



Planning Department,  
Waterford City and County Council,  
Menapia Building,  
The Mall,  
Waterford City

27/08/2021

**RE: Draft Waterford City & County Development Plan 2022-2028**

Dear Sir/Madam,

The OPW, as lead agency for flood risk management in Ireland, welcomes the opportunity to comment on the Draft Waterford City & County Development Plan 2022-2028.

The OPW welcomes the acknowledgement of the Guidelines on the Planning System and Flood Risk Management (DECLG/OPW, 2009), hereafter referred to as the 'Guidelines' and the preparation of a Strategic Flood Risk assessment (SFRA). In particular, the OPW welcomes:

- Policy Objective UTL 10, the commitment to manage flood risk in line with the Guidelines
- Policy Objective UTL 11, the improvement and/or restoration of the natural flood risk management functions of flood plains and ensure each flood risk management activity is examined to determine actions required to embed and provide for effective climate change adaptation as set out in the OPW Climate Change Sectoral Adaptation Plan Flood Risk Management
- That Waterford City & Council will work with the OPW, LAWPRO and other agencies at a catchment-level to identify any measures, such as natural water retention measures, that can have benefits for the Water Framework Directive, flood risk management and biodiversity objectives (Policy Objective FM 01)
- The requirement for development proposals to be accompanied by a SuDS assessment (Policy Objective UTL 09)

The following comments highlight opportunities for the Draft Plan before it is finalised.

**Flood Zone Mapping**

The flood extents on the interactive Land Use Zoning and Flood Zone map do not correspond to the flood mapping in the SFRA for some settlements, e.g. Dungarvan and Gaeltacht na nDéise.

**Unzoned Lands and Open Countryside**

The OPW welcomes the commentary on both the unzoned lands and open countryside, that as the Justification Test has not been applied or passed, that new highly and less vulnerable



development should be located in Flood Zone C and only minor development and water compatible uses will be permitted in Flood Zones A and B.

A specific objective that the flood plain shall be preserved free from development has been included for some unzoned settlements. However, not all the settlements listed in the SFRA in Section 7.2.8, where a fluvial and/or tidal risk was identified have this objective. Waterford City & County Council should consider including a specific objective in relation to flood risk management for all unzoned settlements where risk from flooding has been identified.

An interactive Land Use Zoning and Flood Zone map is available in Volume 4: Maps, it would be useful if this map was referenced in the SFRA.

### **Justification Tests**

The OPW welcomes the inclusion of Plan-making Justification Tests supplied in the SFRA for Dungarvan and Waterford City & Environs. However, proposed land use zones, some of which are classified as highly vulnerable development in the Guidelines are shown within Flood Zones A and B in the settlement zoning maps. Examples of these are detailed in the Comments on 'Specific Settlements' section below. No commentary has been provided to demonstrate that the Plan Making Justification Test has been applied in proposing vulnerable development zoning within Flood Zones A and B.

Where it is intended to zone or otherwise designate land which is at moderate or high risk of flooding, then the appropriateness of the particular development should be rigorously assessed through the application of the Justification Test. The Guidelines set out that, at the Plan-making stage, land use zoning be informed by the suitable level of FRA and if necessary a Justification test. Chapter 5 of the Guidelines sets out that "*most flood risk issues should be raised within strategic assessments undertaken by local authorities at the plan-making stage. Therefore, as more plans are reviewed and zoning reconsidered, there should be less need for development management processes to require detailed flood risk assessment*".

As flood risk assessments are integrated with the SEA process, Section 3.10 also highlights the need that FRA's be "*undertaken as early as possible in the process so that the SEA is fully informed of the flood risks and impacts of the proposed zoning or development*".

If it is the case that these sites are already developed then Circular PL 2/2014 provides further advice and detail to planning authorities on older developed areas of towns and cities located in Flood Zone A and B. "*Where the planning authority considers that the existing use zoning is still appropriate, the planning authority must specify the nature and design of structural or non- structural flood risk management measures required prior to future development in such areas, in order to ensure that flood hazard and risk to the area and to other adjoining locations will not be increased, or if practicable, will be reduced*".

For sites that are intended to be zoned for development following the application of a Justification Test where only a small proportion of the site is at risk of flooding, a policy objective might be attached to such zoning. Such an objective might require that the sequential approach be applied in the site planning, whereby to ensure no encroachment onto, or loss of the flood plain, or that only water compatible development such as *Open Space* would be permitted for the lands which are identified as being at risk of flooding within that site. Planning permission for these sites might then be subject to the sequential approach having been adopted and applied as above, following a detailed FRA.



### **National Indicative Fluvial Mapping (NIFM)**

The OPW NIFM has been used as a dataset in producing the flood risk mapping. It is stated in Table 4-1: Available flood risk data of the SFRA that these maps are predictive flood maps, however it should be noted that these maps are indicative maps and are not predictive. The data shows the modelled extent of land that might be flooded by rivers during a theoretical or 'design' flood event.

While these maps are an improvement on PFRA mapping, they are still indicative maps and the same cautions and limitations as outlined in Circular PL 2/2014 for PFRA should be followed.

### **The Flood Risk Management Plans and Flood Relief Schemes**

The OPW, in conjunction with Waterford City & County Council, 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.

The OPW requests that Waterford City & County Council has full regard to the proposed development of flood relief schemes in Aglish, Ballyduff and Dungarvan & Environs, 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 Plan.

The OPW has a statutory duty to maintain flood relief schemes completed under the Arterial Drainage Acts, 1945-1995, including the schemes in Waterford City. The local authority will also need to maintain any flood relief schemes implemented under its powers. The OPW requests that Waterford City & County Council have full regard to the protection, and the need for maintenance, of these schemes. Waterford City & County Council might also consider including a register of key flood risk infrastructure in the County Development Plan where it would not otherwise be readily identified or protected from interference or removal.

### **Consideration of Climate Change Impacts**

The OPW welcomes the discussion on climate change in the SFRA and in particular the consideration of future scenarios when assessing flood risk and the allowance for climate change in setting finished floor levels. However, this discussion is focused on incorporating climate change into development design, and the Draft Plan has not addressed how climate change has been considered in the production of this development plan. Planning authorities can consider climate change impacts in the Plan-making Stage, such as by avoiding development in areas potentially prone to flooding in the future, providing space for future flood defences, and setting specific development management objectives. It should be noted that the flood maps prepared under the CFRAM, NIFM and ICPSS Programmes include maps for two potential future scenarios taking account of different degrees of climate impact. Consideration might be given to policy objectives in relation to climate change and flood risk.



## **Coastal Change**

It should be noted that the Government has 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 is jointly chaired by the Department of Housing, Planning and Local Government and the OPW and will bring forward options and recommendations for the Government to consider as soon as possible.

## **Mitigation Measures**

The Flood Mitigation Measures at Site Design outlined in Section 5.9 of the SFRA are welcomed by the OPW and provide guidance on how residual flood risk can be managed to acceptable levels.

## **SuDS and Natural Water Retention Measures**

The OPW welcomes the objectives UTL 09, UTL 10, FM 01, H 18 and BGI 04 in relation to SuDS and natural water retention measures.

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 that the SFRA 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.

## **CFRAM Update**

In Section 8 SFRA Review and Monitoring, it is noted that the CFRAM Studies run on a six yearly cycle, and cycle 2 is due in at least 2026. The CFRAM Programme has been completed and implementation of the outputs from this work is underway. The EU Floods Directive requires Member States to review the PFRA, the FRMPs and the flood maps on a six-yearly cycle. As part of the OPW commitment to carry out these reviews, the NIFM Programme has been completed. The OPW continues to update predictive flood mapping to provide the best available flood risk information through the map review programme, where a Flood Map Review Request Form has been submitted to the OPW and the criteria to trigger a review have been met.

## **Applications for Development in Areas at Risk of Flooding**

The OPW welcomes the guidance for all development proposals in Section 5.7 of the SFRA, which is provided in a clear and concise format, in the form of a checklist.

## **Historic Flood Events**

The SFRA references historic flood events from [www.floodmaps.ie](http://www.floodmaps.ie). Please note that this website is no longer available and historic flood events are now available on [www.floodinfo.ie](http://www.floodinfo.ie).



## Reference Errors

The SFRA document contains references to Galway City SFRA and the Western CFRAM study.

## Specific Settlements

### Clonmel Environs

Section 7.2.1 Clonmel Environs in the SFRA states that there is a “*development objective requiring 40m buffer between the river and development*”, however no such objective is included in Specific Development Objectives document for Clonmel Environs.

### Dungarvan

The OPW welcomes the Justification Test supplied for an area of Town Centre, Mixed Use and Industrial zonings and a second Justification Test for an area of Existing Residential. However, there are other areas of *Existing Residential, Strategic Reserve, General Industry, Other Mixed Uses and Other Network and basic Infrastructure/Utilities* zonings which are within Flood Zone A.



*Existing Residential and General Industry partially located in Flood Zone A*



*Other Mixed Uses and Other Network and basic Infrastructure / Utilities located in Flood Zone A*

There is an Arterial Drainage Scheme southwest of Dungarvan and a small Drainage District within Dungarvan. Consideration should be given 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](http://www.floodinfo.ie).

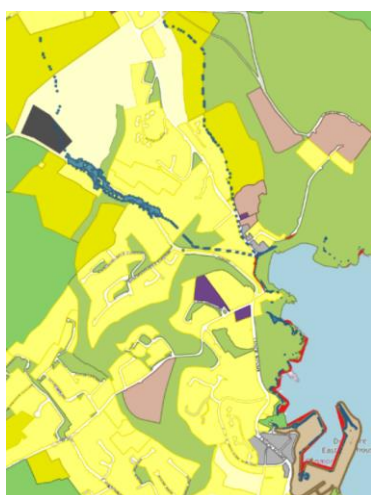




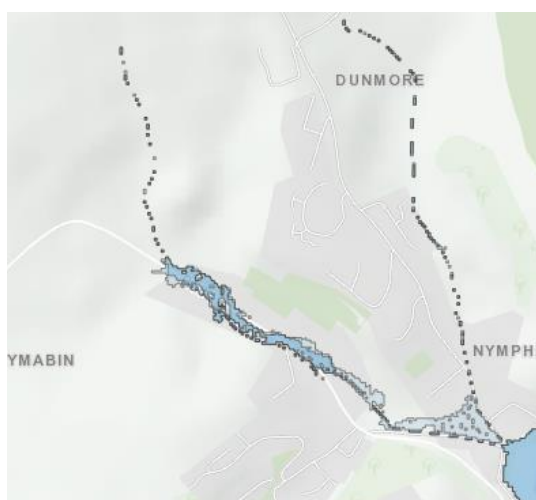
### **Dunmore East**

Commentary on Dunmore East notes the inundation of lands at the junction of the two watercourses, however in the flood mapping the 0.1% AEP fluvial flood extents appear to have been omitted.

There are areas *New Residential, Existing Residential, Strategic Reserve and Industrial, Enterprise and Employment* zoning partially within Flood Zone A and B. Highly vulnerable development is not appropriate in Flood Zone A and B, and less vulnerable development is not appropriate in Flood Zone A, unless a Plan-making Justification Test completed by the local authority can be satisfied. See the 'Justification Tests' section above in relation to sites where only a small proportion of the site is at risk of flooding.



SFRA Flood Zone Mapping

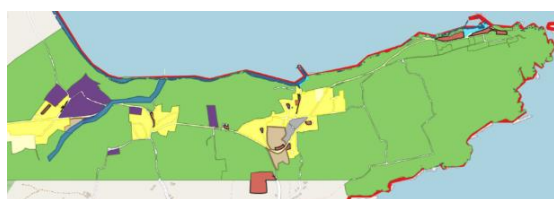


Floodinfo, CFRAM 0.1% AEP fluvial flood extents

### **Gaeltacht na nDéise**

The SFRA states that “*The extent of Flood Zone A from this watercourse crosses land zoned for Industrial, enterprise, employment and for mixed use. Any future development in the vicinity of this watercourse should be supported by a site specific flood risk assessment, which may refine the flood extents in this area*”. Less vulnerable development is not appropriate in Flood Zone A, unless a Plan-making Justification Test completed by the local authority can be satisfied.

The flood extents on the interactive Land Use Zoning and Flood Zone map do not appear to correspond with the flood mapping in the SFRA. The flood zoning highlighted in the SFRA as crossing the *Industrial, Enterprise and Employment* lands has been omitted from the interactive Land Use Zoning.



SFRA flood zone mapping



Interactive land use and flood zone mapping



### **Portlaw**

It is stated in SFRA that “Where there is a small overlap between Flood Zone A and B and existing residential development or the strategic reserve, the sequential approach shall be applied”. Highly vulnerable development is not appropriate in Flood Zone A and B, and less vulnerable development is not appropriate in Flood Zone A, unless a Plan-making Justification Test completed by the local authority can be satisfied. See the ‘Justification Tests’ section above in relation to sites where only a small proportion of the site is at risk of flooding.

There is also a *Mixed Use* zoning located in Flood Zone A. Highly vulnerable development is not appropriate in Flood Zone A and B, and less vulnerable development is not appropriate in Flood Zone A, unless a Plan-making Justification Test completed by the local authority can be satisfied.



*Existing Residential, Strategic Reserve and Mixed Use located in Flood Zone A*

### **Tramore**

There is an area of undeveloped *Industry, Enterprise and Employment* zoning and an existing *Tourism and Related* zoning located in Flood Zone A. Highly vulnerable development is not appropriate in Flood Zone A and B, and less vulnerable development is not appropriate in Flood Zone A, unless a Plan-making Justification Test completed by the local authority can be satisfied.

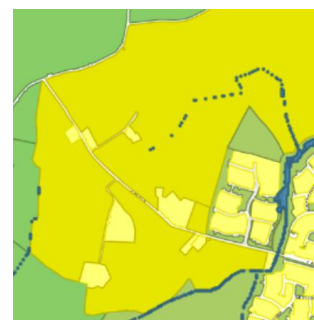
There is also a *Strategic Reserve* zoning partially within Flood Zone A. Highly vulnerable development is not appropriate in Flood Zone A and B, and less vulnerable development is not appropriate in Flood Zone A, unless a Plan-making Justification Test completed by the local authority can be satisfied. See the ‘Justification Tests’ section above in relation to sites where only a small proportion of the site is at risk of flooding.



*Industry, Enterprise and Employment located in Flood Zone A*



*Enterprise and Employment located in Flood Zone A*



*Strategic Reserve located in Flood Zone A*

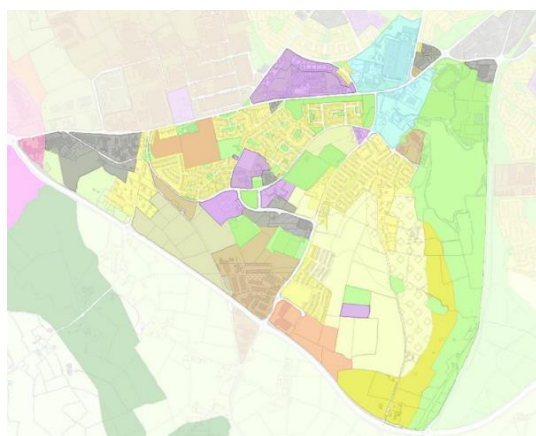


### **Kilbarry and Ballybeg**

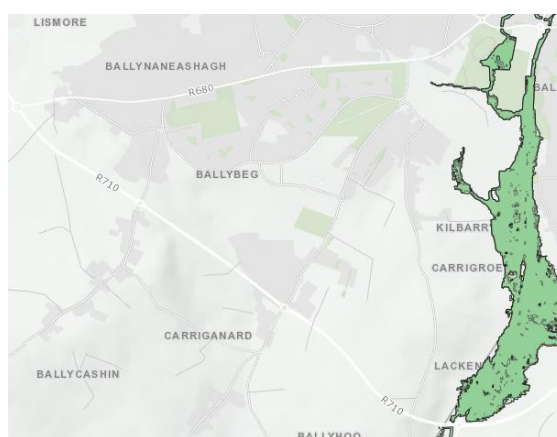
The City South West (Kilbarry/Ballybeg) Urban Design Framework document does not include any discussion on flood risk management nor has flood zone mapping been produced for the area. The *Opportunity Site* zoning, University District (TUSE Campus/Opportunity Sites/RSC/Nature Park), appears to be partially within Flood Zone B. Key Objectives UD07 and UD08 seem to be closest shown on Figure 15 to the flood risk area, however UD08 is omitted from the list of objectives and therefore it is unknown what the objective refers to. Objective UD07 notes that the lands zoned as *Opportunity Site* are identified for commercial uses, including neighbourhood scale convenience shop, ancillary student retail services, student accommodation, residential, hotel and office use. Some of these types of developments are classified as high vulnerable. Highly vulnerable development is not appropriate in Flood Zone A and B, and less vulnerable development is not appropriate in Flood Zone A, unless a Plan-making Justification Test completed by the local authority can be satisfied.

There is an additional note in Section 9.1, that “*Site development works to lands lying within the Yellow House opportunity site will be required to be consistent with the requirement of the Planning System and Flood Risk Management: Guidelines for Planning Authorities DEHLG (November 2009), or any amendment thereto*”, which suggests it is known there is potential flood risk in the area.

Without flood zones mapping overlaid with land use zoning it is difficult to assess whether the *Strategic Residential Reserve* and *New Low Density Residential* zonings are within flood risk areas. Highly vulnerable development is not appropriate in Flood Zone A and B, and less vulnerable development is not appropriate in Flood Zone A, unless a Plan-making Justification Test completed by the local authority can be satisfied.



*City South West (Kilbarry/Ballybeg) Urban Design Framework, Zoning Map*



*Floodinfo, fluvial and coastal flood risk*





If further information or input is required, please do not hesitate to contact the OPW ([floodplanning@opw.ie](mailto:floodplanning@opw.ie)) in advance of the completion of the Draft Waterford City & County Development Plan 2022-2028.

Yours sincerely,

\_\_\_\_\_*Niall Murphy*\_\_\_\_\_

pp Conor Galvin

Flood Risk Management – Climate Adaptation and Strategic Assessments