



# Strategic Flood Risk Assessment for Variation No. 3

of the Kildare County Development Plan  
2023 - 2029

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## Introduction

McCloy Consulting were appointed by Kildare County Council (CC) to undertake a Strategic Flood Risk Assessment (SFRA) with respect to Variation No. 3 of the Kildare County Development Plan 2023-2029 (as varied).

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.

Proposed Variation No. 3 of the Kildare County Development Plan 2023 – 2029 (as varied) was placed on public display for consultation in October 2025. At a Special Meeting of Kildare County Council on Monday 26<sup>th</sup> January 2026, it was resolved to alter Proposed Variation No. 3 and that these alterations constitute a material alteration to the Proposed Variation. The Proposed Material Alterations to Proposed Variation No. 3 are being placed on public display for consultation in February 2026, including new and / or revised land use zonings. At a Special Meeting of Kildare County Council on Monday 27<sup>th</sup> April 2026, it was resolved to adopt Variation No. 3 with the Proposed Material Alterations, incorporating certain minor alterations. Kildare County Council is required to apply the SFRA criteria to the variation land zonings. Therefore, the preparation of the Variation has undergone an appropriate level of SFRA and this document sets out the findings for the Variation. New development will be required to comply with the flood risk management provisions from the County Development Plan (CDP).

## Disclaimer

It is noted that this Variation SFRA was 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 SFRA during the lifetime of the 2023-2029 County Development Plan. 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 Kildare County Council 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.

## Variation No. 3 to the Kildare County Development Plan

Proposed Variation No. 3 was primarily prepared to align the Kildare County Development Plan 2023-2029 (as varied) with certain Ministerial Guidelines published after the adoption of the Plan (i.e. after 9th December 2022), namely:

1. The NPF Implementation: Housing Growth Requirements – Guidelines for Planning Authorities (2025), and
2. The Sustainable Residential Development and Compact Settlements – Guidelines for Planning Authorities (2024).

The Proposed Variation sought to amend the text of Volume 1 of the Kildare County Development Plan 2023 – 2029 (as varied). At a Special Meeting of Kildare County Council on Monday 26<sup>th</sup> January 2026, it was resolved to alter Proposed Variation No. 3 and that these alterations constitute a material alteration to the Proposed Variation. The Proposed Material Alterations to Proposed Variation No. 3 include *inter alia* revisions to the Land Use Zoning Maps contained in Volume 2 of the Kildare County Development Plan 2023 – 2029 (as varied) to provide new and / or revised land use zonings / designations, and to amend settlement

boundaries where relevant. At a Special Meeting of Kildare County Council on Monday 27<sup>th</sup> April 2026, it was resolved to adopt Proposed Variation No. 3 with the Proposed Material Alterations (including new / revised land use zonings / designations), incorporating certain minor alterations to the aforementioned Material Alterations.

The new zonings / rezonings, new / revised designations, and relevant Material Alterations (MAs) are listed below in order of MA with details relevant to this Strategic Flood Risk Assessment.

A total of 19 PMAs include changes to land use zoning within the county, and have been identified for assessment, as follows:

- MA No. 12- Castledermot: Rezone from F: Open Space and Amenity to C: New Residential. Insert new F: Open Space and Amenity. Amend development boundary accordingly.
- MA No. 13- Kill: Rezone from SR: Strategic Reserve to C: New Residential.
- MA No. 14- Athgarvan: Rezone from E: Community and Educational to C: New Residential. Insert new E: Community and Educational. Amend development boundary accordingly.
- MA No. 15- Ballymore Eustace: Extend / Increase the existing C: New Residential land use zoning to the southeast of the village and to replace the 'C' indication above with C\*. Amend development boundary accordingly.
- MA No. 16- Ballymore Eustace: Identify lands with a black outline and A\* designation.
- MA No. 17- Ballymore Eustace: Introduce additional C: New Residential, F: Open Space and Amenity, F\*: Open Space and Amenity, and E: Community and Education. Amend development boundary accordingly, and designate the area of these land use zonings as requiring a development framework.
- MA No. 18- Cooleragh/ Coill Dubh: Introduce additional C: New Residential. Rezone from C: New Residential to E: Community and Educational. Amend development boundary accordingly.
- MA No. 19- Johnstown: Introduce C: New Residential (C\*), and F: Open Space and Amenity (F\*). Amend development boundary accordingly.
- MA No. 20- Johnstown: Introduce SS: Serviced Sites (SS\*), and F: Open Space and Amenity (F\*). Amend development boundary accordingly.
- MA No. 21- Kildangan: Introduce C: New Residential (C\*), and F: Open Space and Amenity (F\*). Amend development boundary accordingly.
- MA No. 22- Kilmeague: Introduce additional C: New Residential. Rezone from C: New Residential to I: Agriculture.
- MA No. 23- Robertstown: Rezone from SS: Serviced Sites to C: New Residential.
- MA No. 24- Straffan: Introduce additional C: New Residential. Amend the Straffan Land Use Zoning Map (Map Ref. V2-3.15) to ensure that a site- specific flood risk assessment is provided for development on these lands.
- MA No. 25- Ballyshannon: Designate lands as Settlement Expansion.
- MA No. 26- Kilmead: Designate lands as Settlement Expansion.
- MA No. 27- Two Mile House: Designate lands as Settlement Expansion.
- MA No. 28- Newtown: Designate Newtown as a Rural Settlement, including introduction of Settlement Core, Existing Settlement, and Settlement Expansion land use designations.
- MA No. 29- Kilcullen: Rezone from SR: Strategic Reserve to C: New Residential.
- MA No. 30- Kilcullen: Rezone from SS\*: Serviced Sites to C: New Residential.

This document should be read alongside the variation documentation, which presents the full variation information and mapping.

## Flood Risk Guidance

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

### Flood Zoning

The approach to assessment of flood risk throughout Kildare 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 designate land which is at moderate or high risk of flooding.
- **Development Management Justification Test** – used at the planning application stage 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

### Flood Risk Information

To ensure this SFRA for Variation No. 3 is based on the most up-to-date flood risk information, a comprehensive review of available flood data was undertaken and confirmed that no new relevant flood data has been published and / or made available since the CDP SFRA was published.

Therefore, the flood data / Flood Zones included in this SFRA report are considered the 'best' available to undertake the assessment.

As set out in the Kildare CDP SFRA, no part of the county is at risk from coastal flooding so fluvial flooding is the only source of Flood Zone data. Sources of fluvial flood data that have been used to inform this assessment are outlined below. It is noted that while Kildare 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 Kildare CDP SFRA was published are taken into account.

#### 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.

#### 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<sup>2</sup> 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 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.

### Kildare CDP SFRA Indicative Mapping

The Flood Zones as set out in the CDP SFRA are based on OPW CFRAM, OPW NIFM and Kildare Indicative SFRA Flood Mapping.

As part of the Kildare CDP SFRA 2023-2029 (see Section 5.8 and 5.9 of the CDP SFRA) indicative mapping was prepared based on hydrological estimations consistent with the CFRAM study applied to extracted cross-sections. This data is indicative in nature, but was deemed appropriate for Stage 2 flood mapping as part of the Kildare CDP SFRA process.

### **Flood Risk Assessment**

The following sections present the variation material alterations overlain with Flood Zone mapping that has been adopted for the purposes of this SFRA. The implication of the Flood Zoning on the nature of the variation (i.e. vulnerability classification) is assessed.

#### Material Alteration No. 12 – Castledermot

*Amend the Castledermot Land Use Zoning Map (Map Ref. V2-1.1A) to:*

- a) Replace part of an existing F: Open Space and Amenity land use zoning with a C: New Residential land use zoning, indicated as C\* on Map V2-1.1A. The image below indicates the lands to be changed from F to C zoning in solid yellow line.*
- b) Insert a new F: Open Space and Amenity land use zoning, indicated as F\* on Map V2-1.1A. Incorporate consequential alterations to Map V2-1.1A, including revisions to the Small Town Boundary and the Flood Risk Assessment Boundary. The image below indicates the lands to be inserted as F zoning in solid red line.*

*Insert a new objective under Section V2 2.2.6 Surface Water for Castledermot to state as follows:*

*ST CX Ensure that development proposals for lands identified as C\* and F\* in Castledermot on Map V2-1.1A shall be subject to a site-specific flood risk assessment appropriate to the type and scale of development being proposed. Such assessment(s) for C\* lands will be required to include consideration of climate change, associated flood extents and set out further requirements for the mitigation\*\* of the impact of climate change.*

*\*\*Including, but not limited to, the siting of development, freeboard and assessment of impact on flood risk elsewhere.*

As shown on Figure 1, the New Residential zoning allocation is wholly located in Flood Zone C (i.e. outside Flood Zone A and Flood Zone B) and therefore appropriate for highly vulnerable, less vulnerable and water compatible development in line with the OPW Guidelines and CDP SFRA. A Plan Making Justification Test is not necessary. No reported historic flooding is located within the vicinity of the site.

The new Open Space and Amenity zoning allocation is water compatible and therefore suitable in any flood zone in line with the OPW Guidelines and CDP SFRA. A Plan Making Justification Test is not necessary.

Per the new objective ST CX, these lands shall require a site-specific Flood Risk Assessment (SSFRA) as there may be sources of flooding or potential increase in risk due to climate change not taken into account by Flood Zoning. Any future development will be required to comply with relevant surface water management guidance and satisfy the range of other proper planning and sustainable development considerations (refer to Section 8 of the CDP SFRA).

**Figure 1: MA No. 12 Castledermot Land Use Zoning Map Amendments overlain with Flood Zone Sources**



### Material Alteration No. 13 – Kill

*Revise the Kill Land Use Zoning Map (Map Ref. V2- 3.1a) to amend the lands zoned as SR: Strategic Reserve to C: New Residential. See lands outlined below in solid blue line.*

As shown on Figure 2, the New Residential zoning allocation is wholly located in Flood Zone C (i.e. outside Flood Zone A and Flood Zone B) and therefore appropriate for highly vulnerable, less vulnerable and water compatible development in line with the OPW Guidelines and CDP SFRA. A Plan Making Justification Test is not necessary.

No reported historic flooding is recorded in the vicinity of the site.

Per the CDP SFRA, development of these lands may still require a site-specific Flood Risk Assessment (SSFRA) as there may be sources of flooding not taken into account by Flood Zoning. Any future development will be required to comply with relevant surface water management guidance and satisfy the range of other proper planning and sustainable development considerations (refer to Section 8 of the CDP SFRA).

**Figure 2: MA No. 13 Kill Land Use Zoning Map Amendments overlain with Flood Zone Sources**



#### Material Alteration No. 14 – Athgarvan

*Revise the Athgarvan Land Use Zoning Map (Map Ref. V2-3.2a) to:*

- a) Replace an existing E: Community and Educational land use zoning with a C: New Residential land use zoning on Map V2-3.2a. These lands are indicated in the yellow outline below.*
- b) Insert a new E: Community and Educational land use zoning on Map V2-3.2a. Incorporate consequential alterations to Map V2-3.2a, including revisions to the Village Boundary. These lands are indicated in the purple outline below.*

As shown on Figure 3, both the New Residential and Community and Educational zoning allocations are wholly located in Flood Zone C (i.e. outside Flood Zone A and Flood Zone B) and therefore appropriate for highly vulnerable, less vulnerable and water compatible development in line with the OPW Guidelines and CDP SFRA. A Plan Making Justification Test is not necessary.

No reported historic flooding is recorded in the vicinity of the sites. Periodic recurring road flooding is noted to the southeast and southwest.

Per the CDP SFRA, development of these lands may still require a site-specific Flood Risk Assessment (SSFRA) as there may be sources of flooding not taken into account by Flood Zoning. Any future development will be required to comply with relevant surface water management guidance and satisfy the range of other proper planning and sustainable development considerations (refer to Section 8 of the CDP SFRA).

Figure 3: MA No. 14 Athgarvan Land Use Zoning Map Amendments overlain with Flood Zone Sources



### Material Alteration No. 15 – Ballymore Eustace

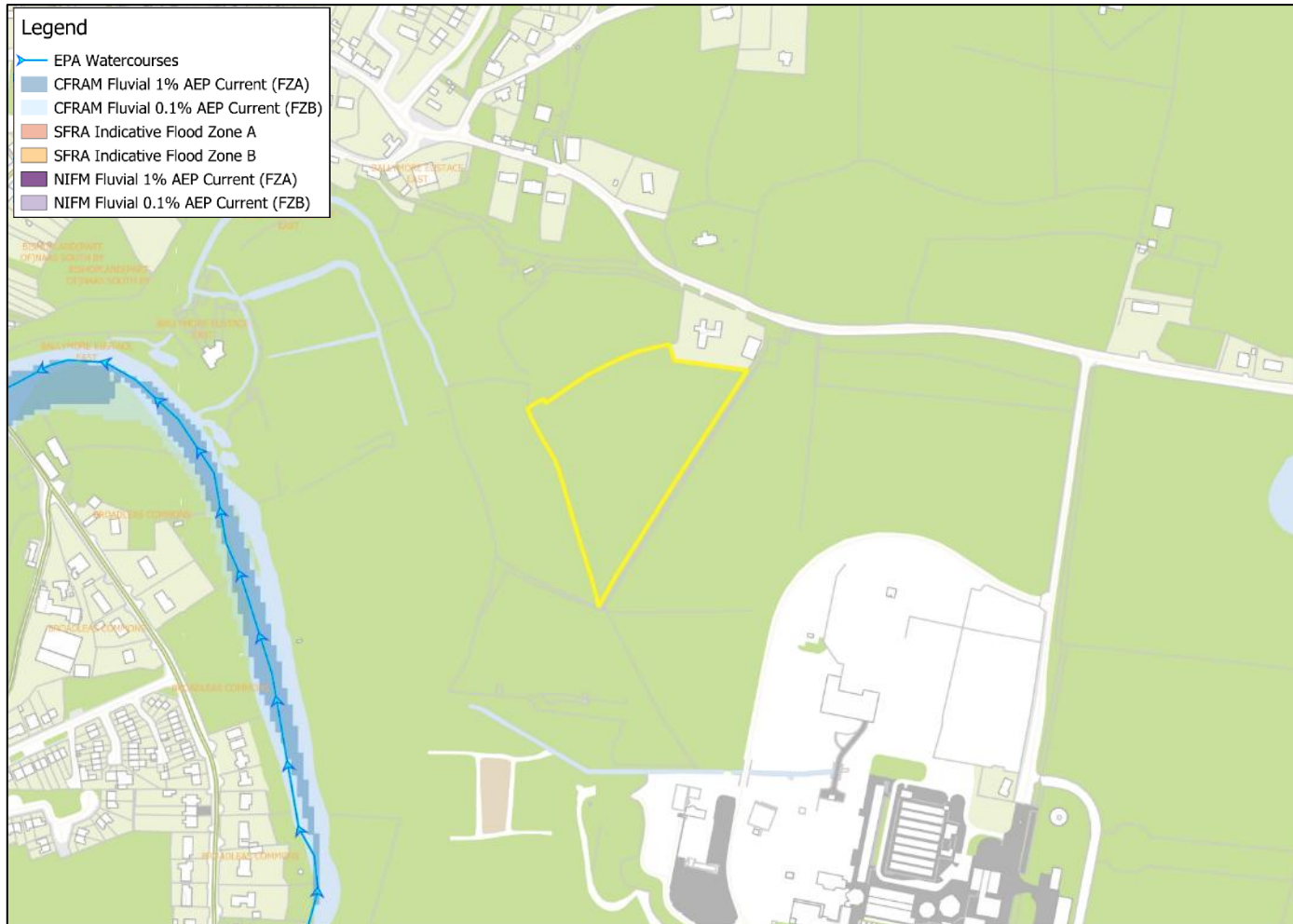
*Revise the Ballymore Eustace Land Use Zoning Map (Map Ref. V2-3.4a) to extend the existing C: New Residential land use zoning to the southeast of the Village (to incorporate the lands outlined in yellow below) and to replace the 'C' indication above with C\*. Incorporate consequential alterations to Map V2-3.4a, including revisions to the Village Boundary.*

As shown on, Figure 4 the New Residential zoning allocation is wholly located in Flood Zone C (i.e. outside Flood Zone A and Flood Zone B) and therefore appropriate for highly vulnerable, less vulnerable and water compatible development in line with the OPW Guidelines and CDP SFRA. A Plan Making Justification Test is not necessary.

No reported historic flooding is recorded in the vicinity of the site.

Per the CDP SFRA, development of these lands may still require a site-specific Flood Risk Assessment (SFRA) as there may be sources of flooding not taken into account by Flood Zoning. Any future development will be required to comply with relevant surface water management guidance and satisfy the range of other proper planning and sustainable development considerations (refer to Section 8 of the CDP SFRA).

Figure 4: MA No. 15 Ballymore Eustace Land Use Zoning Map Amendments overlain with Flood Zone Sources



### Material Alteration No. 16 – Ballymore Eustace

*Revise the Ballymore Eustace Land Use Zoning Map (Map Ref. V2-3.4a) to identify these lands with a black outline and an A\* indication.*

As shown on Figure 5, the revised zoning allocation is wholly located in Flood Zone C (i.e. outside Flood Zone A and Flood Zone B) and therefore appropriate for highly vulnerable, less vulnerable and water compatible development in line with the OPW Guidelines and CDP SFRA. A Plan Making Justification Test is not necessary.

No reported historic flooding is recorded in the vicinity of the site.

Per the CDP SFRA, development of these lands may still require a site-specific Flood Risk Assessment (SSFRA) as there may be sources of flooding not taken into account by Flood Zoning. Any future development will be required to comply with relevant surface water management guidance and satisfy the range of other proper planning and sustainable development considerations (refer to Section 8 of the CDP SFRA).

**Figure 5: MA No. 16 Ballymore Eustace Land Use Zoning Map Amendments overlain with Flood Zone Sources**



### Material Alteration No. 17 – Ballymore Eustace

Revise the Ballymore Eustace Land Use Zoning Map (Map Ref. V2-3.4a) to:

- a) Incorporate additional C: New Residential land use zoning outlined in blue on map below.
- b) Incorporate additional F: Open Space and Amenity land use zoning outlined in red below.
- c) Incorporate a F\* notation on the lands outlined in red below that are situated between the L6048 and the River Liffey.
- d) Incorporate additional E: Community and Education land use zoning as outlined in orange below.
- e) Provide an outline of the area containing the above land use zonings within a dashed yellow line.
- f) Amend the Village boundary, together with the legend of the map to indicate that the lands encompassed by the dashed yellow line (referred to above) require a development framework.

Insert a new objective under Section V2 3.10.6 Surface Water as follows:

*V BEY It is an objective of the Council to ensure that development proposals for lands identified as F\* shall be subject to a site-specific flood risk assessment appropriate to the type and scale of development being proposed.*

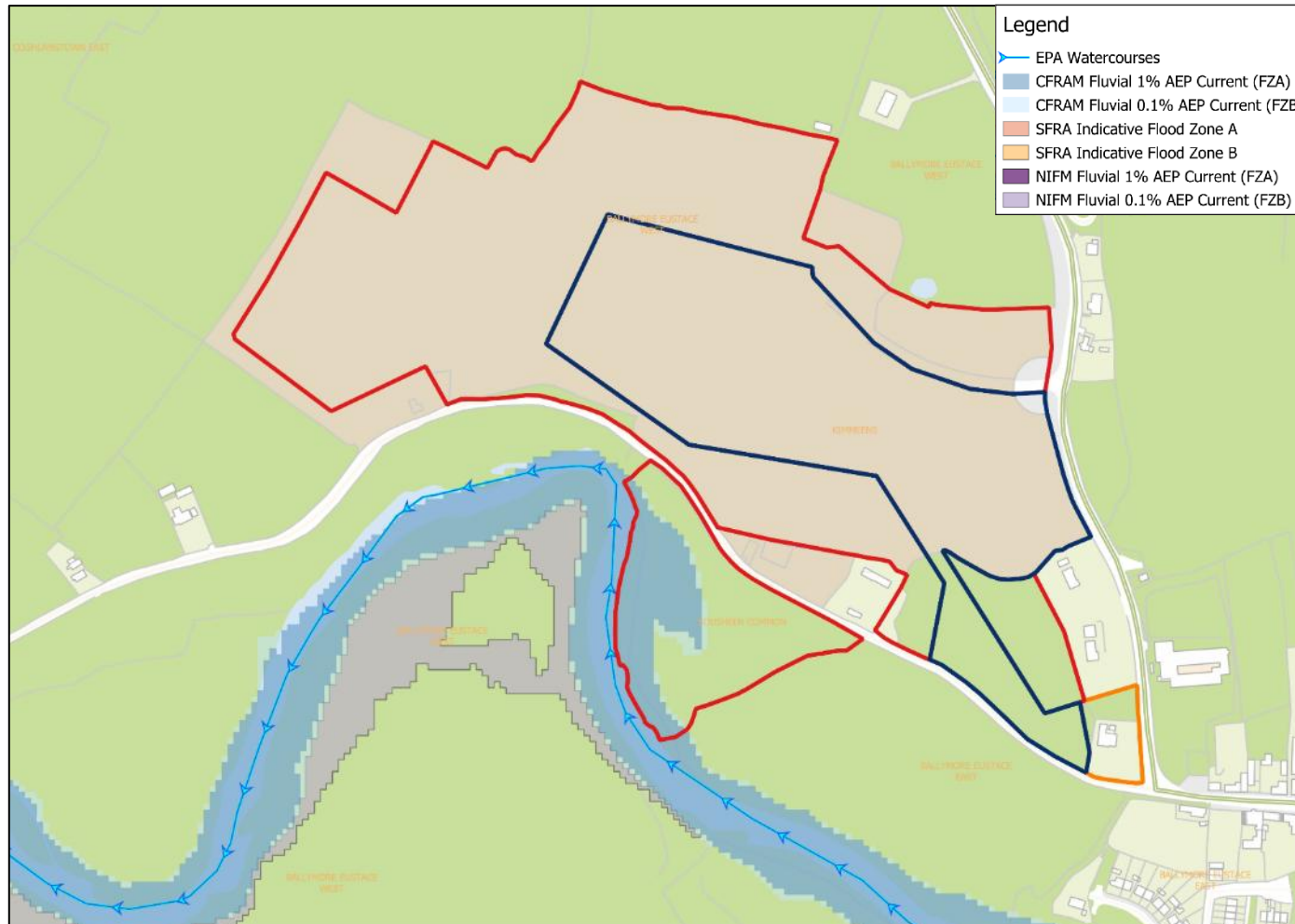
As shown on Figure 6, both the New Residential and Community and Education zoning allocations are wholly located in Flood Zone C (i.e. outside Flood Zone A and Flood Zone B) and therefore appropriate for highly vulnerable, less vulnerable and water compatible development in line with the OPW Guidelines and CDP SFRA. A Plan Making Justification Test is not necessary.

No reported historic flooding is recorded in the vicinity of the site.

The new Open Space and Amenity zoning allocation is water compatible and therefore suitable in any flood zone in line with the OPW Guidelines and CDP SFRA. A Plan Making Justification Test is not necessary.

Per the new objective V BEY, the F\* lands shall require a site-specific Flood Risk Assessment (SFRA), and per the CDP SFRA other lands may require a SFRA, as there may be sources of flooding not taken into account by Flood Zoning. Any future development will be required to comply with relevant surface water management guidance and satisfy the range of other proper planning and sustainable development considerations (refer to Section 8 of the CDP SFRA).

**Figure 6: MA No. 17 Ballymore Eustace Land Use Zoning Map Amendments overlain with Flood Zone Sources**



### Material Alteration No. 18 – Cooleragh- Coill Dubh

*Revise the Cooleragh-Coill Dubh Land Use Zoning Map (Map Ref. V2-3.6) to:*

- a) Include an additional C: New Residential (outlined in yellow below), with associated amendments to the Village boundary.*
- b) Replace part of an existing C: New Residential land use zoning with an E: Community and Educational land use zoning (outlined in blue below).*

As shown on Figure 7, both the New Residential and Community and Educational zoning allocations are wholly located in Flood Zone C (i.e. outside Flood Zone A and Flood Zone B) and therefore appropriate for highly vulnerable, less vulnerable and water compatible development in line with the OPW Guidelines and CDP SFRA. A Plan Making Justification Test is not necessary.

No OPW reported historic flooding is recorded in the vicinity of the site. Kildare CC reported that there is periodic road flooding in Coill Dubh due to undersized road drainage network.

Per the CDP SFRA, development of these lands may still require a site-specific Flood Risk Assessment (SSFRA) as there may be sources of flooding not taken into account by Flood Zoning. Any future development will be required to comply with relevant surface water management guidance and satisfy the range of other proper planning and sustainable development considerations (refer to Section 8 of the CDP SFRA).

Figure 7: MA No. 18 Cooleragh/ Coill Dubh Land Use Zoning Map Amendments overlain with Flood Zone Sources



### Material Alteration No. 19 – Johnstown

Revise the Johnstown Land Use Zoning Map (Map Ref. V2-3.8) to:

- a) Insert a new C: New Residential land use zoning, indicated as C\* on Map V2-3.8. The image below indicates these lands in yellow.
- b) Insert 2 no. new F: Open Space and Amenity land use zonings (as F\*) as indicated in blue below.
- c) Include associated amendments to the village boundary.

Insert a new objective under Section V2 3.9.6 Surface Water in the Village Plan for Johnstown to state as follows:

*V JTX It is an objective of the Council to ensure that development proposals for lands identified as C\* and F\* to the north of Johnstown on Map V2-3.8 shall be subject to a site-specific flood risk assessment appropriate to the type and scale of development being proposed. Such site-specific flood risk assessment(s) are to include consideration of climate change, associated flood extents and set out further requirements for the mitigation\*\* of the impact of climate change.*

*\*\*Including, but not limited to, the siting of development, freeboard and assessment of impact on flood risk elsewhere.*

As shown on Figure 8, the New Residential zoning allocation is wholly located in Flood Zone C (i.e. outside Flood Zone A and Flood Zone B) and therefore appropriate for highly vulnerable, less vulnerable and water compatible development in line with the OPW Guidelines and CDP SFRA. A Plan Making Justification Test is not necessary.

Historic flooding is recorded within Johnstown town centre to the west of the site, predating the now constructed and modelled flood relief scheme. The flood zones as set out here are undefended, in line with OPW Guidelines.

CFRAM Flood Mapping within Johnstown is currently under review (Ref. MR036), and therefore the mapping in this area may change as part of the OPW review process.

The new Open Space and Amenity zoning allocation is water compatible and therefore suitable in any flood zone in line with the OPW Guidelines and CDP SFRA. A Plan Making Justification Test is not necessary.

Per the new objective V JTX, these lands shall require a site-specific Flood Risk Assessment (SSFRA) as to fully account for all sources of flood risk and climate change considered at the site not taken into account by Flood Zoning. Any future development will be required to comply with relevant surface water management guidance and satisfy the range of other proper planning and sustainable development considerations (refer to Section 8 of the CDP SFRA).

**Figure 8: MA No. 19 Castledermot Land Use Zoning Map Amendments overlain with Flood Zone Sources**



### Material Alteration No. 20 – Johnstown

Revise the Johnstown Land Use Zoning Map (Map Ref. V2-3.8) to:

- a) Insert a new SS: Serviced Sites land use zoning on the lands outlined in yellow below, indicated as SS\* on Map V2-3.8.
- b) Insert a new F: Open Space and Amenity land use zoning on the lands in orange below and indicate these lands as F\* on Map V2-3.8.
- c) Include associated amendments to the village boundary.

Insert a new objective under Section V2 3.9.6 Surface Water in the Village Plan for Johnstown to state as follows:

*V JTY It is an objective of the Council to ensure that development proposals for lands identified as SS\* and F\* to the south of Johnstown on Map V2-3.8 shall be subject to a site-specific flood risk assessment appropriate to the type and scale of development being proposed. Such site-specific flood risk assessment(s) are to include consideration of climate change, associated flood extents and set out further requirements for the mitigation\*\* of the impact of climate change.*

*\*\*Including, but not limited to, the siting of development, freeboard and assessment of impact on flood risk elsewhere.*

As shown on Figure 9, the Serviced Sites zoning allocation is wholly located in Flood Zone C (i.e. outside Flood Zone A and Flood Zone B) and therefore appropriate for highly vulnerable, less vulnerable and water compatible development in line with the OPW Guidelines and CDP SFRA. A Plan Making Justification Test is not necessary.

Historic flooding is recorded within Johnstown town centre to the north of the site, predating the now constructed and modelled flood relief scheme. The flood zones as set out here are undefended, in line with OPW Guidelines.

CFRAM Flood Mapping within Johnstown is currently under review (Ref. MR036), and therefore the mapping in this area may change as part of the OPW review process.

The new Open Space and Amenity zoning allocation is water compatible and therefore suitable in any flood zone in line with the OPW Guidelines and CDP SFRA. A Plan Making Justification Test is not necessary.

Per the new objective V JTY, these lands shall require a site-specific Flood Risk Assessment (SSFRA) to fully account for flood risk and climate change considerations at the site not taken into account by Flood Zoning. Any future development will be required to comply with relevant surface water management guidance and satisfy the range of other proper planning and sustainable development considerations (refer to Section 8 of the CDP SFRA).

**Figure 9: MA No. 20 Johnstown Land Use Zoning Map Amendments overlain with Flood Zone Sources**



### Material Alteration No. 21 – Kildangan

Revise the Kildangan Land Use Zoning Map (Map Ref. V2-3.10) to:

- a) Insert a new C: New Residential land use zoning on the lands in yellow below, indicated as C\* on Map V2-3.10.
- b) Insert a new F: Open Space and Amenity land use zoning on the lands in pink below and indicate these lands as F\* on Map V2-3.10.

Insert a new objective to Section V2 3.16.6 Surface Water of the Kildangan Village Plan to state as follows:

*V KDX It is an objective of the Council to ensure that development proposals for lands identified by C\* on Map V2-3.10 shall be subject to a site-specific flood risk assessment appropriate to the type and scale of development being proposed. Such site-specific flood risk assessment(s) are to include consideration of the potential effects of climate change and indicatively modelled watercourse(s) in the vicinity of the lands.*

As shown on Figure 10, the New Residential zoning allocation is wholly located in Flood Zone C (i.e. outside Flood Zone A and Flood Zone B) and therefore appropriate for highly vulnerable, less vulnerable and water compatible development in line with the OPW Guidelines and CDP SFRA. A Plan Making Justification Test is not necessary.

The new Open Space and Amenity zoning allocation is water compatible and therefore suitable in any flood zone in line with the OPW Guidelines and CDP SFRA. A Plan Making Justification Test is not necessary.

No reported historic flooding is recorded in the vicinity of the site.

The watercourses in the vicinity of the site are unmodelled by the OPW, and were indicatively modelled through the Kildare CDP SFRA 2023-2029 process. The modelled extents were deemed appropriate for Stage 2 flood mapping as part of the Kildare CDP SFRA process, and are therefore suitable for delineation of flood zones and land use zoning in the area.

Per the new objective KDX, these lands shall require a site-specific Flood Risk Assessment (SSFRA) to fully account for flood risk and climate change considerations at the site not taken into account by Flood Zoning. Any future development will be required to comply with relevant surface water management guidance and satisfy the range of other proper planning and sustainable development considerations (refer to Section 8 of the CDP SFRA).

Figure 10: MA No. 21 Kildangan Land Use Zoning Map Amendments overlain with Flood Zone Sources



### Material Alteration No. 22 – Kilmeague

Revise the Kimeague Land Use Zoning Map (Map Ref. V2-3.11) to:

- a) Insert a new C: New Residential land use zoning on the lands in red below on Map V2-3.11.*
- b) Change the existing C: New Residential land use zoning on the lands in yellow to I: Agriculture on Map V2-3.11.*

As shown on Figure 11, both the New Residential and Agriculture zoning allocations are wholly located in Flood Zone C (i.e. outside Flood Zone A and Flood Zone B) and therefore appropriate for highly vulnerable, less vulnerable and water compatible development in line with the OPW Guidelines and CDP SFRA. A Plan Making Justification Test is not necessary.

No OPW reported historic flooding is recorded in the vicinity of the site. Kildare CC reported that there is periodic flooding in Kilmeague due to undersized drainage network.

Per the CDP SFRA, development of these lands may still require a site-specific Flood Risk Assessment (SSFRA) as there may be sources of flooding not taken into account by Flood Zoning. Any future development will be required to comply with relevant surface water management guidance and satisfy the range of other proper planning and sustainable development considerations (refer to Section 8 of the CDP SFRA).

**Figure 11: MA No. 22 Kilmeague Land Use Zoning Map Amendments overlain with Flood Zone Sources**



### Material Alteration No. 23 – Robertstown

*Revise the Robertstown Land Use Zoning Map (Map Ref. V2 – 3.14a) to change the existing SS: Serviced Sites land use zoning indicated in blue below to C: New Residential.*

*Insert a new Section and objective to the Robertstown Village Plan as follows:*

#### V2 3.20.7 Surface Water

*V RX It is an objective of the Council to ensure that development proposals for C zoned lands to the south of the Grand Canal shall be subject to a site-specific flood risk assessment appropriate to the type and scale of development being proposed, with consideration given to the benefitting area of the Drainage District maintained by Kildare County Council and the Canal in the vicinity of the lands.*

As shown on Figure 12, the New Residential zoning allocation is wholly located in Flood Zone C (i.e. outside Flood Zone A and Flood Zone B) and therefore appropriate for highly vulnerable, less vulnerable and water compatible development in line with the OPW Guidelines and CDP SFRA. A Plan Making Justification Test is not necessary.

No reported historic flooding is recorded in the vicinity of the site. The Grand Canal is located c. 70m north of the site across the adjacent Main Street. The village is built on a steep area of ground sloping north west towards the Grand Canal.

Per the new objective V RX, these lands shall require a site-specific Flood Risk Assessment (SSFRA) as there may be sources of flooding not taken into account by Flood Zoning. Any future development will be required to comply with relevant surface water management guidance and satisfy the range of other proper planning and sustainable development considerations (refer to Section 8 of the CDP SFRA).

**Figure 12: MA No. 23 Robertstown Land Use Zoning Map Amendments overlain with Flood Zone Sources**



### Material Alteration No. 24 – Straffan

Revise the Straffan Land Use Zoning Map (Map Ref. V2-3.15) to:

- a) *Insert a new C: New Residential land use zoning, on the lands outlined in red below.*
- b) *Amend the purple hatched line Straffan Land Use Zoning Map (Map Ref. V2-3.15) to encompass the lands outlined in red below to ensure that a site-specific flood risk assessment is provided for development on these lands.*

As shown on Figure 13, the New Residential zoning allocation is wholly located in Flood Zone C (i.e. outside Flood Zone A and Flood Zone B) and therefore appropriate for highly vulnerable, less vulnerable and water compatible development in line with the OPW Guidelines and CDP SFRA. A Plan Making Justification Test is not necessary.

Historic flooding is reported prior to 2003 within Straffan associated with the River Liffey. Kildare CC indicated that the centre of the village has experienced flooding associated with surface water drainage however works were completed to alleviate those issues.

While the area is CFRAM modelled, and included within the 2D area of the River Liffey 1D-2D CFRAM model, the adjacent tributary is not modelled explicitly in the 1D.

Per the Kildare CDP SFRA, and this PMA, “due to the presence of the River Liffey adjacent to the lands in the south east, any development in the noted locations on the flood zone mapping shall be required to undertake an FRA. FRAs should address all types of flood risk, mitigation measures, residual flood risk and the sequential approach to assign appropriate land use with respect to vulnerability of the proposed development type”. PMA No. 24 includes these lands within the area requiring a SSFRA.

Any future development will be required to comply with relevant surface water management guidance and satisfy the range of other proper planning and sustainable development considerations (refer to Section 8 of the CDP SFRA).

**Figure 13: MA No. 24 Straffan Land Use Zoning Map Amendments overlain with Flood Zone Sources**



### Material Alteration No. 25 – Ballyshannon

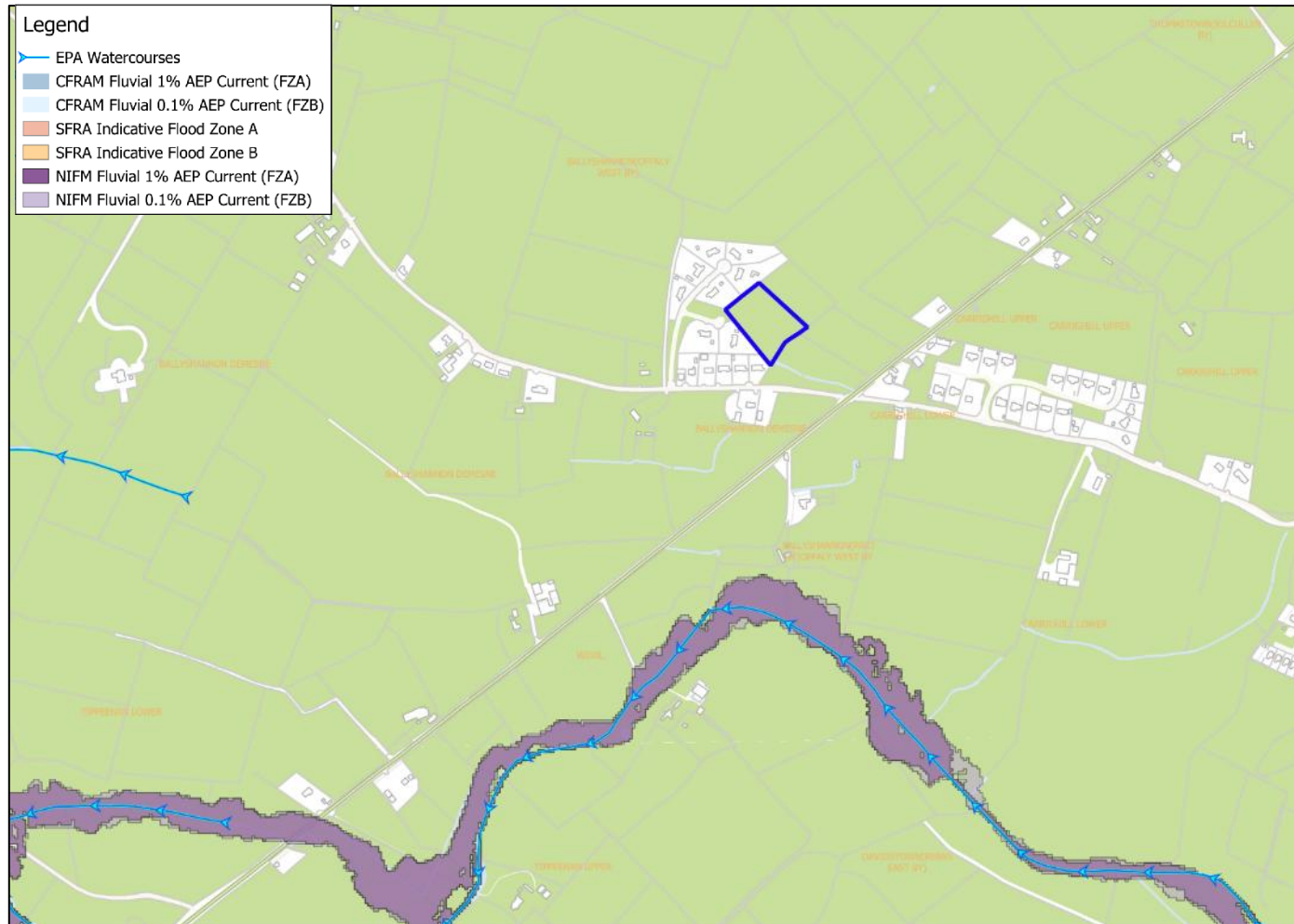
*Revise the Ballyshannon Rural Settlement Map (Map Ref. V2 - 4.3) to designate the lands outlined in blue below as Settlement Expansion.*

As shown on Figure 14, the Settlement Expansion designation is wholly located in Flood Zone C (i.e. outside Flood Zone A and Flood Zone B) and therefore appropriate for highly vulnerable, less vulnerable and water compatible development in line with the OPW Guidelines and CDP SFRA. A Plan Making Justification Test is not necessary.

No historic flooding is recorded in the vicinity of the site.

Per the CDP SFRA, development of these lands may still require a site-specific Flood Risk Assessment (SSFRA) as there may be sources of flooding not taken into account by Flood Zoning. Any future development will be required to comply with relevant surface water management guidance and satisfy the range of other proper planning and sustainable development considerations (refer to Section 8 of the CDP SFRA).

**Figure 14: MA No. 25 Ballyshannon Land Use Zoning Map Amendments overlain with Flood Zone Sources**



### Material Alteration No. 26 – Kilmead

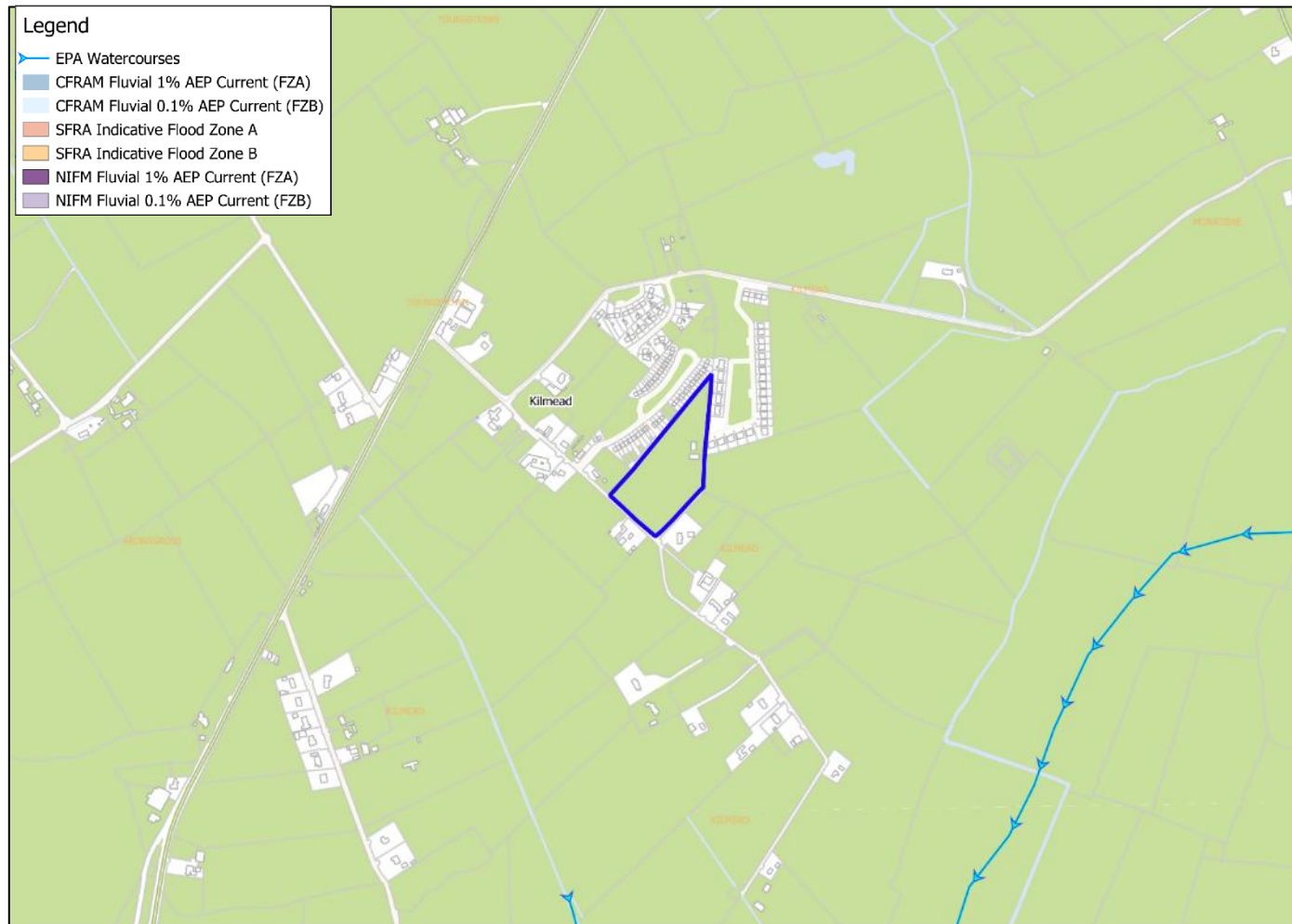
*Revise the Kilmead Rural Settlement Map (Map Ref. V2 – 4.12) to designate the lands outlined in blue below as Settlement Expansion*

As shown on Figure 15, the Settlement Expansion designation is wholly located in Flood Zone C (i.e. outside Flood Zone A and Flood Zone B) and therefore appropriate for highly vulnerable, less vulnerable and water compatible development in line with the OPW Guidelines and CDP SFRA. A Plan Making Justification Test is not necessary.

No historic flooding is recorded in the vicinity of the site. Winter 2015/2016 flood extents are located to the north of Kilmead, as is not shown to cross the New Line Road or impact the site. Unmodelled watercourses are located south of the site, and flow away from the site.

Per the CDP SFRA, development of these lands may still require a site-specific Flood Risk Assessment (SSFRA) as there may be sources of flooding not taken into account by Flood Zoning. Any future development will be required to comply with relevant surface water management guidance and satisfy the range of other proper planning and sustainable development considerations (refer to Section 8 of the CDP SFRA).

Figure 15: MA No. 26 Kilmead Land Use Zoning Map Amendments overlain with Flood Zone Sources



### Material Alteration No. 27 – Two Mile House

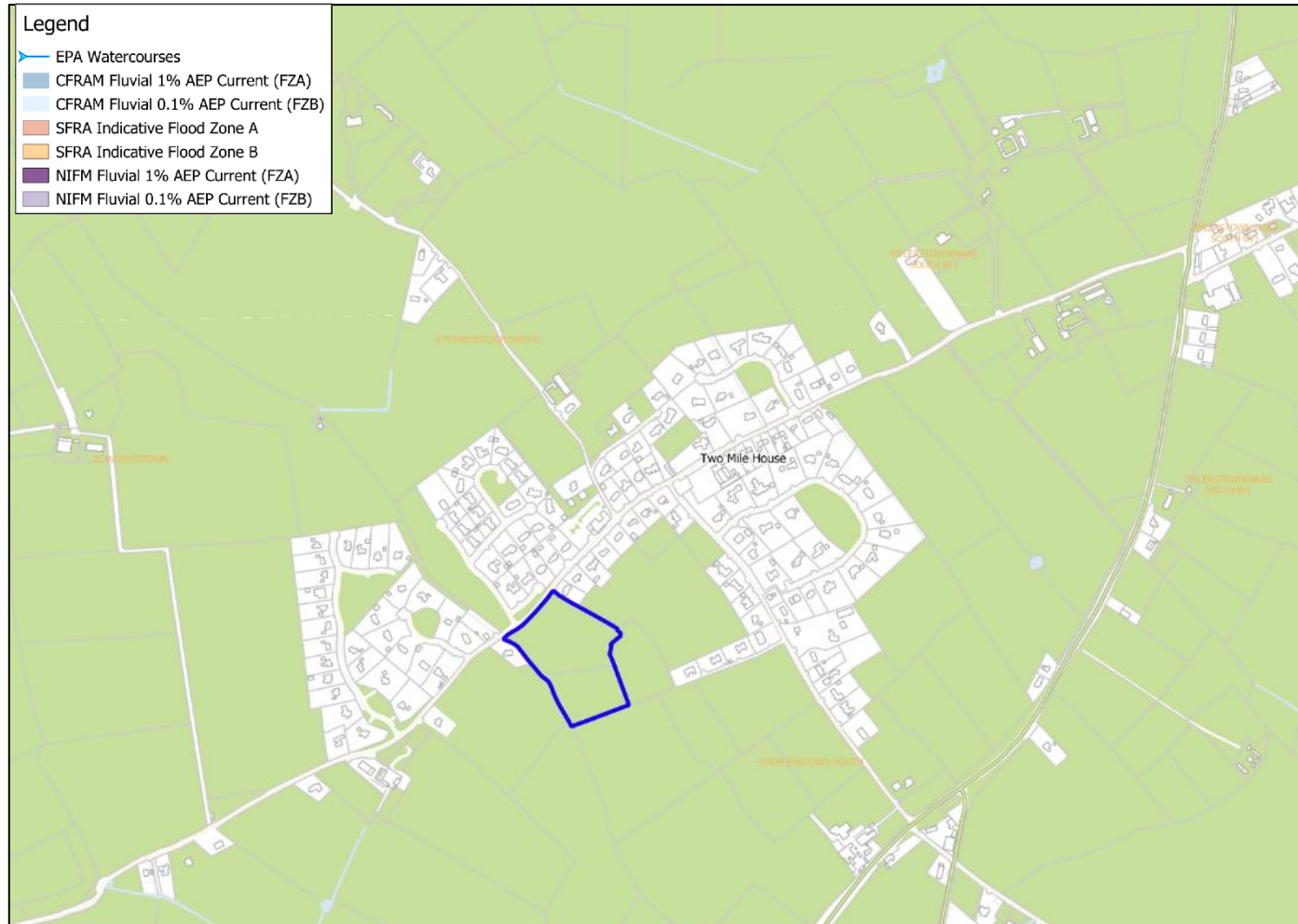
*Revise the Two Mile House Rural Settlement Map (Map Ref. V2 – 4.20) to designate the lands outlined in blue below as Settlement Expansion.*

As shown on Figure 16, the Settlement Expansion designation is wholly located in Flood Zone C (i.e. outside Flood Zone A and Flood Zone B) and therefore appropriate for highly vulnerable, less vulnerable and water compatible development in line with the OPW Guidelines and CDP SFRA. A Plan Making Justification Test is not necessary.

No OPW recorded historic flooding is located in the vicinity of the site. Kildare CC have reported flooding to the local road network in the village during heavy rainfall events and subsequent flooding to some local gardens due to runoff from the road.

Per the CDP SFRA, development of these lands may still require a site-specific Flood Risk Assessment (SSFRA) as there may be sources of flooding not taken into account by Flood Zoning. Any future development will be required to comply with relevant surface water management guidance and satisfy the range of other proper planning and sustainable development considerations (refer to Section 8 of the CDP SFRA).

Figure 16: MA No. 27 Two Mile House Land Use Zoning Map Amendments overlain with Flood Zone Sources



### Material Alteration No. 28 – Newtown

*Amend Volume 2 to reflect the designation of Newtown as a Rural Settlement*

*Insert the following at the end of Table 3.9:*

<i>Newtown</i>	<i>Development proposals for lands in Newtown, including for those designated Settlement Expansion may be subject of a site-specific flood risk assessment appropriate to the type and scale of the development being proposed. Such site-specific flood risk assessment(s) should include consideration of nearby unmodelled watercourses and the potential effects of climate change. Applicants are required to engage with the planning authority at the earliest opportunity in this regard.</i>	<i>Map Ref V2 – 4.21</i>
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*Insert a new Newtown Rural Settlement Map (Map Ref. V2 – 4.21) which indicates / provides:*

- a) The Settlement Core as illustrated below in yellow;*
- b) The Existing Settlement as illustrated below in orange;*
- c) 2 no. Settlement Expansion sites, illustrated in brown below and marked SE 1 and SE 2*
- d) A note which states that ‘Particular consideration shall be given to the design quality of developments in Newtown and the views from approaches to the settlement, including the southern approach in all instances’.*

As shown on Figure 17, the new Settlement and designations are wholly located in Flood Zone C (i.e. outside Flood Zone A and Flood Zone B) and therefore appropriate for highly vulnerable, less vulnerable and water compatible development in line with the OPW Guidelines and CDP SFRA. A Plan Making Justification Test is not necessary.

Unmodelled watercourses flow along the settlement boundary, where the headwaters rise to the east of the Settlement. No historic flooding is reported within the settlement.

Existing Settlement and Settlement Core lands are designated to reflect the existing use within the established settlement. Any development within these lands would be limited in scope, consisting of minor development or infill, as appropriate and supported by a site-specific Flood Risk Assessment (SSFRA).

Per the new amendment, these lands shall require a SSFRA as there may be sources of flooding not taken into account by Flood Zoning. Any future development will be required to comply with relevant surface water management guidance and satisfy the range of other proper planning and sustainable development considerations (refer to Section 8 of the CDP SFRA).

Figure 17: MA No. 28 Newtown Land Use Zoning Map overlain with Flood Zone Sources



### Material Alteration No. 29 – Kilcullen

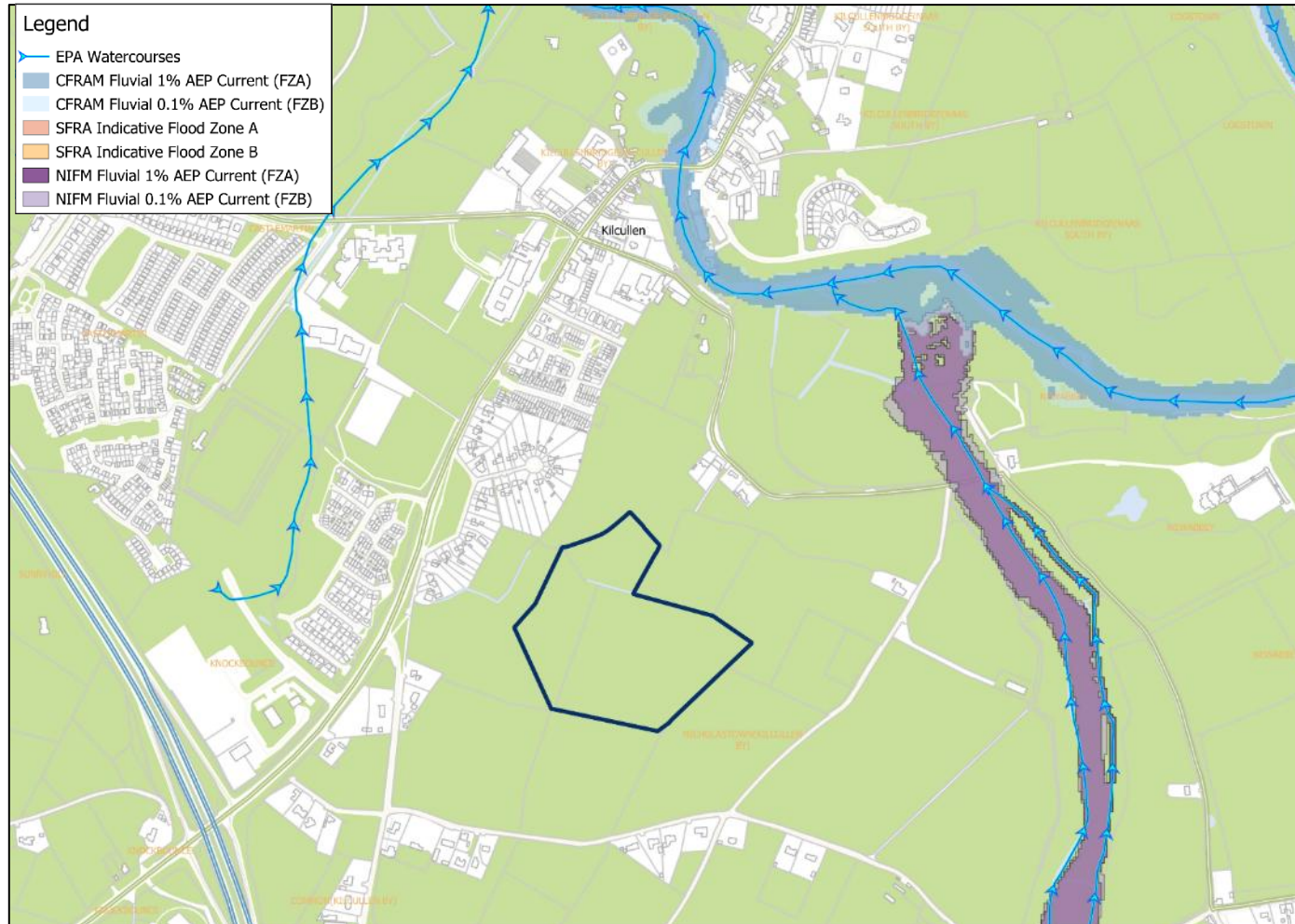
*Revise the Kilcullen Land Use Zoning Map (Map Ref. V2A-1) to change the lands zoned as SR: Strategic Reserve (outlined in dark blue below) to C: New Residential.*

As shown on Figure 18, the New Residential zoning allocation is wholly located in Flood Zone C (i.e. outside Flood Zone A and Flood Zone B) and therefore appropriate for highly vulnerable, less vulnerable and water compatible development in line with the OPW Guidelines and CDP SFRA. A Plan Making Justification Test is not necessary.

Historic flooding is reported in 1993 within Kilcullen associated with the River Liffey. An NIFM and unmodelled watercourse traverse Kilcullen environs, but are not expected to impact the subject site.

Per the CDP SFRA, development of these lands may still require a site-specific Flood Risk Assessment (SSFRA) as there may be sources of flooding not taken into account by Flood Zoning. Any future development will be required to comply with relevant surface water management guidance and satisfy the range of other proper planning and sustainable development considerations (refer to Section 8 of the CDP SFRA).

Figure 18: MA No. 29 Kilcullen Land Use Zoning Map Amendments overlain with Flood Zone Sources



### Material Alteration No. 30 – Kilcullen

*Revise the Kilcullen Land Use Zoning Map (Map Ref. V2A-1) to change the lands zoned as SS\*: Service Sites (outlined in dark blue below) to C: New Residential.*

As shown on Figure 19, the New Residential zoning allocation is wholly located in Flood Zone C (i.e. outside Flood Zone A and Flood Zone B) and therefore appropriate for highly vulnerable, less vulnerable and water compatible development in line with the OPW Guidelines and CDP SFRA. A Plan Making Justification Test is not necessary.

Historic flooding is reported in 1993 within Kilcullen associated with the River Liffey. Detailed modelling of the River Liffey demonstrates no risk to the subject lands.

Per the CDP SFRA, development of these lands may still require a site-specific Flood Risk Assessment (SFRA) as there may be sources of flooding not taken into account by Flood Zoning. Any future development will be required to comply with relevant surface water management guidance and satisfy the range of other proper planning and sustainable development considerations (refer to Section 8 of the CDP SFRA).

Figure 19: MA No. 30 Kilcullen Land Use Zoning Map Amendments overlain with Flood Zone Sources



## Relevant Non-Material Changes

### **Non-Material Change No. 2**

*Amend text in Section 5.1 of the Settlement and Site Capacity Audit as follows:*

*In addition, both ~~pluvial and groundwater~~ potential flood risks to individual sites were considered under the surface water drainage assessment criteria, through a review of CFRAM and ~~PFRA flood maps~~ national indicative fluvial (NIFM), coastal (NCFHM) and groundwater flood mapping (2016 – 2019 GW Flood Project by Geological Survey Ireland).*

This change recognises and supports the use of most up to date sources of flood risk information.

## **Conclusion**

In summary, the new land use zonings / rezonings, new / revised designations, and relevant MAs included in the Variation 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 Kildare CDP SFRA should be applied in any future development proposals relevant to the subject variation sites.