does not own the document, it is a DCC statutory plan. Also, reference should be made to the DCC Bushy Park Management Plan.	Alteration to the dates and ownership of the Dublin City Biodiversity Action Plan will be made in the SEA Statement.	Data gaps are discussed in the SEA Statement
32	We note that the assessment unit for the AA report is the overall Dodder catchment to capture cumulative effects of the preferred options in the Plan. To supplement the 'internet resources' used to make this assessment, we can furnish our own habitats data for parklands in the catchment. We also can furnish information for some of the Natura 2000 sites which are noted in 2.1 'where no conservation management plans are available', including the Special Amenity Area Management Plan for North Bull Island (2009), which included NPWS as a stakeholder in the making of the plan by DCC. This information would inform the AA report.	The assessment was undertaken at the time with the information provided and with information publically available at that time. The assessment is now complete.	Data gaps are discussed in the SEA Statement
	<b>Consultation</b>		
33	Regarding public consultation, I learned of the Draft Plan in the Spring 2012 edition of DLR times. This article did not mention that the Draft Plan and supporting documentation could be viewed on line. It referred interested people to <a href="http://www.cfram.ie">www.cfram.ie</a> , where again there was no link to an online version of the Draft Plan. This failure to make the public aware that the plan was available to view online is not consistent with Minister of State Brian Hayes' statement, at the opening of the public consultation process that "It is crucial that people living along Dublin's river Dodder engage with their local authorities on a draft plan which aims to prevent flooding". (Irish Times, 7 <sup>th</sup> March 2012). How are we to engage if our local authority fails to let us know that we can view the Plan online? Few people have the time or opportunity to go to their council office between 9 and 5 and spend hours studying	Discussed in the SEA Statement	Discussed in the SEA Statement



Sub	Summary of comment	Response	Action
	documentation.		
39	Understand that the options in the draft plan are indicative and trust that the proposed alternatives will be investigated and comprehensively tested. Request that the team communicates and consults with stakeholders and the local community during the design stage so that there is still time to adjust to new information with a view to reaching the optimum solution.	EIA and AA with associated stakeholder engagement and public consultation	Future consultation opportunities discussed in the SEA Statement
39	Further opportunity for comments and alternative proposals should be provided to the community before the design process commences.	EIA and AA with associated stakeholder engagement and public consultation	Future consultation opportunities discussed in the SEA Statement
26	<i>Options - consultation</i> It is imperative that IFI are consulted at an early stage in the detailed design and every effort is made to minimise the impact on the riparian and aquatic resource.	Mitigation measures specified in the ER include a requirement to undertake surveys in relation to fisheries and the HDA includes a requirement to ensure agreement with IFI in relation to the method statement, detailed plans and timing of works before any works commence.	No further action
26	<i>Options</i> Proposals for the Whitechurch Stream are highly invasive and will radically alter instream habitats and morphology, detailed discussion is required on this proposal.	Mitigation measures specified in the HDA include a requirement to ensure agreement with IFI in relation to the method statement, detailed plans and timing of works before any works commence.	No further action
26	<i>Options - maintenance</i> The maintenance programme, particularly the reactive maintenance scheme, pose a high risk element in respect of fisheries, all aspects of channel realignment and silt removal must be considered carefully and in consultation with IFI and other relevant stakeholders.	Mitigation measures specified in the ER include a requirement to ensure agreement with IFI, NPWS and other relevant stakeholders prior to in-stream works.	No further action
9	<i>Consultation</i> Any works should be carried out in full consultation with, and taking on board the requirements of, Inland Fisheries Ireland. National Parks and Wildlife Service should be consulted with respect to the habitat of species such as the kingfisher and otter.	Mitigation measures specified in the ER include a requirement to undertake surveys in relation to fisheries and the HDA includes a requirement to ensure agreement with IFI in relation to the method statement, detailed plans and timing of works before any works commence.	No further action
12	<i>Response to flooding</i> How can one prepare for future planned emergency responses?	The OPW website <a href="http://www.flooding.ie">www.flooding.ie</a> provides information in relation to preparing for flooding as well as what to do during and after flooding.	No further action
21	<i>Options - consultation</i> As proposed flood defence works for Orwell Gardens and for the Shanagarry Apartments and Smurfit Site are located in public land managed by the DLRCC Parks Department, it is strongly advised that there is ongoing consultation with the Local Authority's Parks Management team with regard to any detailed designs in this area.	The mitigation measures in the SEA ER, and EIA and AA requirements, will ensure that consultation takes place.	No further action
22	<i>Conservation - fish</i> IFI should be consulted with regard to fish species, particularly salmon and lamprey species which are present and listed on annex 2 of the Habitats Directive.	The SEA, HDA and Plan teams were fully integrated throughout the development of the draft FRMP, ensuring that potential environmental impacts associated with the implementation of the FRMP have been given due consideration in its preparation. The SEA and HDA assessments considered the potential for significant effects on biodiversity arising from the proposed flood management options and recommended mitigation measures where appropriate. These included appropriate surveys and assessments of any works arising from the FRMP as well as associated consultation activities.	No further action
32	As mitigation will include landscape management issues directly related to the work of this Division, mitigation planning for any projects arising from this plan will necessitate the involvement of Parks Superintendents and Biodiversity Officer.	Mitigation measures specified in the ER include a requirement to consider landscape issues before any works commence as well as consultation with relevant stakeholders. EIA and AA at the next stage will ensure consultation	No further action
32	In relation to 9.4.3 and mitigation, it is stated that, 'A full work methodology should be developed prior to the commencement of any on site works'. In relation to this and Section 5.2 of the Main Report, this Division requests that: <ul style="list-style-type: none"> <li>Protocols are to be agreed with all stakeholder including DCC Parks &amp; Landscape Services, DCC Drainage Division, OPW, Inland Fisheries Ireland in relation to agreeing a maintenance plan for the river in order to resolve potential conflicting objectives.</li> </ul>	Mitigation measures specified in the ER include a requirement to consider issues before any works commence as well as consultation with relevant stakeholders.	Discussed in SEA Statement. Mitigation added.



Sub	Summary of comment	Response	Action
	<ul style="list-style-type: none"> <li>The maintenance plan will be subject to an Appropriate Assessment to ensure that all future operations are fully compliant with the Habitats Directive.</li> </ul>		
3 / 9	<p><i>Conservation – fish – request for rehabilitation</i></p> <p>Concerned about the filling in and shallowing of the trout pools with gravel brought down in unprecedented amounts by the floods from Bohernabreena. These pools need to be reinstated at a suitable depth in order to hold fish again.</p>	Not objective of cfram process	No further action
3	<p><i>Conservation – fish – request for rehabilitation</i></p> <p>The re-creation of the destroyed pools and habitats (permissions needed, methodologies, machinery and operators, access etc) should be done with professional expertise and with the assistance and advice of Inland Fisheries Ireland. Local angling groups, such as the Dodder Anglers Group, should be included in the process and opportunities should be investigated for pooling resources.</p>	-	Some additional aspects added to SEA mitigation
9	<p><i>Review - sources of gravel</i></p> <p>The source of the gravel being carried during flood should be investigated and the banks should be secured to prevent erosion and deposition.</p>	Not objective of cfram process	No further action
9	<p><i>Issue - dump sites</i></p> <p>The issue of old dump site, some of them illegal, along the riverside should be addressed to stop old plastics being washed down which can cause blockages.</p>	Not objective of cfram process	No further action
10	<p><i>Issue – erosion</i></p> <p>A contributing factor to flooding in the Clonskeagh Milltown area between Clonskeagh Bridge and the former Dartry Dye Works is erosion of the river bank on the south side.</p>	Not objective of cfram process	No further action