

FLOOD RISK STATEMENT

FOR

IRELAND'S EU JUST TRANSITION FUND PROGRAMME

for: Eastern and Midland Regional Assembly

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Section 1 Introduction and Policy Background

1.1 Introduction

The Eastern and Midland Regional Assembly has prepared Ireland's EU Just Transition Fund (JTF) Programme 2021-2027. This Flood Risk Statement provides a consideration of flood risk for the Programme and the information contained within will be useful in the implementation of the Programme.

Flooding is the overflowing of water onto land that is normally dry. It can arise from rivers, the sea and estuaries, heavy rain, groundwater and the failure/overwhelming of infrastructure. It is an environmental phenomenon which, as well as causing economic and social impacts, could in certain circumstances pose a risk to human health.

This Flood Risk Statement outlines the need for development proposals to comply with *The Planning System and Flood Risk Management - Guidelines for Planning Authorities* (Department of the Environment, Heritage and Local Government and Office of Public Works, 2009) and associated *Circular PL 2/2014* (Department of the Environment, Community and Local Government) and includes details on the approach to flood risk management that should be followed by prospective applicants.

1.2 Ireland's Draft EU JTF Programme

The European Union's Just Transition Fund (EU JTF) is a newly established fund under the framework of EU cohesion policy and is being rolled out in all EU Member States. The Fund is governed by the EU Just Transition Fund Regulation (Regulation 2021/1056) and the EU Common Provisions Regulation (Regulation 2021/1060), which set out common rules for all EU cohesion policy funds.

The Just Transition Fund is designed to assist communities across Europe to meet the challenges of the green transition, in line with the objective of achieving EU climate neutrality by 2050 in an effective and fair manner – ensuring that nobody is left behind.

Member States must therefore concentrate the proposed investments in their territorial just transition plans on specific regions or parts of regions and justify the selection of those regions based on the economic and social impacts resulting from the transition, in particular with regard to job losses.

The wider Midlands region has been proposed as the territory for investment under the Programme. This region comprises East Galway, North Tipperary, Longford, Laois, Offaly, Westmeath, West Kildare and Roscommon.

The Programme includes (as an annex) a Draft Territorial Just Transition Plan that must address a number of areas, including:

- Outlining the national climate transition process;
- Identifying the most negatively affected territory and the economic, social and territorial impact of the transition;
- Identifying the development needs and objectives of that territory by 2030 consistent with other national, regional or territorial strategies and plans;
- Setting out the types of investments envisaged; and
- Outlining the proposed governance mechanisms for the implementation of the EU JTF.

The Department of the Environment, Climate and Communications has overall policy responsibility for the EU Just Transition Fund in Ireland. The Department is being supported by the Eastern and Midland Regional Assembly (EMRA), which will be the Managing Authority – a requirement of the EU funds management system.

Key priorities and associated specific objective under Ireland's EU JTF Programme include:

- Priority: JTF1. Generating employment for former peat communities by investing in the diversification of the local economy.
 - Specific objective: JSO8.1. Enabling regions and people to address the social, employment, economic and environmental impacts of the transition towards the Union's 2030 targets for energy and climate and a climate-neutral economy of the Union by 2050, based on the Paris Agreement (JTF).
- Priority JTF2. Supporting the rehabilitation and restoration of degraded peatlands and regeneration and repurposing of industrial heritage assets.
 - Specific objective: JSO8.1. Enabling regions and people to address the social, employment, economic and environmental impacts of the transition towards the Union's 2030 targets for energy and climate and a climate-neutral economy of the Union by 2050, based on the Paris Agreement (JTF).
- Priority: JTF3. Providing former peat communities with smart and sustainable mobility options to enable them to benefit directly from the green transition.
 - Specific objective JSO8.1 I. Enabling regions and people to address the social, employment, economic and environmental impacts of the transition towards the Union's 2030 targets for energy and climate and a climate-neutral economy of the Union by 2050, based on the Paris Agreement (JTF).

1.3 Flood Risk Management Policy

1.3.1 EU Floods Directive

The European Directive 2007/60/EC on the assessment and management of flood risk aims to reduce and manage the risks that floods pose to human health, the environment, cultural heritage and economic activity. The Directive applies to inland waters as well as all coastal waters across the whole territory of the EU. The Directive requires Member States to:

- Carry out a preliminary assessment by 2011 in order to identify the river basins and associated coastal areas where potential significant flood risk exists (preliminary mapping was prepared and a list of Areas for Further Assessment finalised in 2012).
- Prepare flood extent maps for the identified areas (finalised in 2016 for inclusion in Flood Risk Management Plans – see below).
- Prepare flood risk management plans focused on prevention, protection and preparedness. These plans are to include measures to reduce the probability of flooding and its potential consequences. These Plans were adopted in 2018.

Implementation of the EU Floods Directive is required to be coordinated with the requirements of the EU Water Framework Directive and the current National River Basin Management Plan.

1.3.2 National Flood Policy

Historically, flood risk management focused on land drainage for the benefit of agricultural improvement. With increasing urbanisation, the Arterial Drainage Act, 1945, was amended in 1995 to permit the Office of Public Works (OPW) to implement localised flood relief schemes to provide flood protection for cities, towns and villages.

In line with changing national and international paradigms on how to manage flood risk most effectively and efficiently, a review of national flood policy was undertaken in 2003-2004. The review was undertaken by an Inter-Departmental Review Group, led by the Minister of State at the Department of Finance with special responsibility for the OPW. The Review Group prepared a report that was put to Government, and subsequently approved and published in September 2004 (Report of the Flood Policy Review Group, OPW, 2004).

The scope of the review included a review of the roles and responsibilities of the different bodies with responsibilities for managing flood risk, and to set a new policy for flood risk management in Ireland into the future. The adopted policy was accompanied by many specific recommendations, including:

- Focus on managing flood risk, rather than relying solely on flood protection measures aimed at reducing flooding;
- Taking a catchment-based approach to assess and manage risks within the whole-catchment context; and
- Being proactive in assessing and managing flood risks, including the preparation of flood maps and flood risk management plans.

1.3.3 National CFRAM Programme

The national Catchment Flood Risk Assessment and Management (CFRAM) programme commenced in Ireland in 2011. The CFRAM Programme delivers on core components of the National Flood Policy, adopted in 2004, and on the requirements of the EU Floods Directive. The Programme has been implemented through CFRAM studies that have been undertaken for each of the river basin districts in Ireland.

The CFRAM Programme comprises three phases as follows:

- The Preliminary Flood Risk Assessment¹ (PFRA) mapping exercise, which was completed in 2012;
- The CFRAM Studies and parallel activities, with Flood Risk Management Plans finalised in 2018; and
- Implementation and Review.

The Programme provides for three main consultative stages as follows:

- Consultation for the PFRA mapping that was adopted in 2012;
- Consultation for Flood Extent mapping, that was finalised in 2016 for inclusion in Flood Risk Management Plans; and
- Consultation for Flood Risk Management Plans, that were adopted in 2018.

The OPW is the lead agency for flood risk management in Ireland. The coordination and implementation of Government policy on the management of flood risk in Ireland is part of its responsibility. The European Communities (Assessment and Management of Flood Risks) Regulations 2010 (S.I. No. 122) identifies the Commissioners of Public Works as the 'competent authority' with overall responsibility for implementation of the Floods Directive 2007/60/EC.

1.3.4 Flood Risk Management Guidelines

In 2009, the OPW and the then Department of the Environment and Local Government (DEHLG) published Guidelines on flood risk management for planning authorities entitled *The Planning System and Flood Risk Management - Guidelines for Planning Authorities*. The Guidelines introduce mechanisms for the incorporation of flood risk identification, assessment and management into the planning process. Implementation of the Guidelines is intended to be achieved through actions at the national, regional, local authority and site-specific levels. Planning authorities and An Bord Pleanála are required to have regard to the Guidelines in carrying out their functions under the Planning Acts.

The Guidelines were amended by Circular PL 2/2014 (Department of the Environment, Community and Local Government) that provides advice on the use of OPW flood mapping in assessing planning applications and clarifies some advice from the Guidelines.

¹ The PFRA identified the settlements/areas that are most at risk from significant flooding and mapped the areas of risk. Where the flood risk is of particular concern nationally, these settlements/areas are identified as Areas for Further Assessment (AFAs).

Section 2 Relevance of Flood Risk to the Programme

2.1 Effects that can occur as a result of flooding

Land use developments and activities have the potential to increase the risk of flooding. Some of the effects of flooding are identified in Table 1.

Table 1 Potential effects that may occur as a result of flooding

| Tangible Effects | Intangible Human and Other Effects |
|--|------------------------------------|
| Damage to buildings (houses) | Loss of life |
| Damage to contents of buildings | Physical injury |
| Damage to new infrastructure e.g. roads | Increased stress |
| Loss of income | Physical and psychological trauma |
| Disruption of flow of employees to work causing knock on effects | Increase in flood related suicide |
| Enhanced rate of property deterioration and decay | Increase in ill health |
| Long term rot and damp | Homelessness |
| | Loss of uninsured possessions |

Consequences of flooding depend on the hazards associated with the flooding (e.g. depth of water, speed of flow, rate of onset, duration, wave-action effects, water quality), and the vulnerability of people, property and the environment potentially affected by a flood (e.g. the age profile of the population, the type of development, presence and reliability of mitigation measures etc.).

2.2 Potential Interactions between the Programme and flood risk

Although Ireland’s Draft EU JTF Programme is a strategic, high-level document that contains limited detail on the type, scale and locations of developments and activities that will be funded, it can be determined that the Programme has, in-combination with the wider-planning and consent granting framework, the potential to interact with flood risk.

If unmitigated, implementation of the Programme would have the potential to increase flood risk as a result of land use developments and activities within and outside of flood plains. However, measures will be followed to ensure that such issues are appropriately mitigated (see Section 3).

Through the rehabilitation and restoration of degraded peatlands, the Programme has the potential to contribute towards natural flood management and reduce flood risk for vulnerable communities and assets².

² Through increased storage and reduction in conveyance, thereby delaying and reducing flood peaks (International Union for Conservation of Nature, 2019, “Peatland Catchments and Natural Flood Management”)

Section 3 Approach to Flood Risk Management

3.1 Overview

Although the Ireland's Draft EU JTF Programme is a strategic, high-level document that contains limited detail on the type, scale and locations of developments and activities that will be funded, an approach to flood risk management can be outlined to ensure that implementation of the Programme provides for adequate protection of the environment and communities.

All proposals for land use developments and activities under the Programme shall be accompanied by a Flood Risk Assessment (FRA) to ensure that flood risk considerations are considered to an appropriate degree and at the relevant stage of decision making. This may include Screening for FRA, in order to identify whether more detailed consideration of flood risk is warranted.

FRAs shall be guided by and, where appropriate, demonstrate compliance with the requirements contained in the Flood Risk Management Guidelines and shall consider any potential cumulative effect of multiple developments. FRAs shall ensure that any potential risk to vulnerable communities and assets is managed in line with the Guidelines.

The scope of the FRA and the stages of FRA required will depend on the type and scale of development or activities and the vulnerability of particular locations.

3.2 Consultation with the Office of Public Works

The OPW shall be consulted with on individual projects as relevant and appropriate, including projects for the rehabilitation and restoration of degraded peatlands and projects in the vicinity of areas or waterbodies for which the OPW are responsible or have flood risk management measures planned.

3.3 Core Objectives

The core objectives of the Flood Risk Management Guidelines are to:

- Avoid inappropriate development in areas at risk of flooding;
- Avoid new developments increasing flood risk elsewhere, including that which may arise from surface water run-off;
- Ensure effective management of residual risks for development permitted in floodplains;
- Avoid unnecessary restriction of national, regional or local economic and social growth;
- Improve the understanding of flood risk among relevant stakeholders; and
- Ensure that the requirements of EU and national law in relation to the natural environment and nature conservation are complied with at all stages of flood risk management.

FRAs undertaken under the Programme shall demonstrate how proposals would contribute towards the achievement of these objectives.

3.4 Stages of Flood Risk Assessment

The Flood Risk Management Guidelines recommend a staged approach to flood risk assessment that covers both the likelihood of flooding and the potential consequences. The stages of appraisal and assessment are:

Stage 1 Flood risk identification – to identify whether there may be any flooding or surface water management issues related to either the area of Regional Spatial and Economic Strategies, Development Plans and LAP's or a

proposed development site that may warrant further investigation at the appropriate lower-level plan or planning application levels.

Stage 2 Initial flood risk assessment – to confirm sources of flooding that may affect a Plan area or proposed development site, to appraise the adequacy of existing information and to scope the extent of the risk of flooding which may involve preparing flood zone maps. Where hydraulic models exist the potential impact of a development on flooding elsewhere and of the scope of possible mitigation measures can be assessed. In addition, the requirements of the detailed assessment are scoped.

Stage 3 Detailed flood risk assessment – to assess flood risk issues in sufficient detail and to provide a quantitative appraisal of potential flood risk to a proposed or existing development or land to be zoned, of its potential impact on flood risk elsewhere and of the effectiveness of any proposed mitigation measures.

3.5 Sources of Information

The existence of flood risk across the country is illustrated by various sources of information on historical flooding events – including those available from the OPW, the lead Authority on flooding in the country. In addition to this mapping of historic flood risk indicators, there is predictive, modelled mapping available, including mapping from the OPW. Compliance with the requirements of the Flood Risk Management Guidelines is currently based on emerging data.

Sources of information that may be used by FRAs and lower tiers of decision making include the following:

- National CFRAM Programme Flood Hazard and Risk Mapping (fluvial and coastal) and Flood Risk Management Plans;
- National Indicative Fluvial Mapping;
- National Coastal Flood Hazard Mapping;
- Preliminary Flood Risk Assessment (fluvial, pluvial and groundwater) maps;
- National Coastal Protection Strategy Study flood and coastal erosion risk maps;
- Predictive and historic flood maps, and Benefiting Lands Maps, such as those at www.floodmaps.ie;
- River Basin Management Plans and reports;
- Previous Strategic Flood Risk Assessments;
- Consultation with Local Authorities who may be able to provide knowledge on historic flood events and local studies etc.;
- Topographical maps, in particular digital elevation models produced by aerial survey or ground survey techniques;
- Information on flood defence condition and performance;
- Local libraries and newspaper reports;
- Interviews with local people, local history/ natural history societies etc.;
- Walkover survey to assess potential sources of flooding, likely routes for flood waters and the site's key features, including flood defences, and their condition; and
- National, regional and local spatial plans, such as the National Planning Framework, Regional Spatial and Economic Strategies, development plans and local area plans provide key information on existing and potential future receptors.

3.6 Flood Zones

Flood risk is an expression of the combination of the flood probability or likelihood and the magnitude of the potential consequences of the flood event. It is normally expressed in terms of the following relationship:

$$\text{Flood risk} = \text{Likelihood of flooding} \times \text{Consequences of flooding}$$

Likelihood of flooding is normally defined as the percentage probability of a flood of a given magnitude or severity occurring or being exceeded in any given year. For example, a 1% Annual Exceedance Probability (AEP) indicates the severity of a flood that is expected to be exceeded on average once in 100 years, i.e. it has a 1 in 100 (1%) chance of occurring in any one year.

Consequences of flooding depend on the hazards associated with the flooding (e.g. depth of water, speed of flow, rate of onset, duration, wave-action effects, water quality) and the vulnerability of people, property and the environment potentially affected by a flood (e.g. the age profile of the population, the type of development and the presence and reliability of mitigation measures).

Flood zones are geographical areas within which the likelihood of flooding is in a particular range and they are a key tool in flood risk management within the planning process as well as in flood warning and emergency planning.

There are three types of flood zones defined for the purposes of the Flood Risk Management Guidelines:

- **Flood Zone A** – where the probability of flooding from rivers and the sea is highest (greater than 1% or 1 in 100 for river flooding or 0.5% or 1 in 200 for coastal flooding);
- **Flood Zone B** – where the probability of flooding from rivers and the sea is moderate (between 0.1% or 1 in 1000 and 1% or 1 in 100 for river flooding and between 0.1% or 1 in 1000 year and 0.5% or 1 in 200 for coastal flooding); and
- **Flood Zone C** – where the probability of flooding from rivers and the sea is low (less than 0.1% or 1 in 1000 for both river and coastal flooding). Flood Zone C covers all other areas that are not in zones A or B.

The delineation of flood zones can be informed by:

- Available historic and predictive (modelled) indicators of flood risk;
- Site walkovers and inspections by experienced professionals, which can help to identify: the potential source and direction of flood paths from fluvial and coastal sources; locations of topographic and built features that coincide with the flood indicator related boundaries; and vegetation associated with a high frequency of inundation; and
- New predictive (modelled) flood risk information generated for the purposes of the development proposal.

3.7 Climate Change

Vulnerability to flooding can be exacerbated by changes in both sea level rise and the severity and frequency of extreme weather events.

The Flood Risk Management Guidelines recommend that a precautionary approach to climate change is adopted due to the level of uncertainty involved in the potential effects.

Flood Risk Assessments for land use developments and activities under the Programme shall apply the precautionary approach recommended in the Guidelines and shall be informed by the advice on the expected impacts of climate change and the allowances to be provided for future flood risk management provided in the OPW's (2019) Flood Risk Management Climate Change Sectoral Adaptation Plan.

3.8 Avoidance, Substitution and Justification

The key principles of flood risk management set out in the Flood Risk Management Guidelines are to:

- Avoid development that will be at risk of flooding or that will increase the flooding risk elsewhere, where possible;
- Substitute less vulnerable uses, where avoidance is not possible; and
- Mitigate and manage the risk, where avoidance and substitution are not possible.

The above principles ensure that highly and less vulnerable development is not permitted in areas that are at elevated levels of flood risk, except where a Justification Test is passed demonstrating, *inter alia*, how flood risk will be mitigated and managed. The Justification Test, including the criteria that must be satisfied for the Test to be passed³, is outlined in Chapter 5 "Flooding and Development Management" of the Guidelines.

The Guidelines specify the vulnerability of several different types of developments which are classified as highly vulnerable development. The Justification Test would have to be passed for any proposal a Highly Vulnerable Development within, or partially within, Flood Zones A or B.

³ Box 5.1, page 48, Flood Risk Management Guidelines.

With respect to types of development that are not classified by the Guidelines, the Guidelines require that such developments are considered on their own merits. Vulnerability for such developments can be best assessed by those undertaking the FRA for the relevant proposed development - in consultation with the project planners and designers - considering: the potential susceptibility to damage to the development and/or the service being provided, in the event of the development being flooded; and the potential significance of the damage and/or service.

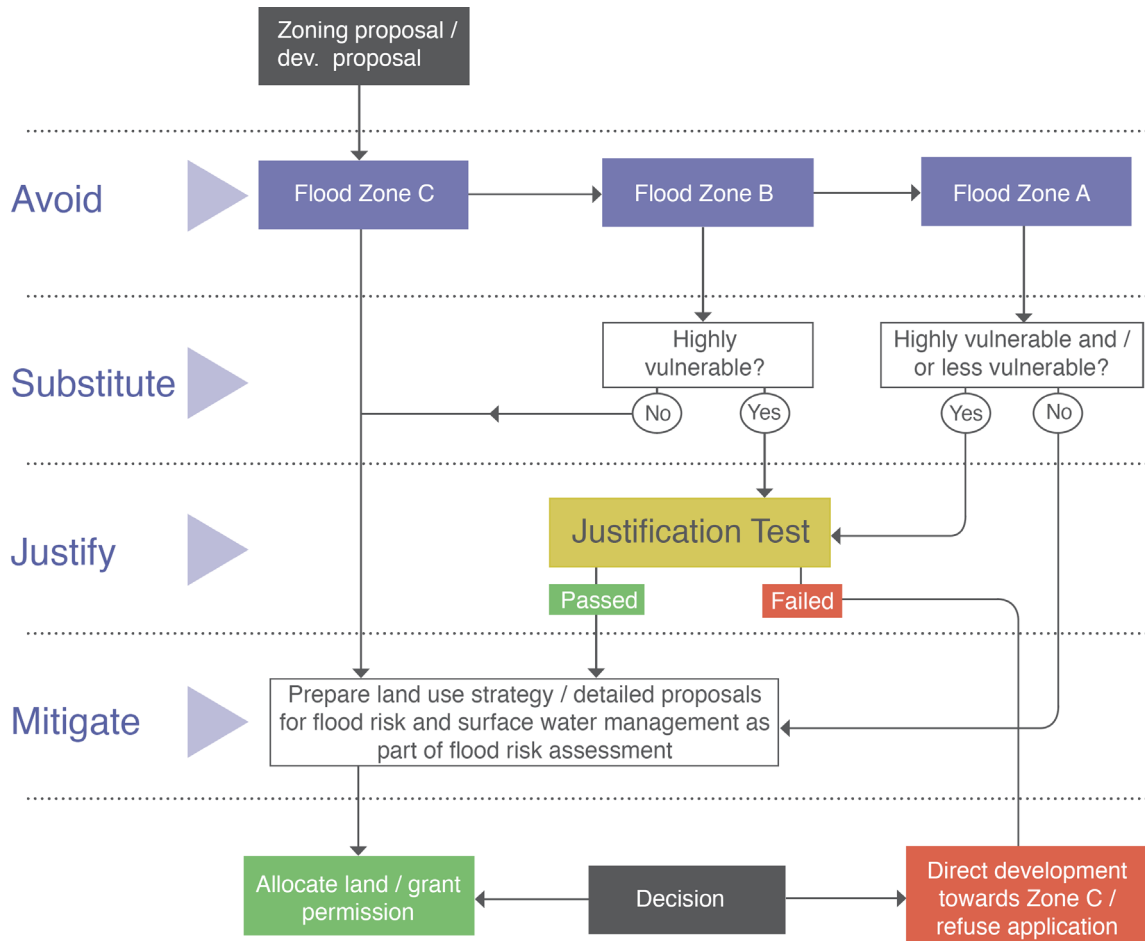


Figure 1 Sequential approach mechanism in the planning process⁴

Table 2 identifies the appropriateness of development belonging to each vulnerability class within each of the flood zones. This table also identifies the instances in which the Justification Test should be undertaken. Where the criteria of the Justification Test are not satisfied, development cannot be proceeded with.

Table 2 Appropriateness of development within Flood Zones

| | Flood Zone A | Flood Zone B | Flood Zone C |
|--|--------------------|--------------------|--------------|
| Highly vulnerable development (including essential infrastructure) | Justification Test | Justification Test | Appropriate |
| Less vulnerable development | Justification Test | Appropriate | Appropriate |
| Water-compatible development | Appropriate | Appropriate | Appropriate |

⁴ Fig. 3.2, page 23, Flood Risk Management Guidelines.

Section 4 Conclusion

Implementation of Ireland's EU JTF Programme has the potential to interact with flood risk.

This Flood Risk Statement outlines the need for all proposals for land use developments and activities under the Programme to be accompanied by a Flood Risk Assessment to ensure that flood risk considerations are considered to an appropriate degree and at the relevant stage of decision making.

The information contained within this document may be useful to lower-tier decision-making when information about specific projects is known.