McCloy Consulting

Strategic Flood Risk Assessment for Proposed Variation No. 1

of the Tipperary County Development Plan 2022-2028

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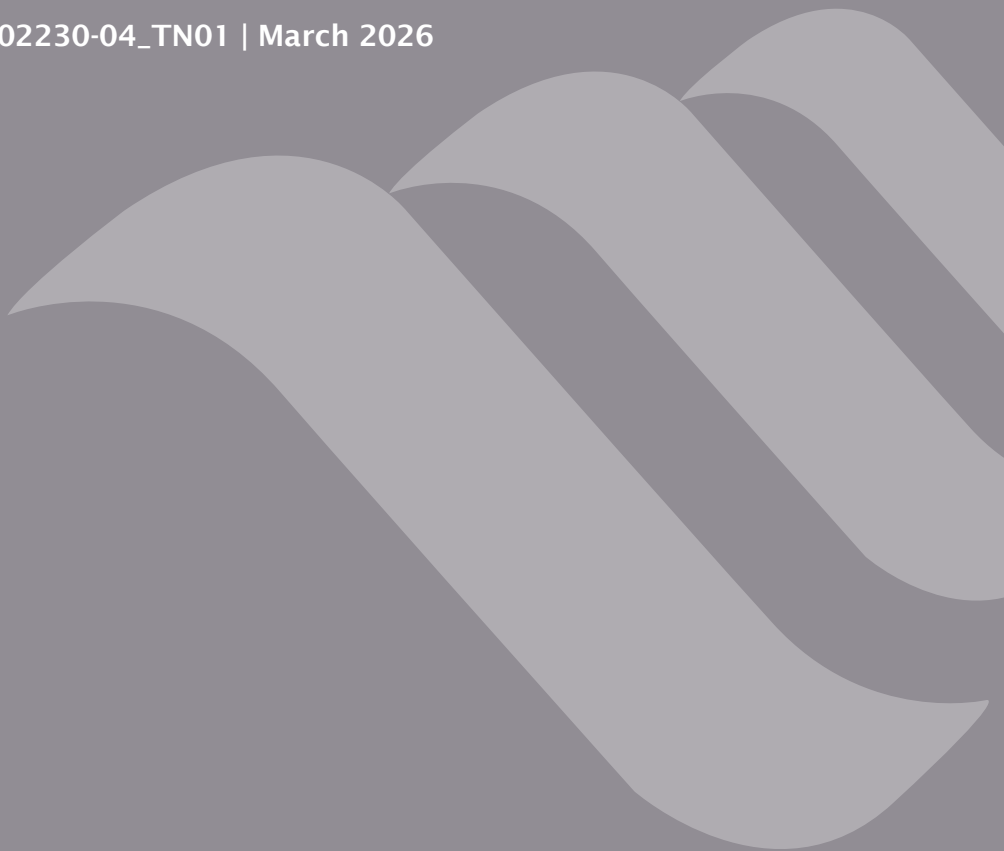

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Introduction

McCloy Consulting have been appointed by Tipperary County Council (CC) to undertake a Strategic Flood Risk Assessment (SFRA) with respect to Proposed Variation No. 1 of the Tipperary County Development Plan (Tipperary CDP) 2022-2028.

As stated in the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (S.I. No. 436 of 2004), a Strategic Environmental Assessment (SEA) must be prepared as part of any county development plan to assess the likely significant effects of the plan's implementation on the environment.

The Planning System and Flood Risk Management Guidelines for Planning Authorities 2009 (the OPW Guidelines) recommend that an SFRA be prepared to support the SEA of a development plan to ensure that flood risk, where identified, is considered as one of the key environmental criteria against which the plan is assessed. The SFRA should ultimately inform policy and land use decisions in areas that have been assessed as being at risk of flooding.

Tipperary CC is required to apply the SFRA criteria to the proposed variation land zonings. Therefore, the preparation of Proposed Variation No. 1 has undergone an appropriate level of SFRA and this document sets out the findings for the proposed variation. New development will be required to comply with the flood risk management provisions from the CDP and associated SFRA, as well as the information set out in this document.

Disclaimer

It is noted that this Variation SFRA is based on the approach and flood data outlined in the CDP SFRA, prepared in compliance with the requirements of the OPW Guidelines. As stated in the CDP SFRA, outputs from future studies and datasets may trigger a review and update of the CDP SFRA during the lifetime of the 2022-2028 CDP. Accordingly, all information in relation to flood risk is provided for general policy guidance only and may be updated in light of future data and analysis, or future flood events.

As a result, all landowners and developers are advised that Tipperary CC and their agents can accept no responsibility for losses or damages arising due to assessments of the vulnerability to flooding of lands, uses and developments. Owners, users and developers are advised to take all reasonable measures to assess the vulnerability to flooding of lands and buildings in which they have an interest prior to making planning or development decisions.

Proposed Variation No. 1 to the Tipperary County Development Plan 2022-2028

Proposed Variation No. 1 has been primarily prepared to align the Tipperary CDP with The National Planning Framework (NPF) Implementation: Housing Growth Requirements – Guidelines for Planning Authorities (2025) and with certain Ministerial Guidelines published after the adoption of the Plan.

The proposed variation includes a revised Core Strategy and additional residential land-use zoning in a number of towns and villages, designed to deliver housing supply at scale..

A total of 143 changes to land use zoning within the county have been identified for assessment. This document should be read alongside the proposed variation documentation, which presents the full variation information and mapping.

Flood Risk Guidance

Comprehensive flood risk guidance is set out in the CDP and associated CDP SFRA. The following are considered to be the primary aspects relevant to assessment of flood risk as part of the proposed variation. It is noted that there have been no significant / relevant updates to flood risk planning policy in Ireland since the current CDP SFRA was published.

Flood Zoning

The approach to assessment of flood risk throughout Tipperary County is set out in the CDP SFRA which presents flood mapping for the County. Flood mapping includes Flood Zone maps which identify the three classifications outlined in the OPW 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).
- 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).

Sequential Approach

The OPW Guidelines recommend a sequential approach to planning to ensure the core objectives of the guidelines are implemented. It is of particular importance at the plan making stage but is also applicable in the layout and design of development at the development management stage.

In general, most types of development would be considered inappropriate in Flood Zone A. In Flood Zone B highly vulnerable development (e.g., hospitals, dwelling houses and primary infrastructure) would be considered inappropriate but less vulnerable development (e.g., retail, commercial and industrial uses) might be considered appropriate. Development within Flood Zone C is appropriate from a flood risk perspective.

However, this preferred Sequential Approach is not always possible as many urban centres are affected by Flood Zones and are targeted for key social and economic development. To reflect this, the OPW Guidelines outline the Justification Test to facilitate assessment of the balance between consideration of flood risk issues and the need for continued development in towns and cities.

Justification Test

The Justification Test is a mechanism within the OPW Guidelines relevant to highly vulnerable and less vulnerable proposals in Flood Zone A and Flood Zone B. The Justification Test is designed to rigorously assess the appropriateness, or otherwise, of particular developments that, for the reasons outlined above, are being considered in areas of moderate or high flood risk. The test is comprised of two processes:

- **Plan Making Justification Test** – used at the plan preparation and adoption stage where it is intended to zone or otherwise designated land which is at moderate or high risk of flooding.
- **Development Management Justification Test** – used at the planning application state where it is intended to develop land at moderate or high risk of flooding for uses or development vulnerable to flooding that would generally be inappropriate for that land.

Table 1 is a matrix of receptor vulnerability versus Flood Zone to illustrate appropriate development and scenarios where development is required to meet the Justification Test.

Table 1: Vulnerability and Flood Zone Matrix for Justification Test

Development Vulnerability	Flood Zone A	Flood Zone B	Flood Zone C
Highly Vulnerable (including essential infrastructure)	Justification Test	Justification Test	Appropriate
Less Vulnerable	Justification Test	Appropriate	Appropriate
Water-compatible	Appropriate	Appropriate	Appropriate

Climate Change Adaptation

It is likely that climate change will have an impact on flood risk in Ireland as a result of rising sea levels and more frequent extreme rainfall events. Climate change is a dynamic process that requires a precautionary and flexible approach to ensure appropriate provision for or adaptation to its potential consequences.

Guidance on climate change objectives and actions is set out in the Climate Change Sectoral Adaptation Plan published by the OPW in 2025. The first Climate Change Sectoral Adaptation Plan was published in 2015 under the mandate of the National Climate Change Framework. An updated plan was prepared in 2019 with amendments to the previous plan made based on new information available on climate change and its potential impacts and developments in flood risk management since 2015, and was the standing document when the CDP and associated CDP SFRA were published.

An updated plan has since been published in 2025, and updates the 2019 Plan using newly available information on climate change and its potential impacts, developments in flood risk management since 2019 and the Guidelines for the preparation of the Sectoral Adaptation Plans (DECC, 2024b).

The long-term goal adopted by the OPW on climate adaptation for flooding and flood risk management is "Enhance resilience against flood risk and reduce impacts of flooding now and into the future, by integrating climate adaptation strategies and measures that reduce vulnerability, protect communities, and promote sustainable flood risk management", supporting the overarching vision of "A climate-resilient Ireland where flood risk is managed sustainably to protect communities, reduce vulnerability and secure the future".

To deliver on this goal, the OPW has identified the following adaptation objectives:

- Objective 1: Enhancing our knowledge and understanding of the potential impacts and future risks of climate change for flooding and flood risk management through research and assessments.
- Objective 2: Strengthen capacity and awareness of the impacts of climate change, relating to flooding and flood risk management, within the OPW and across wider stakeholder groups including public bodies, professional sectors and the general public.
- Objective 3: Embed climate change adaptation into flood risk management practices undertaken by the OPW and other sectors.
- Objective 4: Increase the awareness and suitable application of Nature-based Solutions for Catchment Management to improve climate resilience.

A number of actions have been identified under each adaptation objective across the areas of activity in flood risk prevention, protection and preparedness and resilience, as well as in further research and capacity building. Flooding has the potential to affect all sectors and local authorities, and coordination is critical towards ensuring a coherent and whole of government approach to climate resilience in relation to flooding and flood risk management.

Based on the Sectoral Adaptation Plans, the OPW adopted two indicative potential futures for flood risk assessment; the Mid-Range Future Scenario (MRFS) and the High-End Future Scenario (HEFS). These were selected to reflect, based on information available at the time and remain valid per the updated document, a future in the latter part of the century that would be:

- typical or near to the general average of the future climate projections (MRFS).
- a more extreme future based on the upper end of the range of projections of future climatic conditions and the impacts such changes would have on the drivers of flood risk (HEFS).

The allowances, in flood risk terms, for both the MRFS and HEFS are set out in the CDP SFRA, whereby:

> *"Chapter 11.5.2 Assessing Flood Risk of this Plan requires that:*
>
> *· Flood risk assessments submitted shall consider climate change impacts,*
>
> *· CFRAM Programme climate scenario mapping should be consulted by prospective applicants for developments."*

Flood Risk Information

To ensure this SFRA for Proposed Variation No. 1 is based on the most up-to-date flood risk information, a comprehensive review of available flood data was undertaken. Therefore, the flood data / Flood Zones included in this SFRA report are considered the 'best' available to undertake the assessment.

Sources of fluvial and coastal flood data that have been used to inform this assessment and designate the associated Flood Zone of each variation site are outlined below. It is noted that while CDP SFRA Flood Zone mapping is understood to include OPW CFRAM and NIFM data, this assessment has used currently available CFRAM and NIFM data to ensure any changes since the CDP SFRA was published are taken into account. Further, NCFHM updated coastal flood extents have been taken into consideration to reflect the most up-to-date sources of flood risk information.

Additionally, this assessment has had regard to other sources of flood risk not captured / defined by the Flood Zones. It is noted that the CDP sets out that "In Flood Zone C, where the probability of flooding is low (less than 0.1%, Flood Zone C), site-specific flood risk assessment may be required, and the developer should satisfy themselves that the probability of flooding is appropriate to the development being proposed", and "Flood risk assessments submitted shall consider climate change impacts and adaptation measures…". Further, Policy 11-9 outlines that it is the policy of the Council to "Assess all new developments (both within and without designated Flood Risk Zones) in line with the 'Staged Approach' and pre-cautionary principle set out in the Planning System and Flood Risk Management Guidelines for Planning Authorities, (DEHLG, 2009)…" as well as requiring the submission of a site-specific Flood Risk Assessment for developments on lands subject to Flood Zone A, Flood Zone B, MRFS extents, and any lands identified as benefiting lands. Therefore, all available information relating to flooding should be considered as part of any assessment prepared in support of development proposals on the variation sites.

Catchment Flood Risk Assessment and Management (CFRAM) Study

As part of the OPW's CFRAM programme, flood extent, depth, and risk maps (generally referred to as 'CFRAM maps') were published in 2015 / 2016 for areas identified by the Preliminary Flood Risk Assessment (PFRA) as being at potentially significant risk of flooding. One of the main purposes of the detailed CFRAM flood maps was to assist Local Authorities in planning and development management.

The CFRAM flood extent maps show the estimated extents, peak water levels, and peak flows associated with flooding from modelled river reaches, estuaries, and coastlines, taking account of flood defences. Flood maps were produced for a range of flood events (10%, 1%, and 0.1% AEP) for the present-day scenario and two future scenarios (the MRFS and HEFS). Flooding from other sources has typically not been considered as part of the CFRAM flood mapping.

CFRAM flood data represents best available information for flooding from fluvial sources and is used for Flood Zone mapping for the Variation SFRA.

National Indicative Fluvial Mapping (NIFM)

The National Indicative Fluvial Mapping (NIFM) was released by the OPW in 2021. It shows the extent of flooding from modelled river reaches for catchments greater than 5 km^2 in areas that were not previously mapped as part of the CFRAM programme. Flood mapping was prepared for a range of flood events (5%, 1%, and 0.1% AEP) for the present-day scenario and two future climate change scenarios (the MRFS and HEFS).

NIFM User Guidance Notes state that the maps only provide an indication of areas that may be prone to flooding. They are not necessarily locally accurate and should not be used as the sole basis for defining the Flood Zones nor for making decisions on planning applications. They are by definition of a national indicative quality.

NIFM flood data represents best available information for flooding from fluvial sources where no more detailed regional or local-quality data exists.

Tipperary CC Flood Zones

Flood Zone data provided by Tipperary CC for the purposes of this assessment are understood based on CFRAM, NIFM, ICPSS, PFRA, various Local Area Plan SFRA data and other modelling studies.

The previous Flood Zones were based on both OPW data, local knowledge and various modelling outputs, as available at the time of generating the Flood Zone maps, and are now centrally held by Tipperary CC. The individual data sets have not been further identified.

As the existing CDP, LAPs and SFRAs are still in force, the entirety of the existing Flood Zones remain in place, and are conservatively applied to delineate Flood Zones. New information, as outlined in the following section, has further been applied to additionally assess the variation sites, to ensure the most up-to-date reflection of Flood Zones in County Tipperary.

National Coastal Flood Hazard Mapping (NCFHM)

The National Coastal Flood Hazard Mapping (NCFHM) 2021 project was prepared and published by the OPW Coastal and Flood Risk Management Data Management Sections. The NCFHM coastal flood extents are based on the estimated extreme water level outputs from Phase 1 of the Irish Coastal Wave and Water Level Modelling Study (ICWWS) published in 2018.

The aim of this project is to produce updated national scale coastal flood extent and depth maps for the 50%, 20%, 10%, 5%, 2%, 1%, 0.5% and 0.1% Annual Exceedance Probabilities (AEPs) for the present day scenario and for the Mid-Range Future Scenario (MRFS) and High End Future Scenario (HEFS) which represent a 0.5 m and 1.0 m increase in sea level respectively (as well as two more extreme high end scenarios which are outside the scope of this assessment). As the NCFHM is understood to be based on the ICWWS data, ICWWS flood levels form the basis of this assessment.

The maps prepared are predictive, as they provide predicted flood extent and depth information for a 'design' flood event that has an estimated probability of occurrence (e.g., the 0.5% AEP event), rather than information for floods that have occurred in the past. 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 OPW Guidelines. The NCFHM maps are based on more up-to-date estimates of extreme coastal levels than those used for the CFRAM coastal maps (based on superseded 2013 ICPSS data).

The maps have been produced at a strategic / national level to provide an overview of coastal flood hazard in Ireland, and minor or local features may not have been included in their preparation. Flood outlines are suitable for use in Flood Zoning but not suitable for use in site specific flood risk assessment.

NCFHM flood data represents best available information for flooding from coastal sources and is used for Flood Zone mapping for the Variation SFRA.

Flood Risk Assessment

The Proposed Variation No. 1 sites have been overlain with Flood Zone mapping (based on sources outlined previously) at the WebViewer available here:

https://maps.mccloyconsulting.com/M02230-04%20Tipp%20SFRA/index.html

The implication of the Flood Zoning on the nature of the proposed variation (i.e. vulnerability classification), particularly whether a Plan-Making (PM) Justification Test (JT) is required, as well as any relevant comment is presented in the following table.

Table 2: Variation Site Flood Risk Summary

Draft Variation Site ID	Settlement	Draft Variation Proposed Zoning	Flood Zone	PM JT Required?	Comment
A_1	Ardfinnan	New Residential	FZC	No	
A_2	Ardfinnan	Strategic Reserve	FZC	No	
B_1	Ballina	New Residential	FZC	No	Site located within historic flood extents (1954) of River Shannon, as captured by CFRAM delineated FZs. Site is appropriately located in FZC.
B_2	Ballina	New Residential	FZC	No	
B_3	Ballina	Strategic Reserve	FZC	No	
B_4	Ballina	New Residential	FZC	No	
B_5	Ballina	New Residential	FZC	No	
B_6	Ballina	New Residential	FZC	No	Given the site is located partially within the MRFS CC extents, a SSFRA should be prepared for any development proposal in line with Policy 11-9 of the Tipp CDP 2022-2028. Site located within historic flood extents(1954) of River Shannon, as captured by CFRAM delineated FZs. Site is appropriately located in FZC.
B_7	Ballina	Existing Residential	FZC	No	
BC_1	Ballyclerihan	New Residential	FZC	No	Recurring flooding recorded in adjacent housing estate. Any development proposal for the site should ensure there is no associated flood risk to the site, and any proposal will not increase flood risk elsewhere.
BC_2	Ballyclerihan	New Residential	FZC	No	
BC_3	Ballyclerihan	Strategic Reserve	FZC	No	
BL_1	Borrisoleigh	New Residential	FZC	No	
BL_2	Borrisoleigh	New Residential	FZC	No	
BL_4	Borrisoleigh	New Residential	FZC	No	EPA watercourse centreline passes through site, however based on CFRAM modelling of the area, the watercourse seemingly routes north, as captured by CFRAM and NIFM delineated FZs in

Draft Variation Site ID	Settlement	Draft Variation Proposed Zoning	Flood Zone	PM JT Required?	Comment
					the area. Any development proposal for the site should ensure there is no associated flood risk to the site, and any proposal will not increase flood risk elsewhere.
BO_1	Borrisokane	New Residential	FZC	No	
BO_2	Borrisokane	New Residential	FZC	No	
BO_3	Borrisokane	Existing Residential	FZC	No	
C_1	Clonmel	New Residential	FZC	No	
C_10	Clonmel	Existing Residential	FZC	No	
C_11	Clonmel	New Residential	FZC	No	
C_12	Clonmel	Employment	FZC	No	
C_13	Clonmel	Amenity	**FZA**	No	The proposed Amenity zoning is considered Water Compatible, and is therefore appropriate in any FZ. Any development proposal for the site should be accompanied by a SSFRA, in line with Policy 11-9 of the Tipp CDP 2022-2028.
C_2	Clonmel	New Residential	FZC	No	
C_3	Clonmel	New Residential	FZC	No	
C_4	Clonmel	New Residential	FZC	No	
C_5	Clonmel	Strategic Reserve	FZC	No	Historical flooding recorded in vicinity, remedial works recorded as carried out in 2005. Any development proposal for the site should ensure there is no associated flood risk to the site, and any proposal will not increase flood risk elsewhere.
C_6	Clonmel	Community Services and Infrastructure	FZC	No	
C_7	Clonmel	Strategic Reserve	FZC	No	

Draft Variation Site ID	Settlement	Draft Variation Proposed Zoning	Flood Zone	PM JT Required?	Comment
C_8	Clonmel	Strategic Reserve	FZC	No	
C_9	Clonmel	Strategic Reserve	FZC	No	Site partially located within historic flood extents and within a CFRAM mapped area but nature of flood data at the site is unclear. Any development proposal at the site should prepare a Stage 3 SSFRA, having regard to associated flood risk and CC impacts.
CG_1	Clogheen	New Residential	FZC	No	Recurring fluvial flooding within Clogheen, captured by CFRAM delineated FZs. Site is appropriately located in FZC.
CG_2	Clogheen	Strategic Reserve	FZC	No	Given the site is located partially within the MRFS CC extents, a SSFRA should be prepared for any development proposal in line with Policy 11-9 of the Tipp CDP 2022-2028. Recurring fluvial flooding within Clogheen, captured by CFRAM FZs. Site is appropriately located in FZC.
CG_3	Clogheen	New Residential	FZC	No	
CG_4	Clogheen	New Residential	FZC	No	
CG_5	Clogheen	Existing Residential	FZC	No	Recurring fluvial flooding within Clogheen, captured by CFRAM delineated FZs. Site is appropriately located in FZC.
CH_1	Cahir	New Residential	FZC	No	
CH_10	Cahir	Existing Residential	FZC	No	
CH_2	Cahir	Strategic Reserve	FZC	No	
CH_3	Cahir	Strategic Reserve	FZC	No	
CH_4	Cahir	New Residential	FZC	No	
CH_5	Cahir	Strategic Reserve	FZC	No	
CH_6	Cahir	Strategic Reserve	FZC	No	
CH_7	Cahir	New Residential	FZC	No	Adjacent watercourse is NIFM modelled, as suitable for S1 analysis. Any development proposal at the site should have regard to IFI guidelines, and associated flood risk and prepare a SSFRA to a suitable level.
CH_8	Cahir	New Residential	FZC	No	

Draft Variation Site ID	Settlement	Draft Variation Proposed Zoning	Flood Zone	PM JT Required?	Comment
CH_9	Cahir	Existing Residential	FZC	No	
CL_1	Cloughjordan	Existing Residential	FZC	No	
CL_2	Cloughjordan	New Residential	FZC	No	
CL_3	Cloughjordan	Existing Residential	FZC	No	
COS_1	Carrick on Suir	New Residential	FZC	No	
COS_2	Carrick on Suir	New Residential	FZC	No	
COS_3	Carrick on Suir	Strategic Reserve	FZC	No	
COS_4	Carrick on Suir	New Residential	FZC	No	
CS_1	Cashel	New Residential	FZC	No	
CS_11	Cashel	Town Environs	FZC	No	
CS_12	Cashel	Town Environs	FZC	No	
CS_13	Cashel	Existing Residential	FZC	No	
CS_14	Cashel	Existing Residential	FZC	No	
CS_15	Cashel	New Residential	FZC	No	
CS_16	Cashel	New Residential	FZC	No	
CS_17	Cashel	Existing Resdiential	FZC	No	
CS_18	Cashel	New Residential	FZC	No	
CS_19	Cashel	New Residential	FZC	No	
CS_2	Cashel	New Residential	FZC	No	
CS_20	Cashel	Existing Residential	FZC	No	
CS_3	Cashel	New Residential	FZC	No	
CS_4	Cashel	New Residential	FZC	No	

Draft Variation Site ID	Settlement	Draft Variation Proposed Zoning	Flood Zone	PM JT Required?	Comment
CS_5	Cashel	New Residential	FZC	No	Recurring flooding associated with runoff recorded on "George's Land" in vicinity of site. Area identified immediately south of site by sketched 2006 mapping. Any development proposal for the site should ensure there is no associated flood risk to the site, and any proposal will not increase flood risk elsewhere.
CS_6	Cashel	New Residential	FZC	No	Recurring flooding associated with runoff recorded on "George's Land" in vicinity of site. Area identified immediately south of site by sketched 2006 mapping. Any development proposal for the site should ensure there is no associated flood risk to the site, and any proposal will not increase flood risk elsewhere.
CS_7	Cashel	New Residential	FZC	No	Recurring flooding associated with runoff recorded on "George's Land" in vicinity of site. Area identified immediately south of site by sketched 2006 mapping. Any development proposal for the site should ensure there is no associated flood risk to the site, and any proposal will not increase flood risk elsewhere.
CS_8	Cashel	New Residential	FZC	No	
CS_9	Cashel	New Residential	FZC	No	
F_1	Fethard	New Resdiential	FZC	No	Recurring fluvial flooding within Fethard, captured by CFRAM delineated FZs. Site is appropriately located in FZC.
F_2	Fethard	Strategic Reserve	FZC	No	Given the site is located partially within the MRFS CC extents, a SSFRA should be prepared for any development proposal in line with Policy 11-9 of the Tipp CDP 2022-2028. Site is appropriately located in FZC.
F_3	Fethard	Strategic Reserve	FZC	No	
F_4	Fethard	New Residential	FZC	No	Adjacent watercourse is NIFM modelled, as suitable for S1 analysis. Any development proposal at the site should have regard to IFI guidelines, and associated flood risk and prepare a SSFRA to a suitable level.

Draft Variation Site ID	Settlement	Draft Variation Proposed Zoning	Flood Zone	PM JT Required?	Comment
HC_1	Holycross	Strategic Reserve	FZC	No	
HC_2	Holycross	Strategic Reserve	FZC	No	
HC_3	Holycross	Amenity	**FZA**	No	The proposed Amenity zoning is considered Water Compatible, and is therefore appropriate in any FZ. Any development proposal for the site should be accompanied by a SSFRA, in line with Policy 11-9 of the Tipp CDP 2022-2028.
KL_1	Kilsheelan	Strategic Reserve	FZC	No	
KL_2	Kilsheelan	New Residential	FZC	No	
KL_3	Kilsheelan	Strategic Reserve	FZC	No	
KL_4	Kilsheelan	Strategic Reserve	FZC	No	
KL_5	Kilsheelan	Existing Residential	FZC	No	
KL_6	Kilsheelan	Employment	FZC	No	
KL_7	Kilsheelan	New Residential	FZC	No	Given the site is located partially within the MRFS CC extents, a SSFRA should be prepared for any development proposal in line with Policy 11-9 of the Tipp CDP 2022-2028. Watercourse runs along western site bound, captured by both CFRAM and NIFM delineated FZs. Site is appropriately located in FZC.
KL_8	Kilsheelan	New Residential	FZC	No	
KN_1	Killenaule	New Residential	FZC	No	
KN_2	Killenaule	New Residential	FZC	No	
KN_3	Killenaule	Strategic Reserve	FZC	No	Unmodelled watercourse adjacent to site, as encompassed by Tipperary CC FZs. Any development proposal at the site should prepare a Stage 3 SSFRA, having regard to associated flood risk, CC impacts, and IFI guidelines/ riparian buffers.
M_1	Mullinahone	New Residential	FZC	No	Recurring fluvial flooding within Mullinahone, captured by CFRAM delineated FZs. Site is appropriately located in FZC.
M_2	Mullinahone	Strategic Reserve	FZC	No	

Draft Variation Site ID	Settlement	Draft Variation Proposed Zoning	Flood Zone	PM JT Required?	Comment
M_3	Mullinahone	Existing Residential	FZC	No	Recurring fluvial flooding within Mullinahone, captured by CFRAM delineated FZs. Site is appropriately located in FZC.
N_1	Nenagh	New Residential	FZC	No	
N_2	Nenagh	New Residential	FZC	No	
N_3	Nenagh	Strategic Reserve	FZC	No	Given the site is located partially within the MRFS CC extents, a SSFRA should be prepared for any development proposal in line with Policy 11-9 of the Tipp CDP 2022-2028. CFRAM modelled watercourse along eastern site bound, as captured by delineated FZs. Site is appropriately located in FZC.
N_4	Nenagh	Strategic Reserve	FZC	No	Recurring fluvial flooding at adjacent junction, captured by CFRAM delineated FZs. Site is appropriately located in FZC.
N_5	Nenagh	New Residential	FZC	No	Recurring fluvial flooding associated with Clareen Stream, captured by CFRAM delineated FZs. Site is appropriately located in FZC.
NEW_1	Newport	Strategic Reserve	FZC	No	
NEW_2	Newport	New Residential	FZC	No	Historical flooding recorded in vicinity, remedial works recorded as carried out. Any development proposal for the site should ensure there is no associated flood risk to the site, and any proposal will not increase flood risk elsewhere.
NEW_3	Newport	New Residential	FZC	No	Historical flooding recorded in vicinity, remedial works recorded as carried out. Any development proposal for the site should ensure there is no associated flood risk to the site, and any proposal will not increase flood risk elsewhere.
NEW_4	Newport	Strategic Reserve	FZC	No	
NEW_5	Newport	New Residential	FZC	No	Recurring fluvial flooding within Newport, captured by CFRAM delineated FZs. Site is appropriately located in FZC.

Draft Variation Site ID	Settlement	Draft Variation Proposed Zoning	Flood Zone	PM JT Required?	Comment
PR_1	Portroe	Addtional lands to be zoned New Residential outside boundary	FZC	No	
R_1	Roscrea	New Residential	FZC	No	
R_2	Roscrea	New Residential	FZC	No	
T_1	Thurles	Strategic Reserve	FZC	No	Given the site is located partially within the MRFS CC extents, a SSFRA should be prepared for any development proposal in line with Policy 11-9 of the Tipp CDP 2022-2028. Recurring fluvial flooding is recorded within Thurles, as captured by CFRAM delineated FZs. Site is appropriately located in FZC.
T_2	Thurles	New Residential	FZC	No	
T_3	Thurles	Strategic Reserve	FZC	No	Historic flood extents within site based on aerial photography and video footage of January 2008 flooding along River Suir. CFRAM modelling of River Suir through Thurles has since been undertaken and calibrated based on historic flood records, and is the basis for FZs in Thurles. Site is appropriately located in FZC. Any development proposal for the site should ensure there is no associated flood risk to the site, and any proposal will not increase flood risk elsewhere.
T_4	Thurles	New Residential	FZC	No	
TM_1	Templemore	Town Environs	**FZA**	No	The proposed Town Environs zoning is considered Water Compatible, and is therefore appropriate in any FZ. Any development proposal for the site should be accompanied by a SSFRA, in line with Policy 11-9 of the Tipp CDP 2022-2028.
TM_10	Templemore	Existing Residential	FZC	No	
TM_11	Templemore	Existing Residential	FZC	No	
TM_12	Templemore	New Residential	FZC	No	

Draft Variation Site ID	Settlement	Draft Variation Proposed Zoning	Flood Zone	PM JT Required?	Comment
TM_5	Templemore	New Residential	FZC	No	
TM_6	Templemore	Employment	FZC	No	
TM_7	Templemore	New Residential	FZC	No	
TM_8	Templemore	Existing Residential	FZC	No	
TM_9	Templemore	New Residential	FZC	No	
TMB_1	Twomile Borris	New Residential	FZC	No	
TMB_10	Twomile Borris	Amenity	FZC	No	
TMB_11	Twomile Borris	New Residential	FZC	No	
TMB_2	Twomile Borris	New Residential	FZC	No	
TMB_3	Twomile Borris	Existing Residential	FZC	No	
TMB_4	Twomile Borris	Amenity	FZC	No	
TMB_5	Twomile Borris	Existing Residential	FZC	No	
TMB_6	Twomile Borris	Existing Residential	FZC	No	
TMB_7	Twomile Borris	Existing Residential	FZC	No	
TMB_8	Twomile Borris	Amenity	FZC	No	
TMB_9	Twomile Borris	Amenity	FZC	No	
TT_1	Tipperary Town	Existing Residential	FZC	No	
TT_10	Tipperary Town	Existing Residential	FZC	No	
TT_11	Tipperary Town	Employment	FZC	No	
TT_12	Tipperary Town	Amenity	**FZA**	No	The proposed Amenity zoning is considered Water Compatible, and is therefore appropriate in any FZ. Any development proposal for the site should be accompanied by a SSFRA, in line with Policy 11-9 of the Tipp CDP 2022-2028.

Draft Variation Site ID	Settlement	Draft Variation Proposed Zoning	Flood Zone	PM JT Required?	Comment
TT_2	Tipperary Town	Strategic Reserve	FZC	No	Site is bisected by an unmodelled EPA watercourse. Any development proposal at the site should prepare a Stage 3 SSFRA, having regard to associated flood risk, CC impacts, and IFI guidelines/ riparian buffers.
TT_3	Tipperary Town	New Residential	FZC	No	Unmodelled watercourse runs along western site bound. Any development proposal at the site should prepare a Stage 3 SSFRA, having regard to associated flood risk, CC impacts, and IFI guidelines/ riparian buffers.
TT_4	Tipperary Town	New Residential	FZC	No	Given the site is located partially within the MRFS CC extents, a SSFRA should be prepared for any development proposal in line with Policy 11-9 of the Tipp CDP 2022-2028. A CFRAM modelled watercourse is located to the north, buffered by WC amenity space. Site is appropriately located in FZC.
TT_5	Tipperary Town	Amenity	FZC	No	
TT_6	Tipperary Town	New Residential	FZC	No	Given the site is located partially within the MRFS CC extents, a SSFRA should be prepared for any development proposal in line with Policy 11-9 of the Tipp CDP 2022-2028. Site is appropriately located in FZC.
TT_7	Tipperary Town	Amenity	**FZA**	No	The proposed Amenity zoning is considered Water Compatible, and is therefore appropriate in any FZ. Any development proposal for the site should be accompanied by a SSFRA, in line with Policy 11-9 of the Tipp CDP 2022-2028.
TT_8	Tipperary Town	Existing Residential	FZC	No	
TT_9	Tipperary Town	New Residential	FZC	No	

Conclusion

In achieving the objectives of the OPW Guidelines, Tipperary CC must:

- Adopt a sequential approach to flood risk management, which aims to (1) avoid flood risk where possible, (2) substitute less vulnerable uses where avoidance is not possible, and (3) mitigate and manage the risk where avoidance and substitution are not possible.
- Apply the Justification Test for development in flood risk areas.

A precautionary approach should also be applied to flood risk management to reflect uncertainties in available flood data, risk assessment techniques, climate change projections, and performance of existing flood defences.

In summary, all 143 proposed zonings / rezonings and new / revised designations included in Proposed Variation No. 1 are considered 'appropriate' as per the OPW Guidelines and do not require the application of Plan-Making Justification Tests.

The Sequential Approach and guidance outlined in the OPW Guidelines and CDP SFRA should be applied in any future development proposals relevant to the subject variation sites.