



1. Introduction

This document sets out the Proposed Material Amendments to the Strategic Environmental Assessment, Appropriate Assessment and Strategic Flood Risk Assessment.



2. Strategic Environmental Assessment

| | Volume 3 Proposed Amendment SEA 1 | |
|----------|--------------------------------------|----------|
| Section: | Heading | Page No. |
| 4 | Environmental Baseline | 12 |

Include reference to all GSI datasets that are not mapped in the SEA Environmental Report.

Include the following footnote:

As required, the SEA focuses on the issues and associated levels of detail of most relevance at Plan level. In recognition that the Plan provides a framework for consent for various individual projects to which other, more localised, environmental issues and/or addition levels of detail will be required.

The SEA notes the availability of other data sources from GSI, including:

- Landslide events and susceptibility mapping
- Mineral locality mapping
- Aggregate potential mapping;
- Bedrock mapping;
- Quaternary and physiographic mapping; and
- National aquifer and recharge mapping.

| Volume 3 Proposed Amendment SEA 2 | | |
|-----------------------------------|------------------------------------|----------|
| Section: | Heading | Page No. |
| 4.8 | Strategic Environmental Objectives | 35 |

Insert Text Addition within Section 4.8 of the SEA Environmental Report as follows:

In addition to being significant net sinks of carbon, peatlands have the potential to be net sources of carbon if these soils are drained or extracted as part of land management activities.

| | Volume 3 Proposed Amendment SEA 3 | |
|----------|--------------------------------------|----------|
| Section: | Heading | Page No. |
| 5 | Strategic Environmental Objectives | 53 |

Insert text within Table 5.1 Strategic Environmental Objectives (SEOs), Indicators and Targets – Target associated with Soil & Land Component of the SEA Environmental Report as follows:

Maintain built surface cover nationally to below the EU average of 4% as per the NP



| | Volume 3 Proposed Amendment SEA 4 | |
|----------|--------------------------------------|----------|
| Section: | Heading | Page No. |
| 5 | Strategic Environmental Objectives | 56 |

Insert new SEO within Table 5.1 Strategic Environmental Objectives (SEOs), Indicators and Targets – Target Landscape as follows;

To seek to align with the National Landscape Strategy

| | Volume 3 Proposed Amendment SEA 5 | |
|----------|------------------------------------|----------|
| Section: | Heading | Page No. |
| 5 | Strategic Environmental Objectives | |

To insert footnote after the SEO 'Climatic Factors within Table 5.1 Strategic Environmental Objectives (SEOs), Indicators and Targets – Target Landscape as follows;

Please also refer to relevant legislation and requirements under Section 4.10, Section 8.8.11 and Appendix I

| | Volume 3 Proposed Amendment SEA 6 | |
|----------|--------------------------------------|----------|
| Section: | Heading | Page No. |
| 5 | Strategic Environmental Objectives | |

Insert footnote after the SEO 'Climatic Factors within Table 5.1 Strategic Environmental Objectives (SEOs), Indicators and Targets – Target as follows;

Please also refer to relevant legislation and requirements under Section 4.10, Section 8.8.11 and Appendix I



| | Volume 3 Proposed Amendment SEA 7 | |
|----------|-----------------------------------|----------|
| Section: | Heading | Page No. |
| 4.7.1 | Population | 25 |

Amend text in section 4.7.1 as follows:

County Westmeath contains a hierarchy of settlements, which includes two gateway towns, the two largest towns (Athlone and Mullingar) and various smaller settlements. It is also considered as being a rural county with a number of international and national environmental designations, most of which are associated with lakeland and peatland areas within the county.

| Volume 3 Proposed Amendment SEA 8 | | |
|-----------------------------------|------------------------------------------------------------------------|----------|
| Section: | Heading | Page No. |
| 4.7.1 | Appendix I Relationship with Legislation and Other Policies, Plans and | 167 |
| | Programmes | |

Amend text in Column "Summary of lower level objectives, actions etc" as follows:

Ensuring Irish Water delivers infrastructural projects that meet key public health, environmental and economic objectives in the water services sector.

Ensuring the provision of adequate water and sewerage services in the settlements gateways and hubs listed in the National Spatial Strategy, and in other locations where services need to be enhanced.

| Volume 5 Proposed Amendment SEA 9 | | |
|--------------------------------------|------------------------------------------------------------------|----------|
| Section: | Heading | Page No. |
| 2.1.2 | Regional Spatial & Economic Strategy (Eastern & Midland Regional | 8 |
| | Assembly) | |

Amend text in Section 2.1.2 as follows:

The settlement hierarchy selected by the RSES takes account of the fact that while Athlone and Mullingar, are vulnerable to fluvial flooding, wider, effective management of flood risk coupled with wider environmental, sustainability and economic considerations mean that it is possible to facilitate the continued consolidation of the development of the existing urban structure of the region. In line



with the sequential and justification criteria set out in the Department's Guidelines on the Planning System and Flood Risk Management it is considered that these locations should be encouraged to continue to consolidate and to grow in order to bring about a more compact and sustainable urban development form while at the same time managing flood risk appropriately. These guidelines outline measures through which both the flood risk and the continued development of Westmeath's Gateway towns of Athlone and Mullingar, and county towns can be reconciled.



3. Appropriate Assessment

| Volume 4 Proposed Amendment NIR 1 | | |
|-----------------------------------|---------------------------------------------|----------|
| Section: | Heading | Page No. |
| 4.3.1.5 | Changes of Indicators of Conservation Value | 27 |

Replace Existing Text at Footnote 19 as follows:

Seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance, including ensuring that new any projects, such as greenways, are a suitable distance from ecological sensitivities, such as riparian zones.

Seek to avoid significant effects on European Sites that might occur as a result of increases in visitor numbers. This will be done by, for example, ensuring that any new projects, such as greenways, are a suitable distance from ecological sensitivities, such as riparian zones



4. Strategic Flood Risk Assessment

| Volume 5 Strategic Flood Risk Assessment Proposed Alteration FR 1 | | |
|-------------------------------------------------------------------|---------------------------|----------|
| Section: | Heading | Page No. |
| 5.2 | Arterial Drainage Schemes | 19 |

Insert supplementary details regarding Arterial Drainage Systems in the county into Section 5.2 of the SFRA as follows:

A third form of fluvial regime is much more common within the County and this is related to rivers that have been subject to an OPW Arterial Drainage Scheme (ADS). The OPW carried out a number of Arterial Drainage Schemes on catchments under the Arterial Drainage Act, 1945. The main purpose of the ADSs was to improve land drainage and reduce the frequency and extent of overland flooding. ADSs can involve embankment construction, river straightening, lake storage development, and, most commonly, the deepening and widening of river channels. Through the implementation of ADSs the hydraulic conveyance efficiency of a catchment is increased, thereby leading to a reduction in overland flood storage. Although it has been found that ADS generally achieve their main objectives, this increase in discharge-carrying capacity leads to an acceleration of the response to rainfall with flood peaks of increased intensity and more rapid recessions.

Three arterial drainage schemes, Brosna, Inny and Boyne, were completed within Westmeath. The Brosna ADS was undertaken between 1948 and 1955, the Inny ADS was undertaken between 1960 and 1968, and the Boyne ADS was undertaken between 1948 and 1955.

Arterial drainage maintenance and monitoring of these schemes is still carried out by OPW on rivers, lakes, weirs, bridges and embankments to maintain adequate conveyance and ensure that flood waters (of varying magnitude but typically the 3-year flood) are retained in bank by lowering water levels during the growing season thus reducing waterlogging on the adjacent land during wetter periods.

Schemes are actively managed by OPW on Rivers;

- Brosna in (Mullingar, Tyrrellspass, Kilbeggan, Moate, Castletown/Geoghegan, Kilucan/Rathwire);
- Inny in (Castlepollard, Ballymore, Ballinacarrig, Ballinalack, Collinstown Multyfarnham);
- Boyne (Clonmellon, Devlin, Killucan, Kinnegad, Milltownpass, Rochfordbridge).

The OPW were consulted on drainage design detail for the above schemes. In additional to the general principles outlined above, the Boyne scheme had to be constructed so as to provide an outfall for land drainage purposes (the Invert level of the channel had to be low enough). This means that in a lot of cases there is greater capacity than the 1 in 3 year protection but this is not typically documented. There are no embankments on the Boyne scheme.

For the settlement of Ballinalack on the Inny Scheme there are flood embankments, however the design standard of these was unable to be confirmed.



| Volume 5 Strategic Flood Risk Assessment Proposed Alteration FR 2 | | |
|-------------------------------------------------------------------|----------------------------|----------|
| Section: | Heading | Page No. |
| 4 | Data Collection and Review | 17 |
| 4.1 | Flood Zone Development | 18 |

Insert additional detail in relation to available flood risk datasets in Table 4.1 of the SFRA as follows:

| Description | Coverage | Robustness | Comments on usefulness |
|--------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Eastern CFRAM Study | Areas for further assessment (AFAs), or settlements falling along modelled lengths, in County Westmeath are: Kilbeggan; (Athlone & Mullingar are not being considered under the WMCDP) Other settlements that are not AFAs but have CFRAM output (Medium Priority Watercourse) are: Ballinagore (no zoning), Glasson, | Flood Zones and flood extents for current and future scenarios provided by OPW. Modelling is 'best available' and outputs will allow informed decisions on zoning objectives. Design water levels will inform decisions relating to raising land and setting finished floor levels. | Very useful but undertaken at a catchment level. In general, CFRAM provides all information needed to apply the Justification Test (JT) for Plan Making under the SFRA. Site specific FRAs will still be required for planning applications, but information on water levels can form the basis of decision in relation to finished floor levels. However, it is important to note that CFRAM outputs should not be relied upon without review and consideration of appropriateness to the site in question, particularly for Medium Priority Watercourses (MPW). |
| OPW Preliminary Flood Risk Assessment (PFRA) flood maps – Fluvial Used as County Development Plan Flood Map (2015-2021) | The PFRA was a national screening exercise that was undertaken by OPW to identify areas at potential risk of flooding. Fluvial, coastal, pluvial and groundwater risks were identified at an indicative scale. Based on the on the PFRA, no verification or adjustment of this data. | Moderate/Low | Covers nearly all rivers (including non-CFRAM) previously used for development of base Flood Zones for SFRA. For purposes of SFRA and at Development Management level these cannot be used to make zoning decisions without validation through site visits. Further site investigation may be needed has been undertaken to provide |



| Description | Coverage | Robustness | Comments on usefulness |
|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | | greater confidence in the outlines and inform the land use zoning decisions. |
| Historical event outlines and point observations and reports | Various, taken from www.floodmaps.ie | Indicative | Used indirectly to validate flood zones and identify non-fluvial flooding in the SFRA. |
| and reports | | | Useful background information for site specific FRAs, but note the database is not exhaustive, absence of a record does not necessarily mean absence of flood risk. |
| Arterial Drainage Benefitting land maps | Show land which would (or have) benefitted from a drainage scheme. This is not based on a 'design flood' (i.e. the events do not have a return period), but indicate low-lying, poorly drained land. It is not the same as lands which are protected by a flood relief scheme and these are not representative of fluvial Flood Zones. | Low | Superseded by the data sources listed above, although may be used to cross check Flood Zones but Benefitting Lands maps are used in a tiered approach where it is the best available dataset and it is then verified on site. Limited benefit to site specific FRAs. Given that many of the rivers in Westmeath have been subject to Arterial Drainage by OPW the benefitting lands maps are most likely to be an overestimation of risk. |
| Flood relief schemes | There are no completed OPW Flood Relief Schemes that are in place within County Westmeath. Athlone Flood Relief Scheme is in construction. Kilbeggan has some OPW embankments but these are part of an arterial drainage scheme and as such provide an agricultural standard of protection. | n/a | n/a |
| Site Specific FRAs | Settlement or sub-settlement – used in Kilbeggan, Kinnegad, Milltownpass. | Moderate | Helpful for additional verification of PFRA and/or Benefitting Lands mapping. |



| Description | Coverage | | Robustness | Comments on usefulness |
|-------------|----------|-----------------------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Site Visits | ' ' | stown, negad, & | Moderate | Site visits used to verify flood extents where there were potential conflicts with predicted flood extent and undeveloped land uses with highly or less vulnerable land use zoning objectives. |

Insert clarification regarding use of flood map data:

4.1 Flood Zone Development

As set out in the RSES Regional Flood Risk Appraisal Report, and under the Planning Guidelines, the Flood Zone mapping for the County is principally derived from the CFRAM where possible. However, most settlements in the WMCDP are not covered by the CFRAM and in this case a range of other datasets, as shown in Table 4.2 were used as supplementary information to inform this SFRA.

Due to recent guidance from OPW regarding the use of the first generation PFRA mapping and the indicative nature of the flood extents, the approach used under the Westmeath SFRA has been precautionary. All sources of available flood mapping were reviewed in cases where proposed undeveloped lands are zoned for highly or less vulnerable use (where CFRAM was not available). As such, a single dataset of County Flood Zones has not been prepared, but in each settlement specific guidance is provided based on the data review and a JBA site visit.

When the second generation PFRA mapping is issued to Local Authorities the data will be used in conjunction with the other available datasets and site visits to provide a countywide Flood Zone dataset, subject to further verification.

The review of the suite of flood risk data has been developed as a spatial planning tool to guide WMCC in making land-use zoning and development management decisions and it is recognised that site specific information may contradict the Flood Zones, either to demonstrate a greater or lesser level of flood risk. However, the data has been deemed appropriate for the planning decisions being made at this stage of the plan making process.

In general, where CFRAM modelling has been carried out, flood levels are available at selected node points along the watercourse. Once an appropriate level of validation has been undertaken as part of the site-specific FRA, these flood levels may be used to form the basis of the development design.

As set out in the RSES Regional Flood Risk Appraisal Report, and under the Planning Guidelines, the Flood Zone mapping for the County is principally derived from the CFRAM where possible. However, most settlements in the WMCDP are not covered by the CFRAM and in this case a range of other datasets, as shown in Table 0.2, were used as supplementary information to inform this SFRA.

Due to recent guidance from OPW regarding the use of the first generation PFRA mapping and the indicative nature of the flood extents, the approach used under the Westmeath SFRA has been precautionary. All sources of available flood mapping were reviewed in cases where proposed undeveloped lands are zoned for highly or less vulnerable use (where CFRAM was not available). As such, a single dataset of County Flood Zones has not been prepared, but in each settlement specific guidance is provided based on the data review and a JBA site visit. During the site visit the flood



mapping was appraised on site by an experienced flood risk manager and professional opinion and judgement has been used to develop the recommendations within the Settlement Review of Section 8.

The review of the suite of flood risk data has been developed as a spatial planning tool to guide WMCC in making land-use zoning and development management decisions. The data sets have been deemed appropriate for the planning decisions being made at this stage of the plan making process and where flood risk is identified the following approach has been undertaken;

- Application of the Justification Test and/or;
- Further detailed analysis, or;
- Rezoning to a less vulnerable use, or;
- Further assessment at Development Management stage in limited circumstances where
 it has been determined that development should be possible in principle, taking into
 account a site specific opinion.

When the National Indicative Flood Mapping (NIFM) is issued to Local Authorities the data will be used in conjunction with the other available datasets and site visits to provide a countywide Flood Zone dataset, subject to further verification.

In general, where CFRAM modelling has been carried out, flood levels are available at selected node points along the watercourse. Once an appropriate level of validation has been undertaken as part of the site-specific FRA, these flood levels may be used to form the basis of the development design.



| Volume 5 Strategic Flood Risk Assessment Proposed Alteration FR 3 | | | |
|-------------------------------------------------------------------|------------------------------------------------------------------|----------|--|
| Section: | Heading | Page No. | |
| 4 | Data Collection and Review (Table 4.1 Available Flood Risk Data) | 17 | |
| | See CE FR 2 for the amendment | | |
| 8.1 | The Strategic Approach to Flood Risk Management | 35 | |
| 8.2 | Ballinalack | 40 | |
| 8.3 | Ballynacarrigy | 41 | |
| 8.4 | Ballymore | 42 | |
| 8.5 | Castlepollard | 43 | |
| 8.6 | Castletown Geoghegan | 44 | |
| 8.7 | Clonmellon | 45 | |
| 8.8 | Collinstown | 46 | |
| 8.9 | Delvin | 47 | |
| 8.10 | Glasson | 48 | |
| 8.11 | Kilbeggan | 49 | |
| 8.12 | Killucan Rathwire | 50 | |
| 8.13 | Kinnegad | 51 | |
| 8.14 | Milltownpass | 52 | |
| 8.15 | Moate | 53 | |
| 8.16 | Multyfarnham | 54 | |
| 8.17 | Rochfortbridge | 55 | |
| 8.18 | Tyrrellspass | 56 | |

Omit reference to any direct link between Benefitting Lands and Flood Zones in the SFRA:

8.1 The Strategic Approach to Flood Risk Management

A strategic approach to the management of flood risk is important in County Westmeath as the risks are varied and disparate, with scales of risk and scales of existing and proposed development varying greatly across the county.

Following the Planning Guidelines, development should always be located in areas of lowest flood risk first, and only when it has been established that there are no suitable alternative options should development (of the lowest vulnerability) proceed. Consideration may then be given to factors which moderate risks, such as defences, and finally consideration of suitable flood risk mitigation and site management measures is necessary.

It is important to note that whilst it may be technically feasible to mitigate or manage flood risk at site level, strategically it may not be a sustainable approach.

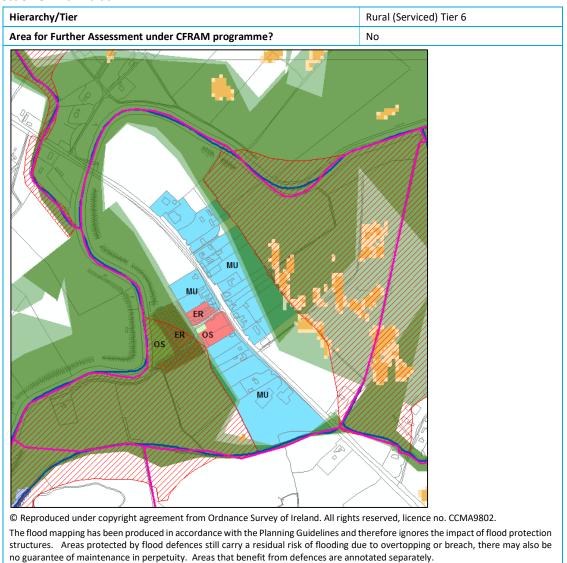


A summary of flood risks associated with each of the zoning objectives has been provided in the following settlement reviews. The Flood Risk commentary indicates whether a certain land zoning, in Flood Zone A or B at potential flood risk, will need to have the Plan Making Justification Test (JT) applied and passed.

When carrying out a site specific FRA, or when planning applications are being considered, it is important to remember that not all uses will be appropriate on flood risk grounds, hence the need to work through the Justification Test for Development Management on a site by site basis and with reference to Table 8.1. For example, a Mixed Use Town / Village Centre zoning objective is "to include for an integrated mix of residential, commercial, community and social uses" which have varying vulnerabilities and would not be equally permissible within Flood Zone A and B an area that is susceptible to a high probability of flooding.

Section 8.2 Ballinalack

Flood Zone Data



OPW PFRA PLUVIAL + FLUVIAL (Flood Zone A/B represented by PFRA fluvial best available

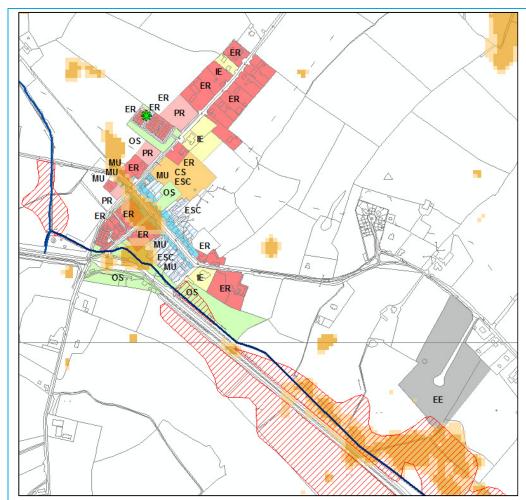


| | dataset) BENEFTTING LANDS |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Historic Flooding | None found |
| Comment | The River Inny is subject to an OPW Arterial Drainage scheme and meanders around the western and northern periphery of the village. Most of the development is on higher ground circa 4m above the riverbank. The available flood mapping predicts a significant amount of flooding around the periphery of the existing developed lands, within which the Inis Glora Estate is located. It is likely that the flood extents are currently overestimated by the PFRA and Benefitting Lands mapping, but this is currently the best available data. |
| Climate Change | Sensitive to fluvial increases in flow. Moderate sensitivity to lower lying lands but higher ground is significantly above the floodplain. |
| Conclusion | Any further development within the MU or ER lands should be subject to an appropriately detailed FRA at Development Management stage and should specifically include a residual risk analysis of defence failure. The FRA must be in accordance with approved WMCDP Policy and the guidance provided within the SFRA section on Development Management & Flood Risk. Risk is limited to existing development and should be managed in line with approved WMCDP Policy and the guidance provided within the SFRA section on Development Management & Flood Risk. |

Section 8.3 Ballynacarrigy

| Hierarchy/Tier | Rural (Serviced) Tier 6 |
|----------------------------------------------------|-------------------------|
| Area for Further Assessment under CFRAM programme? | No |





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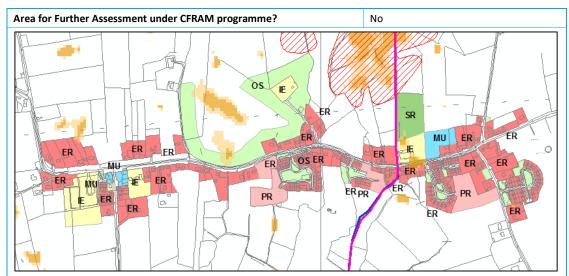
The flood mapping has been produced in accordance with the Planning Guidelines and therefore ignores the impact of flood protection structures. Areas protected by flood defences still carry a residual risk of flooding due to overtopping or breach, there may also be no guarantee of maintenance in perpetuity. Areas that benefit from defences are annotated separately.

| Flood Zone Data | OPW PFRA PLUVIAL BENEFTTING LANDS (taken to represent Flood Zone A/B best available dataset) |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Historic Flooding | Recurring surface water flooding, Carrickmore Estate, inadequate surface water drainage issue. |
| Comment | Risk from the canal is low and an adjacent stream is mapped only by Benefitting Lands extents. Risk from the stream is still only predicted to impact adjacent open space and there are no undeveloped zoned lands adjacent to the watercourse. There is some predicted pluvial flooding which is based on an analysis of topographic low points, actual surface water drainage may mitigate these areas. There is recurring surface water flooding following heavy rainfall in Carrickmore Estate and this is acknowledged as a known drainage issue. |
| Climate Change | Minimal fluvial impacts expected, potential increase in runoff would increase surface water risk. |
| Conclusion | Manage flood risk and development in line with approved WMCDP Policy and the guidance provided within the SFRA section on Development Management & Flood Risk. Surface water management is a key priority in this settlement. |

Section 8.4 Ballymore

| Hierarchy/Tier | Rural (Serviced) Tier 6 |
|----------------|-------------------------|





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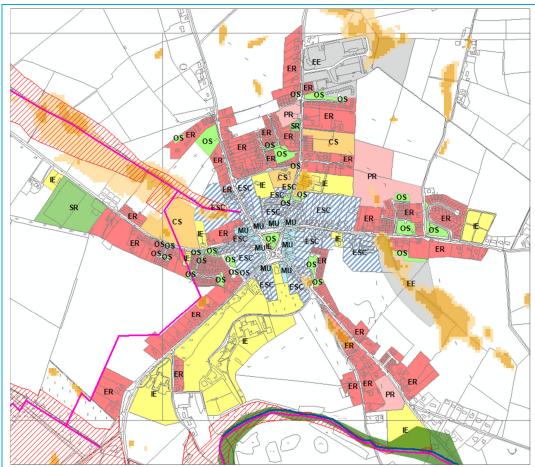
The flood mapping has been produced in accordance with the Planning Guidelines and therefore ignores the impact of flood protection structures. Areas protected by flood defences still carry a residual risk of flooding due to overtopping or breach, there may also be no guarantee of maintenance in perpetuity. Areas that benefit from defences are annotated separately.

| Flood Zone Data | OPW PFRA PLUVIAL BENEFTTING LANDS (taken to represent Flood Zone A/B best available dataset) |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Historic Flooding | None found |
| Comment | Predicted flood risk from the Benefiting Lands mapping is low and there are no significant undeveloped zoned lands close to the watercourse. Some small areas of pluvial flooding are noted, but there is no recorded flood history. |
| Climate Change | No fluvial impacts. Potential fluvial impacts from the OPW drainage channel, potential increase in runoff would increase surface water risk. |
| Conclusion | The PR & IE lands with a boundary adjacent to the OPW channel should be subject to a Stage 3 detailed FRA at Development Management stage and in accordance with CPO 10.101 the OPW should be consulted regarding the development free riparian strip. The FRA must be in accordance with the guidance provided within the SFRA section on Development Management & Flood Risk. Risk is not significant. Any extensions/redevelopment should be managed in line with approved WMCDP Policy and the guidance provided within the SFRA section on Development Management & Flood Risk. |

Section 8.5 Castlepollard

| Hierarchy/Tier | Self-Sustaining Growth Town Tier 3 |
|----------------------------------------------------|------------------------------------|
| Area for Further Assessment under CFRAM programme? | No |





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| Flood Zone Data | OPW PFRA PLUVIAL + FLUVIAL (southern watercourse only) | |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| | BENEFTTING LANDS (taken to represent Flood Zone A/B best available dataset) | |
| Historic Flooding | None found | |
| Comment | The principal risk to the settlement is from the Arterial Drainage channel to the west. A site visit confirmed that the watercourse enters a culvert adjacent to the Proposed Residential (PR) zoning and this has a very deep invert (flows to south). The CS zoning does not encroach within Benefitting Lands and the risk from the culverted section of the watercourse is low. Through the length of the culvert under the PR lands the levels gradually rise to the south where it borders the R395 road. Elsewhere in the settlement there are isolated areas of surface water ponding identified by the PFRA. | |
| Climate Change | Potential increase/sensitivity to fluvial and pluvial risk. | |
| Conclusion | Risk is not significant. PR zoning is appropriate in the west of the above settlement but must be subject to FRA at Development Management stage. Pluvial flooding is a potential risk to undeveloped Enterprise & Employment (EE) lands but again, the risk can be managed by appropriately designed stormwater systems to be detailed at Development Management stage. Risk can be managed in line with approved WMCDP Policy and the guidance provided within the SFRA section on Development Management & Flood Risk. | |
| | CS zoning is appropriate in the west of the settlement but must be subject to a Stage 3 detailed FRA at Development Management stage. The FRA should be in accordance with approved WMCDP Policy and the guidance provided within the SFRA section on Development Management & Flood Risk. | |

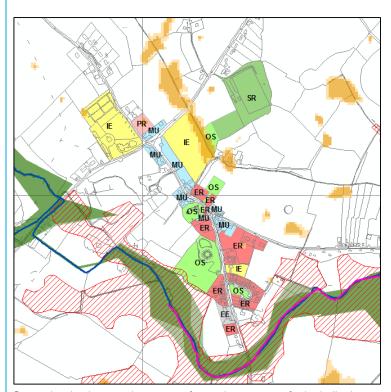


Pluvial flooding is a potential risk to undeveloped EE and PR lands in the east of the settlement and the risk must be assessed and managed by an appropriately designed stormwater management system at Development Management stage. The FRA should be in accordance with approved WMCDP Policy.

The IE lands to the south east of the settlement should be subject to a Stage 3 detailed FRA at Development Management stage to clarify the risk from the OPW arterial drainage channel or else only consider water compatible development use. The FRA should be in accordance with approved WMCDP Policy and the guidance provided within the SFRA section on Development Management & Flood Risk.

Section 8.6 Castletown Geoghegan

| Hierarchy/Tier | Rural (Serviced) Tier 6 | |
|----------------------------------------------------|-------------------------|--|
| Area for Further Assessment under CFRAM programme? | No | |
| | | |



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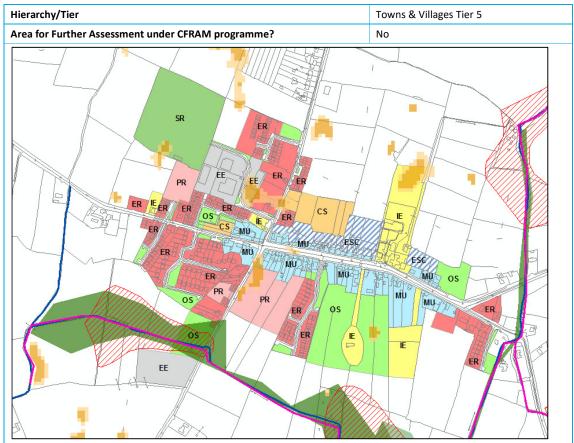
The flood mapping has been produced in accordance with the Planning Guidelines and therefore ignores the impact of flood protection structures. Areas protected by flood defences still carry a residual risk of flooding due to overtopping or breach, there may also be no guarantee of maintenance in perpetuity. Areas that benefit from defences are annotated separately.

| Flood Zone Data | OPW PFRA PLUVIAL + FLUVIAL BENEFTTING LANDS (taken to represent Flood Zone A/B best available dataset) |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Historic Flooding | None found |
| Comment | An OPW drainage channel meanders around the southern periphery of the settlement and fluvial flood risk is limited to lands that are outside of the settlement. Predicted pluvial flooding impacts undeveloped Community, Educational & Institutional (IE) land. |
| Climate Change | No fluvial impacts likely to affect settlement, potential increase in runoff. |
| Conclusion | Pluvial risk to IE land should be managed at Development Management stage by the |



implementation of an appropriately designed stormwater system in line with approved WMCDP Policy and the guidance provided within the SFRA section on Development Management & Flood Risk.

Section 8.7 Clonmellon



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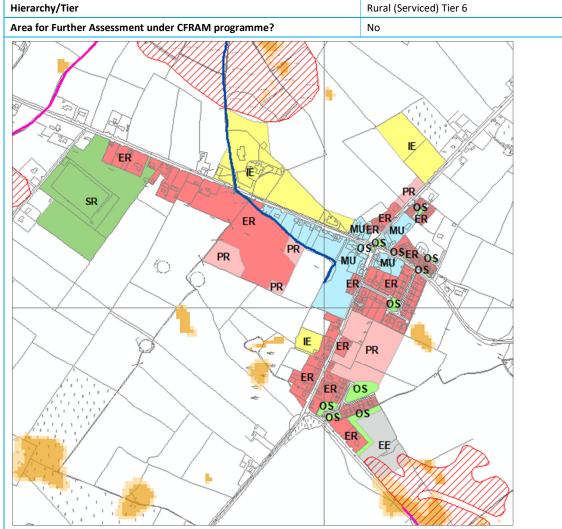
| Flood Zone Data | OPW PFRA PLUVIAL + FLUVIAL (taken to represent Flood Zone A/B best available dataset) BENEFTTING LANDS |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Historic Flooding | None found |
| Comment | An OPW drainage channel flows around the southern and eastern periphery of the settlement and fluvial flood risk is limited to lands that are outside of the settlement, with the exception of a small overlap with Existing Residential (ER) land on the southern extent of the land. It is likely that this extent is overestimated given that the watercourse is subject to arterial drainage. Isolated areas are subject to predicted pluvial flooding, these have been identified as small topographic hollows and the modelling does not consider the existing stormwater system. Most development appears to be circa 2m above floodplain levels and fluvial risk is predominantly low. The EE lands are outlying the main settlement and avoid the predicted risk from the OPW PFRA study, a site specific FRA will be required at planning application stage as per WMCDP Policy. |
| Climate Change | Potential increase in floodplain but development is on higher ground, low vulnerability. Pluvial risk may increase. |



Conclusion

The EE lands to the south of the settlement require a site-specific FRA at Development Management stage in accordance with approved WMCDP Policy and the guidance provided within the SFRA section on Development Management & Flood Risk. Manage flood risk and development in line with approved WMCDP Policy and the guidance provided within the SFRA section on Development Management & Flood Risk.

Section 8.8 Collinstown



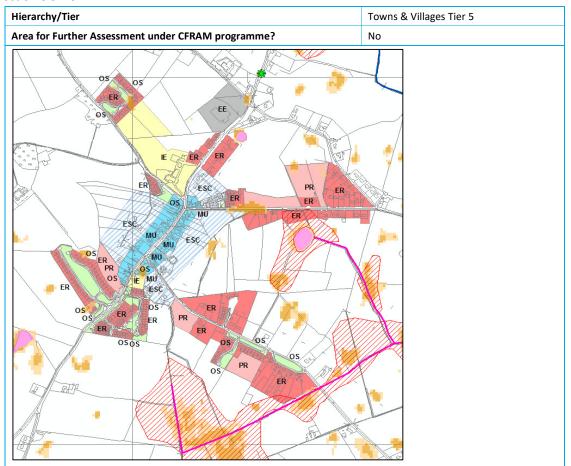
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| Flood Zone Data | OPW PFRA PLUVIAL BENEFTTING LANDS (taken to represent Flood Zone A/B best available dataset) |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Historic Flooding | None found |
| Comment | A drainage channel originates just to the west of the village centre (crossroads). The watercourse is subsequently piped under the proposed residential land and new housing estate in a 1m diameter pipe. Site visit has verified the watercourse and risk is low to surrounding development. The only other potential source of risk is predicted by Benefitting Lands mapping to the south and this impacts an undeveloped EE site. An OPW Arterial Drainage channel is |



| | located 100m south east of the site and most likely provides effective mitigation to the lands. Prior to any development the extent of flooding should be confirmed by an appropriately detailed site specific FRA and the approach set out in the Development Management and Flood Risk section of this SFRA should be followed. |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Climate Change | Minor increase in fluvial risk, potential increase in runoff would increase surface water risk. |
| Conclusion | Risk is generally low, however Prior to any development of the EE lands on the southern periphery of the settlement the extent of flooding should be confirmed by an appropriately detailed site specific FRA in accordance with approved WMCDP Policy and the guidance provided within the SFRA section on Development Management & Flood Risk. Manage flood risk and development in line with approved WMCDP Policy and the guidance provided within the SFRA section on Development Management & Flood Risk. |

Section 8.9 Delvin



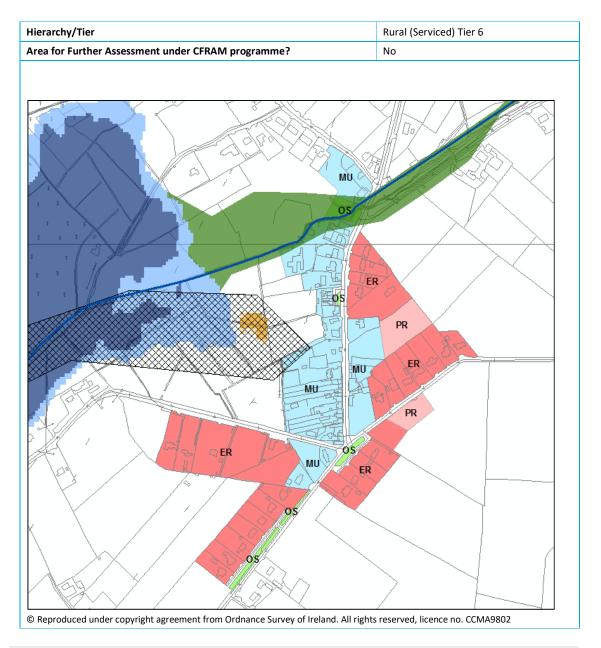
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| Flood Zone Data | OPW PFRA PLUVIAL | |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| | BENEFTTING LANDS (taken to represent Flood Zone A/B best available dataset) | |
| Historic Flooding | Pluvial event in 2009, Mart Junction, Delvin. Surface water from surrounding land and road inundated a dip in the road. No indication of property flooding in the core settlement. | |
| Comment | OPW Arterial Drainage channels are located to the south and east of zoned land. The associated Benefitting Lands flood mapping indicates that there is some overlap with Existing Residential (ER) land. There are some groundwater fed ponds that are located outside of zoned lands in | |



| | topographic low spots. Given the Arterial Drainage works it is anticipated that the Benefitting lands extents are overestimating risk to the ER lands. Overall the fluvial risk to the settlement is low and the majority of predicted pluvial flooding is outside of the zoned land. |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Climate Change | Low sensitivity from fluvial events to current zoned land. Pluvial risk may increase, particularly in isolated low spots, but these are predominantly outside zoned land. |
| Conclusion | Risk is generally low. Manage flood risk and development in line with approved WMCDP Policy and the guidance provided within the SFRA section on Development Management & Flood Risk. Any further development within the ER lands to the east of the settlement adjacent to the OPW Arterial Drainage channel should be subject to an appropriately detailed FRA at Development Management stage in accordance with approved WMCDP Policy and the guidance provided within the SFRA section on Development Management & Flood Risk. |

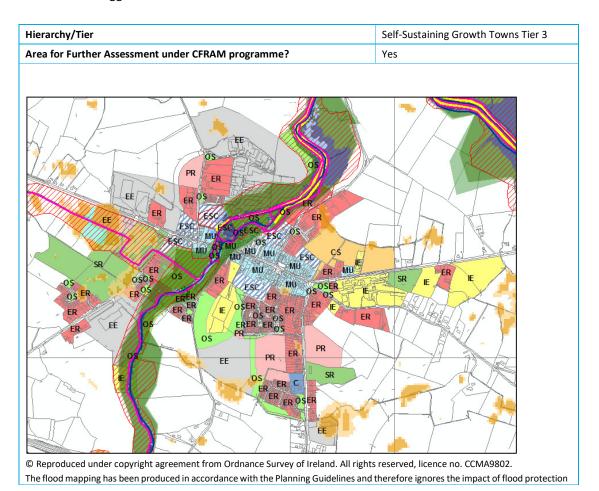
Section 8.10 Glasson





| The flood mapping has been produced in accordance with the Planning Guidelines and therefore ignores the impact of flood protection structures. Areas protected by flood defences still carry a residual risk of flooding due to overtopping or breach, there may also be no guarantee of maintenance in perpetuity. Areas that benefit from defences are annotated separately. | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Flood Zone Data | OPW CFRAM to west OPW PFRA PLUVIAL & FLUVIAL (taken to represent Flood Zone A/B best available dataset through settlement) |
| Historic Flooding | Hatched polygon represents historic flood extent from the 1954 Shannon flood event. |
| Comment | Glasson is located to the east of Lough Ree. A watercourse flows in a westerly direction under the road to the north of the Mixed Use (MU) existing developed land. There is a circa 4m drop in ground level to historically flooded areas from the Shannon (Lough Ree) to the west of the site. CFRAM mapping is available from the Shannon (from Lough Ree) to west, the OPW PFRA fluvial extents provide the only estimate moving upstream on the fluvial watercourse. Impacts from the PFRA are limited to a small amount of existing development. There is no undeveloped zoned land at risk of flooding. |
| Climate Change | Moderate sensitivity from fluvial events to current zoned land. Pluvial risk is generally low. |
| Conclusion | Risk is generally low with the exception of the developed MU land bordering the single watercourse flowing through the settlement. Any extensions/change of use/redevelopment of these properties must have an appropriately detailed FRA. Manage flood risk and development in line with approved WMCDP Policy and the guidance provided within the SFRA section on Development Management & Flood Risk. |

Section 8.11 Kilbeggan



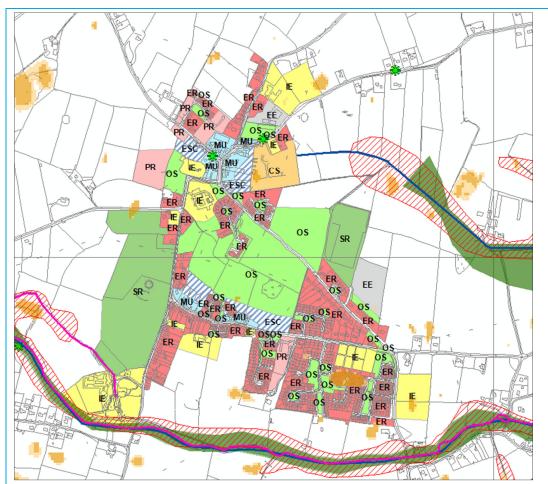


| | ected by flood defences still carry a residual risk of flooding due to overtopping or breach, there may also be mance in perpetuity. Areas that benefit from defences are annotated separately. |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Flood Zone Data | OPW CFRAM for River Brosna (taken to represent Flood Zone A/B best available dataset) OPW PFRA PLUVIAL BENEFITTING LANDS SITE SPECIFIC FRA for drain to west of centre |
| Historic Flooding | Brosna View Estate historic recurring pluvial flooding. The Brosna overflows at Coola Bridge every year (assumed this does not impact property). |
| Comment | The CFRAM analysis confirmed that there is no fluvial flood risk from the River Brosna to any properties within Kilbeggan for the 10% AEP, 1% AEP or 0.1% AEP flood events, as such there is no requirement for a flood relief scheme. The CFRAM did not map the drain that approaches from the west of the settlement along the R446 Moate Road. Benefiting Lands mapping provides an initial estimate of risk, however a site specific FRA provides a detailed assessment of risk and this is displayed on the map above as supplementary information. EE land is situated within Flood Zone C and is appropriate. Pluvial risk is focussed in the lands subject to the site specific FRA, these have now been raised and the low spot has been removed. Site specific measures will manage pluvial risk here. |
| Climate Change | Moderate sensitivity from fluvial events on the River Brosna, no significant risk to property. Pluvial risk is generally low but could increase with predicted increases in rainfall intensity. |
| Conclusion | Risk is generally low as confirmed by the OPW CFRAM. Risk adjacent to the western drain has been more well defined but any development within the Benefitting Lands extents and any extensions/change of use/redevelopment in this area must have an appropriately detailed FRA. Any extensions/change of use/redevelopment adjacent to the OPW drain that enters Kilbeggan from the west must have an appropriately detailed FRA at Development Management stage in accordance with approved WMCDP Policy and the guidance provided within the SFRA section on Development Management & Flood Risk. Manage flood risk and development in line with approved WMCDP Policy and the guidance provided within the SFRA section on Development Management & Flood Risk. |

Section 8.12 Killucan Rathwire

| Hierarchy/Tier | Self-Sustaining Towns Tier 4 |
|----------------------------------------------------|------------------------------|
| Area for Further Assessment under CFRAM programme? | No |





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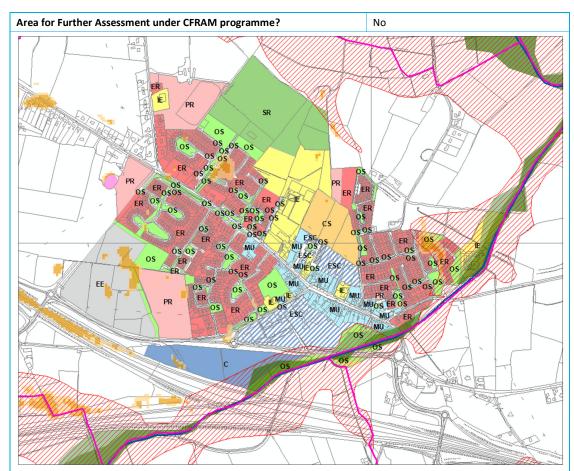
The flood mapping has been produced in accordance with the Planning Guidelines and therefore ignores the impact of flood protection structures. Areas protected by flood defences still carry a residual risk of flooding due to overtopping or breach, there may also be no guarantee of maintenance in perpetuity. Areas that benefit from defences are annotated separately.

| Flood Zone Data | OPW PFRA PLUVIAL & FLUVIAL BENEFITTING LANDS (taken to represent Flood Zone A/B best available dataset) |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Historic Flooding | After heavy rain, every year water flows down the road into the village and the surface water drainage is unable to cope. Road is liable to flood and properties are affected. A stream is also noted to overflow its banks with road and low lying area flooding, no property mentioned. |
| Comment | Flood extents (from Benefitting Lands) are limited to areas outside of the settlement with the exception of the IE land adjacent to the Riverstown River in the south west of the settlement. The encroachment within the land is not understood to present a significant risk to any vulnerable development. Elsewhere in the settlement there is some issue with pluvial flooding impacting property. |
| Climate Change | High sensitivity to pluvial flood events. Moderate to low sensitivity to fluvial events. |
| Conclusion | Risk is generally low, any redevelopment within the IE lands close the river must have an appropriately detailed FRA. Manage flood risk and development in line with approved WMCDP Policy and the guidance provided within the SFRA section on Development Management & Flood Risk. |

Section 8.13 Kinnegad

| Hierarchy/Tier S | Self-Sustaining Growth Towns Tier 3 |
|------------------|-------------------------------------|
|------------------|-------------------------------------|





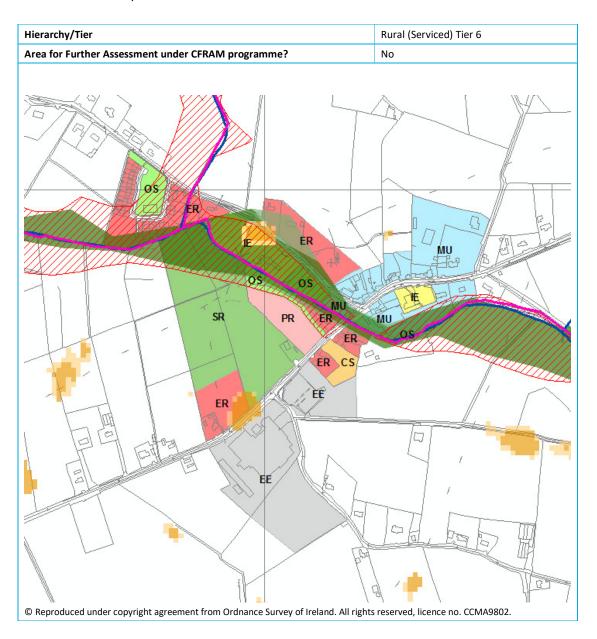
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| Flood Zone Data | OPW PFRA PLUVIAL & FLUVIAL (taken to represent Flood Zone A/B best available dataset) BENEFITTING LANDS |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Historic Flooding | None recorded |
| Comment | The principal risk to Kinnegad is from the Kinnegad River, however this is subject to an OPW Arterial Drainage scheme and the channel here is widened and deepened. It is highly likely that the actual flood extents are much less conservative than the Benefitting Lands and to some extent the PFRA extents as well. The undeveloped commercial land north of the Kinnegad River is at potential risk of flooding, as mapped by the PFRA flood extents. Based on the completion of a site based assessment it is highly likely that the actual flood extents are much less conservative than existing mapped flood risk. In other areas ‡there is minor overlap with existing developed land only and there is no significant undeveloped lands at potential risk. New Proposed Residential zoning next to the disused quarry lake to the north west of the town is not a significant risk to the site, but an appropriately detailed FRA should be submitted at development management stage to screen risk further. A more detailed assessment of flood risk from the Kinnegad River would potentially be able to reduce the Flood Zone extent and release further land zoned OS for future zoning and development. |
| Climate Change | Sensitivity to pluvial flood events. Moderate to low sensitivity to fluvial events. |
| Conclusion | Risk is generally low and is overestimated by Benefitting Lands and PFRA mapping. Manage flood risk and development in line with approved WMCDP Policy and the guidance provided within the SFRA section on Development Management & Flood Risk. The Justification Test has been applied to the undeveloped commercial lands and this is presented in the Appendix |



(Section Error! Reference source not found.), a Stage 3 detailed FRA must be undertaken at Development Management stage to confirm the extent of Flood Zones A and B. Any proposed development within the site should then apply the Sequential Approach, preferentially avoiding any less vulnerable development within Flood Zone A and setting appropriate development levels within Flood Zone C after having assessed the future impacts of climate change as part of a residual risk analysis. IE lands to the north of the Kinnegad River will also require a detailed FRA but since the land use is of a lower vulnerability the Justification Test does not apply. Any proposed development within the site should then apply the Sequential Approach, preferentially avoiding any less vulnerable development within Flood Zone A and setting appropriate development levels within Flood Zone C. Any FRA should be in accordance with approved WMCDP Policy and the guidance provided within the SFRA section on Development Management & Flood Risk.

Section 8.14 Milltownpass

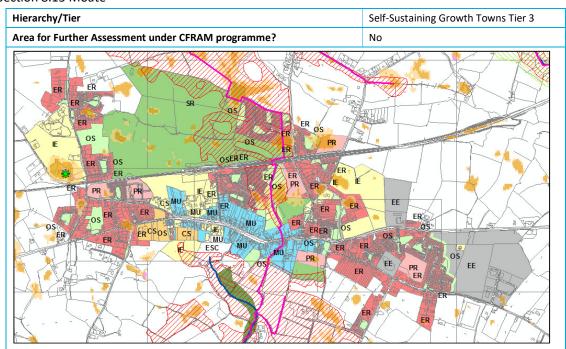




The flood mapping has been produced in accordance with the Planning Guidelines and therefore ignores the impact of flood protection structures. Areas protected by flood defences still carry a residual risk of flooding due to overtopping or breach, there may also be no guarantee of maintenance in perpetuity. Areas that benefit from defences are annotated separately.

| no guarantee of maintenance in perpetuity. Areas that benefit from defences are annotated separately. | | |
|-------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Flood Zone Data | OPW PFRA PLUVIAL & FLUVIAL BENEFITTING LANDS (taken to represent Flood Zone A/B best available dataset) | |
| Historic Flooding | None recorded | |
| Comment | Risk in Milltownpass was reviewed by the OPW under the CFRAM but it was found that the channel capacity is in the order of the 1% AEP event. Site visit from JBA also confirmed that flood risk from the Benefitting Lands and the PFRA is overestimated and the School is not at high risk, other areas of existing residential development is also at lower risk than suggested by the mapping. Undeveloped land includes Sports & Recreational (SR) and Proposed Residential. SR is appropriate within Flood Zone A/B, the PR lands have a small overlap with are adjacent to benefitting lands but a site specific flood risk assessment confirms that land levels are high at this location and channel capacity is also significant. | |
| Climate Change | Moderate to low sensitivity to fluvial events. | |
| Conclusion | Risk is generally low and is overestimated by Benefitting Lands and PFRA mapping. The PR lands must be subject to a detailed FRA at development management stage in accordance with approved WMCDP Policy. Manage flood risk and development in line with approved WMCDP Policy and the guidance provided within the SFRA section on Development Management & Flood Risk. | |

Section 8.15 Moate



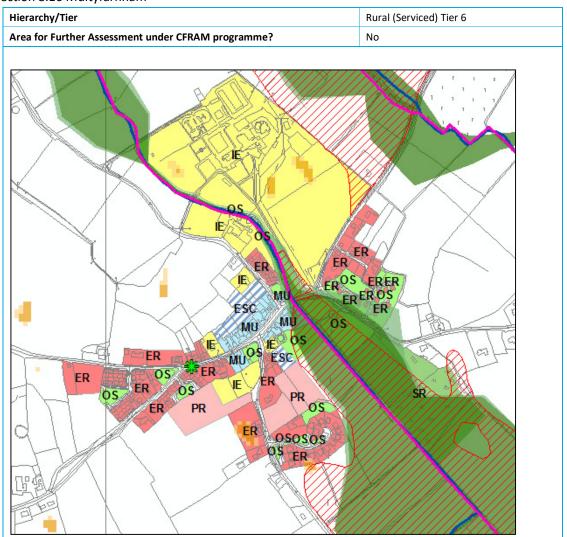
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| Flood Zone Data | BENEFITTING LANDS (taken to represent Flood Zone A/B best available dataset) |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Historic Flooding | Turlough (western edge of settlement) floods after heavy rain every year. The flood is of long duration. |
| Comment | The principal risk within Moate is from an OPW Arterial Drainage channel that flows in a southerly direction through the town. It is culverted beneath an existing housing estate in the north of the settlement, the risk from the Benefitting Lands mapping here is not correct and |



| | should be Zone C. The watercourse emerges in the OS land to the north of the railway line before extending through OS land south of the line. PR land here has been located in Flood Zone C and once more it is expected that the actual extent of Flood Zone A would be less than represented by the Benefitting Lands mapping. Most of the pluvial risk is contained within the Benefitting Lands areas and is indicative of low lying areas within the settlement, despite the presence of Benefitting Lands mapping the risk to existing and proposed development is low. Undeveloped IE lands located on the southern extent of the settlement are subject to significant |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | Benefitting Lands flood extent. The lands are separated from the nearest drainage channel by circa 200m and there is a fall of around 2m in vertical height. It is highly unlikely that the lands are at high risk of flooding and prior to any development the extent of flooding should be confirmed by an appropriately detailed site specific FRA and should follow the approach set out in the Development Management and Flood Risk section of this SFRA. |
| Climate Change | Limited analysis to confirm fluvial sensitivity, but likely to be moderate. Pluvial would be high, particularly adjacent to the Turlough. |
| Conclusion | Risk is generally low and is overestimated by Benefitting Lands mapping. Manage flood risk and development in line with approved WMCDP Policy and the guidance provided within the SFRA section on Development Management & Flood Risk. |

Section 8.16 Multyfarnham



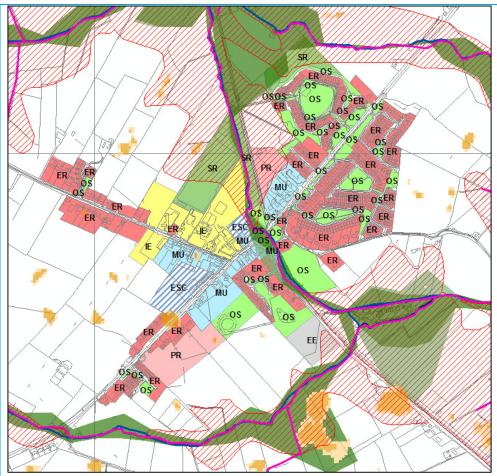


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|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The flood mapping has b structures. Areas prote | been produced in accordance with the Planning Guidelines and therefore ignores the impact of flood protection ected by flood defences still carry a residual risk of flooding due to overtopping or breach, there may also be nance in perpetuity. Areas that benefit from defences are annotated separately. |
| Flood Zone Data | OPW PFRA Pluvial & Fluvial (taken to represent Flood Zone A/B best available dataset) BENEFITTING LANDS |
| Historic Flooding | Low lying area floods after very heavy rain. The road is liable to flood. |
| Comment | Benefitting Lands and PFRA outlines are similar. The River Gaine passes through the village centre, flood risk is typically avoided by use of OS zoning. Some Existing Residential (ER) in Zone B (PFRA), however the presence of the Arterial Drainage scheme in place on the River Gaine means that the flood extents are most likely to be overestimated. |
| Climate Change | High fluvial sensitivity. Pluvial flooding is limited in the settlement. |
| Conclusion | Risk is generally low and is overestimated by Benefitting Lands mapping. All undeveloped zoned lands are within Flood Zone C, however the source of flood mapping is indicative and a detailed Stage 3 FRA should be undertaken for IE, ER, MU and PR sites. Manage flood risk and development. The assessment should be in line with approved WMCDP Policy and the guidance provided within the SFRA section on Development Management & Flood Risk. |

Section 8.17 Rochfortbridge

| Hierarchy/Tier | Self-Sustaining Towns Tier 4 |
|----------------------------------------------------|------------------------------|
| Area for Further Assessment under CFRAM programme? | No |
| | |





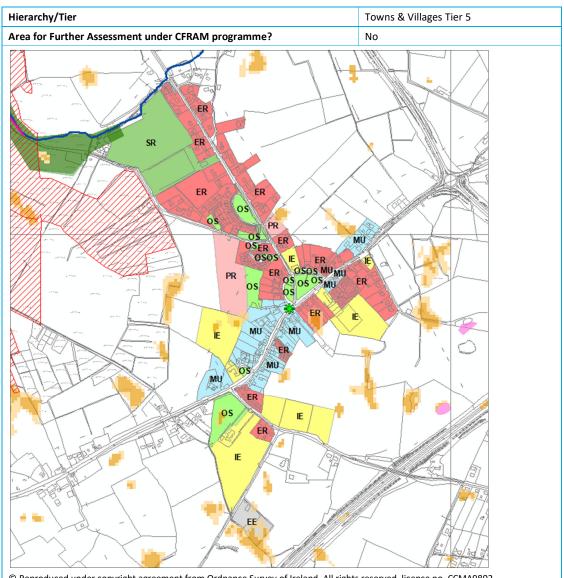
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| Flood Zone Data | OPW PFRA Pluvial & Fluvial (taken to represent Flood Zone A/B best available dataset) BENEFITTING LANDS |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Historic Flooding | None found |
| Comment | The Arterial Drainage channel flows through centre of the town. Extensive Benefitting Lands flood extents are overestimated, and this was confirmed by a site visit. PFRA extents are more representative of risk and should be used as an indicative estimate of Flood Zones. Flood risk predominantly impacts water compatible use except in the centre where there appears to be some risk to existing development ESC, MU & ER. The EE zoning to the south of the settlement has a significant-small overlap with the BL mapping, which is likely to be an overestimation. |
| Climate Change | High fluvial sensitivity. Pluvial flooding is limited in the settlement. |
| Conclusion | Risk is generally low, but any redevelopment within the ESC, MU & ER adjacent to the watercourse must have an appropriately detailed FRA. EE lands to the south overlap Flood Zone A/B and Stage 3 FRA is required at Development Management stage, Flood Zone A/B should be defined and kept as open space/water compatible use. IE lands also have a border with the watercourse and should apply a riparian border and be subject to an appropriately detailed FRA. Manage flood risk and development in line with approved WMCDP Policy and the guidance provided within the SFRA section on Development Management & Flood Risk. Any development within the ESC, MU, EE & ER adjacent to the watercourse must have an appropriately detailed FRA. IE lands also have a border with the watercourse and should apply a riparian border and be subject to an appropriately detailed FRA in accordance with approved WMCDP Policy and the guidance provided within the |



SFRA section on Development Management & Flood Risk.

Section 8.18 Tyrrellspass



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| Flood Zone Data | OPW PFRA Pluvial & Fluvial (taken to represent Flood Zone A/B) BENEFITTING LANDS (taken to represent Flood Zone A/B) |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Historic Flooding | Low lying land floods after heavy rain every year (pluvial). A property in the village is affected. |
| Comment | There is limited fluvial flood risk to the northern fringe of the village, this is only predicted to impact Sports and Recreation (SR) zoning, but the risk may extend upstream to impact existing residential land. There is some predicted but isolated areas of pluvial flooding and the historic flood event confirms that one property in the village is impacted by this. |
| Climate Change | Moderate fluvial sensitivity. Pluvial flooding is limited in the settlement, but given the existing |



| | risk it is assumed it would be highly sensitive to further increases in rainfall. |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Conclusion | Risk is generally low. Manage flood risk and development in line with approved WMCDP Policy and the guidance provided within the SFRA section on Development Management & Flood Risk. |



| | Volume 5 Strategic Flood Risk Assessment Proposed Alteration FR 4 | |
|------------|-------------------------------------------------------------------|----------|
| Section: | Heading | Page No. |
| 9 Appendix | Justification Test, Kinnegad | 56 |

Insert Justification Test for site in Kinnegad.

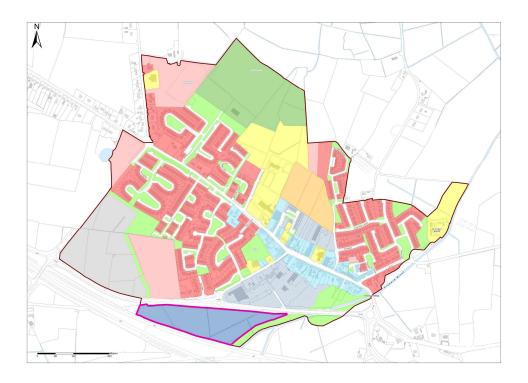
Justification Test for commercial zoned lands south of the R146 in Kinnegad

The Justification Test for Development Plans has been undertaken in an iterative process, and has involved consultation between Westmeath County Council, JBA Consulting and CAAS, as part of the Strategic Environmental Assessment of the Westmeath County Development Plan 2021-2021.

Site Description

The subject site is located to the south of Kinnegad town centre. It occupies a strategic location along the R148 and is zoned for commercial use. The site is currently undeveloped. It directly fronts the R148 and is served by public lighting. Lands to the north of the R148 have been subject to development in recent years with the addition of a Tesco's and Aldi stores. The site forms part of a larger tract of land zoned for commercial use. The subject site presents a significant opportunity for new development at this location to strengthen the existing commercial base in Kinnegad and to increase the service and employment offering in the town.

Map 1 Site outlined in pink which is the subject of the Justification Test





Part 1

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

Draft Westmeath County Development Plan 2021-2027

Kinnegad is designated as a Self-Sustaining Growth Town in the Draft Westmeath County Development Plan 2021-2027. The vision for Kinnegad is to facilitate its continued growth as a self-sustaining town. This will involve capitalising on the town's strategic location, availability of suitably zoned lands and its skilled working population to create a sustainable employment base in the town. It is an objective of the Draft CDP 2021-2027, to promote the development of Kinnegad as a driver of economic growth in the County and fulfil its role as a designated Self-Sustaining Growth Town. (CPO 8.83 refers). The following objectives contained in the Draft Westmeath County Development Plan 2021-2027 are also of relevance:

CPO 8.90 Promote and support the establishment of new enterprise and employment uses on lands identified for these purposes.

CPO 8.104 Sustain and enhance the retail and services offer of Kinnegad town centre and facilitate a competitive and healthy environment for the commercial and retailing industry, in line with the Westmeath County Retail Strategy.

The town was the fastest growing of the main centres in the county over the period 2002 – 2011. This reflects its strategic location on the border of the Greater Dublin area and at the nationally important interchange of the M4/N4 (Dublin – Sligo) and M6 (Dublin – Galway) motorways. The combination of population growth and location has attracted retail and commercial investment into the town. Between 2011 and 2016, Kinnegad grew by 14.2% and the town had a recorded population of 2,745 in 2016.

Kinnegad also had a significantly lower ratio of jobs to resident workers (0.391) than Athlone and Mullingar, with 1019 resident workers in the town and a total of 398 jobs in 2016. The provision of future economic opportunities has a key role to play in reversing commuting trends through increasing the ratio of jobs to resident workers.

Westmeath County Retail Strategy 2019-2026

It is a policy of the Westmeath County Retail Strategy 2019-2026 to sustain and enhance the retail and services offer of Kinnegad Town Centre. It is further stated in the strategy that there is a need to encourage investment in new retail and commercial space within the heart of the town. Underpinning this is the necessity to consolidate activities within the town centre as currently these are dispersed in the St Etchen's and Eastwae schemes and the Tesco store.



9.2 Part 2

The zoning or designation of the lands for the particular use or development type is required to achieve the proper planning and sustainable development of the urban settlement and, in particular:

2 (i) Is essential to facilitate regeneration and/or expansion of the centre of the urban settlement

This tract of land is the closest commercially zoned landbank to the town centre. To date lands to the north of the site have been substantially developed for retail use. Such lands directly connect to Kinnegad Main St. Furthermore, the Draft Plan provides for additional connectivity from this area to the town core. It is considered that the subject site given its siting immediately south of the aforementioned lands will provide for the sequential expansion of commercial uses at this location, thus consolidating commercial activity close to the town core. This in turn will provide additional employment opportunities in Kinnegad and thus enable the town to realise its role as a Self-Sustaining Growth Town.

2(ii) & 2(iii) Comprises significant previously developed and/or under-utilised lands; Is within or adjoining the core of an established or designated urban settlement;

Kinnegad has a quite compact town core which comprises of both the mixed use zoning together with associated backlands area zoned expanded settlement centre. The subject site adjoins the established core of Kinnegad and is undeveloped. It has no particular amenity value at present. The site is directly accessible to the Main St. through existing pedestrian links via lands to the north.

2 (iv) Will be essential in achieving compact and sustainable urban growth; and

The subject site has been zoned for development in Kinnegad since 2002. It is considered that the development of this site is essential in realising the compact and sustainable growth of Kinnegad as it provides for a natural extension to the town centre. It will also enable a new streetscape to be developed south of the R148 to complement established development on lands to the north. This in turn will enable the R148 to become integrated into the settlement rather than acting as a distributor road. Kinnegad has developed on a linear basis along the principal roads serving the settlement namely R148 and R161. Development is precluded to the east given the county boundary with Co. Meath. Lands to the west of Kinnegad comprise of predominantly residential zoned lands which would not be suitable for commercial development.

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

The subject lands form part of the only tract of land zoned for commercial use in Kinnegad. There are no other lands zoned of a similar extent that could facilitate commercial activity within the town.



9.3 Part 3

The principal risk the zoned land is from the Kinnegad River, however this is subject to an OPW Arterial Drainage scheme and the channel here is widened and deepened. Based on the completion of a site based assessment it is highly likely that the actual flood extents are much less conservative than existing mapped flood risk. A Stage 3 detailed FRA must be undertaken at Development Management stage to confirm the extent of Flood Zones A and B. Any proposed development within the site should then apply the Sequential Approach, preferentially avoiding any less vulnerable development within Flood Zone A and setting appropriate development levels within Flood Zone C after having assessed the future impacts of climate change as part of a residual risk analysis. There is sufficient land available within the zoning type to adopt this approach and manage the risk of flooding to any potential development. The FRA should be in accordance with approved WMCDP Policy and the guidance provided within the SFRA section on Development Management & Flood Risk.

| | Volume 5 Strategic Flood Risk Assessment Proposed Alteration FR 5 | |
|----------|-------------------------------------------------------------------|----------|
| Section: | Heading | Page No. |
| 6.1 | Flood Risk Policy WMCDP | 22 |

Amend CPO 10.98 in the plan as follows:

"Ensure that a flood risk assessment is carried out for any development proposal within 200m of a watercourse, in accordance with the Planning System and Flood Risk Management (DoEHLG/OPW 2009). This assessment shall be appropriate to the scale and nature of risk to the potential development"



Volume 5 Strategic Flood Risk Assessment Proposed Alteration FR 3 Addendum Section: Heading Page No. 8.2 Ballinalack 40 42 8.4 Ballymore 8.5 43 Castlepollard 8.6 Castletown Geoghegan 44 45 8.7 Clonmellon Collinstown 8.8 46 47 8.9 Delvin 8.10 Glasson 48 49 8.11 Kilbeggan 8.13 51 Kinnegad 8.14 52 Milltownpass 54 8.16 Multyfarnham 8.17 Rochfortbridge 55

Adjustments to Section 8 Settlement Review – where recommendations or zoning has changed as a result of EMRA/OPW/OPR comments or as a result of other third party submissions: These are included under the response to **FR 3.**



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Westmeath County Council, Áras an Chontae, Mount Street, Mullingar, Co. Westmeath

Tel: 044-9332000 Email: info@westmeathcoco.ie Web: www.westmeathcoco.ie