SFRA of Proposed Variation 8B to the Kilkenny City and County Development Plan 2021: NPF Implementation

1 Introduction

This document assesses the flood risk arising from the proposed zoning changes under Variation 8B to the Kilkenny City and County Development Plan 2021: NPF Implementation.

The *Planning System and Flood Risk Management – Guidelines for Planning Authorities*[1] were published in November 2009 (the Guidelines). These Guidelines were issued under Section 28 of the Planning and Development Act 2000 as amended, and require Planning Authorities to introduce flood risk assessment as an integral and leading element of their development planning functions. This is achieved by ensuring that the various steps in the process of making a development plan, together with the associated Strategic Environmental Assessment (SEA), are supported by an appropriate Strategic Flood Risk Assessment (SFRA).

This SFRA forms Appendix 1 to the Strategic Environmental Assessment Screening Report for Variation 8B to the Kilkenny City & County Development Plan (CCDP) and should be read in conjunction with that report. The purpose of this SFRA is to inform the Strategic Environmental Assessment (SEA) of the plan, and in this way inform the policies and objectives of the plan.

1.1 Variation 8B: NPF Implementation

As set out in the Strategic Environmental Assessment Screening Report, Variation No. 8B to the Kilkenny City and County Development Plan (KCCDP) relates to the rezoning of sites within the District towns of Callan, Thomastown and Graiguenamanagh.

A *Strategic Flood Risk Assessment of the City and County Development Plan 2021*[2] was carried out in 2021 as part of the making of the Development Plan. That document provides the context for this assessment.

Each of the 11 sites identified for rezoning are assessed for flood risk.

[1] Department of Environment, *The Planning System and Flood Risk Management – Guidelines for Planning Authorities*, 2009

[2] Kilkenny County Council, 2021, *Strategic Flood Risk Assessment of the Kilkenny City and County Development Plan 2021*

Table 1: List of zoning changes

Ref.	Location	Current zoning	Proposed zoning	Site area (hectares)
Callan				
A	Clonmel Road, Callan	Agriculture	New Residential	2.296
B	Coolagh Road, Callan	Agriculture	New Residential	1.1
C	Bolton, Callan	Low Density Residential	New Residential	2.8
D	Clashacollare, Callan	Agriculture	New Residential	5.82
Thomastown				
A	Dublin Road, Thomastown	Low Density Residential	New Residential	.85
B	Rear of Dúnán, Thomastown	Agriculture	New Residential	5
C	Rear of Maudlin Court, Thomastown	Low Density Residential	New Residential	1.8
D	Rear of Lidl, Thomastown	Mixed Use	New Residential	.87
E	The Greens, Thomastown	Outside development boundary	New Residential	2.4
Graiguenamanagh				
A	Brandondale, Graiguenamanagh	Agriculture/Low Density Residential	New Residential	4.3
B	Brandondale, Graiguenamanagh	Agriculture	New Residential	1.699

1.2 Stages of a Flood Risk Assessment (FRA)

The Guidelines recommend that a staged approach is adopted when undertaking a Flood Risk Assessment (FRA). The recommended stages are briefly described below:

• Stage 1 - Flood Risk Identification

To identify whether there may be any flooding or surface water management issues that will require further investigation. This stage comprised a comprehensive desk study of available information to establish whether a flood risk issue exists or whether one may exist in the future.

• Stage 2 - Initial Flood Risk Assessment

If a flood risk issue is deemed to exist arising from the Stage 1 Flood Risk Identification process, the assessment proceeds to Stage 2 which confirms the sources of flooding, appraises the adequacy of existing information and determines the extent of additional surveys and the degree of modelling that will be required. Stage 2 must be sufficiently detailed to allow the application of the sequential approach within the flood risk zone.

• Stage 3 - Detailed Flood Risk Assessment

A detailed FRA is carried out where necessary to assess flood risk issues in sufficient detail and to provide a quantitative appraisal of potential flood risk.

1.3 Scales of Flood Risk Assessments

Flood Risk Assessments are undertaken at different scales by different organisations for many different purposes. The scales are as follows:

• Regional Flood Risk Appraisal (RFRA): A Regional Flood Risk Appraisal provides a broad overview of the source and significance of all types of flood risk across a region and highlights areas where more detailed study will be required. These appraisals are undertaken by regional authorities.

• Strategic Flood Risk Assessment (SFRA): A Strategic Flood Risk Assessment provides a broad (area-wide or county-wide) assessment of all types of flood risk to inform strategic land use planning decisions. The SFRA allows the Planning Authority to undertake the sequential approach (described below) and identify how flood risk can be reduced as part of the development plan process.

• Site Flood Risk Assessment (Site FRA): A Site FRA is undertaken to assess all types of flood risk for a new development. This requires identification of the sources of flood risk, the effects of climate change on the flood risk, the impact of the proposed development, the effectiveness of flood mitigation and management measures and the residual risks that then remain.

This assessment is for a Variation to a Development Plan and therefore is at SFRA scale.

2 Stage 1: Flood Risk Identification

The purpose of this stage is to identify whether there are any flooding or surface water management issues relating to the sites included in the Variation that may warrant further investigation.

Section 3.1 of the 2021 SFRA, Stage 1 Flood Risk Identification, outlined the various sources of information available on flood risk in Kilkenny City and County. All relevant flood risk information has been consulted for the most up to date information. In addition, the SFRAs as carried out for each LAP has been reviewed.

The sources utilised are set out below.

Settlement	Most recent SFRA	OPW information
Callan	SFRA Callan Local Area Plan, 2019 and SEA Screening for Amendment 1 to Callan LAP, 2024	CFRAM mapping - OPW Community-Scale Flood Extents present day, mid-range and high-end future scenarios
Graiguenamanagh	SFRA Graiguenamanagh-Tinnahinch Joint Local Area Plan, 2020	CFRAM mapping - OPW Community-Scale Flood Extents present day, mid-range and high-end future scenarios
Thomastown	SFRA Thomastown Local Area Plan, 2019	CFRAM mapping - OPW Community-Scale Flood Extents present day, mid-range and high-end future scenarios

Each site, subject to rezoning, is mapped below with the flood zones overlain, as taken from the latest flood map information, and the SFRA carried out on each District Town.

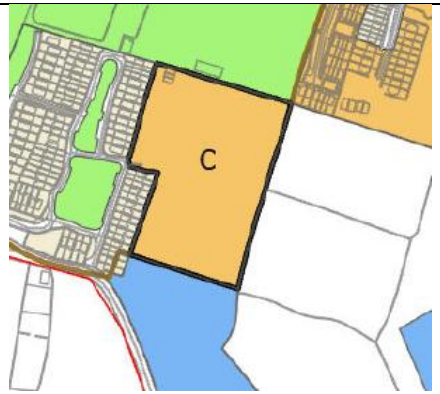
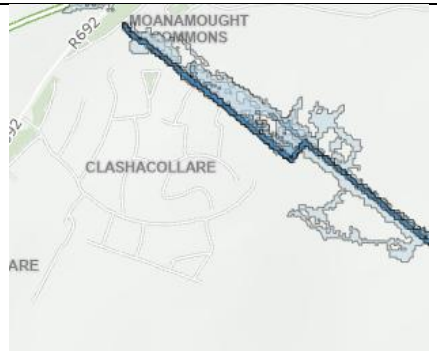
2.1 Consideration of Climate change

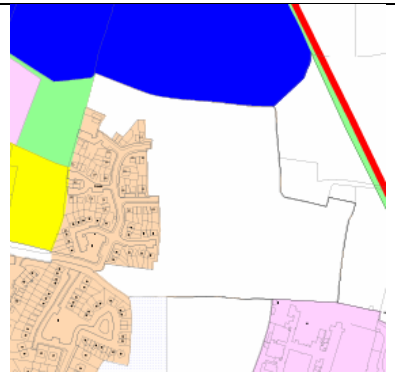
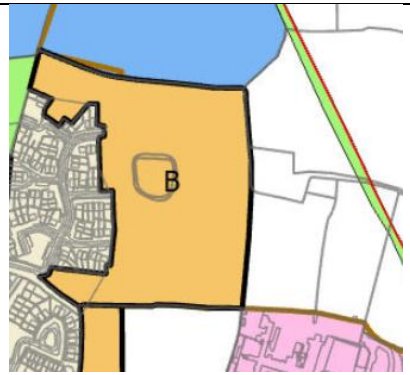
The National Indicative Flood Mapping (NIFM) flood mapping dataset now available from the OPW includes mapping for two potential future scenarios taking account of different degrees of climate impact. Data is also available from the OPW Community-Scale Flood Extents, for mid-range and high-end future scenarios. This data may be utilised to identify areas where flood risk may potentially increase in the future.

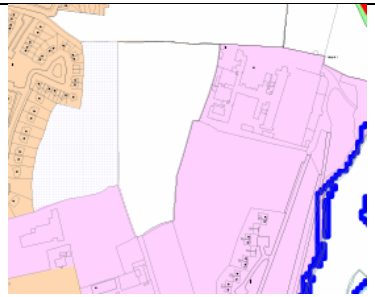
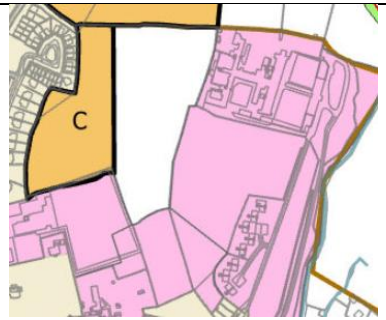
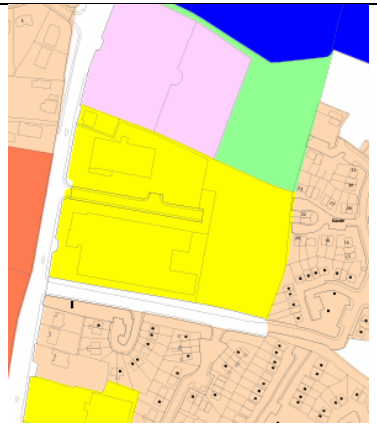
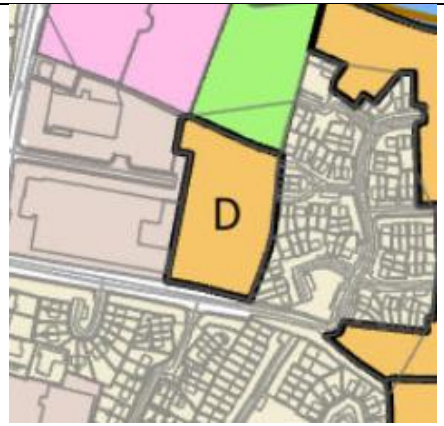
In Callan, the area to the north of Site D, along the River Tullamaine was subject to increased risk under the mid-range and high-end future scenarios.

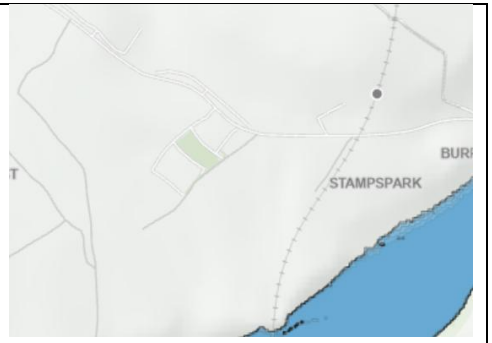
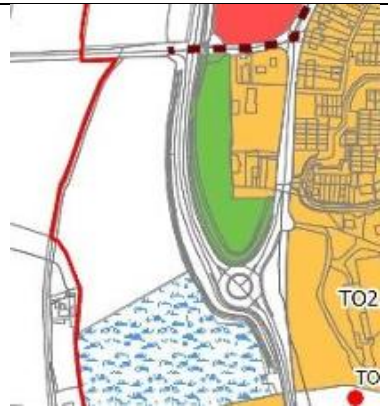
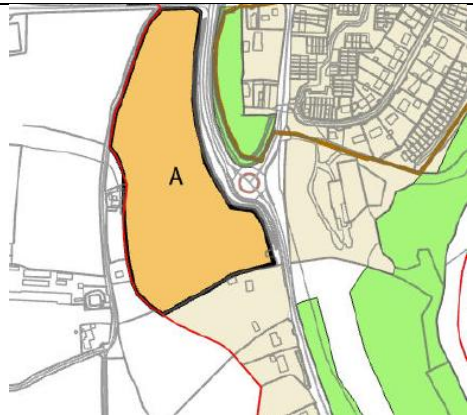
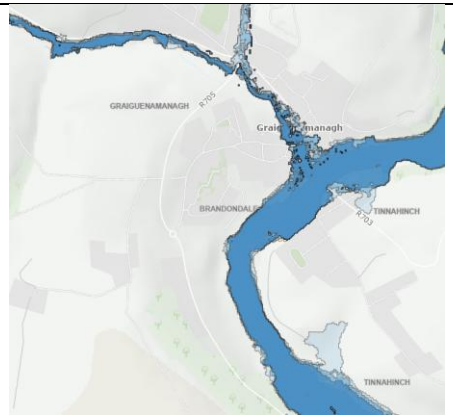
None of the sites for rezoning were affected under the mid-range and high-end future scenarios in either Graiguenamanagh or Thomastown.

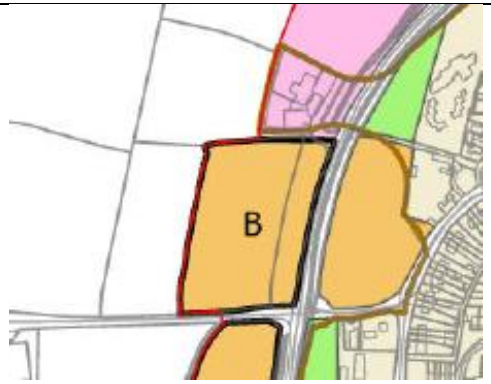
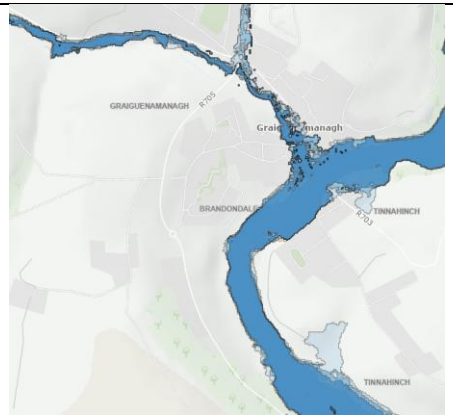
Ref.	Current and Proposed zoning	Flood risk indicators	Extract from SFRA 2019 Callan Zoning Adopted amendment no. 1	Proposed Zoning under Variation 8B	OPW Flood Mapping Accessed April 2026
Callan, A	Agriculture - New Residential	None			
Callan, B	Agriculture - New Residential	None			

Callan C	Low Density Residential - New Residential	None			
Callan D	Agriculture - New Residential	Flood zones A and B mapped along northern boundary of subject site.			

Ref.	Current and Proposed zoning	Flood risk indicators	Extract from SFRA 2019 Thomastown Zoning	Proposed Zoning under Variation 8B	OPW Flood Mapping
Thomastown A	Low Density Residential - New Residential	None. Flood zones A and B mapped west of subject site			
Thomastown B	Strategic Reserve - New Residential	None. Flood zones A and B mapped to west of subject site			

Thomastown C	Low Density Residential - New Residential	None. Flood zones A and B mapped to west of subject site			
Thomastown D	Mixed Use - New Residential	None.			

Thomastown E	Outside dev. Boundary – New Residet ntial	None			
Ref.	**Current and Proposed zoning**	**Flood risk indicators**	**Extract from SFRA 2021 Graiguenamanagh Zoning**	**Proposed Zoning under Variation 8B**	**OPW Flood Mapping**
Graiguenamanagh A	Agriculture/Low Density Residential - New Residential	None.			

Graiguenamanagh B	Agriculture New Residential	None.			

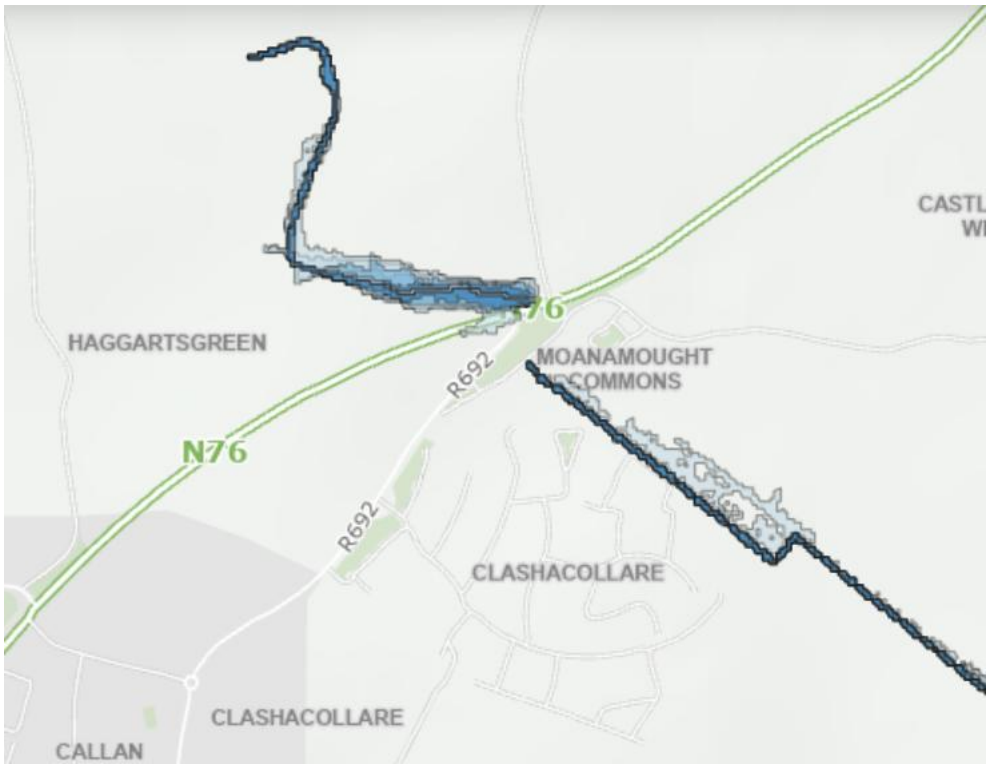


Figure 1: Areas of flood risk in Clashacollare, Callan

3 Stage 2 Initial Flood Risk Assessment

This section sets out the process involved in Stage 2. The purpose of this stage is to ensure that all relevant flood risk issues are assessed in relation to the decisions to be made and potential conflicts between flood risk and development are addressed to the appropriate level of detail.

As demonstrated above, only one site subject to rezoning under this Variation is located within either Flood Zone A or B. For this site, flood risk management and future development may cause a conflict.

3.1.1 Application of the Sequential Approach

The Guidelines have categorised land uses into three vulnerability classes and have also specified which vulnerability class would be appropriate in each flood zone, or where the Justification Test would be required.

Where zoned land is located within either Flood Zone A or B, the need for a further review of flood risk, and the specific zoning objectives, is required. If the proposed zoning was found to be water compatible and located within either Flood Zone A or B, there is no requirement to apply the Justification Test. If, however, less vulnerable uses were proposed for Flood Zone A, or highly vulnerable uses were proposed for Flood Zones A or B, the Justification Test must be applied. This process is detailed below.

3.1.2 Justification Test

As outlined above, one site identified in Callan has a potential conflict between development and flood risk. It is important to note, that the site itself is not located in an area of flood risk, but is bounded to the north by an area of flood risk.

In accordance with the Guidelines, a Justification test will be carried out for this land. The criteria are set out in Box 4.1 of the Guidelines and the test is set out below.

1. The urban settlement is targeted for growth under the National Spatial Strategy, regional planning guidelines, statutory plans or under the Planning Guidelines or Planning Directives provisions of the Planning and Development Act 2000, as amended.

Callan is identified as a District Town in the settlement hierarchy of the City and County Development Plan 2021. According to the Development Plan, the Council will ensure that the District Towns will in so far as practical be self-sufficient incorporating employment activities, sufficient retail services and social and community facilities.

2. The zoning or designation of the lands for the particular use or development type is required to achieve the proper and sustainable planning of the urban settlement and in particular:
   a. Is essential to facilitate regeneration and/or expansion of the centre of the urban settlement
   b. Comprises significant previously developed and/or under-utilised lands;
   c. Is within or adjoining the core of an established or designated urban settlement;
   d. Will be essential in achieving compact or sustainable urban growth;

e. There are no suitable alternative lands for the particular use or development type, in areas at lower risk of flooding within or adjoining the core of the urban settlement.

This site comprises an extension to the housing estate at this location. As stated above the land subject to the rezoning is not in an area of flood risk.

3. A flood risk assessment to an appropriate level of detail has been carried out as part of the Strategic Environmental Assessment as part of the development plan preparation process, which demonstrates that flood risk to the development can be adequately managed and the use or development of the lands will not cause unacceptable adverse impacts elsewhere.

The site was inspected to verify that the flood mapping as shown in Figure 1 reflected the situation on the ground. As can be seen from Figures 2 and 3 below, the flood mapping reflects the Tullamaine river channel running to the north of the site. As can be seen, there is a substantial difference in levels between the subject site and the channel. The channel is bounded by agricultural land to the north.

According to the SFRA for the 2019 Callan LAP, the modelled flood events in this area is likely due to a restriction to flows through a culvert under the road. In the event that the culvert beneath the N76 were to become blocked levels in the River Tullamaine would likely rise to the elevation of the N76 and inundate the road. The water would pool in a small topographic low at the junction with Kilkenny Road. If water levels continue to rise, the most likely flow pathway would be along Kilkenny Road and on to Castletobin where some houses could be at risk of external flooding. However, anticipated depths of flooding would be very shallow and therefore unlikely to exceed the freeboard between finished floor levels and the external areas. Due to the limited upstream catchment the extent of flooding is likely to be limited.

That SFRA concluded that flooding from the River Tullamaine was possible in the north of the study area, however the maximum extent of flooding is limited.

Given that the area subject to rezoning is not located within an area of flood risk, it is considered the risk to the development can be adequately managed and the use or development of the lands will not cause unacceptable adverse impacts elsewhere. Access to the channel of the River Tullamaine should be provided to allow for channel maintenance. This will be included as a site-specific objective.

Figures 2 and 3: Photos from Friary Walk of River Tullamaine channel looking north west (Dated April 2026)

In this context, this Flood Risk Assessment contains sufficient information appropriate to the scale and nature of the development potential. Mitigation measures are included in the Development Plan (See Vol. 1 Chapter 10, section 10.2.6), to state that any development proposal within the area identified will be subject to a site specific Flood Risk Assessment appropriate to the type and scale of the development being proposed. This mitigation measure will ensure that any development taking place will not exacerbate any flooding issue.

4 Conclusion

This SFRA has fully informed the zoning proposed in this Variation, and a site-specific objective has been included for Callan as set out above.

The CDP 2021, contains text and policies on flooding in Vol. 1, Section 10.2.6.

4.1 Monitoring and Review

This FRA is based on currently available data and in accordance with its status as a "living document" it will be subject to modification by these emerging datasets of maps and plans as they become available. In the interim any development proposal in the areas identified in this FRA shall be subject to detailed flood risk assessment.