

# Public Consultation on the Draft Flood Risk Management Plans

SUMMARY REPORT

2018



## **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 the various 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.

## **Legal Disclaimer**

The Flood Risk Management Plans have been developed for the purpose of informing feasible and proposed measures to address flood risk in Ireland and other government related planning activities. They should not be used or relied upon for any other purpose or decision-making process.

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## **1. INTRODUCTION**

A set of Flood Risk Management Plans (the 'Plans') has been published following a comprehensive programme (the National Catchment-based Flood Risk Assessment and Management (CFRAM) Programme) of technical analysis and extensive public and stakeholder consultation and engagement.

The CFRAM Programme has assessed and mapped the flood risk in areas designated as being at potentially significant flood risk, and then identified the most feasible measure or measures to address the risk. These areas were designated following the Preliminary Flood Risk Assessment that was subject to public consultation in 2011.

The proposed, feasible measures for addressing the flood risk in these areas are set out in 29 Flood Risk Management Plans that were subject to Strategic Environmental and Habitats Directive (Appropriate) Assessments. The Plans also include measures that can benefit all at risk properties, including those that were not assessed in the CFRAM Programme. The measures set out in the Plans are available on [www.floodinfo.ie](http://www.floodinfo.ie).

Public and stakeholder engagement was a critical component to the process of developing a sustainable, long-term strategy for flood risk management, as set out in the Plans. Such engagement was prioritised by the Office of Public Works (OPW) to ensure that flood risk management measures are suitable and appropriate, as well as technically effective; and address key areas of local concern and will fit into the community environment in a way that local people will welcome.

Three rounds of local consultation at key stages have been the focus of the CFRAM Programme. The last of these was the public and stakeholder consultation on the draft Plans, which included a statutory consultation process.

This report describes the statutory consultation on the draft Plans, and summarises the frequently raised issues raised in the submissions, and the responses to these issues.

## **2. DRAFT FLOOD RISK MANAGEMENT PLANS - FORMAL CONSULTATION**

### **2.1. CONSULTATION PROCESS**

As part of the statutory consultation, the draft Plans were published on-line from July to early October 2016, along with information on the statutory consultation process, responses to a set of Frequently Asked Questions and relevant supporting documentation. The draft Plans were also made available in hard-copy for inspection in the principal offices of each of the local authorities. The dates of the publication of each of the Draft Plans, and the closing dates for the submission of observations from the public and from the Councils are provided in Table 1 below.

In parallel to the statutory consultation, the OPW held a series of Public Consultation Days in the areas where flood risk management measures were proposed in the draft Plans. This gave the OPW the opportunity to meet again with local representatives, representative bodies and the public to explain the preferred flood risk measures for the entire area and the draft preferred measure to address the flood risk locally, together with their associated environmental assessments.

**Table 1 - Consultation Dates on the Draft Flood Risk Management Plans**

Project / Plan (River Basin No.)	Date of	Closure Date for Observations	
	Publication	Public	Councils
<b>North Western - Neagh Bann CFRAM Project:</b> - Foyle, Gweebarra-Sheephaven, Donegal Bay North, Lough Swilly and Donagh-Moville (01) - Neagh Bann (06) - Erne (36)	19/08/2016	28/10/2016	21/11/2016
<b>Eastern CFRAM Project:</b> - Boyne (07) - Nanny-Delvin (08) - Liffey and Dublin Bay (09) - Avoca-Vartry (10)	22/09/2016	02/12/2016	23/12/2016
<b>South Eastern CFRAM Project:</b> - Owenavorrhagh (11) - Slaney & Wexford Harbour (12) - Ballyteigue-Bannow (13) - Barrow (14) - Nore (15) - Suir (16) - Colligan-Mahon – Waterford South Coast (17)	19/08/2016 (Suir: 04/10/2016)	28/10/2016 (Suir: 13/12/2016)	21/11/2016 (Suir: 31/01/2017)
<b>South Western CFRAM Project:</b> - Blackwater (Munster) (18) - Lee, Cork Harbour and Youghal Bay (19) - Bandon-Ilen (20) - Dunmanus-Bantry-Kenmare (21) - Laune-Maine-Dingle Bay (22)	15/07/2017	23/09/2016	24/10/2016
<b>Shannon CFRAM Project:</b> - Tralee Bay & Feale (23) - Shannon Estuary South (24) - Shannon (25/26) - Shannon Estuary North and Mal Bay (27/28)	15/07/2017	23/09/2016	24/10/2016
<b>Western CFRAM Project:</b> - Galway Bay South East (29) - Corrib (30) - Galway Bay North (31/32) - Erriff-Clew Bay-Blacksod-Broadhaven (33) - Moy & Killala Bay (34) - Sligo Bay & Drowse (35)	13/09/2016	22/11/2016	15/12/2016



The OPW presented the draft Plans to County and City Councils to seek comments from the locally elected representatives. As part of the statutory consultation, the Councils had three months to forward their written observations to the OPW.

The OPW received a significant number of written submissions in response to the consultation process. The submissions received have been very constructive and have informed the finalisation of the maps and Plans.

## 2.2. SUMMARY OF SUBMISSIONS MADE

Over 500 observations were submitted under the formal public consultation process on the 29 draft Plans, with most of the observations submitted by members of the public. A break-down of the source of these observations is set out in Table 2 below. Each observation submitted typically comprised a number of different issues or points, and sometimes set out a large number of different issues.

**Table 2 - Break-Down of Observations Received by Source**

Source	% of Observations
Members of the Public	54%
Associations / Non-governmental organisations	12%
Businesses / Business Organisations	11%
Local Authorities / Councils	7%
Government Depts. / State Agencies	7%
Politicians (National, Local)	6%
Semi-State Organisation	2%

Some common issues were raised in a number of separate observations. Some such issues were identical in separate observations, i.e., the same issue being made on more than one of the draft Plans. Other such issues were of a similar nature or common theme, but were made by different people or organisations relating to the same location, and/or were made by the same person or organisation but relating to different locations. An example of such issues would be comments opposing or supporting a proposed measure for a particular location, or a comment expressing a particular concern in relation to different locations. These frequently raised issues, and responses to them, are provided (in a generalised form) in Section 3 herein.

Other individual specific issues raised through the consultation process have been fully considered and have informed the Plans. They will further be taken into account and inform the detailed design when the proposed measures are further developed at a local, project level before Public Exhibition or submission for planning approval.

People, groups and organisations that raised an issue under the public consultation that is not included under the frequently raised issues set out in this summary (Section 3) can find out how the issue was considered and addressed by contacting:

Email: FloodInfo@opw.ie

Telephone: 01 647 6999 / 046 942 6999

### **2.3. CONSIDERATION OF OBSERVATIONS MADE**

All of the observations submitted to the OPW through the public consultation process were fully considered by the OPW and its consultants. The action arising from each issue raised was dependent on the nature and the context of the issue. Actions taken have included, but are not limited to:

- A review of the proposed measure, and amendment of the measure set out in the draft Plan.
- A review of the proposed measure, and noting of the issue for consideration at the project-level of assessment (i.e., the future development and detailed design of the measure before implementation).
- A review of the proposed measure, and a decision that the measure set out in the draft Plan should not be amended.
- An amendment to the Plan, other than an amendment to a specific measure.
- An amendment in relation to the environmental assessments, such as the consideration of additional mitigation and/or monitoring measures.
- Raising of the issue with a third party, e.g., a local authority, to whom the issue would be relevant.
- Noting of the issue as a matter to guide or be addressed in the second cycle of the implementation of the EU 'Floods' Directive.
- The issue was noted but it was considered appropriate that no action should be taken on foot of the comment. A clarification relating to the issue raised has been included in Section 3, where appropriate.

It is important to note that further public and stakeholder consultation will be undertaken at the project-level assessment of measures comprising community flood protection schemes prior to submission for planning permission or Public Exhibition and confirmation (in the case of projects being implemented by the OPW under the Arterial Drainage Acts) for the implementation of the scheme.

### **3. FREQUENTLY RAISED ISSUES**

This Section sets out, in a generalised form, the issues that were raised frequently within the observations submitted on the draft Plans, and responses to these issues.

**Table 3 - Frequently Raised Issues and Responses**

**General Issues**

No.	Group Heading	Issue / Comment	Response
1	<b>Areas at Risk not Included in CFRAM / Plans</b>	<p>Watercourses and areas have been noted that give rise to flooding, or that are prone to flooding, but that have not been addressed in the Plans.</p> <p>Queries were raised in the submissions as to why the Plans only addressed certain areas, and why some areas are not being addressed.</p>	<p>The areas that are the focus of the Plans, called Areas for Further Assessment (AFAs), were identified through the Preliminary Flood Risk Assessment (PFRA).</p> <p>The PFRA was undertaken and subject to public consultation in 2011, and was a screening exercise to identify areas of potentially significant risk, and included an assessment of a large number of potential risk areas around the country. It was based on historical data on past floods, predictive assessments of potential future floods, and consultation with the local authorities. It would not have been possible to address all flood problems in the country in one cycle / programme, and so the areas (communities) of greatest risk have been prioritised in this cycle.</p> <p>A review of the Preliminary Flood Risk Assessment will be undertaken during 2018, and other areas of risk not addressed in the current Plans can be considered as part of the review to assess the significance of their risk. It is intended that the risk in rural areas may be assessed in more detail during this second cycle.</p> <p>While the Plans do not set out new, locally specific measures to address the flood risk in areas outside of the AFAs, it does describe policies and other works aimed at, or related to, reducing flood risk throughout the River Basin (e.g., spatial planning, emergency response planning and the maintenance of drainage schemes), including areas outside of the AFAs. In addition the Government's Interdepartmental Flood Policy Coordination Group is considering a range of policy initiatives that may help to mitigate flood risk in areas and homes outside of the designated AFAs.</p> <p>In addition, to address local flood problems in areas that are not identified as AFAs, the local authorities may apply for funding from the OPW under the Minor Flood Mitigation Works and Coastal Protection Scheme (the 'Minor Works Scheme') to address qualifying local flood problems with local solutions. Already over 400 Minor Works projects have been funded for areas outside of AFAs, since 2009.</p>
2	<b>Delineation of Areas for Further Assessment (AFAs)</b>	<p>Queries were raised over the delineation of the AFAs.</p>	<p>The extent of the Areas for Further Assessment (AFAs) analysed under the National CFRAM Programme include the most up-to-date development plan boundary and / or the outer boundary of the existing urban / developed area of the community. Where appropriate, the extents also include some areas beyond this to ensure that properties (or clusters of properties) immediately adjacent to the communities are included within the AFA.</p>

3	<b>Rural flood risk</b>	Rural areas, where there may be individual properties flooded or isolated during flood events, and where roads may be flooded and impassable, have not been addressed in the Plans.	<p>It would not have been possible to assess using engineering analysis all localised flood problems in the country in one programme. The Plans have therefore focused on the communities of greatest risk (AFAs), which were identified through the Preliminary Flood Risk Assessment (see Section 3 of the Plans).</p> <p>While the Plans do not set out new, locally specific measures to address the flood risk in areas outside of the AFAs, they do describe policies and other works aimed at, or related to, reducing flood risk throughout the River Basin (e.g., spatial planning, emergency response planning and the maintenance of drainage schemes), including areas outside of the AFAs. In addition the Government's Interdepartmental Flood Policy Coordination Group is considering a range of policy initiatives that may help to mitigate flood risk in areas and homes outside of the designated AFAs.</p> <p>It is intended that rural risk may be assessed in more detail in the second cycle of the implementation of the 'Floods' Directive (2018-2021).</p>
4	<b>Preliminary Flood Risk Assessment (PFRA) - Consideration of Infrastructure</b>	Submissions indicated that the PFRA did not fully consider the impacts of flooding on infrastructure.	<p>The PFRA, that was undertaken in 2011 and was subject to public consultation at that time, did take account of the flood risk to infrastructure, including utility and transport infrastructure, with a very high weighting given in the predictive assessment to critical, national infrastructure.</p> <p>A review of the Preliminary Flood Risk Assessment will be undertaken by the end of 2018. The impacts on infrastructure will again be considered as part of the review.</p>
5	<b>Community Flood Groups</b>	It is noted that community flood groups should have a role in determining the appropriate flood measures for a community.	<p>The OPW recognises the importance of public and stakeholder engagement to ensure that flood risk management measures for a given community are suitable and appropriate, as well as technically effective, and welcomes engagement with community flood groups.</p> <p>The OPW acknowledges the role of the Irish National Flood Forum in supporting community flood groups. Research by the Department of Housing, Planning and Local Government will help to inform future support by the State for community flood groups.</p>

6	<b>Inadequate Consultation</b>	<p>Comments have been made that the consultation processes held to date have not been adequate, and that further consultation is required before the measures are implemented.</p>	<p>Public and stakeholder engagement was a critical component to the process of developing a sustainable, long-term strategy for flood risk management, now set out in the Plans. Such engagement was prioritised by the OPW to ensure that flood risk management measures are suitable and appropriate, as well as technically effective. The OPW has sought to ensure, and has invested significant resources, in consultation activities.</p> <p>Three rounds of local consultation in the communities that have been the focus of the CFRAM Programme have been a particular focus, with nearly 500 public consultation days (PCDs) held within or near the communities at key stages throughout the Programme. These local consultation events provided for face-to-face discussion, facilitating the explanation and understanding of the detailed and technical issues involved in the CFRAM Programme. The PCDs have been very informative to both generate awareness of the Programme and to provide essential material and local knowledge to inform the preparation of the flood maps and Plans.</p> <p>In addition to the PCDs, there have been two rounds of statutory public consultation; one in relation to the draft flood maps and the second on the draft Plans. The OPW has also engaged in ongoing consultation with stakeholders throughout the CFRAM Programme through a series of meetings of the National CFRAM Steering and Stakeholder Groups and the Project Steering/Advisory Groups and Project Progress Groups.</p> <p>Details of the consultation undertaken through the CFRAM Programme are set out in Section 4 of the Plans.</p> <p>Implementing the measures within the Plans will involve further public and stakeholder consultation and engagement. For example, the project development stage for proposed schemes will involve a significant level of further local engagement on the proposed measures in the Plan at key points in the progress of the design work required to bring those proposed measures to a state of readiness to submit for planning approval (in the case of projects being implemented by local authorities under the Planning and Development Acts) or for Public Exhibition (in the case of projects being implemented by the OPW under the Arterial Drainage Acts). Local engagement events will be organised to inform and engage with the relevant communities during the progress with the design, development and implementation of the proposed scheme.</p>
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7	<b>Need for Whole of Govt. Approach to Flood Risk Management</b>	Submissions stressed the need for a coordinated approach to flood risk management, with all relevant parties involved.	<p>The Interdepartmental Flood Policy Co-ordination Group provides for the liaison and co-ordination between relevant Government Departments to ensure that a whole-of-government approach to the management of flood risk is maintained.</p> <p>The Group has co-ordinated a broad range of Government policy on flood related matters, including planning guidelines, flood forecasting and flood insurance policy. The Group has presented and has received approval from Government for its interim report, dated 8th November 2016 and that is available on the OPW website.</p> <p>The Interdepartmental Group is continuing its work, now greatly informed by the wealth of knowledge and output from the CFRAM Programme, to bring forward further proposals of Government support and assistance to households and communities to support flood protection and mitigation measures.</p>
8a	<b>Shannon 'Single Agency'</b>	Some submissions proposed the establishment of a single agency to manage the River Shannon.	<p>The Government decided in January 2016 to establish a State Agency Flood Risk Co-ordination Group to ensure the necessary coordination for the management of flood risk along the Shannon.</p> <p>Its current Work Programme, on the OPW website, sets out actions and activities to manage flood risk for the Shannon catchment. The Group's Work Programme has been growing, including from the major decision taken to consider the development of a plan for a strategic maintenance programme on the River Shannon. The Group has established a sub-committee that is focused and actively working to develop the plan that will halt the deterioration of the river channel and complement the proposed measures for those areas at assessed risk identified through the Shannon CFRAM Study.</p>
8b	<b>'Single Agency' / Coordination Groups</b>	Some submissions proposed the establishment of a single agency to manage the River Basin.	A number of authorities and bodies have duties and/or rights with regards to river basins, such as the OPW, local authorities, ESB, Waterways Ireland, and other organisations also have regulatory roles for rivers, such as the EPA, NPWS and the IFI. These authorities and bodies already work in close coordination on matters relating to the rivers.

9	<b>Flood Map Updates</b>	<p>Comments or queries were provided in relation to the flood maps, and if they will be reviewed / updated in the future.</p> <p>Comments that maps show areas as being at risk of flooding that have not flooded in the past.</p>	<p>Statutory public consultation on the flood maps was held from 20th November to 23rd December 2015 inclusive, and followed a series of locally held Public Consultation Days.</p> <p>Submissions received through these public consultation processes have been considered and, where appropriate, the maps have been amended. It should be noted that the absence of flooding in the past does not mean that an area will not flood in the future. While past flood information has been used to inform the development of the flood maps, the maps show the potential future flooding (including for some extreme, rare events), rather than just recording historic floods extents.</p> <p>This statutory consultation also gave those land and property owners, whose land was within one of the three possible flood extents, the right to lodge a technical objection. Thirty-seven objections were lodged against the flood maps. Considering the Objections on the flood maps, received through the formal map consultation process, have involved a review of the maps through additional survey / re-modelling being undertaken where suitable.</p> <p>Now published, the OPW will continue to consider any further relevant information provided in relation to the flood mapping (e.g., where new physical infrastructure might have changed flood patterns and extents, or where new flood events indicate that a review of the mapping is warranted), and will update / amend the flood maps on an ongoing basis as and where appropriate.</p>
10	<b>Availability of Flood Maps</b>	<p>Enquiries were received as to whether the flood maps will be made available in the future.</p>	<p>Final maps of flood risk from rivers and the sea are available on <a href="http://www.floodinfo.ie">www.floodinfo.ie</a>. The CFRAM process involved the development, including public consultation, of flood extent, depth and risk maps for the communities at potentially significant flood risk and of a number of other flood maps, such as maps taking into account the potential impact of climate change.</p>
11	<b>Consideration of Climate Change</b>	<p>Queries were raised as to whether, and if so how, climate change was taken into account in the preparation of the Plans.</p>	<p>It is likely that climate change will have a considerable impact on flood risk in Ireland into the future, such as through rising mean sea levels, increased wave action and the potential increases in winter rainfall and intense, summer storms. Land use change, such as through new housing and other developments, can also increase future flood risk.</p> <p>The National CFRAM Programme has included the assessment and mapping of flood risk for two potential future scenarios; the Mid-Range Future Scenario and the High-End Future Scenario. The development of options under the CFRAM Programme, while focused primarily on existing risk, also included consideration of potential future flood extents, depths and risks based on the flood mapping undertaken for the two future scenarios, to identify what flood protection or other measures might be required in the future, and how adaptable measures aimed at addressing existing risks would be to meet future needs.</p>

12	<b>Groundwater Turloughs</b>	A number of submissions raised the need to consider and address groundwater / turlough flood risk.	The Geological Survey of Ireland (GSI) has initiated a three-year project on Groundwater and Turlough Monitoring and Modelling in order to advance further study into the mechanisms of groundwater flooding and to address the deficit of data available in this area. An Advisory Committee for this project has been established that comprises representatives from GSI, Trinity College Dublin (TCD) and relevant local authorities, Government Departments and State Bodies. GSI has already put staff in place on the project through TCD and has initiated its work. It has also installed additional monitoring gauges on turloughs in Roscommon and Galway (Gort lowlands).
13	<b>Coastal Erosion</b>	Concerns were raised over the issue of coastal erosion.	<p>The CFRAM Programme, and the Flood Risk Management Plans, does not focus on coastal erosion, but rather addresses protection against flooding for 90 coastal areas assessed as being at potentially significant flood risk.</p> <p>The OPW has undertaken a national assessment of coastal erosion (including erosion rates) under the Irish Coastal Protection Strategy Study (ICPSS) and the results of this study have been published on the OPW website. The relevant reports and associated predictive erosion hazard mapping (to 2050) can be viewed on the OPW website.</p> <p>(see: <a href="http://www.opw.ie/en/flood-risk-management/floodanderosionmapping/icpss/">http://www.opw.ie/en/flood-risk-management/floodanderosionmapping/icpss/</a>)</p> <p>The ICPSS has surveyed and assessed the coastal erosion risk along the entire national coastline and this information is available to all Local Authorities. This will enable them to develop appropriate plans and strategies for the sustainable management of the coastline in their counties including the identification, prioritisation and, subject to the availability of resources, the implementation of coastal protection works both of a structural and non-structural nature.</p> <p>Outside of proposed measures set out in the plans, the Local Authorities may carry out coastal protection works using their own resources. If necessary, they may also put forward proposals to the relevant central Government Departments for funding of appropriate measures depending on the infrastructure or assets under threat.</p> <p>Because intervention within a coastal area may cause problems further along the coast, any proposed intervention measures are best developed in conjunction with a formal coastal erosion risk management study which has carefully investigated the problem and explored the full range of management options.</p>



14	<b>Urban Storm Water Drainage</b>	Submissions have reported local surface water flooding or drainage problems, and raised the query as to why urban storm water drainage has not been addressed in the Plans.	<p>The Plans address the sources of flooding identified as being potentially significant in one or more communities (AFAs), as determined through the Preliminary Flood Risk Assessment. The sources of flooding addressed for each of the AFAs is indicated in Table 3.1 of the Plans. The Plans do not address sources of flood risk within the AFAs that were not deemed under the PFRA to have been significant for those AFAs.</p> <p>Flood risk from surface water runoff or urban storm water drainage problems were identified as being significant in Dublin City and in Raphoe, Co. Donegal. Measures to manage these risks are included in the relevant Plans.</p> <p>The local authorities have responsibility for urban storm water drainage, and for addressing any localised problems associated with the urban storm water drainage network. The relevant local authority have been informed of observations made relating to urban storm water drainage problems.</p>
15	<b>Indications of Support for or Objection against the Measures</b>	A number of submissions were received that expressed either support for, or opposition against, the measure proposed for progression, or in general for measures to reduce the risk.	<p>Such submissions have been noted and fully considered. Submissions supporting the proposed measures have been taken to help confirm the measure set out in the Plans. Where there has been opposition to an option through the formal submissions and the Public Consultation Days, this has also been considered and, where appropriate, the proposed measure has been amended.</p> <p>It is important to note that the proposed flood defence measures set out in the Plan are not definitive and final, and that as part of the project-level assessment that is required to prepare the measure for planning / Public Exhibition, then more detailed assessments are required at a local level and further public and stakeholder consultation will be undertaken. As such, there is further scope for the community views to influence any feasible measure that is progressed to implementation.</p>
16	<b>Provision of Technical Information</b>	In a number of submissions, technical information was provided that is relevant to the choice or design of the proposed measure to be progressed for a particular community.	<p>Such submissions have been noted and fully considered. Where the information provided is significant and relevant to the choice and/or design of the proposed measure, then this has been taken into account and, where appropriate, the proposed measure amended accordingly.</p> <p>Otherwise, the measure proposed in the Plan has, subject to other reasons for amendment, remained as proposed, as the option may be amended as necessary as part of the project-level assessment that is required to prepare the measure for planning / Public Exhibition. At this stage, more detailed assessments are required at a local level and the information provided has been noted for use in this assessment.</p> <p>Suggestions or proposals for alternative measures have equally been assessed and, where appropriate, the proposed measure amended accordingly.</p>

17	<b>Changes to Proposed Measures</b>	New developments may have occurred, or will occur, before the proposed measures are implemented. In addition, some local issues may not have been taken into account in the design of the proposed measures. How will these be taken into account?	The potential physical flood relief works or 'Schemes' set out in the Plans that have been developed through the CFRAM Programme are to an outline design, and are not at this point final and definitive, nor ready or approved for construction. Each one will now be brought through project-level development that includes further public and stakeholder engagement, detailed design and a local Public Exhibition / Confirmation or submission for planning approval. This assessment and detailed design will capture or take into account a range of additional information including ground investigation results, new developments and project-level environmental assessments. This process may give rise to some amendment of the proposed works to ensure that it is fully adapted, developed and appropriate within the local context, and are compliant with environmental legislation. The proposed measures will also undergo a further assessment of costs and benefits to ensure the scheme, following detailed design, remains feasible.
18	<b>Economic Damages / Cost-Benefit Analysis</b>	Queries were raised as to whether emergency response costs have been considered in estimating flood losses / damages.	An allowance for emergency response costs is included in the calculation of flood event damages for all areas. As such, the reduction in emergency response costs by implementing flood protection measures is counted as a benefit (i.e., a damage avoided) to justify expenditure on the proposed protection measures.
19	<b>Multi-Criteria Analysis (MCA) / Optioneering Process</b>	<p>Queries were raised about the method / process for identifying the proposed measures.</p> <p>Comments have also been made on the Global Weightings assigned to different Objectives, suggesting some might be inappropriate.</p>	<p>The method of analysis used to appraise the options is called a 'Multi-Criteria Analysis', or 'MCA'. This is a method for appraising an option against a weighted range of diverse Objectives, to produce a mark or score of performance, referred to as the 'MCA-Benefit Score'. The process for identifying and developing possible flood risk management measures, including the 'MCA' appraisal, are set out in Section 7.3 of the Plans.</p> <p>The MCA makes use of 'Global Weightings' to rank the general importance, or level of 'societal value', for each of the Objectives. The more important the Objective, the higher the Global Weighting, and hence the more influence the Objective has in determining the overall MCA-Benefit Score and the choice of proposed flood risk management measure. Given the key role the Objectives and their Global Weightings have in selecting proposed measures for managing flood risk, the OPW publicly consulted on the Objectives and the weightings that would be assigned to each Objective. For this, the OPW commissioned an independent poll of over 1000 members of the public on the weightings through a structured questionnaire, with the results of this poll analysed by University College Dublin and the weightings for each of the Objectives then set. The weightings have therefore been determined through public consultation and opinion.</p>

20	<b>Multi-Criteria Analysis (MCA) / Optioneering Process</b>	Environmental issues have been given priority over people.	Environmental issues do not take precedence over people but must be considered, and legislation must be complied with, to ensure proposed measures do not damage the environment or that any negative impacts are minimised. This approach to flood mitigation works provides a reasonable balance to protect the interests of other property owners and communities, as well as the wider environment. Environmental objectives are treated equally to social and economic objectives when assessing all options for benefits, impacts and feasibility.
21	<b>Inadequacies of 1% AEP Standard of protection</b>	It has been suggested that a higher standard of protection (above the '100-year' adopted by the OPW for fluvial flooding) should be adopted.	The preferred Standard of Protection offered by flood protection measures in Ireland is the current scenario 1% Annual Exceedance Probability (AEP) flood for fluvial flooding and 0.5 % AEP flood for tidal flooding (also referred to as the 100-year and 200-year floods respectively). These standards would be broadly in line with common practice around Europe.  It should be noted that, where deemed appropriate, these standards can increase for a particular measure or AFA depending on local circumstances.
22	<b>Upstream / Downstream Impacts</b>	Concerns have been expressed about potential impacts of the measures on flood risk up- or down-stream.	Typically, defending localised urban areas from more extreme river flooding does not have a significant impact on downstream and upstream water levels. This is because the volume of flood water that would otherwise be stored in the protected area is typically insignificant compared to the total volume of flood waters flowing down the river.  The development of measures typically included the modelling of the measures where these include physical works. This was to determine the effectiveness of the possible measures in reducing risk, and also to assess any impacts up- or down-stream with the objective of ensuring that any proposed measure does not increase risk up- or down-stream. Where a possible increase in risk elsewhere has been identified as being significant then the measure would have been rejected or amended. Where a minor increase in risk was identified, then this will be addressed and mitigated at the project-level of assessment (see Section 8.1 of the Plans) to ensure that the measure will not increase risk elsewhere.
23	<b>Protection of State-Owned Commercial Company Assets</b>	Queries were raised as to why some infrastructural assets have not been included in the areas to benefit from flood defences?	Where an asset of a commercial company (including semi-state companies) falls within an area to be protected by a 'community' scheme, then it will benefit from protection. However, in other instances where the asset is isolated, while the OPW may provide flood mapping to help inform these companies that their asset(s) might be at risk, it is a matter for the companies to decide upon and take actions or measures to mitigate the risk, as deemed necessary or appropriate to ensure the security of their assets and systems.

24	<b>Insurance</b>	Submissions have reported the inability to obtain flood insurance.	<p>The Minister for Finance and Public Expenditure and Reform has overall responsibility for the Government's flood insurance policy. The OPW has a role to assist insurance companies assess the risk and take into account the protection provided in those areas protected by completed OPW flood defence schemes. The OPW and Insurance Ireland, the representative body of the insurance industry, have a Memorandum of Understanding. This sets out the principles of how the two organisations work together to ensure that appropriate and relevant information on these completed schemes is provided to insurers to facilitate, to the greatest extent possible, the availability to the public of insurance against the risk of flooding. Insurance Ireland members have committed to take into account all information provided by the OPW when assessing exposure to flood risk within these protected areas. To date the OPW has provided details to Insurance Ireland on 18 completed schemes nationally and Insurance Ireland surveys its members to ascertain the extent to which flood insurance cover is available in these areas. The results of the most recent survey indicated that 83% of property insurance policies in defended areas include cover against flood risk.</p> <p>The decision on whether to offer insurance, the levels of premiums charged and the policy terms applied are matters for individual insurers. Insurance companies make commercial decisions on the provision of insurance cover based on their assessment of the risks they would be accepting on a case-by-case basis. The insurance industry has its own flood modelling tools for assessing the level of risk to individual properties and it has highlighted to the OPW that it does not use the OPW Flood Maps to inform its flood modelling.</p> <p>Any person with an insurance-related query or complaint can contact Insurance Ireland's Insurance Information Service (01 676 1914 or <a href="mailto:iis@insuranceireland.eu">iis@insuranceireland.eu</a>). In addition, the Financial Services Ombudsman (1890 88 20 90) deals independently with unresolved complaints from consumers about their individual dealings with all financial service providers.</p>
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25	<b>Channel Maintenance</b>	Flooding issues have been reported due to a lack of maintenance of river channels and streams.	<p>Channel maintenance does not provide the standard of protection against significant flood risk that has been the focus of the CFRAM Programme. It does however assist with the flow of water in the rivers and can reduce barriers to water reaching the sea.</p> <p>The OPW has a statutory duty to maintain the channels (and embankments) that form part of an Arterial Drainage Scheme, and has a rolling annual programme of maintenance.</p> <p>The local authorities have a statutory duty to maintain channels that form part of a Drainage District.</p> <p>For river channels and streams that do not form part a Scheme as above, the OPW has published some guidance for land owners whose lands adjoin watercourses. This guidance is available <a href="http://www.flooding.ie">www.flooding.ie</a></p>
26	<b>Channel Maintenance - Shannon</b>	Maintenance is required for the River Shannon and its tributaries.	The Shannon State Agency Flood Risk Coordination Group has completed targeted maintenance works on the River Shannon within seasonal environmental windows and licences. The Group took a major decision to consider developing a plan for a strategic maintenance programme on the River Shannon. The Group has established a sub-committee that is focused and actively working to develop a maintenance plan that will help prevent deterioration of the river channel. Its work is considering legal and environmental issues, as well as the feasibility of this investment.
27	<b>Maintenance of Flood Defences</b>	It is proposed that the Plans should include for the maintenance of existing flood risk management assets.	The OPW has a statutory duty under the Arterial Drainage Act, 1945, and the Amendment of the Act, 1995, to maintain the Arterial Drainage and the Flood Relief Schemes, and the Plans do not amend these responsibilities. Other flood risk management infrastructure is maintained by the bodies that are responsible for those assets. The relevant bodies have been informed of observations received on the maintenance of flood risk management infrastructure not under the responsibility of the OPW.

28	<b>IPP / Relocation</b>	Submissions noted the need for the IPP and Voluntary Home Relocation Schemes, and queried when these would be implemented.	<p><b>IPP:</b></p> <p>Individual Property Protection can be effective in reducing the damage to the contents, furniture and fittings in a house or business, but are not applicable in all situations (for example, they may not be suitable in areas of deep or prolonged flooding, or for some types of property with pervious foundations and flooring). Property owners considering the use of such methods should seek the advice of an appropriately qualified expert on the suitability of the measures for their property, and consider the possible requirements for environmental assessment.</p> <p>While there may be some tax relief for some works on homes that are aimed at preventing the risk of flooding, the Interdepartmental Flood Policy Coordination Group is considering the administrative arrangements, for consideration by Government, of any appropriate assistance to home owners, where it is suitable to install Individual Property Protection measures for their property. Its work is being informed by the Plans and the two pilot projects that were announced by Government in January 2016 in Kilkenny (Thomastown and Graiguenamanagh) and Mayo (Crossmolina).</p> <p><b>Relocation:</b></p> <p>In extreme circumstances, the flood risk to a home may be such that continuing to live in the area is not acceptable to the owners, and it may not be feasible to take measures to reduce the flooding of the area. In such cases, the homeowner may choose to relocate.</p> <p>In response to the floods of Winter 2015/2016, the Government has agreed to the administrative arrangements for a once off voluntary homeowner relocation scheme, to provide humanitarian assistance for those worst affected by that flood event.</p>
29	<b>SUDS / Runoff</b>	A National SUDS policy is required. Runoff from upstream development needs to be controlled / managed.	Sustainable Urban Drainage Systems (SuDS) can play a role in reducing local surface water flooding and in managing run-off from new developments to surface water drainage systems, reducing the impact of such developments on flood risk downstream, as well as improving water quality and contributing to local amenity. The potential for SUDS has been considered for the AFAs under the CFRAM Programme, with advice and findings provided to the relevant local authorities. A measure is included in the Plans for the planning authorities to seek to reduce the extent of hard surfacing and paving and require, subject to the outcomes of environmental assessment, the use of sustainable drainage techniques, in accordance with the Guidelines on the Planning System and Flood Risk Management (2009).

30	<b>Inappropriate planning or development</b>	Land that is prone to flooding has been zoned for development, and/or development is being permitted in flood prone areas.	<p>An important measure set out in the Plans is the ongoing application of the Guidelines on the Planning System and Flood Risk Management, developed jointly by the OPW and Department of Housing Planning and Local Government, published in 2009 under Section 28 of the Planning Acts. These Guidelines form a robust and transparent framework for the consideration of flood risk in planning and development management to avoid inappropriate development in flood-prone areas. The Guidelines aim, through the definition of Flood Zones and the vulnerability of land use / development types, to avoid inappropriate development in flood prone areas.</p> <p>The application of these Guidelines should be facilitated and informed by the flood mapping that has been developed through the National CFRAM Programme to help avoid the creation of further flood problems around the country.</p> <p>The OPW provides an ongoing advisory service to the planning authorities in relation to the consideration of flood risk in forward planning, and the appropriate use of the CFRAM flood maps and other relevant information.</p> <p>It should be noted however that planning and development management decisions are a matter for the relevant planning authorities. The relevant local authorities have been informed of observations received relating to planning and development management.</p>
31	<b>Inappropriate planning or development</b>	Development is being unnecessarily restricted on the basis of flood risk.	<p>While the Guidelines on the Planning System and Flood Risk Management (2009) aim to avoid inappropriate development in flood prone areas, it is recognised that the growth and redevelopment of urban centres needs to occur in and immediately around the existing urban centre. A Justification Test was included in the Guidelines to permit, subject to a series of stringent tests, such growth and redevelopment where necessary in a controlled manner. It is emphasised that the Justification Test in the Guidelines applies only to Urban Centres, and should not be used to justify otherwise inappropriate development on the outskirts of communities (e.g., new residential developments in Flood Zone A or B).</p> <p>It should be noted however that planning and development management decisions are a matter for the relevant authorities. The relevant local authorities have been informed of observations received relating to planning and development management.</p>

32	<b>Non-State Flood Relief Measures</b>	Some proposed flood risk management measures that are planned to be implemented by private / commercial entities have not been included in the Plans.	The Plans set out the strategies and proposed actions of the State to effectively manage flood risk into the future. Private and commercial entities, including state-owned commercial companies, may take other flood risk management measures to protect their own assets and processes. However, such measures should be assessed to ensure that the measures do not increase flood risk up- or down-stream.
33	<b>Flood Forecasting</b>	A number of submissions proposed the implementation of flood forecasting systems.	<p>The Government decided in January 2016 to establish a National Flood Forecasting and Warning Service. The service will deal with flood forecasting from fluvial (river) and coastal sources and when established it will involve the issuing of flood forecasts and general alerts at both national and catchment scales.</p> <p>The service will take five years of planning and testing to be fully operational and will be of significant benefit to communities and individuals to prepare for and lessen the impact of flooding. Pending the delivery of this service, there are a range of local, interim and proxy forecasting systems and information available, including alerts provided by the European Flood Awareness System.</p>
34	<b>Non-Flood risk Issues Issues for Other Authorities</b>	<p>Issues related to matters other than flood risk have been raised.</p> <p>Issues that need to be addressed by other Authorities.</p>	<p>The CFRAM Programme, and the Plans, are focused on flood risk management issues. While wider issues are taken into account, the Plans are not the appropriate vehicle to deal with / enhance related matters such as water supply, water quality, hydro-electric schemes or other matters not directly related to flood risk.</p> <p>Issues that were raised during the formal consultation that are matters for other authorities have been brought to the attention of those authorities (such as specific planning matters or issues related to urban storm water drainage).</p>
35	<b>Timelines for Implementation</b>	Queries were raised on the timeline for the Implementation of the Proposed Measures, with calls for the prioritisation of certain areas.	<p>It will not be possible to advance all measures immediately, and so proposed schemes have to be prioritised. The Government's National Development Plan (NDP) 2018 – 2027 includes a total funding allocation of €940m over the lifetime of the Plan to underpin the delivery of the flood relief capital works programme. The capital funding allocation for flood relief will rise to €100m per year by 2021.</p> <p>A prioritised approach to the delivery of flood relief schemes, proposed in the Plans, is being adopted to achieve greatest benefit in return to the Government's investment. The Prioritisation has been applied on a regional basis.</p>



36	<b>Request for Contact at Next Stage</b>	Requests have been submitted to participate in consultation held for the next stage of development of the proposed measures.	Consultation events held when the relevant measure is progressed to the next stage of development will be advertised locally, and will be open to all members of the public and stakeholders.
37	<b>Compensation</b>	Queries as to whether land owners might receive compensation due to the publication of the flood maps and/or Plans, or delays in implementing the proposed measures.	<p>The flood maps and Plans do not create flood risk, but rather identify where it is understood to exist and what has been, is being or is proposed to be done to manage and reduce that risk. As such, no compensation is provided on foot of publication of the flood maps or the Plans.</p> <p>Property and land owners that are affected by the construction of a flood relief scheme may, at that time, be entitled to compensation.</p>

## Environmental Issues

E1	<b>Coordination with the Water Framework Directive (WFD) / River Basin Management Plans</b>	Concerns were raised in relation to the degree and effectiveness of the coordination.	<p>The OPW has been coordinating with the Environmental Protection Agency (EPA) and the Dept. of Housing, Planning and Local Government as set out in Section 6.5 of the Plans. This has included bi-lateral meetings, cross-representation between the OPW and the WFD management groups, the exchange of relevant information and some initial work on the coordination of measures.</p> <p>The OPW will continue to work with the EPA and other agencies implementing the WFD to identify, where possible, measures that will have benefits for both WFD and flood risk management objectives, such as natural water retention measures, and to identify and address measures that may otherwise cause conflict between the objectives of the two Directives.</p>
E2	<b>Lack of a Catchment-based Approach</b>	The full potential of taking an integrated catchment management approach has not been realised in the Plan as there has been a lack of full coordination with the WFD and integration and alignment with the development of the River Basin Management Plan.	<p>Historically, the assessment and development of flood relief schemes has been focused on individual communities. Under the CFRAM Programme, the hydrological and hydraulic analysis, and the assessment of the potentially feasible measures, has been undertaken at multiple spatial scales of assessment, from the regional level, to catchment- and sub-catchment level, down to the individual community. By way of example, the potential range of measures considered has included upstream storage of flood waters that could provide benefits to multiple communities downstream. However, such measures are often not technically viable due to the volume of flood waters that would need to be stored.</p> <p>The OPW will continue to work with the EPA and other agencies to identify, where possible, measures that will have benefits for the WFD, biodiversity and potentially other objectives as well as flood risk management objectives, such as natural water retention measures.</p>
E3	<b>Consideration of Existing Natural Defences</b>	Concerns were raised in relation to the need to protect or enhance natural flood defences, such as sand dunes and flood marshes.	The assessment of flood risk under the CFRAM Programme has incorporated existing defences, including natural land forms, within the hydraulic modelling, which is dynamic (as opposed to assuming constant flows or water levels) and hence would replicate the attenuation provided by natural storage areas. The need for enhancement of such features can be considered in greater detail at the next stage of development of the measures.

E4	<b>Negative Impacts on Objectives of the Water Framework Directive (WFD)</b>	Concerns were raised that the proposed measure may have negative impacts on WFD objectives.	<p>An assessment of the most appropriate measures to reduce or manage the flood risk within each catchment and each of the 300 Area for Further Assessment (AFA) around Ireland has been undertaken. One aspect of the assessment looked at the potential impact of possible measures on water bodies achieving WFD objectives. This assessment has determined which measures might cause impact in terms of the objectives of the WFD, varying in scale and duration. It has also considered the overall impacts and benefits to the environment and to society across all objectives as part of the consideration of viable alternatives for managing flood risk for the community.</p> <p>The assessment at the project-level will also enable a detailed appraisal of the potential impacts of the final measure on the water body hydro-morphology, hydrological regime and status to be undertaken including, where necessary (if impacts can not be avoided or mitigated), a detailed appraisal under Article 4(7) of the WFD (derogation related to deterioration caused by new modifications). This will build on the initial work done during the preparation of the Plans.</p>
E5	<b>Need for Coordination and Oversight in Future Governance Arrangements</b>	There is a requirement that the OPW 'promote the co-ordinated implementation of the Directive across river basin districts or other units of management'. It is unclear how this coordination will be achieved.	<p>Management structures were put in place for the implementation of the Flood Policy Review (2004) and of the CFRAM Programme, which have included the establishment of the Inter-Departmental Flood Policy Coordination Group, the National CFRAM Steering Group and Study / Regional Steering and Progress Groups.</p> <p>The Inter-Departmental Flood Policy Coordination Group will continue to monitor progress in the implementation of the Flood Policy Review (2004), including the delivery of the proposed measures set out in the Plans. It will also consider the evidence and information available from the CFRAM Programme to inform its proposals for further assistance and support for additional non-structural measures.</p>
E6	<b>Independent Monitoring of Mitigation Measures and Planning Conditions</b>	It is suggested that independent monitoring needs to be undertaken to ensure appropriate implementation and monitoring of mitigation measures and planning consent conditions.	The authority responsible for the progression of the measure (typically the OPW or the local authorities) will be responsible for ensuring that all relevant regulation is complied with through their respective powers (typically the Arterial Drainage Act for OPW-lead measures and Part 8 Planning for local authority-lead measures). This responsibility includes ensuring that monitoring complies with any consent requirements.

E7	<b>Resource and Expertise Availability in Local Authorities</b>	The issue was raised of insufficient resourcing of staff with ecological expertise at the local authority level to ensure adequate assessment and monitoring of projects.	<p>It is foreseen that many of the measures set out in the Plan that will require further ecological assessment and monitoring will be progressed by the OPW, which will ensure that all regulatory requirements are appropriately met.</p> <p>It is beyond the scope of the Plan to determine local authority resource requirements, but capacity for effective delivery, and in meeting all regulatory requirements, will be a pertinent factor in determining implementation routes for each measure.</p>
E8	<b>Over-Emphasis on Structural Measures / Lack of Natural Water Retention Measures (NWRM)</b>	Concerns were expressed over the lack of assessment of land use management and Natural Water Retention Measures	<p>Prior to the 1995 Amendment of the Arterial Drainage Act of 1945, the focus in Ireland for the management of excess water was on arterial drainage and rural land protection to improve agricultural production. The management of flood risk for communities in urban areas is hence a relatively recent development in Ireland compared to most other European countries. As a result, there are many communities around Ireland that are exposed to flooding.</p> <p>This first cycle of Plans has sought to address this core risk, and identifies feasible measures to reduce the level of risk to the national standards where possible, appropriate and viable. Such proposed measures typically involve physical works, such as protection structures.</p> <p>It is recognised that catchment land use management and natural water retention measures (NWRMs) can contribute, in certain circumstances, to the reduction in flood flows downstream, and that such measures can have multiple broader benefits in terms of biodiversity, carbon sequestration, water quality, amenity, etc. However, it is widely recognised that such measures will not provide substantial benefits in all circumstances, will require extensive landowner engagement, and would benefit from further research to increase our understanding of their effectiveness. It was not possible at the level of analysis of the CFRAM Programme to determine in detail what land use management or NWRMs would be effective and appropriate for all catchments and AFAs.</p> <p>The OPW will work with the EPA and other agencies to identify, where possible, measures that will have benefits for both WFD and flood risk management objectives, such as NWRMs, and also for biodiversity and potentially other objectives. This will form part of the project-level assessment required to progress proposed physical works and flood relief schemes towards planning or Exhibition and confirmation (see Section 8.1), where potential works may be amended or enhanced by the introduction of natural water retention and similar measures. The work will include seeking, and where possible implementing, pilot studies and applications in coordination with the WFD Local Authority Waters and Communities Offices and other relevant agencies. It is anticipated that this is most likely to be achieved in areas where there are pressures on the ecological status of a water body in a sub-catchment where there is also an identified potentially significant flood risk (i.e., an AFA).</p>

E9	<b>Culverts</b>	Concern over the sustainability of culverts as proposed measures.	Typically, the measures proposed in the Plans only propose culverts as replacements for older, smaller, or unsuitable crossings. New culverts are rarely proposed in place of watercourses that are currently open channels. All measures, however, including those that propose incorporating culverts, are assessed and scored (inter alia) on the basis of their adaptability to increased flows resulting from climate change, so the sustainability of such measures has been explicitly considered as part of the CFRAM process. Furthermore, the sizing of the culverts will be reviewed in detail at detailed scheme development to ensure adequate conveyance (under current and future flow scenarios), in line with Section 50 of the Arterial Drainage Act 1945.
E10	<b>Lack of Regulatory Controls on Physical Modifications</b>	The lack of regulatory controls on physical modifications to water bodies.	The development of regulatory controls for physical modifications to (and abstractions from) water-bodies is a matter to be addressed under the implementation of the Water Framework Directive (WFD). Notwithstanding this, the proposed measures set out in the Plans have been assessed against a range of environmental objectives as part of the Multi-Criteria Analysis, and the outcomes of this process will identify potential impacts of physical modifications, which in turn can inform the consideration of alternatives at the next stage of progression of the measures and, where relevant, appropriate mitigation measures and the potential need to apply Article 4(7) of the WFD.
E11	<b>Ensuring EIA / AA at Project Level</b>	Clarify whether all the proposed measures will be subject to an EIA assessment and on what basis is this decided and by whom? Will some measures be classified as Exempted Development?	The Plan does not confer approval or permission for the installation or construction of any physical works. The progression of proposed measures set out in the Plan will be subject to and should comply with all relevant regulation, including undertaking screening for EIA and AA where relevant and then as appropriate, full project-level EIA and AA. The authority responsible for the progression of the measure (typically the OPW or the local authorities) will be responsible for ensuring that all relevant regulation and consent requirements is complied with or met through their respective powers.
E12	<b>Failure to Demonstrate Adequacy of Mitigation Measures</b>	Concerns were raised over the general approach to plan-level mitigation in the NIS.	It is important to note that approval of the Plan does not confer consent to construct physical measures, and that the proposed measures are not definitive and final, and alternatives / amendments will be considered at the project-level level of assessment, including as appropriate project-level AA and EIA. The relevant mitigation measures therefore can not be defined in detail at this level of assessment.  Notwithstanding the above, further detail on standard or potentially required mitigation measures is provided in the Plans and environmental assessments / statements.

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