

# Strategic Environmental Assessment Statement

**Sligo Bay & Drowse**

**2018**

# Strategic Environmental Assessment Statement

For

## River Basin (35) Sligo Bay & Drowse (Drowes) Flood Risk Management Plan

*Areas for Further Assessment included in the Plan:*

<i>Cuil Mhuine</i>	<i>Collooney</i>
<i>Baile an Mhóta</i>	<i>Ballymote</i>
<i>Baile Easa Dara &amp; máguaird</i>	<i>Ballysadare &amp; Environs</i>
<i>Goirtín</i>	<i>Gorteen</i>
<i>Cúil Áine</i>	<i>Coolaney</i>
<i>Baile Shligigh (Ráth Bracháin san áireamh)</i>	<i>Sligo Town (Incl Rathbraghan)</i>
<i>Cluainín</i>	<i>Manorhamilton</i>
<i>Baile Idir dhá Abhainn</i>	<i>Riverstown</i>

Flood Risk Management Plans prepared by the Office of Public Works 2018

*In accordance with*

*European Communities (Assessment and Management of Flood Risks) Regulations 2010 and 2015*

## Purpose of this Report

As part of the National Catchment-based Flood Risk Assessment & Management (CFRAM) programme, the Commissioners of Public Works have commissioned expert consultants to prepare Strategic Environmental Assessments, Appropriate Assessment Screening Reports and, where deemed necessary by the Commissioners of Public Works, Natura Impacts Assessments, associated with the national suite of Flood Risk Management Plans.

This is necessary to meet the requirements of both S.I. No. 435 of 2004 European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (as amended by S.I. No. 200/2011), and S.I. No. 477/2011 European Communities (Birds and Natural Habitats) Regulations 2011.

Expert Consultants have prepared these Reports on behalf of the Commissioners of Public Works to inform the Commissioners' determination as to whether the Plans are likely to have significant effects on the environment and whether an Appropriate Assessment of a plan or project is required and, if required, whether or not the plans shall adversely affect the integrity of any European site.

The Report contained in this document is specific to the Flood Risk Management Plan as indicated on the front cover.

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## Acknowledgements

The Office of Public Works (OPW) gratefully acknowledges the assistance, input and provision of data by a large number of organisations towards the implementation of the National CFRAM Programme. In particular, the OPW acknowledges the assistance of JBA Consulting Engineers and the valuable input and support of the Local Authorities at project level in each of the study areas.

The OPW also acknowledges the participation of members of the public, representative organisations and other groups throughout each stage of consultation.

# Flood Risk Management Plan

The various documents and maps that make up the Plan are as follows:

- Flood Risk Management Plan (Volume I)
- **SEA Environmental Report and the Natural Impact Statement (Volume II)**
  - SEA Environmental Report including Non-Technical Summary (Volume IIa)
  - Natura Impact Statement (Volume IIa – Appendix B)
  - Addendum to the Environmental Report (Volume IIb)
  - **SEA Statement (Volume IIc) – this report**

## JBA Consulting

24 Grove Island  
Corbally  
Limerick  
Ireland

## JBA Project Manager

Tom Sampson BSc MSc CEnv MCIWEM C.WEM

## Revision History

Revision Ref / Date Issued	Amendments	Issued to
Version 1.0 / 27/07/2017	First Issue	John Martin, OPW
Version 2.0 / 04/08/2017	Minor updates. Final Report for issue to DEPR for adoption of the plan.	John Martin, Paul Stewart, OPW
Version 3.0 13/10/2017	Minor updates. Final Report.	John Martin, Paul Stewart, OPW

## Contract

This report describes work commissioned by The Office of Public Works, by a letter dated (28/07/11). The Office of Public Works' representative for the contract was Clare Butler. Tom Sampson, Declan Egan and Catalina Herrera of JBA Consulting carried out this work.

Prepared by ..... Catalina Herrera BSc MSc  
Environmental Scientist

Reviewed by ..... Tom Sampson BSc MSc FRGS C.WEM MCIWEM  
Chartered Senior Analyst

## Purpose

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JBA is aiming to reduce its per capita carbon emissions.

## Acknowledgements

The Office of Public Works (OPW) gratefully acknowledges the assistance, input and provision of data by a large number of organisations towards the implementation of the National CFRAM Programme and the preparation of this Draft Flood Risk Management Plan, including:

- JBA Consulting Engineers and Scientists Ltd
- Sligo County Council
- Leitrim County Council
- The Environmental Protection Agency
- Met Éireann
- All members of the National CFRAM Steering and Stakeholder Groups

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## Glossary and Acronyms

Annual Exceedance Probability Or AEP	The probability, typically expressed as a percentage, of a flood event of a given magnitude being equalled or exceeded in any given year. For example, a 1% AEP flood event has a 1%, or 1 in a 100, chance of occurring or being exceeded in any given year.
Appropriate Assessment	An assessment of the potential impacts of a plan (such as an FRMP) or project on the integrity of a site designated as a Natura 2000 Site, as required under the Habitats Directive.
Area for Further Assessment Or AFA	Areas where, based on the Preliminary Flood Risk Assessment, the risks associated with flooding are considered to be potentially significant. For these areas further, more detailed assessment is required to determine the degree of flood risk, and develop measures to manage and reduce the flood risk. The AFAs are the focus of the CFRAM Studies.
Arterial Drainage Scheme	Works undertaken under the Arterial Drainage Act (1945) to improve the drainage of land. Such works were undertaken, and are maintained on an ongoing basis, by the OPW.
Benefiting Lands	Lands benefiting from an Arterial Drainage Scheme.
Catchment	The area of land draining to a particular point on a river or drainage system, such as an Area for Further Assessment (AFA) or the outfall of a river to the sea.
Catchment Flood Risk Assessment and Management Study Or CFRAM Study	A study to assess and map the flood hazard and risk, both existing and potential future, from fluvial and coastal waters, and to define objectives for the management of the identified risks and prepare a FRMP setting out a prioritised set of measures aimed at meeting the defined objectives.
Communities	Cities, towns, villages or townlands where there is a collection of homes, businesses and other properties.
Consequences	The impacts of flooding, which may be direct (e.g., physical injury or damage to a property or monument), a disruption (e.g., loss of electricity supply or blockage of a road) or indirect (e.g., stress for affected people or loss of business for affected commerce)
Drainage	Works to remove or facilitate the removal of surface or sub-surface water, e.g., from roads and urban areas through urban storm-water drainage systems, or from land through drainage channels or watercourses that have been deepened or increased in capacity.
Drainage District	Works across a specified area undertaken under the Drainage Acts to facilitate land drainage
Flood	The temporary covering by water of land that is not normally covered by water.
'Floods' Directive	The EU 'Floods' Directive [2007/60/EC] is the Directive that came into force in November 2007 requiring Member States to undertake a PFRA to identify Areas for Further Assessment (AFAs), and then to prepare flood maps and FRMPs for these areas.
Flood Extent	The extent of land that has been, or might be, flooded. Flood extent is often represented on a flood map.
Flood Hazard Map	A map indicating areas of land that may be prone to flooding, referred to as a flood extent map, or a map indicating the depth, velocity or other aspect of flooding or flood waters for a given flood event. Flood hazard maps are typically prepared for either a past event or for (a) potential future flood event(s) of a given probability.
Flood Risk Map	A map showing the potential risks associated with flooding. These maps may indicate a particular aspect of risk, taking into account the probability of flooding (e.g., annual average economic damages), but can also show the various receptors that could be affected by floods of different probabilities.
Flood Risk Management Plan (FRMP)	A Plan setting out a prioritised set of measures within a long-term sustainable strategy aimed at achieving defined flood risk management objectives. The FRMP is developed at a catchment or Unit of Management scale, but is focused on managing risk within



	the AFAs.
Floodplain	The area of land adjacent to a river or coastal reach that is prone to periodic flooding from that river or the sea.
Fluvial	Riverine, often used in the context of fluvial flooding, i.e., flooding from rivers, streams, etc.
Habitats Directive	The Habitats Directive [92/43/EEC] aims at securing biodiversity through the provision of protection for animal and plant species and habitat types of European importance.
Hazard	Something that can cause harm or detrimental consequences. In this context, the hazard referred to is flooding.
Hydraulics	The science of the behaviour of fluids, often used in this context in relation to estimating the conveyance of flood water in river channels or structures (such as culverts) or overland to determine flood levels or extents.
Hydrology	The science of the natural water cycle, often used in this context in relation to estimating the rate and volume of rainfall flowing off the land and of flood flows in rivers.
Hydrometric Area	Hydrological divisions of land, generally large catchments or a conglomeration of small catchments, and associated coastal areas. There are 40 Hydrometric Areas in the island of Ireland.
Indicative	This term is typically used to refer to the flood maps developed under the PFRA. The maps developed are approximate, rather than highly detailed, with some local anomalies.
Individual Risk Receptor Or IRR	A single receptor (see below) that has been determined to represent a potentially significant flood risk (as opposed to a community or other area at potentially significant flood risk AFA).
Inundation	Another word for flooding or a flood (see 'Flood')
Measure	A measure (when used in the context of a flood risk management measure) is a set of works, structural and / or non-structural, aimed at reducing or managing flood risk.
National CFRAM Programme	The programme developed by the OPW to implement key aspects of the EU 'Floods' Directive in Ireland, which includes the CFRAM Studies, and builds on the findings of the PFRA.
Pluvial	Refers to rainfall, often used in the context of pluvial flooding, i.e., flooding caused directly from heavy rainfall events (rather than over-flowing rivers).
Point Receptor	Something that might suffer harm or damage as a result of a flood, that is at a particular location that does not cover a large area, such as a house, office, monument, hospital, etc.
Possible Area for Further Assessment	The Possible AFAs are those identified through the draft PFRA where some flood risk has been identified but which, subject to the outcomes of public consultation and the Flood Risk Review, are not anticipated to be designated as AFAs.
Preliminary Flood Risk Assessment Or PFRA	An initial, high-level screening of flood risk at the national level to determine where the risks associated with flooding are potentially significant, and hence identify the AFAs. The PFRA is the first step required under the EU 'Floods' Directive.
Probable Area for Further Assessment	The Probable AFAs are those identified through the draft PFRA where significant flood risk has been identified and which, subject to the outcomes of public consultation and the Flood Risk Review, are anticipated to be designated as AFAs.
Receptor	Something that might suffer harm or damage as a result of a flood, such as a house, office, monument, hospital, agricultural land or environmentally designated sites.
Return Period	A term that was used to describe the probability of a flood event, expressed as the interval in the number of years that, on average over a long period of time, a certain magnitude of flood would be expected to occur. This term has been replaced by 'Annual Exceedance Probability, as Return Period can be misleading.

Riparian	River bank. Often used to describe the area on or near a river bank that supports certain vegetation suited to that environment (Riparian Zone).
Risk	The combination of the probability of flooding, and the consequences of a flood.
River Basin District Or RBD	A hydrological division of land defined for the purposes of the Water Framework Directive. There are eight RBDs in the island of Ireland
Riverine	Related to a river
Runoff	The flow of water over or through the land to a waterbody (e.g., stream, river or lake) resulting from rainfall events. This may be overland, or through the soil where water infiltrates into the ground.
Sedimentation	The accumulation of particles (of soil, sand, clay, peat, etc.) in the river channel
Significant Risk	Flood risk that is of particular concern nationally. The PFRA Main Report (see <a href="http://www.cfram.ie">www.cfram.ie</a> ) sets out how significant risk is determined for the PFRA, and hence how Areas for Further Assessment have been identified.
Strategic Environmental Assessment Or SEA	An SEA is an environmental assessment of plans (such as the FRMPs) and programmes to ensure a high level consideration of environmental issues in the plan preparation and adoption, and is a requirement provided for under the SEA directive [2001/42/EC]
Surface Water	Water on the surface of the land. Often used to refer to ponding of rainfall unable to drain away or infiltrate into the soil.
Surge	The phenomenon of high sea levels due to meteorological conditions, such as low pressure or high winds, as opposed to the normal tidal cycles
Survey Management Project	A project commissioned by the OPW in advance of the CFRAM Studies to specify and manage a large proportion of the survey work.
Sustainability	The capacity to endure. Often used in an environmental context or in relation to climate change, but with reference to actions people and society may take.
Tidal	Related to the tides of the sea / oceans, often used in the context of tidal flooding, i.e., flooding caused from high sea or estuarine levels.
Topography	The shape of the land, e.g., where land rises or is flat.
Transitional Water	The estuarine or inter-tidal reach of a river, where the water is influenced by both freshwater river flow and saltwater from the sea.
Unit of Management Or UoM	A hydrological division of land defined for the purposes of the Floods Directive. One FRMP will be prepared for each UoM.
Vulnerability	The potential degree of damage to a receptor (see above), and the degree of consequences that would arise from such damage.
Waterbody	A term used in the Water Framework Directive (see below) to describe discrete section of rivers, lakes, estuaries, the sea, groundwater and other bodies of water.
Water Framework Directive	The Water Framework Directive [2000/60/EC] aims to protect surface, transitional, coastal and ground waters to protect and enhance the aquatic environment and ecosystems and promote sustainable use of water resources

# List of Acronyms

AA	Appropriate Assessment
ACA	Architectural Conservation Area
AEP	Annual Exceedance Probability
AFA	Area for Further Assessment
AMAX	Annual Maximum Flow Record
AR5	5th Assessment Report (IPCC)
BCR	Benefit - Cost Ratio
CEMP	Construction Environment Management Plan
CFRAM	Catchment-Based Flood Risk Assessment and Management
DECLG	Department of Environment, Community and Local Government
DHPLG	Department of Housing, Planning and Local Government (Formerly DECLG)
EEA	European Environment Agency
EIA	Environmental Impact Assessment
EPA	Environmental Protection Agency
ESB	Electricity Supply Board
EU	European Union
FSR	Flood Studies Report
FRMP	Flood Risk Management Plan
FRR	Flood Risk Review
FSU	Flood Studies Update
GSI	Geological Survey Ireland
HEFS	High-End Future Scenario
HPW	High Priority Watercourse
ICPSS	Irish Coastal Protection Strategy Study
IFA	Irish Farmers Association
IFI	Inland Fisheries Ireland
INFF	Irish National Flood Forum
IPCC	Intergovernmental Panel on Climate Change
IROPI	Imperative Reasons of Overriding Public Interest
IRR	Individual Risk Receptor
LAP	Local Area Plan
LULC	Land Use and Land Cover
MCA	Multi-Criteria Analysis

MPW	Medium Priority Watercourse
MRFS	Mid-Range Future Scenario
NCCAF	National Climate Change Adaptation Framework
NFM	Natural Flood Management
NHA	Natural Heritage Area
NI	Northern Ireland
NIAH	National Inventory of Architectural Heritage
NIG	National Implementation Group
NPWS	National Parks and Wildlife Service
OPW	Office of Public Works
PCD	Public Consultation day
POR	Preliminary options report
PPP	Purchase price parity
PVd	Present Value Damages
PFRA	Preliminary Flood Risk Assessment
PLP	Property Level Protection
RBD	River Basin District
RBMP	River Basin Management Plan
RPG	Regional Planning Group
SAAR	Standard Average Annual Rainfall
SAC	Special Area of Conservation
SEA	Strategic Environmental Assessment
SFRA	Strategic Flood Risk Assessment
SI	Statutory Instrument
SPA	Special Protection Area
SUDS	Sustainable Urban Drainage System
UoM	Unit of Management
WFD	Water Framework Directive
WMU	Water Management Unit
WTW	Water Treatment Works
WWTW	Waste Water Treatment Works
ZAP	Zones of Archaeological Potential

# 1 Introduction

This is the Strategic Environmental Assessment Statement (SEA Statement), which forms the last stage of the SEA process, for the Flood Risk Management Plan (FRMP) of the Sligo Bay Drowes Unit of Management (UoM 35).

The SEA Statement has been prepared by JBA Consulting Engineers and Scientists Ltd. Grove Island, Corbally, Co. Limerick. JBA Consulting Engineers and Scientists Ltd. will be referred to hereafter as JBA in this report.

## 1.1 Structure of the Plan

The structure of the Plan is set out below:

<b>VOLUME I</b>	<b>Flood Risk Management Plan</b>
<b>VOLUME II</b>	<b>SEA Environmental Report and the Natural Impact Statement (Volume II)</b>
	SEA Environmental Report including Non-Technical Summary (Volume IIa)
	Natura Impact Statement (Volume IIa – Appendix B)
	Addendum to the Environmental Report (Volume IIb)
	<b>SEA Statement (Volume IIc) – this report</b>

## 1.2 SEA Definition and Role

The SEA is a formal, systematic evaluation process for predicting, assessing and mitigating, the likely significant environmental effects of implementing a national, regional plan or programme prior to it being adopted. The SEA process allows for the public and/or interested stakeholders, to comment and to be kept informed of the decisions, progress, and evolution of the strategic plan/programme, in accordance with the Aarhus Convention. It facilitates the integration of environmental considerations into environmental decision-making at an early stage.

## 1.3 Legislation and Guidelines

The SEA process is a requirement of European law. The EU enacted the Strategic Environmental Assessment (SEA) Directive under Council Directive 2011/42/EC on the 'Assessment of the Effects of Certain Plans and Programmes on the Environment'. The purpose of the Directive is to undertake an environmental assessment to assess the likely significant impacts of the plan or programme on the environment before it is adopted. The Directive was transposed into Irish legislation under S.I. No. 435 of 2004 - the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations, 2004 and S.I. No. 436 of 2004 the Planning and Development (Strategic Environmental Assessment) Regulations. These statutory instruments were amended under S.I. No. 200 of 2011 and S.I. No. 201 of 2011 respectively.

An SEA is required for the Western CFRAM Sligo Bay Drowes Unit of Management (UoM 35). Flood Risk Management Plan.

A number of governmental departments have prepared guidance documents to assist SEA practitioners in interpreting the requirements of the SEA Directive and their associated Regulations. The key guidance documents are:

- Department of Environment, Heritage and Local Government 2004: Implementation of SEA Directive: Assessment of the Effects of Certain Plans and Programmes on the Environment. Guidelines for Regional Authorities and Planning Authorities (2004)
- Environmental Protection Agency: SEA Pack (2008)
- Environmental Protection Agency: Consultation Draft of the GISEA Manual (2009).

## 1.4 SEA Statement

The SEA process is being conducted in compliance with national legislation and guidelines to ensure an environmentally robust flood risk management plan, which includes a programme of measures, for the Western River Basin District (as defined under the 1<sup>st</sup> cycle of the River Basin Management Plans in Ireland).

The purpose of this SEA Statement is to:

- Demonstrate how environmental considerations have been integrated into the Plan;
- Demonstrate how the opinions expressed by interested stakeholders and the public have been considered in the Plan;
- States the reasons for choosing the plan measures in light of the reasonable alternatives considered;
- Identify the mitigation measures that will be put in place to reduce/remedy any significant environmental impacts associated with the Plan;
- Identify the measures to be taken to monitor any significant effects of implementing the Plan.

For a comprehensive understanding of the environmental aspects of the Plan, the associated Environmental Report and Addendum to the Environmental Report should be consulted. The Environmental Report presents an in-depth baseline assessment for all environmental aspects within the River Basin and also includes a Non-Technical Summary.

In response to consultation submissions, the OPW has changed some terminology used in the draft plans. “River Basin” replaces “Unit of Management (UoM)”, and “the Plan” replaces “FRMP”. The terminology has not been changed in the Non-Technical Summary or the Environmental Report, but all other reports use the latest terms.

### 1.4.1 SEA Process in compliance with necessary requirement

The Directive requires that certain information pertaining to the Plan be made available after the decision-making stage has been completed in order to inform stakeholders, statutory bodies, and the public that the SEA process followed the necessary requirements. Table 1 2 below responds to four criterion for an SEA Statement outlined in the EPA’s SEA Pack, Output 4: SEA Statement (page 28).

**Table 1-1. Requirement of SEA Directives EU Council Directive 2001/42/EC and the Irish Regulations (S.I. No. 200 of 2011) to complete the Strategic Environmental Report**

The information to be provided under Article 5(1), subject to Article 5 (2), subject to Article 5 (3), is the following:	Section of SEA Environmental Report/SEA Addendum
(a) an outline of the contents, main objectives of the plan or programme and relationship with other relevant plans and programmes;	Section 4.0: Flood Risk Management Plan for UoM 29  Section 6.0: Interaction with Plans, Programmes, Policies
(b) the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme;	Section 7.0: Current Environmental Status within UoM 29  Section 10: Assessment of the recommendation within the FRMP for UoM 29
(c) the environmental characteristics of areas likely to be significantly affected;	Section 7.0: Current Environmental Status within UoM 29

The information to be provided under Article 5(1), subject to Article 5 (2), subject to Article 5 (3), is the following:	Section of SEA Environmental Report/SEA Addendum
(d) any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC;	Section 10: Assessment of the recommendation within the FRMP for UoM 29  VOLUME IIa Appendix B – Natura Impact Statement  VOLUME IIb – SEA Environmental Report Addendum
(e) the environmental protection objectives, established at international, Community or Member State level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation;	Section 9.0. SEA Environmental Objectives
(f) the likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors;	Section 10: Assessment of the recommendation within the FRMP for UoM 29
(g) the measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme;	Section 11: Recommended Mitigation Measures  VOLUME IIa Appendix B – Natura Impact Statement  VOLUME IIb – SEA Environmental Report Addendum
(h) an outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information;	Section 11: Alternatives Considered
(i) a description of the measures envisaged concerning monitoring in accordance with Article 10;	Section 13: Conclusions and Recommendations  (Section 13.3: Monitoring and Plan Review)
(j) a non-technical summary of the information provided under the above headings.	VOLUME II SEA Environmental Report and the Natura Impact Statement  VOLUME IIa – Non-Technical Summary
Habitats Directive Assessment	VOLUME II SEA Environmental Report and the Natura Impact Statement  VOLUME IIa Appendix B – Natura Impact Statement

## **2 Summary of how environmental considerations have been integrated into the Flood Risk Management Plan**

### **2.1 Introduction**

The Plans have integrated environmental considerations into the assessment of flood risk, setting environmental objectives and assessing the selected measures. Environmental considerations have been taken into account throughout preparation of the Plan, as follows:

- Plan preparation - The Plan is focussed on providing a framework with regards to flood risk management. Environmental receptors (including ecological, social, cultural and economic) have been a key consideration in its development.
- SEA - Through the SEA process objectives, targets and indicators were identified to describe and monitor change and predict impacts of the proposed Plan on the environment.
- Natural Impact Statement (NIS) – Natura 2000 sites, designated under the EU Birds Directive (2009/147/EC) and Habitats Directive (92/43/EEC), are located within the zone of influence of the proposed Plan, for that reason an appropriate assessment (AA) process at a plan level in accordance with Article 6(3) of the Habitats Directive.
- Stakeholder Consultation - at all relevant stages of the Strategy preparation, consultation has been undertaken with statutory consultees, relevant stakeholders, and also the general public. The comments raised have been taken into account in the SEA process and the development of the Plan.

### **2.2 Strategic Environmental Assessment**

S.I. No. 435 of 2004 the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations, 2004 (amended 2011) required an SEA to be carried out in respect to the Plan. The primary role of the SEA during the preparation of the plan was to consider the potential impact (s) from the Plan, assess already existing plans and programmes and consider them in combination with the Plan. Most importantly to influence mitigation and monitoring measures proposed by the Plan to prevent or moderate any potential significant adverse impact on the environment. The SEA also ensured that there was sufficient scope for considering the potential effects of proposed measures in greater detail at project level.

The findings of the SEA assessment in relation to the Plan were presented in an Environmental Report which were submitted to the various consultees and the public in conjunction with the Plan. The purpose of the Environmental Report was to inform the statutory bodies, stakeholders and the public of the likely environmental impacts of implementing the Plan.

Changes made to the Plan were evaluated and the draft Environmental Report was updated to produce an SEA Environmental Report Addendum. The Natura Impact Statement has also been updated accordingly.

Since the SEA was a statutory requirement, there was no need for the Screening the Plan.

The SEA process can be categorised in a number of stages as summarised in Figure 2-1..



**Figure 2-1. Overview of SEA Process for the Plan**



The SEA Process can be categorised in a number of stages as summarised in Table 2-1.

**Table 2-1. Summary of Strategic Environmental Assessment**

Stage	Description
Screening	Since the SEA was a statutory requirement of the plan, there was no requirement for screening.
Scoping	Scoping was conducted to determine the baseline environmental conditions and issues to be considered further in the Environmental Report. Submissions received from Environmental Authorities have been incorporated into the Environmental Report.
Consultation with statutory authorities, relevant stakeholders, and the public	A draft Scoping Report was sent to the Environmental Authorities and they were given a consultation period to make submissions and observations. Public Consultation Days were also conducted where the draft scoping report was an item for discussion.
CFRAM objectives	A set of Flood Risk Management Objectives was developed and applied through the Pilot CFRAM Studies, with stakeholder consultation to ensure the Objectives set were appropriate. In commencing the National CFRAM Programme, the Objectives developed for the Pilot Studies were reviewed and refined. The OPW considered it appropriate to publicly consult on the proposed Objectives, and launched a public consultation in October 2014. Seventy one submissions were received which informed amendments then made to define the final Objectives.
Preparation of Environmental Report for the Plan including: <ul style="list-style-type: none"> <li>- Environmental Baseline Data</li> <li>- Environmental Objectives</li> <li>- Development Plan Objectives and zoning assessment</li> <li>- Consultation with statutory consultees</li> <li>- Assessment of Alternative</li> <li>- Mitigation measures identified</li> <li>- Monitoring measures identifies</li> </ul>	<p>A multi-disciplinary team was established to create policy consistent with documents and to examine the effects on the environment from the implementation of the Plan.</p> <p>The SEA process and team was fully integrated in the initial screening of flood risk management methods and Multi-Criteria Analysis (MCA) of potentially viable flood relief works.</p> <p>Potential impact(s) on the environments were identified.</p> <p>Assessment of cumulative effects of options</p> <p>Alternatives to the Plan were considered and examined.</p> <p>Mitigation measures were proposed, discussed and selected.</p> <p>Monitoring framework proposed.</p>
Consultation on the Environmental Report	The draft Environmental Report was sent to Statutory Consultees and relevant stakeholders, as well as made available to the public and they were given a consultation period (5-weeks) to make submissions.
Strategic Environmental Assessment (SEA) Statement (Current Stage in the process)	An outline of how environmental considerations are integrated into the Plan; how the Environmental Report, the opinions of the public and statutory authorities and the results of trans-boundary consultations are taken into account, and the reasons for choosing the Plan as adopted in the light of other reasonable alternatives.

Stage	Description
Monitoring the Plan	Monitoring environmental effects over the lifetime of the Plan

## 2.3 Interaction between the Plan, SEA and Appropriate Assessment Processes

The Plan has been the subject of a Strategic Environmental Assessment (SEA) and an Appropriate Assessment (AA) to meet the requirements of the Irish Regulations transposing the EU SEA and Habitats Directive respectively.

Legislation and guidance relating to SEA recommends that the process of plan preparation, SEA and AA should be integrated and prepared in an iterative process to facilitate the ongoing assessment and evaluation of environmental consideration during the plan preparation.

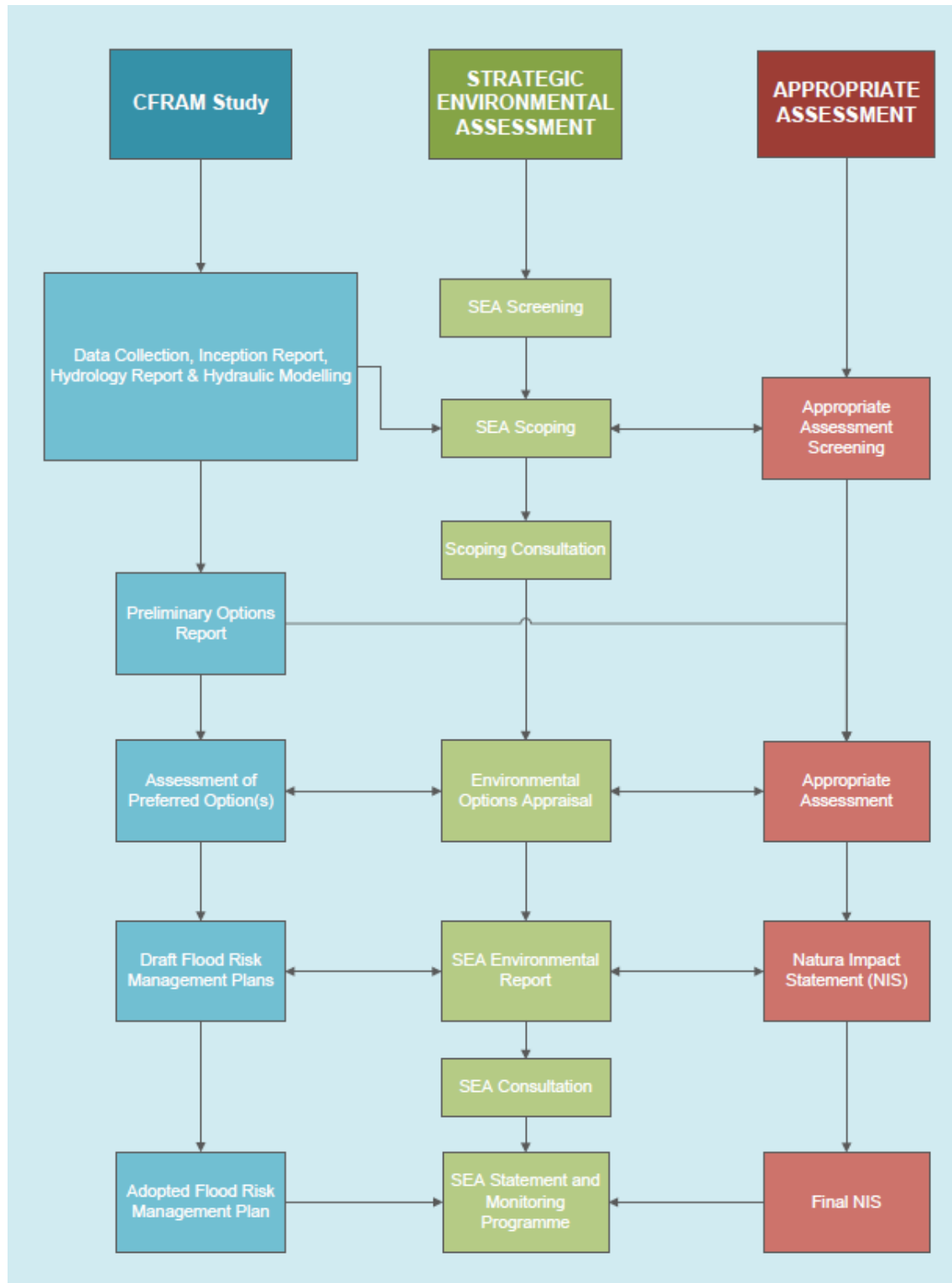
The Draft Plan issued for consultation was accompanied by an SEA Environmental Report (Vol. II), which documented the SEA process. A Natura Impact Statement (Vol. II) also accompanied the Plan, to set out the potential impacts of possible measures on Natura 2000 sites (core breeding and resting sites for rare and threatened species, or sites for some rare natural habitat types) .

Figure 2-2 shows the interactions between the stages of the CFRAM Study, the SEA and AA processes.

Following consideration of observations made in response to the public consultation on the Draft Plan, including comments received on the SEA Environmental Report and the Natura Impact Statement, the final Plan has been prepared. The Plan has been published with a SEA Conclusion Statement, which documents changes made to the Plan and its overall effects, and an Appropriate Assessment Conclusion Statement.

Environmental considerations and consultation with statutory bodies, stakeholders and the general public has been essential to the development of the Plan. It was important to meet statutory requirement for consultation with relevant parties but also ensure that the views of the general public were taken into consideration throughout the process.

**Figure 2-2. Diagram displaying the interactions between the stages of the CFRAM Study, the SEA and AA processes**



### **3 Summary of how the SEA Report and the submissions received from stakeholders have been taken into account**

#### **3.1 Introduction**

The Plan in conjunction with the SEA Environmental Report and Natura Impact Statement was made available to the public, statutory consultees and other interested parties as part consultation process. These views were taken into account and amendments were made to the final strategy document, where necessary. The SEA Environmental Report Addendum (Volume IIb) document any further assessment or updates to the proposed mitigation measures or monitoring in response to updates to the Plan following the consultation process..

At the appropriate stages during the SEA the relevant statutory consultees have been consulted and their comments incorporated into the strategies development.

#### **3.2 Consultation Process**

##### **3.2.1 Overview**

Public and stakeholder engagement is a critical component to the process of developing a sustainable, long-term Plan. This engagement is necessary to ensure measures are suitable and appropriate, as well as technically effective.

##### **3.2.2 SEA Public and Stakeholder Consultation and Engagement**

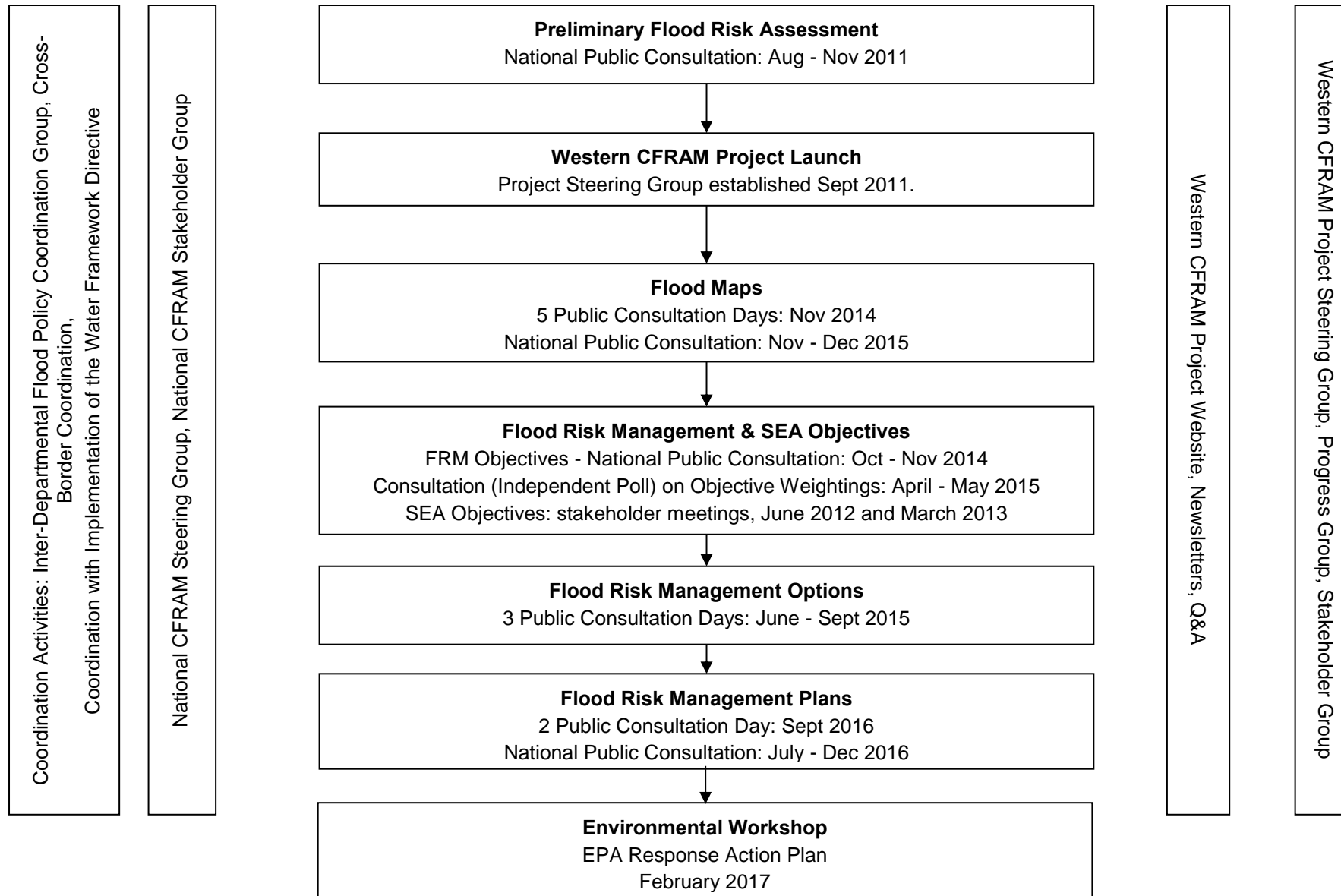
The involvement of external parties (both stakeholders and the general public) has been essential for the development of the Plan and accompanying SEA. It has been crucial to meet the statutory requirements for consultation with relevant parties, as well as, ensuring that the opinion, comments and suggestions of the general public, stakeholders, and statutory bodies were taken into account throughout the process. Legislation and guidance relating to SEA recommends that the process of plan preparation, SEA and Appropriate Assessment (AA) should be integrated and prepared in an iterative process to facilitate the ongoing assessment and evaluation of environmental considerations during plan preparation.

The new amending SEA Regulations S.I No 200 of 2011 and S.I No. 201 of 2011 outline the statutory Environmental Authorities which were consulted as part of the SEA process:

- a) Environmental Protection Agency (EPA);
- b) Ministry of Housing, Planning, Community and Local Government Ministry of Agriculture, Food, and the Marine and/or the Ministry of Communications, Climate Actions & Environment;
- c) Department of Arts, Heritage, Regional, Rural, and Gaeltacht Affairs (DAHRRGA);
- d) Any adjoining planning authority whose area is continuous to the area prepared a draft plan, proposed variation or local area plan.

Figure 3-1 is an overview of the CFRAM stages, which further demonstrates how the SEA process has been integrated throughout the lifetime of the plan preparation. The nature of the SEA process is such that the Plan is informed by environmental considerations throughout the preparation and development of the Plan objectives. The Natura Impact Statement (NIS) is a separate document to the Environmental Report both which accompany the Plan.

Figure 3-1. Overview of the CFRAM Stages and Structures



### 3.3 Key Issues raised in the SEA Report with Mitigation

The SEA Environmental Report presented an in-depth assessment of the Plan's objectives to identify aspects of the Plan that may require revising, as a result of potential significant environmental effects. A summary of the environmental constraints, issues and opportunities is presented below in Table 3-1.

**Table 3-1. Summary of potential impacts of Plan on Environmental Receptors**

Environmental Receptor	Potential Impact of Plan on Environmental Receptor
<b>Humans.</b>	<ul style="list-style-type: none"> <li>• The implementation of the Plan will have a positive impact on the inhabitants in the area. The assessment found that the level of flood risk will be reduced and will provide for a better quality of life for the inhabitants.</li> <li>• The measures proposed will not totally eliminate flood risk to a number of inhabitants in Sligo, but they will significantly reduce the flood risk. Consequently, a minor negative impact has been assigned to the economic risk and the risk to human life and local employment/tourism.</li> <li>• Some of the measures of the Plan recommend Individual Property Protection. This would have a positive impact on the residents who inhabit properties that are at risk of flooding.</li> <li>• Channel maintenance activities will continue to provide a long term positive impact for human health, residents and properties.</li> <li>• Measures such as flood forecasting systems, minor scheme works and land use management etc. will provide a long term positive impact for the people and economy of an area.</li> </ul>
<b>Material Assets</b>	<ul style="list-style-type: none"> <li>• Water infrastructure and the associated demand for abstraction and discharges of waste water will require upgrading or replacement. The continued increase in population is likely to lead to a bigger demand for amenity, tourism and recreation resources, both formal and informal.</li> <li>• The region's water resources are likely to be important features in this process offering prospects for more informal recreation and potential formal development. Securing and improving water quality will be very import.</li> <li>• Precautions (ie: flood risk assessments) should be taken to ensure new developments and housing units are not established in floodplains or areas of high flood risk, especially if located in low-lying zones.</li> </ul> <p>The implementation of the plan would have a positive impact on these material assets. There are a number of vulnerable receptors (e.g. hospitals, nursing homes, health centres, licenced facilities) located in lowland areas that could be potentially at flood risk.</p>
<b>Agricultural land</b>	<ul style="list-style-type: none"> <li>• Some agricultural land will benefit from the measures while some land designated as Natural Flood Management will be more liable to flooding.</li> <li>• The overall impacts will be mainly on yield and potential land use.</li> </ul>

Environmental Receptor	Potential Impact of Plan on Environmental Receptor
	<ul style="list-style-type: none"> <li>The short term storage of water in low lying land may increase the suspended solids, nitrates and organic loading of the flood water. This floodwater would place an additional loading on the riverine systems to which it discharges. Indirectly the flood water may impact on the in-river inhabitants such as fish. The full impacts of any of these measures will be determined when the investigations into land use management and natural flood risk management is completed.</li> </ul>
<b>Water quality.</b>	<ul style="list-style-type: none"> <li>The recommended measures do not involve the construction of flood defences in rivers or along coasts. Consequently, there will be no significant impact on water quality.</li> <li>Channel maintenance activities may have an impact on water quality. This will have wider implications on the species that the river can support and may conflict with the biological regime in these waterbodies.</li> <li>Impacts on the water quality in this river may put a water body at risk of not achieving good water quality status as per the requirements of the Water Framework Directive. Similarly run off from storage lands may increase the suspended solids and organic loading to a water body.</li> </ul>
<b>Visual Impacts.</b>	<ul style="list-style-type: none"> <li>No significant visual impacts on landscape will arise.</li> </ul>
<b>Cultural Heritage/Archaeology</b>	<ul style="list-style-type: none"> <li>No impacts on cultural heritage/archaeology will arise due to the recommendations of the Plan.</li> <li>A full archaeological desktop assessment will be required prior to any work that will involve breaking ground. The impacts will be determined at this stage.</li> </ul>
<b>Ecology.</b>	<ul style="list-style-type: none"> <li>Channel maintenance works have the potential to impact on the ecology of the channels they maintain. The impacts of noise/activity/lighting during the maintenance may impact on sensitive species such as otter and birds.</li> </ul>

Projects stemming from the Plan will apply a range of measures that will mitigate potential environmental impacts. While the applicability of processes and particular measures will be dependent on the nature and scale of each project, examples of typical processes and measures that will be implemented where applicable at the different stages of project implementation are set out below.

- **Project Mitigation-Consenting Process:** As set out in Section B.8 of the Plan, the consenting process for the progression of measures involving physical works will require the applicable environmental assessments. Also, the consenting authorities may set out specific environmental conditions as part of the project approval.
- **Project Mitigation-Pre-Construction / Detailed Design:** For the detailed design of projects, where options are available, the design uses a hierarchy to mitigation measures along the following principles: avoid creating the potential impact where feasible; minimise the potential impact through mitigating measures; Enhance the environment to better than pre-project conditions, where reasonably possible
- **Project Mitigation-Construction Stage:** For large and complex projects and sites, where environmental management may entail multiple aspects, a project specific Construction Environmental Management Plan (CEMP) may be developed. This will form a framework for all environmental management processes, mitigation measures and monitoring and will include other environmental requirements such as invasive

species management measures, if applicable. A designated environmental officer, project ecologist and project archaeologist will be appointed, as appropriate for the project.

The integration of the SEA process and the preparation of the Plan has ensured that:

- Environment, social and economics were considered at all stages of the process
- Environmental constraints were identified at the early stages in the process and screened out a number of flood risk management measures and options
- The preferred measures have been selected based on a number of assessments
- Public consultation and stakeholder consultation was undertaken throughout the preparation of this Plan.

### **3.4 Submissions Received and response**

In accordance with the Aarhus Convention, the public and other interested stakeholders were involved in the decision making for the Plan, SEA, and AA, Appendix A summarises the submissions and actions in response to them. In addition, an overall consultation synthesis reports will include a nationwide account of all submission and actions/responses, as well as, all Local Authorities will receive a specific response on how their consultation have been addressed.

In response to the issues raised in the SEA Report and consultation submissions by national stakeholders, statutory authorities, and the general public, a consistent set of recommended mitigation measures have been developed nationally, these are outlined in the SEA Environmental Addendum.



## 4 Reasons for choosing the Flood Risk Management Plan as adopted, in the light of other reasonable alternatives

### 4.1 Introduction

The development of the Plan included the consideration of a range of flood management measures at different spatial scales within the Plan. Through the process of preparing the draft Plan alternative flood management methods were considered at the different spatial scales. In accordance with the Aarhus Convention a number of consultations about the alternatives were undertaken with the statutory consultees, stakeholders and the public. The alternatives to be considered must be cognisant of the objectives and geographic scale of the plan and realistic alternatives that are viable and achievable.

### 4.2 Summary of the Alternatives Considered

The following sections of this report describes the alternatives considered at the spatial scale and the types of measures considered.

- **Alternatives at a Spatial Scale (catchment, sub-catchment, AFA level):**
  - The measures which apply everywhere are a continuation of existing duties and so no alternatives are proposed on that.
  - The assessment identified that flood risk management at a catchment level and/ or AFA level could be controlled by a number of non-structural measures.
    - a) Planning Policy Requirements
    - b) Flood Forecasting and Warning Systems
    - c) Sustainable Urban Drainage systems (SUDs)
    - d) Land Use Management
    - e) Measures implemented under other legislation
    - f) Requirements for additional monitoring (rain and river level / flow gauges)
    - g) Provision of flood defence walls maintenance.
  - The AFA measures are the potentially viable flood relief works. These are all subject to project level development and so alternatives to delivering the project objectives for these measures (which are not yet defined) will be fully considered at the project development stage.

At present the legislative and financial frameworks or technical details are not yet in place to bring forward the implementation of some of the non-structural measures such as natural flood management, property relocation and individual property protection. As such, bringing these measures forward is not an alternative to the Plan.

- **Do Nothing Scenario:** The impacts of the 'do nothing' alternative would be neutral for all of the environmental objectives but would have a long term negative impact on humans and local economy particularly in the AFAs liable to flooding.

### 4.3 Reasons for choosing the Plan in light of the alternatives considered

The 'Do Nothing' alternative means that the status quo would remain and no Plan would be adapted. Certain controls would remain in place for example the Governments Guidelines on Planning and Flood Risk. The current Sligo Borough Development Plans, the Sligo County Development and the Leitrim County Development Plan has objectives dealing with spatial planning in flood risk areas, adaptation to climate change etc. The Department of the Environment's requirements for Local Authorities to prepare climate change adaptation plans would, at a minimum, ensure that future flood levels would be considered in future planning. The

impacts of the 'do nothing' alternative would be neutral for all of the environmental objectives but would have a long term negative impact on humans and local economy particularly in the AFAs liable to flooding.

discussed above.

## 5 Measures decided concerning monitoring

### 5.1 Introduction

A monitoring programme allows the actual impacts of the Programme to be tested against those that were predicted. It allows major problems to be identified and dealt with in a timely manner, and environmental baseline information to be gathered for future Programme reviews. Monitoring is carried out by reporting on the set of indicators and targets drawn up previously and used to describe the future trends in the baseline, which will enable future positive and negative impacts on the environment to be measured.

The purpose of the monitoring programme is to provide the evidence base needed to monitor and manage the negative impacts of the Plan. The monitoring programme will also inform the planned 6-yearly review and update of the Plan. The indicators will be used to plot trends in the data over the 6-year cycle. The monitoring framework can be reviewed and revised during the 6-year review of the Plan, to take into account the experiences gained from the implementation of the Plan, changes as a result of climate change and any new environmental data or legislation that may arise over the 6-year cycle.

When the Plan is initiated, a monitoring programme can be put in place using the baseline data presented in this Strategic Environmental Report. This monitoring will inform the six yearly update of the Plan as is a requirement of the EU Floods Directive.

### 5.2 Responsibilities for Monitoring

The OPW will be responsible for implementing the monitoring programme.

This monitoring programme will encompass the Plan but the impact of the local flood risk management schemes particularly during construction will need to be assessed and sufficient mitigation measures put in place to reduce these impacts. The mitigation measures will form part of the Contractor's Construction Environmental Management Plan for the individual schemes.

The EPA's Catchment Portal ([www.catchments.ie](http://www.catchments.ie)) can be used as a baseline for the environmental status of a habitat or waterbody prior to the commencement of any projects arising from the Plan. The data and maps that are available on this website can be incorporated into the SEA monitoring programme. Monitoring requirements will also be conditioned on any consents/planning permissions required for the Plan.

A full monitoring programme for the Plan is difficult to present at this stage because some elements of the Plan are dependent upon changes to current strategic documents such as the County and City Development Plans. The monitoring programme should be aligned with the monitoring programme for other Plans and Programmes such as the WFD, and the EPA's fluvial geomorphological assessment programme.

However, when the Plan is initiated a monitoring programme can be put in place using the baseline data presented in this Environmental Report. This monitoring will inform the six yearly update of as is a requirement of the EU Floods Directive.

It is recommended that all the monitoring data generated from the implementation of the Plan is stored in a centralised database that can be accessed nationally. This information should be used to inform the 6-yearly update to the Plan. The review should focus on:

- The level of progress of the Plan that has occurred over the previous 6 years
- Have any significant impacts occurred during this period?
- What new data has been accumulated from other programmes during this timeframe and how has it being made available to the OPW
- What Plans/Programmes have been initiated during this period that could influence/impact on the Plan?
- How have these new Plans/Programmes been integrated into the Plan?
- Does the review of the monitoring data for this period highlight any changes/amendments that should be made to the Plan or the National CFRAM programme?

- Has the review identified more areas at risk of flooding and will the revised Plan require a revised SEA and AA
- Have any new approaches to flood management been identified within this period?
- What progress has been made with integrating Flood Risk Management Plans with other Plans and Programmes such as the WFD, National Biodiversity Plan, Peatland Conservation Plans, Freshwater Pearl Mussel Conservation Plans etc.

#### **5.2.1 Project Monitoring**

The Plan, with its associated SEA and plan-level AA, sets out a series of monitoring requirements, in connection with the SEA objectives and the predicted effects of the Plan. For measures involving physical works, the project-level EIA and AA, where conducted, will set out the specific monitoring required for each measure.

## 6 Conclusion

The Plan sets out a proposed strategy for the sustainable, long-term management of flood risk. The SEA and AA informed the plan through an ongoing iterative process that incorporated environmental considerations and sensitivities throughout the plan development. The SEA and AA were undertaken in line with the Planning and Development (Strategic Environmental Assessment) Regulations 2004 to 2011 (as amended), the Planning and Development Act 2000(as amended), and the European Communities (Natural Habitats) Regulation 2011. The approval / adoption of the Plan has not and does not confer approval or permission for the installation or construction of any physical works. EIA and/or AA Screening, and, where so concluded from the screening, Environmental Impact Assessment and / or Appropriate Assessment, must be undertaken in accordance with the relevant legislation where relevant as part of the progression of measures that involve physical works. Subject to the full and proper implementation of mitigation and monitoring measures outlined in the SEA Addendum which have been incorporated into the Plan, the implementation of the plan is not likely to have significant impacts to the environment.

## References

European Communities (Environmental Assessment of Certain Plans and Programmes) (Amendment) Regulations 2011, (S.I. No. 200 of 2011), amending the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (S.I. No. 435 of 2004),

Development of Strategic Environmental Assessment (SEA) Methodologies for Plans and Programmes in Ireland –Synthesis report (EPA, 2003)  
<http://www.epa.ie/pubs/advice/ea/developmentofseamethodologiesforplansandprogrammesinireland.html>

Development of Strategic Environmental Assessment (SEA) Methodologies for Plans and Programmes in Ireland –Synthesis report (EPA, 2003)

Department of Environment, Heritage and Local Government 2004: Implementation of SEA Directive: Assessment of the Effects of Certain Plans and Programmes on the Environment. Guidelines for Regional Authorities and Planning Authorities (2004)

Environmental Protection Agency: SEA Pack (2008)

Environmental Protection Agency: Consultation Draft of the GISEA Manual (2009).

Council of European Communities (CEC). (1992). Council Directives 92/43/EEC of 21 May 1992 on the conservation of natural habitats and wild fauna and flora. Official Journal of the European Communities, L206/ 7-50.

EU, 2009. DIRECTIVE 2009/147/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 30 November 2009 on the conservation of wild birds

Irish Statute Book (ISB). (2011). S.I. No.477/2011-European Communities (Birds and Natural Habitats) Regulations 2011.

The Department of Environment Community and Local Government Guidelines: “Implementation of SEA Directive 92/43/EEC: Assessment of the Effects of Certain Plans and Programmes on the Environment –Guidelines for Local Authorities and Planning Authorities” (DEHLG, 2004)

DEHLG, 2009. ‘Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities’.

[https://www.npws.ie/sites/default/files/publications/pdf/NPWS\\_2009\\_AA\\_Guidance.pdf](https://www.npws.ie/sites/default/files/publications/pdf/NPWS_2009_AA_Guidance.pdf).

## Appendices

### A Consultation Responses -EPA Environmental Workshop

Session 1: EPA Response Action Plan Environmental Workshop 13th February 2017		
	<u>ACTION PLAN</u>	
Theme	Description	Action
Planning	Update the FRMP in respect of recommendations for links between CFRAM mapping and zoning / Planning resources.	OPW
Governance	Update the FRMP in respect of implementation and governance structures.	OPW
Future Environment	Update the FRMP – build in recommendations/findings from the SEA and AA for future project implementation (as project mitigation) and 2 <sup>nd</sup> Cycle of Floods Directive implementation.	OPW / Consultants
Process – Past Floods	Include details of past flood events in Sections 2.5 and 2.6 of the FRMP and where relevant Sections 8 and 9, including the floods of winter 2015/16	Consultants
Alternatives	Any change to options would require further assessment. Add details to the Environmental Report or the SEA Statement if there's significant effects.	Consultants
Monitoring / Mitigation	Include a flowchart of the approval process (consents licences etc.) highlighting the stage the current plan is at. Update Section 10 of the FRMP to include further detail on assessing the effectiveness of monitoring in the 2021 review	OPW
	Consultants to collaboratively compile a table/template of high level generic monitoring and mitigation measures to ensure consistency across the studies.	Consultants
WFD	Update the FRMP and emphasise assessment of the MCA sub-objective regarding WFD issues.	OPW

**Session 1: EPA Response Action Plan Environmental Workshop 13th February 2017**

	<b><u>ACTION PLAN</u></b>	
	Differentiate high level and AFA specific issues	
Benefits	Consultants to provide detail in the FRMP on benefits including numbers of properties protected etc., within context of the Template from OPW (see below)	Consultants
	Update the FRMP template to include detail in Section 6 and/or the Executive Summary on the benefits of the options proposed and work completed. Highlight the benefit of implementing measures to communities.	OPW
	Include further detail on measure 8.4.1.12 – installation of hydrometric gauges in the FRMP	Consultants

**Session 3: SWAN Response Action Plan**

<b>ID</b>	<b>Description</b>	<b>Action</b>
SWAN1	The selection of options of with lower environmental impact where it is not the preferred option needs to be assessed on an AFA per AFA basis and updated in the FRMP. If applicable include text in the FRMP under a particular measure that specific issues should be considered at the next stage of progression and/or that the lesser environmental impact measure (if viable on other criteria) needs to be considered as an alternative at the next stage of progression.	Consultants
SWAN2	Identify any pilots for Natural Water Retention Measures for each study , where appropriate.	Consultants
SWAN2	Add to the Measure Summary "including the use of pilot studies and applications, where possible".	OPW
SWAN3	SWAN have requested a meeting with the OPW to discuss their submission before the plans are finalised.	OPW
SWAN4	SWANs generic mitigation proposals to be included in template for mitigation measures and to be included in the FRMP.	Consultants
SWAN5	Mitigation measures in NIS and SEA to be consistent across all the CFRAM studies.	Consultants
SWAN6	More details on the non-structural flood works and their impacts especially non-structural works are to be included in the FRMP.	OPW



### Session 3: SWAN Response Action Plan

ID	Description	Action
SWAN7	The following statement from the SEA for UoM 8 is to be included in the SEA Statement for all UoMs, “the subsequent detailed design of each localised flood risk management scheme should ensure, where relevant and as far as reasonably possible, that modifications to the river channels, estuaries and the coastline are minimised, for example by setting back defences (flood embankments/walls) from the river channel to enable natural morphological processes to be maintained. Specific assessments to assess the compatibility of the scheme design with the relevant WFD requirements for each relevant water body should also be undertaken..”	Consultants
SWAN8	Set back walls versus culverts is a detailed design issue and this is to be reflected in The Public Consultation Synthesis Report	OPW
SWAN 8	Update Section 8.4 and SEA/AA as appropriate where a specific AFA is referred to	Consultants
SWAN11	The projected programming of the measures is included in the FRMPs	OPW
SWAN13	Include a procedure to follow up on mitigation to ensure it is being implemented and assess its effectiveness in the template for mitigation measures.	Consultants
SWAN17	Has the maintenance of existing schemes been referenced in the SEA? Update FRMP to state if it has been.	OPW
SWAN24	Input required from the regional OPW office on Standard Operating Procedures and this is to be reflected in the final FRMP.	OPW

### Session 4: Others Response Action Plan

ID	Description	Action
OTH1	National Technical Coordination Group Document discussed impacts of measures. Consultants to review and reference document produced in the SEA Statement	Consultants

#### Session 4: Others Response Action Plan

ID	Description	Action
OTH2	Section 4.5 of the FRMP sets out coordination of the FRMP, Template text to be revised with location specific infill information.	Consultants
OTH3	Natural Water Retention measures should be discussed in the FRMP. Text to be paraphrased for the FRMP with revision of Section 8.	OPW
OTH4	Standard Community catchment based approach response text to be prepared for FRMP.	OPW
OTH9	Development in flood plains has to be pass the Justification Test. MA to prepare a draft response for inclusion in the Public Consultation Synthesis Report	OPW
OTH10	OPW to address the concerns regarding 'integrated catchment approach coordination given multiple implementation authorities' in the FRMP	OPW
OTH11	Birds in the Countryside – Standard datasets have been used for analysis. High level assessment carried out for the FRMPs. To be explained further in the Public Consultation Synthesis Report	Consultants
OTH12	Independent pre and post mitigation monitoring specific to the AFA should be carried out by an Ecologist. Generic High level provisions should be detailed within the template for mitigation measures	Consultants
OTH13	Consultants to address IFIs concerns re: the use of their available data in the Public Consultation Synthesis Report	Consultants
OTH15	Ecological expertise resources within LAs is a matter for LAS, and should be considered internally and expertise to be coordinated appropriately. Response to be provided in Public Consultation Synthesis Report	OPW
OTH18	SEA Statement should be updated to state salmonid waters should be protected everywhere	Consultants
OTH19	Shannon CFRAM specific query to addressed in the Public Consultation Synthesis Report	Consultants
OTH20	Correct period of instream works should be stated within the SEA Statement i.e. permitted during the period July to September inclusive	Consultants

#### Session 4: Others Response Action Plan

ID	Description	Action
n/a	An Appendix should be included in the Public Consultation Synthesis Report to communicate submission decision. The internal FRMP Submission spreadsheet should contain sub response actions that will amend the Plan or SEA Report or both. The Public Consultation Synthesis Report will summarise the categorisation of sub generic responses which will cover all responses.	OPW

#### Western CFRAM Specific Comments

##### Dept. AHRRGA Responses

ID	Description	Action
<b>SUB-16-459 (UoM 35)</b>	Volume 1, Section 1.3.4 Other Relevant Policies and Plans and SEA p49 Section 6.2.3 Sligo County Development Plan 2011-2017. There is a new draft County Development Plan for Sligo 2017-2023 which is publically available and this should be referred to.	Consultants - update NIS
	Volume 1, Section 7.2 Environmental Constraints and Opportunities in the Sligo Bay Drowes UoM. Figure 7-2: Natura 2000 sites within UoM 35 would benefit from being larger so that Natura site location in relation to AFA boundary can be clearly seen. Table 7-1 p53 Biodiversity, Flora & Fauna could be expanded to include protected species generally, with the addition of otter in the list of those mentioned.	Consultants - update NIS
	Volume 1, Section 8.4.3 Coolaney AFA measures p84 and 8.4.4 Rathbraghan AFA measures p87. It would be useful if these sections incorporated the findings of the NIS into the text. The Environmental considerations that are currently mentioned are broad, however the NIS identifies potential impacts, during construction phase at least on three Natura sites, one with regard to Coolaney and two with regard to Rathbraghan. It would be useful for the authors to provide maps within the plan that clearly show the geographical position of planned works in relation to Natura site boundaries. Figure 7-6 on p74 of the SEA showing Natura 2000 sites is not adequate in this regard.	Consultants - update NIS
	SEA Appendix B, Section B.5.5 Ushin River SAC, Potential risk to site resulting from FRMP. It appears that the first sentence within this paragraph was included in error and that it actually refers to section B.5.3 Cummeen Strand/Drumcliff Bay SAC. 'The proposed preferred option is located on an un-named tributary of the Willsborough Stream, which discharges into the Cummeen Strand/Drumcliff Bay SAC. The preferred option is located on the southern river bank of the Owenboy River and immediately adjacent to the Ushin River SAC. The preferred option has the potential to cause damage and disturbance to designated habitats, and species and their supporting habitats, during construction via surface water and land and air pathways.'	Consultants - update NIS

Western CFRAM Specific Comments		
Dept. AHRRGA Responses		
ID	Description	Action
	SEA Appendix B.5.5 Ushin River SAC p B31. As with other draft Plans for different UoMs the effects or potential effects of sediment mobilisation is discussed. It would be useful to have details of the expected distance of travel for the type of sediment that could be released into the water as a result of proposed measures in order that potential impacts can be adequately assessed.	Consultants - update NIS
	Fresh Water Pearl Mussel (FWPM). Part of the catchment has been identified as a Margaritifera Sensitive area (Fig 7-8 p80). (border of Counties Sligo and Mayo around Easky Lough and Easky River) Whilst none of the planned works are in this area (works are planned downstream at Collaney AFA, detailed Appendix B- 8). These works are planned to be adjacent to, rather than within the channel, however they still need to be adequately detailed and assessed and appropriate mitigation identified. Within the NIR no Natura sites are identified where FWPM are a QI. With regard to FWPM in the wider catchment no assessment, survey or mitigation is discussed and the only mention found is a commentary on the species on p76. In summary, the report mentions FWPM as a concern within the SEA Objectives (p100 table 9-1) but does not deal with the objective in the text.	Consultants - update NIS



Registered Office

**24 Grove Island  
Corbally  
Limerick  
Ireland**

T: +353 (0) 61 345463

e: [info@jbaconsulting.com](mailto:info@jbaconsulting.com)

**JBA Consulting Engineers and  
Scientists Limited**

**Registration number 444752**

**Visit our website**

[www.jbaconsulting.com](http://www.jbaconsulting.com)



**The Office of Public Works**  
**Head Office**  
**Jonathan Swift Street**  
**Trim**  
**Co. Meath**  
**C15 NX36**

**Telephone: (0761) 106000, (046) 942 6000**  
**E-mail: [floodinfo@opw.ie](mailto:floodinfo@opw.ie)**  
**Website: [www.floodinfo.ie](http://www.floodinfo.ie)**