



Greystones-Delgany & Kilcoole Local Area Plan Submission - Report

Who are you:	State Body
Name:	Office of Public Works
Email Address:	floodplanning@opw.ie
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Topic

Other topics for you to have your say on! - Environmental Assessment - Plan Implementation -Plan Delivery

Submission

Please see OPW flood risk management observations in letter attached.

File

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Planning Department,
Wicklow County Council,
County Buildings,
Station Road,
Wicklow Town,
A67 FW96

26/01/2024

RE: Issues Paper for the Greystones-Delgany and Kilcoole Local Area Plan

Dear Sir/Madam,

The OPW, as lead agency for flood risk management in Ireland, welcomes the opportunity to comment on the Issues Paper in the preparation of the Greystones-Delgany and Kilcoole Local Area Plan.

This submission is made specifically concerning flood risk management. Further submissions on the Issues Paper may be made by the OPW concerning the estate portfolio, heritage and other areas of responsibility.

Flood Risk Management (FRM) – General Guidance

Reference should be made to the Guidelines on the Planning System and Flood Risk Management (DHPLG/OPW, Nov 2009) issued under Section 28 of the Planning Acts, here after referred to as the 'Guidelines', and associated Circulars and Technical Appendices, to ensure that the key principles of flood risk management and sustainable planning are adopted. The sequential approach to managing flood risk within the planning system should be considered at the earliest stage, and where uncertainty exists the precautionary approach should be taken or further more detailed assessment carried out before decisions are made, rather than delegating decisions to the development management stage. The Guidelines set out a three Stage Flood Risk Assessment process for the Planning Authorities to identify whether flood risk may exist, and the degree to which it is an issue, and what assessment to a scale proportionate to the risk should then be carried out. The following is an overview of this three-stage process;

Stage 1 Flood risk identification – To identify whether there may be any flooding or surface water management issues related to a plan area or proposed development site that may warrant further investigation.

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 indicative 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 should be scoped.

Stage 3 Detailed flood risk assessment – To assess flood risk issues in sufficient detail to prepare Flood Zone maps based on a quantitative appraisal of potential flood risks to a proposed or existing development or to land that is being considered for zoning, and to identify potential impacts on flood risk elsewhere and of the effectiveness of any proposed mitigation measures.

In the preparation of the Draft Plan, the OPW recommends that particular attention is paid to the following sections of the Guidelines;

- Chapter 3 – The Planning Principles,
- Chapter 3 – The Sequential Approach, and definitions of Appropriate Development,
- Chapters 3 and 4 – The Plan-making Justification Test where it is intended to zone or otherwise designate land where there is a moderate or high probability of flooding, noting that the application of the Test should be supported by analysis to an appropriate level of detail.

The OPW advises that clear commitments and strategic objectives regarding flood risk and the principles of the Guidelines are included in the Draft Plan, and that persons with the relevant expertise review any flood risk assessments submitted to Wicklow County Council.

Sequential Approach

The sequential approach uses mapped flood zones alongside considerations of the vulnerability of different types of development to give priority to development in zones of low flood probability. Only if there are no reasonable sites available in zones of low flood probability should consideration be given to development in higher flood probability zones.

To demonstrate that the sequential approach has been applied, flood zone maps should show the proposed land use zonings overlaid with both Flood Zone A and B. These maps should be at a reasonable scale and be clearly legible.

Justification Test

Highly vulnerable development is not appropriate in Flood Zone A and B and less vulnerable development is not appropriate in Flood Zone A. In exceptional circumstances, development that is generally considered inappropriate because of its vulnerability to flooding may be justified as appropriate, on the grounds of proper planning and sustainable development provided that the risks are reduced and/or managed to an acceptable level. The Guidelines set out that land use zoning, informed by the suitable level of FRA and if necessary a Justification Test, should be concluded at the Plan-making Stage. Please note that the Justification Test applies only to the urban centre (i.e., the core area of a city, town or village which acts as a centre for a broad range of employment, retail, community, residential and transport functions), and would not be applicable to the periphery of urban areas.

There are three criteria of a Justification Test, all of which must be satisfied, with the third criteria being the flood risk assessment. This flood risk assessment must demonstrate that flood risk can be adequately managed and the use or development of the lands will not cause



unacceptable impacts elsewhere. Wicklow County Council should specify the structural or non-structural measures as prerequisites to development and provide information on the residual risks that would remain and how they might be managed. Inappropriate development that does not satisfy all criteria of the Justification Test should not be considered at the Plan-making stage.

Specific Flood Risk Management Issues for Consideration

The Flood Risk Management Plans and Flood Maps

The OPW, in conjunction with Wicklow and other County and City Councils, undertook the National Catchment-based Flood Risk Assessment and Management (CFRAM) Programme, through which Flood Risk Management Plans (FRMPs) and flood maps were prepared. The FRMPs were adopted by the Minister for Public Expenditure and Reform under the Floods Directive as transposed and form part of the Ireland 2040 National Development Plan. The implementation of these Plans is an objective of the Regional Spatial and Economic Strategies. It is noted that Wicklow County Council adopted the FRMPs relevant to its administrative area in June 2018. The CFRAM Programme included analysis of flood risk in Greystones & Environs and Kilcoole. In this context:

- The OPW requests that Wicklow County Council has full regard in the preparation of its Local Area Plan to the proposed development of flood relief schemes in Greystones & Environs and the potential scheme in Kilcoole, to ensure that zoning or development proposals support and do not impede or prevent the progression of these measures, and that a specific objective in this regard is included in the Draft Local Area Plan.
- The OPW has a statutory duty to maintain flood relief schemes completed under the Arterial Drainage Acts, 1945-1995. The local authority will also need to maintain any flood relief schemes implemented under its powers. The OPW requests that Wicklow County Council has full regard in the preparation of its Local Area Plan to the protection, and the need for maintenance, of these schemes. Wicklow County Council might also consider including a register of key flood risk infrastructure in the Local Area Plan where it would not otherwise be readily identified or protected from interference or removal.
- The flood maps produced under the National CFRAM Programme provide an important resource for plan making and consideration of development in relation to the implementation of the Guidelines, and planning authorities should have regard to these maps in both forward planning and development management. Planning authorities are reminded that where physical changes have occurred, where there is evidentially robust additional sources of information, such as site-specific flood risk assessments or where local, more recent surveys have been undertaken, this information can and should also be included in the making of spatial planning decisions.
- The flood maps, including those for potential future scenarios taking account of the possible impacts of climate change, are available to view on the OPW portal, www.floodinfo.ie, and may be obtained in GIS format by submitting a Data Request



Form, available from <https://www.floodinfo.ie/contact/> to OPW Data Management Section via email (flood_data@opw.ie).

Map Review Programme

It should be noted that in certain areas physical changes may have occurred since the preparation of the flood maps under the National CFRAM Programme that would affect the watercourse and floodplains, and hence the Flood Zones. In some areas, there may have been limited information recorded on past flood events against which to calibrate the models, and more recent flood events or other evidence that becomes available may indicate that the flood extents should be greater or lesser than those currently mapped. In other areas, very detailed local assessments may have been undertaken, such as for a site-specific flood risk assessment that could be more detailed, contemporary and/or robust than the flood maps that were developed through the National CFRAM Programme. The OPW will review, and where necessary update, the flood maps on an on-going basis.

National Indicative Flood Mapping

The updated indicative flood mapping outlined below were prepared for the purpose of an initial assessment, at a national level, to assist in the review of areas of potentially significant flood risk, as required by the EU 'Floods' Directive 2007/60/EC. They provide only an indication of areas that may be prone to flooding and are therefore not necessarily locally accurate. As such, while the indicative maps may be used for strategic-level assessments, they should not be used as the sole basis for defining the Flood Zones, or for making planning policy.

National Indicative Fluvial Mapping (NIFM)

Indicative fluvial flood maps have been prepared for all watercourses in the country with a catchment greater than 5km² through the National Indicative Fluvial Mapping (NIFM) project that was completed in 2020. These maps provide important flood hazard information for areas not covered under the National CFRAM Programme, and were developed using much more robust analysis than that used previously to prepare the PFRA indicative mapping. However, the maps did not make use of channel survey data, and do not take flood defences into account. These maps have been prepared for two potential future scenarios taking account of the potential impact of climate change; the Mid-Range future Scenario (MRFS) and High-End Future Scenario (HEFS), as well as for current conditions.

The OPW does not provide any predictive fluvial flood maps for catchments with an area of less than 5km² that were not included in the National CFRAM Programme. Planning Authorities may need to carry out their own Flood Risk Assessments to inform the definition of Flood Zones for these areas.

Further user guidance and details on the preparation of the NIFM outputs and mapping are available at: <https://www.floodinfo.ie/publications/?t=50>.

National Coastal Flood Hazard Mapping

The national scale coastal flood hazard maps published by OPW under the PFRA in 2012 were based on extreme coastal levels estimated under the Irish Coastal Protection Strategy



Study (ICPSS). These levels are now superseded by the outputs of the Irish Coastal Wave and Water Level Study (ICWWS).

The National Coastal Flood Hazard Mapping (NCFHM) 2021 project produced updated coastal flood hazard maps based on the ICWWS levels and these were published on the www.floodinfo.ie web portal. These coastal flood hazard maps, for both flood extent and depth, have been produced for a range of annual exceedance probabilities for the Present Day as well as for multiple Future Scenarios (including: MRFS, HEFS, H+EFS and H++EFS). PFRA coastal flood hazard maps are now superseded by the outputs of the NCFHM project.

The NCFHM maps show the worst case scenario as any flood defences potentially protecting the coastal floodplain are not taken into account, and so are in-line with the definition of the Flood Zones as set out in the Guidelines. The NCFHM maps are based on more up-to-date estimates of extreme coastal levels than those used for the CFRAM coastal maps (that were based on the ICPSS data). However the NCFHM project methodology extrapolated extreme coastal levels across a Digital Terrain Model to generate flood maps. The CFRAM coastal maps were generated from site-specific hydraulic models and adopted a more detailed methodology, using a temporally varying water level at the coastal boundary to represent the tidal cycle. As such the NCFHM maps may be considered in preference to the CFRAM with regards to the definition of the Flood Zones.

Further user guidance and details on the preparation of the NCFHM 2021 project outputs and mapping are available at: <https://www.floodinfo.ie/publications/?t=48>.

National Groundwater Flood Mapping

Probabilistic and historic groundwater flood maps have been prepared by Geological Survey Ireland through the 2016-2019 GWFlood Project. The Groundwater Flood Probability Maps show the probabilistic flood extent of groundwater flooding in limestone regions and are focussed primarily (but not entirely) on flooding at seasonally flooded wetlands known as turloughs. The Historic Groundwater Flood Map shows the observed peak flood extents caused by groundwater in Ireland and are largely based on the winter 2015 / 2016 flood event which was the largest flood on record in many areas.

Further user guidance and details on the preparation of the GWFlood Project are available at: <https://www.gsi.ie/en-ie/programmes-and-projects/groundwater/activities/groundwater-flooding/gwflood-project-2016-2019/Pages/default.aspx>

Consideration of Climate Change Impacts

The potential impacts of climate change include increased rainfall intensities, increased fluvial flood flows and rising sea levels. In line with the Guidelines, while Flood Zones are defined on the basis of current flood risk, planning authorities need to consider such impacts in the preparation of plans, such as by avoiding development in areas potentially prone to flooding in the future, providing space for future flood defences, specifying minimum floor levels and setting specific development management objectives. It should be noted that the flood maps prepared under the National CFRAM and the national indicative flood maps (see above) include maps for two potential future scenarios taking account of different degrees of climate impact.



Coastal Change

While not specifically covered by the Guidelines, planning authorities should have regard to areas that may be at risk or vulnerable to coastal erosion or coastal change, including change associated with climate change (e.g. sea level rise, increased storm frequency, accelerated rates of coastal erosion, etc.). Planning authorities should consider the merits of undertaking a Coastal Erosion Risk Management Study, in consultation with the OPW, to assist in identifying areas that may be at risk or vulnerable to coastal erosion or coastal change, and the extent of this risk. A precautionary approach should be taken where analysis of potential future coastal change, including potential climate effects, has not yet been carried out.

It should be noted that the Government established an Inter-Departmental Group on Coastal Change Management to scope out an approach for the development of a national coordinated and integrated strategy to manage the projected impact of coastal change to our coastal communities, economies, heritage, culture and environment. The Inter-Departmental Group was jointly chaired by the Department of Housing, Planning and Local Government and the OPW. The options and recommendations for the Government to consider have been published in the 'Report of the Inter-Departmental Group on National Coastal Change Management Strategy'.

Local authorities, in statutory plans, should continue to identify potentially vulnerable locations that could be affected by coastal change. It is recommended that statutory plans in such cases put in place spatial policies to limit development in the interests of not increasing the amount of development and consequent population at risk from imminent coastal change.

Planning policy at a local level should reflect the risk and avoid intensifying existing development uses or locating new inappropriate development within the zone(s) most at risk from coastal change and potential locations where managed retreat may be feasible or necessary. Furthermore, planning policy should be aligned, where necessary, to facilitate managed retreat particularly with respect to the location of new replacement dwellings/ structures/ development.

Arterial Drainage Schemes and Drainage Districts

The OPW requests that Wicklow County Council has regard in zoning land for development to ensure that access requirements are preserved for the maintenance of Arterial Drainage Schemes and Drainage Districts. Applications for development on land identified as benefiting land may be prone to flooding, and as such site-specific flood risk assessments may be required in these areas. The location of Arterial Drainage Schemes and Drainage Districts may be viewed on www.floodinfo.ie.

Land Protected by Agricultural Embankments

It should be noted that the Flood Zones are defined ignoring the presence of flood defences (Section 2.25 of the Guidelines). This is particularly important in the context of land that benefits from some degree of protection from embankments that were constructed to protect agricultural lands, i.e., as part of an Arterial Drainage Scheme or Drainage District or the so-called Land Commission Embankments (see www.floodinfo.ie). In such areas, it is strongly recommended that land should only be zoned for development in accordance with the definition of appropriate development as set out in the Guidelines.



Impacts on Other Areas

While a particular development may not be prone to flood risk itself, it can increase flooding up- or down-stream, due to increased runoff from additional drainage or increased paved areas or due to loss of storage. In line with the Guidelines, proposed new development needs to avoid increasing such flood risk elsewhere.

Nature-based Solutions and SuDS

The OPW advises that the preparation of development plans should take account of the opportunities for nature-based solutions to reduce runoff and provide other benefits such as to water quality, biodiversity, etc. This can include in areas around existing developments, as well as within existing and proposed development in the form of Sustainable Urban Drainage Systems (SuDS). Wicklow County Council should refer to The Best Practice Interim Guidance Document 'Nature-based Solutions to the Management of Rainwater and Surface Water Runoff in Urban Areas' for further guidance.

The Guidelines recommend that the SFRA provide guidance on the likely applicability of different SuDS techniques for managing surface water run-off at key development sites, and also identifies where integrated and area based provision of SuDS and green infrastructure are appropriate in order to avoid reliance on individual site by site solutions.

If further information is required or to request a pre draft consultation meeting, please do not hesitate to contact the OPW (floodplanning@opw.ie).

Yours sincerely,

[Redacted signature]

pp Conor Galvin

Flood Risk Management – Climate Adaptation and Strategic Assessments