McCloy Consulting

Strategic Flood Risk Assessment for Proposed Variation No. 1

of the Tipperary County Development Plan 2022-2028

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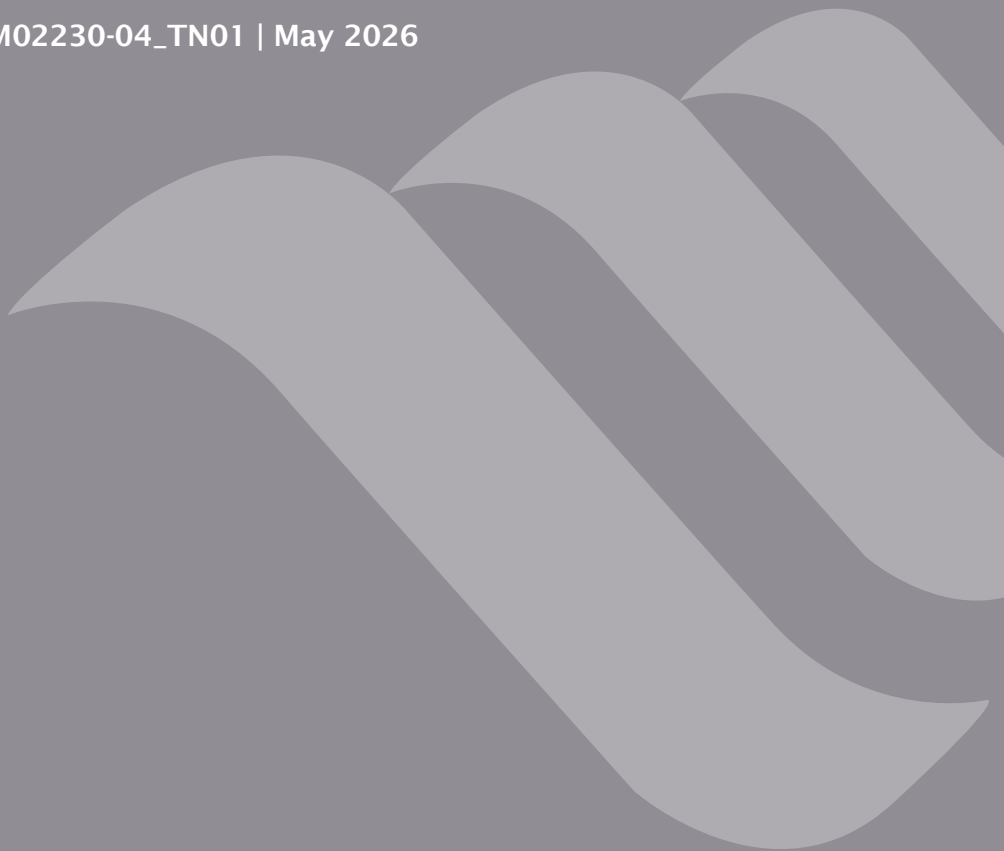

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Introduction

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."*

While Flood Zones are generated without the inclusion of allowances for climate change, the OPW Guidelines, and Tipperary CDP recognise that climate change, including its potential impact on flood risk, is a key consideration for future development. The potential impact of climate change on development proposals should be considered for any site where a Stage 2 or Stage 3 FRA has been identified as being required (i.e. flood risk has not been screened out in a Stage 1 FRA). The source of climate change flood risk may be fluvial or pluvial and will generally result in higher flood levels and wider flood extents than present-day projections.

Climate change projections are to be applied depending on the receptor vulnerability as follows:

- HEFS is to be considered for 'highly vulnerable' development
- MRFS is to be considered for 'less vulnerable' development
- Climate change is generally not a critical consideration for 'water compatible' development but if required (e.g. to ascertain flood depths), the MRFS will apply

For mixed use developments, both HEFS and MRFS should be assessed and applied depending on the vulnerability of the part of the development under consideration.

For purposes of site-specific flood risk assessment to inform development management and control:

- Climate change impacts on fluvial flooding where no mapped flood data is available are to be assessed by an appropriate methodology which will normally[1] require site-specific hydraulic modelling by increasing the estimated flows by the factor shown in the CDP (20% for MRFS, 30% for HEFS).
- SSFRAs should address climate change scenarios in relation to Finished Floor Levels (FFLs)/ Finished Ground Levels (FGLs) and potential mitigation measures in these areas.

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.

[1] *The OPW Guidelines state that in the absence of climate change data, the 0.1% AEP flood can be taken / applied as the 1% AEP + CC flood but this approach should only be used the effect is proportionate the scale and nature of the development*

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 the River Shannon, understood to be captured by CFRAM delineated Flood Zones. Site is appropriately located in Flood Zone C. Significant flooding was experienced along the River Shannon in 1954. Ballina lies in the lower Shannon catchment, at the interchange between Lough Derg and the downstream Parteen Weir. Review of historic flood records on the River Shannon and at Parteen Weir indicate the 2009 Shannon flood extent, which the OPW CFRAM Study and extents at Ballina are calibrated to, are greater than those experience in the 1954 historic event. Therefore, historic flood extents in Ballina are captured by the OPW Shannon CFRAM study and associated mapping used to define Flood Zones in the area.
B_2	Ballina	New Residential	FZC	No	
B_3	*Ballina*				*Site removed in Rev 03 (PMA), reverted to Agricultural.*
B_4	Ballina	New Residential	FZC	No	
B_5	Ballina	New Residential	FZC	No	

Draft Variation Site ID	Settlement	Draft Variation Proposed Zoning	Flood Zone	PM JT Required?	Comment
B_6	Ballina	New Residential	FZC	No	Site located within historic flood extents (1954) of River Shannon, as captured by CFRAM delineated Flood Zones. Site is appropriately located in Flood Zone C. Significant flooding was experienced along the River Shannon in 1954. Ballina lies in the lower Shannon catchment, at the interchange between Lough Derg and the downstream Parteen Weir. Review of historic flood records on the River Shannon and at Parteen Weir indicate the 2009 Shannon flood extent, which the OPW CFRAM Study and extents at Ballina are calibrated to, are greater than those experience in the 1954 historic event. Therefore, historic flood extents in Ballina are captured by the OPW Shannon CFRAM study and associated mapping used to define Flood Zones in the area. Marginal area within 0.1% MRFS and HEFS CC extent, outside 1% HEFS CC extent. Sufficient available land to employ the sequential approach, to be considered as part of a Stage 3 SSFRA at Development Management stage in support of future proposals for the site in line with Policy 11-9 of the Tipp CDP 2022-2028.
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 be accompanied by a SSFRA, in line with Policy 11-9 of the Tipp CDP 2022-2028.
BC_2	Ballyclerihan	New Residential	FZC	No	
BC_3	Ballyclerihan	Strategic Reserve	FZC	No	
BC_4	Ballyclerihan	Strategic Reserve	FZC	No	Site added in Rev03 (PMA).
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 is noted to route north, as captured by CFRAM and NIFM delineated Flood Zones in the area. 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
BO_1	*Borrisokane*				*Site removed in Rev 03 (PMA), reverted to Employment.*
BO_2	*Borrisokane*				*Site removed in Rev 03 (PMA), reverted to Agricultural.*
BO_3	Borrisokane	Existing Residential	FZC	No	
BO_4	Borrisokane	New Residential	FZC	No	Site added in Rev 03 (PMA).
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 Flood Zone. 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	Boundary modified in Rev03 (PMA).
C_3a	Clonmel	Amenity	FZC	No	Site added in Rev 03 (PMA).
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 be accompanied by a SSFRA, in line with Policy 11-9 of the Tipp CDP 2022-2028.
C_6	Clonmel	Community Services and Infrastructure	FZC	No	
C_7	Clonmel	Strategic Reserve	FZC	No	
C_8	Clonmel	Strategic Reserve	FZC	No	

Draft Variation Site ID	Settlement	Draft Variation Proposed Zoning	Flood Zone	PM JT Required?	Comment
C_9	Clonmel	Strategic Reserve	FZC	No	Site partially located within historic flood extents and within a CFRAM mapped area. Exceptional flooding is recorded as having been experienced throughout South Tipperary in November 2000. 184 properties were identified as flooded in Clonmel. The Boulick Stream is noted as the source of flooding in the Glenconnor and Highfield Grove areas. The Boulick has since been culverted at the N24, where it would have run along the southern boundary of the site. Given the change in the hydraulic environment, the historic flood risk is no longer considered present at the site. 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_14	Clonmel	New Residential	FZC	No	Site added in Rev 03 (PMA).
CG_1	Clogheen	New Residential	FZC	No	Recurring fluvial flooding within Clogheen is understood to have been captured by CFRAM delineated Flood Zones. Site is appropriately located in Flood Zone C.
CG_2	Clogheen	Strategic Reserve	FZC	No	Recurring fluvial flooding within Clogheen is understood to have been captured by CFRAM delineated Flood Zones. Site is appropriately located in Flood Zone C. Marginal area within 0.1% MRFS and HEFS CC extent, outside 1% HEFS CC extent. Sufficient available land to employ the sequential approach, to be considered as part of a Stage 3 SSFRA at Development Management stage in support of future proposals for the site in line with Policy 11-9 of the Tipp CDP 2022-2028.
CG_3	Clogheen	Amenity	FZC	No	Rezoned to Water Compatible usage in Rev 03 (PMA).
CG_4	*Clogheen*				*Site removed in Rev 03 (PMA), reverted to Existing Residential.*
CG_5	Clogheen	Existing Residential	FZC	No	Recurring fluvial flooding within Clogheen is understood to have been captured by CFRAM delineated Flood Zones. Site is appropriately located in Flood Zone C.
CH_1	Cahir	New Residential	FZC	No	
CH_10	Cahir	Existing Residential	FZC	No	
CH_2	Cahir	Strategic Reserve	FZC	No	

Draft Variation Site ID	Settlement	Draft Variation Proposed Zoning	Flood Zone	PM JT Required?	Comment
CH_3	Cahir	New Residential	FZC	No	Proposed zoning revised in Rev 03 (PMA).
CH_4	Cahir	New Residential	FZC	No	
CH_5	Cahir	Strategic Reserve	FZC	No	
CH_6	Cahir	Strategic Reserve	FZC	No	
CH_7	*Cahir*				*Site removed in Rev 03 (PMA), reverted to Town Environs.*
CH_8	Cahir	New Residential	FZC	No	
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	Strategic Reserve	FZC	No	Proposed zoning revised in Rev 03 (PMA).
CS_17	Cashel	Existing Residential	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	

Draft Variation Site ID	Settlement	Draft Variation Proposed Zoning	Flood Zone	PM JT Required?	Comment
CS_4	Cashel	New Residential	FZC	No	
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. There are no watercourses in the area identified by historic or EPA mapping, or GSI record of predicted or historic groundwater flooding. The historic flood records are therefore considered surface water, and to be considered as part of appropriate drainage design at Development Management stage. Any development proposal for the site should be accompanied by a SSFRA, in line with Policy 11-9 of the Tipp CDP 2022-2028.
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. There are no watercourses in the area identified by historic or EPA mapping, or GSI record of predicted or historic groundwater flooding. The historic flood records are therefore considered surface water, and to be considered as part of appropriate drainage design at Development Management stage. Any development proposal for the site should be accompanied by a SSFRA, in line with Policy 11-9 of the Tipp CDP 2022-2028.
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. There are no watercourses in the area identified by historic or EPA mapping, or GSI record of predicted or historic groundwater flooding. The historic flood records are therefore considered surface water, and to be considered as part of appropriate drainage design at Development Management stage. Any development proposal for the site should be accompanied by a SSFRA, in line with Policy 11-9 of the Tipp CDP 2022-2028.
CS_8	Cashel	New Residential	FZC	No	
CS_9	Cashel	New Residential	FZC	No	

Draft Variation Site ID	Settlement	Draft Variation Proposed Zoning	Flood Zone	PM JT Required?	Comment
CS_21	Cashel	Amenity	FZC	No	Site added in Rev 03 (PMA).
CS_22	Cashel	New Residential	FZC	No	Site added in Rev 03 (PMA). Adjacent lands at Waller's Lot, local cemetery, and Clonmel Road noted as experiencing recurring flooding in periods of heavy rainfall. Area identified along Clonmel Road by sketched 2006 mapping. There are no watercourses in the area identified by historic or EPA mapping, or GSI record of predicted or historic groundwater flooding. The historic flood records are therefore considered surface water, and to be considered as part of appropriate drainage design at Development Management stage. Any development proposal for the site should be accompanied by a SSFRA, in line with Policy 11-9 of the Tipp CDP 2022-2028.
CS_23	Cashel	Strategic Reserve	FZC	No	Site added in Rev 03 (PMA). Adjacent lands at Waller's Lot, local cemetery, and Clonmel Road noted as experiencing recurring flooding in periods of heavy rainfall. Area identified along Clonmel Road by sketched 2006 mapping. There are no watercourses in the area identified by historic or EPA mapping, or GSI record of predicted or historic groundwater flooding. The historic flood records are therefore considered surface water, and to be considered as part of appropriate drainage design at Development Management stage. Any development proposal for the site should be accompanied by a SSFRA, in line with Policy 11-9 of the Tipp CDP 2022-2028.
F_1	Fethard	New Residential	FZC	No	Recurring fluvial flooding within Fethard is understood to have been captured by CFRAM delineated Flood Zones. Site is appropriately located in Flood Zone C.
F_2	Fethard	Strategic Reserve	FZC	No	Marginal area within 0.1% MRFS and 1% / 0.1% HEFS CC extent, outside 1% MRFS CC extent. Sufficient available land to employ the sequential approach, to be considered as part of a Stage 3 SSFRA at Development Management stage in support of future proposals for the site in line with Policy 11-9 of the Tipp CDP 2022-2028.
F_3	Fethard	Strategic Reserve	FZC	No	

Draft Variation Site ID	Settlement	Draft Variation Proposed Zoning	Flood Zone	PM JT Required?	Comment
F_4	Fethard	New Residential	FZC	No	Adjacent watercourse included in OPW NIFM flood extent mapping. Any development proposal for the site should be accompanied by a SSFRA, in line with Policy 11-9 of the Tipp CDP 2022-2028.
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 Flood Zone. 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	Site bound modified in Rev 03 (PMA).
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	Marginal area within 0.1% MRFS and 1% / 0.1% HEFS CC extent, outside 1% MRFS CC extent. Sufficient available land to employ the sequential approach, to be considered as part of a Stage 3 SSFRA at Development Management stage in support of future proposals for the site in line with Policy 11-9 of the Tipp CDP 2022-2028.
KL_8	Kilsheelan	New Residential	FZC	No	
KL_9	Kilsheelan	Community Services and Infrastructure	FZC	No	Site added in Rev 03 (PMA).
KL_10	Kilsheelan	Community Services and Infrastructure	FZC	No	Site added in Rev 03 (PMA). Recurring flooding associated with runoff recorded at adjacent road in vicinity of site. Any development proposal for the site should be accompanied by a SSFRA, in line with Policy 11-9 of the Tipp CDP 2022-2028.
KN_1	Killenaule	New Residential	FZC	No	

Draft Variation Site ID	Settlement	Draft Variation Proposed Zoning	Flood Zone	PM JT Required?	Comment
KN_2	Killenaule	New Residential	FZC	No	
KN_3	Killenaule	Strategic Reserve	FZC	No	EPA delineated unmodelled watercourse adjacent to site, as encompassed by Tipperary CC Flood Zones. Any development proposal for the site should be accompanied by a SSFRA, in line with Policy 11-9 of the Tipp CDP 2022-2028.
M_1	Mullinahone	New Residential	FZC	No	Recurring fluvial flooding within Mullinahone is understood to have been captured by CFRAM delineated Flood Zones. Site is appropriately located in Flood Zone C.
M_2	Mullinahone	Strategic Reserve	FZC	No	
M_3	Mullinahone	Existing Residential	FZC	No	Recurring fluvial flooding within Mullinahone is understood to have been captured by CFRAM delineated Flood Zones. Site is appropriately located in Flood Zone C.
N_1	Nenagh	New Residential	FZC	No	
N_2	Nenagh	New Residential	FZC	No	
N_3	Nenagh	Strategic Reserve	FZC	No	Marginal area within 0.1% MRFS and HEFS CC extent, outside 1% HEFS CC extent. Sufficient available land to employ the sequential approach, to be considered as part of a Stage 3 SSFRA at Development Management stage in support of future proposals for the site in line with Policy 11-9 of the Tipp CDP 2022-2028.
N_4	Nenagh	Strategic Reserve	FZC	No	Recurring fluvial flooding at adjacent junction is understood to have been captured by CFRAM delineated Flood Zones. Site is appropriately located in Flood Zone C.
N_5	Nenagh	New Residential	FZC	No	Recurring fluvial flooding associated with Clareen Stream is understood to have been captured by CFRAM delineated Flood Zones. Site is appropriately located in Flood Zone C.
N_6	Nenagh	New Residential	FZC	No	Site added in Rev 03 (PMA).
N_7	Nenagh	New Residential	FZC	No	Site added in Rev 03 (PMA).
N_8	Nenagh	New Residential	FZC	No	Site added in Rev 03 (PMA).
NEW_1	Newport	Strategic Reserve	FZC	No	

Draft Variation Site ID	Settlement	Draft Variation Proposed Zoning	Flood Zone	PM JT Required?	Comment
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 be accompanied by a SSFRA, in line with Policy 11-9 of the Tipp CDP 2022-2028.
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 be accompanied by a SSFRA, in line with Policy 11-9 of the Tipp CDP 2022-2028.
NEW_4	Newport	Strategic Reserve	FZC	No	
NEW_5	Newport	New Residential	FZC	No	Recurring fluvial flooding within Newport is understood to have been captured by CFRAM delineated Flood Zones. Site is appropriately located in Flood Zone C.
PR_1	Portroe	Additional 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	Marginal area within 0.1% MRFS and HEFS CC extent, outside 1% HEFS CC extent. Sufficient available land to employ the sequential approach, to be considered as part of a Stage 3 SSFRA at Development Management stage in support of future proposals for the site in line with Policy 11-9 of the Tipp CDP 2022-2028.
T_2	Thurles	New Residential	FZC	No	

Draft Variation Site ID	Settlement	Draft Variation Proposed Zoning	Flood Zone	PM JT Required?	Comment
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, understood to be captured by CFRAM delineated Flood Zones. Site is appropriately located in Flood Zone C. CFRAM modelling of River Suir through Thurles has since been undertaken and calibrated based on historic flood records, and is the basis for Flood Zones in Thurles. The hydraulics report confirms localized ponding was recorded by aerial photography (and digitized as part of the historic flood extent mapping), but is not associated with fluvial flood risk as there is no flow path from the river.
T_4	Thurles	New Residential	FZC	No	
T_5	Thurles	New Residential	FZC	No	Site added in Rev03. Recurring fluvial flooding within Thurles is understood to have been captured by CFRAM delineated Flood Zones. Site is appropriately located in Flood Zone C. Marginal area within MRFS CC extents. Sufficient available land to employ the sequential approach, to be considered as part of a Stage 3 SSFRA at Development Management stage in support of future proposals for the site in line with Policy 11-9 of the Tipp CDP 2022-2028.
T_6	Thurles	New Residential	FZC	No	Site added in Rev 03 (PMA).
TM_1	Templemore	Amenity	**FZA**	No	Proposed site zoning revised to Amenity in Rev 03 (PMA). The proposed Amenity zoning is considered Water Compatible, and is therefore appropriate in any Flood Zone. 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	
TM_5	Templemore	New Residential	FZC	No	
TM_6	Templemore	Employment	FZC	No	

Draft Variation Site ID	Settlement	Draft Variation Proposed Zoning	Flood Zone	PM JT Required?	Comment
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 Flood Zone. 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_2	Tipperary Town	Amenity	FZC	No	Proposed zoning revised to Amenity in Rev 03 (PMA). The proposed Amenity zoning is considered Water Compatible, and is therefore appropriate in any Flood Zone. Any development proposal for the site should be accompanied by a SSFRA, in line with Policy 11-9 of the Tipp CDP 2022-2028, including consideration of the unmodelled EPA watercourse in the vicinity.

Draft Variation Site ID	Settlement	Draft Variation Proposed Zoning	Flood Zone	PM JT Required?	Comment
TT_3	*Tipperary Town*				*Site removed in Rev 03 (PMA), reverted to Strategic Reserve. Any development proposal for the site should be accompanied by a SSFRA, in line with Policy 11-9 of the Tipp CDP 2022-2028, including consideration of the unmodelled EPA watercourse in the vicinity.*
TT_4	Tipperary Town	New Residential	FZC	No	Marginal area within MRFS CC extents. Sufficient available land to employ the sequential approach, to be considered as part of a Stage 3 SSFRA at Development Management stage in support of future proposals for the site in line with Policy 11-9 of the Tipp CDP 2022-2028.
TT_5	Tipperary Town	Amenity	FZC	No	
TT_6	Tipperary Town	Amenity	FZC	No	Zoning revised to Amenity in Rev 03 (PMA). Site is appropriately located in Flood Zone C. Marginal area within MRFS CC extents. 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_7	Tipperary Town	Amenity	**FZA**	No	The proposed Amenity zoning is considered Water Compatible, and is therefore appropriate in any Flood Zone. 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	
TT_14	Tipperary Town	New Residential	FZC	No	Site added in Rev 03 (PMA).

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 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.

Appendix A

OPR / OPW Consultation Responses

Response Format

The following constitutes a response to submissions from the OPW and OPR, dated 1st April 2026 and 20th April 2026, respectively, which address flood risk related comments, recommendations, and observations, as they pertain to the Proposed Variation.

The response sets out our comment on and interpretation of the OPW and OPR comments, recommendations and observations vis a vis advice previously provided to Tipperary CC and sets out potential actions to address the comments should Tipperary CC deem any action is necessary. The responses and associated assessments are in addition to and designed to complement the previously issued SFRA report which remains unchanged.

We note that several comments relate to planning policy, proposed land use zoning and / or the overall form of the Variation, which will need to be addressed by Tipperary CC as the planning authority.

Templemore Site TM_1- Town Environs Zoning

OPR Comment	OPW Comment
the Office recommends that the Planning Authority: (i) ensures the zoning objective for site TM_1 within Flood Zone A is limited to water compatible uses, or alternatively that a Plan Making Justification Test is carried out prior to zoning the land for highly or less vulnerable uses in accordance with the Flood Guidelines;	**Town Environs Zoning** Draft Variation Site ID TM_1 rezones an area of land in Templemore from *New Residential* to *Town Environs*. The SFRA commentary on this change states that: "*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.*" The land use zoning matrix provided in table 1.3 of the variation indicates that "*Agricultural Buildings/Structures*", defined as less vulnerable development in the guidelines, are permitted in principle.

Following discussions with Tipperary CC, it was indicated site TM_1 was intended for only Water Compatible usage. Tipperary CC has decided to rezone the lands Amenity, which reflects the Water Compatible intention for the site, and the site's location in Flood Zone A and Flood Zone B.

Nature-based Solutions and SuDS

OPR Comment	OPW Comment
(v) ensures the management of surface water runoff in the development of key sites is in accordance with Sustainable urban Drainage Systems (SuDS), including nature-base solutions. These sites should be identified in the SFRA and necessary guidance provided on the applicability of different SuDS techniques.	**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). Tipperary 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', as well as the Guidance Document for Planners, Developers and Developer Agents 'Implementation of Urban Nature-based Solutions' for further guidance. The Guidelines recommend that the Strategic Flood Risk Assessment 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.

The Tipperary County Development Plan 2022-2028 outlines SuDS and NBS requirements across the County, as supported by Section 1.7 of the Tipperary CDP 2022-2028 SFRA and Chapter 15 of the CDP. Notably, Section 15.3 sets out "The Council is responsible for the on-going maintenance and monitoring of sustainable drainage systems within our towns and villages, and will seek to maintain drainage having consideration to Water Sensitive Urban Design and application of a SuDS approach. The Council will require all new development to provide a separate foul and surface water drainage system and to incorporate Water Sensitive Urban Design and a SuDS approach, where appropriate, in new development and the public realm. The provisions of Nature-Based Solutions to the Management of Rainwater and Surface Water Runoff in Urban Areas (water sensitive urban design) Best Practice Interim Guidance Document (DHLGH, 2001) and any review there off, will apply. The Council will require the implementation of water sensitive urban design as an integral part of the design of new developments to reduce the generation of storm water run-off, and

to ensure that all storm water generated is disposed of on-site or is attenuated and treated prior to discharge to an approved storm water system".

Specification of regional SuDS is outside the scope of the Variation SFRA, however this approach will be incorporated as part of the ongoing planning principles for Tipperary County, and as part of the next CDP cycle. Reference to recent [Department of Housing, Local Government and Heritage (DHLGH) Rainwater Management Plans – Guidance for Local Authorities (2024)] will be added to the next CDP cycle, looking at strategic planning across the County. This document sets out targets for RMPs across the country which could be referenced as part of policies / objectives within the future CDP / SFRA at the direction of Tipperary CC.

Consideration of Climate Change

OPR Comment	OPW Comment
(ii) amends the Strategic Flood Risk Assessment (SFRA) to include text to address the findings of the future scenario maps to mitigate risk on identified sites, namely CG_2, KL_7, B_6, F_2, TT_4, TT_6, T_1 and N_3, adopting a precautionary approach;	**Consideration of Climate Change Impacts** Tipperary County Council should set out how climate change is to be managed on lands that are not currently at risk of flooding but could potentially be at risk in the future as shown by the future scenario flood extents. 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. Future scenario risk has been identified at the following amended zonings in the SFRA but it is proposed that this is to be dealt with at the development management stage: • Clogheen CG_2 (less vulnerable *Agriculture* to highly vulnerable *Strategic Reserve*) • Kilsheelan KL_7 (water compatible *Amenity* to highly vulnerable *New Residential*) • Ballina B_6 (water compatible *Amenity* to highly vulnerable *New Residential*) • Fetherd F_2 (less vulnerable *Agriculture* to highly vulnerable *Strategic Reserve*) • Tipperary Town TT_4 (highly vulnerable *New Residential Phase 2* to highly vulnerable *New Residential*) • Tipperary Town TT_6 (highly vulnerable *New Residential Phase 2* to highly vulnerable *New Residential*) • Thurles T_1 (*Town Environs* which allows less vulnerable development such as agricultural buildings and structures to highly vulnerable *Strategic Reserve*) • Nenagh N_3 (*Town Environs* which allows less vulnerable development such as agricultural buildings and structures to highly vulnerable *Strategic Reserve*)

Each of the highlighted sites have been reviewed in relation to the High-End Future Scenario predicted flood extents (NIFM, NCFHM, CFRAM).

Additional text has been added to address site-specific risk and consideration of climate change as part of the SFRA (see main body of report).

Unmapped Watercourses

OPR Comment	OPW Comment
(iii) determines if stage 3 flood risk assessments are required for sites TT_2 and TT_3 lands along either side of unmapped watercourses which have no flood risk extents illustrated on the flood zone mapping. If required, the Planning Authority should undertake stage 3 flood risk assessments and if necessary, re-zone lands for an appropriate use consistent with the Flood Guidelines;	**Unmapped Watercourses** For a number of areas where rezoning is proposed, the EPA flow network data indicates watercourses passing through or adjacent to the lands. These watercourses appear not to have met the criteria for inclusion in either the National CFRAM or the National Indicative Fluvial Mapping (NIFM) programme, and therefore the OPW has not produced predictive flood risk extents for these watercourses. For these areas, Table 2 of the SFRA generally includes commentary to the effect that "*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*". Tipperary County Council should review if Stage 3 flood risk assessments are required to inform the land use zonings and the SFRA. An evaluation of site-specific flood risk assessments may also assist with establishing flood zones. This applies to the following areas: • Tipperary Town TT_2 (less vulnerable *Agriculture* to highly vulnerable *Strategic Reserve*) • Tipperary Town TT_3 (highly vulnerable *New Residential Phase 2* to highly vulnerable *New Residential*)

In line with the scope of a Strategic-Level Flood Risk Assessment, a Stage 1 assessment was initially undertaken at each of the identified Variation sites. The findings set out that an unmodelled watercourse is located in the vicinity of each site, based on EPA watercourse mapping, and requires "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".

Site TT_3 in no longer proceeding as part of the variation, and is therefore removed from assessment, reverting to its original zoning. Any proposed development proposal at the site in line with the existing zoning should still prepare a Stage 3 SSFRA, having regard to associated flood risk, CC impacts, and IFI guidelines/ riparian buffers.

In response to the OPW and OPR submissions, and further consultation with the OPW, additional Stage 2 assessment has been undertaken at Site TT_2, to appraise the adequacy of the existing information, and set out recommendations for the site. Following Stage 2 analysis, and given the open watercourse and time constraints associated with the PMA process, the site has been rezoned to water compatible Amenity. 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, accounting for the unmodelled EPA watercourse identified at the subject site.

Historic Flooding

OPR Comment	OPW Comment
(iv) ensures the mapped extents of historic flood events are considered in the SFRA in relation to sites B_1, B_6, C_9 and T_3; and	**Historic Flooding** A number of amended zonings appear to be adjacent to or within the extents of historic flood events. While these have been noted in the SFRA, for certain areas detail has not been provided as to how the zonings are considered appropriate in the context of risk identified due to prior flood events at these locations. This applies to the following areas: • Ballina B_1 (water compatible *Amenity* to highly vulnerable *New Residential*) within mapped extents of December 1954 Shannon Flood event • Ballina B_6 (water compatible *Amenity* to highly vulnerable *New Residential*) within mapped extents of December 1954 Shannon Flood event • Clonmel C_9 (highly vulnerable *Community Services and Infrastructure* to highly vulnerable *Strategic Reserve*) within mapped extents of November 2000 flood event • Thurles T_3 (*Town Environs* which allows less vulnerable development to highly vulnerable *Strategic Reserve*) contains an area indicated to have been inundated in the January 2008 river Suir flood event • Cashel CS_5 (highly vulnerable *Existing Residential* to highly vulnerable *New Residential*) within marked extents of a recorded recurring flood event • Cashel CS_6 (highly vulnerable *Existing Residential* to highly vulnerable *New Residential*) within marked extents of a recorded recurring flood event • Cashel CS_7 (highly vulnerable *Existing Residential* to highly vulnerable *New Residential*) within marked extents of a recorded recurring flood event

Additional text has been added to address site-specific risk and consideration of historic flood risk as part of the SFRA (see main body of report).

For each of the sites, the historic flood risk has been appropriately considered as part of the zoning, and should be considered as part of a SSFRA for any development proposal at the subject sites.