MWP

STRATEGIC FLOOD RISK ASSESSMENT

Kenmare MD Local Area Plan 2023-2029

Kerry County Council

August 2023

Contents

Glossary of Acronyms and Terms 1

1. Introduction to the Strategic Flood Risk Assessment 2

1.1 General 2

1.2 Kenmare Municipal District Overview 2

1.3 Scope of the Kenmare MD Local Area Plan 4

1.4 Strategic Flood Risk Assessment Objectives 4

1.5 Disclaimer 5

2. The Planning System and Flood Risk 6

2.1 Overview 6

2.2 Flood Risk 6

2.3 The Staged Approach 7

2.4 Climate Change 8

2.5 Vulnerability of Developments 8

2.6 Flood Zones 9

2.7 The Sequential Approach 10

3. Sources of Flooding 11

3.1 Fluvial Flooding 11

3.2 Coastal Flooding and Erosion 11

3.3 Pluvial Flooding 12

3.4 Groundwater Flooding 12

3.5 Flooding from Drainage Systems 12

3.6 Flood Defence Failures 13

3.7 Climate Change 13

4. Flood Risk Identification 14

4.1 Collation & Review of Existing Flood Risk Information 14

4.2 Flood Risk Identification of Settlements in Kenmare MD 16

4.2.1 Regional Towns 16
4.2.2 District Towns 20
4.2.3 Villages 22
4.2.4 Small Village Settlements 28

4.3 Summary of Identified Flood Risk by Settlement 36

5. Initial Flood Risk Assessment 38

5.1 Flood Risk Assessment of Land Use Zonings 38

5.1.1 Overview 38

5.1.2 Cahersiveen Land Use Zoning Assessment 39
5.1.3 Killorglin Land Use Zoning Assessment 47
5.1.4 Kenmare Land Use Zoning Assessment 57
5.1.5 Sneem Land Use Zoning Assessment 100
5.1.6 Waterville Land Use Zoning Assessment 106
5.1.7 Knightstown Land Use Zoning Assessment 108
5.1.8 Portmagee Land Use Zoning Assessment 114
5.1.9 NIFM Watercourses & Unmapped Watercourses 121
5.2 Justification Tests 152
5.2.1 Kenmare 152
5.2.1.1 Justification Test Criterion 1 152
5.2.1.2 Justification Test Criterion 2 and 3 152
5.3 Future Scenarios 154
6. Flood Risk Management 182
6.1 Sustainable Drainage Systems (SuDS) 182
6.1.1 SuDS Philosophy & Design Criteria 182
6.1.2 Key Water Quantity Design Standards 185
6.2 Key Policies for the Plan 186
6.3 Integration of Flood Risk Management 186
6.4 Flood Risk and Development Management 186
7. Monitoring and Review of Strategic Flood Risk Assessment 190
Appendix A 191

Tables

Table 1.1: Settlement Hierarchy 4
Table 2.1: Vulnerability Matrix 8
Table 2.2: Definitions of Flood Zones 9
Table 4.1: Existing Flood Risk Information and Review Summary 15
Table 4.2: Summary of Identified Flood Risk for Settlements in Kenmare MD 37
Table 5.1: Summary of Land Zones at Flood Risk from NIFM Watercourses & Unmapped Watercourses 140
Table 5.2: Justification Test Criterion 1- Kenmare - N1.6 (N1.6.1) Car Park 152
Table 5.3: Justification Test Criterion 2 & 3 - Kenmare - N1.6 (N1.6.1) Car Park 153
Table 6.1: Design Criteria 183
Table 6.2: Sustainability Hierarchy 184
Table 6.3: Kenmare MD LAP Key Requirements for Flood Risk Management 189
Table 7.1: Potential Triggers of an SFRA Review 190

Figures

Figure 1.1: Kenmare MD Settlement Map 3
Figure 2.1: Source-Pathway-Receptor Model 7
Figure 2.2: Example of Flood Zone Mapping (Planning System and Flood Risk Management, 2009) 9
Figure 2.3: The Sequential Approach Mechanism in the Planning Process 10
Figure 5.1: Cahersiveen - Land Use Zoning and Flood Zone Map 46
Figure 5.2: Killorglin - Land Use Zoning and Flood Zone Map (Fluvial) 55
Figure 5.3: Killorglin - Land Use Zoning and Flood Zone Map (Coastal) 56
Figure 5.4: Kenmare - Land Use Zoning and Flood Zone Map (Fluvial) 98
Figure 5.5: Kenmare - Land Use Zoning and Flood Zone Map (Coastal) 99
Figure 5.6: Sneem - Land Use Zoning and Flood Zone Map (Coastal) 105
Figure 5.7: Waterville- Land Use Zoning and Flood Zone Map (Coastal) 107
Figure 5.8: Knightstown - Land Use Zoning and Flood Zone Map (Coastal) 113
Figure 5.9: Portmagee - Land Use Zoning and Flood Zone Map (Coastal) 120
Figure 5.10: Cahersiveen EPA Watercourses Map 141
Figure 5.11: Kenmare NIFM 1% & 0.1% AEP Present Day 142
Figure 5.12: Kenmare EPA Watercourses Map 143
Figure 5.13: Killorglin EPA Watercourses Map 144
Figure 5.14: Knightstown EPA Watercourses Map 145
Figure 5.15: Sneem NIFM 1% & 0.1% AEP Present Day 146
Figure 5.16: Sneem EPA Watercourses Map 147
Figure 5.17: Waterville NIFM 1% & 0.1% AEP Present Day 148
Figure 5.18: Baile an Sceilg EPA Watercourses Map 149
Figure 5.19: Chapeltown EPA Watercourses Map 150
Figure 5.20: Glenbeigh NIFM 1% & 0.1% AEP Present Day 151
Figure 5.21: Cahersiveen NCFHM 1% & 0.1% AEP MRFS 155
Figure 5.22: Cahersiveen NCFHM 1% & 0.1% AEP HEFS 156
Figure 5.23: Kenmare CFRAMS Fluvial 1% & 0.1% AEP MRFS 157
Figure 5.24: Kenmare CFRAMS Fluvial 1% & 0.1% AEP HEFS 158
Figure 5.25: Kenmare CFRAMS Coastal & NCFHM 1% & 0.1% AEP MRFS 159
Figure 5.26: Kenmare CFRAMS Coastal & NCFHM 1% & 0.1% AEP HEFS 160
Figure 5.27: Killorglin CFRAMS Fluvial 1% & 0.1% AEP MRFS 161
Figure 5.28: Killorglin CFRAMS Fluvial 1% & 0.1% AEP HEFS 162
Figure 5.29: Killorglin NCFHM 1% & 0.1% AEP MRFS 163

Figure 5.30: Killorglin NCFHM 1% & 0.1% AEP HEFS 164
Figure 5.31: Knightstown NCFHM 1% & 0.1% AEP MRFS 165
Figure 5.32: Killorglin NCFHM 1% & 0.1% AEP HEFS 166
Figure 5.33: Portmagee CFRAMS Coastal & NCFHM 1% & 0.1% AEP MRFS 167
Figure 5.34: Portmagee CFRAMS Coastal & NCFHM 1% & 0.1% AEP HEFS 168
Figure 5.35: Sneem NCFHM 1% & 0.1% AEP MRFS 169
Figure 5.36: Sneem NCFHM 1% & 0.1% AEP HEFS 170
Figure 5.37: Waterville NCFHM 1% & 0.1% AEP MRFS 171
Figure 5.38: Waterville NCFHM 1% & 0.1% AEP HEFS 172
Figure 5.39: Baile an Sceilg NCFHM 1% & 0.1% AEP MRFS 173
Figure 5.40: Baile an Sceilg NCFHM 1% & 0.1% AEP HEFS 174
Figure 5.41: Beaufort CFRAMS Coastal 1% & 0.1% AEP MRFS & HEFS (Extents Unchanged) 175
Figure 5.42: Beaufort CFRAMS Fluvial 1% & 0.1% AEP MRFS 176
Figure 5.43: Beaufort CFRAMS Fluvial 1% & 0.1% AEP HEFS 177
Figure 5.44: Glenbeigh NIFM 1% & 0.1% AEP MRFS 178
Figure 5.45: Glenbeigh NIFM 1% & 0.1% AEP HEFS 179
Figure 5.46: Kilgarvan NIFM 1% & 0.1% AEP MRFS 180
Figure 5.47: Kilgarvan NIFM 1% & 0.1% AEP HEFS 181
Figure 6.1: SuDS Management Train 184
Figure 0.1: Baile an Sceilg - NCFHM 1% & 0.1% AEP Present Day Scenario 192
Figure 0.2: Beaufort - CFRAMS Coastal 1% & 0.1% AEP Present Day Scenario 193
Figure 0.3: Beaufort - CFRAMS Fluvial 1% & 0.1% AEP Present Day Scenario 194
Figure 0.4: Kilgarvan - NIFM 1% & 0.1% AEP Present Day Scenario 195

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Glossary of Acronyms and Terms

AEP	Annual Exceedance Probability
CFRAMS	Catchment Flood Risk Assessment and Management Study
EPA	Environmental Protection Agency
FFL	Finished Floor Level
FRA	Flood Risk Assessment
FRS	Flood Relief Scheme
GDSDS	Greater Dublin Strategic Drainage Study
HEFS	High End Future Scenario
ICPSS	Irish Coastal Protection Strategy Study
ICWWS	Irish Coastal Wave & Water Level Modelling Study
KCC	Kerry County Council
KCDP	Kerry County Development Plan
LAP	Local Area Plan
MD	Municipal District
mOD	Metres Above Ordnance Datum
MRFS	Mid Range Future Scenario
MWP	Malachy Walsh & Partners
NCFHM	National Coastal Flood Hazard Mapping
NIFM	National Indicative Fluvial Mapping
OPW	Office of Public Works
PFRA	Preliminary Flood Risk Assessment
PSFRM	The Planning System and Flood Risk Management Guidelines, November 2009
SFRA	Strategic Flood Risk Assessment
SuDS	Sustainable Urban Drainage Systems

1. Introduction to the Strategic Flood Risk Assessment

1.1 General

Malachy Walsh and Partners (MWP) Consulting Engineers have been commissioned by Kerry County Council (KCC) to carry out a Strategic Flood Risk Assessment (SFRA) of the Draft Kenmare MD LAP 2023-2029.

This report sets out the Strategic Flood Risk Assessment which has been prepared in accordance with:

1. *The Planning System and Flood Risk Management – Guidelines for Planning Authorities, November 2009,* published by the Office of Public Works and the Department of Environment, Heritage and Local Government;
2. Circular PL 2/2014, Department of the Environment, Community and Local Government.
3. Kerry County Development Plan (KCDP) Strategic Flood Risk Assessment (SFRA) 2022-2028.

1.2 Kenmare Municipal District Overview

The population of the Plan Area in 2022 Census was 27,076 persons which is an increase of 8 % from 2016. This percentage increase compares to an increase of 5.1 % in the population of County Kerry. Outside the regional towns in the plan area, the remaining settlements have small population bases. There are significant differences between the populations of the regional towns of Kenmare, Killorglin and Cahersiveen and the designated district towns of Sneem (population, 274) and Waterville (population, 462).

The Plan area has attractive towns, a fantastic natural environment and is an outdoor enthusiast's paradise. Continued investments over recent years in infrastructure, people and attractions have added to the competitiveness of the region internationally for tourists.

The strategy for the Kenmare MD Local Area Plan is dependent on the growth of Cahersiveen, Kenmare and Killorglin as the regional towns in the plan area and to a lesser extent on the district towns of Sneem and Waterville. The rural towns and villages play a significant economic and service role for the surrounding rural communities.

The Kenmare MD LAP 2023-2029 identifies a hierarchy of settlements within the MD. The geographic location of settlement hierarchy is illustrated on Figure 1.1 below and listed on Table 1.1 together with the function of each settlement type based on The Regional Economic & Spatial Strategy for the Southern Region (RSES).

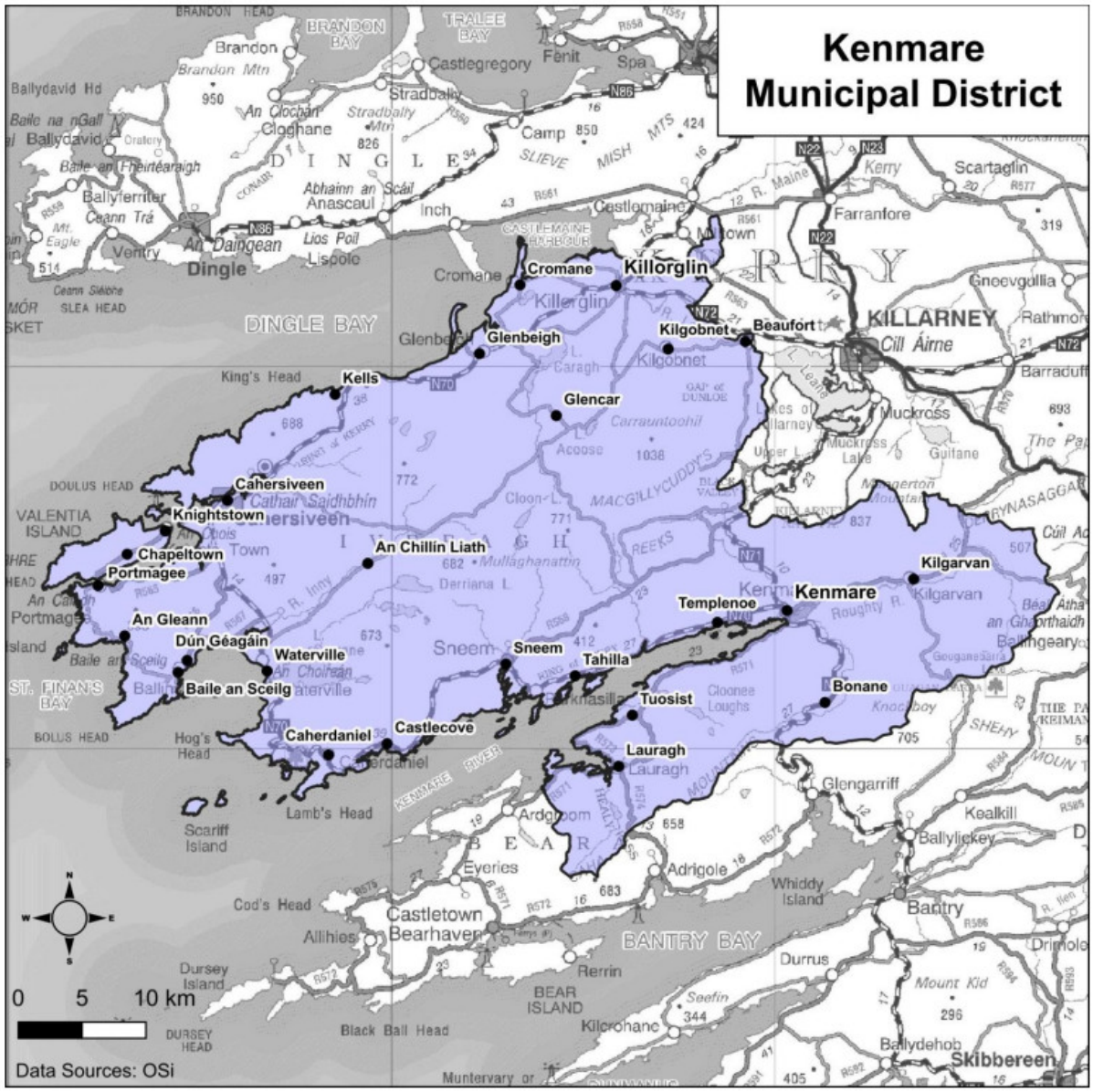


Figure 1.1: Kenmare MD Settlement Map

Within the plan area, the regional towns are Cahersiveen, Kenmare and Killorglin while Sneem and Waterville occupy an important role as district towns for the area as identified in the settlement hierarchy of the Kerry County Development Plan (KCDP) 2022-2028. Baile an Sceilg, Beaufort, Glenbeigh, Kilgarvan, Knightstown and Portmagee are the principal villages in the plan area. The regional towns are significantly larger than the other settlements in the LAP area. The Gaeltacht area of Uíbh Ráthach is also situated in the Kenmare MD.

Hierarchy	Settlement	Function
Regional Towns	Cahersiveen, Killorglin, Kenmare	Towns which provide a housing, employment, or service function. The category is broad and ranges from large commuter towns to more peripheral towns.
District Towns	Sneem, Waterville	Towns that serve a rural hinterland as service centres.
Village	Baile an Sceilg, Beaufort, Chapeltown, Cloghane, Dún Géagain, Glenbeigh, Kilgarvan, Knightstown, Portmagee	Smaller settlements that serve a rural hinterland with less of a variety of services available
Small Village Settlements	An Chillín Liath, An Gleann, Bonane, Caherdaniel, Castlecove, Cromane, Glencar, Kells, Kilgobnet, Lauragh, Tahilla, Templenoe, Tuosist	Serve smaller rural catchments. They provide local services with some smaller scale rural enterprises in a number of such villages.

Table 1.1: Settlement Hierarchy

1.3 Scope of the Kenmare MD Local Area Plan

The purpose of this SFRA is to provide a broad (area-wide) assessment of all types of flood risk to inform strategic land-use planning decisions for Kenmare MD. For most areas within the MD, the Plan does not identify specific land zoning objectives therefore a detailed flood risk assessment involving the production of a flood risk map for all watercourses or coastal frontage is not required.

This SFRA uses existing information and data sources to inform strategic land-use planning decisions. As part of this, the Plan and the SFRA provide guidance for the identification and zoning of development lands at Local Area Plan preparation level, so as to ensure that flood risk management forms an integral component of the plan formulation process. Guidance is also provided for project level assessment and sustainable flood risk management.

This SFRA has been integrated with the Strategic Environmental Assessment (SEA) process. As part of this a number recommendations for SEA monitoring are provided within this SFRA.

1.4 Strategic Flood Risk Assessment Objectives

In line with the Guidelines, the core objectives of the SFRA are:

- To provide for an improved understanding of flood risk issues within the development plan and development management process, and to communicate this to a wide range of stakeholders;
- To produce an assessment of existing flood defence infrastructure and the consequences of failure of that infrastructure and also identification of areas of natural floodplain to be safeguarded;
- To produce a suitably detailed flood risk assessment, drawing on and extending existing data and information, leading to a suite of flood risk policies and objectives and, where appropriate, maps that

support the application of the sequential approach, in key areas where there may be tension between development pressures and avoidance of flood risk;

- To inform, where necessary, the application of the Justification Test;
- To conclude whether measures to deal with flood risks to the area proposed for development can satisfactorily reduce the risks to an acceptable level while not increasing flood risk elsewhere, and
- To produce guidance on mitigation measures on how surface water should be managed and appropriate criteria to be used in the review of site specific flood risk assessments.

1.5 Disclaimer

This SFRA has been prepared in compliance with the Guidelines but the SFRA remains a living document and is based on the best available data at the time of preparation. It is subject to change based on more up to date and relevant flood risk information becoming available during the lifetime of the Local Area Plan. Accordingly, all information in relation to flood risk is provided for general policy guidance and may be updated in respect of emerging new data and analysis. Owners, occupiers, developers and any other interested bodies are advised to take all reasonable measures to assess the flooding vulnerability or risk of lands in which they have or may have an interest prior to making planning or development decisions. The aim of this SFRA is to provide an appraisal of all sources of flooding within the Study area and to set out a number of approaches in the plan making process to avoid, reduce and manage flood risk as part of a wider objective to ensure the protection of property, people and infrastructure. The SFRA does not contain advice for existing occupiers who currently live in areas at risk of flooding or those that may experience flooding.

2. The Planning System and Flood Risk

2.1 Overview

"The Planning System and Flood Risk Management: Guidelines for Planning Authorities", published in November 2009, describes flooding as a natural process that can occur at any time and in a wide variety of locations. The Guidelines describe good flood risk practice in planning and development management and seek to integrate flood risk management into the planning process, thereby assisting in the delivery of sustainable development. Planning authorities are directed to have regard to the Guidelines in the preparation of Development Plans and Local Area Plans, and for development management purposes. For this to be achieved, flood risk must be assessed as early as possible in the planning process.

Paragraph 1.6 of the guidelines states that the core objectives are to:

- Avoid inappropriate development in areas at risk of flooding;
- Avoid new developments increasing flood risk elsewhere, including that which may arise from surface run-off;
- Ensure effective management of residual risks for development permitted in flood plains;
- Avoid unnecessary restriction of national, regional or local economic and social growth;
- Improve the understanding of flood risk among relevant stakeholders; and
- Ensure that the requirements of EU and national law in relation to the natural environment and nature conservation are complied with at all stages of flood risk management.

The guidelines aim to facilitate "the transparent consideration of flood risk at all levels of the planning process, ensuring a consistency of approach throughout the country". The Guidelines work on a number of key principles, including:

- Adopting a staged and hierarchical approach to the assessment of flood risk;
- Adopting a sequential approach to the management of flood risk, based on the frequency of flooding (identified through Flood Zones) and the vulnerability of the proposed land use.

2.2 Flood Risk

In order to manage flood risk it is important to understand what the term "flood risk" implies and to define the components of flood risk in order to apply the principles of the DEHLG Flood Risk Management Guidelines.

Flood risk is generally accepted to be a combination of the likelihood of flooding and the potential consequences arising, and is normally expressed in terms of the following relationship:

Flood Risk = Probability of Flooding x Consequences of Flooding

Flood risk is assessed using the source – pathway – receptor model as illustrated on Figure 2.1.

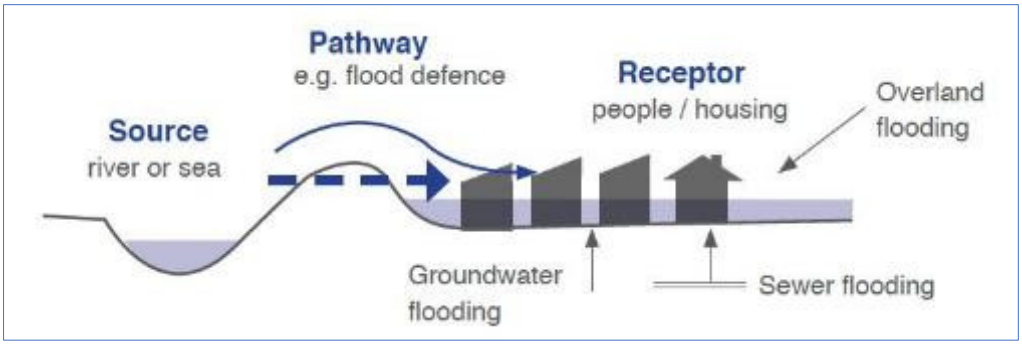


Figure 2.1: Source-Pathway-Receptor Model

Principal sources of flooding are intense or prolonged rainfall or higher than normal sea levels while the most common pathways are rivers, drains, sewers, overland flow and river and coastal flood plains and their defence assets. Receptors can include people, their property and the environment. All three elements must be present for flood risk to arise. Mitigation measures, such as defences or flood resilient construction, have little or no effect on sources of flooding but they can block or impede pathways or remove receptors.

Flood risk assessments require identification and assessment of all three components:

- The probability and magnitude of the source(s) (e.g. high river levels, sea levels and wave heights);
- The performance and response of pathways and barriers to pathways such as floodplain areas and flood defence systems, and
- The consequences to receptors such as people, properties and the environment.

The planning process is primarily concerned with the location of receptors, taking appropriate account of potential sources and pathways that might put those receptors at risk.

2.3 The Staged Approach

The Guidelines recommend a staged approach to be adopted to ensure that only such an appraisal or assessment as is needed for the purposes of decision making at the various plan levels is undertaken. The stages include:

Stage 1 - Flood risk Identification: To identify whether there may be any flooding or surface water management issues related to the area of the regional planning guidelines, development plans or local area plans (LAPs) or a proposed development site that may warrant further investigation at the appropriate lower level plan or planning application levels. If the Planning Authority considers that there is potential flood risk issue, then stage 2 shall be entered into.

Stage 2 - Initial flood risk assessment: To confirm sources of flooding that may affect a plan area or proposed development site, to appraise the adequacy of existing information and to scope the extent of the risk of flooding which may involve preparing indicative flood zone maps. Where hydraulic models exist, the potential impact of a development on flooding elsewhere and of the scope of possible mitigation measures can be assessed. In addition, the requirement of the detailed assessment should be scoped; and

Stage 3 - Detailed flood risk assessment: To assess flood risk issues in sufficient detail and to provide quantitative appraisal of potential flood risk to a proposed or existing development or land to be zoned, of its potential impact on flood risk elsewhere and of the effectiveness of any proposed mitigation measures.

2.4 Climate Change

Climate change can be expected to generally increase flood risk and consequences of flooding. Due to the uncertainty associated with the potential effects of climate change, the Guidelines recommend that a precautionary approach to dealing with climate change is adopted and provide the following examples:

- Recognising that significant changes in the flood extent may result from an increase in rainfall or tide events and accordingly adopting a cautious approach to zoning land in these potential transitional areas;
- Ensuring that the levels of structures designed to protect against flooding, such as flood defences, land-raising or raised floor levels are sufficient to cope with the effects of climate change over the lifetime of the development they are designed to protect; and
- Ensuring that structures to protect against flooding and the development protected are capable of adaptation to the effects of climate change when there is more certainty about the effects and still time for such adaptation to be effective

2.5 Vulnerability of Developments

The Guidelines have outlined three Vulnerability Classifications for developments based on the proposed land use and type of development. These classifications and particular examples of development types which would be included in each classification are summarised as follows;

- Highly Vulnerable Development: This would include emergency services, hospitals, schools, residential institutions, dwelling houses, essential infrastructure, water & sewage treatment etc.
- Less Vulnerable Development: Retail, leisure, commercial, industrial buildings, local transport infrastructure.
- Water-compatible development: Docks, marinas and wharves. Amenity and open space, outdoor sports and recreation and essential facilities such as changing rooms.

The Guidelines also include a matrix of vulnerability versus flood zone to differentiate between developments which are appropriate in various flood zones and those which require a Justification Test. This table is reproduced as Table 2.1 below.

Vulnerability Classification	Flood Zone A	Flood Zone B	Flood Zone C
Highly Vulnerable Development	Justification Test	Justification Test	Appropriate
Less Vulnerable Development	Justification Test	Appropriate	Appropriate
Water-compatible Development	Appropriate	Appropriate	Appropriate

Table 2.1: Vulnerability Matrix

2.6 Flood Zones

In the Planning System and Flood Risk Management Guidelines document, the likelihood of a flood occurring is established through the identification of Flood Zones which indicate a high, moderate or low risk of flooding from fluvial or tidal sources. Table 2.2 below includes the definition of Flood Zones as well as the implications for planning.

It is important to note that the Flood Zones do not take other sources of flooding, such as groundwater or pluvial, into account, so an assessment of risk arising from such sources should also be made, where appropriate.

Flood Zone	Description & Summary of Planning Implications
Zone A High probability of flooding	More than 1% probability (1 in 100) for river flooding and more than 0.5% probability (1 in 200) for coastal flooding. Most types of development would be considered inappropriate in this zone.
Zone B Moderate probability of flooding	0.1% to 1% probability (between 1 in 100 and 1 in 1,000) for river flooding and 0.1% to 0.5% probability (between 1 in 200 and 1 in 1,000) for coastal flooding. Highly vulnerable development, such as hospitals, residential care homes, Garda, fire and ambulance stations, dwelling houses and primary strategic transport and utilities infrastructure, would generally be considered inappropriate in this zone.
Zone C Low probability of flooding	This zone defines areas with a low risk of flooding from rivers and the coast (i.e. less than 0.1% probability or less than 1 in 1,000). Development in this zone is appropriate from a flooding perspective (subject to assessment of flood hazard from sources other than rivers and the coast).

Table 2.2: Definitions of Flood Zones

Figure 2.2: Example of Flood Zone Mapping (Planning System and Flood Risk Management, 2009)

2.7 The Sequential Approach

The sequential approach makes use of flood risk assessment and of prior identification of flood zones for river and coastal flooding and classification of the vulnerability to flooding of different types of development. The principle of the Sequential Approach mechanism is to:

- **Avoid:** Preferably choose lower risk flood zones for new development
- **Substitute:** Ensure the type of development proposed is not especially vulnerable to the adverse impacts of flooding
- **Justify:** Ensure that development is being considered for strategic reasons
- **Mitigate:** Ensure flood risk is reduced to acceptable levels
- **Proceed:** Only Justification Test is passed. Ensure emergency planning measures are in place.

The application of the Sequential Approach mechanism in the planning process is illustrated on Figure 2.3 which is an extract from the Planning System and Flood Risk Management Guidelines.

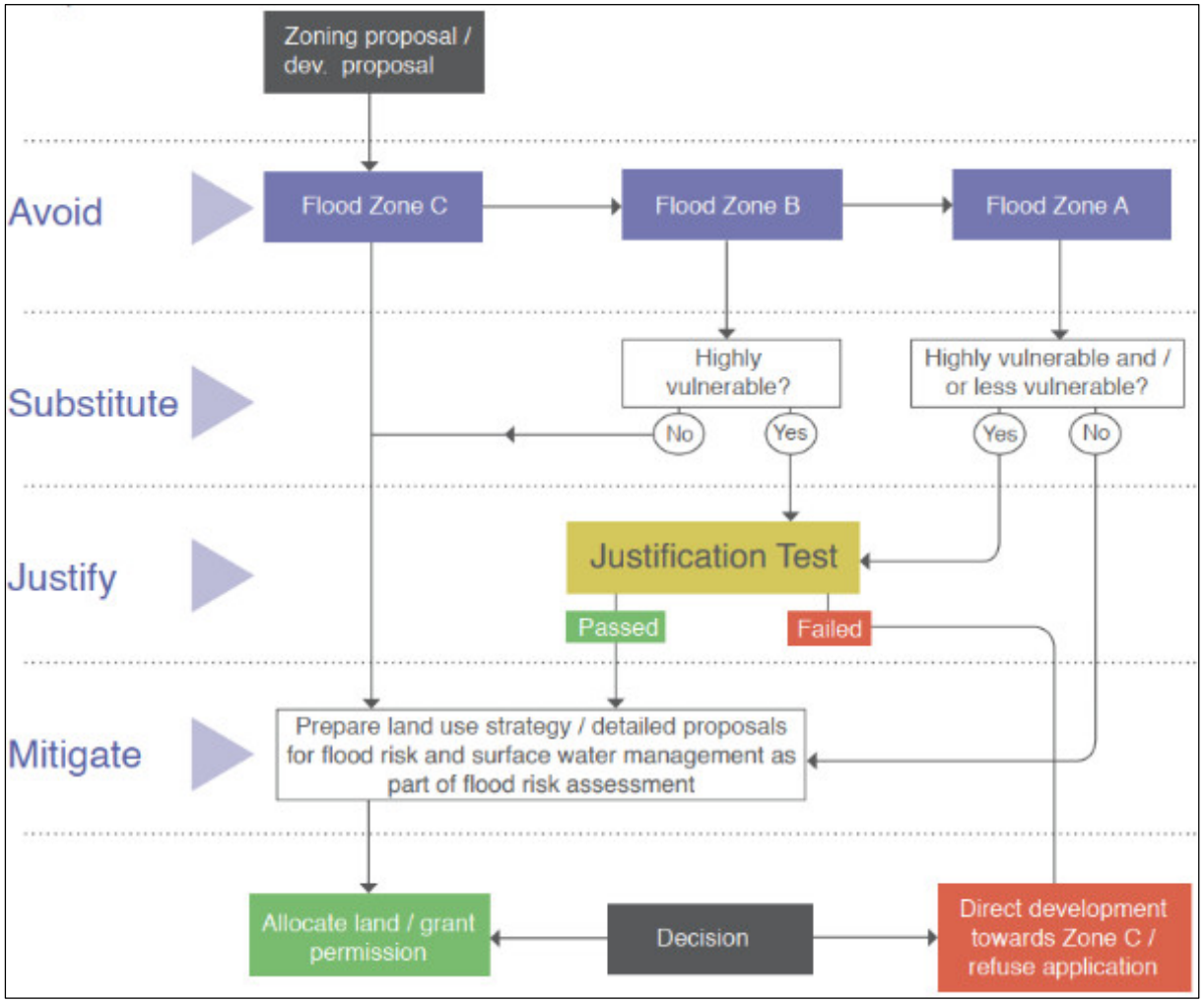


Figure 2.3: The Sequential Approach Mechanism in the Planning Process

3. Sources of Flooding

This SFRA has reviewed flood risk from the following sources;

- Fluvial
- Coastal
- Pluvial
- Groundwater
- Drainage systems
- Reservoirs and canals and other artificial or man-made systems

3.1 Fluvial Flooding

Flooding of watercourses is associated with the exceedance of channel capacity during higher flows. The process of flooding on watercourses depends on a number of characteristics associated with the catchment including; geographical location and variation in rainfall, steepness of the channel, degree of channel maintenance and surrounding floodplain and infiltration and rate of runoff associated with urban and rural catchments. Generally there are two main types of catchments; large and relatively flat or small and steep, resulting in two very different responses during large rainfall events. In a large, relatively flat catchment, flood levels will rise slowly and natural floodplains may remain flooded for several days, acting as the natural regulator of the flow. In small, steep catchments, local intense rainfall can result in the rapid onset of deep and fast-flowing flooding with little warning. Such "flash" flooding, which may only last a few hours, can cause considerable damage and possible threat to life. Both of these catchment types occur in Kerry.

The form of the floodplain, either natural or urbanised, can influence flooding along watercourses. The location of buildings and roads can significantly influence flood depths and velocities by altering flow directions and reducing the volume of storage within the floodplain. Critical structures such as bridge and culverts can also significantly reduce capacity creating pinch points within the floodplain.

3.2 Coastal Flooding and Erosion

Coastal flooding is caused by higher than normal sea levels which occur primarily due to extreme high tides, storm surges, wave action or due to high river flows combining with high tides. Kerry has an extensive coastline with numerous settlements in areas of coastal flood risk.

Coastal erosion of both the foreshore and the shoreline itself is intimately linked with coastal flooding. The loss of natural coastal defences, such as sand dunes, due to erosion (or mechanical removal of sand) can increase the risk of flooding in coastal areas

As part of the Irish Coastal Protection Strategy Study (ICPSS) process, coastal flood event (hazard) maps and predictive erosion maps have been prepared.

Three primary areas of potential significant coastal erosion hazard were identified for Kenmare MD as follows:

- Waterville to Ballinskelligs, Co. Kerry
- Ardcost to Ballycarbery, Co. Kerry
- Rossbehy to Cromane, Co. Kerry

3.3 Pluvial Flooding

Flooding of land from surface water runoff is usually caused by intense rainfall that may only last a few hours. The resulting water follows natural valley lines, creating flow paths along roads and through and around developments and ponding in low spots, which often coincide with fluvial floodplains in low lying areas. Any areas at risk from fluvial flooding will almost certainly be at risk from surface water flooding.

SFRA's at local area plan level in Kenmare MD will require a strategic assessment of the likelihood of surface water flooding for which overland routing is suitable and appropriate. This includes consideration of the following:

- Are there zoned lands which may need to accommodate and retain surface water flow routes?
- Are there zoned lands which might discharge upstream of an area vulnerable to surface water flooding?

Pluvial flood risk should be assessed as part of site-specific flood risk assessments and drainage management strategies, and appropriate measures should be implemented to mitigate any potential risks.

3.4 Groundwater Flooding

Groundwater flooding is caused by the emergence of water originating from underground, and is particularly common in Karst landscapes. This can emerge from either point or diffuse locations. The occurrence of groundwater flooding is usually very local and unlike flooding from rivers, does not generally pose a significant risk to life due to the slow rate at which the water level rises.

However, groundwater flooding can cause significant damage to property, especially in urban areas and pose further risks to the environment and ground stability. Groundwater flooding can persist over a number of weeks and even months. In most cases groundwater flooding cannot be easily managed nor lasting solutions engineered although the impact on buildings can be mitigated against through various measures.

Groundwater flooding is not considered to be currently a significant or widespread concern in the Kenmare MD Nonetheless, the assessment of the potential for specific zoned lands to be vulnerable to groundwater flooding, will be undertaken based on the OPW indicative groundwater flood maps, at local area plan preparation level.

3.5 Flooding from Drainage Systems

Flooding from artificial drainage systems occurs when flow entering a system, such as an urban storm water drainage system, exceeds its discharge capacity, it becomes blocked or it cannot discharge due to a high water level in the receiving watercourse.

Flooding in urban areas can also be attributed to sewers. Sewers have a finite capacity which, during certain load conditions, will be exceeded. In addition, design standards vary and changes within the catchment areas draining to the system, in particular planned growth and urban creep, will reduce the level of service provided by the asset. Sewer flooding problems will often be associated with regularly occurring storm events during which sewers and associated infrastructure can become blocked or fail. This problem is exacerbated in areas with under-capacity systems. In the larger events that are less frequent but have a higher consequence, surface water will exceed the sewer system and flow across the surface of the land, often following the same flow paths and ponding in the same areas as overland flow. Foul sewers and surface water drainage systems are spread extensively across the urban areas with various interconnected systems discharging to treatment works and into local watercourses.

3.6 Flood Defence Failures

The condition of existing flood management assets is an important consideration for local authority planners when allocating new development. The 'Planning System and Flood Risk Management' considers that defended areas are still at risk of flooding due to the risk of overtopping or breach, and therefore sites within these areas must be assessed with respect to the adequacy of the defences.

Should defended areas be identified, the consideration of residual risk, i.e. the likelihood of flooding occurring as a result of breach or overtopping, forms an important element of the SFRA.

Flood defences in the MD include those associated with the River Laune in Mid Kerry. In addition, coastal flood defences are located at various locations along the coastline.

Defence Asset Condition Surveys were undertaken as part of the South West CFRAM study. This has informed the Standard of Protection of these defences.

3.7 Climate Change

The 'Planning System and Flood Risk Management' recommends that a precautionary approach to climate change is adopted due to the level of uncertainty involved in the potential effects.

There is general scientific consensus that climate change is occurring, while international and national research indicates that the instances and extent of flooding are likely to increase as a result. For Ireland, an increase in extreme weather events has been predicted, including periods of intense rainfall during the summer months and more prolonged rainfall during the winter months. Under either these scenarios, flood events would be more likely to occur, although this would be very much location dependent. The nature of the relevant catchment will ensure that impacts on flood risk vulnerability will vary.

The OPW notes in the Draft National PFRA6 that the information required to undertake a predictive analysis of the potential flood risk impacts of climate change is not currently available, but is under development, and once available will be used to review the PFRA outcomes. The CFRAM Studies will undertake detailed assessments of the potential impacts of climate change on the flood risk in the Areas for Further Assessment (AFAs) and Individual Risk Receptors (IRRs) with these potential impacts being taken into account in the development of appropriate flood risk management measures.

The ICPSS report published in 2013 does not include a consideration of future climate change scenarios.

4. Flood Risk Identification

The purpose of Flood Risk Identification is to identify whether there may be any flooding or surface water management issues related to a plan area or proposed development site that may warrant further investigation.

4.1 Collation & Review of Existing Flood Risk Information

Existing flood risk information which has been collated and reviewed as part of this SFRA as summarised on Table 4.1 below.

Flood Risk Information Source	Review Comments
National Coastal Flood Hazard Mapping, 2021	Predictive national scale coastal flood maps including flood depths and extents for the current and future scenarios. Useful data for flood zone mapping but undertaken at a national scale.
Irish Coastal Wave & Water Level Modelling Study (ICWWS 2018)	Point data only, not directly useful for this SFRA but was used as an input to the National Coastal Flood Hazard Mapping.
National Indicative Fluvial Mapping (NIFM) Flood Extents, 2020	Predictive national scale indicative mapping covering catchments greater than 5km^2 where not already available from the National CFRAM Programme. May be used for Flood Risk Identification but not suitable for defining flood zones or for plan making decisions.
South Western CFRAM Study (UoM21 & UoM22)	Includes Flood Risk Management Plans and predictive catchment scale coastal and fluvial flood extent and depth maps for current and future scenarios. Generally considered to be suitable for flood zone mapping in the strategic flood risk assessment and for facilitating the application of the sequential approach. UoM 21 AFA's includes: Kenmare UoM 22 AFA's includes: Portmagee,
Shannon CFRAM Study (UoM23 & UoM24)	Includes Flood Risk Management Plans and predictive catchment scale coastal and fluvial flood extent and depth maps for current and future scenarios. Generally considered to be suitable for flood zone mapping in the strategic flood risk assessment and for facilitating the application of the sequential approach.
Flood Relief Schemes	The main schemes in County Kerry have not progressed significantly. It is unlikely significant new information will be available for the SFRA that is not already provided from the CFRAM Studies. Ongoing schemes include: Kenmare
Previous Strategic Flood Risk Assessments for Local Area Plans	Includes information on historical flooding, flood risk in each settlement and zoning objectives.

Flood Risk Information Source	Review Comments
• West Iveragh LAP 2019 – 2025, January 2019	
Irish Coastal Protection Strategy Study (ICPSS 2010 - 2014)	Coastal flood extents maps for current and future scenarios. Can be used to identify potential flood zones, although largely superseded by the National Coastal Flood Hazard Mapping 2021.
Consultation with Local Authorities who may be able to provide knowledge on historic flood events and local studies etc.	Yes
Information on flood defence condition and performance;	Yes, primarily from CFRAM Studies
Past flood event point data and extents from http://www.floodinfo.ie	Provides an indication of areas which have experienced flooding in the past, from various possible sources. Specific information relating to flooding mechanisms and affected areas is often not available. Useful to assist in validating other information or as a flood risk indicator where other information is not available.
Drainage Districts, Benefiting Land Maps and Arterial Drainage Schemes	These areas are indicative or low lying poor quality land which has/had insufficient ability to natural drain however this is not specifically related to flooding. Can be used as a potential flood risk indicator where no other information exists. Not suitable for flood zone mapping or development plan decision making.
Preliminary Flood Risk Assessment (PFRA) mapping 2011	Largely superseded by more recent studies. Not considered suitable for flood zone mapping or development plan decision making.
Alluvial deposit maps of the Geological Survey of Ireland	Not considered suitable for flood zone mapping or development plan decision making. May be useful as a flood risk indicator where no other information exists.
Geological Survey of Ireland Groundwater Flooding Probability Maps	Focused primarily on limestone regions and turloughs. Generally not applicable for County Kerry.
Geological Survey of Ireland Historic Groundwater Flood Map	Groundwater flood extent map based on satellite images, mostly from the Winter of 2015/2016. Not relevant to SFRA fluvial/coastal flood zone mapping or for development plan decision making but could be used as a flood risk indicator.

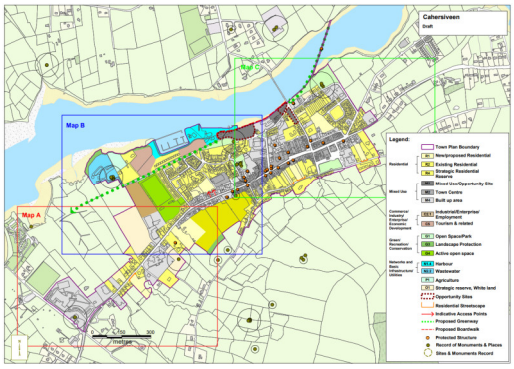
Table 4.1: Existing Flood Risk Information and Review Summary

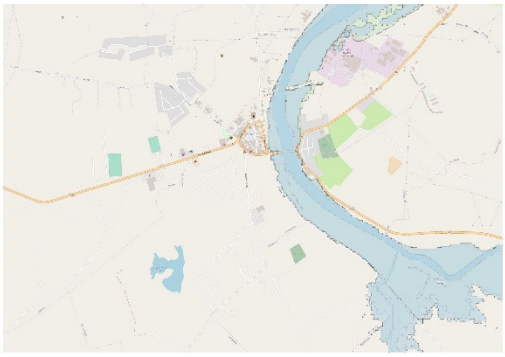
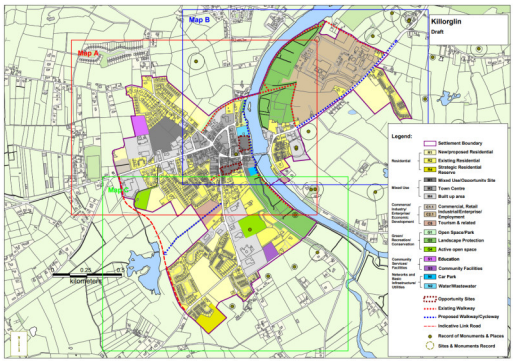
4.2 Flood Risk Identification of Settlements in Kenmare MD

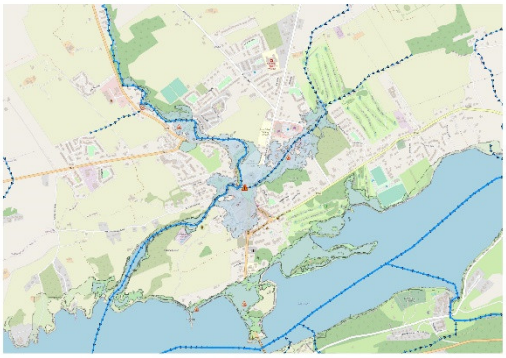
An initial flood risk assessment of the settlements in Kenmare MD has been completed in the following Sub-sections which identifies the requirements for a Stage 2 Flood Risk Assessment.

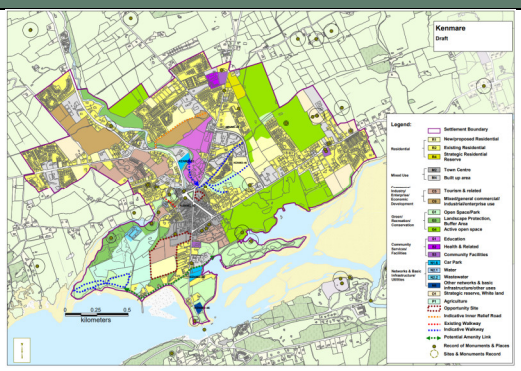
4.2.1 Regional Towns

Settlement	Flood Risk Comments
	Regional Towns
Cahersiveen	Land Zoning in this settlement is identified in the Kenmare MD LAP 2022-2028 and the flood risk associated with the specific land zonings is addressed in Section 5.1 of this SFRA. **Flooding Sources & Risk** Based on the available historic records and predictive flood maps, Pluvial, Groundwater and Urban Drainage flood risk was not identified within the development boundary. There is a history of coastal flooding within the town. Furthermore, the National Coastal Flood Hazard Mapping 2021 indicates that areas in proximity to the settlement are at risk of coastal flooding, as indicated by the 0.1% AEP flood extent map below. The flood extents are not significantly larger for the High End Future Scenario (HEFS), although flood depths can be expected to increase appreciably. There are rivers/streams in proximity to the settlement boundary which have not been included in any available predictive mapping. The potential flood risk from these watercourses should be reviewed as part of the next stage of the LAP SFRA. **Rivers/Streams in Proximity to Settlement (gis.epa.ie):**  **Flood Zone Maps (National Coastal Flood Hazard Mapping 2021)** **0.1% AEP Coastal Flood Extent Map, Present Day:**  **0.1% AEP Coastal Flood Extent Map, HEFS:**

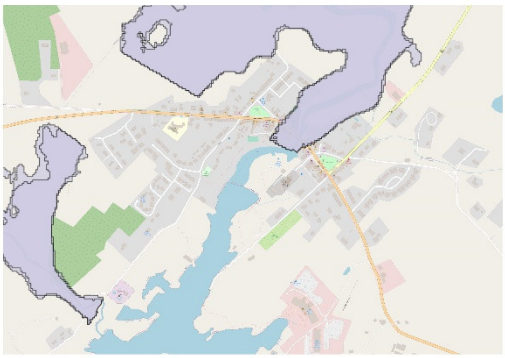
Settlement	Flood Risk Comments
	 **Kenmare MD LAP Draft Land Use Zoning – Cahersiveen** 
Killorglin	**Flooding Sources & Risk** Based on the available historic records and predictive flood maps, Pluvial, Groundwater and Urban Drainage flood risk was not identified within the development boundary. There is a historic record of flooding from January 2014 when the River Laune overtopped its banks during heavy rain and high tides. The predictive mapping from the Irish Coastal Wave & Water Level Modelling Study (ICWWS 2018) and the South Western CFRAM Study indicates that areas within the settlement are at risk of coastal and fluvial flooding, as indicated by the 0.1% AEP flood extent maps below. The flood extents for future scenarios are not significantly larger than the present day, although the flood depths can be expected to increase appreciably. A stream runs through the settlement which has not been included in any available predictive mapping. The potential flood risk from this watercourse should be reviewed as part of the next stage of the LAP SFRA. **Rivers/Streams in Proximity to Settlement (gis.epa.ie):**  **Flood Zone Maps (NCFHM (Coastal) & South Western CFRAM (Fluvial))**

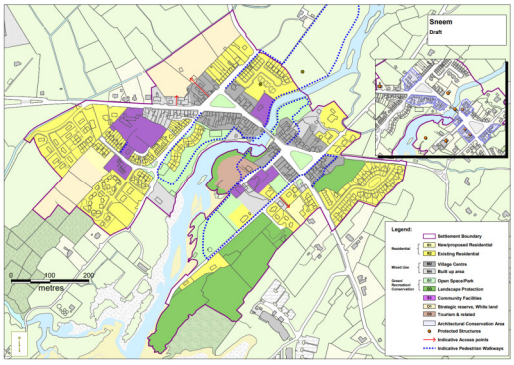
Settlement	Flood Risk Comments
	0.1% AEP Coastal and Fluvial Flood Extent Map, Present Day:  0.1% AEP Coastal and Fluvial Flood Extent Map, HEFS  Kenmare MD LAP Draft Land Use Zoning – Killorglin 
Kenmare	**Flooding Sources & Risk** Based on the available historic records and predictive flood maps, Pluvial, Groundwater and Urban Drainage flood risk was not identified within the development boundary. There is a history of coastal and fluvial flooding in proximity to the town. Furthermore, the South Western CFRAM Study indicates that areas within the settlement are at risk of coastal and fluvial flooding, as indicated by the 0.1% AEP flood extent maps below. The Irish Coastal Wave & Water Level Modelling Study (ICWWS 2018) indicates that the lands adjacent to the coastline are potentially vulnerable to wave overtopping. The coastal and fluvial flood extents for the High End Future Scenario (HEFS) are larger, with additional areas of flooded lands within the town. This may influence decisions made with respect to land zonings.

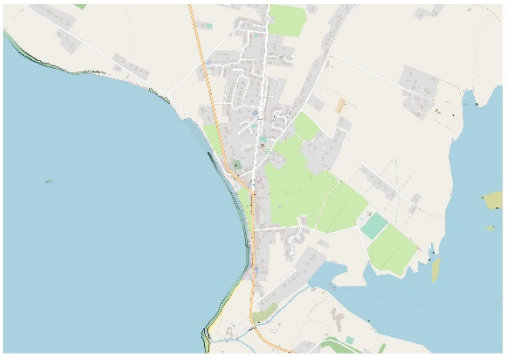
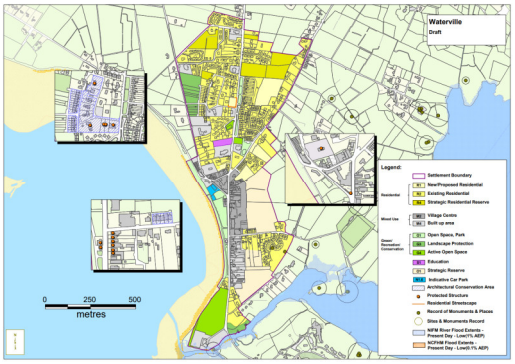
Settlement	Flood Risk Comments
	A number of streams run through the settlement which do not appear to have been included in any available predictive mapping. The potential flood risk from these watercourses should be reviewed as part of the next stage of the LAP SFRA so that flood zone maps can be produced where relevant. **Rivers/Streams in Proximity to Settlement (gis.epa.ie):**  **Flood Zone Maps (floodinfo.ie)** **0.1% AEP Coastal and Fluvial Flood Extent Map, Present Day:**  **0.1% AEP Coastal and Fluvial Flood Extent Map, HEFS:**  **Kenmare MD LAP Draft Land Use Zoning – Kenmare**

Settlement	Flood Risk Comments
	

4.2.2 District Towns

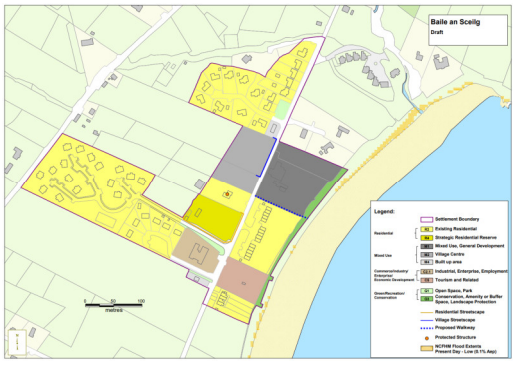
Settlement	Flood Risk Comments
	District Towns
Sneem	**Flooding Sources & Risk** Based on the available historic records and predictive flood maps, Pluvial, Groundwater and Urban Drainage flood risk was not identified within the development boundary. There is a record of recurring fluvial flooding upstream of the settlement. Indicative Fluvial Mapping (NIFM) Flood Mapping 2020 indicates that areas within the settlement are at risk of fluvial flooding, as indicated by the 0.1% AEP flood extent map below. The predictive mapping from the National Coastal Flood Hazard Mapping 2021 indicates that areas within the settlement are at risk of coastal flooding, as indicated by the 0.1% AEP flood extent map below. **Flood Zone Maps (floodinfo.ie)** **0.1% AEP Fluvial Flood Extent Map, Present Day & HEFS:**  **0.1% AEP Coastal Flood Extent Map, Present Day & HEFS:**

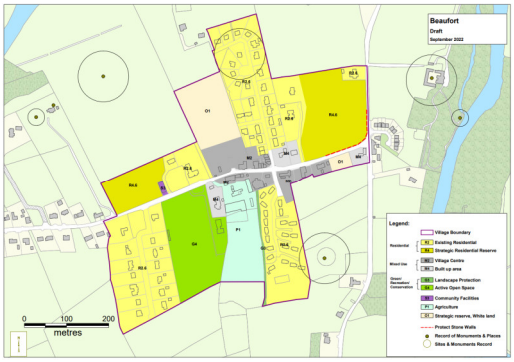
Settlement	Flood Risk Comments
	 **Kenmare MD LAP Draft Land Use Zoning – Sneem** 
Waterville	**Flooding Sources & Risk** Based on the available historic records and predictive flood maps, Pluvial, Groundwater and Urban Drainage flood risk was not identified within the development boundary. There is no identified history of fluvial or coastal flooding within this settlement. Indicative Fluvial Mapping (NIFM) Flood Mapping 2020 indicates that localised areas along the southern fringes of the settlement boundary may be at risk of fluvial flooding in the current or future scenarios, as indicated by the 0.1% AEP flood extent map below. The predictive mapping from the National Coastal Flood Hazard Mapping 2021 indicates that localised areas along the western fringes of the settlement boundary would be at risk of coastal flooding, as indicated by the 0.1% AEP flood extent map below. The Irish Coastal Wave & Water Level Modelling Study (ICWWS 2018) indicates that the lands adjacent to the coastline are potentially vulnerable to wave overtopping. **Flood Zone Maps (floodinfo.ie)** **0.1% AEP Fluvial Flood Extent Map, Present Day & HEFS:**

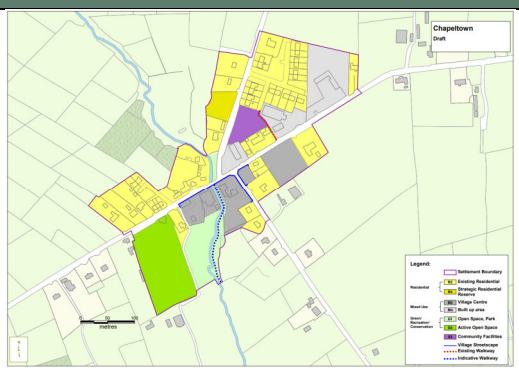
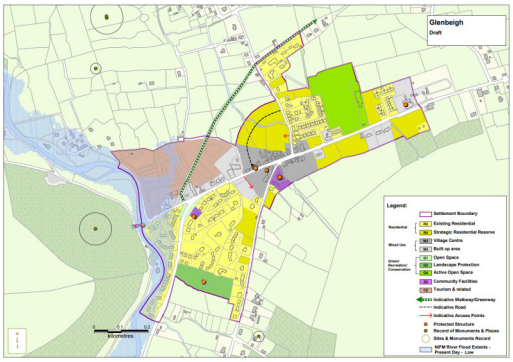
Settlement	Flood Risk Comments
	 0.1% AEP Coastal Flood Extent Map, Present Day & HEFS:  Kenmare MD LAP Draft Land Use Zoning – Waterville 

4.2.3 Villages

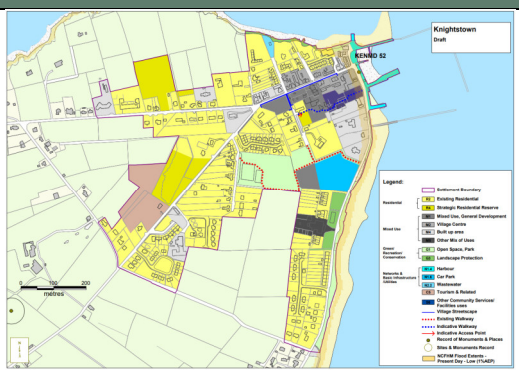
Settlement	Flood Risk Comments
	Villages
Baile an Sceilg	**Flooding Sources & Risk** Based on the available historic records and predictive flood maps, Fluvial, Pluvial, Groundwater and Urban Drainage flood risk was not identified within the development boundary. There is no history of coastal flooding within the town. However, the National Coastal Flood Hazard Mapping 2021 indicates that the coastal fringes adjacent to the settlement boundary may be at risk of

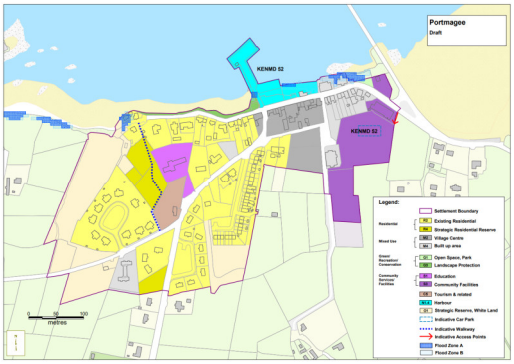
Settlement	Flood Risk Comments
	flooding in the current or future scenarios, as indicated by the 0.1% AEP flood extent map below. However, it is unlikely that coastal flood risk will significantly influence land use zoning within this settlement. There is a stream in proximity to the settlement boundary which has not been included in any available predictive mapping. The potential flood risk from this watercourse should be reviewed as part of the next stage of the LAP SFRA so that flood zone maps can be produced where relevant. **Rivers/Streams in Proximity to Settlement (gis.epa.ie):**  **Flood Zone Maps (National Coastal Flood Hazard Mapping 2021)** **0.1% AEP Coastal Flood Extent Map, Present Day & HEFS:**  **Kenmare MD LAP Draft Land Use Zoning – Baile an Sceilg** 
Beaufort	**Flooding Sources & Risk** Based on the available historic records and predictive flood maps, Groundwater and Urban Drainage flood risk was not identified within the development boundary.

Settlement	Flood Risk Comments
	There is no identified history of flooding within the town. The South Western CFRAM Study indicates that areas along the north and east fringes of the settlement are at risk of coastal and fluvial flooding, as indicated by the 0.1% AEP flood extent maps below however, zoned lands are not impacted. The Geological Survey of Ireland Winter 2015/2016 surface water flooding maps indicate flooding occurred in close proximity to the settlement however, zoned lands are not impacted. **Flood Zone Maps (floodinfo.ie)** **0.1% AEP Coastal and Fluvial Flood Extent Map, Present Day & HEFS [CFRAM, 2021]:**  **Kenmare MD LAP Draft Land Use Zoning – Beaufort** 
Chapeltown	**Flooding Sources & Risk** A stream runs through the settlement which does not appear to have been included in any available predictive mapping. The potential flood risk from this watercourse should be reviewed as part of the next stage of the LAP SFRA so that flood zone maps can be produced where relevant. **Rivers/Streams in Proximity to Settlement (gis.epa.ie):**  **Kenmare MD LAP Draft Land Use Zoning – Chapeltown**

Settlement	Flood Risk Comments
	
Dún Géagain	**Flooding Sources & Risk** There is no identified flood risk within close proximity of Dún Géagain. This will not be examined further in the LAP SFRA.
Glenbeigh	**Flooding Sources & Risk** Based on the available historic records and predictive flood maps, Coastal, Pluvial, Groundwater and Urban Drainage flood risk was not identified within the development boundary. There is a record of recurring fluvial flooding within the settlement. Indicative Fluvial Mapping (NIFM) Flood Mapping 2020 indicates that areas within the settlement are at risk of fluvial flooding for present and future scenarios, as indicated by the 0.1% AEP flood extent map below. **Flood Zone Maps (floodinfo.ie)** **0.1% AEP Fluvial Flood Extent Map, Present Day & HEFS:**  **Kenmare MD LAP Draft Land Use Zoning – Glenbeigh** 

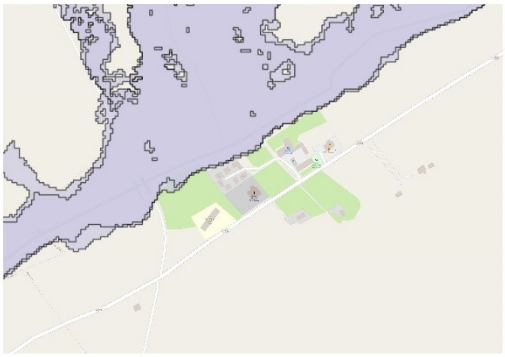
Settlement	Flood Risk Comments
Kilgarvan	**Flooding Sources & Risk** There is no identified flood risk within close proximity of Kilgarvan. This will not be examined further in the LAP SFRA.
Knightstown	**Flooding Sources & Risk** Based on the available historic records and predictive flood maps, Fluvial, Pluvial, Groundwater and Urban Drainage flood risk was not identified within the development boundary. There is no history of coastal flooding within the town. However, the National Coastal Flood Hazard Mapping 2021 indicates that the coastal fringes adjacent to the settlement boundary may be at risk of flooding in the current or future scenarios, as indicated by the 0.1% AEP flood extent map below. This may influence land use zoning within this settlement. There is a stream within the settlement boundary which has not been included in any available predictive mapping. The potential flood risk from this watercourse should be reviewed as part of the next stage of the LAP SFRA so that flood zone maps can be produced where relevant. **Rivers/Streams within Settlement (gis.epa.ie):**  **Flood Zone Maps (National Coastal Flood Hazard Mapping 2021)** **0.1% AEP Coastal Flood Extent Map, Present Day & HEFS:**  **Kenmare MD LAP Draft Land Use Zoning – Knightstown**

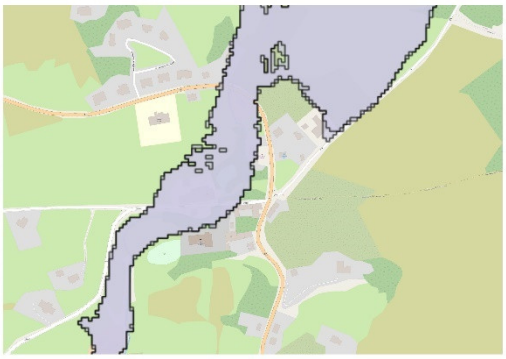
Settlement	Flood Risk Comments
	
Portmagee	**Flooding Sources & Risk** Based on the available historic records and predictive flood maps, Pluvial, Groundwater and Urban Drainage flood risk was not identified within the development boundary. There is no identified history of fluvial flooding within the settlement. The National Indicative Fluvial Mapping (NIFM) Flood Mapping, 2020 indicates that areas east of the settlement are at risk of fluvial flooding, as indicated by the 0.1% AEP Flood extent map below. There is a history of coastal flooding in proximity to the town. Furthermore, the South Western CFRAM Study indicates that areas along the coastal fringes of the settlement are at risk of coastal flooding, as indicated by the 0.1% AEP flood extent maps below. National Coastal Flood Hazard Mapping 2021 flood extent map also shown. The Laune – Maine – Dingle Bay Flood Risk Management Plan indicates that pluvial flooding occurred in December 2015 which came from higher ground in Coomanaspig. The coastal flood extents for the High End Future Scenario (HEFS) are larger, with additional areas of flooded lands within the town. This may influence decisions made with respect to land zonings. Coastal flood extent and depth maps for current and future scenarios are available from the South Western CFRAM Study. Flood levels are also available at specific nodes along the modelled watercourse. Predictive coastal flood levels are also available from the Irish Coastal Wave & Water Level Modelling Study (ICWWS 2018) point data. There appears to be some differences between the South Western CFRAM Study and National Coastal Flood Hazard Mapping 2021 predictions for coastal flooding which should be investigated further. However, there is an additional watercourse adjacent to the eastern boundary of the settlement which has not been included in any available predictive mapping. The potential flood risk from this watercourse should be reviewed as part of the next stage of the LAP SFRA so that flood zone maps can be produced where relevant. **Rivers/Streams in Proximity to Settlement (gis.epa.ie):**  **Flood Zone Maps (floodinfo.ie)** **0.1% AEP Fluvial Flood Extent Map, Present Day:**

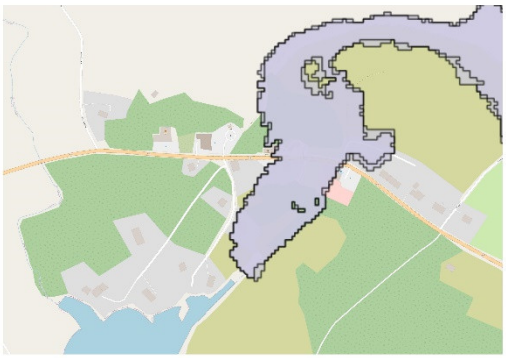
Settlement	Flood Risk Comments
	 0.1% AEP Coastal Flood Extent Map, Present Day & HEFS [CFRAMS & NCFHM]  Kenmare MD LAP Draft Land Use Zoning – Portmagee 

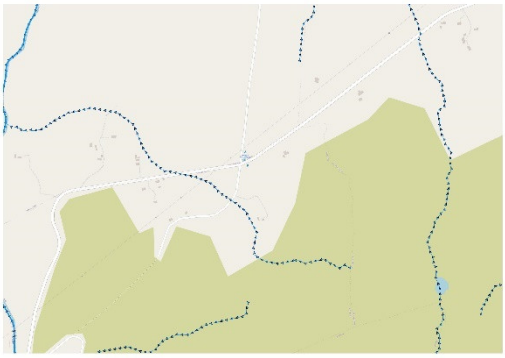
4.2.4 Small Village Settlements

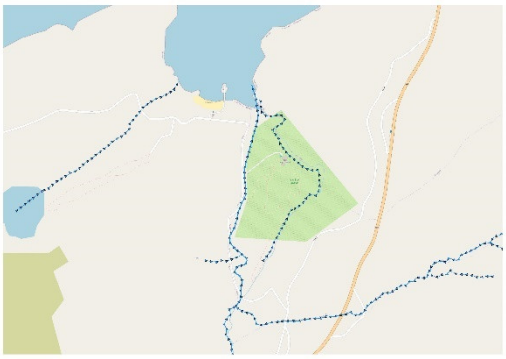
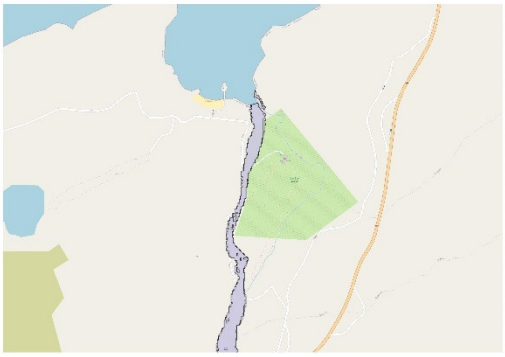
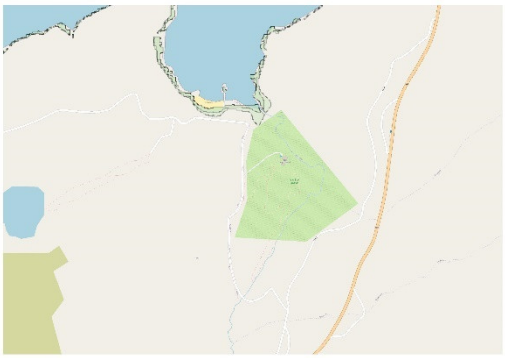
Settlement	Flood Risk Comments
Small Village Settlements	
An Chillín Liath	**Flooding Sources & Risk** Based on the available historic records and predictive flood maps, Coastal, Pluvial, Groundwater and Urban Drainage flood risk was not identified within the development boundary. There is no identified history of fluvial flooding within the settlement. The National Indicative Fluvial Mapping (NIFM) Flood Mapping, 2020 indicates that areas along the northern fringes of the settlement are at risk of fluvial flooding, as indicated by the 0.1% AEP Flood extent map below.

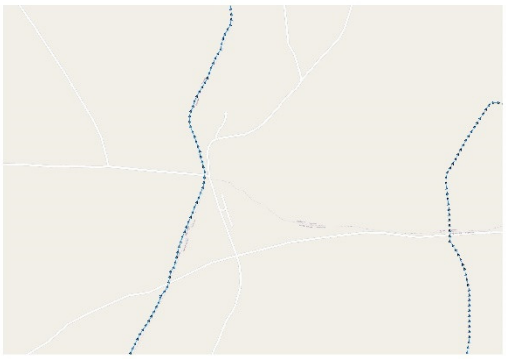
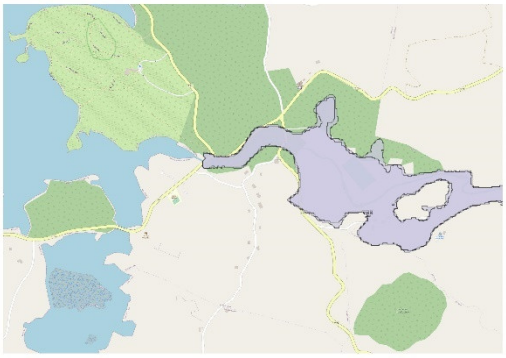
Settlement	Flood Risk Comments
	Flood Zone Maps (floodinfo.ie) **0.1% AEP Fluvial Flood Extent Map, Present Day & HEFS:** 
An Gleann	**Flooding Sources & Risk** A stream runs through the settlement which does not appear to have been included in any available predictive mapping. The potential flood risk from this watercourse should be reviewed as part of the next stage of the LAP SFRA so that flood zone maps can be produced where relevant. **Rivers/Streams in Proximity to Settlement (gis.epa.ie):** 
Bonane	**Flooding Sources & Risk** There is no identified flood risk within close proximity of Bonane. This will not be examined further in the LAP SFRA.
Caherdaniel	**Flooding Sources & Risk** Based on the available historic records and predictive flood maps, Coastal, Pluvial, Groundwater and Urban Drainage flood risk was not identified within the development boundary. There is no identified history of fluvial flooding within the settlement. The National Indicative Fluvial Mapping (NIFM) Flood Mapping, 2020 indicates that areas within the settlement are at risk of fluvial flooding, as indicated by the 0.1% AEP Flood extent map below. This may influence decisions made with respect to land zonings. **Flood Zone Maps (floodinfo.ie)** **0.1% AEP Fluvial Flood Extent Map, Present Day & HEFS:**

Settlement	Flood Risk Comments
	
Castlecove	**Flooding Sources & Risk** Based on the available historic records and predictive flood maps, Pluvial, Groundwater and Urban Drainage flood risk was not identified within the development boundary. There is no identified history of fluvial or coastal flooding within this settlement boundary. Indicative Fluvial Mapping (NIFM) Flood Mapping 2020 indicates that areas within the settlement boundary may be at risk of fluvial flooding in the current or future scenarios, as indicated by the 0.1% AEP flood extent map below. The predictive mapping from the National Coastal Flood Hazard Mapping 2021 indicates that areas south of the settlement would be at risk of coastal flooding, as indicated by the 0.1% AEP flood extent map below. A stream runs within close proximity west of the settlement which does not appear to have been included in any available predictive mapping. The potential flood risk from these watercourses should be reviewed as part of the next stage of the LAP SFRA so that flood zone maps can be produced where relevant. This will enable the application of the sequential approach. **Rivers/Streams in Proximity to Settlement (gis.epa.ie):**  **Flood Zone Maps (floodinfo.ie)** **0.1% AEP Fluvial Flood Extent Map, Present Day:**

Settlement	Flood Risk Comments
	 0.1% AEP Coastal Flood Extent Map, Present Day & HEFS: 
Cromane	**Flooding Sources & Risk** Based on the available historic records and predictive flood maps, Pluvial, Groundwater and Urban Drainage flood risk was not identified within the development boundary. There is a history of coastal in proximity to the north of the town. Furthermore, the South Western CFRAM Study indicates that areas within close proximity of the settlement are at risk of coastal and fluvial flooding, as indicated by the 0.1% AEP flood extent maps below. Flood extents for future scenarios are larger which may influence land zoning decisions in the northern fringes of the settlement. National Coastal Flood Hazard Mapping 2021 flood extent map also shown. **Flood Zone Maps (floodinfo.ie)** 0.1% AEP Coastal and Fluvial [CFRAM] & Coastal [NCFHM] Flood Extent Map Present Day:  0.1% AEP Coastal and Fluvial Flood Extent Map, HEFS:

Settlement	Flood Risk Comments
	
Glencar	**Flooding Sources & Risk** A number of streams flow in close proximity to the settlement which does not appear to have been included in any available predictive mapping. The potential flood risk from this watercourse should be reviewed as part of the next stage of the LAP SFRA so that flood zone maps can be produced where relevant. **Rivers/Streams in Proximity to Settlement (gis.epa.ie):** 
Kells	**Flooding Sources & Risk** Based on the available historic records and predictive flood maps, Groundwater and Urban Drainage flood risk was not identified within the development boundary. There is no identified history of fluvial or coastal flooding within this settlement. Indicative Fluvial Mapping (NIFM) Flood Mapping 2020 indicates that areas within the settlement may be at risk of fluvial flooding in the current or future scenarios, as indicated by the 0.1% AEP flood extent map below. This may influence decisions made with respect to land zonings. The predictive mapping from the National Coastal Flood Hazard Mapping 2021 indicates that coastal areas within close proximity of the settlement would be at risk of coastal flooding for both current and future scenarios, as indicated by the 0.1% AEP flood extent map below. A recurring flood from surface runoff was identified in close proximity affecting the N70 at Mountfoley 5/6 times per annum. Two streams flow in close proximity to the settlement which do not appear to have been included in any available predictive mapping. The potential flood risk from this watercourse should be reviewed as part of the next LAP SFRA so that flood zone maps can be produced where relevant. This will enable the application of the sequential approach. **Rivers/Streams in Proximity to Settlement (gis.epa.ie):**

Settlement	Flood Risk Comments
	 Flood Zone Maps (floodinfo.ie) 0.1% AEP Fluvial Flood Extent Map, Present Day:  0.1% AEP Coastal Flood Extent Map, Present Day & HEFS: 
Kilgobnet	Flooding Sources & Risk A stream flows through the settlement which does not appear to have been included in any available predictive mapping. The potential flood risk from this watercourse should be reviewed as part of the next stage of the LAP SFRA so that flood zone maps can be produced where relevant. Rivers/Streams in Proximity to Settlement (gis.epa.ie):

Settlement	Flood Risk Comments
	
Lauragh	**Flooding Sources & Risk** Based on the available historic records and predictive flood maps, Pluvial, Groundwater and Urban Drainage flood risk was not identified within the development boundary. There is no identified history of fluvial or coastal flooding within this settlement. Indicative Fluvial Mapping (NIFM) Flood Mapping 2020 indicates that areas north of the settlement may be at risk of fluvial flooding in the current or future scenarios, as indicated by the 0.1% AEP flood extent map below. The predictive mapping from the National Coastal Flood Hazard Mapping 2021 indicates that areas within the settlement would be at risk of coastal flooding, as indicated by the 0.1% AEP flood extent map below. **Flood Zone Maps (floodinfo.ie)** **0.1% AEP Fluvial Flood Extent Map, Present Day & HEFS:**  **0.1% AEP Coastal Flood Extent Map, Present Day & HEFS:** 
Tahilla	**Flooding Sources & Risk**

Settlement	Flood Risk Comments
	Based on the available historic records and predictive flood maps, Coastal, Pluvial, Groundwater and Urban Drainage flood risk was not identified within the development boundary. There is no identified history of fluvial flooding within the settlement. The National Indicative Fluvial Mapping (NIFM) Flood Mapping, 2020 indicates that areas within the settlement are at risk of fluvial flooding, as indicated by the 0.1% AEP Flood extent map below. This may influence decisions made with respect to land zonings. **Flood Zone Maps (floodinfo.ie)** **0.1% AEP Fluvial Flood Extent Map, Present Day:** 
Templenoe	**Flooding Sources & Risk** There is no identified flood risk within close proximity of Templenoe. This will not be examined further in the LAP SFRA.
Tuosist	**Flooding Sources & Risk** There is no identified flood risk within close proximity of Tuosist. This will not be examined further in the LAP SFRA.

4.3 Summary of Identified Flood Risk by Settlement

Based on a review of all available existing flood risk information, a summary of the identified sources of flooding in all settlements in Kenmare MD is included on Table 4.1.

Summary of Identified Flood Risk within Development Boundary [1]						
Settlement	Fluvial	Coastal	Pluvial	Groundwater	Urban Drainage	Stage 2 SFRA Requirement
Regional Towns						
Cahersiveen	Yes	Yes	No	No	No	Fluvial, Coastal
Killorglin	Yes	Yes	No	No	No	Fluvial, Coastal
Kenmare	Yes	Yes	No	No	No	Fluvial, Coastal
District Towns						
Sneem	Yes	Yes	No	No	No	Fluvial, Coastal
Waterville	Yes	Yes	No	No	No	Fluvial, Coastal
Village						
Baile an Sceilg	Yes	Yes	No	No	No	Fluvial, Coastal
Beaufort	No	No	No	No	No	Not Required [2]
Chapeltown	Yes	No	No	No	No	Fluvial
Dún Géagain	No	No	No	No	No	Not Required [2]
Glenbeigh	Yes	No	No	No	No	Fluvial
Kilgarvan	No	No	No	No	No	Not Required [2]
Knightstown	Yes	Yes	No	No	No	Fluvial, Coastal
Portmagee	Yes	Yes	No	No	No	Fluvial, Coastal
Small Village Settlements						
An Chillín Liath	Yes	No	No	No	No	Fluvial
An Gleann	Yes	No	No	No	No	Fluvial
Bonane	No	No	No	No	No	Not Required [2]

Summary of Identified Flood Risk within Development Boundary [1]						
Settlement	Fluvial	Coastal	Pluvial	Groundwater	Urban Drainage	Stage 2 SFRA Requirement
Caherdaniel	Yes	No	No	No	No	Fluvial
Castlecove	Yes	Yes	No	No	No	Fluvial, Coastal
Cromane	Yes	Yes	No	No	No	Fluvial, Coastal
Glencar	Yes	No	No	No	No	Fluvial
Kells	Yes	Yes	Yes	No	No	Fluvial, Coastal, Pluvial
Kilgobnet	Yes	No	No	No	No	Fluvial
Lauragh	Yes	Yes	No	No	No	Fluvial, Coastal
Tahilla	Yes	No	No	No	No	Fluvial
Templenoe	No	No	No	No	No	Not Required [2]
Tuosist	No	No	No	No	No	Not Required [2]

[1] Flood risk identified in this SFRA is based on information available from desktop study. Further reviews of all possible sources of flooding should be completed at project level stages.

[2] Even where no flood risk has been identified, there may be potential sources of flooding which require further consideration at site specific level.

Table 4.2: Summary of Identified Flood Risk for Settlements in Kenmare MD

5. Initial Flood Risk Assessment

5.1 Flood Risk Assessment of Land Use Zonings

5.1.1 Overview

The flood risk to specific land use zonings is assessed further in the following sub-sections. This has been used to assist in the application of the Sequential Approach and to determine where a Justification Test is required. Recommendations have also been provided for incorporating any specific Objectives in the Development Plan and for assessing flood risk at a site-specific scale.

This applies to Cahersiveen, Killorglin, Kenmare, Sneem, Waterville, Baile an Sceilg, Beaufort, Chapeltown, Dún Géagain, Glenbeigh, Kilgarvan, Knightstown and Portmagee as these are the only settlements where lands are zoned in the Kenmare MD LAP. The land use zoning map and flood zone maps for each settlement is provided at the end of each sub-section.

However, Chapeltown and Glenbeigh do not have suitably available flood mapping for Flood Zone Assessment i.e there is no mapping available for an identified watercourse or only NIFM is available. These settlements are addressed in Section 5.1.9.

Beaufort, Dún Géagain, and Kilgarvan have been identified as settlements which do not require further action in Stage 2 of this FRA. Flood maps overlaid with the land use zonings for these settlements which demonstrate that available flood mapping does not impact on land use zonings have been included in Appendix A. Dún Géagain has not been included as there is no available flood mapping or identified watercourses in close proximity of the zoned lands. Coastal flood maps for Baile an Sceilg have also been included.

5.1.2 Cahersiveen Land Use Zoning Assessment

The land use zoning map and flood zone map for Cahersiveen is provided below with a summary of Land Use Zoning Review for Zoned Lands located in Flood Zones A and B. NCFHM was used for Flood Zone mapping in Cahersiveen.

Cahersiveen Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
C5		Tourism and Related	Water-compatible Development	A and B	These lands have been identified as being at risk of tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required
G1	G1.1	Open Space, Park	Water-compatible Development	A and B	These lands have been identified as being at risk of tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required
G1	G1.2	Open Space, Park	Water-compatible Development	A and B	A small portion of these lands adjacent to the northern boundary have been identified as being at risk of tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required

Cahersiveen Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
G3		Conservation, Amenity or Buffer Space, Landscape Protection	Water-compatible Development	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required
M1	M1.1	Mixed Use/ Opportunity Site	Water-compatible Development	A and B	A small portion of these lands adjacent to the northern boundary have been identified as being at risk of tidal flooding. The proposed land use is water compatible and therefore the land use zoning is appropriate. Nonetheless, the area within Flood Zones A and B is representative of a small and localised encroachment into the site which should not preclude the development of the entire site. The Sequential Approach can still be applied to this site during the development design, locating land use types in appropriate locations of the site. Highly Vulnerable Development is not permitted within Flood Zone B. An Objective should be included in the Plan to ensure that only water-compatible development is permitted in Flood Zone A and Less Vulnerable in Flood Zone B. Highly vulnerable development is not permitted in areas of flood risk. Any application for development of these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009). In particular, the flood risk assessment should ensure: • Existing flow paths are maintained • Floodplain storage and conveyance areas should be protected. • Future flood risk should be considered in the design and land uses should be matched with flood risk. • The development will not have an adverse impact on flood risk. • Flood hazard to users of the site is mitigated to an acceptable level.	Not Required

Cahersiveen Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
M1	M1.2	Mixed Use/ Opportunity Site	Less Vulnerable	A and B	A small portion of these lands adjacent to the northern boundary have been identified as being at risk of tidal flooding. The area within Flood Zones A and B is representative of approximately 30% of the site which should not preclude the development of the entire site. The Sequential Approach can still be applied to this site during the development design, locating land use types in appropriate locations of the site. Highly Vulnerable Development is not permitted within Flood Zone B. An Objective should be included in the Plan to ensure that only water-compatible development is permitted in Flood Zone A and Less Vulnerable in Flood Zone B. Highly vulnerable development is not permitted in areas of flood risk. Any application for development of these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009). In particular, the flood risk assessment should ensure: • Existing flow paths are maintained • Floodplain storage and conveyance areas should be protected. • Future flood risk should be considered in the design and land uses should be matched with flood risk. • The development will not have an adverse impact on flood risk. • Flood hazard to users of the site is mitigated to an acceptable level.	Not Required
M1	M1.3	Mixed Use/ Opportunity Site	Water-compatible Development	A and B	These lands have been identified as being at risk of tidal flooding. The entire site is located within Flood Zone A and B. An Objective should be included in the Plan to ensure that only water-compatible development is permitted in Flood Zone A and Less Vulnerable in Flood Zone B. Highly vulnerable development is not permitted in areas of flood risk. Any application for development of these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009). In particular, the flood risk assessment should ensure: • Existing flow paths are maintained	Not Required

Cahersiveen Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
					• Floodplain storage and conveyance areas should be protected. • Future flood risk should be considered in the design and land uses should be matched with flood risk. • The development will not have an adverse impact on flood risk. Flood hazard to users of the site is mitigated to an acceptable level.	
M4	M4.1	Built up Area	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The zoning designation applies to the existing built-up area. Therefore, the sequential approach cannot be used and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
M4	M4.2	Built up Area	Highly Vulnerable	A and B	A small portion of these lands adjacent to the northern boundary have been identified as being at risk of tidal flooding. The zoning designation applies to the existing built-up area. Therefore, the sequential approach cannot be used and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable

Cahersiveen Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
N1.4	N1.4	Harbour	Water-compatible Development	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required
P1	P1	Agriculture	Less Vulnerable	A and B	A small portion of these lands within the generalised zoning objective adjacent to the northern boundary have been identified as being at risk of tidal flooding. The area within Flood Zones A and B is representative of a small and localised encroachment into the site which should not preclude the development of the entire site. The Sequential Approach can still be applied to this site during the development design, locating land use types in appropriate locations of the site. Less Vulnerable Development is not permitted within Flood Zone A. An Objective should be included in the Plan to ensure that only water-compatible development is permitted in Flood Zone A and Less Vulnerable in Flood Zone B. Highly vulnerable development is not permitted in areas of flood risk. Any application for development of these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009). In particular, the flood risk assessment should ensure: • Existing flow paths are maintained • Floodplain storage and conveyance areas should be protected. • Future flood risk should be considered in the design and land uses should be matched with flood risk. • The development will not have an adverse impact on flood risk. Flood hazard to users of the site is mitigated to an acceptable level.	Not Required

Cahersiveen Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
R2.6	R2.6.1	Existing Residential	Highly Vulnerable	A and B	A small portion of these lands within the generalised zoning objective adjacent to the northern boundary have been identified as being at risk of tidal flooding. The zoning designation applies to the existing residential areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
R2.6	R2.6.2	Existing Residential	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The zoning designation applies to the existing residential areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
R2.6	R2.6.3	Existing Residential	Highly Vulnerable	A and B	A small portion of these lands within the generalised zoning objective adjacent to the northern boundary have been identified as being at risk of tidal flooding. The zoning designation applies to the existing residential areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable

Cahersiveen Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
R2.6	R2.6.4	Existing Residential	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The zoning designation applies to the existing residential areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable

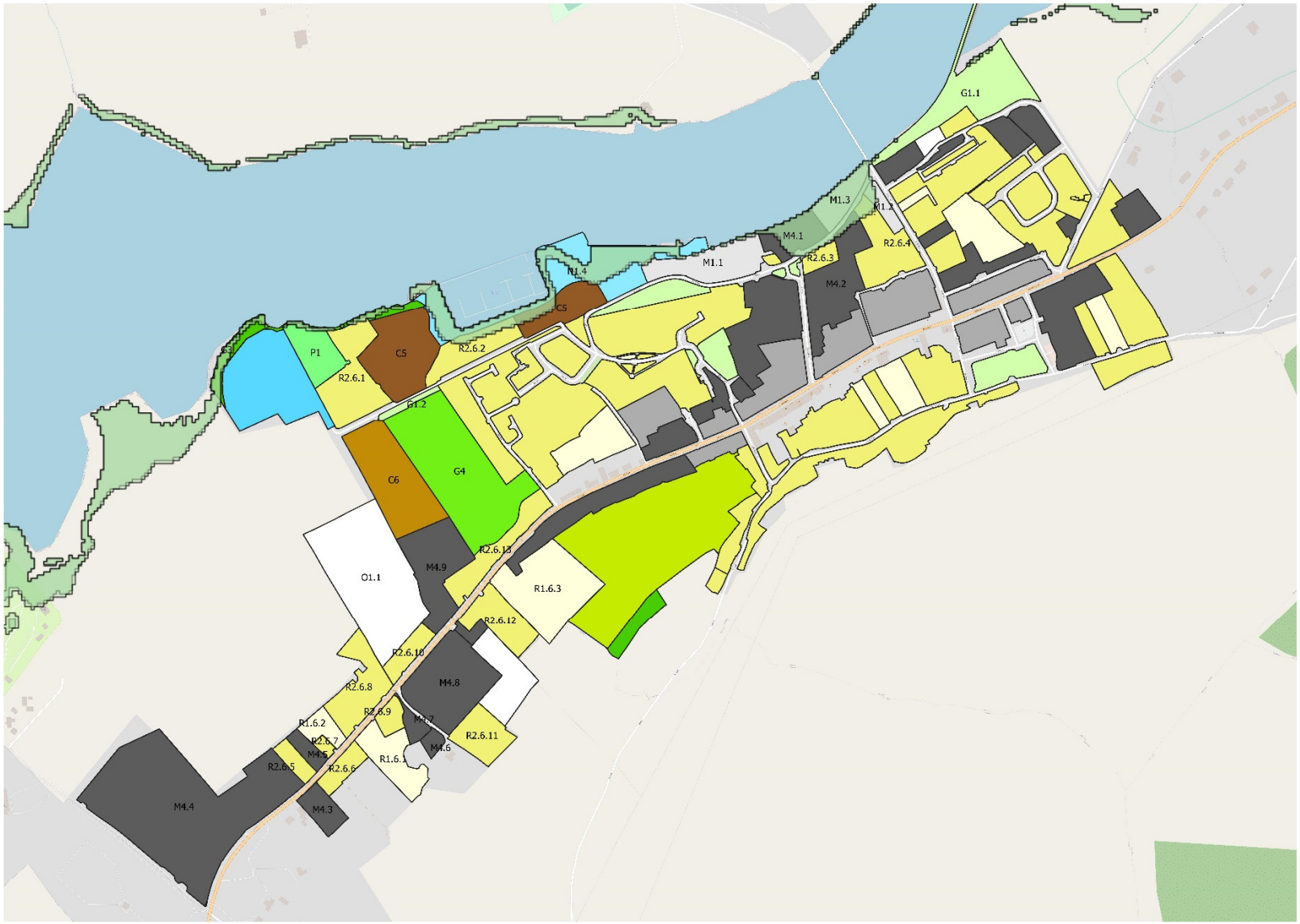


Figure 5.1: Cahersiveen - Land Use Zoning and Flood Zone Map

5.1.3 Killorglin Land Use Zoning Assessment

The land use zoning map and flood zone map for Killorglin is provided below with a summary of Land Use Zoning Review for Zoned Lands located in Flood Zones A and B. CFRAMS Coastal and Fluvial was used for Flood Zone mapping in Killorglin.

Killorglin Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
C2.1	C2.1	Industrial/Enterprise/ Employment	Less Vulnerable	Fluvial: B Tidal: A and B	A small portion of these lands within the generalised zoning objective within the northern area of the site have been identified as being at risk of fluvial and tidal flooding. The zoning designation applies to the existing industrial/ enterprise/ employment areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
C5	C5	Tourism & Related	Highly Vulnerable	Fluvial: A and B Tidal: A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial and tidal flooding. The lands were historically used as a camping/glamping site. A small portion of these lands adjacent to the southern boundary have been identified as being at risk of fluvial and tidal flooding. The area within Flood Zones A and B is representative of a small and localised encroachment into the site which should not preclude the development of the entire site. The Sequential Approach can still be applied to this site during the development design, locating land use types in appropriate locations of the site. Highly Vulnerable Development is not permitted within Flood Zone B. An Objective should be included in the Plan to ensure that only water-compatible development is permitted in Flood Zone A and Less Vulnerable in Flood Zone B. Highly vulnerable development is not permitted in areas of	Not Required

Killorglin Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
					flood risk. Any application for development of these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009). In particular, the flood risk assessment should ensure: • Existing flow paths are maintained • Floodplain storage and conveyance areas should be protected. • Future flood risk should be considered in the design and land uses should be matched with flood risk. • The development will not have an adverse impact on flood risk. • Flood hazard to users of the site is mitigated to an acceptable level.	
G1	G1.1	Open Space, Park	Water-compatible Development	Fluvial: A and B Tidal: A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial and tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required
G1	G1.2	Open Space, Park	Water-compatible Development	Fluvial: A and B Tidal: A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial and tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required

Killorglin Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
G3	G3.1	Landscape Protection	Water-compatible Development	Fluvial: A and B Tidal: A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial and tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required
G3	G3.2	Landscape Protection	Water-compatible Development	Fluvial: A and B Tidal: A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial and tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required
G3	G3.3	Landscape Protection	Water-compatible Development	Fluvial: A and B Tidal: A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial and tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required

Killorglin Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
G3	G3.4	Landscape Protection	Water-compatible Development	Fluvial: A and B Tidal: A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial and tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required
M1	M1	Mixed Use	Water-compatible Development	Fluvial: A and B Tidal: A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial and tidal flooding. It is proposed that these lands will form part of a blueway trail. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required
M2	M2.1	Town Centre	Highly Vulnerable	Fluvial: A and B Tidal: A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial and tidal flooding. The zoning designation applies to the existing built-up area. Therefore, the sequential approach cannot be used and a Justification Test does not apply. Applications for any future development in the Built-up Area should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable

Killorglin Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
M2	M2.2	Town Centre	Highly Vulnerable	Fluvial: A and B Tidal: A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial and tidal flooding. The zoning designation applies to the existing built-up area. Therefore, the sequential approach cannot be used and a Justification Test does not apply. Applications for any future development in the Built-up Area should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
M4	M4.1	Built up Area	Highly Vulnerable	Fluvial: A and B Tidal: A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial and tidal flooding. The zoning designation applies to the existing built-up area. Therefore, the sequential approach cannot be used and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable

Killorglin Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
M4	M4.2	Built up Area	Highly Vulnerable	Fluvial: A and B Tidal: A and B	A small portion of these lands within the generalised zoning objective along the western boundary of the site have been identified as being at risk of fluvial and tidal flooding. The zoning designation applies to the existing built-up area. Therefore, the sequential approach cannot be used and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
N1.6	N1.6	Car Park	Less Vulnerable/ Water Compatible	Fluvial: A and B Tidal: A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial and tidal flooding. The land is currently an undeveloped greenfield site. It is proposed that this site will be used for a combination of car parking. and picnic areas. The car park areas are less vulnerable development which will be restricted to areas outside of Flood Zones A in the western areas of the site. The picnic areas are water compatible development and are suitable for development within flood zones A and B within the eastern areas of the site. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required

Killorglin Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
N2.2	N2.2	Wastewater	Less Vulnerable	Fluvial: A and B Tidal: A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial and tidal flooding. The lands which are at risk of flooding comprise existing wastewater treatment plant facility. Therefore, the sequential approach cannot be used and a Justification Test does not apply. Any application for development of these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
R2.6	R2.6.1	Existing Residential	Highly Vulnerable	Fluvial: A and B Tidal: A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial and tidal flooding. The zoning designation applies to the existing residential areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
R2.6	R2.6.2	Existing Residential	Highly Vulnerable	Fluvial: A and B Tidal: A and B	A small portion of these lands within the generalised zoning objective along the western boundary of the site have been identified as being at risk of fluvial and tidal flooding. The zoning designation applies to the existing residential areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in	Not Applicable

Killorglin Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
					accordance with the Planning System and Flood Risk Management Guidelines (2009).	
R2.6	R2.6.3	Existing Residential	Highly Vulnerable	Fluvial: A and B Tidal: A and B	A small portion of these lands within the generalised zoning objective along the western boundary of the site have been identified as being at risk of fluvial and tidal flooding. The zoning designation applies to the existing residential areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable

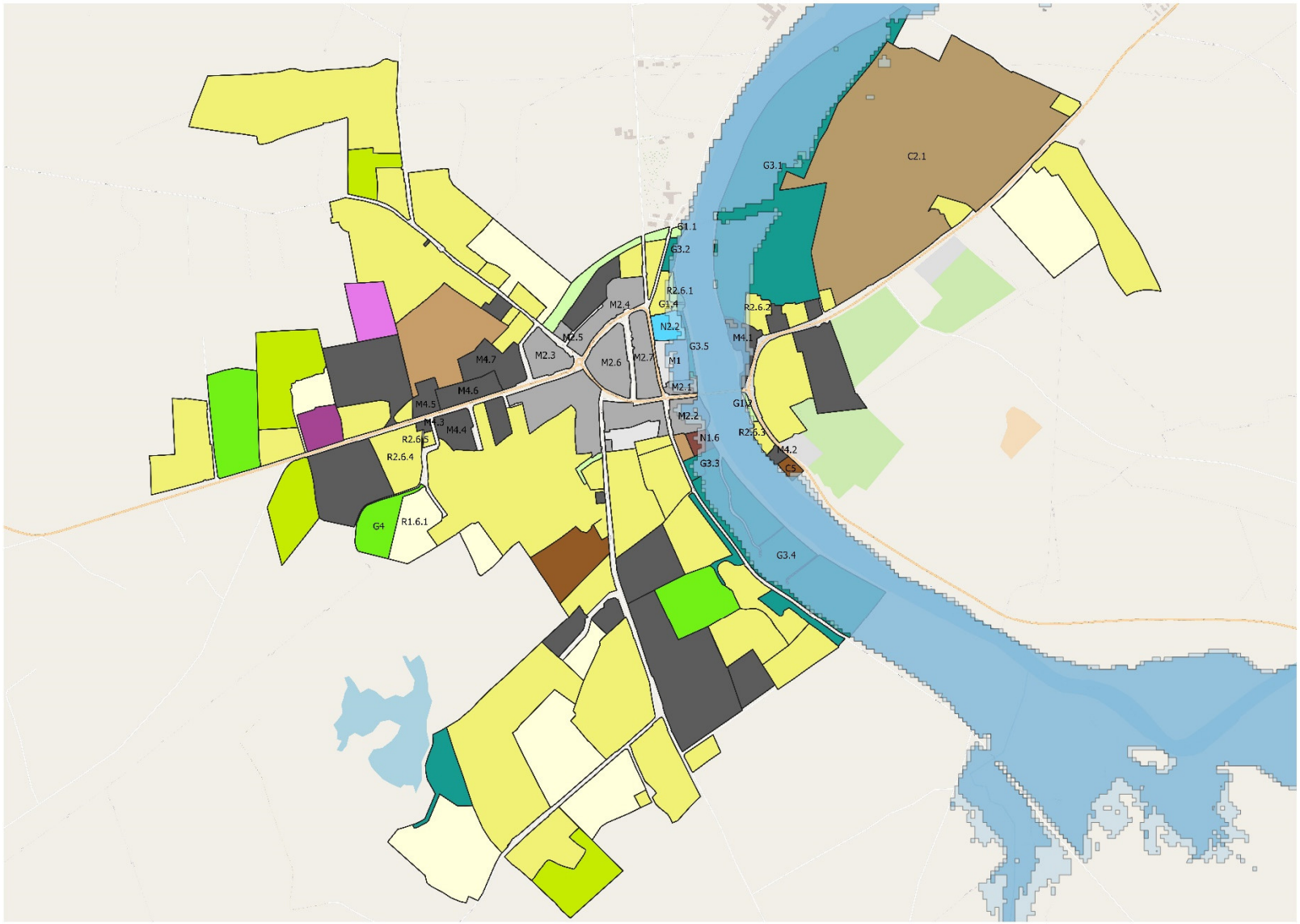


Figure 5.2: Killorglin - Land Use Zoning and Flood Zone Map (Fluvial)

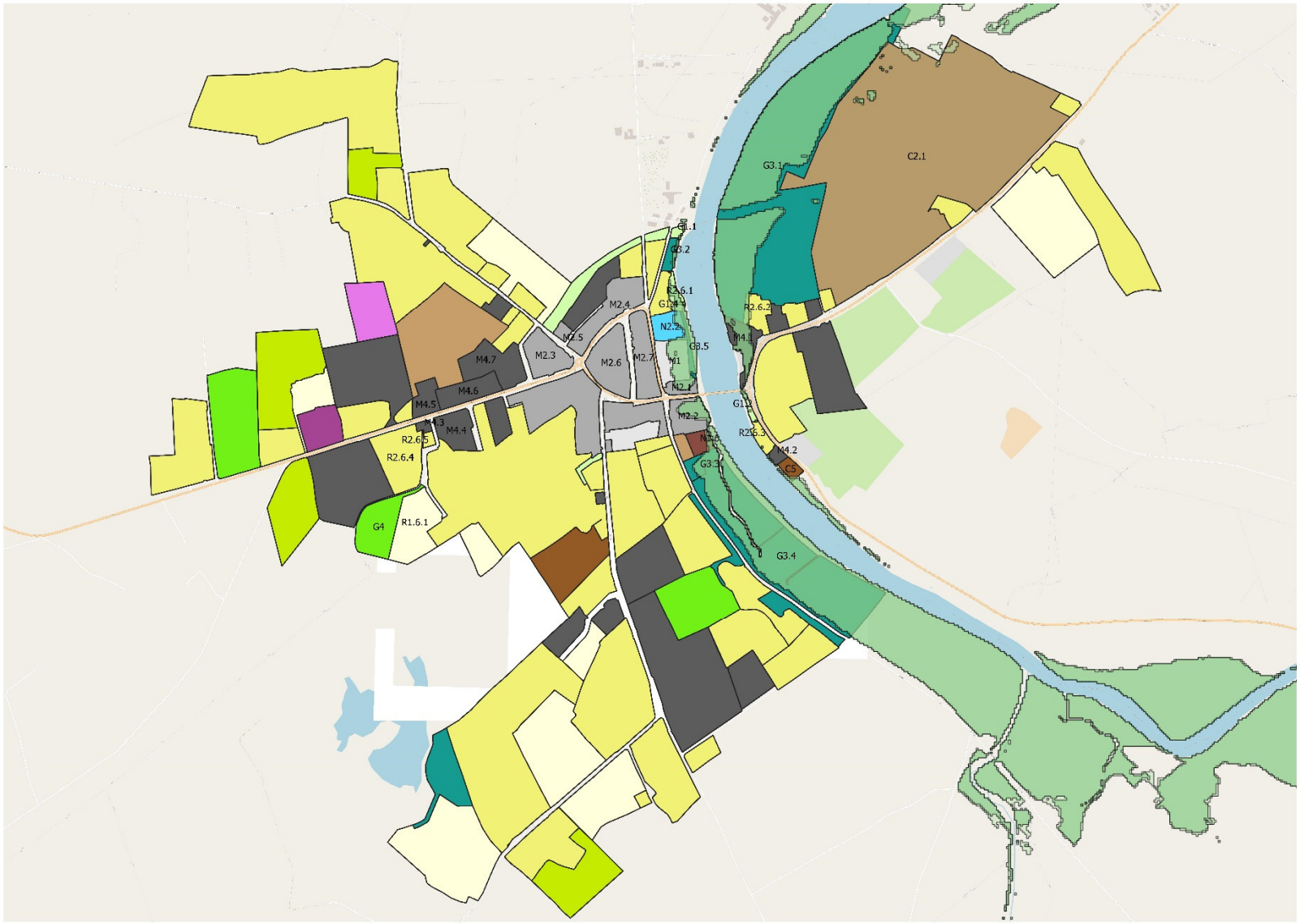


Figure 5.3: Killorglin - Land Use Zoning and Flood Zone Map (Coastal)

5.1.4 Kenmare Land Use Zoning Assessment

The land use zoning map and flood zone map for Kenmare is provided below with a summary of Land Use Zoning Review for Zoned Lands located in Flood Zones A and B. NCFHM, CFRAMS Coastal and Fluvial was used for Flood Zone mapping in Kenmare.

Kenmare Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
C5	C5.1	Tourism & Related	Less Vulnerable	A and B	A small portion of these lands within the generalised zoning objective adjacent to the southern boundary of the site have been identified as being at risk of tidal flooding. The lands contain the Park Hotel and the land zoning objective is consistent with this use. Any development proposal at the site should be minor and ancillary to the nature of the existing use. Therefore, the sequential approach cannot be used and a Justification Test does not apply. Applications for any future development of this site should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. This should include a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
C5	C5.2	Tourism & Related	Less Vulnerable	A and B	A small portion of these lands within the generalised zoning objective adjacent to the western boundary of the site have been identified as being at risk of tidal flooding. The area within Flood Zone A and B is representative of a small and localised encroachment into the site which should not preclude the development of the entire site. The Sequential Approach can still be applied to this site during the development design, locating land use types in appropriate locations of the site. Highly Vulnerable Development is not permitted within Flood Zone A and B. An Objective should be included in the Plan to ensure that only Less Vulnerable in Flood Zone B. Highly vulnerable development is not permitted in areas of flood risk. Any application for development of these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood	Not Applicable

Kenmare Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
					Risk Management Guidelines (2009). In particular, the flood risk assessment should ensure: • Existing flow paths are maintained • Floodplain storage and conveyance areas should be protected. • Future flood risk should be considered in the design and land uses should be matched with flood risk. • The development will not have an adverse impact on flood risk. Flood hazard to users of the site is mitigated to an acceptable level.	
C6	C6	Enterprise	Less Vulnerable	A and B	A small portion of these lands adjacent to the southern boundary have been identified as being at risk of tidal flooding. The area within Flood Zone A and B is representative of a small and localised encroachment into the site which should not preclude the development of the entire site. The Sequential Approach can still be applied to this site during the development design, locating land use types in appropriate locations of the site. Highly Vulnerable Development is not permitted within Flood Zone A and B. An Objective should be included in the Plan to ensure that only Less Vulnerable in Flood Zone B. Highly vulnerable development is not permitted in areas of flood risk. Any application for development of these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009). In particular, the flood risk assessment should ensure: • Existing flow paths are maintained • Floodplain storage and conveyance areas should be protected. • Future flood risk should be considered in the design and land uses should be matched with flood risk. • The development will not have an adverse impact on flood risk. • Flood hazard to users of the site is mitigated to an acceptable level.	Not Required

Kenmare Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
G1	G1.1	Open space, park	Water-compatible Development	A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required
G1	G1.2	Open space, park	Water-compatible Development	Fluvial: A and B Tidal: A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial and tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required
G1	G1.3	Open space, park	Water-compatible Development	Fluvial: A and B Tidal: A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial and tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required

Kenmare Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
G1	G1.4	Open space, park	Water-compatible Development	Fluvial: A and B Tidal: A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial and tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required
G1	G1.5	Open space, park	Water-compatible Development	Fluvial: A and B Tidal: A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial and tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required
G1	G1.6	Open space, park	Water-compatible Development	A and B	Lands have been identified as being at risk of fluvial flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required

Kenmare Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
G1	G1.7	Open space, park	Water-compatible Development	A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required
G1	G1.8	Open space, park	Water-compatible Development	A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required
G1	G1.9	Open space, park	Water-compatible Development	A and B	A small portion of these lands within the generalised zoning objective adjacent to the northern boundary of the site have been identified as being at risk of fluvial flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required

Kenmare Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
G1	G1.10	Open space, park	Water-compatible Development	B	A small portion of these lands within the generalised zoning objective adjacent to the northern boundary of the site have been identified as being at risk of fluvial flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required
G1	G1.11	Open space, park	Water-compatible Development	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required
G1	G1.12	Open space, park	Water-compatible Development	A and B	Lands have been identified as being at risk of tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required

Kenmare Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
G1	G1.13	Open space, park	Water-compatible Development	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required
G1	G1.14	Open space, park	Water-compatible Development	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required
G1	G1.15	Open space, park	Water-compatible Development	Fluvial: A and B Tidal: A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial and tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required

Kenmare Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
G1	G1.16	Open space, park	Water-compatible Development	A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required
G3	G3.1	Landscape Protection	Water-compatible Development	Fluvial: A and B Tidal: A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial and tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required
G3	G3.2	Landscape Protection	Water-compatible Development	Fluvial: A and B Tidal: A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial and tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required

Kenmare Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
G3	G3.3	Landscape Protection	Water-compatible Development	Fluvial: A and B Tidal: A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial and tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required
G3	G3.4	Landscape Protection	Water-compatible Development	A and B	A small portion of these lands within the generalised zoning objective adjacent to the southern boundary of the site have been identified as being at risk of fluvial flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required
G3	G3.5	Landscape Protection	Water-compatible Development	A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required

Kenmare Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
G3	G3.6	Landscape Protection	Water-compatible Development	A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial and tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required
G3	G3.7	Landscape Protection	Water-compatible Development	A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial and tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required
G3	G3.8	Landscape Protection	Water-compatible Development	A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial and tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required

Kenmare Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
G3	G3.9	Landscape Protection	Water-compatible Development	A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial and tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required
G4	G4.1	Active Open Space	Water-compatible Development	Fluvial: A and B Tidal: A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial and tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required
G4	G4.2	Active Open Space	Water-compatible Development	Fluvial: A and B Tidal: A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial and tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required

Kenmare Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
G4	G4.3	Active Open Space	Water-compatible Development	Fluvial: A and B Tidal: A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial and tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required
M2	M2.1	Town Centre	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The zoning designation applies to the existing built-up area. Therefore, the sequential approach cannot be used and a Justification Test does not apply. Applications for any future development in the Built-up Area should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
M2	M2.2	Town Centre	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The zoning designation applies to the existing built-up area. Therefore, the sequential approach cannot be used and a Justification Test does not apply. Applications for any future development in the Built-up Area should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management	Not Applicable

Kenmare Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
					Guidelines (2009).	
M2	M2.3	Town Centre	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The zoning designation applies to the existing built-up area. Therefore, the sequential approach cannot be used and a Justification Test does not apply. Applications for any future development in the Built-up Area should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
M2	M2.4	Town Centre	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The zoning designation applies to the existing built-up area. Therefore, the sequential approach cannot be used and a Justification Test does not apply. Applications for any future development in the Built-up Area should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management	Not Applicable

Kenmare Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
					Guidelines (2009).	
M2	M2.5	Town Centre	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The zoning designation applies to the existing built-up area. Therefore, the sequential approach cannot be used and a Justification Test does not apply. Applications for any future development in the Built-up Area should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
M2	M2.6	Town Centre	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The zoning designation applies to the existing built-up area. Therefore, the sequential approach cannot be used and a Justification Test does not apply. Applications for any future development in the Built-up Area should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management	Not Applicable

Kenmare Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
					Guidelines (2009).	
M2	M2.7	Town Centre	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The zoning designation applies to the existing built-up area. Therefore, the sequential approach cannot be used and a Justification Test does not apply. Applications for any future development in the Built-up Area should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
M4	M4.1	Built up Area	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The zoning designation applies to the existing built-up area. Therefore, the sequential approach cannot be used and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management	Not Applicable

Kenmare Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
					Guidelines (2009).	
M4	M4.2	Built up Area	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The zoning designation applies to the existing built-up area. Therefore, the sequential approach cannot be used and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
M4	M4.3	Built up Area	Highly Vulnerable	Fluvial: A and B Tidal: A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial and tidal flooding. The zoning designation applies to the existing built-up area. Therefore, the sequential approach cannot be used and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management	Not Applicable

Kenmare Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
					Guidelines (2009).	
M4	M4.4	Built up Area	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The zoning designation applies to the existing built-up area. Therefore, the sequential approach cannot be used and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
M4	M4.5	Built up Area	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The zoning designation applies to the existing built-up area. Therefore, the sequential approach cannot be used and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management	Not Applicable

Kenmare Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
					Guidelines (2009).	
M4	M4.6	Built up Area	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The zoning designation applies to the existing built-up area. Therefore, the sequential approach cannot be used and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
M4	M4.7	Built up Area	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The zoning designation applies to the existing built-up area. Therefore, the sequential approach cannot be used and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management	Not Applicable

Kenmare Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
					Guidelines (2009).	
M4	M4.8	Built up Area	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The zoning designation applies to the existing built-up area. Therefore, the sequential approach cannot be used and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
M4	M4.9	Built up Area	Highly Vulnerable	B	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The zoning designation applies to the existing built-up area. Therefore, the sequential approach cannot be used and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management	Not Applicable

Kenmare Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
					Guidelines (2009).	
M4	M4.10	Built up Area	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The zoning designation applies to the existing built-up area. Therefore, the sequential approach cannot be used and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
M4	M4.11	Built up Area	Highly Vulnerable	A and B	A small portion of these lands adjacent to the southern boundary have been identified as being at risk of tidal flooding. The zoning designation applies to the existing built-up area. Therefore, the sequential approach cannot be used and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management	Not Applicable

Kenmare Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
					Guidelines (2009).	
M4	M4.12	Built up Area	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The zoning designation applies to the existing built-up area. Therefore, the sequential approach cannot be used and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
N1.6	N1.6.1	Car Park	Less Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The zoning designation applies to a proposed overflow car park area. Due to its intended use, the site is not expected to be frequently occupied, particularly during times of heavy rainfall when flooding would be anticipated. The current timeline for completion of the Flood Risk Management scheme for the Kenmare area is 2030/2031. It is expected that the flood risk at this site will have been mitigated by this scheme. Any application for development of these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance	Required

Kenmare Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
					with the Planning System and Flood Risk Management Guidelines (2009). In particular, the flood risk assessment should ensure: • Existing flow paths are maintained • Floodplain storage and conveyance areas should be protected. • Future flood risk should be considered in the design and land uses should be matched with flood risk. • The development will not have an adverse impact on flood risk. • Flood hazard to users of the site is mitigated to an acceptable level.	
N1.6	N1.6.2	Car Park	Less Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The zoning designation applies to the existing car park area. Therefore, the sequential approach cannot be used and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
N2.1	N2.1	Water	Less Vulnerable	Fluvial: A and B Tidal: A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial and tidal flooding. The lands which are at risk of flooding comprise existing wastewater treatment plant facility. Therefore, the sequential approach cannot be used and a Justification Test does not apply. Any application for development of these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable

Kenmare Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
N2.2	N2.2	Wastewater	Less Vulnerable	A and B	A small portion of these lands adjacent to the northern boundary have been identified as being at risk of tidal flooding. The lands which are at risk of flooding comprise existing wastewater treatment plant facility. Therefore, the sequential approach cannot be used and a Justification Test does not apply. Any application for development of these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
N6	N6	Other Utilities Use	Less Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The zoning designation applies to the existing overspill car park area/storage area. Therefore, the sequential approach cannot be used and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
P1	P1	Agriculture	Water-compatible Development	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The land use zoning is appropriate and significant development is not envisaged. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required

Kenmare Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
R1.6	R1.6.1	New/Proposed Residential	Highly Vulnerable	A and B	A small portion of these lands adjacent to the western boundary have been identified as being at risk of fluvial flooding. The area within Flood Zones A and B is representative of a small and localised encroachment into the site which should not preclude the development of the entire site. The Sequential Approach can still be applied to this site during the development design, locating land use types in appropriate locations of the site. Highly Vulnerable Development is not permitted within Flood Zone A and B. An Objective should be included in the Plan to ensure that only water-compatible development is permitted in Flood Zone A and Less Vulnerable in Flood Zone B. Highly vulnerable development is not permitted in areas of flood risk. Any application for development of these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009). In particular, the flood risk assessment should ensure: • Existing flow paths are maintained • Floodplain storage and conveyance areas should be protected. • Future flood risk should be considered in the design and land uses should be matched with flood risk. • The development will not have an adverse impact on flood risk. • Flood hazard to users of the site is mitigated to an acceptable level.	Not Required
R1.6	R1.6.2	New/Proposed Residential	Highly Vulnerable	B	A small portion of these lands adjacent to the southern boundary have been identified as being at risk of fluvial flooding. The area within Flood Zone B is representative of a small and localised encroachment into the site which should not preclude the development of the entire site. The Sequential Approach can still be applied to this site during the development design, locating land use types in appropriate locations of the site. Highly Vulnerable Development is not permitted within Flood Zone B.	Not Required

Kenmare Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
					An Objective should be included in the Plan to ensure that only Less Vulnerable in Flood Zone B. Highly vulnerable development is not permitted in areas of flood risk. Any application for development of these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009). In particular, the flood risk assessment should ensure: • Existing flow paths are maintained • Floodplain storage and conveyance areas should be protected. • Future flood risk should be considered in the design and land uses should be matched with flood risk. • The development will not have an adverse impact on flood risk. Flood hazard to users of the site is mitigated to an acceptable level.	
R2.6	R2.6.1	Existing Residential	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The zoning designation applies to the existing residential areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. • Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable

Kenmare Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
R2.6	R2.6.2	Existing Residential	Highly Vulnerable	Fluvial: A and B Tidal: A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial and tidal flooding. The zoning designation applies to the existing residential areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. • Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
R2.6	R2.6.3	Existing Residential	Highly Vulnerable	Fluvial: A and B Tidal: A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial and tidal flooding. The zoning designation applies to the existing residential areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable

Kenmare Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
R2.6	R2.6.4	Existing Residential	Highly Vulnerable	Fluvial: A and B Tidal: A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial and tidal flooding. The zoning designation applies to the existing residential areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
R2.6	R2.6.5	Existing Residential	Highly Vulnerable	Fluvial: A and B Tidal: A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial and tidal flooding. The zoning designation applies to the existing residential areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable

Kenmare Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
R2.6	R2.6.6	Existing Residential	Highly Vulnerable	B	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The zoning designation applies to the existing residential areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
R2.6	R2.6.7	Existing Residential	Highly Vulnerable	B	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The zoning designation applies to the existing residential areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable

Kenmare Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
R2.6	R2.6.8	Existing Residential	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The zoning designation applies to the existing residential areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
R2.6	R2.6.9	Existing Residential	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The zoning designation applies to the existing residential areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable

Kenmare Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
R2.6	R2.6.10	Existing Residential	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The zoning designation applies to the existing residential areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
R2.6	R2.6.11	Existing Residential	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The zoning designation applies to the existing residential areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable

Kenmare Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
R2.6	R2.6.12	Existing Residential	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The zoning designation applies to the existing residential areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
R2.6	R2.6.13	Existing Residential	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The zoning designation applies to the existing residential areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable

Kenmare Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
R2.6	R2.6.14	Existing Residential	Highly Vulnerable	B	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The zoning designation applies to the existing residential areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
R2.6	R2.6.17	Existing Residential	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The zoning designation applies to the existing residential areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable

Kenmare Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
R2.6	R2.6.18	Existing Residential	Highly Vulnerable	Fluvial: A and B Tidal: A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial and tidal flooding. The zoning designation applies to the existing residential areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
R2.6	R2.6.19	Existing Residential	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The zoning designation applies to the existing residential areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable

Kenmare Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
R2.6	R2.6.20	Existing Residential	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The zoning designation applies to the existing residential areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
R2.6	R2.6.21	Existing Residential	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The zoning designation applies to the existing residential areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable

Kenmare Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
R2.6	R2.6.22	Existing Residential	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The zoning designation applies to the existing residential areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
R2.6	R2.6.22	Existing Residential	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The zoning designation applies to the existing residential areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable

Kenmare Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
R2.6	R2.6.23	Existing Residential	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The zoning designation applies to the existing residential areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
R2.6	R2.6.24	Existing Residential	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The zoning designation applies to the existing residential areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable

Kenmare Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
R2.6	R2.6.25	Existing Residential	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The zoning designation applies to the existing residential areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
R2.6	R2.6.26	Existing Residential	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The zoning designation applies to the existing residential areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable

Kenmare Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
R2.6	R2.6.27	Existing Residential	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The zoning designation applies to the existing residential areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
R2.6	R2.6.28	Existing Residential	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The zoning designation applies to the existing residential areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable

Kenmare Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
R2.6	R2.6.29	Existing Residential	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The zoning designation applies to the existing residential areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
R2.6	R2.6.30	Existing Residential	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The zoning designation applies to the existing residential areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable

Kenmare Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
R2.6	R2.6.31	Existing Residential	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The zoning designation applies to the existing residential areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
R2.6	R2.6.32	Existing Residential	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The zoning designation applies to the existing residential areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable

Kenmare Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
S1	S1.1	Education	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The zoning designation applies to the existing education areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
S1	S1.2	Education	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The zoning designation applies to the education areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable

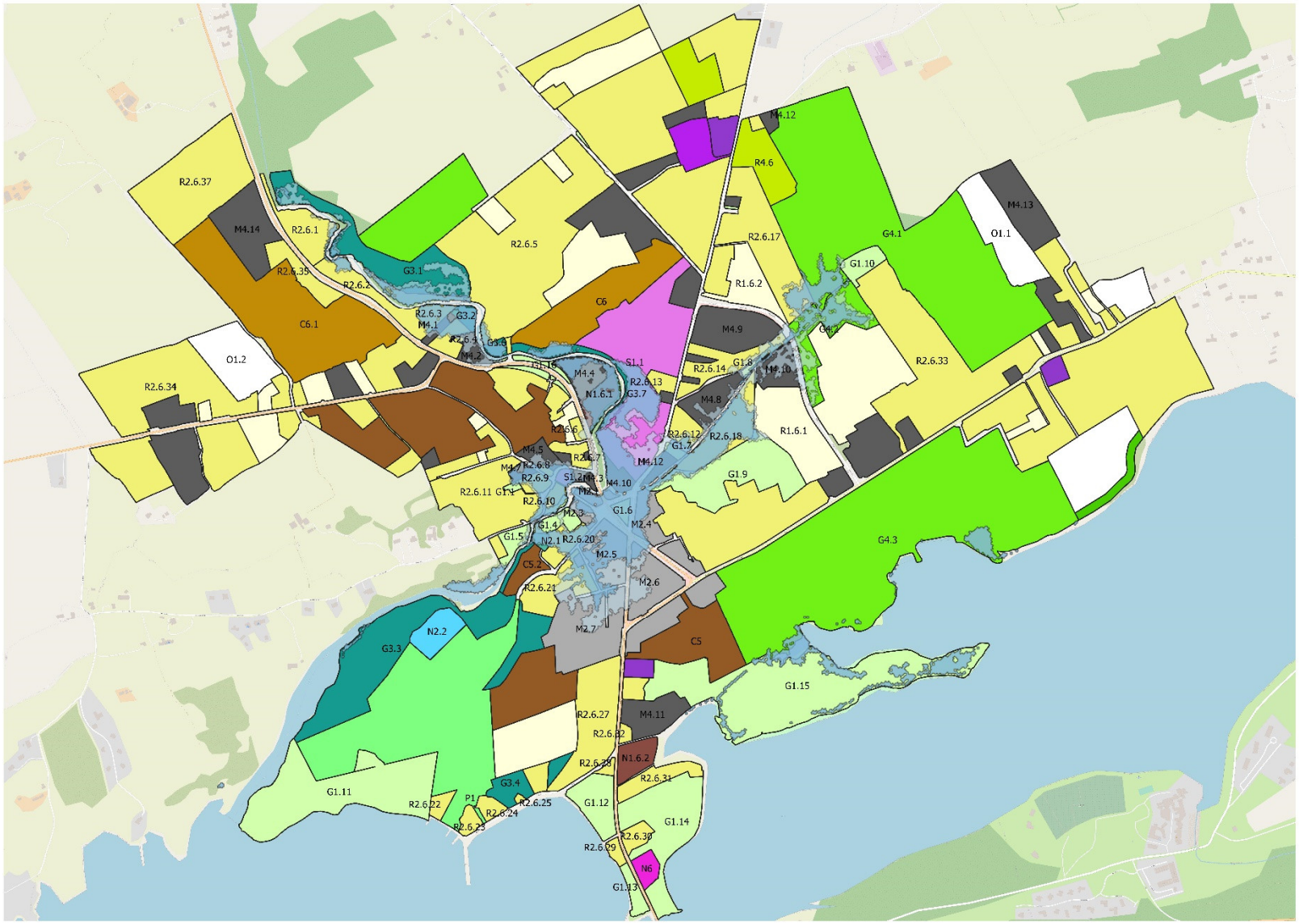


Figure 5.4: Kenmare - Land Use Zoning and Flood Zone Map (Fluvial)

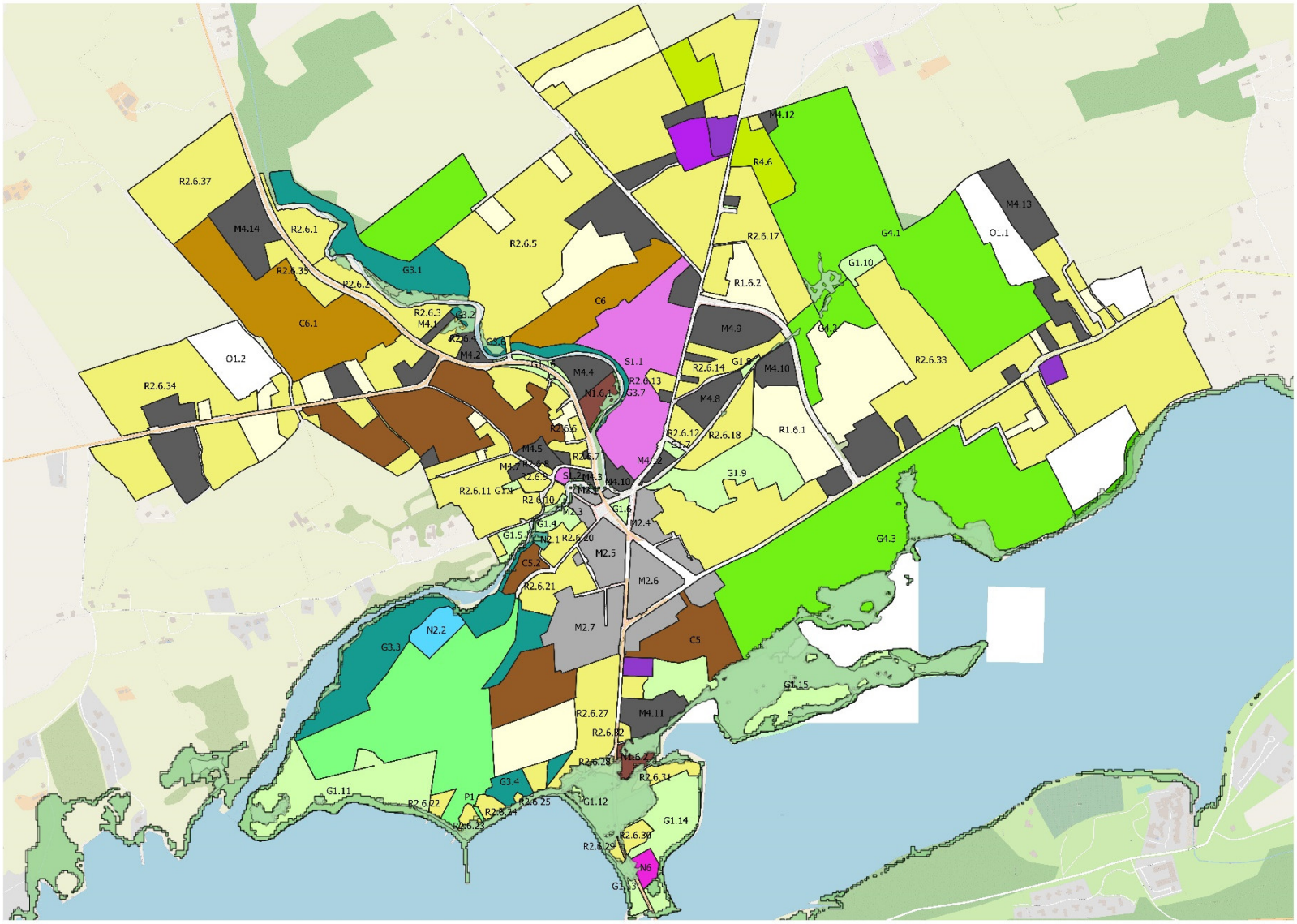


Figure 5.5: Kenmare - Land Use Zoning and Flood Zone Map (Coastal)

5.1.5 Sneem Land Use Zoning Assessment

The land use zoning map and flood zone map for Sneem is provided below with a summary of Land Use Zoning Review for Zoned Lands located in Flood Zones A and B. NCFHM was used for Flood Zone mapping in Sneem.

Sneem Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
C5		Tourism & Related	Less Vulnerable	A & B	These lands have been identified as being at risk of tidal flooding. The lands contain Goosey Island Motorhome Park and the land zoning objective is consistent with this use. Any development proposal at the site should be minor and ancillary to the nature of the existing use. Therefore, the sequential approach cannot be used and a Justification Test does not apply. Applications for any future development of this site should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. This should include a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
G1	G1.1	Open space, park	Water-compatible Development	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required
G1	G1.2	Open space, park	Water-compatible Development	A and B	A small portion of these lands within the generalised zoning objective within the northern area of the site have been identified as being at risk of tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required

Sneem Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
G3	G3.1	Landscape Protection	Water-compatible Development	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required
G3	G3.2	Landscape Protection	Water-compatible Development	A and B	A small portion of these lands within the generalised zoning objective within the northern area of the site have been identified as being at risk of tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required
M2	M2.1	Village	Highly Vulnerable	A and B	A small portion of these lands within the generalised zoning objective within the southern area of the site have been identified as being at risk of fluvial and tidal flooding. The zoning designation applies to the existing built-up area. Therefore, the sequential approach cannot be used and a Justification Test does not apply. Applications for any future development in the Built-up Area should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable

Sneem Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
M2	M2.2	Village	Highly Vulnerable	A and B	A small portion of these lands within the generalised zoning objective within the south western area of the site have been identified as being at risk of fluvial and tidal flooding. The zoning designation applies to the existing built-up area. Therefore, the sequential approach cannot be used and a Justification Test does not apply. Applications for any future development in the Built-up Area should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
M4	M4.1	Built up Area	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The zoning designation applies to the existing built-up area. Therefore, the sequential approach cannot be used and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
M4	M4.2	Built up Area	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding The zoning designation applies to the existing built-up area. Therefore, the sequential approach cannot be used and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood	Not Applicable

Sneem Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
					Risk Management Guidelines (2009).	
M4	M4.3	Built up Area	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding The zoning designation applies to the existing built-up area. Therefore, the sequential approach cannot be used and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
R2.6	R2.6.1	Existing Residential	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The zoning designation applies to the existing residential areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable

Sneem Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
R2.6	R2.6.2	Existing Residential	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The zoning designation applies to the existing residential areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
S3	S3.1	Community Facilities	Less Vulnerable	A and B	A small portion of these lands within the generalised zoning objective within the south western area of the site have been identified as being at risk of tidal flooding. The zoning designation applies to the existing community facilities. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable

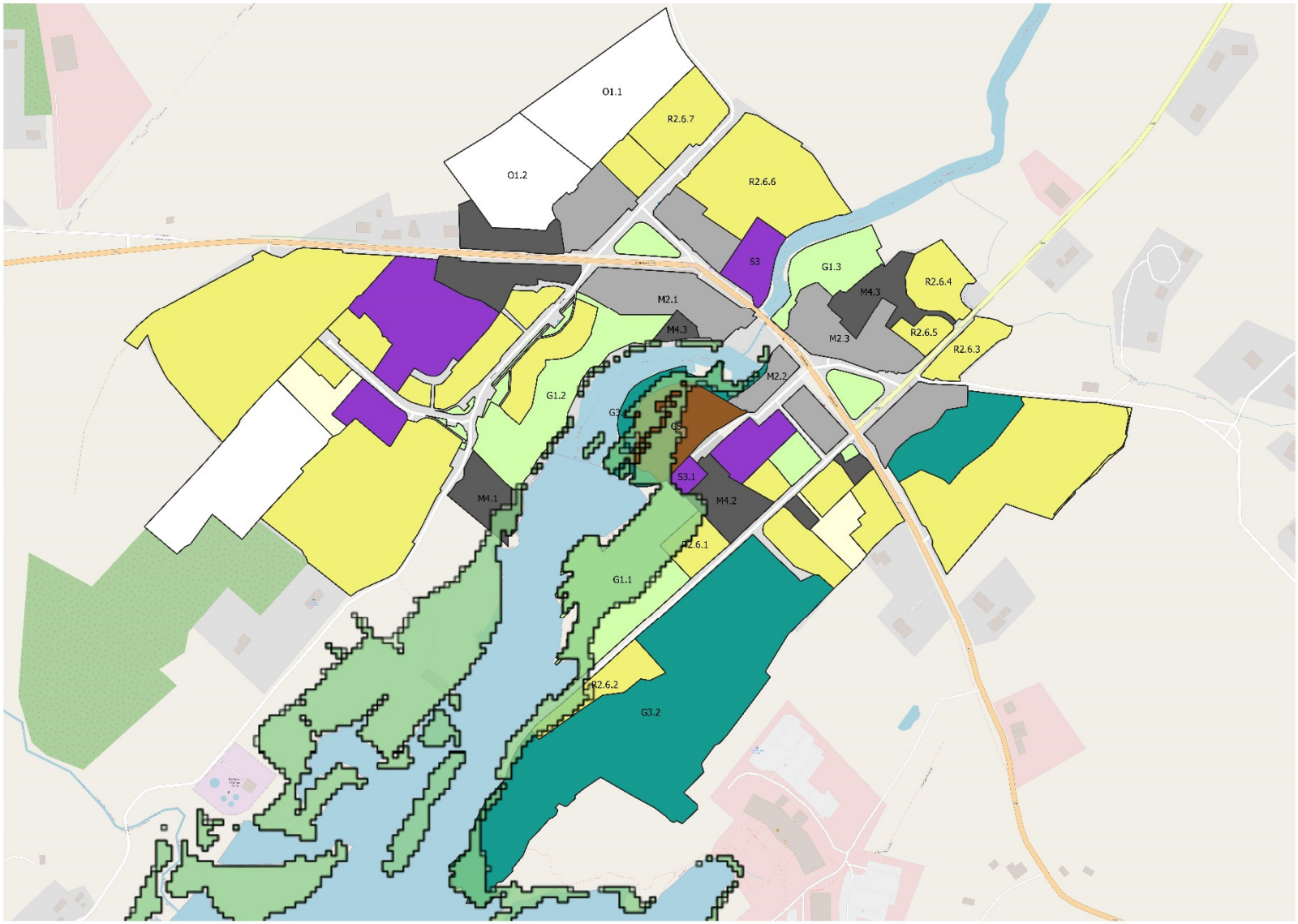


Figure 5.6: Sneem - Land Use Zoning and Flood Zone Map (Coastal)

5.1.6 Waterville Land Use Zoning Assessment

The land use zoning map and flood zone map for Waterville is provided below with a summary of Land Use Zoning Review for Zoned Lands located in Flood Zones A and B. NCFHM was used for Flood Zone mapping in Waterville.

Waterville Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
G1	G1	Open Space, Park	Water-compatible Development	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required
M4	M4	Built up Area	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The zoning designation applies to the existing built-up area. Therefore, the sequential approach cannot be used and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable

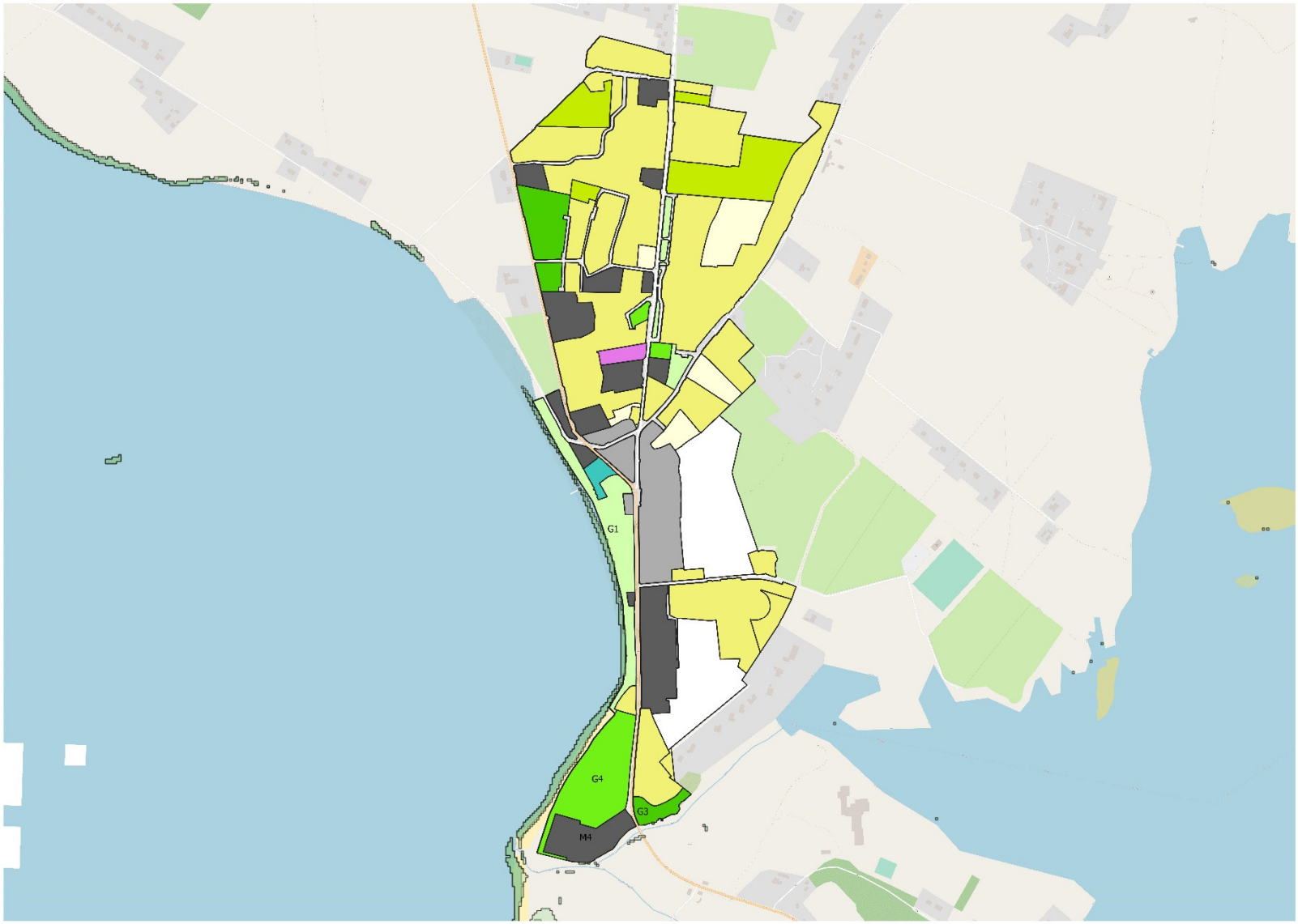


Figure 5.7: Waterville- Land Use Zoning and Flood Zone Map (Coastal)

5.1.7 Knightstown Land Use Zoning Assessment

The land use zoning map and flood zone map for Knightstown is provided below with a summary of Land Use Zoning Review for Zoned Lands located in Flood Zones A and B. NCFHM was used for Flood Zone mapping in Knightstown.

Knightstown Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
G1	G1.1	Open Space, Park	Water-compatible Development	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required
G1	G1.2	Open Space, Park	Water-compatible Development	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required
G1	G1.3	Open Space, Park	Water-compatible Development	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required

Knightstown Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
G1	G1.4	Open Space, Park	Water-compatible Development	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required
G1	G1.5	Open Space, Park	Water-compatible Development	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required
G3		Conservation, Amenity or Buffer Space, Landscape Protection	Water-compatible Development	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required

Knightstown Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
M2	M2	Village Centre	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The zoning designation applies to the existing residential areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
M4	M4.1	Built up Area	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The zoning designation applies to the existing built-up area. Therefore, the sequential approach cannot be used and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required
M4	M4.2	Built up Area	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The zoning designation applies to the existing built-up area. Therefore, the sequential approach cannot be used and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required

Knightstown Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
N1.4	N1.4	Harbour	Water-compatible Development	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required
N1.6	N1.6	Car Park	Less Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of fluvial and tidal flooding. The land is currently an undeveloped greenfield site. It is proposed that this site will be used for car parking. and picnic areas. The car park areas are less vulnerable development which will be restricted to areas outside of Flood Zones A in the western areas of the site. The picnic areas are water compatible development and are suitable for development within flood zones A and B within the eastern areas of the site. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required
R2.6		Existing Residential	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The zoning designation applies to the existing residential areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable

Knightstown Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
S6	S6	Other Community Services/Facilities	Water-compatible Development	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. This site is known locally as the "Telegraph Field", the historic site of the eastern terminal of the first commercially viable transatlantic telegraph cable. There is no development proposed here. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required

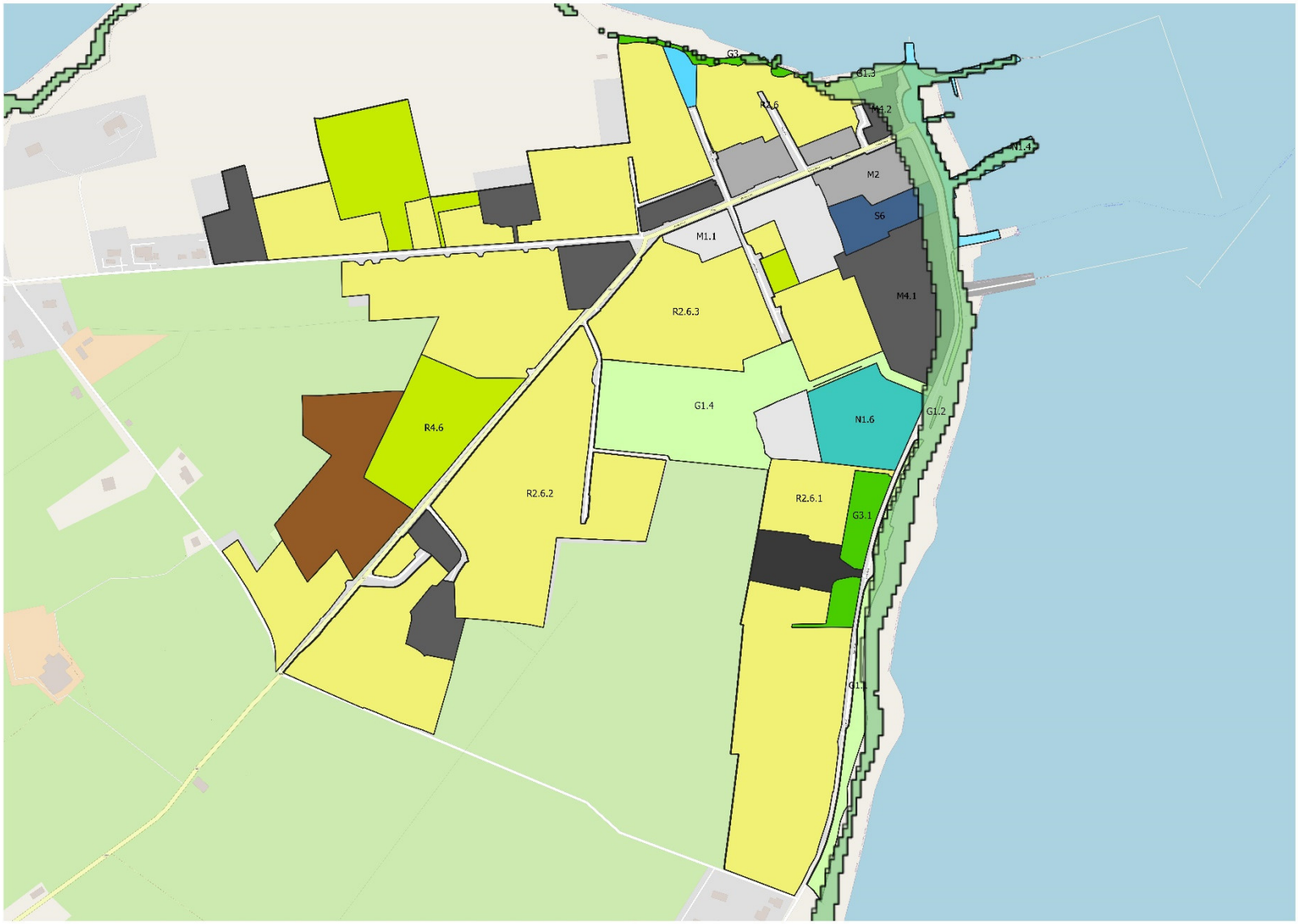


Figure 5.8: Knightstown - Land Use Zoning and Flood Zone Map (Coastal)

5.1.8 Portmagee Land Use Zoning Assessment

The land use zoning map and flood zone map for Portmagee is provided below with a summary of Land Use Zoning Review for Zoned Lands located in Flood Zones A and B. NCFHM was used for Flood Zone mapping in Portmagee.

Portmagee Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
G1	G1	Open Space, Park	Water-compatible Development	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required
G3	G3	Conservation, Amenity or Buffer Space, Landscape Protection	Water-compatible Development	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required
M4	M4.1	Built up Area	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The zoning designation applies to the existing built-up area. Therefore, the sequential approach cannot be used and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable

Portmagee Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
M4	M4.2	Built up Area	Highly Vulnerable	B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The zoning designation applies to the existing built-up area. Therefore, the sequential approach cannot be used and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
M4	M4.3	Built up Area	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The zoning designation applies to the existing built-up area. Therefore, the sequential approach cannot be used and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
N1.4	N1.4	Harbour	Water-compatible Development	A and B	Areas within the generalised zoning objective been identified as being at risk of tidal flooding. The land use zoning is appropriate. Notwithstanding this, any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Required

Portmagee Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
O1	O1	Strategic Reserve, White Land	N/A	A and B	Lands at risk are intended for development at some future date, but no specific land use has been identified. Given the land use for this strategic reserve has not been identified and development is not envisaged during the lifetime of this LAP, it is premature to consider potential measures or restrictions on development. If it is intended to apply a specific land use zoning to these lands in the future, it is recommended that a Stage 3 Detailed Flood Risk Assessment is carried out so that the sequential approach can be used and to establish appropriate land use zonings throughout the site, in conjunction with a Justification Test, where necessary. The Stage 3 Detailed Flood Risk Assessment should be completed in accordance with the Planning System and Flood Risk Management Guidelines (2009). In particular, the flood risk assessment should: • Confirm the flood risk and flood zones for the existing and future scenarios. • Considering a range of possible land uses, establish what measures are necessary to mitigate flood risk and provide for the sustainable development of the lands without increasing flood risk elsewhere. • Identify the requirements for any compensation storage, the possible locations of same and the implications that has on zoning and development management. Assess the residual risks associated with the development and the hazards to users of the site.	Not Required

Portmagee Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
R2.6	R2.6.1	Existing Residential	Highly Vulnerable	A and B	Areas within the generalised zoning objective been identified as being at risk of coastal flooding. The zoning designation applies to the existing residential areas. Therefore, the sequential approach cannot be used, and a Justification Test does not apply. Applications for any future development in these areas should be considered in accordance with Section 5.28 (as amended in Circular PL2/2014) of the Guidelines. Development proposals for sites which have been identified as at risk of flooding in the current or future scenarios should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).	Not Applicable
S3	S3.1	Community Facilities (See objective PE-TM-05)	Less Vulnerable	B	Areas within the generalised zoning objective been identified as being at risk tidal flooding. It is proposed that this site will be used for car parking. This use is Less Vulnerable and therefore the land use zoning is appropriate. It is anticipated that the development of this site for this use would not include significant new buildings and that the site would be less likely to be used during adverse weather conditions. With careful consideration of the site design, it is considered feasible to provide such a facility on this site once appropriate mitigation is put in place to prevent adverse impacts elsewhere and to ensure the risk to users of the site is acceptable. Before any development occurs at this site, a site-specific flood risk assessment should be undertaken in accordance with the Planning System and Flood Risk Management Guidelines (2009). In particular, the flood risk assessment should ensure: • Existing flood defences are assessed and the likelihood and consequence of an embankment breach is considered. • Existing flow paths are maintained. • Floodplain storage and conveyance areas should be protected, or appropriate compensation provided. • Future flood risk should be considered in the design and land uses should be matched with flood risk.	Not Required

Portmagee Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
					• The development will not have an adverse impact on flood risk. Flood hazard to users of the site is mitigated to an acceptable level. Flood awareness, warning systems and evacuation procedures need to be put in place.	
S3	S3.2	Community Facilities (See objective PE-TM-05)	Less Vulnerable	B	Areas within the generalised zoning objective been identified as being at risk tidal flooding. The land is currently an undeveloped greenfield site. It is proposed that this site will be used for car parking. This use is Less Vulnerable and therefore the land use zoning is appropriate. It is anticipated that the development of this site for this use would not include significant new buildings and that the site would be less likely to be used during adverse weather conditions. With careful consideration of the site design, it is considered feasible to provide such a facility on this site once appropriate mitigation is put in place to prevent adverse impacts elsewhere and to ensure the risk to users of the site is acceptable. Before any development occurs at this site, a site-specific flood risk assessment should be undertaken in accordance with the Planning System and Flood Risk Management Guidelines (2009). In particular, the flood risk assessment should ensure: • Existing flood defences are assessed and the likelihood and consequence of an embankment breach is considered. • Existing flow paths are maintained. • Floodplain storage and conveyance areas should be protected, or appropriate compensation provided. • Future flood risk should be considered in the design and land uses should be matched with flood risk.	Not Required

Portmagee Land Use Zoning Review for Zoned Lands in Flood Zones A and B						
Zoning Objective	SFRA Map Reference	Zoning Description	Vulnerability	Flood Zone	Flood Risk Comments & Recommendations	Justification Test Requirements
					• The development will not have an adverse impact on flood risk. Flood hazard to users of the site is mitigated to an acceptable level. Flood awareness, warning systems and evacuation procedures need to be put in place.	

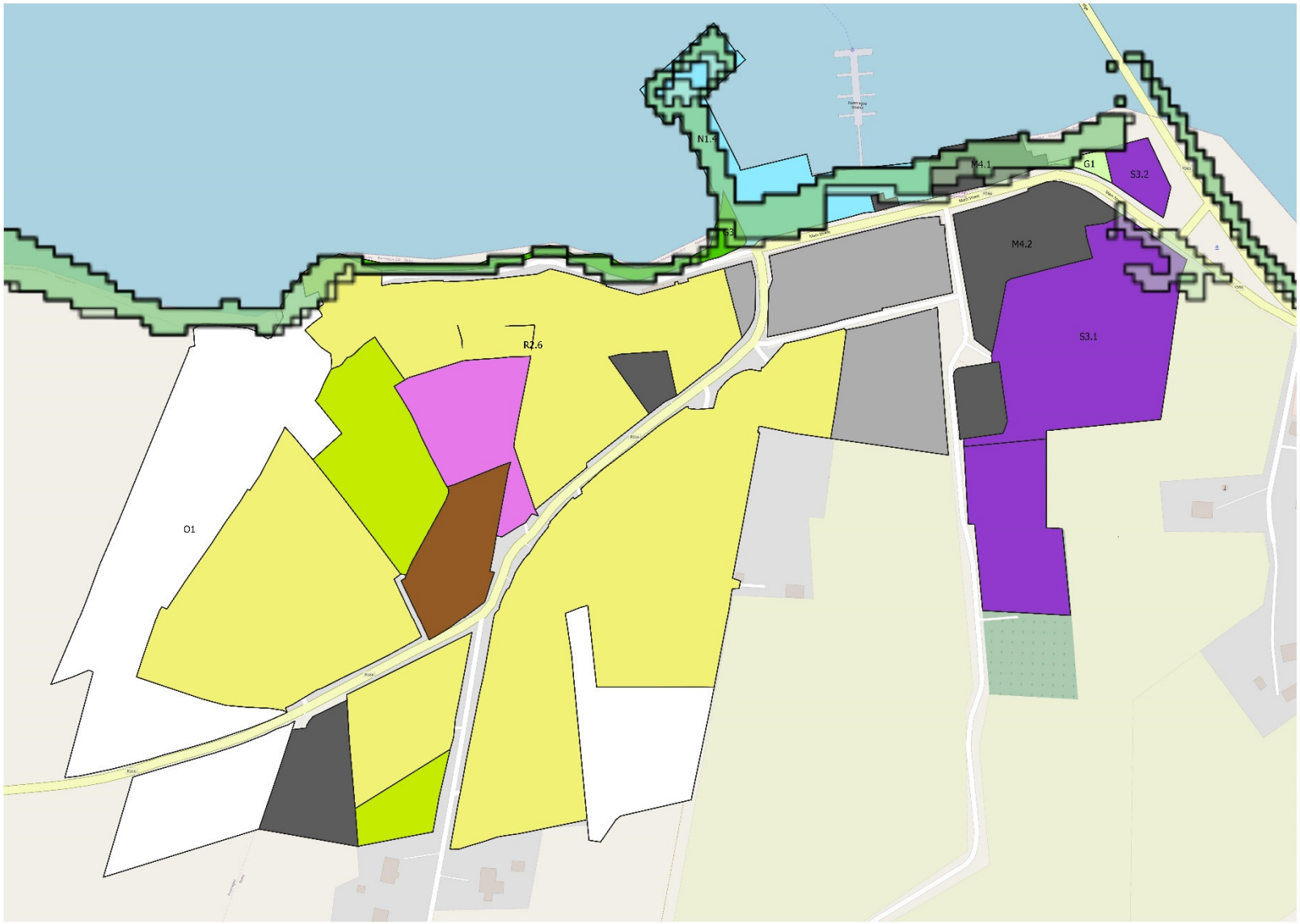


Figure 5.9: Portmagee - Land Use Zoning and Flood Zone Map (Coastal)

5.1.9 NIFM Watercourses & Unmapped Watercourses

Presented below is a summary table of zoned lands which have been identified at risk of flooding due to either NIFM extents indicating flooding within zoned lands or being in close proximity to unmapped watercourses. Also presented below in Figure 5.12 - Figure 5.20 are maps illustrating the zoned lands which could potentially be impacted by unmapped or NIFM mapped watercourses. There are a number of sites which have been identified as potentially being at risk of flooding that have been mapped by NIFM or are located in close proximity of unmapped watercourses. Also provided is the recommended action for each site.

Zoning Objective	SFRA Map Reference	Available Mapping	Watercourse ID	Flood Risk Comment	Recommended Action
Cahersiveen					
M4	M4.3 – M4.5	Unmapped	Garranbane	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is unmapped and therefore Flood Zones cannot be assigned.	The potential sites at risk are existing built up area and any development proposal at the site should be minor and ancillary to the nature of the existing use. Development proposals for this site should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
R1.6	R1.6.2	Unmapped	Garranbane	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is unmapped and therefore Flood Zones cannot be assigned.	The potential sites at risk are zoned for new/proposed residential. Development proposals for this site should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
R2.6	R2.6.5 – R2.6.7	Unmapped	Garranbane	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is unmapped and therefore Flood Zones cannot be assigned.	The potential sites at risk are existing residential area and any development proposal at the site should be minor and ancillary to the nature of the existing use. Development proposals for this site should include a site-specific flood risk assessment, completed in accordance with the Planning

Zoning Objective	SFRA Map Reference	Available Mapping	Watercourse ID	Flood Risk Comment	Recommended Action
					System and Flood Risk Management Guidelines (2009).
M4	M4.6-4.8	Unmapped	IE_SW_22B390780 (Seg Code: 22_3259)	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is unmapped and therefore Flood Zones cannot be assigned.	The potential sites at risk are existing built up area and any development proposal at the site should be minor and ancillary to the nature of the existing use. Development proposals for this site should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
R1.6	R1.6.1 & R1.6.2	Unmapped	IE_SW_22B390780 (Seg Code: 22_3259)	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is unmapped and therefore Flood Zones cannot be assigned.	The potential sites at risk are zoned for new/proposed residential. Development proposals for this site should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
R2.6	R2.6.8 – R2.6.11	Unmapped	IE_SW_22B390780 (Seg Code: 22_3259)	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is unmapped and therefore Flood Zones cannot be assigned.	The potential sites at risk are existing residential area and any development proposal at the site should be minor and ancillary to the nature of the existing use. Development proposals for this site should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
O1	O1.1	Unmapped	IE_SW_22B390780 (Seg Code: 22_3259)	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is unmapped and therefore Flood Zones cannot be assigned.	Lands at risk are intended for development at some future date, but no specific land use has been identified. Given the land use for this strategic reserve has not been identified and development is not envisaged during the lifetime of this LAP, it

Zoning Objective	SFRA Map Reference	Available Mapping	Watercourse ID	Flood Risk Comment	Recommended Action
					is premature to consider potential measures or restrictions on development. If it is intended to apply a specific land use zoning to these lands in the future, it is recommended that a Stage 3 Detailed Flood Risk Assessment is carried out so that the sequential approach can be used and to establish appropriate land use zonings throughout the site, in conjunction with a Justification Test, where necessary. The Stage 3 Detailed Flood Risk Assessment should be completed in accordance with the Planning System and Flood Risk Management Guidelines (2009). In particular, the flood risk assessment should: • Confirm the flood risk and flood zones for the existing and future scenarios. • Considering a range of possible land uses, establish what measures are necessary to mitigate flood risk and provide for the sustainable development of the lands without increasing flood risk elsewhere. • Identify the requirements for any compensation storage, the possible locations of same and the implications that has on zoning and development management. Assess the residual risks associated with the development and the hazards to users of the site.
C5	C5	Unmapped	IE_SW_22B390780 (Seg Code: 22_2221)	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is unmapped and therefore Flood Zones cannot be assigned.	The potential site at risk is zoned Tourism and Related, however, some areas of these lands potentially at risk appear undeveloped.

Zoning Objective	SFRA Map Reference	Available Mapping	Watercourse ID	Flood Risk Comment	Recommended Action
					Development proposals for this site should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
C6	C6	Unmapped	IE_SW_22B390780 (Seg Code: 22_2221)	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is unmapped and therefore Flood Zones cannot be assigned.	The potential site at risk is zoned Mixed/General/Industrial/Enterprise Use, however, some areas of these lands potentially at risk appear undeveloped. Development proposals for this site should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
G1	G1.2	Unmapped	IE_SW_22B390780 (Seg Code: 22_2221)	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is unmapped and therefore Flood Zones cannot be assigned.	The land use zoning is water compatible so therefore no further action is recommended. Any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
G1	G1.2	Unmapped	IE_SW_22B390780 (Seg Code: 22_2221)	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is unmapped and therefore Flood Zones cannot be assigned.	The land use zoning is water compatible so therefore no further action is recommended. Any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
M4	M4.9	Unmapped	IE_SW_22B390780 (Seg Code: 22_2221)	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is unmapped and therefore Flood Zones cannot be assigned.	The potential sites at risk are existing built up area and any development proposal at the site should be minor and ancillary to the nature of the existing use.

Zoning Objective	SFRA Map Reference	Available Mapping	Watercourse ID	Flood Risk Comment	Recommended Action
					Development proposals for this site should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
R1.6	R1.6.3	Unmapped	IE_SW_22B390780 (Seg Code: 22_2221)	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is unmapped and therefore Flood Zones cannot be assigned.	The potential sites at risk are zoned for new/proposed residential. Development proposals for this site should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
R2.6	R2.6.1 & R2.6.2. R2.6.12 – R2.6.14	Unmapped	IE_SW_22B390780 (Seg Code: 22_2221)	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is unmapped and therefore Flood Zones cannot be assigned.	The potential sites at risk are existing residential area and any development proposal at the site should be minor and ancillary to the nature of the existing use. Development proposals for this site should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
Killorglin					
G4	G4	Unmapped	Knockyline	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is unmapped and therefore Flood Zones cannot be assigned.	The land use zoning is water compatible so therefore no further action is recommended. Any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
M2	M2.3 – M2.7	Unmapped	Knockyline	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding.	The potential sites at risk are existing built up area and any development proposal at the site

Zoning Objective	SFRA Map Reference	Available Mapping	Watercourse ID	Flood Risk Comment	Recommended Action
				The watercourse is unmapped and therefore Flood Zones cannot be assigned.	should be minor and ancillary to the nature of the existing use. Development proposals for this site should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
M4	M4.3 – M4.7	Unmapped	Knockyline	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is unmapped and therefore Flood Zones cannot be assigned.	The potential sites at risk are existing built up area and any development proposal at the site should be minor and ancillary to the nature of the existing use. Development proposals for this site should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
R1.6	R1.6.1	Unmapped	Knockyline	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is unmapped and therefore Flood Zones cannot be assigned.	The potential sites at risk are zoned for new/proposed residential. Development proposals for this site should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
R2.6	R2.6.1, R2.6.4 & R2.6.5	Unmapped	Knockyline	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is unmapped and therefore Flood Zones cannot be assigned.	The potential sites at risk are existing residential area and any development proposal at the site should be minor and ancillary to the nature of the existing use. Development proposals for this site should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).

Zoning Objective	SFRA Map Reference	Available Mapping	Watercourse ID	Flood Risk Comment	Recommended Action
Kenmare					
G4	G4.1 & G4.2	Unmapped	Lissaniska 21	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is unmapped and therefore Flood Zones cannot be assigned.	The land use zoning is water compatible so therefore no further action is recommended. Any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
M4	M4.12	Unmapped	Lissaniska 21	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is unmapped and therefore Flood Zones cannot be assigned.	The potential sites at risk are existing built up area and any development proposal at the site should be minor and ancillary to the nature of the existing use. Development proposals for this site should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
R4.6	R4.6	Unmapped	Lissaniska 21	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is unmapped and therefore Flood Zones cannot be assigned.	The potential sites at risk are zoned as Strategic Residential Reserve with proposed residential development at some future date. Development proposals for this site should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
G4	G4.1 & G4.2	Unmapped	Killowen 21	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is unmapped and therefore Flood Zones cannot be assigned.	The land use zoning is water compatible so therefore no further action is recommended. Any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).

Zoning Objective	SFRA Map Reference	Available Mapping	Watercourse ID	Flood Risk Comment	Recommended Action
M4	M4.13	Unmapped	Killowen 21	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is unmapped and therefore Flood Zones cannot be assigned.	The potential sites at risk are existing built up area and any development proposal at the site should be minor and ancillary to the nature of the existing use. However, some areas of these lands potentially at risk appear undeveloped. Development proposals for this site should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
R2.6	R2.6.33	Unmapped	Killowen 21	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is unmapped and therefore Flood Zones cannot be assigned.	The potential sites at risk are existing residential area and any development proposal at the site should be minor and ancillary to the nature of the existing use. Development proposals for this site should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
O1	O1.1	Unmapped	Killowen 21	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is unmapped and therefore Flood Zones cannot be assigned.	Lands at risk are intended for development at some future date, but no specific land use has been identified. Given the land use for this strategic reserve has not been identified and development is not envisaged during the lifetime of this LAP, it is premature to consider potential measures or restrictions on development. If it is intended to apply a specific land use zoning to these lands in the future, it is recommended that a Stage 3 Detailed Flood Risk Assessment is carried out so that the sequential approach can be used and to establish appropriate land use zonings throughout the site, in conjunction with a Justification Test, where necessary. The Stage 3 Detailed Flood Risk Assessment should be

Zoning Objective	SFRA Map Reference	Available Mapping	Watercourse ID	Flood Risk Comment	Recommended Action
					completed in accordance with the Planning System and Flood Risk Management Guidelines (2009). In particular, the flood risk assessment should: • Confirm the flood risk and flood zones for the existing and future scenarios. • Considering a range of possible land uses, establish what measures are necessary to mitigate flood risk and provide for the sustainable development of the lands without increasing flood risk elsewhere. • Identify the requirements for any compensation storage, the possible locations of same and the implications that has on zoning and development management. Assess the residual risks associated with the development and the hazards to users of the site.
C2.1	C2.1	Unmapped	Dromeavane	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is unmapped and therefore Flood Zones cannot be assigned.	The potential sites at risk are zoned for Industrial, Enterprise, Employment. However, the lands potentially at risk appear undeveloped. Development proposals for this site should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
C6	C6.1	Unmapped	Dromeavane	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is unmapped and therefore Flood Zones cannot be assigned.	The potential sites at risk are zoned for Mixed/General Commercial/Industrial/Enterpise Use.

Zoning Objective	SFRA Map Reference	Available Mapping	Watercourse ID	Flood Risk Comment	Recommended Action
					However, the lands potentially at risk appear undeveloped. Development proposals for this site should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
M4	M4.14	Unmapped	Dromeavane	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is unmapped and therefore Flood Zones cannot be assigned.	The potential sites at risk are existing built up area and any development proposal at the site should be minor and ancillary to the nature of the existing use. Development proposals for this site should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
R2.6	R2.6.2, R2.6.34 – R2.6.36	Unmapped	Dromeavane	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is unmapped and therefore Flood Zones cannot be assigned.	The potential sites at risk are existing residential area and any development proposal at the site should be minor and ancillary to the nature of the existing use. Development proposals for this site should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
O1	O1.2	Unmapped	Dromeavane	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is unmapped and therefore Flood Zones cannot be assigned.	Lands at risk are intended for development at some future date, but no specific land use has been identified. Given the land use for this strategic reserve has not been identified and development is not envisaged during the lifetime of this LAP, it is premature to consider potential measures or restrictions on development. If it is intended to apply a specific land use zoning to these lands

Zoning Objective	SFRA Map Reference	Available Mapping	Watercourse ID	Flood Risk Comment	Recommended Action
					in the future, it is recommended that a Stage 3 Detailed Flood Risk Assessment is carried out so that the sequential approach can be used and to establish appropriate land use zonings throughout the site, in conjunction with a Justification Test, where necessary. The Stage 3 Detailed Flood Risk Assessment should be completed in accordance with the Planning System and Flood Risk Management Guidelines (2009). In particular, the flood risk assessment should: • Confirm the flood risk and flood zones for the existing and future scenarios. • Considering a range of possible land uses, establish what measures are necessary to mitigate flood risk and provide for the sustainable development of the lands without increasing flood risk elsewhere. • Identify the requirements for any compensation storage, the possible locations of same and the implications that has on zoning and development management. Assess the residual risks associated with the development and the hazards to users of the site.
M4	M4.14	NIFM	Finnihy	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is only mapped by NIFM and therefore Flood Zones cannot be assigned. Available NIFM indicates that flood risk is largely confined to a small localised encroachment in the north eastern area of the site.	The potential sites at risk are existing built up area and any development proposal at the site should be minor and ancillary to the nature of the existing use. Development proposals for this site should include a site-specific flood risk assessment, completed in accordance with the Planning

Zoning Objective	SFRA Map Reference	Available Mapping	Watercourse ID	Flood Risk Comment	Recommended Action
					System and Flood Risk Management Guidelines (2009).
R2.6	R2.6.37	NIFM	Finnihy	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is only mapped by NIFM and therefore Flood Zones cannot be assigned. Available NIFM indicates that flood risk is largely confined to a small localised encroachment in the eastern area of the site.	The potential sites at risk are existing residential area and any development proposal at the site should be minor and ancillary to the nature of the existing use. Development proposals for this site should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
Sneem					
R2.6	R2.6.3 – R2.6.5	Unmapped	Drimna Beg	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is unmapped and therefore Flood Zones cannot be assigned.	The potential sites at risk are existing residential area and any development proposal at the site should be minor and ancillary to the nature of the existing use. Development proposals for this site should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
G1	G1.3	NIFM	Sneem	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is only mapped by NIFM and therefore Flood Zones cannot be assigned. Available NIFM indicates that the entire site is at risk of flooding.	The land use zoning is water compatible so therefore no further action is recommended. Any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
M2	M2.1 & M2.3	NIFM	Sneem	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding.	The potential sites at risk are existing built up area and any development proposal at the site should be minor and ancillary to the nature of the existing use.

Zoning Objective	SFRA Map Reference	Available Mapping	Watercourse ID	Flood Risk Comment	Recommended Action
				The watercourse is only mapped by NIFM and therefore Flood Zones cannot be assigned. Available NIFM indicates that areas of the sites are at risk of flooding.	Development proposals for this site should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
M4	M4.3	NIFM	Sneem	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is only mapped by NIFM and therefore Flood Zones cannot be assigned. Available NIFM indicates that areas of the sites are at risk of flooding.	The potential sites at risk are existing built up area and any development proposal at the site should be minor and ancillary to the nature of the existing use. Development proposals for this site should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
O1	O1.1 & O1.2	NIFM	Sneem	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is only mapped by NIFM and therefore Flood Zones cannot be assigned. Available NIFM indicates that areas of the sites are at risk of flooding.	Lands at risk are intended for development at some future date, but no specific land use has been identified. Given the land use for this strategic reserve has not been identified and development is not envisaged during the lifetime of this LAP, it is premature to consider potential measures or restrictions on development. If it is intended to apply a specific land use zoning to these lands in the future, it is recommended that a Stage 3 Detailed Flood Risk Assessment is carried out so that the sequential approach can be used and to establish appropriate land use zonings throughout the site, in conjunction with a Justification Test, where necessary. The Stage 3 Detailed Flood Risk Assessment should be completed in accordance with the Planning System and Flood Risk Management Guidelines (2009). In particular, the flood risk assessment should:

Zoning Objective	SFRA Map Reference	Available Mapping	Watercourse ID	Flood Risk Comment	Recommended Action
					• Confirm the flood risk and flood zones for the existing and future scenarios. • Considering a range of possible land uses, establish what measures are necessary to mitigate flood risk and provide for the sustainable development of the lands without increasing flood risk elsewhere. • Identify the requirements for any compensation storage, the possible locations of same and the implications that has on zoning and development management. Assess the residual risks associated with the development and the hazards to users of the site.
R2.6	R2.6.6 & R2.6.7	NIFM	Sneem	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is only mapped by NIFM and therefore Flood Zones cannot be assigned. Available NIFM indicates that areas of the sites are at risk of flooding.	The potential sites at risk are existing residential area and any development proposal at the site should be minor and ancillary to the nature of the existing use. Development proposals for this site should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
S3	S3	NIFM	Sneem	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is only mapped by NIFM and therefore Flood Zones cannot be assigned. Available NIFM indicates that the entire site is at risk of flooding.	The potential sites at risk are zoned for Community Facilities. Development proposals for this site should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).

Zoning Objective	SFRA Map Reference	Available Mapping	Watercourse ID	Flood Risk Comment	Recommended Action
Baile an Sceilig					
R2.6	R2.6.1 & R2.6.2	Unmapped	Kinard East	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is only mapped by NIFM and therefore Flood Zones cannot be assigned. Available NIFM indicates that flood risk is largely confined to a small localised encroachment in the eastern area of the site.	The potential sites at risk are existing residential area and any development proposal at the site should be minor and ancillary to the nature of the existing use. Development proposals for this site should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
Chapeltown					
G1	G1.1 – G1.3	Unmapped	Feaghmaan West	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is unmapped and therefore Flood Zones cannot be assigned.	The land use zoning is water compatible so therefore no further action is recommended. Any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
M2	M2.1 & M2.2	Unmapped	Feaghmaan West	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is unmapped and therefore Flood Zones cannot be assigned.	The potential sites at risk are existing built up area and any development proposal at the site should be minor and ancillary to the nature of the existing use. Development proposals for this site should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
R2.6	R2.6	Unmapped	Feaghmaan West	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is unmapped and therefore Flood Zones cannot be assigned.	The potential sites at risk are existing residential area and any development proposal at the site should be minor and ancillary to the nature of the existing use.

Zoning Objective	SFRA Map Reference	Available Mapping	Watercourse ID	Flood Risk Comment	Recommended Action
					Development proposals for this site should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
Glenbeigh					
C5	C5	NIFM	Behy	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is only mapped by NIFM and therefore Flood Zones cannot be assigned. Available NIFM indicates that large areas of the site is at risk of flooding.	The lands contain O Connors Caravan Park and the land zoning objective is consistent with this use. Any development proposal at the site should be minor and ancillary to the nature of the existing use. Development proposals for this site should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
R2.6	R2.6	NIFM	Behy	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is only mapped by NIFM and therefore Flood Zones cannot be assigned. Available NIFM indicates that large areas of the site is at risk of flooding.	The potential sites at risk are existing residential area and any development proposal at the site should be minor and ancillary to the nature of the existing use. Development proposals for this site should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
Knightstown					
G1	G1.4	Unmapped	Farranreagh	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is unmapped and therefore Flood Zones cannot be assigned.	The land use zoning is water compatible so therefore no further action is recommended. Any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance

Zoning Objective	SFRA Map Reference	Available Mapping	Watercourse ID	Flood Risk Comment	Recommended Action
					with the Planning System and Flood Risk Management Guidelines (2009).
G3	G3.1	Unmapped	Farranreagh	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is unmapped and therefore Flood Zones cannot be assigned.	The land use zoning is water compatible so therefore no further action is recommended. Any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
M1	M1	Unmapped	Farranreagh	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is unmapped and therefore Flood Zones cannot be assigned.	The potential site at risk is zoned for Mixed Use, General Development, Opportunity/Proposed Site. This site is zoned for Mixed Use General Development. Village Streetscape. Development proposals for this site should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
R2.6	R2.6.1 & R2.6.2	Unmapped	Farranreagh	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is unmapped and therefore Flood Zones cannot be assigned.	The potential sites at risk are existing residential area and any development proposal at the site should be minor and ancillary to the nature of the existing use. Development proposals for this site should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
R4.6	R4.6	Unmapped	Farranreagh	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is unmapped and therefore Flood Zones cannot be assigned.	The potential sites at risk are zoned as Strategic Residential Reserve with proposed residential development at some future date. Development proposals for this site should include a site-specific flood risk assessment,

Zoning Objective	SFRA Map Reference	Available Mapping	Watercourse ID	Flood Risk Comment	Recommended Action
					completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
G1	G1.4	Unmapped	IE_SW_22F240620 (Seg Code: 22_3159)	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is unmapped and therefore Flood Zones cannot be assigned.	The land use zoning is water compatible so therefore no further action is recommended. Any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
M1	M1.1	Unmapped	IE_SW_22F240620 (Seg Code: 22_3159)	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is unmapped and therefore Flood Zones cannot be assigned.	The potential site at risk is zoned for Mixed Use, General Development, Opportunity/Proposed Site. This site is zoned for Mixed Use General Development. Village Streetscape. Development proposals for this site should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
R2.6	R2.6.3	Unmapped	IE_SW_22F240620 (Seg Code: 22_3159)	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is unmapped and therefore Flood Zones cannot be assigned.	The potential sites at risk are existing residential area and any development proposal at the site should be minor and ancillary to the nature of the existing use. Development proposals for this site should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
Portmagee					
G1	G1.1	Unmapped	Portmagee	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding.	The land use zoning is water compatible so therefore no further action is recommended.

Zoning Objective	SFRA Map Reference	Available Mapping	Watercourse ID	Flood Risk Comment	Recommended Action
				The watercourse is unmapped and therefore Flood Zones cannot be assigned.	Any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
Waterville					
G3	G3	NIFM	Waterville	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is only mapped by NIFM and therefore Flood Zones cannot be assigned. Available NIFM indicates that small areas of the site is at risk of flooding.	The land use zoning is water compatible so therefore no further action is recommended. Any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
G4	G4	NIFM	Waterville & Finglas River	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is only mapped by NIFM and therefore Flood Zones cannot be assigned. Available NIFM indicates that small areas of the site is at risk of flooding.	The land use zoning is water compatible so therefore no further action is recommended. Any development on these lands should be accompanied by a site-specific flood risk assessment which is completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).
M4	M4	NIFM	Finglas River	Areas within the generalised zoning objective been identified as being at risk of fluvial flooding. The watercourse is only mapped by NIFM and therefore Flood Zones cannot be assigned. Available NIFM indicates that areas of the site is at risk of flooding.	The potential site at risk is existing built up area and any development proposal at the site should be minor and ancillary to the nature of the existing use. Development proposals for this site should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).

Table 5.1: Summary of Land Zones at Flood Risk from NIFM Watercourses & Unmapped Watercourses

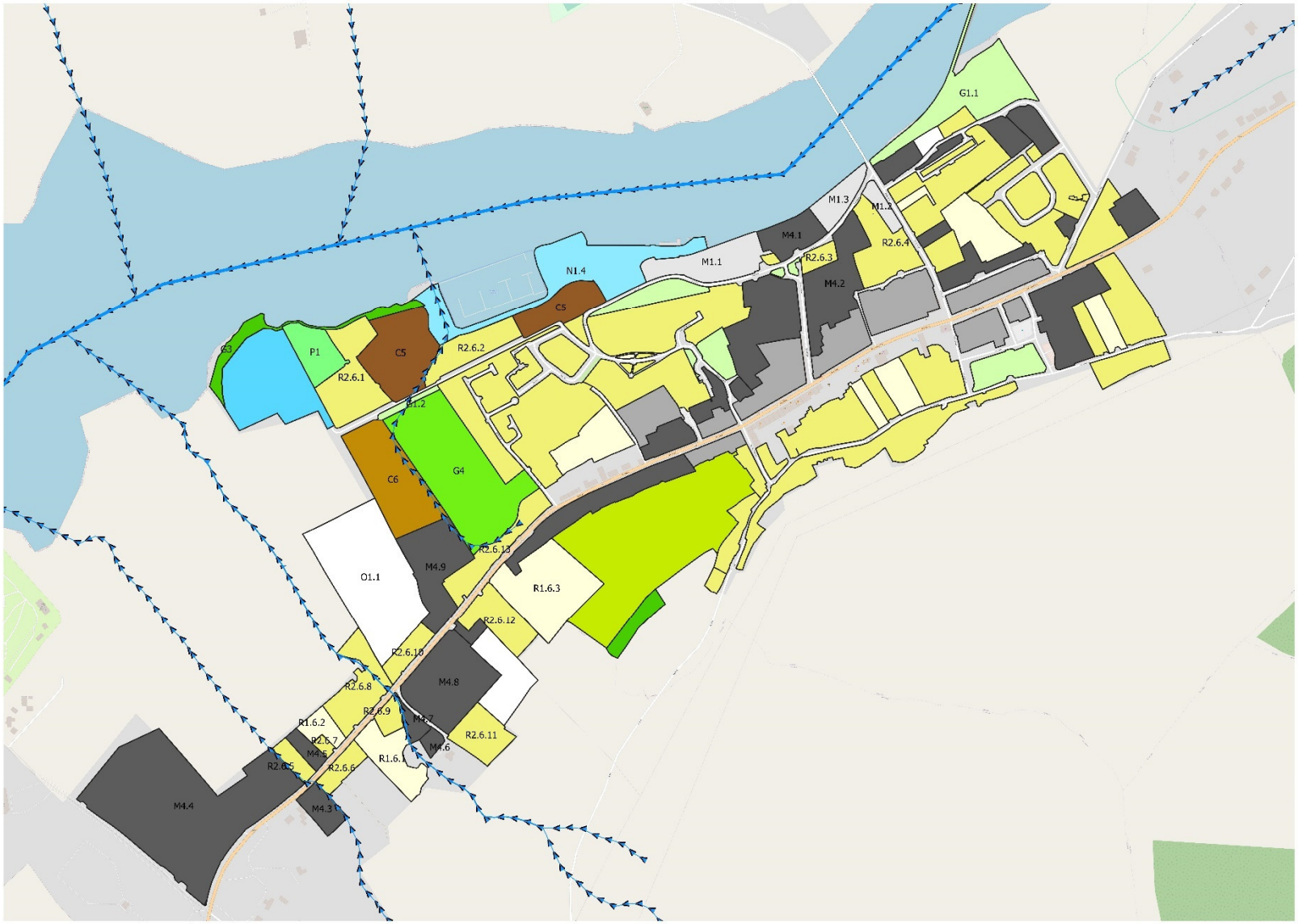


Figure 5.10: Cahersiveen EPA Watercourses Map

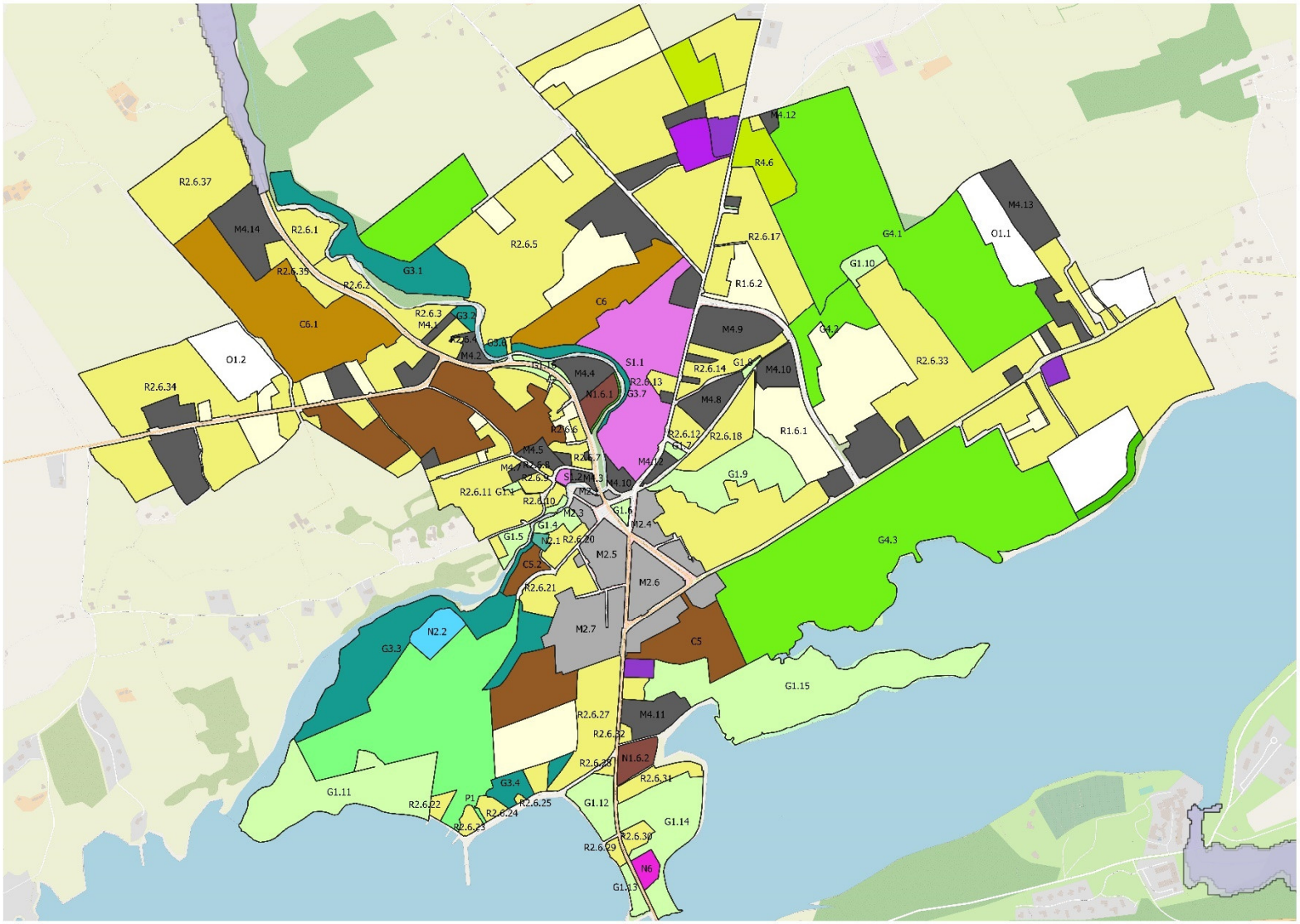


Figure 5.11: Kenmare NIFM 1% & 0.1% AEP Present Day

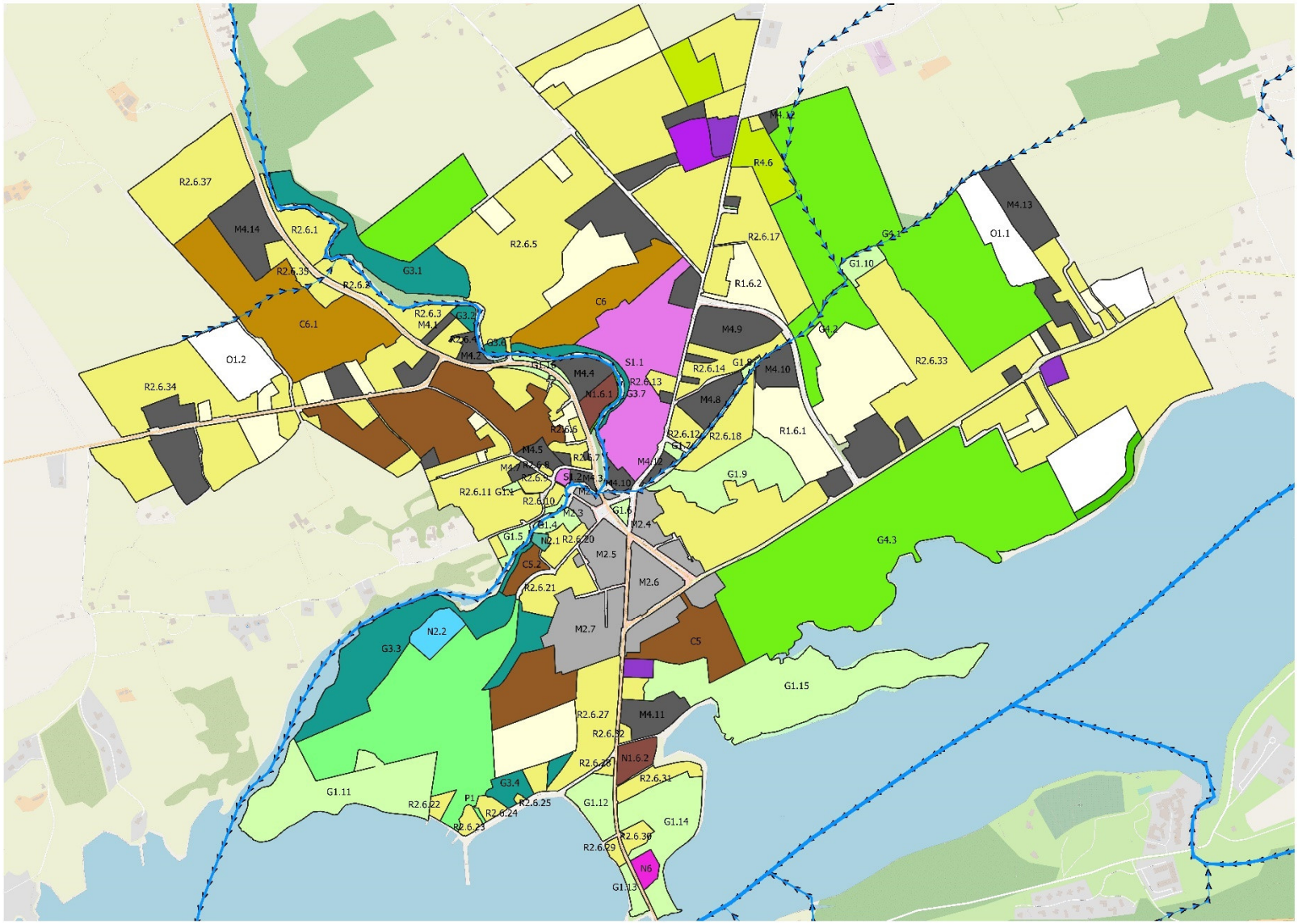


Figure 5.12: Kenmare EPA Watercourses Map

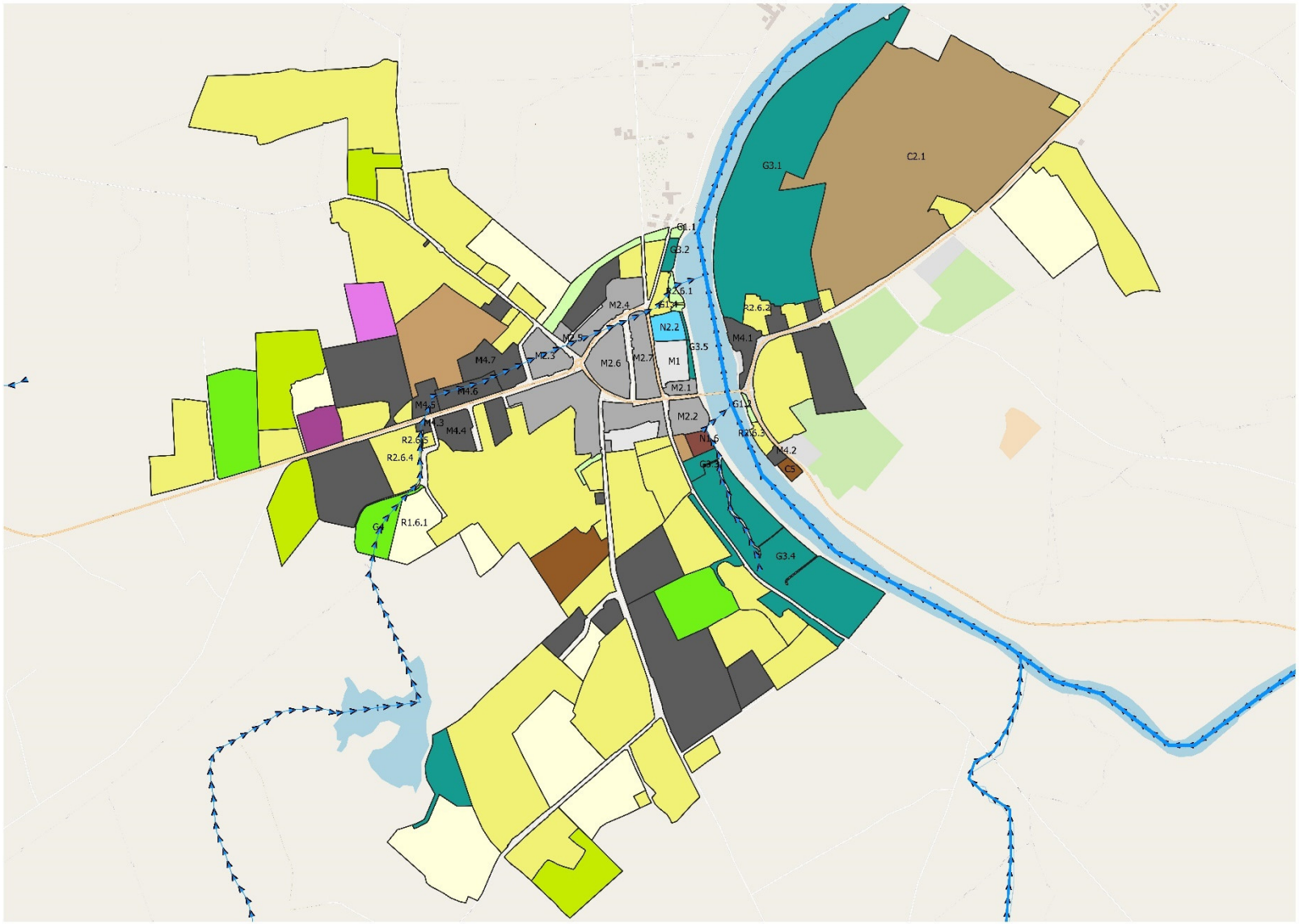


Figure 5.13: Killorglin EPA Watercourses Map

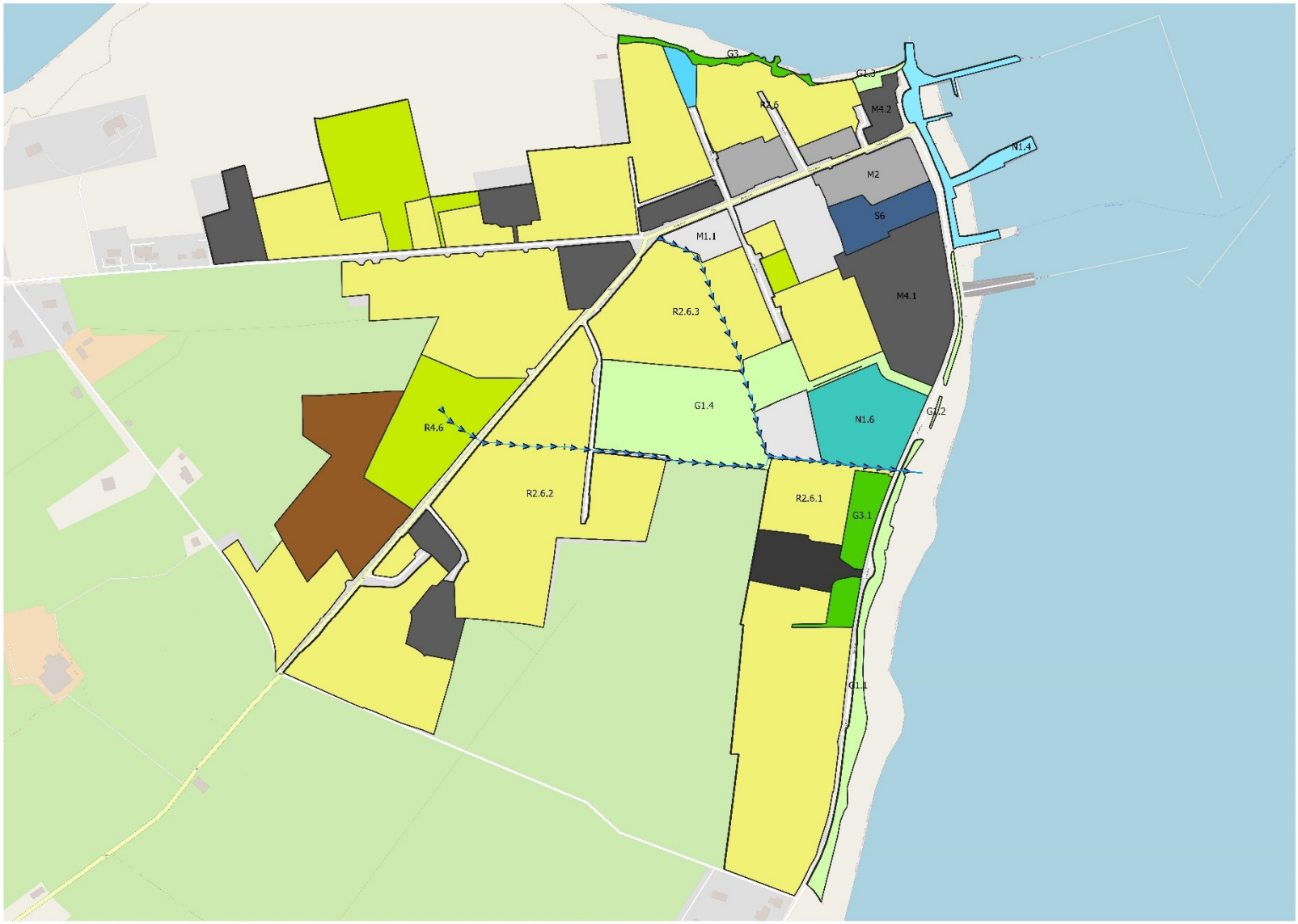


Figure 5.14: Knightstown EPA Watercourses Map

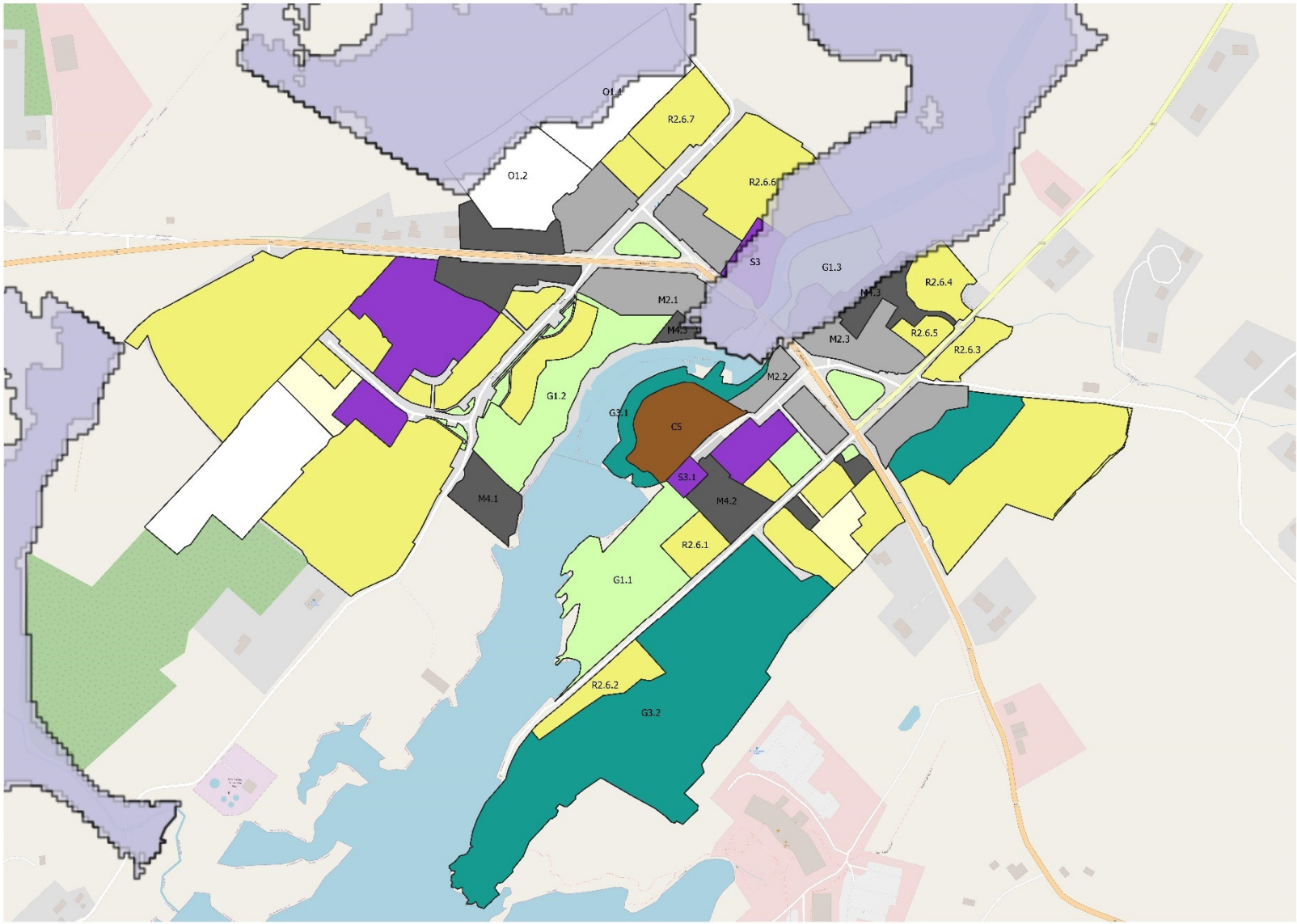


Figure 5.15: Sneem NIFM 1% & 0.1% AEP Present Day

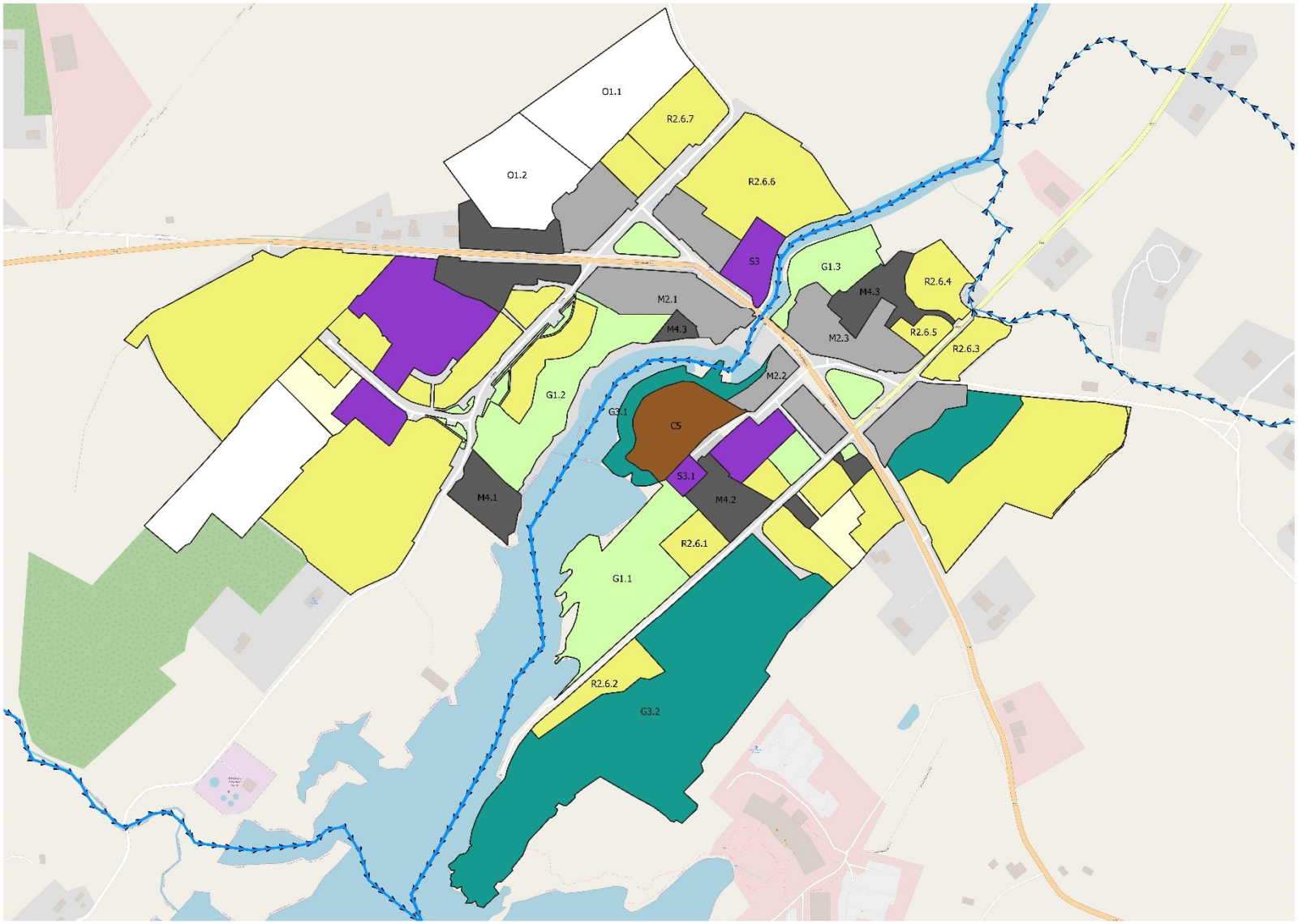


Figure 5.16: Sneem EPA Watercourses Map

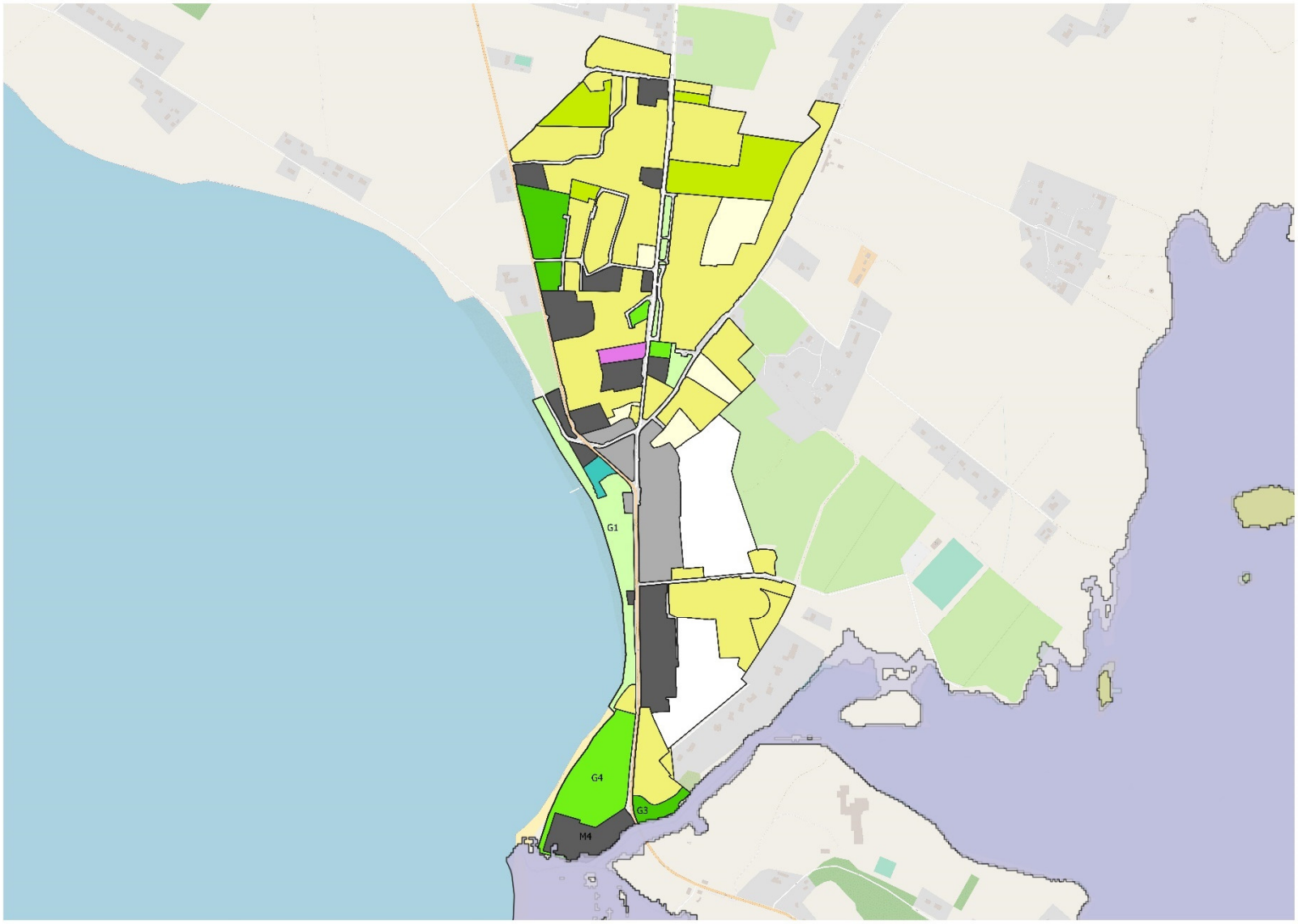


Figure 5.17: Waterville NIFM 1% & 0.1% AEP Present Day

Figure 5.18: Baile an Sceilg EPA Watercourses Map

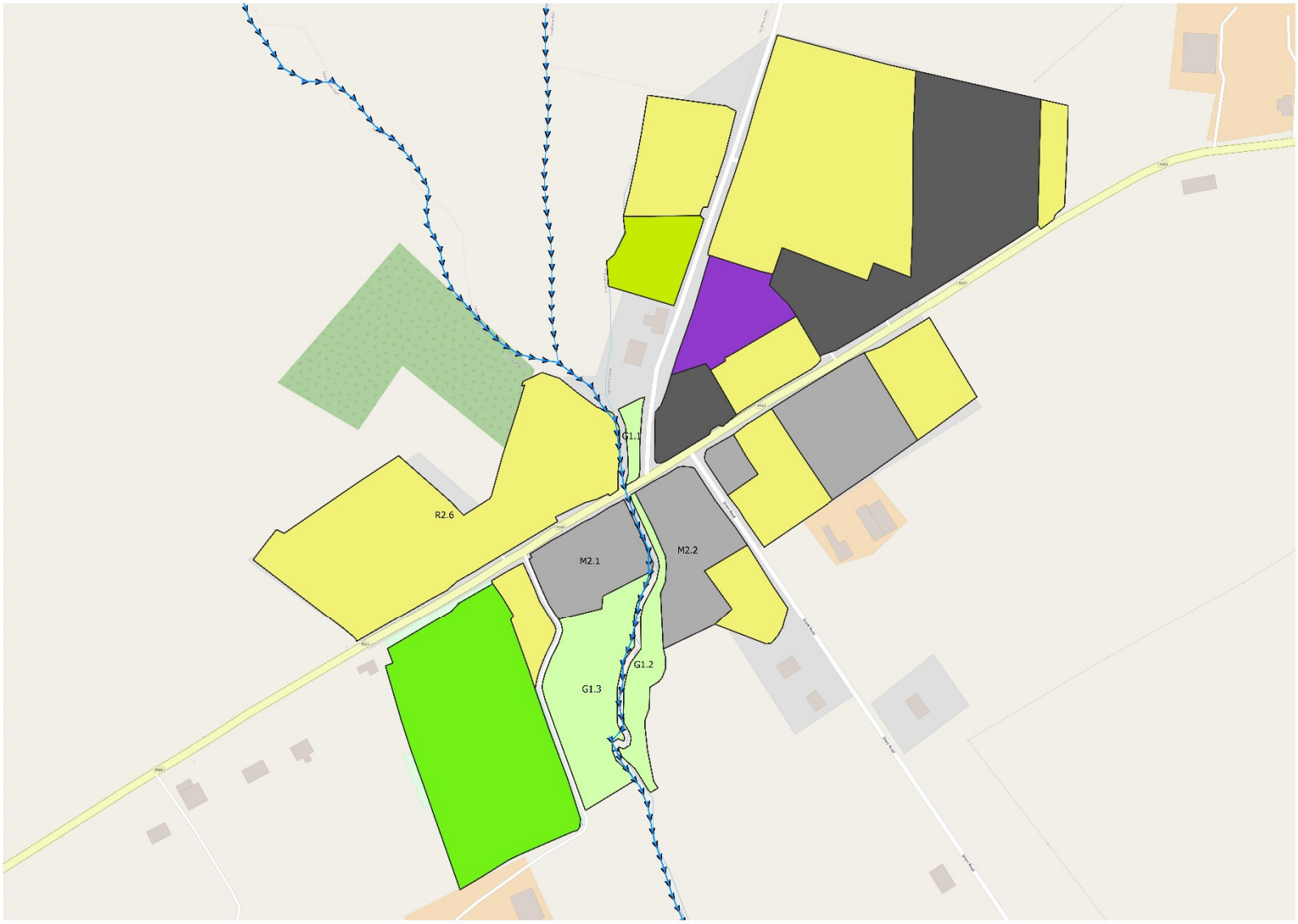


Figure 5.19: Chapeltown EPA Watercourses Map

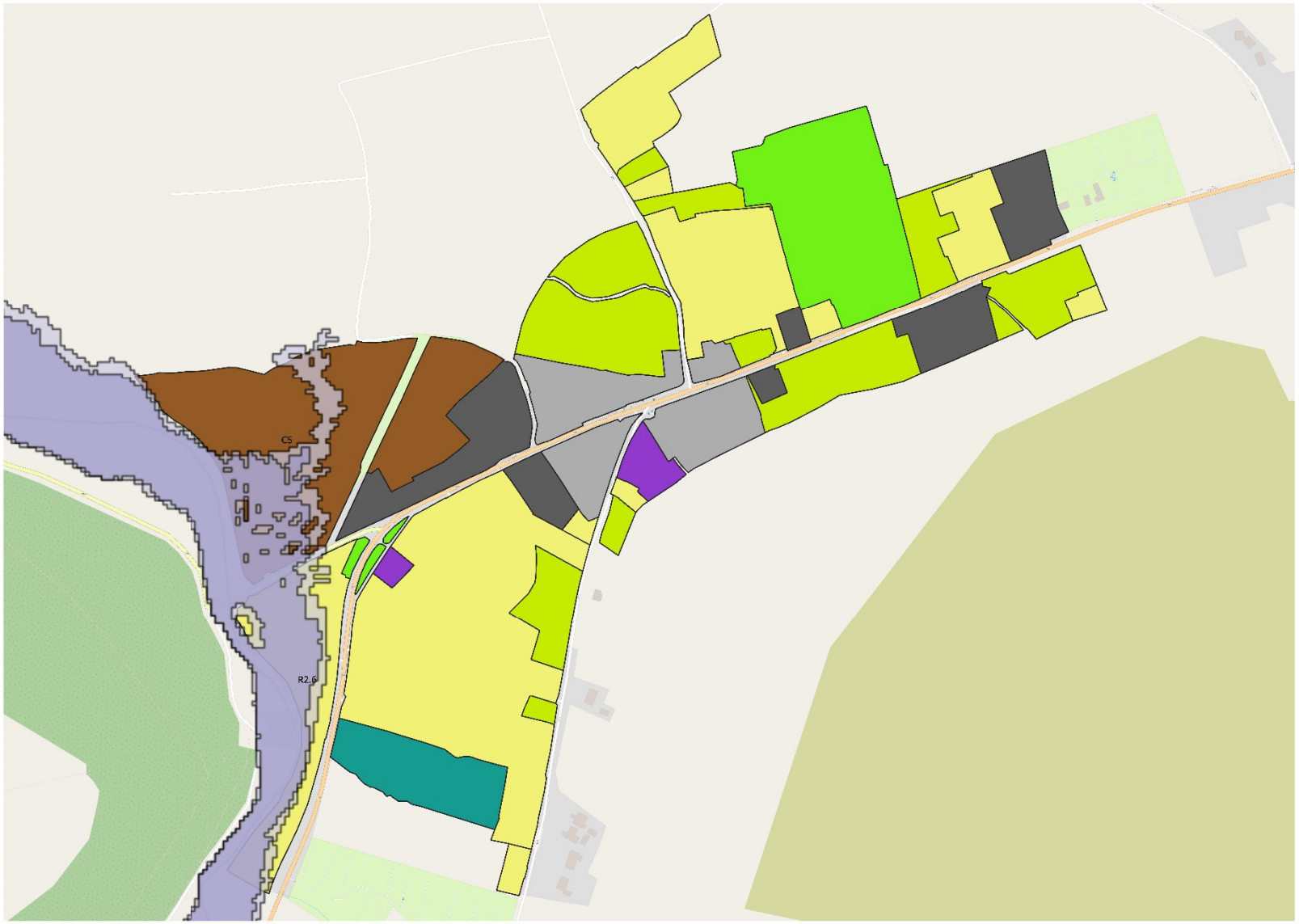


Figure 5.20: Glenbeigh NIFM 1% & 0.1% AEP Present Day

5.2 Justification Tests

5.2.1 Kenmare

The following sub-sections outlines the Plan-making Justification Test which was undertaken in relation to the land use zoning of specific sites which were identified in Section 5.1.

5.2.1.1 Justification Test Criterion 1

Justification Test Criterion 1	
Justification Criteria	Justification
The urban settlement is targeted for growth in the Kerry CDP	Kenmare has been identified as a large scale 'Regional Town' in the Kerry CDP 2022-28. It is an aim to ensure that these towns provide a housing, employment, or service function serving a local region within the county.

Table 5.2: Justification Test Criterion 1- Kenmare - N1.6 (N1.6.1) Car Park

5.2.1.2 Justification Test Criterion 2 and 3

Justification Test (N1.6/N1.6.1)	
Justification Criteria	Justification
The urban settlement is targeted for growth in the CDP.	Refer to Section 5.2.1.1.
The zoning is required to achieve the proper planning and sustainable development of an urban settlement and is; 1. Essential to facilitate the regeneration and / or expansion of the centre of the urban settlement; 2. Comprises significant previously developed and / or under-utilised lands; 3. Is within or adjoining the core of an established or designated urban settlement; 4. Will be essential to achieving compact and sustainable urban growth; and 5. There are no suitable alternative lands for the particular use in areas at lower risk of flooding within or adjoining the core of the urban settlement.	This site has been designated for the development of a carpark. The site currently forms part of the former convent site. The convent building occupies the northern part of the site. The southern part of the site on which the carpark is proposed is located in Flood Zones A and B. One of the main tenets of the National Planning Framework is delivering compact growth within the heart of our towns and villages and is a new direction in planning for the county's future growth. This will be delivered through good placemaking underpinned by urban design, with the creation of attractive vibrant town centres and public spaces. The CDP actively promotes urban regeneration and compact growth. Placemaking and public realm improvements are essential to town centre regeneration and it is therefore essential to provide edge of town carparking rather than on-street town centre spaces. For the reasons outlined above and having regard to the CDP Objectives for development within proximity of the town centre, as well as growth in population and employment in regional towns; 1. The site is essential to facilitate the sustainable expansion of the centre of the urban settlement. 2. The site is significantly under-utilised. 3. The site is adjoining the core of the urban settlement. 4. The zoning is essential to achieving compact and sustainable urban growth. 5. There are no suitable alternative lands in areas of lower flood risk for this particular land use.

Justification Test (N1.6/N1.6.1)	
Justification Criteria	**Justification**
A Flood Risk Assessment to the appropriate level of detail has been carried out as part of the SEA, which demonstrates that flood risk to the development can be adequately managed and that the development will not cause adverse impacts elsewhere.	A SFRA has been carried out which addresses the flood risk at this site. The SFRA demonstrates that flood risk to the development can be adequately managed and that the development of the site can take place without causing adverse impacts elsewhere. Specific details need to be established as part of the site-specific flood risk assessment. Refer to Section 5.1.4 for the key findings and recommendations of the SFRA.

Table 5.3: Justification Test Criterion 2 & 3 - Kenmare - N1.6 (N1.6.1) Car Park

5.3 Future Scenarios

Although Flood Zoning is only required for the Present Day scenario the 'Planning System and Flood Risk Management Guidelines' recommend that a precautionary approach to climate change is adopted due to the level of uncertainty involved in the potential effects. For this reason, the MRFS and HEFS flood extent maps are presented below for Cahersiveen, Killorglin, Kenmare, Sneem, Waterville, Baile an Sceilg, Beaufort, Glenbeigh, Kilgarvan, Knightstown and Portmagee as these are the only settlements with land use zonings where flood mapping is available.

The MRFS and HEFS flood extent maps for the 1% AEP and 0.1% AEP events are presented in Figure 5.21 - Figure 5.47.

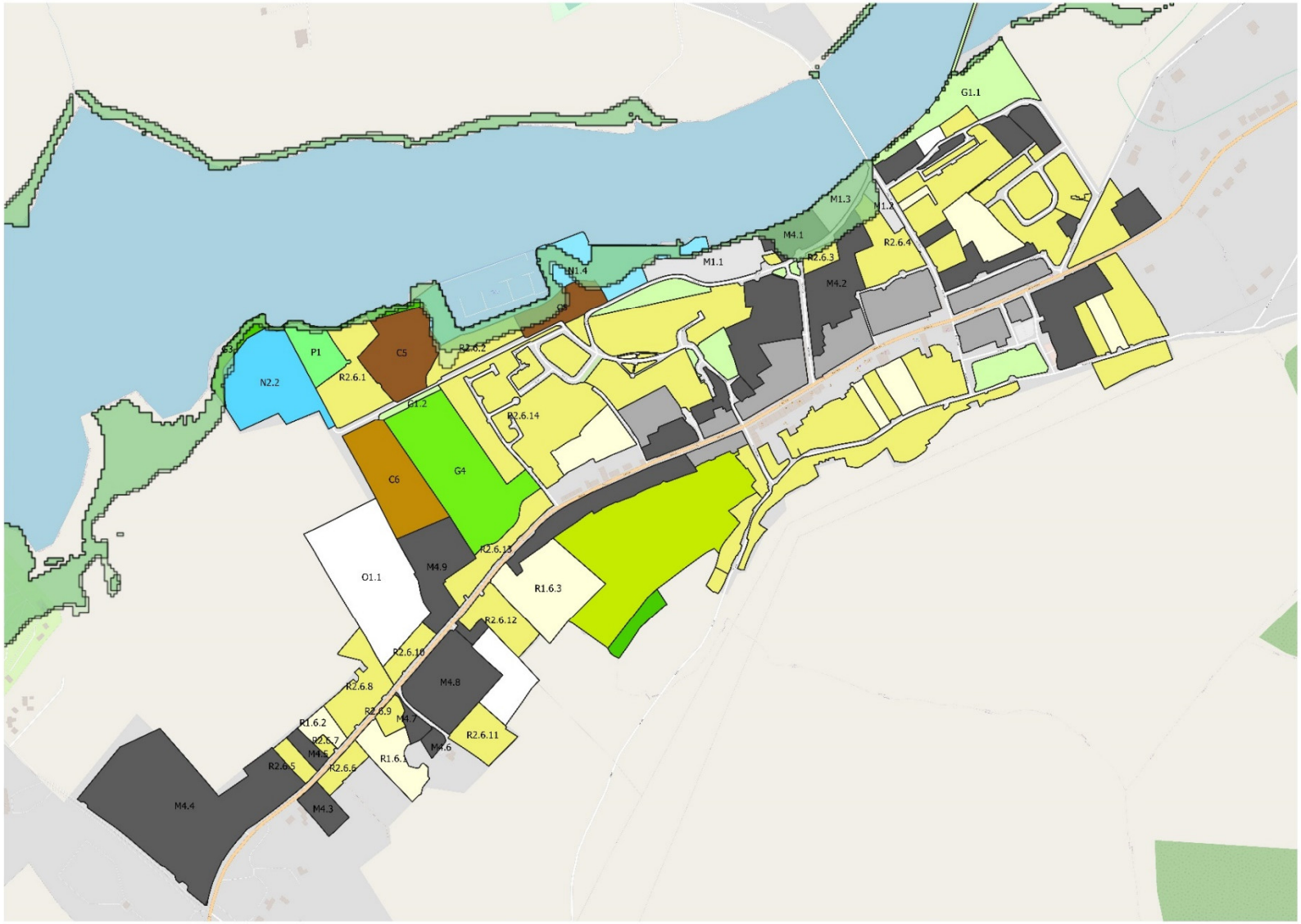


Figure 5.21: Cahersiveen NCFHM 1% & 0.1% AEP MRFS

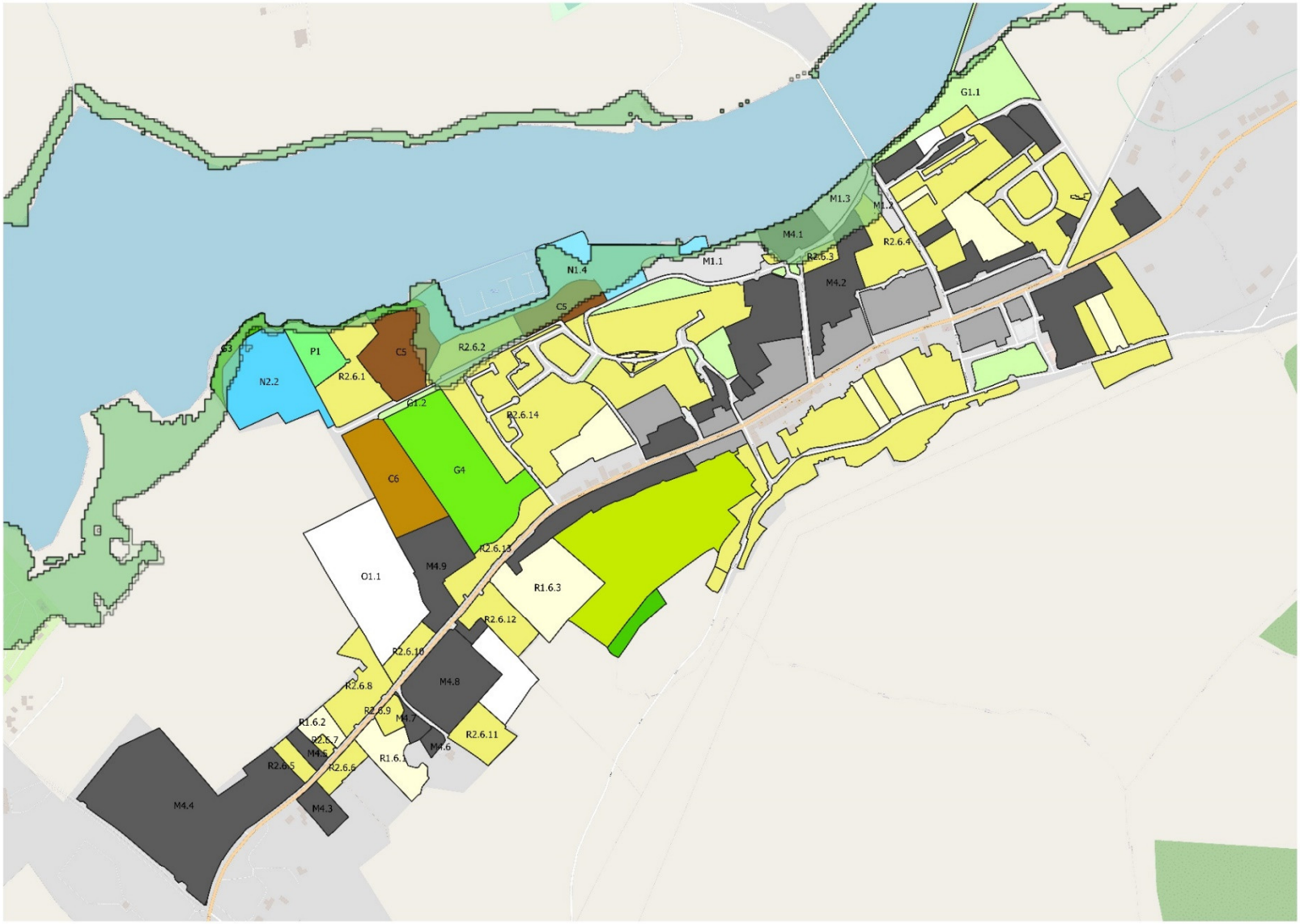


Figure 5.22: Cahersiveen NCFHM 1% & 0.1% AEP HEFS

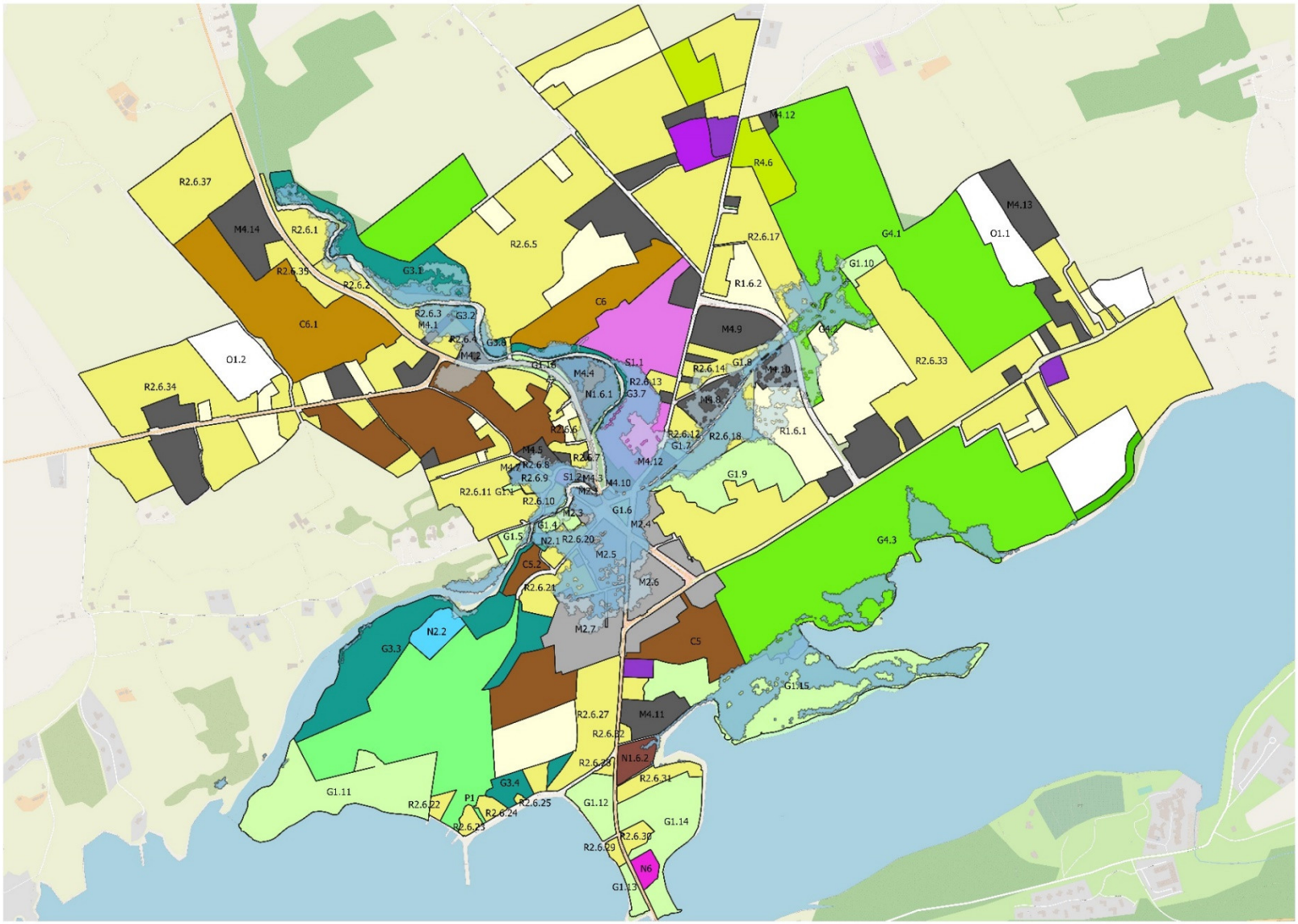


Figure 5.23: Kenmare CFRAMS Fluvial 1% & 0.1% AEP MRFS

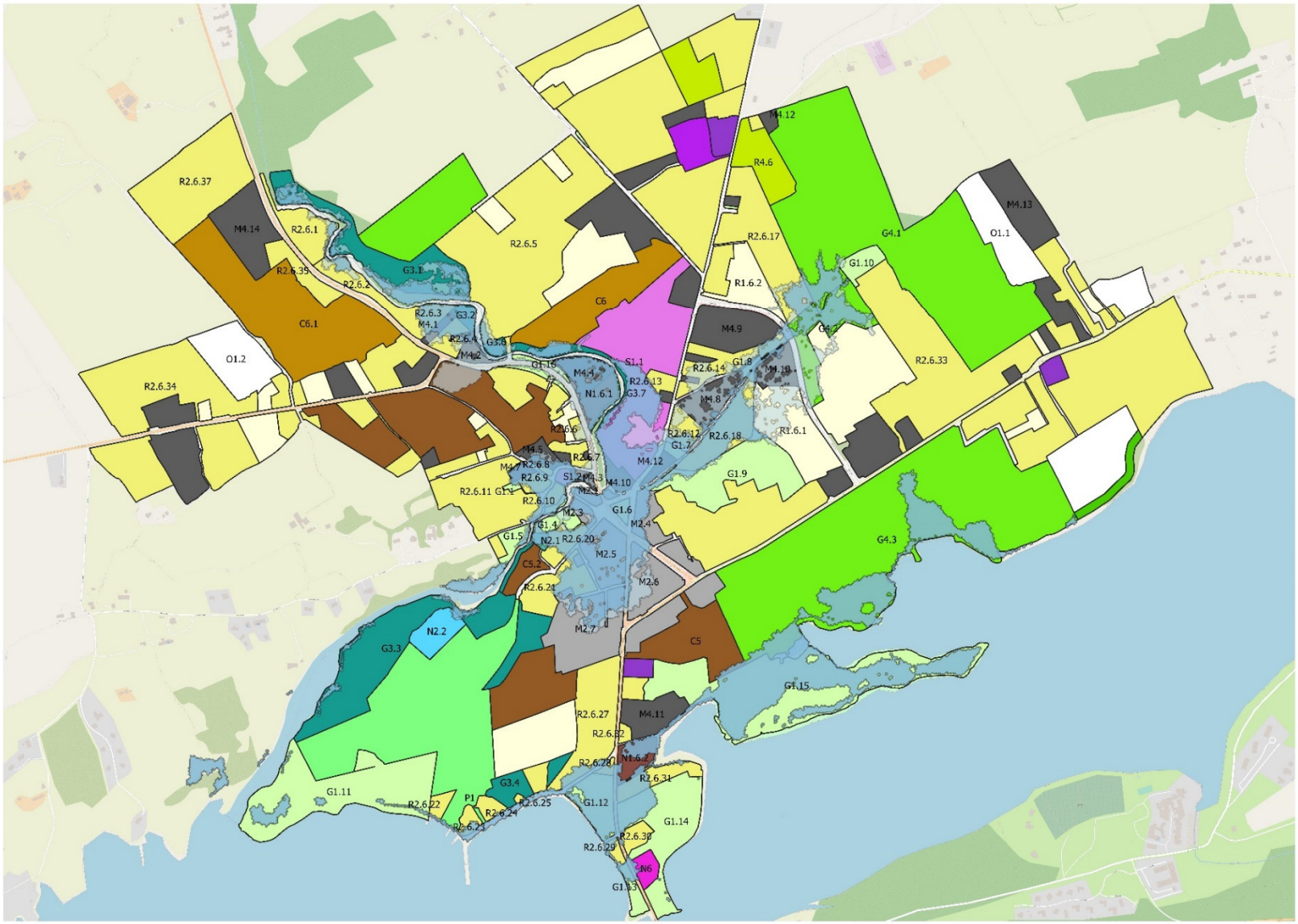


Figure 5.24: Kenmare CFRAMS Fluvial 1% & 0.1% AEP HEFS

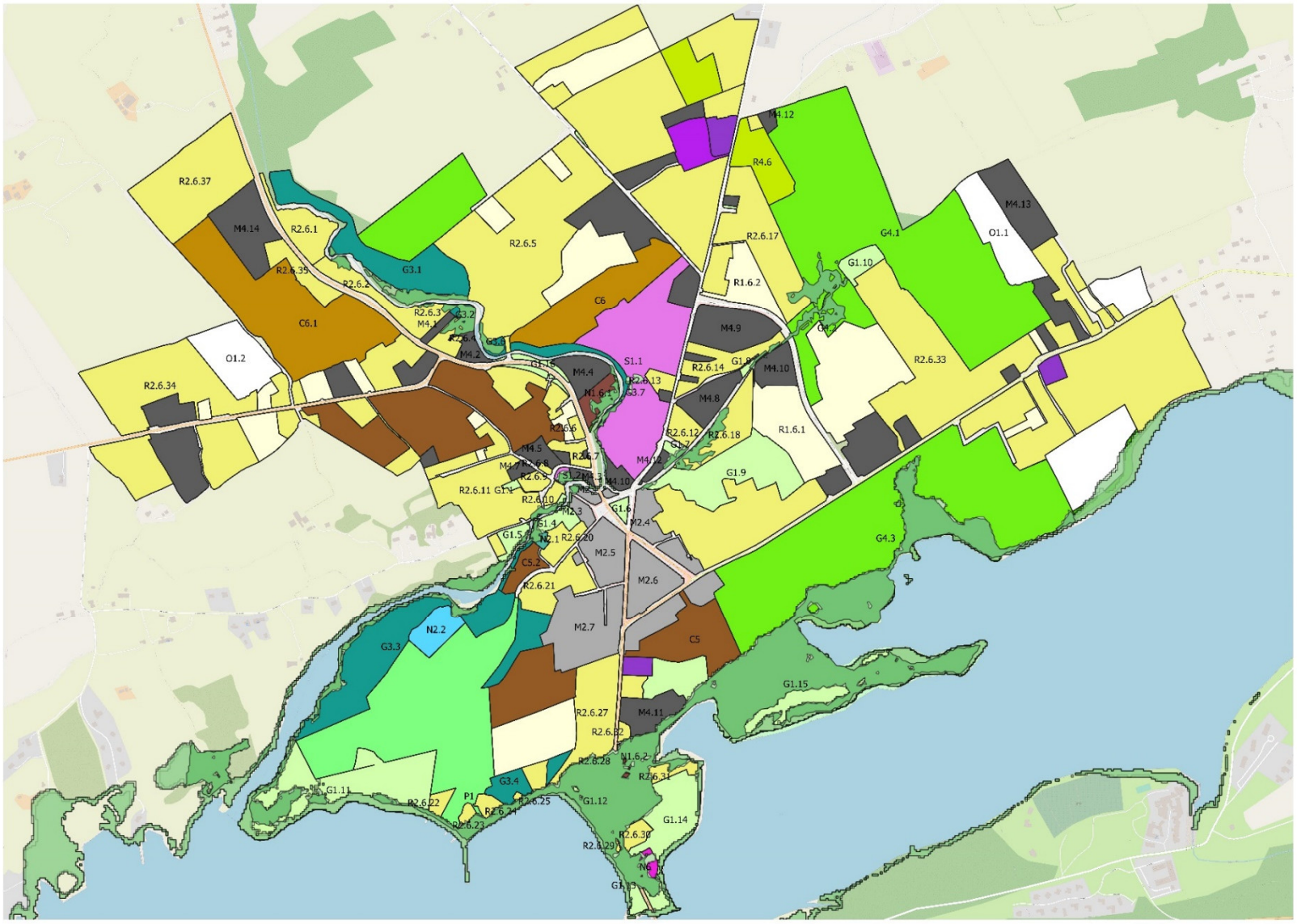


Figure 5.25: Kenmare CFRAMS Coastal & NCFHM 1% & 0.1% AEP MRFS

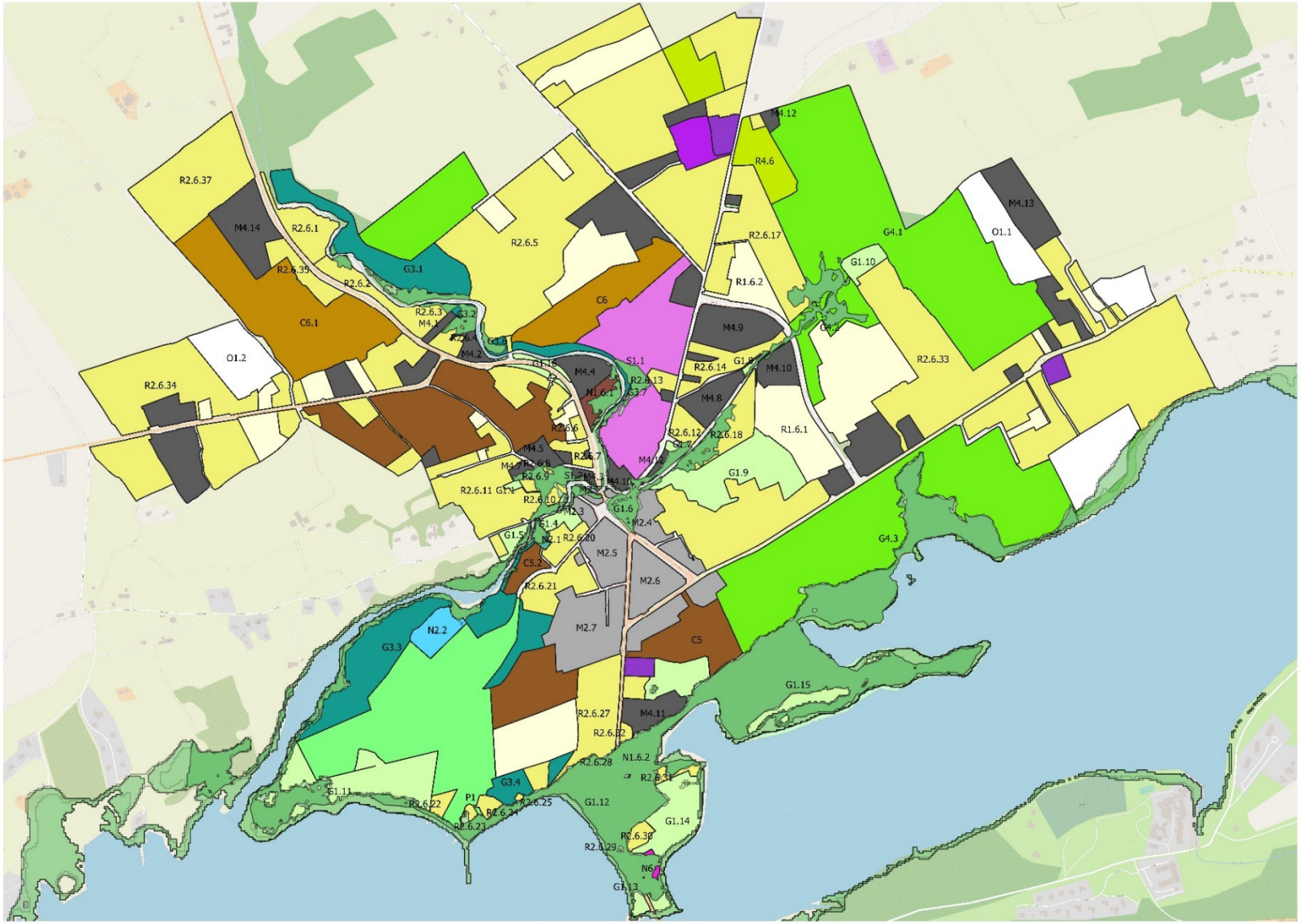


Figure 5.26: Kenmare CFRAMS Coastal & NCFHM 1% & 0.1% AEP HEFS

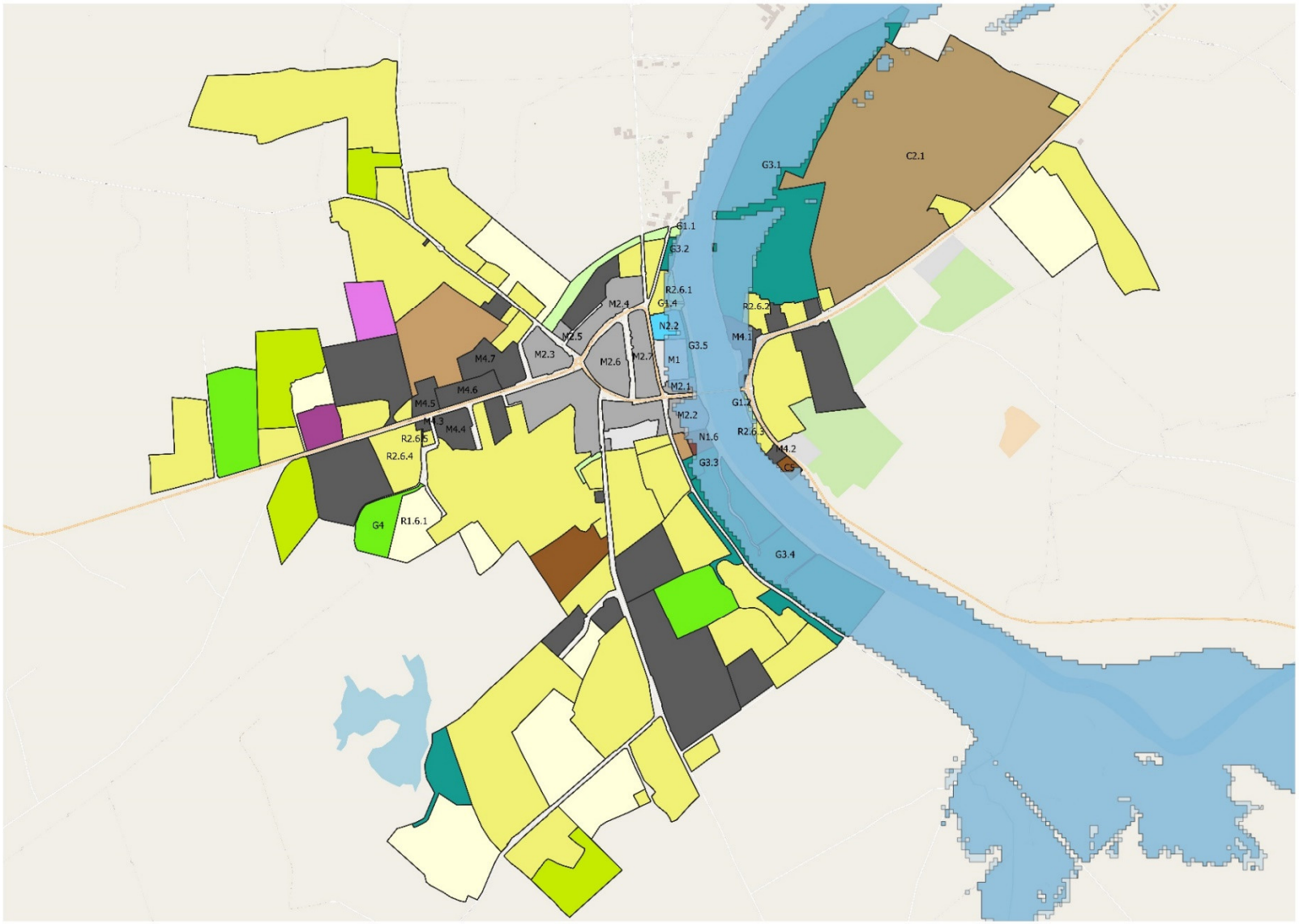


Figure 5.27: Killorglin CFRAMS Fluvial 1% & 0.1% AEP MRFS

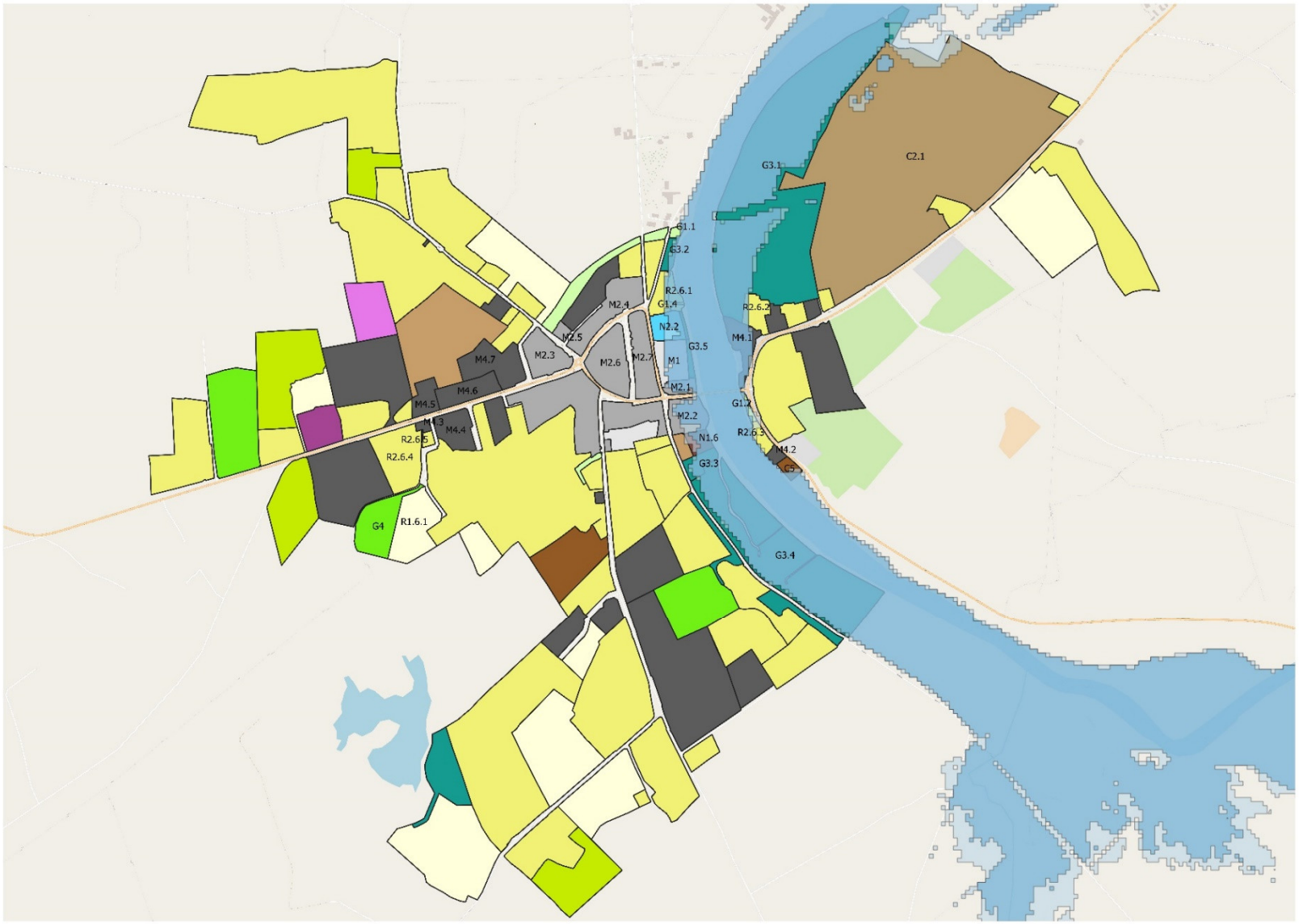


Figure 5.28: Killorglin CFRAMS Fluvial 1% & 0.1% AEP HEFS

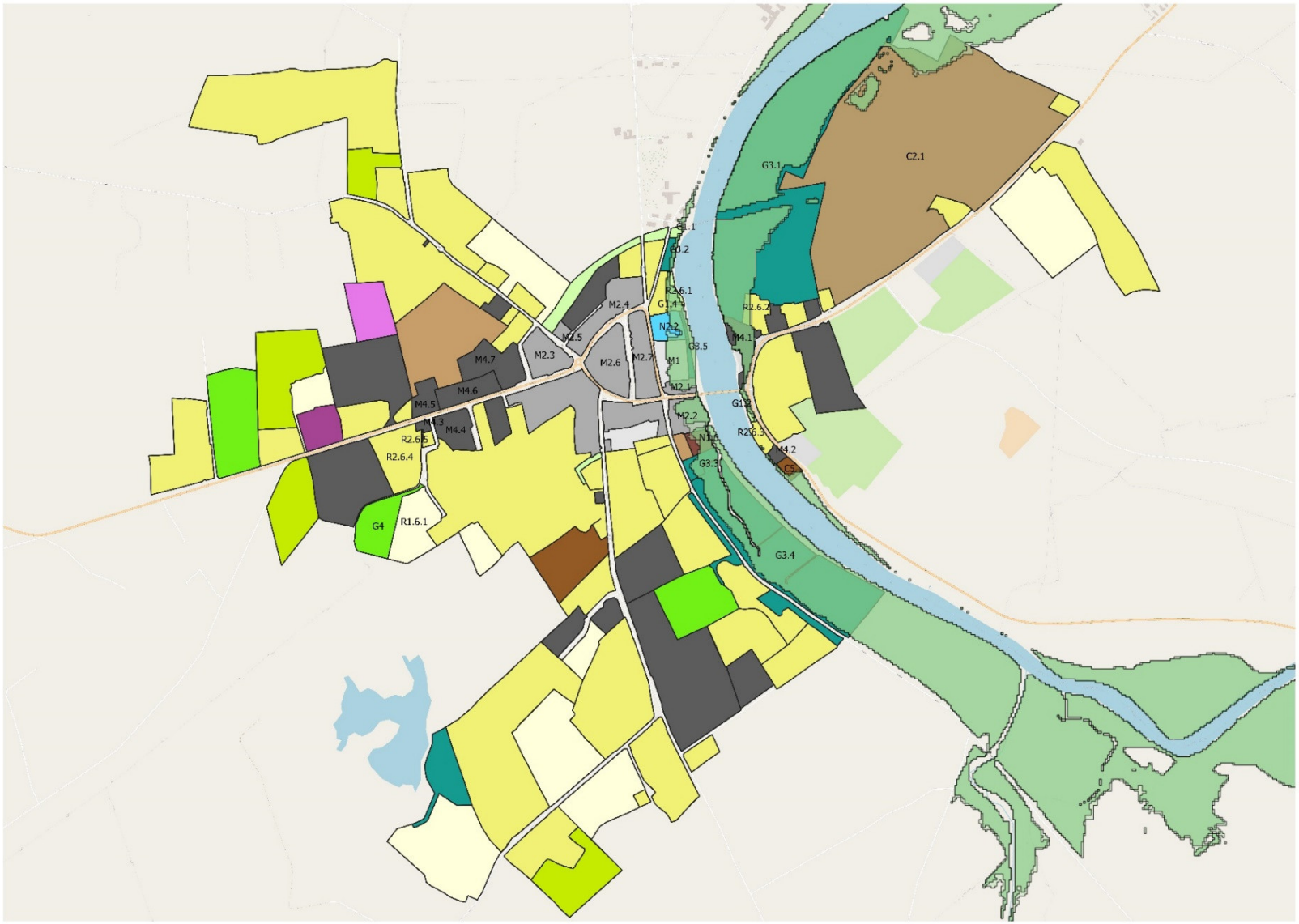


Figure 5.29: Killorglin NCFHM 1% & 0.1% AEP MRFS

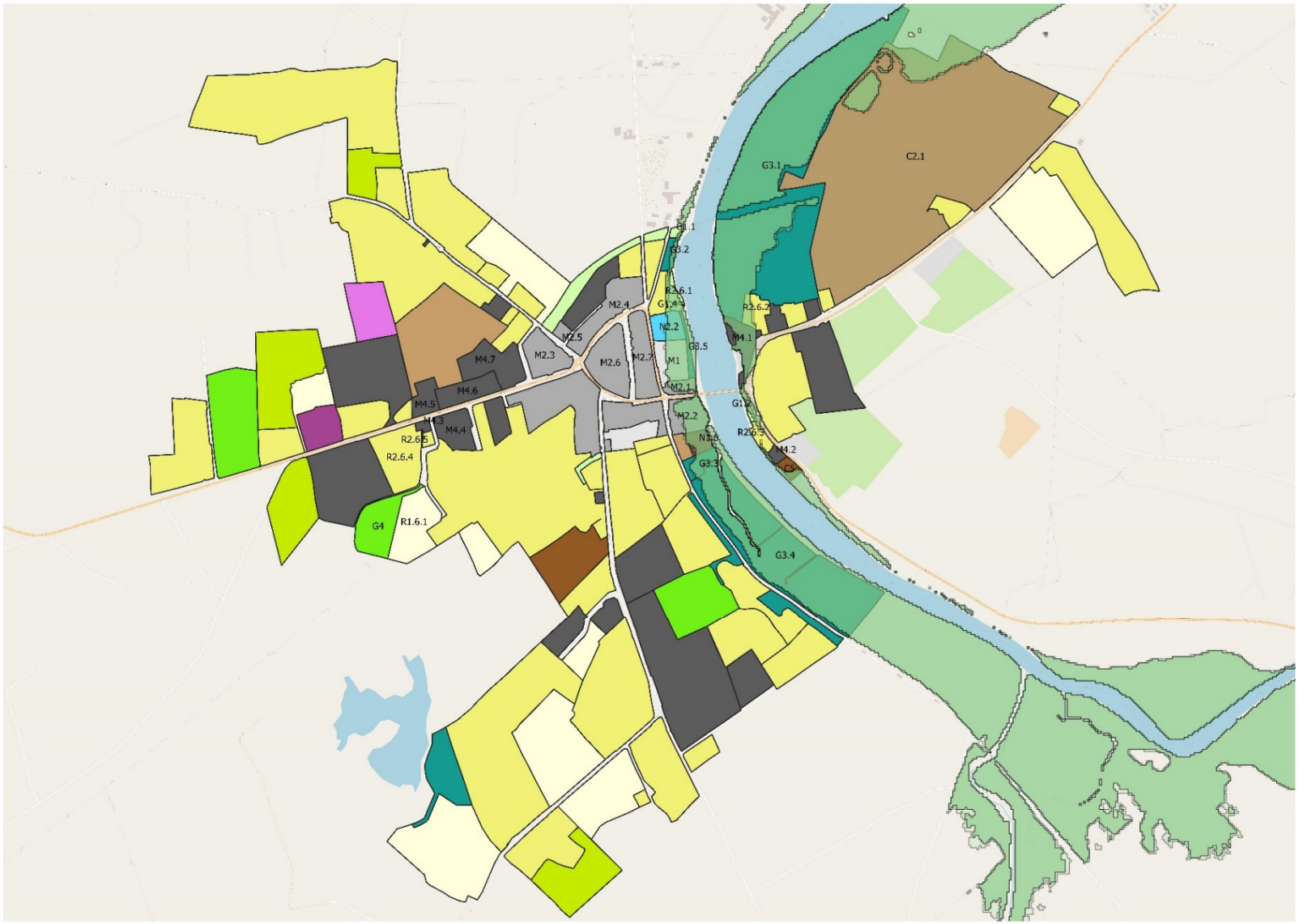


Figure 5.30: Killorglin NCFHM 1% & 0.1% AEP HEFS

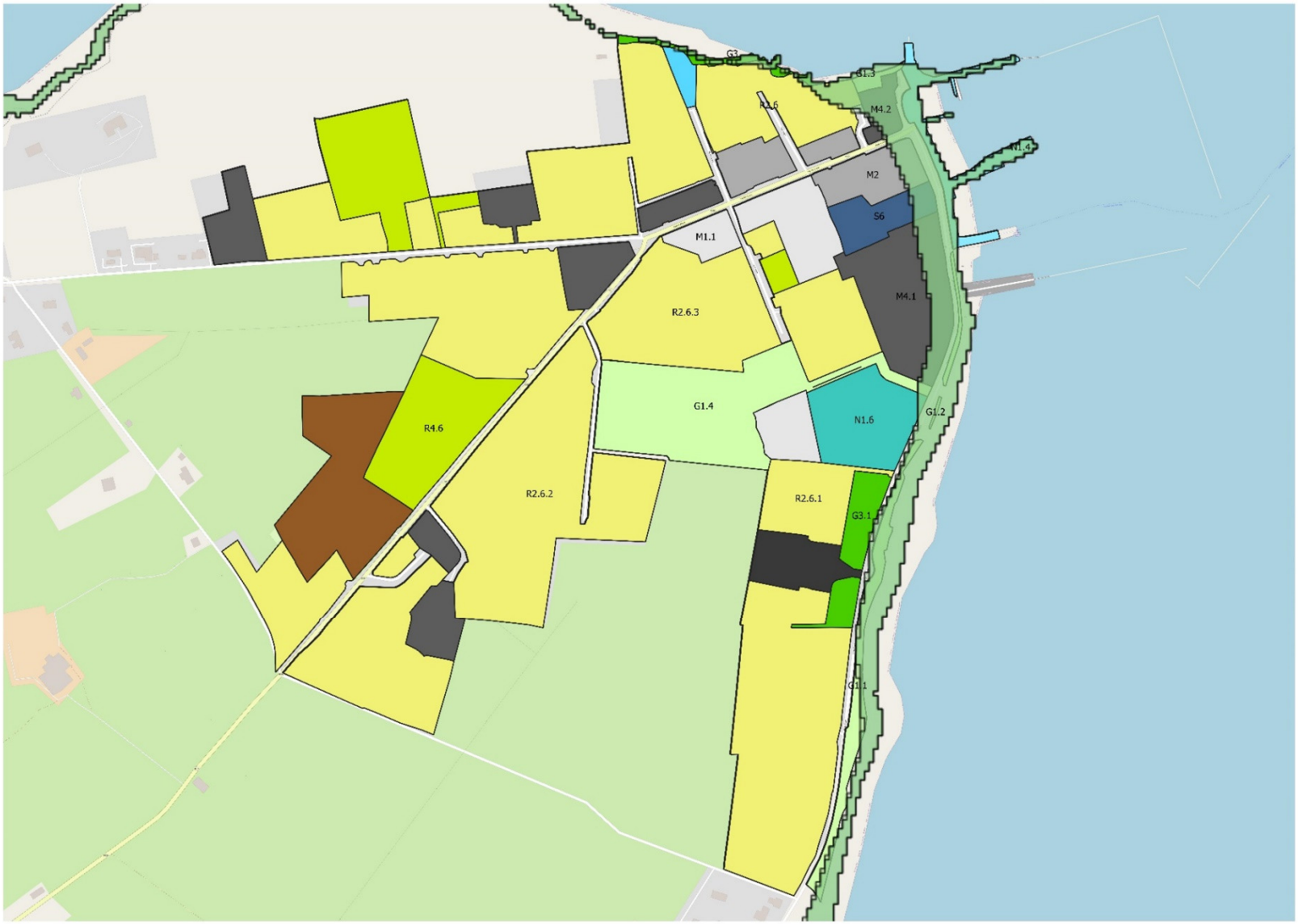


Figure 5.31: Knightstown NCFHM 1% & 0.1% AEP MRFS

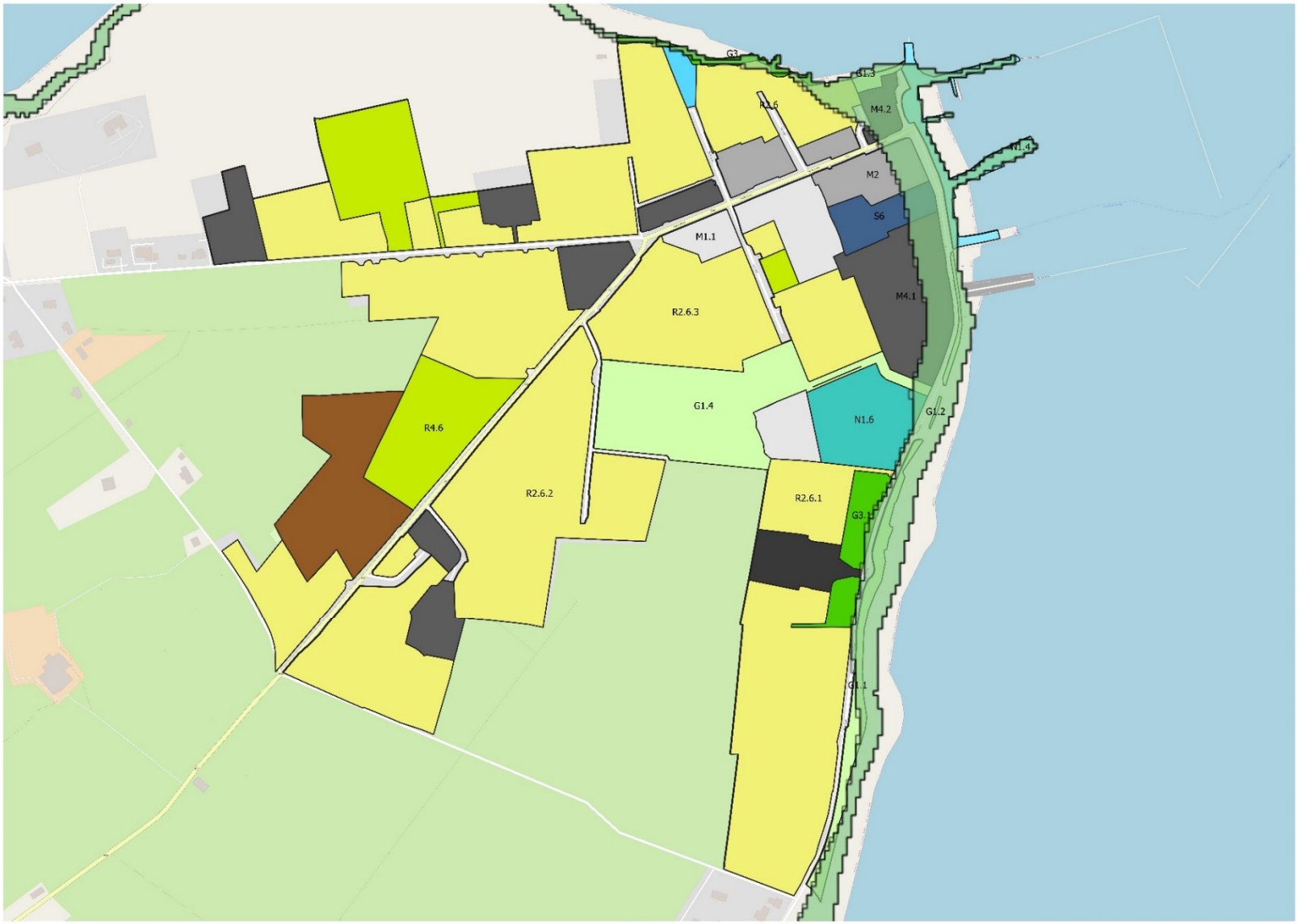


Figure 5.32: Killorglin NCFHM 1% & 0.1% AEP HEFS

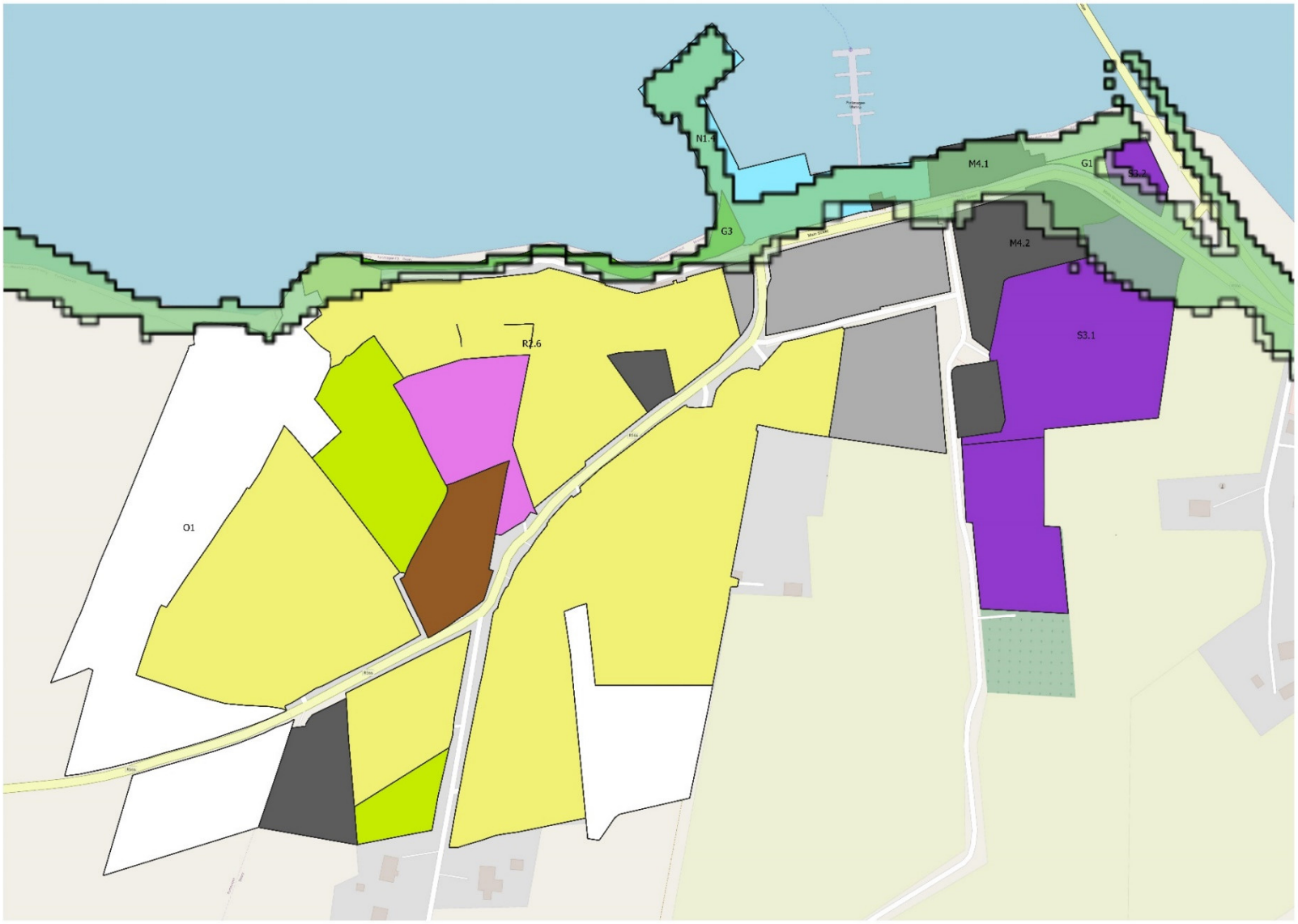


Figure 5.33: Portmagee CFRAMS Coastal & NCFHM 1% & 0.1% AEP MRFS

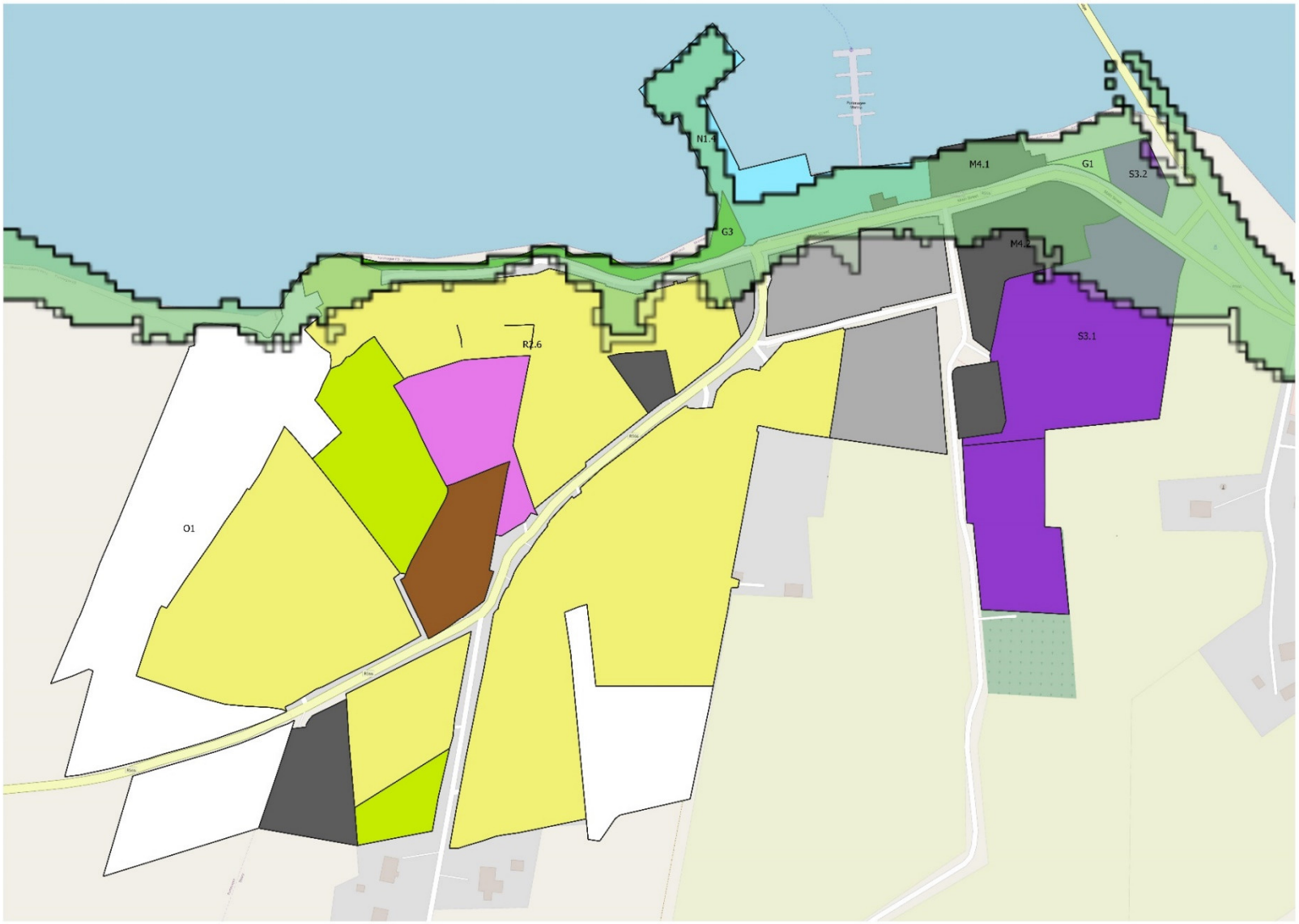


Figure 5.34: Portmagee CFRAMS Coastal & NCFHM 1% & 0.1% AEP HEFS

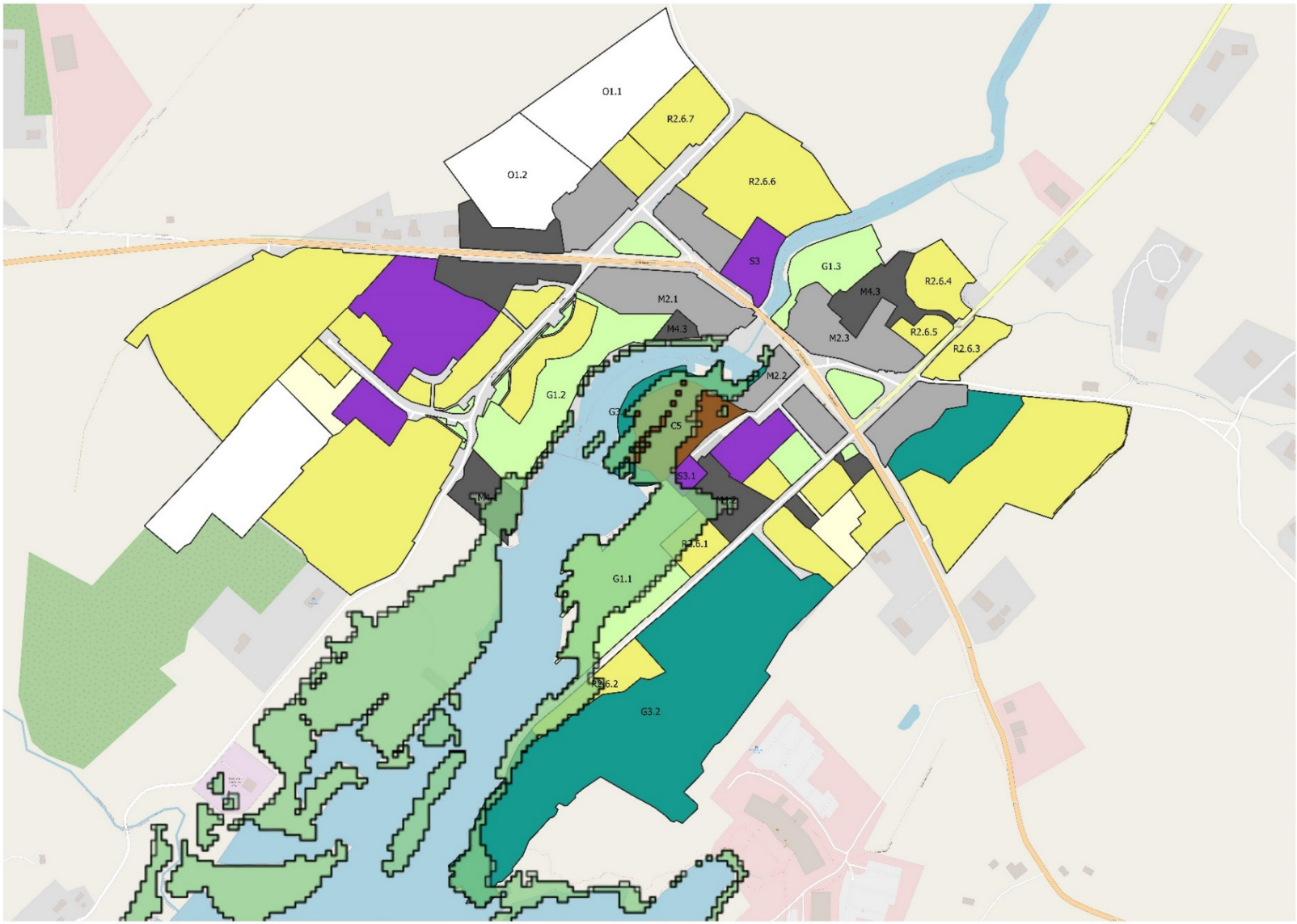


Figure 5.35: Sneem NCFHM 1% & 0.1% AEP MRFS

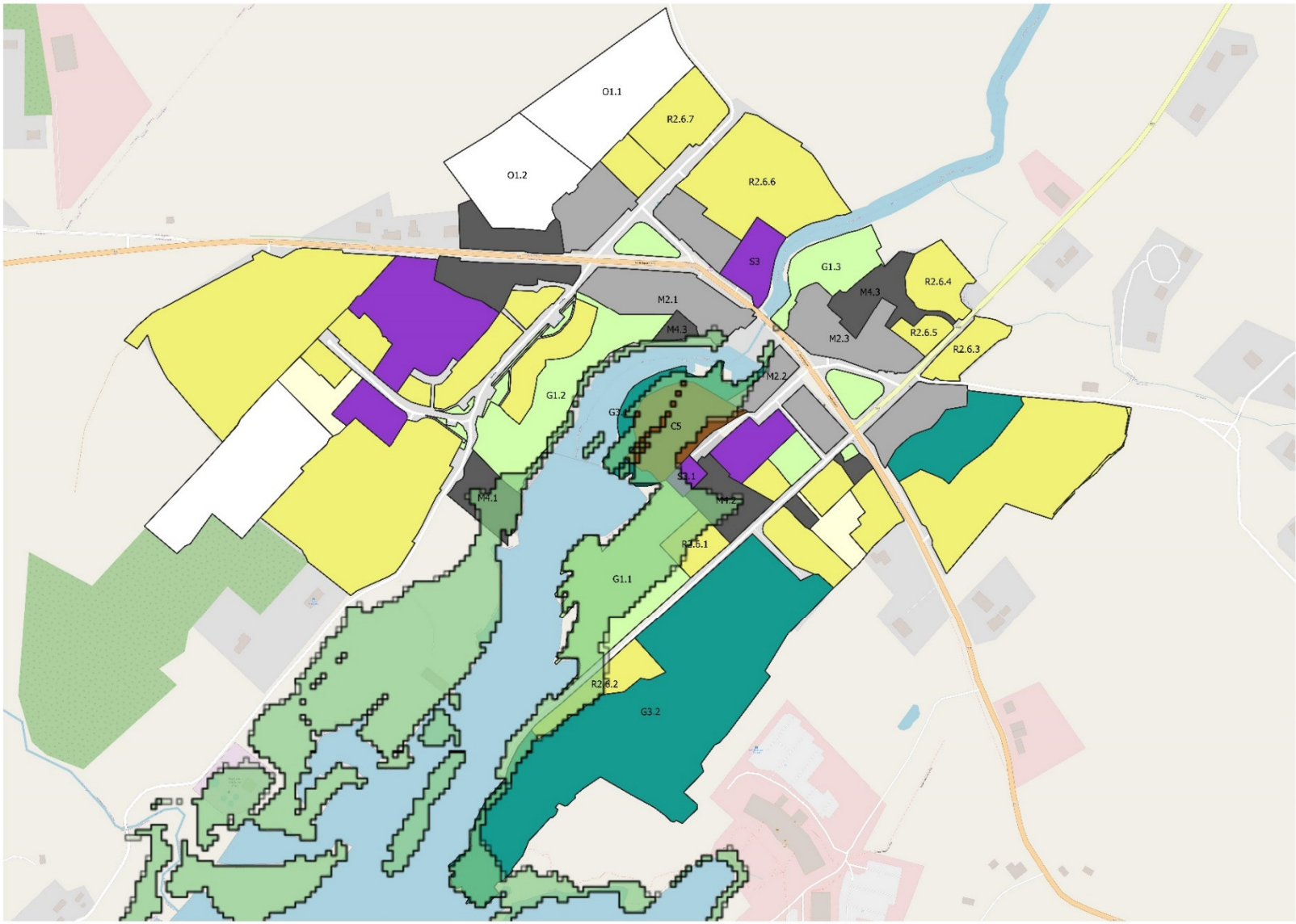


Figure 5.36: Sneem NCFHM 1% & 0.1% AEP HEFS

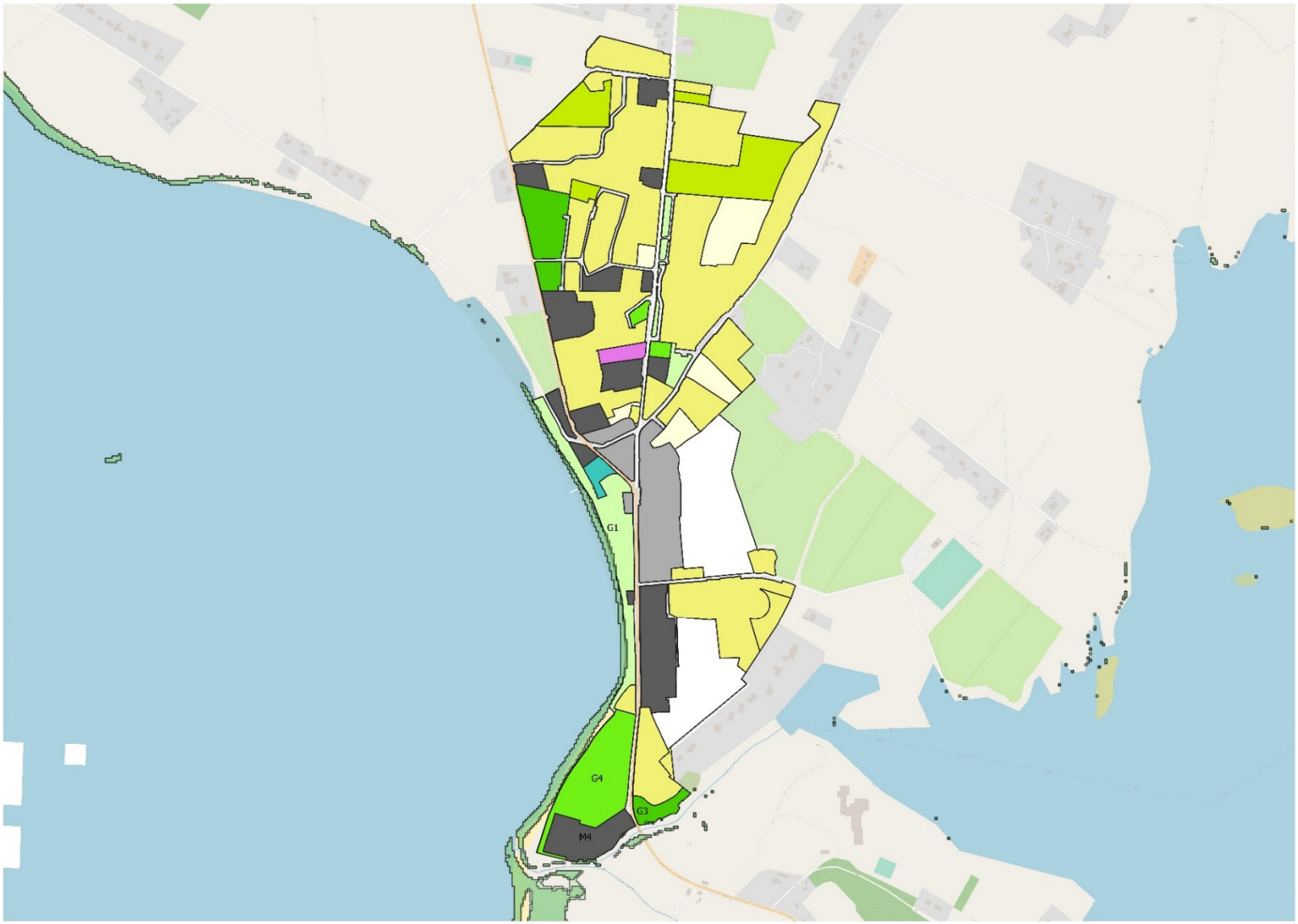


Figure 5.37: Waterville NCFHM 1% & 0.1% AEP MRFS

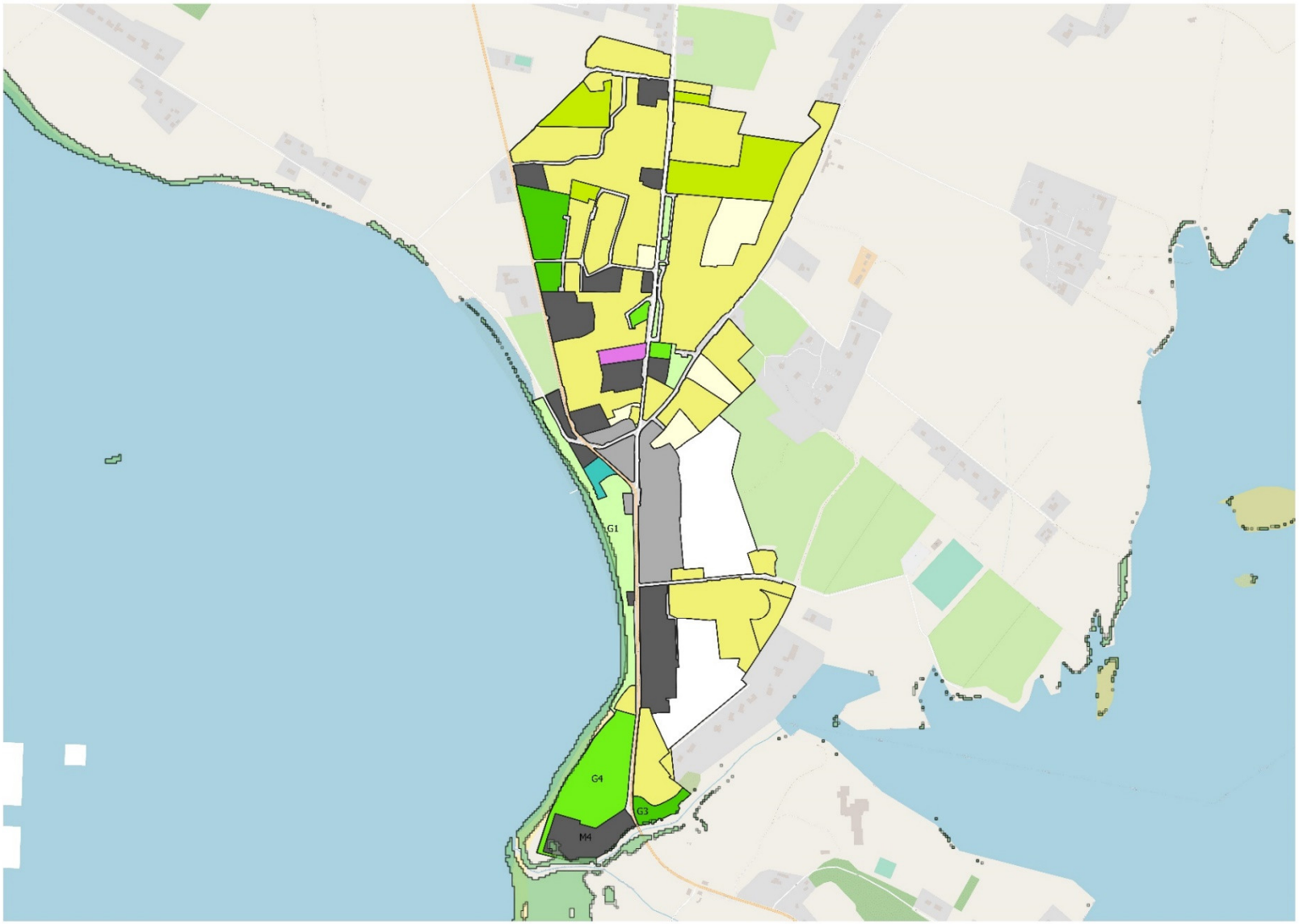


Figure 5.38: Waterville NCFHM 1% & 0.1% AEP HEFS

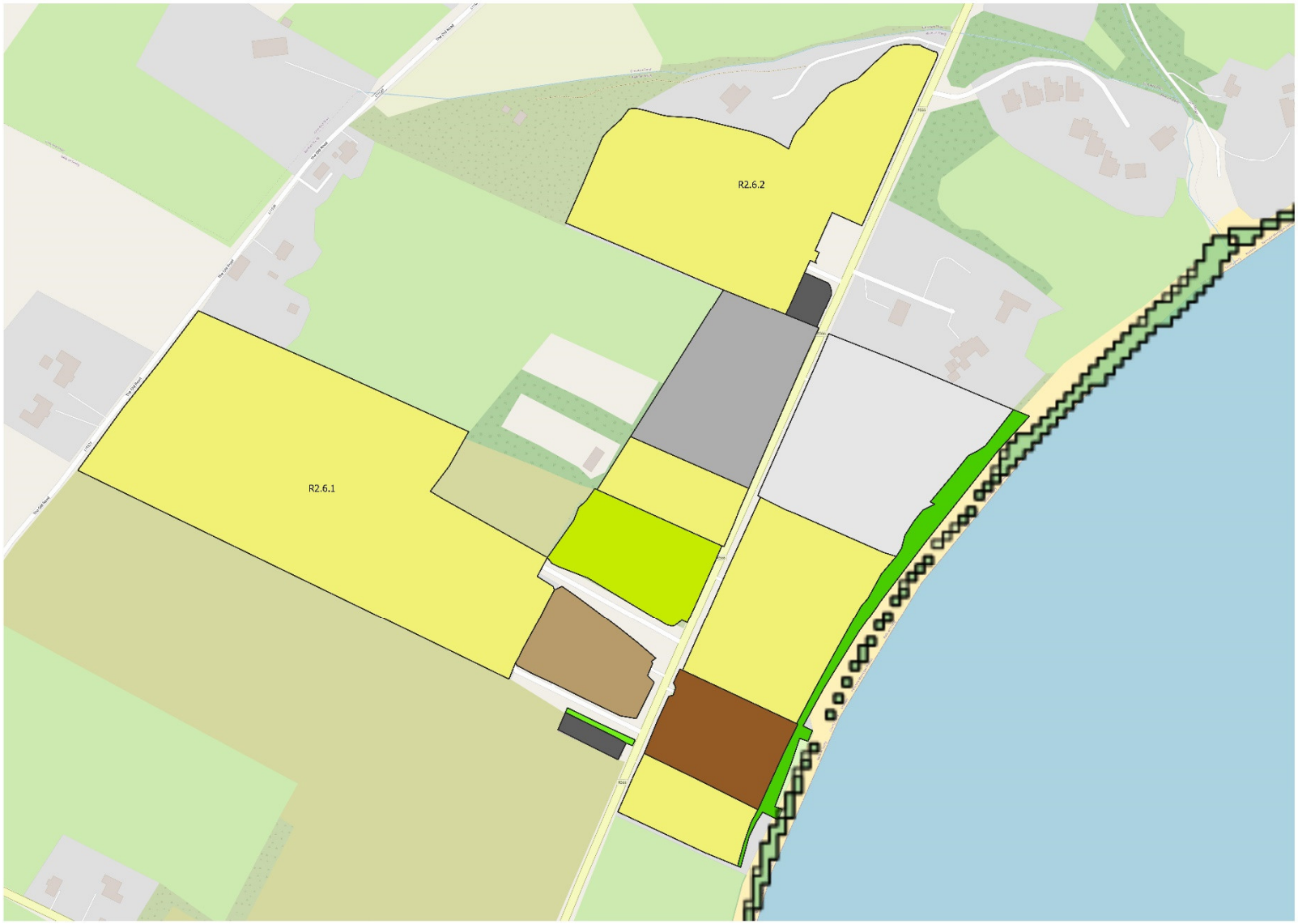


Figure 5.39: Baile an Sceilg NCFHM 1% & 0.1% AEP MRFS

Figure 5.40: Baile an Sceilg NCFHM 1% & 0.1% AEP HEFS

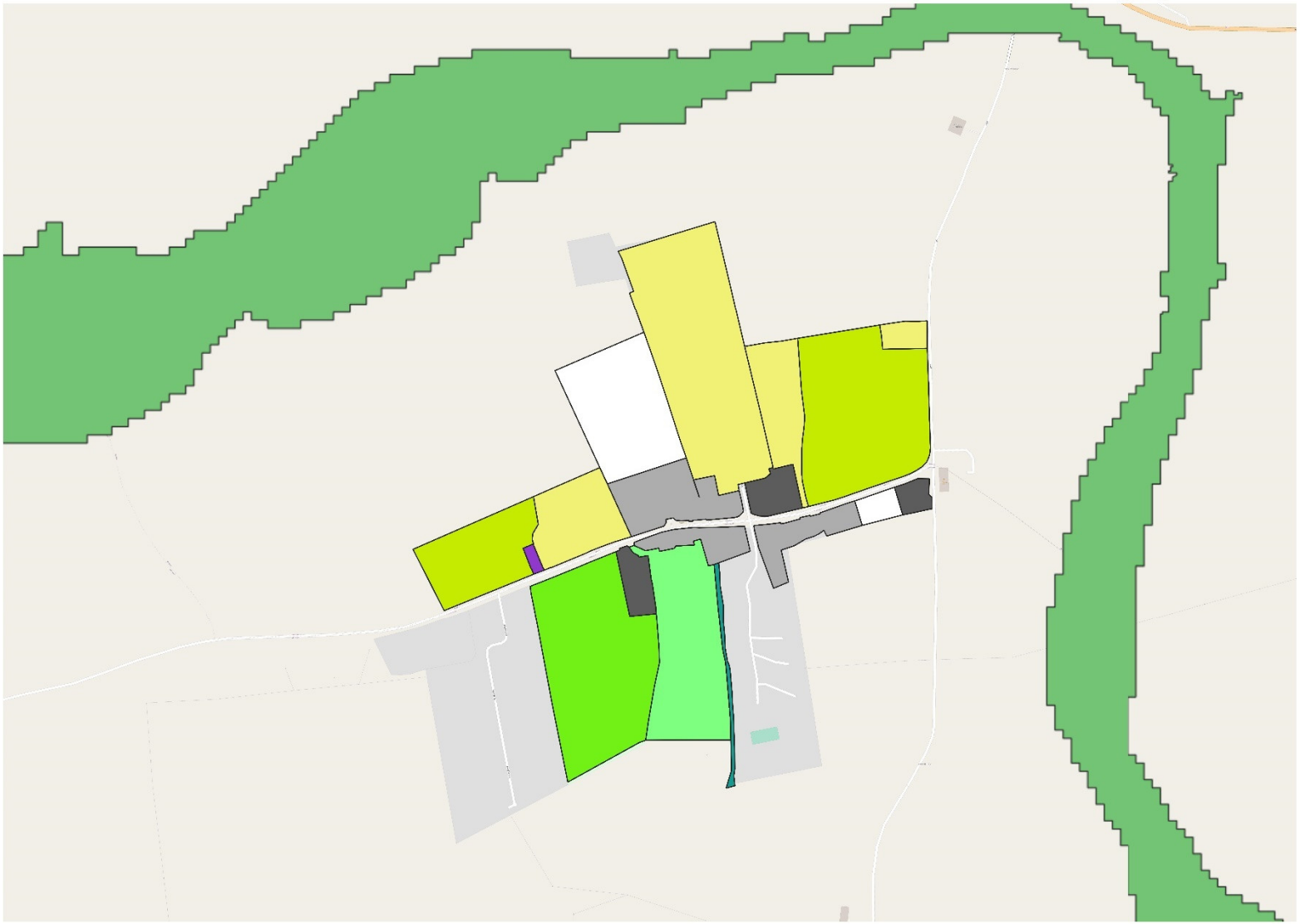


Figure 5.41: Beaufort CFRAMS Coastal 1% & 0.1% AEP MRFS & HEFS (Extents Unchanged)

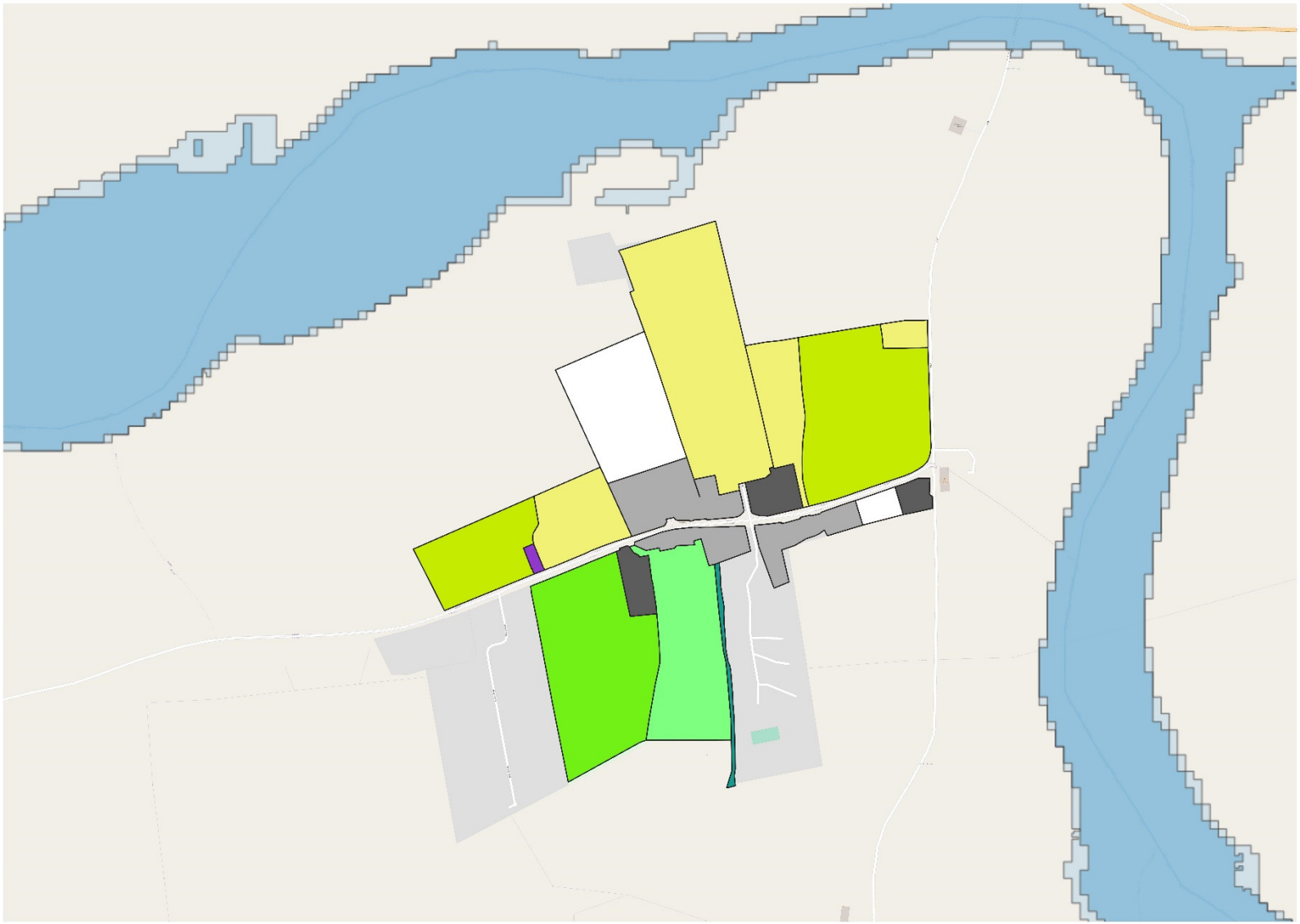


Figure 5.42: Beaufort CFRAMS Fluvial 1% & 0.1% AEP MRFS

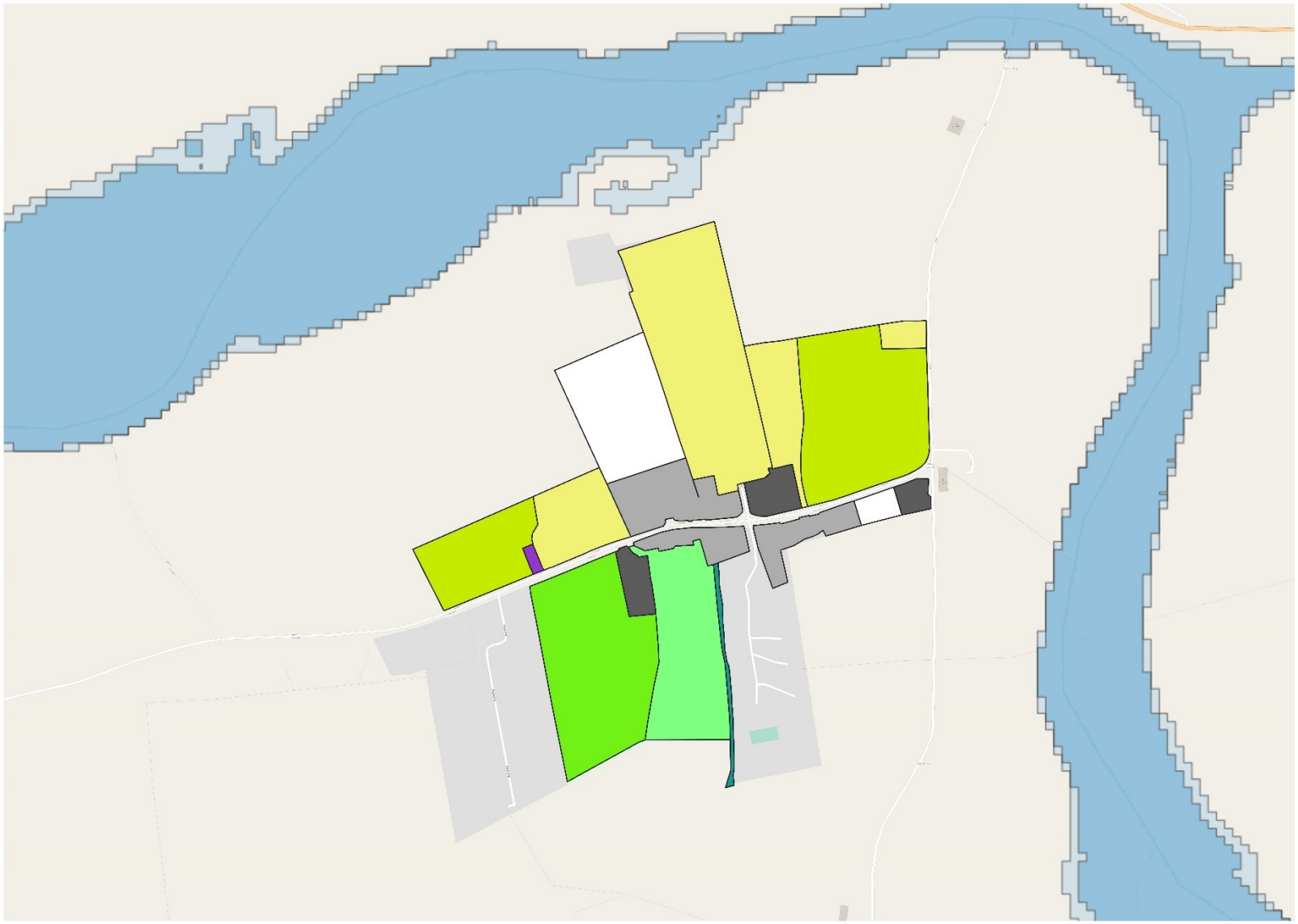


Figure 5.43: Beaufort CFRAMS Fluvial 1% & 0.1% AEP HEFS

Figure 5.44: Glenbeigh NIFM 1% & 0.1% AEP MRFS

Figure 5.45: Glenbeigh NIFM 1% & 0.1% AEP HEFS

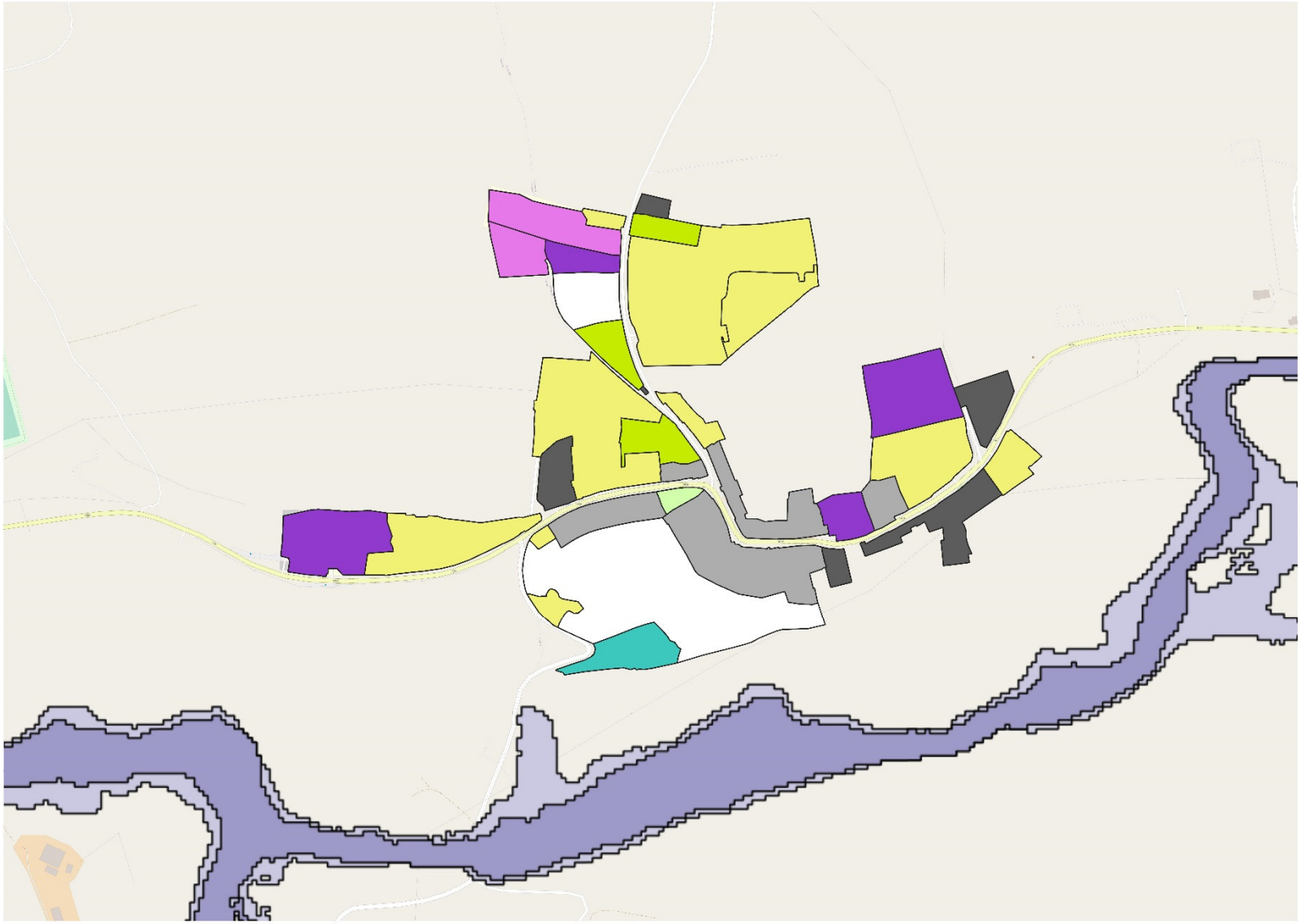


Figure 5.46: Kilgarvan NIFM 1% & 0.1% AEP MRFS

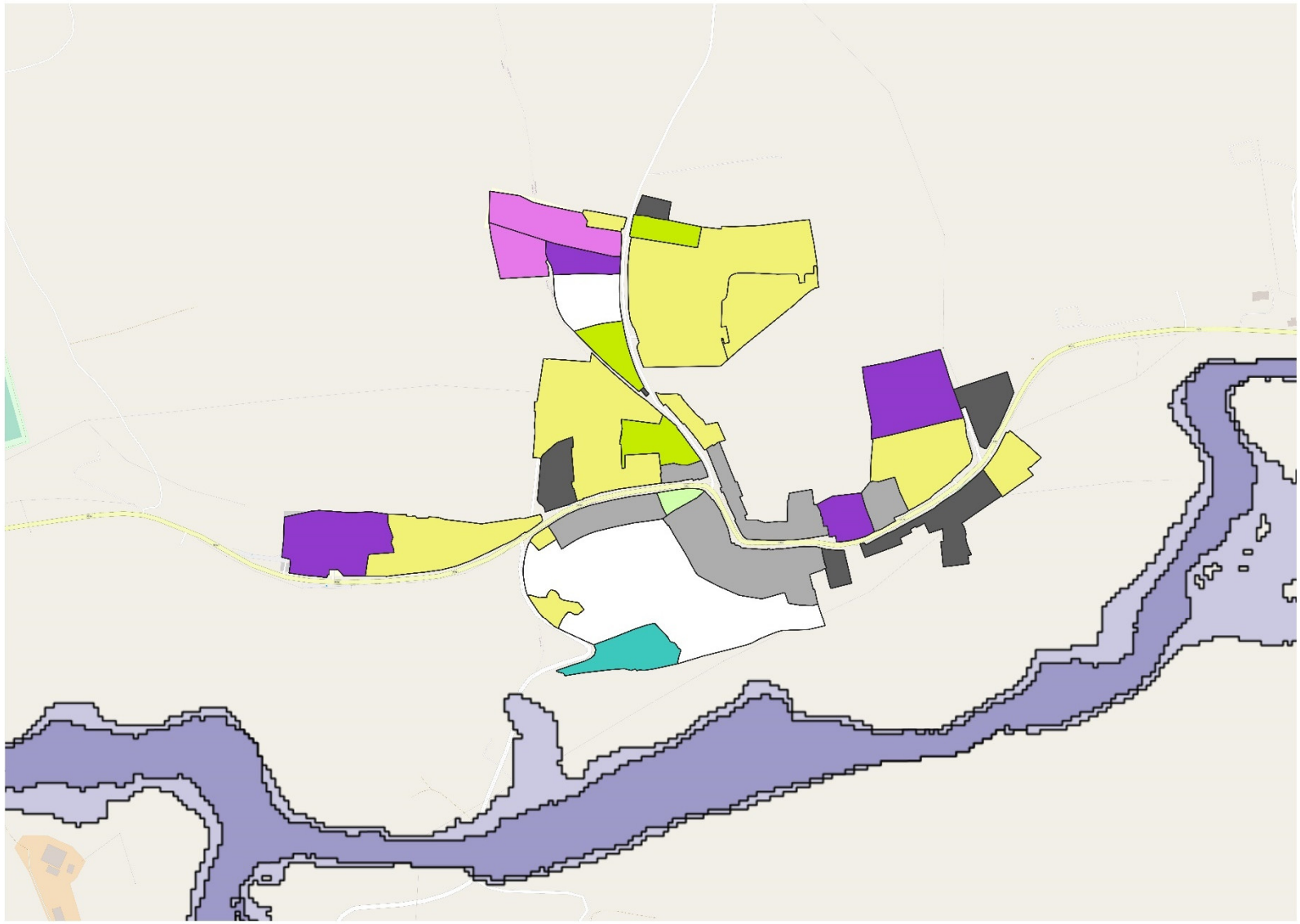


Figure 5.47: Kilgarvan NIFM 1% & 0.1% AEP HEFS

6. Flood Risk Management

6.1 Sustainable Drainage Systems (SuDS)

6.1.1 SuDS Philosophy & Design Criteria

Surface water is a valuable resource, and this should be reflected in the way it is managed and used in the bult environment. The overarching objective of the SuDS approach is to ensure that development on each area of land within the subject area does not result in an increase in run-off to rivers and other discharge points when compared to a natural hydrological baseline pre-development. To maximise these benefits, sustainable drainage systems should be considered from the beginning of the development planning process and throughout the design. This may influence site layout and design, and the use and characteristics of urban spaces.

Sustainable Drainage Systems are designed to replicate natural drainage systems. The philosophy of SuDS is about maximizing the benefits and minimizing the negative impacts of surface water run-off from developed areas. The types of benefits that can be achieved by SuDS can be broadly divided into four categories, also known as the four pillars of SuDS design and are the main drivers supporting SuDS philosophy. These four pillars are water quantity, water quality, amenity, and biodiversity. These drivers control the design criteria and objectives of each SuDS component.

Objective	Design Criteria
Water Quantity	1. Use surface water runoff as a resource. 2. Support the effective management of flood risk in the receiving catchment. 3. Protect morphology and ecology in receiving surface waters. 4. Preserve and protect natural hydrological systems on the site. 5. Drain the site effectively. 6. Manage on-site flood risk. 7. Design in system flexibility/adaptability to cope with future change.
Water Quality	1. Support the management of water quality in receiving surface waters and groundwaters. 2. Design system resilience to cope with future change.
Amenity	1. Maximise multi-functionality. 2. Enhance visual character. 3. Deliver safe surface water management systems. 4. Support development resilience/adaptability to future change. 5. Maximise legibility. 6. Support community environmental learning.
Biodiversity	1. Support and protect natural local habitat and species. 2. Contribute to the delivery of local biodiversity objectives. 3. Contribute to habitat connectivity. 4. Create diverse, self-sustaining, and resilient ecosystems.

Table 6.1: Design Criteria

The SuDS philosophy, and effective stormwater management in general, requires a series of SuDS features, linked together, to form a stormwater management system to treat and attenuate surface water runoff as close to the source of runoff as possible, before being conveyed downstream for further treatment and storage. The individual components described below do not constitute SuDS, if applied in isolation. As indicated on Figure 6.1, the management train essentially comprises of four stages: Prevention, Source Control, Site Control and Regional Control.

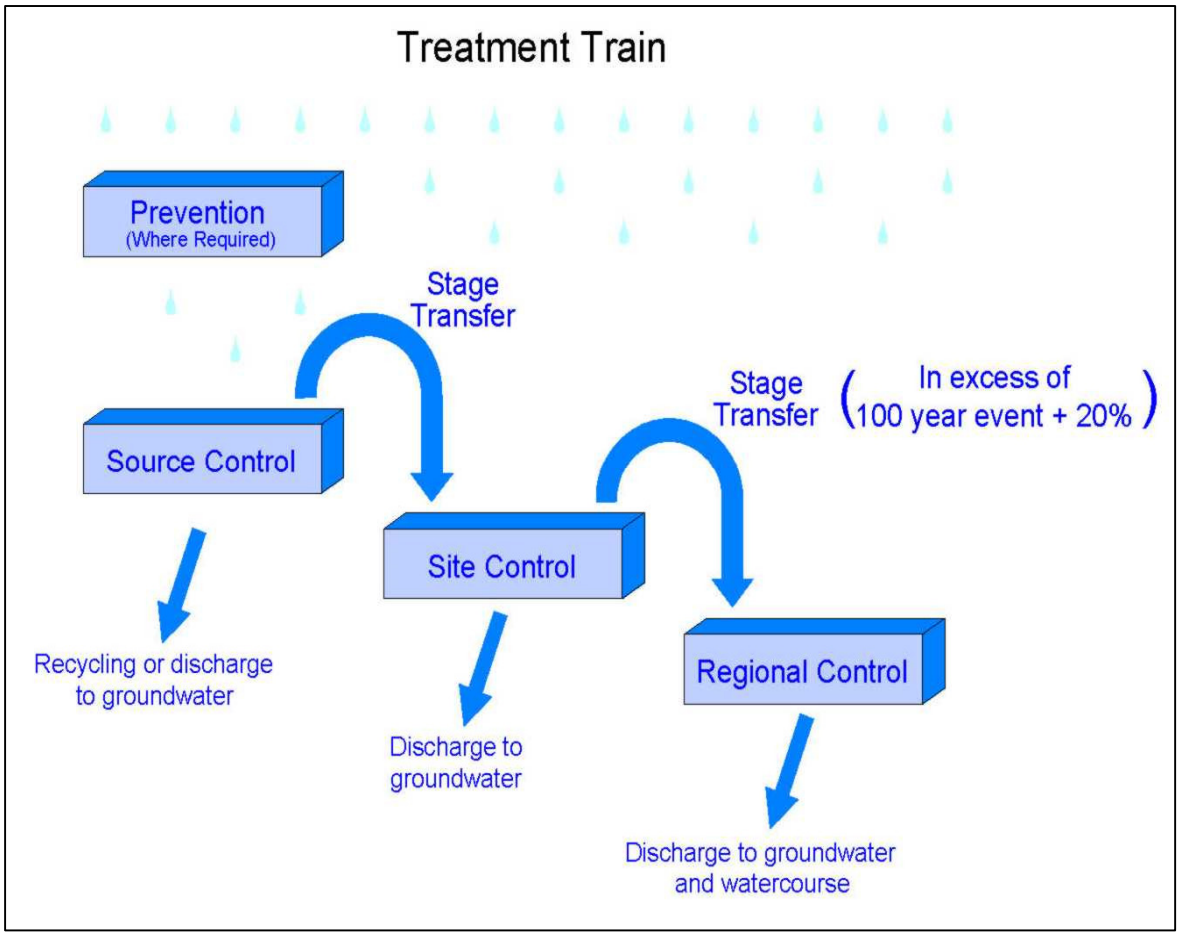


Figure 6.1: SuDS Management Train

The principle of the Management Train is that wherever possible, surface water should be managed locally in small, sub-catchments as close to source as possible rather than being conveyed to and managed in large systems further down the catchment. Different SuDS components may be able to perform at multiple source/site/regional control levels. Drainage designs for developments should follow the sustainability hierarchy summarized on Table 6.2.

Sustainability Level	SuDS Component	Water Quantity	Water Quality	Amenity & Biodiversity
Most Sustainable	Rainwater harvesting, Green/Blue Roofs	✓	✓	✓
	Trees	✓	✓	✓
	Infiltration Systems (Infiltration trenches & basins etc.)	✓	✓	✓
	Filter Strips & Swales	✓	✓	✓
	Detention Basins & Wetlands & Ponds	✓	✓	✓
	Pervious Paving & Filter Drains	✓	✓	
Least Sustainable	Attenuation Tanks & Oversize Pipes	✓		

Table 6.2: Sustainability Hierarchy

6.1.2 Key Water Quantity Design Standards

1. Climate Change Allowance

Rainfall depths used for the design of the drainage system and associated SuDS components should include for the effects of climate change. Current industry standard is to accommodate the Mid-Range Future Scenario (MRFS) which corresponds to a 20% uplift on extreme rainfall depths. However, the High-End Future Scenario (HEFS) corresponding to a 30% increase should be considered on a case by case basis for certain development such as critical infrastructure or where the consequences of exceedance are high. The implications of any flooding associated with a HEFS event should be examined and understood for all drainage proposals.

2. Controlling runoff volume

The use of infiltration and rainwater harvesting are important mechanisms for delivering volume control: the greater the volume of runoff that is infiltrated or used on site, the lower the volume of runoff discharged. The acceptable runoff volumes for various rainfall events is described below.

a) **Frequent Rainfall Events:** The prevention of runoff from the site for the majority of frequent rainfall events (or for the initial depth of rainfall for larger events) is called interception. Interception of at least 5mm of runoff (preferably 10mm should be achieved) from the site should be achieved for frequent rainfall events (i.e., events with <1 year return period). This will ensure run off from the site does not occur for the majority of small rainfall events.

b) **Extreme Rainfall Events:** The SuDS should be designed so that the volume of runoff discharged from the site during extreme rainfall events (i.e., 1 in 100 year event plus climate change) is controlled. The volume of runoff from the proposed development should not exceed the volume of runoff from the same area pre-development. Where controlling greenfield volumes is considered unachievable, then the runoff volume should be reduced as much as possible and any additional volume should be stored and released at a rate of no more than 2 litres/s/ha or Q_{BAR}, whichever is greater.

3. Control of peak rate of runoff

Attenuation is an important mechanism in controlling peak runoff rates from the development. Peak runoff rates should also be controlled during both frequent and extreme rainfall events.

a) **Frequent Rainfall Events:** The SuDS should be designed so that peak runoff rates from the site for frequent rainfall events (<1 year return period) that are likely to have an impact on morphology, ecology, or capacity of receiving surface waters are constrained to the greenfield rates of runoff for the same return period or 2l/s/ha, whichever is greater. These events are likely to produce bankfull events for streams and rivers so replicating greenfield runoff rates will protect the morphology and ecology of the receiving area.

b) **Extreme Rainfall Events**: The SuDS should be designed so that the peak runoff rates for extreme rainfall events are constrained to the greenfield rates of runoff for the same event up to an including the 100 year event with climate change allowance. Site critical duration storm to be used to assess attenuation storage volume.

4. Control of on-site flood risk arising from the surface water management system.

a) The SuDS should be designed so that runoff is completely contained within the designated drainage system and no flooding on site should occur for 1 in 30 year rainfall events unless specifically designated to flood. However, since peak runoff rates will usually require control up to the 1 in 100 year rainfall events, SuDS components may be designed to manage events up to this size.

b) The risks associated with events that exceed the capacity of the drainage system should be evaluated, and the design of the site and the drainage system should be integrated so that flooding is appropriately managed. Properties should be fully protected against flooding from the site drainage system for the 1 in 100 year event including climate change.

5. Exceedance Design

All drainage and SuDS components should be designed to mitigate the risk to people and property in the event of the drainage system becoming overloaded. This risk can be managed by providing suitable alternative flow paths which direct flows away from buildings and other high risk areas via roads, carparks, amenity areas and the like.

6.2 Key Policies for the Plan

Flood Risk Management Policies and Objectives are provided in the relevant chapters of the Local Area Plan. The key policies for Flood Risk Management are:

- Adopt a sequential approach to flood risk management in the making of subsidiary plans and local area plans and to guide flood vulnerable development away from undeveloped areas that have been identified as being at risk of flooding.
- Zone/designate land other than water-compatible development in areas with a high or moderate risk of flooding (Flood Zones A & B) only where it can be clearly demonstrated, on a solid evidence base, that the zoning or designation will facilitate the development of the land in a sustainable manner and in accordance with the Planning System and Flood Risk Management Guidelines (DoEHLG 2009).
- Adopt a strategic, integrated, sustainable and proactive approach to catchment management in the County to reduce and manage flood risk.
- Require the application of Sustainable Urban Drainage Systems (SuDS) in all new developments and proposals to extend existing developments.
- Avail of opportunities to enhance biodiversity and amenity and to ensure the protection of environmentally sensitive sites and habitats.
- Where applicable develop flood storage areas and/or other nature-based solutions to flood risk.
- Development proposals for zoned lands potentially impacted by unmapped watercourses should include a site-specific flood risk assessment, completed in accordance with the Planning System and Flood Risk Management Guidelines (2009).

6.3 Integration of Flood Risk Management

Flood risk management in Kenmare MD will need to be integrated with other statutory planning processes including development management processes within the county.

6.4 Flood Risk and Development Management

The key requirements for acceptable flood management of all development in Kenmare MD as set out in the Kenmare MD LAP SFRA are summarised on Table 6.3 below.

SFRA Ref. No.	Measure	Description
SFRA_01	Site Specific Flood Risk Assessment	A Site-Specific Flood Risk Assessment (FRA) should be carried out for all developments and should be completed in accordance with the Planning System and Flood Risk Management Guidelines (2009). FRA's should build upon the strategic flood risk management measures outlined in this Strategic Flood Risk Assessment and also consider new information and site-specific data to ensure that all potential flood risk issues are identified, mitigated and managed to an acceptable level. Site Specific FRA's should be carried out to an appropriate level of detail to identify flood risk to a development and quantify potential impacts of any proposal on flood risk elsewhere. The minimum requirement is a Stage 1 Flood Risk Assessment, and this requirement is not limited to areas or sites with an identified flood risk. Where a development site is in an area of low risk but in proximity to Flood Zone B, particular consideration should be given to the sensitivity of the development to flood risk, such as the impact of climate change and residual risks. Generally, a Stage 2 – Initial Flood Risk Assessment would be required for any site within or in close proximity to Flood Zone A or B and this may need to be further developed into a Stage 3 – Detailed Flood Risk Assessment, depending on the adequacy of the information available, the nature of existing and future flood risk and the details of the proposed development.
SFRA_02	Addressing Flood Risk in New Development	Any proposal in an area at risk of flooding that is considered acceptable in principle must demonstrate that appropriate mitigation measures will be put in place and that residual risks can be managed to an acceptable level. Certain sites, including many assessed in this Plan, will require the application of the Sequential Approach to the development design to ensure that more vulnerable uses are sited in areas of lowest flood risk. Development proposals should: (a) Ensure that highly vulnerable development is not located in areas identified in Flood Zone A and B. (b) Ensure that only water compatible development is located within Flood Zone A and less vulnerable in Flood Zone B. (c) Ensure that less vulnerable development and water compatible development only is permitted with suitable mitigation measures.
SFRA_03	Development near Unmapped Watercourses	For development proposals in zoned lands located in proximity of a watercourse that currently has no flood zone mapping or designated flood zones, the site-specific flood risk assessment shall be completed to an appropriate level of detail so that Flood Zones can be defined and the Sequential Approach/Justification Test can be applied where necessary.
SFRA_04	Minor Proposals in areas of Flood Risk	Minor proposals for development, for example small extensions to existing houses or changes of use, in areas at moderate to high risk of flooding should be assessed in accordance with Section 5.28 of the Guidelines, incorporating the additional guidance in Planning Circular PL2/2014.

SFRA Ref. No.	Measure	Description
SFRA_05	Maintaining Existing Drainage Regime & Flow Paths	Existing overland and channelized flow paths should be maintained and floodplain storage and conveyance areas should be protected. Where it is essential to modify flow paths or ground levels in floodplains, the impact of any such modifications should be quantified and mitigated as part of a site specific flood risk assessment.
SFRA_06	Development on Floodplains	In line with the precautionary approach recommended in the Guidelines, compensation storage shall be provided for any development which results in a loss of floodplain. Unless an alternative approach can be justified and agreed with Kerry County Council, this should be provided within the flood cell and on a level for level basis up to the 1% AEP MRFS flood level. Compensation storage shall be constructed prior to the development of the lands for which compensation is being provided.
SFRA_07	Finished Floor Levels	In order to ensure there is no unacceptable flood risk to people or property, the finished floor level of all new developments should be constructed above the 1% AEP Mid-Range Future Scenario (MRFS) flood level plus freeboard. Appropriate freeboard is typically 300 to 500mm but this should be assessed on a case-by case basis depending on the sensitivity of the site the exceedance flows, climate change, residual risks, wave action etc. It is recognised that in existing town centres of built-up areas, a balance may need to be achieved between providing a suitable streetscape and mitigating flood risk. In such circumstances it may be acceptable to relax freeboard requirements subject to appropriate residual risk mitigation. The use of flood resistant or flood resilient construction may be an acceptable alternative.
SFRA_08	Residual Risks	Residual Risks should be assessed at a site-specific scale and appropriate measures should be implemented to manage all identified residual risk. Typical residual risks that require assessment are flood defence failures (breach or overtopping), channel/structure blockages or failures of other critical infrastructure.
SFRA_09	Surface Water Management	Sustainable Urban Drainage Systems (SuDS) and other nature-based surface water drainage solutions should be incorporated into the design of new developments. Proposals shall also address pluvial flood risk in areas where surface water ponding could occur and ensure that floor and street levels are designed to manage any potential risks or exceedances. SuDS design should be carried out in accordance with this SFRA, the Greater Dublin Strategic Drainage Study 2005 and the CIRIA SuDS Manual 2015. Particular regard shall be had to the DoHLG&H best practice interim guidance document 'Nature-based Solutions to the Management of Rainwater and Surface Water Runoff in Urban Areas – Water Sensitive Urban Design'.
SFRA_10	Natural Flood Management Measures	The design of amenity and public open space adjacent to watercourses and in areas of flood risk should incorporate Natural Flood Management Measures and seek to achieve Biodiversity Net Gain for developments.

SFRA Ref. No.	Measure	Description
SFRA_11	Development Along Natural Watercourses	Development along natural watercourses should follow the guidelines outlined in the Inland Fisheries Ireland's' Planning for Watercourses in the Urban Environment' (2020), particularly in relation to undeveloped lands on greenfield sites.
SFRA_12	Climate Change	The impact of climate change on flood risk should be considered for all developments. Rainfall depths used for the design of the drainage system and associated SuDS components should include for the effects of climate change. Current industry standard is to accommodate the Mid-Range Future Scenario (MRFS) which corresponds to a 20% increase in fluvial flows and rainfall depths and a 0.5m sea level rise. However, the High-End Future Scenario (HEFS) corresponding to a 30% increase should be considered on a case-by-case basis for certain development such as critical infrastructure or where the consequences of exceedance are high. The implications of any flooding associated with a HEFS event should be examined and understood for all proposals. It is important to recognise that guidance in relation to climate change allowances may change during the lifetime of the Development Plan and the SFRA. Consequently, all future risk assessments and development designs should be based on the latest available guidance at the time of writing.

Table 6.3: Kenmare MD LAP Key Requirements for Flood Risk Management

7. Monitoring and Review of Strategic Flood Risk Assessment

The monitoring and reviewing of the Strategic Flood Risk Assessment is vital if it is to continue to be a relevant process for the lifetime of Plan. There are a number of key outputs from possible future studies and datasets which should be incorporated into any update of the SFRA as availability allows. A list of potential triggers for an SFRA review is provided in Table 7.1. Not all future sources of information should trigger an immediate full update of the SFRA; however, new information should be collected and kept alongside the SFRA until it is updated.

Trigger	Source	Envisaged timescales
CFRAM Flood Risk Final Flood Hazard Mapping	OPW	2023 and beyond
Changes to Planning and / or Flood Risk Management Policy	Various	-
Significant Flood Events	Various	-
Development Specific FRA's and IRR's	Various	-

Table 7.1: Potential Triggers of an SFRA Review

Appendix A

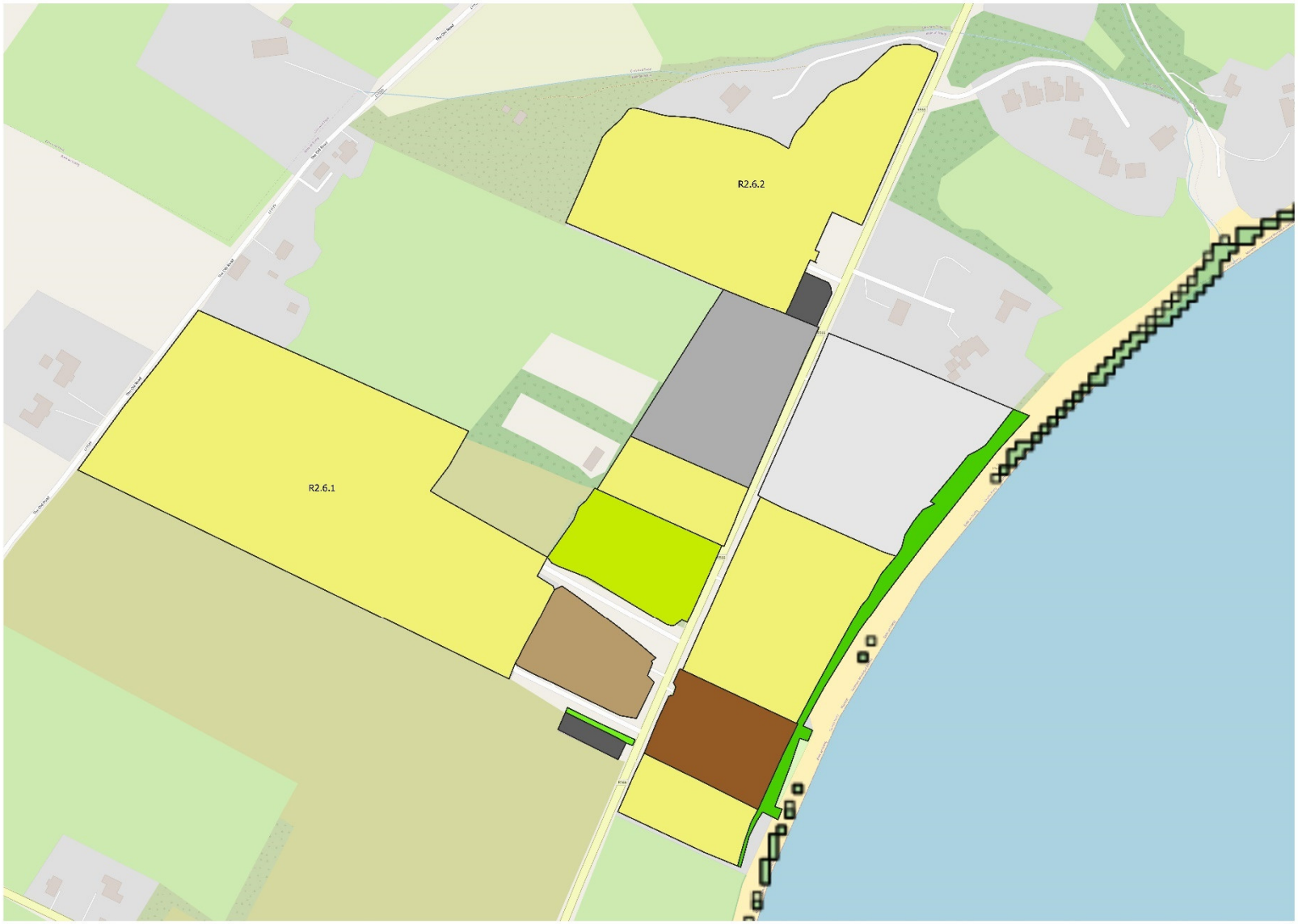


Figure 0.1: Baile an Sceilg - NCFHM 1% & 0.1% AEP Present Day Scenario

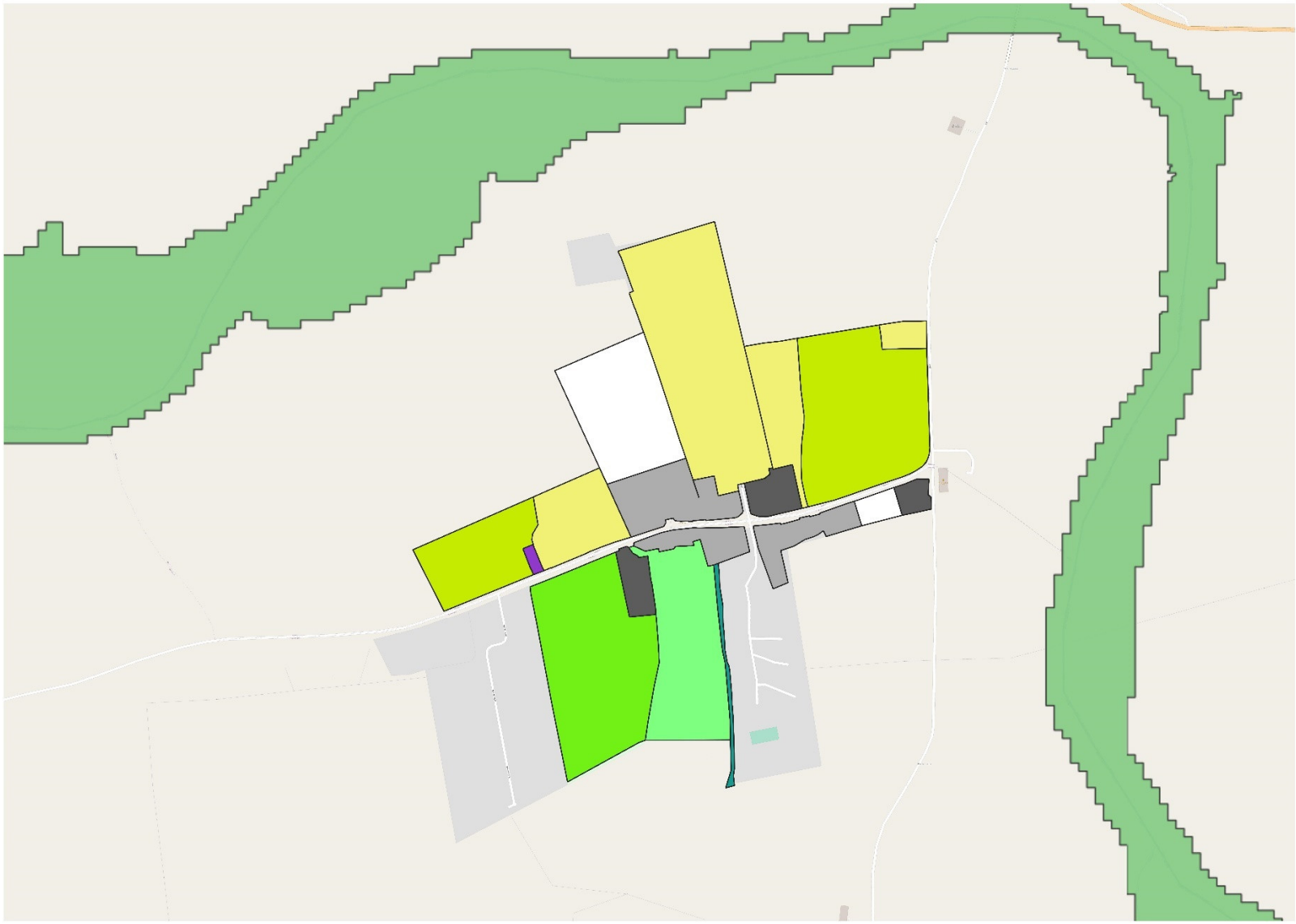


Figure 0.2: Beaufort - CFRAMS Coastal 1% & 0.1% AEP Present Day Scenario

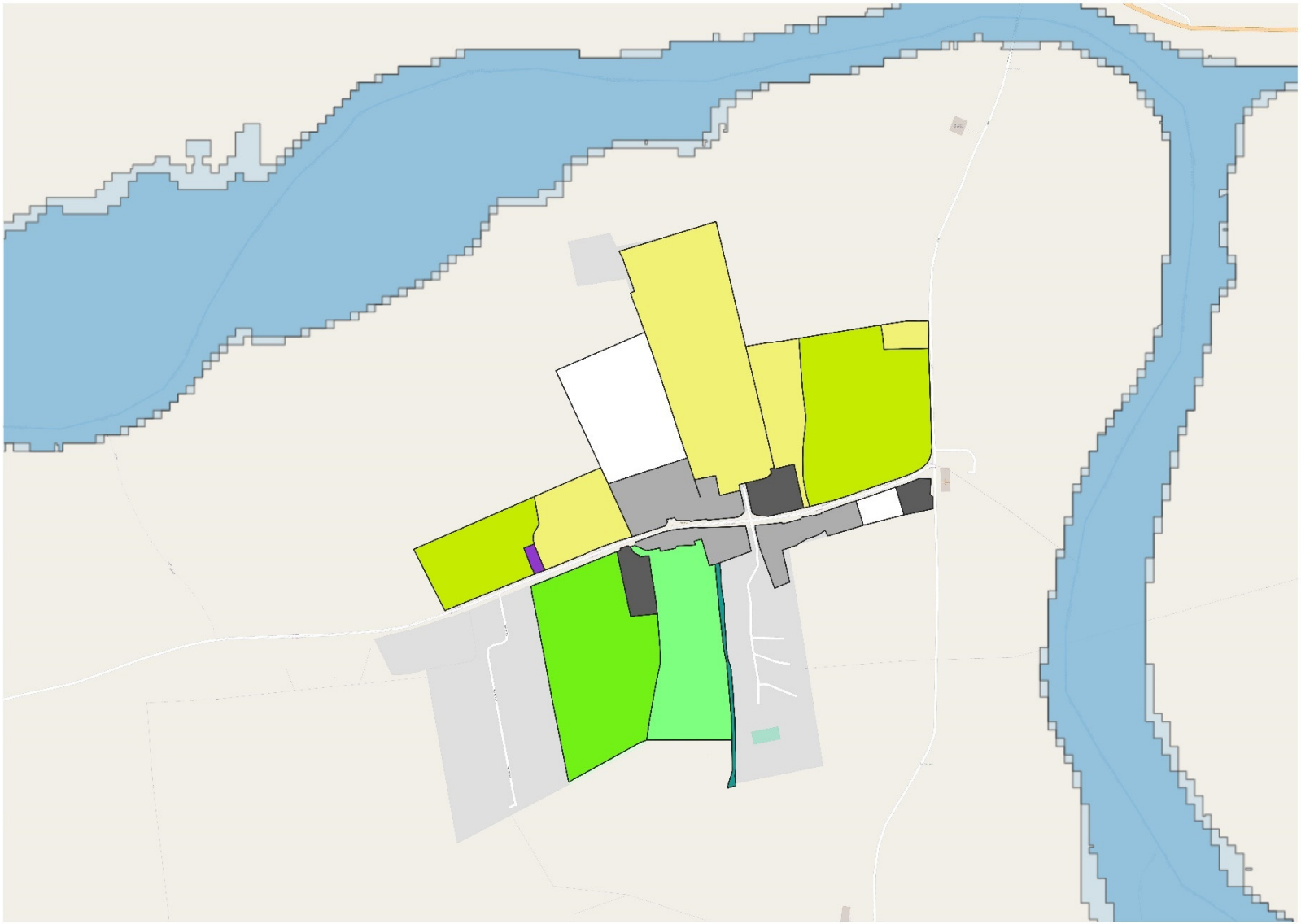


Figure 0.3: Beaufort - CFRAMS Fluvial 1% & 0.1% AEP Present Day Scenario

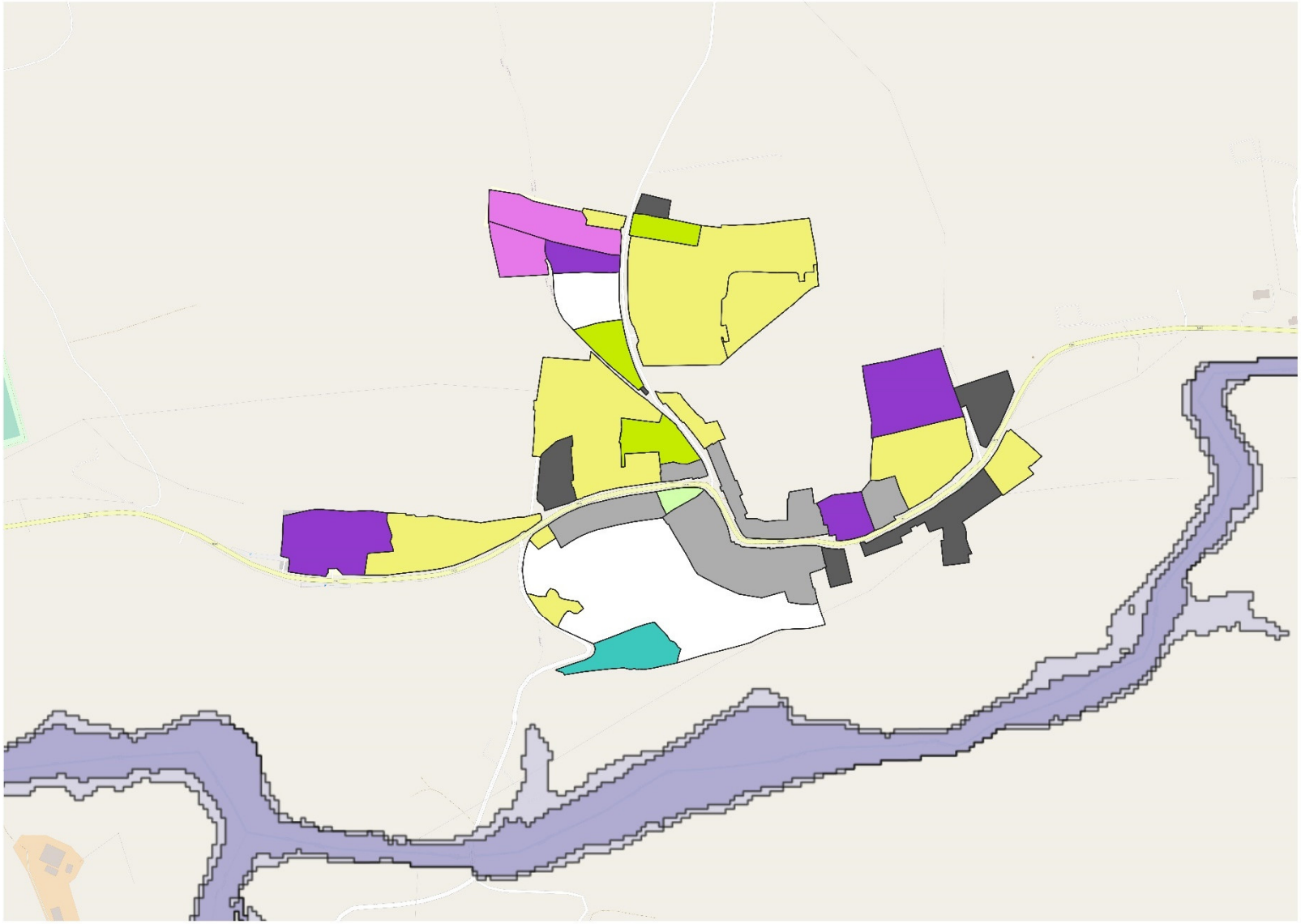


Figure 0.4: Kilgarvan - NIFM 1% & 0.1% AEP Present Day Scenario