

**MACROOM ELECTORAL AREA
LOCAL AREA PLAN
2011**



2

Volume 2

**Habitats Directive Assessment, Natura Impact Report
Strategic Environmental Assessment Statement
Strategic Flood Risk Assessment**

**Cork County Council
Planning Policy Unit**

Macroom Electoral Area Local Area Plan

August 2011

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Macroom Electoral Area Local Area Plan

Natura Impact Report

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1 Introduction

1.1 Preamble

1.1.1 Cork County Council has recently prepared the Macroom Electoral Area Local Area Plan under the provisions of the Planning and Development Acts 2000-2010. The plan focuses on the local level implementation of the overall planning strategy for the County as set out in the County Development Plan 2009. The plan also adheres to the core strategies set down in higher level plans including the National Spatial Strategy (2002-2020) and the Regional Planning Guidelines (2010) for the South West Region.

1.1.2 In accordance with requirements under the EU Habitats Directive (43/92/EEC) and EU Birds Directive (79/409/EEC), the impacts of the policies and objectives of all statutory land use plans on certain sites that are designated for the protection of nature (Natura 2000 sites¹), must be assessed as an integral part of the process of drafting of the plan. This is to determine whether or not the implementation of plan policies could have negative consequences for the habitats or plant and animal species for which these sites are designated. This assessment process is called a **Habitats Directive Assessment (HDA)** and must be carried out for all stages of the plan making process.

1.1.3 The draft Macroom Electoral Area Local Area Plan was assessed to determine whether the plan or its policies could have significant impacts on any Natura 2000 sites. The results of that assessment are contained in the first Natura Impact Report, (Natura Impact Report (I) for the Macroom EA Local Area Plan), which was published in February 2011. The findings and recommendations of that process were presented to Council members as part of the Managers Report of 23rd February 2011. The Managers Report also contained recommendations relating to all amendments proposed to the plan arising from the public consultation process (Nov. 2010-Jan 2011). Council members voted to accept or reject the recommendations contained in the Managers Report of 30th and 31st March. In addition, they themselves proposed and voted to include other amendments to the plan at that time. The proposed amendments to the plan were published on 21st April 2011.

1.1.4 The proposed amendments to the draft Macroom Electoral Area Local Area Plan were also assessed to determine whether these could have significant impacts on any Natura 2000 sites. The results of that assessment are contained in the second Natura Impact Report, (Natura Impact Report (II) on proposed amendments to the Macroom EA Local Area Plan), which was published on 21st April 2011. That report contained an examination of all amendments proposed to be made to the plan, which were approved by Council Members of 30th and 31st March, and a determination as to whether the amendments have the potential to have significant impacts on Natura 2000 sites. Where impacts could not be ruled out, recommendations were made for modifications to be made to the amendments, or for the

¹ Natura 2000 sites include Special Areas of Conservation designated under the Habitats Directive and Special Protection Areas designated under the Birds Directive. Special Areas of Conservation are sites that are protected because they support particular habitats and/or plant and animal species that have been identified to be threatened at EU community level. Special Protection Areas are sites that are protected for the conservation of species of birds that are in danger of extinction, or are rare or vulnerable. Special Protection Areas may also be sites that are particularly important for migratory birds. Such sites include internationally important wetlands.

removal of these. These recommendations were contained in the Managers Report of 15th June. Council members voted on the recommendations contained in the Managers report on 25th July 2011. All of the recommendations made arising from the AA process were accepted by the Council at this meeting.

1.1.5 This is the final Natura Impact Report for the Macroom Electoral Area Local Area Plan, 2011. It summarises how all of the recommendations arising from the initial Natura Impact Reports, and how ecological considerations generally, have been integrated into the Local Area Plan. It also contains the details of the monitoring measures which will be implemented to ensure that the undertakings in relation to the protection of the Natura 2000 network, as set out in the Local Area Plan, are met. Finally the report contains the **AA Conclusion Statement** which finds that, subject to a number of changes to text, objectives, settlement boundaries and zonings, which have been accepted by Council and are contained in the final plan, there will be no significant impact on the network as a whole, nor to individual Natura 2000 sites or their dependant habitats and species. This report should be read in conjunction with the Macroom Electoral Area Local Area Plan.

1.1.6 The first and second Natura Impact Reports have been made available to statutory consultees and the general public. In addition, the National Parks and Wildlife Service was consulted and advised on the content of each of the Natura Impact Reports.

1.1.7 The full timetable for the making of the plan and the parallel Habitats Directive Assessment process is set out in **Appendix I** of this report.

1.2 Habitats Directive Assessment

1.2.1 Habitats Directive Assessment, also referred to as Appropriate Assessment, is a process which involves the evaluation of the potential impacts of plans and projects on Natura 2000 sites and the habitats and species that they support and, where necessary, the development of mitigation measures to avoid any such impacts. It is an iterative process which runs parallel to and informs the plan making process, involving analysis and review of draft policies, or amendments/variations, as they emerge during each stage of plan making. Within this process, regard must also be had to the potential for policies or amendments to policies, to contribute to impacts which on their own may be acceptable, but which could be significant when considered in combination with the impacts arising from the implementation of other plans or policies.

1.2.2 Articles 6(3) of the Directive sets out the requirement for the assessment of plans and projects affecting Natura 2000 sites as follows:

6(3) Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site and subject to the provision of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.

1.2.3 Article 6(4) of the Directive deals with derogation procedures, where it is considered necessary to proceed with a plan/project despite a finding that negative impacts are likely.

6(4) If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.

Where the site concerned hosts a priority natural habitat type and/or a priority species, the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance to the environment, or further to an opinion from the Commission, to other imperative reasons of overriding public interest.

1.2.4 In relation to plan making, the process of assessment may result in the modification or removal of policies proposed to the plan or in the adoption of new policies, or, if significant impacts arise which cannot be avoided, a recommendation not to proceed with the policy.

1.2.5 The European Union has provided guidance as to how to complete a Habitats Directive Assessment for land use plans which identifies four main stages in the process as follows:

Stage One: Screening

The process which identifies what might be likely impacts arising from a plan on Natura 2000 sites, either alone or in combination with other projects or plans, and considers whether these impacts are likely to be significant. If the effects are deemed to be significant, potentially significant, or uncertain, then the process must proceed to Stage Two.

Stage Two: Appropriate assessment

Where the possibility of significant impacts has not been discounted by the screening process, a more detailed assessment is required. This is called an appropriate assessment and involves the consideration of the impact of the plan on the integrity of the Natura 2000 site, either alone or in combination with other projects or plans, having regard to the site's ecological structure and function, and its conservation objectives. Additionally, where there are adverse impacts, it involves an assessment of the potential mitigation of those impacts.

Stage Three: Assessment of alternative solutions

Should the conclusion of the appropriate assessment be that there are likely to be impacts which will affect the overall integrity of Natura 2000 site, then it is required to examine alternative ways of achieving the objectives of the plan that avoids such adverse impacts. Stage three of a Habitats Directive Assessment involves the assessment of alternative solutions or options that could enable the plan or project to proceed without adverse effects on the integrity of a Natura 2000 sites. The process must return to stage two as alternatives will require appropriate assessment in order to proceed. Demonstrating that all reasonable alternatives have been considered and

assessed, and that the least damaging option has been selected, is necessary to progress to Stage four. Alternatives must be compared with respect to the significance of their likely effects on the integrity of the site/sites. Other assessment criteria, such as economic criteria cannot be seen as overruling ecological criteria.

Stage Four: Assessment where no alternative solutions exist and where adverse impacts remain.

This is the main derogation process of Article 6(4) which examines whether there are imperative reasons of overriding public interest (IROPI) for allowing a plan that will have adverse effects on the integrity of a Natura 2000 site to proceed in cases where it has been established that no less damaging alternative solution exists. Such a plan may only proceed if compensatory measures have been put in place to offset the impacts to be incurred and these compensatory measures must be assessed as part of the AA process. The EU Commission must be informed of the compensatory measures and these must be approved by the Minister. Compensatory measures are a last resort attempt to maintain the integrity of the Natura 2000 network and they must be practical, implementable, likely to succeed, proportionate and enforceable.

The Habitats Directive Assessment process may stop at any of the above stages if significant impacts on Natura 2000 sites can be ruled out.

1.2.6 Development plans including County Development Plans, Local Area Plans, Town Plans and variations to these may only be adopted if it has been demonstrated that impacts on the integrity of any Natura 2000 sites which could be affected by the plan have been ruled out. Where such impacts have not been ruled out, the plan may only proceed where it has been demonstrated that there are no reasonable alternative solutions, that there are imperative reasons of overriding public interest to proceed with the plan, and that compensatory measures have been designed, assessed, approved by the Minister, and have been put in place in advance of the adoption of the plan. In every case in which a local authority envisages approving or proceeding with a plan or project on the grounds of overriding public interest, the Minister must be consulted.

2 Methodology

2.1 Data Sources

2.1.1 The appropriate assessment of potential impacts on the integrity of Natura 2000 sites in this study is based on a desktop review of information relating to these sites and to the habitats and species that they support, and personal knowledge of many of the sites. References and data used are cited in the back of this report.

2.2 Consultation

2.2.1 Consultation was carried out with the NPWS in relation to the Appropriate Assessment of the draft Macroom Electoral Area Local Area Plan and on the proposed amendments to same. This process assisted the Planning Authority to identify the principle threats of concern for individual sites and to amend the plan accordingly. The draft plan and amendments as well as the Natura Impact Reports and Environmental Report for the plan were referred to statutory consultees and were made available to the general public for review at the various consultation stages of the plan making process.

2.3 Approach

2.3.1 The approach taken in the making of this assessment follows *European Communities, Assessment of plans and projects significantly affecting Natura 2000 sites, Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC, 2002*, and on *Local Government and Appropriate Assessment of Plans and Projects in Ireland, Guidance for Planning Authorities, 2009*.

3 Habitats Directive Assessment of the draft Plan and Proposed Amendments

3.1 Description of the Plan

3.1.1 The draft plan consists of a written statement and maps. It takes cognisance of the County Development Plan (2009) and relevant aspects of the South West Regional Planning Guidelines (2010) in terms of its objectives relating to population targets, housing strategy, settlement strategies and boundaries, economic development, flood risk assessment, climate change and biodiversity strategies. It contains three sections as follows:

Section 1: Introduction to the Macroom Electoral Area Local Area Plan

This section summarises the content of the plan and its relationship to other plans. It contains information relating to the process that has been followed in the making of the plan including the approach to consultation and zoning etc. The main towns, villages and other settlements within the electoral area are identified in this section. Policies relating to assessment of flood risk and the protection of the green belt which apply to the entire electoral area are also included in this section.

Section 2: Local Area Strategy

Macroom Electoral Area is split between three of the Strategic Planned Areas defined by the County Development Plan 2009, the County Metropolitan Strategic Planning Area, the CASP Ring Strategic Planning Area and the West Strategic Planning Area. This section of the plan sets out the overall strategy for Macroom Electoral Area as a whole. It presents a summary and analysis of the growth and population targets used in the plan and gives details of the main employment and economic considerations, education and infrastructure requirements and key environmental considerations. It sets out an overall vision for the electoral area as follows:

- Deliver significant housing growth, in particular through the implementation of the masterplan area in Ballincollig;
- Deliver jobs targets, in particular in the Integrated Employment Centre of Ballincollig and the District Employment Centre of Macroom,
- Pursue the implementation of key infrastructural projects; including the N22 (Ballincollig, Macroom to Ballyvourney) and the proposed rapid transit corridor between Mahon and Ballincollig and the completion of the Green Route in Ballincollig.
- Protect the character of the villages and smaller settlements;
- Offer a wider housing choice in sustainable settlements;
- Protect key heritage sites and exploit for tourism/ quality of life.

This section contains policy statements relating to the provision of a sustainable water supply and treatment system as well as environmental assessment requirements.

Section 3: Settlements and Other Locations.

This section of the document sets out more specific objectives relating to population targets, residential, commercial and industrial development, the provision of infrastructural, community and recreational facilities etc for each of the two main towns Ballincollig and Macroom , four key villages Coachford, Ballingearry ,Ballymakeery/Ballyvourney ,Killumney, and twelve villages Aghabullogue, Aherla, Ballynora, Clondrohid, Cloughduv, Crookstown, Crossbarry, Inchigeelagh, Kilmurry, Kilnamartyra, Newcestown, Rylane/Seiscne, eighteen village nuclei and five other small settlements within the electoral area.

3.2 Habitats Directive Assessment of the draft Plan

3.2.1 The draft Plan was reviewed in January 2011 to determine whether the policies or zonings contained therein would be likely to have significant impacts on the Natura 2000 network. As part of this assessment all Natura 2000 sites within the boundary of the Local Area Plan Area, all Natura 2000 sites within 15km of the boundary and all downstream Natura 2000 sites designated for water dependant habitats and/or species were screened for potential impacts arising from the plan. A total of ten Special Areas of Conservation and five Special Protection Areas were identified as part of the screening process. These are shown in **Table 3.1** below.

Table 3.1: Natura 2000 Sites Identified for Screening for Appropriate Assessment for the draft Macroom EA Local Area Plan

Sites	Site Code	Habitats for which these are designated	Species for which these are designated	Other species and habitats of note occurring within the site	Potential Threats
Clonakilty Bay SAC	91	Mudflats and sandflats not covered by seawater at low tide; Annual vegetation of drift lines, Embryonic shifting dunes; Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes); Fixed coastal dunes with herbaceous vegetation (grey dunes); Atlantic decalcified fixed dunes (<i>Callunetum</i>)		Habitats: Lagoon; Brackish grassland; Freshwater marsh; Alder scrub; Species: Waterfowl.	Habitats: Aquaculture; Fishing; Coastal development; Activities which could cause water pollution including waste water discharges and water abstractions; Bait digging; Land reclamation; Coastal protection works; Spread of invasive species including sea buckthorn and <i>Spartina</i> ; Infilling; Recreational uses, including trampling, horse riding and vehicle use; Mechanised removal of tidal litter. Over and under-grazing; Sand and gravel extraction; Removal of other beach materials; Development pressure causing habitat loss.

Sites	Site Code	Habitats for which these are designated	Species for which these are designated	Other species and habitats of note occurring within the site	Potential Threats
St. Gobnait's Wood SAC	106	Old Sessile Oak Woodlands with <i>Ilex</i> and <i>Blechnum</i>		Habitats: Wet grassland/marsh; scrub.	Habitats: Woodland clearance; Invasive species encroachment; Sub-optimal grazing.
The Gearagh SAC	108	Water Courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation; Old sessile oak woodlands with <i>Ilex</i> and <i>blechnum</i> ; Alluvial forest with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> .	Otter	Habitats: Alluvial grassland; Cutaway bog. Species: Mudwort; Wintering waterbirds.	Habitats: Eutrophication caused by overgrazing, overfertilisation, afforestation; Woodland clearance; Invasive species encroachment; Sub-optimal grazing. Drainage. Species: Otter: Disturbance to river banks.
Killarney National Park, Macgillycuddy Reeks and Caragh River Catchment SAC	365	Depressions on peat substrates of the <i>Rhynchosporion</i> ; Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>); Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletalia uniflorae</i> and or <i>Isoeto-</i>	Twaite Shad; Killarney Fern; Slender Naiad; Kerry Slug; Marsh Fritillary; Lesser horseshoe Bat; Sea Lamprey; Salmon; River Lamprey; Freshwater Pearl mussel; Otter.	All of the habitats and species of biodiversity importance occurring in Cork are qualifying features for this site.	Habitats: Overgrazing; Afforestation; Burning; Peat cutting; Development of infrastructural projects (eg wind energy); Drainage; Activities giving rise to nutrient enrichment and siltation of watercourses; Recreational pressures. Species: As per habitats, any

Sites	Site Code	Habitats for which these are designated	Species for which these are designated	Other species and habitats of note occurring within the site	Potential Threats
		Nanojuncetae; Water courses of plain to maintain levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation; European dry heath; <i>Juniperus communis</i> formations on heaths or calcareous grasslands; Calaminarian grasslands of <i>Violetalia calaminariae</i> ; <i>Molinia</i> meadows on calcareous, peaty or clayey-silt laden soils; Blanket bog and *Active blanket bog; Old sessile oak woodlands with <i>Ilex</i> and <i>Blechnum</i> ; Alpine and sub-alpine heath; North atlantic wet heath with <i>Erica tetralix</i> .			activity which could give rise to decline of water quality, or loss of habitats upon which listed species are dependant including the loss of roosting and feeding sites and commuting routes for bats; river drainage or channelisation.
Great Island Channel SAC	1058	Mudflats and sandflats not covered by seawater at low tide; Atlantic salt meadows.		Habitats: Wet grassland. Species: Wintering waterfowl.	Habitats: Aquaculture, fishing, bait digging, removal of fauna, land reclamation, coastal

Sites	Site Code	Habitats for which these are designated	Species for which these are designated	Other species and habitats of note occurring within the site	Potential Threats
					protection works, spread of invasive species; coastal development, water pollution: Species: Disturbance.
Courtmacsherry Estuary SAC	1230	Estuaries; Mudflats and sandflats not covered by seawater at low tide; Annual vegetation of drift lines; Perennial vegetation of stony banks; Salicornia and other annuals colonising muds and sand; Atlantic salt meadows; Mediterranean salt meadows; Embryonic shifting dunes; Shifting dunes along the shoreline with ammophila areanaria (white dunes); Fixed coastal dunes with herbaceous vegetation (grey dunes).		Species: Wintering waterfowl.	Habitats: Aquaculture; Fishing; Coastal development; Water pollution arising from agriculture; Bait digging; Land reclamation; Coastal protection works; Spread of invasive species; Infilling; Spread of invasive species including sea buckthorn and Spartina; Infilling; Recreational uses, including trampling, horse riding and vehicle use; Mechanised removal of tidal litter. Over and under-grazing; Sand and gravel extraction; Removal of other beach materials; Development pressure

Sites	Site Code	Habitats for which these are designated	Species for which these are designated	Other species and habitats of note occurring within the site	Potential Threats
					causing habitat loss. Species: Disturbance to wintering birds.
Derryclogher (Knockboy) Bog SAC	1873	Blanket Bog and Active Blanket Bog		Habitats: Rivers and streams; Lakes; Heath; Grassland and Stream flushes.	Habitats: Overstocking; Peat extraction; Afforestation; Drainage; Burning and Infrastructural Developments (e.g. Windfarms); Recreational uses including hill walking and quad biking; Afforestation; Quarries; Nutrient enrichment of lakes arising from agriculture and housing development.
Mullaghanish Bog SAC	1890	Blanket Bog and Active Blanket Bog		All of the habitats and species of biodiversity importance occurring in Cork are qualifying features for this site.	Habitats: Overstocking; Peat extraction; Afforestation; Drainage; Burning and Infrastructural Developments (e.g. Windfarms); Recreational uses including hill walking and quad biking; Afforestation.
Blackwater River SAC	2170	Mudflats and sandflats not covered by	Freshwater pearl mussel; White clawed	Habitats: Wet woodland; Dry woodland;	Habitats: Aquaculture; Fishing; Coastal

Sites	Site Code	Habitats for which these are designated	Species for which these are designated	Other species and habitats of note occurring within the site	Potential Threats
		seawater at low tide; Perennial vegetation of stoney banks; Salicornia and other annuals colonising mud and sand; Atlantic salt meadows; Mediterranean salt meadows; Water courses of plain to maintane levels with the Ranunculion fluitantis and Callitricho - batrachion vegetation; Alluvial forest with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> ; Old sessile oak woodlands with <i>Ilex</i> and <i>Blechnum</i> ; <i>Taxus baccata</i> woods.	crayfish; Sea lamprey; Brook lamprey; River lamprey; Twaite shad; Atlantic salmon; Otter.	Freshwater marsh; Wet grassland; Shingle Spit. Species: Toothwort; Summer Snowflake; Flowering Rush ; Common Calamint; Red Campion; Sand Leek; Wood Club-rush.	development; Activities which could cause water pollution including waste water discharges and water abstractions; Bait digging; Land reclamation; Coastal protection works; River bank protection works; Spread of invasive species; Infilling; Development pressure within the river catchment causing habitat loss; Woodland clearance; Invasive species encroachment; Sub-optimal grazing. Species: Fish and invertebrates: All activities which could impact on water quality; Otter: Disturbance to river banks.
Bandon River SAC	2171	Water courses of plain to montane levels with the Ranunculion	Freshwater Pearl Mussel; Brook lamprey.	Habitats: Wet broad-leaved woodland; Species: Salmon;	Habitats: Eutrophication; Overgrazing; Excessive fertilisation;

Sites	Site Code	Habitats for which these are designated	Species for which these are designated	Other species and habitats of note occurring within the site	Potential Threats
		fluitantis and Callitricho-Batrachion vegetation; Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (alno-padion, alnion incanae, salicion albae) .		Kingfisher.	Afforestation; Introduction of invasive alien species; Species: All activities which could impact on water quality.
Cork Harbour SPA	4030	n/a	Cormorant; Shelduck; Oystercatcher; Golden plover; Lapwing; Dunlin; Black-tailed godwit; Curlew; Redshank; Common tern; 20,000 wintering waterbirds.	Species: Little grebe; Great crested grebe; Grey heron; Wigeon; Teal; Pintail; Shoveler; Red-breasted merganser; Grey plover; Black-headed gull; Common gull; Lesser black-backed gull; Wetland and Waterbirds.	Species: Activities which could cause disturbance to birds; Construction of paths or track etc; Land reclamation and habitat removal.
Clonakilty Bay SPA	4081	n/a	Black-tailed godwit	Species: Shelduck; Dunlin; Curlew; Wetland and Waterbirds.	Species: Activities which could cause disturbance to birds; Construction of paths or track etc; Land reclamation and habitat removal.
The Gearagh SPA	4109	n/a	Wetland and Waterbirds	Species: Whooper Swan; Golden Plover; Duck spp; Goose spp; Swan spp; Alluvial Woodland and	Species: Agricultural improvement; Drainage; Activities which could cause disturbance to

Sites	Site Code	Habitats for which these are designated	Species for which these are designated	Other species and habitats of note occurring within the site	Potential Threats
				other habitats.	wintering birds. Habitats: Eutrophication caused by overgrazing, overfertilisation, afforestation; Woodland clearance; Invasive species encroachment; Sub-optimal grazing.
Mullaghanish to Musheramore SPA	4162	n/a	Hen Harrier	Species: Merlin. Habitats: Upland habitats including Blanket Bog; Heath; Upland grassland; Rivers and Afforested Land.	Species: Afforestation; Pressure for development of infrastructural projects including wind farms; power lines and hydroelectric stations; Any activities which could cause disturbance to breeding birds or removal of breeding or foraging habitat upon which they are dependant.
Courtmacsherry Estuary SPA	4219	n/a	Golden Plover; Black-tailed Godwit; Curlew; Common Gull	Species: Great Northern Diver; Shelduck; Wigeon; Red-breasted Merganser; Lapwing; Dunlin; Bar-tailed Godwit; Blackheaded	Habitats: Aquaculture; Fishing; Coastal development; Water pollution arising from agriculture; Bait digging; Land reclamation; Coastal

Sites	Site Code	Habitats for which these are designated	Species for which these are designated	Other species and habitats of note occurring within the site	Potential Threats
				Gull. Habitat: Coastal Habitats.	<p>protection works; Spread of invasive species; Infilling; Spread of invasive species including sea buckthorn and Spartina; Infilling; Recreational uses, including trampling, horse riding and vehicle use; Mechanised removal of tidal litter. Over and under-grazing; Sand and gravel extraction; Removal of other beach materials; Development pressure causing habitat loss. Species: Disturbance to wintering birds.</p>

3.2.2 All of the draft plan objectives were reviewed as part of the Habitats Directive screening process. Consideration was given to direct and indirect impacts which may arise from development which could be encouraged by objectives contained in the draft plan. This could include new residential, commercial, infrastructural, recreational or other development which may give rise to direct impacts on habitats or species (loss of habitat, disturbance to species); as well as activities which could have indirect impacts (e.g. activities which could affect water quality or hydrology which could in turn affect the status/health of populations of water dependant habitats or species). Proposals which could give rise to impacts which were considered include:

- policies promoting development which would give rise to habitat loss within Natura 2000 sites – ie proposed development zonings directly on lands designated for nature conservation.
- policies promoting development in areas with inadequate provision for water and waste water infrastructure.
- policies promoting development in areas which could give rise to pressure on water quality during the construction and operational phase, in particular proposals for development within flood zones of Natura 2000 sites with water dependant habitats and species.
- policies promoting development which could give rise to disturbance to protected species, in particular proposals for paths and walkways within or adjacent to sensitive bird feeding and roosting sites.

3.2.3 These were considered both on their own as well as in relation to potential cumulative impacts when considered in combination with other plans and projects. Potentially significant impacts were identified in relation to St. Gobnait's Wood Special Area of Conservation arising from the overlapping of the Ballyvourney settlement boundary with the SAC; and on the Gearagh Special Area of Conservation and Special Protection Area arising from the overlapping of the settlement boundary for Toon Bridge with the SAC and SPA. In addition, it was noted that waste water treatment infrastructure in each of the three settlements upstream from the Gearagh does not have capacity to deal with the projected population increases. There is potential for such population increases in these settlements to give rise to impacts on water quality in the Special Area of Conservation. These sites were brought forward for appropriate assessment and recommendations for alterations to policies, settlement boundaries and zonings were made to offset potential impacts on habitats or species for which this site was designated, and on the overall integrity of the site itself.

Table 3.2 Summary of potential impacts on Natura 2000 sites identified through screening of draft plan and consideration of cumulative impacts (See first Natura Impact Report for the Macroom EA Local Area Plan for full details).

Site Name	Potential Impacts	Other Plans Which Could Give Rise to Potential Cumulative Impacts
Clonakilty Bay SAC	None identified	n/a
St. Gobnait's Wood SAC	Some areas of this SAC are within the settlement boundary of Ballyvourney. Such areas could be targeted for development giving rise to possible loss of habitat and/or disturbance to species. St. Gobnait's Wood is zoned O-01 with woodland paths zoned U-02 and U-03.	None identified
The Gearagh SAC	Green belt areas around Macroom Town lie within the Gearagh Special Area of Conservation. Part of the SAC lies within the settlement of Toon Bridge. Development in these areas could give rise to possible loss of habitat and/or disturbance to species. There is insufficient waste water treatment capacity to facilitate proposed population increases in each of three settlements upstream from the Gearagh, being Toon Bridge, Inchigeelagh and Ballingearry. Population increases provided for in this plan could contribute to a negative impact on water quality in the upper Lee and in the Gearagh Special Area of Conservation.	<p>This electoral area overlaps with the Upper Lee Water Management Unit. Most of the water bodies in the area are High Status or Good Status, with 2 classified as moderate status and four as poor status. Additional pressure on water quality in this SAC arises primarily from agricultural sources (72%), forestry (9%) and unsewered properties (7%). 8% arises from urban waste water and from waste water treatment plants. Approximately one quarter of septic tanks in the area are located in areas of very high or extreme risk.</p> <p>Additional pressure on water quality in the Gearagh Special Area of Conservation could be caused by development provided for in the Cork County Development Plan, 2009-2017.</p>
Killarney National Park, Magillicuddy Reeks and Caragh River Catchment SAC	None identified	n/a
Great Island Channel SAC	None identified	n/a

Site Name	Potential Impacts	Other Plans Which Could Give Rise to Potential Cumulative Impacts
Courtmacsherry Estuary SAC	None identified	n/a
Derryclogher (Knockboy) Bog SAC	None identified	n/a
Mullaghanish Bog SAC	None identified	n/a
Blackwater River (Cork/Waterford)SAC	None identified	n/a
Bandon River SAC	None identified	n/a
Cork HarbourSPA	None identified	n/a
ClonakiltySPA	None identified	n/a
The GearaghSPA	Green belt areas around Macroom Town lie within the Gearagh Special Area of Conservation. Part of the SAC lies within the settlement of Toon Bridge. Development in these areas could give rise to possible loss of habitat and/or disturbance to species for which the SPA is designated.	Additional pressure on habitats and water quality in the Gearagh Special Area of Conservation could be caused by development provided for in the Cork County Development Plan, 2009-2017 and the Macroom Town Plan, 2009-2015
Mullaghanish to MusheramoreSPA	None identified	n/a
Courtmacsherry EstuarySPA	None identified	n/a

3.2.4 All of the recommendations made for changes to policies, settlement boundaries and zonings arising out of the Appropriate Assessment process were put before Cork County Council in the *Report to Members, Macroom Electoral Area Local Area Plan, Public Consultation Draft, Managers Opinion on the Issues Raised by Submissions and Recommended Amendments* (February 2011), and these were accepted in full by the Council at their meeting of March 30th/31st. These were published as proposed amendments to the draft Local Area Plan on 21st April 2011, in addition to other amendments arising from the public consultation process or proposed by Council members.

3.2.5 The recommendations which arose from the AA of the draft plan are set out in **Table 3.3** below. The full assessment is available for review in *Natura Impact Report I for the draft Macroom EA Local Area Plan*, (February, 2011). The proposed amendments to the plan are set out in the *Macroom Electoral Area Local Area Plan, Proposed Amendment to the Draft Plan, Public Consultation Document* (April, 2011).

Table 3.3 Summary of Recommendations for Changes Arising From Appropriate Assessment of Draft Plan
(Proposed wording changes for policies are set out in **bold**).

Obj. No.	Amendment Ref	Original wording of obj. in draft plan	Recommendation from AA process	Proposed change arising from AA of draft plan
GB 1-1	MM 01.10.01	(b) It is an objective to reserve generally for use as agriculture, open space or recreation uses those lands that lie in the immediate surroundings of towns.	Modify wording of objective.	(b) It is an objective to reserve generally for use as agriculture, open space or recreation uses those lands that lie in the immediate surroundings of towns. Where Natura 2000 sites occur within greenbelts, these shall be reserved for uses compatible with their nature conservation designation.
LAS 2-1	MM 02.02.04	In line with the principles set out in the County Development Plan 2009 and the provisions of objectives INF 5-6, INF 5-7 and INF 5-8 of the County Development Plan, development proposed in this plan will only take place where appropriate and sustainable water and waste water infrastructure, that will help secure the objectives of the relevant River Basin Management Plan, is already in a programme or is to be provided in tandem with the development	Modify wording of objective.	In line with the principles set out in the County Development Plan 2009 and the provisions of objectives INF 5-6, INF 5-7 and INF 5-8 of the County Development Plan, development proposed in this plan will only take place where appropriate and sustainable water and waste water infrastructure is in place which will secure the objectives of the relevant River Basin Management Plan

Obj. No.	Amendment Ref	Original wording of obj. in draft plan	Recommendation from AA process	Proposed change arising from AA of draft plan
				and the protection of sites designated for nature conservation. This must be provided and be operational in advance of the commencement of any discharges from the all residential and other development.
LAS 2-2	MM 02.02.05	This plan, and individual projects based on the plans proposals, will be subject (as appropriate) to Strategic Environmental Assessment Appropriate Assessment (Habitats Directive and Birds Directive) and Environmental Impact Assessment to ensure the parallel development and implementation of a range of sustainable measures to protect the integrity of the biodiversity of the area...	Modify wording of objective.	This plan, and individual projects based on the plans proposals, will be subject (as appropriate) to Strategic Environmental Assessment, Habitats Directive Assessment Screening and/or Assessment (Habitats Directive and Birds Directive) and Environmental Impact Assessment to ensure the parallel development and implementation of a range of sustainable measures to protect the integrity of the biodiversity of the area
LAS 2-3	MM 02.02.06	N/A	Insert new objective.	It is an objective to provide protection to all proposed and designated natural heritage sites and

Obj. No.	Amendment Ref	Original wording of obj. in draft plan	Recommendation from AA process	Proposed change arising from AA of draft plan
				protected species within this planning area in accordance with env 1-5, 1-6, 1.7 and 1-8 of the County Development Plan, 2009. This includes Special Areas of Conservation, Special Protection Areas and Natural Heritage Areas.
LAS 2-4	MM 02.02.07	N/A	Insert new objective.	It is an objective to maintain where possible important features of the landscape which function as ecological corridors and areas of local biodiversity value and features of geological value within this planning area in accordance with env 1-9, 1-10, 1-11 and 1.12 of the County Development Plan, 2009.
Ballymakeery/ Ballyvourney U-02	MM 03.04.01	Maintain amenity walk through Saint Gobnait's Wood.	Modify wording of objective.	Maintain amenity walk through Saint Gobnait's Wood. Path upgrades or other works will require the provision of an ecological impact assessment report (Natura Impact Statement) in accordance with

Obj. No.	Amendment Ref	Original wording of obj. in draft plan	Recommendation from AA process	Proposed change arising from AA of draft plan
				the requirements of the Habitats Directive and may only proceed where it can be shown that they will not have significant negative impact on the SAC.
Ballymakeery/ Ballyvourney U-03	MM 03.04.02	Maintain amenity walk through Saint Gobnait's Wood.	Modify wording of objective.	Maintain amenity walk through Saint Gobnait's Wood. Path upgrades or other works will require the provision of an ecological impact assessment report (Natura Impact Statement) in accordance with the requirements of the Habitats Directive and may only proceed where it can be shown that they will not have significant negative impact on the SAC.
Ballymakeery/ Ballyvourney	MM 03.04.03	N/A	Modify development boundary	Amend the development boundary to remove areas of SAC from within the development boundary.
Inchigeelagh Db-01 C	MM 03.14.01	In the absence of a public wastewater treatment plant being provided in the village development shall be restricted to 10	Modify wording of objective.	In the absence of a public wastewater treatment plant being provided in the village

Obj. No.	Amendment Ref	Original wording of obj. in draft plan	Recommendation from AA process	Proposed change arising from AA of draft plan
		<p>individual dwellings subject to normal proper planning and sustainable development considerations. Each dwelling unit shall be served by private individual treatment unit and shall provide a sustainable properly maintained private water supply, unless a public supply is available. Such proposals will be assessed in line with the appropriate EPA code of practice and will have regard to any cumulative impacts on water quality..</p>		<p>development shall be restricted to 10 individual dwellings subject to normal proper planning and sustainable development considerations. Each dwelling unit shall be served by private individual treatment unit and shall provide a sustainable properly maintained private water supply, unless a public supply is available. Such proposals will be assessed in line with the appropriate EPA code of practice and will have regard to any cumulative impacts on water quality and on Lough Allua proposed Natural Heritage Area and on the Gearagh Special Area of Conservation.</p>
Inchigeelagh DB-01(d)	MM 03.14.02	<p>In order to secure the population growth and supporting development proposed in DB -01a, appropriate and sustainable water and waste water infrastructure that will secure the objectives of the relevant River Basin Management Plan, needs to be provided in tandem</p>	<p>Modify wording of objective.</p>	<p>In order to secure the residential growth and supporting development proposed in DB - 01a, appropriate and sustainable water and waste water infrastructure that will secure the objectives of the</p>

Obj. No.	Amendment Ref	Original wording of obj. in draft plan	Recommendation from AA process	Proposed change arising from AA of draft plan
		with development and where applicable protect the integrity of Natura 2000 site.		relevant River Basin Management Plan and the protection of the Gearagh Special Area of Conservation, must be provided and be operational in advance of the commencement of any discharges from the development. Waste water infrastructure must be capable of treating discharges to ensure that water quality in the receiving river does not fall below legally required levels. Sustainable Urban Drainage Systems (SUDS) and sufficient storm water attenuation will be required for developments within this area.
Toon Bridge DB-01(a)	MM 03.35.01	Within the development boundary of Toon Bridge it is an objective to encourage the development of up to 5 dwelling units in the period 2010-2020, subject to normal proper planning considerations. Each dwelling unit shall be served by private individual treatment unit and shall provide a sustainable properly	Modify wording of objective.	Within the development boundary of Toon Bridge it is an objective to encourage the development of up to 5 dwelling units in the period 2010-2020, subject to normal proper planning considerations. Each dwelling unit

Obj. No.	Amendment Ref	Original wording of obj. in draft plan	Recommendation from AA process	Proposed change arising from AA of draft plan
		maintained private water supply, unless a public supply is available. Such proposals will be assessed in line with the appropriate EPA code of practice and will have regard to any cumulative impacts on water quality		shall be served by private individual treatment unit and shall provide a sustainable properly maintained private water supply, unless a public supply is available. Such proposals will be assessed in line with the appropriate EPA code of practice and will have regard to any cumulative impacts on water quality and on the Gearagh Special Area of Conservation and Special Protection Area.
Toon Bridge DB-01 (b)	MM 03.35.02	In order to secure the residential growth proposed above, appropriate and sustainable water and waste water infrastructure that will help secure the objectives of the relevant River Basin Management Plan, needs to be provided in tandem with the development.	Modify wording of objective.	In order to secure the population growth and supporting development proposed in DB - 01a, appropriate and sustainable water and waste water infrastructure that will help secure the objectives of the relevant River Basin Management Plan and the protection of the Gearagh Special Area of Conservation, must be provided and be operational in advance of the

Obj. No.	Amendment Ref	Original wording of obj. in draft plan	Recommendation from AA process	Proposed change arising from AA of draft plan
				<p>commencement of any discharges from the development. Waste water infrastructure must be capable of treating discharges to ensure that water quality in the receiving river does not fall below legally required levels. Sustainable Urban Drainage Systems (SUDS) and sufficient storm water attenuation will be required for developments within this area.</p>
Toon Bridge T-01	MM 03.35.03	<p>Consolidate existing village centre.</p> <p>Parts of the site are at risk of flooding. Any development proposals on this site will normally be accompanied by a flood risk assessment that complies with Chapter 5 of the Ministerial Guidelines 'The Planning System and Flood Risk Management' as described in objectives FD 1-4 , 1-5 and 1-6 in Section 1 of this plan.</p>	Modify wording of objective.	<p>Consolidate existing village centre.</p> <p>This zone is adjacent to the Gearagh Special Area of Conservation and Special Protection Area. Development proposals are likely to require the provision of an ecological impact assessment report (Natura Impact Statement) in accordance with the requirements of the Habitats Directive and may only proceed where</p>

Obj. No.	Amendment Ref	Original wording of obj. in draft plan	Recommendation from AA process	Proposed change arising from AA of draft plan
				<p>it can be shown that they will not have significant negative impact on the SAC and SPA. A buffer zone will be required between any development proposed for this zone and the SAC and SPA. The size of the buffer zone will be determined at project level.</p> <p>Parts of this site are at risk of flooding. Any development proposals on this site will normally be accompanied by a flood risk assessment that complies with Chapter 5 of the Ministerial Guidelines 'The Planning System and Flood Risk Management' as described in objectives FD 1-4, 1-5 and 1-6 in Section 1 of this plan.</p>
Toon Bridge 0-01	MM 03.35.04	This area is within the floodplain of the Toon River. Lands to remain predominantly open and rural in character, with some opportunities for recreation or amenity type uses. Any development proposals on this site will normally	Modify wording of objective	This area is within the floodplain of the Toon River. Lands to remain predominantly open and rural in character, with some opportunities for recreation or amenity type uses.

Obj. No.	Amendment Ref	Original wording of obj. in draft plan	Recommendation from AA process	Proposed change arising from AA of draft plan
		<p>be accompanied by a flood risk assessment that complies with Chapter 5 of Ministerial Guidelines 'The Planning System and Flood Risk Management' as described in objectives FD 1-4, 1-5 and 1-6 in Section 1 of this plan.</p>		<p>Parts of the zone are within the Gearagh Special Protection Area. These parts of the zone are not suitable for development. Development in other parts of this zone is likely to require the provision of an ecological impact assessment report (Natura Impact Statement) in accordance with the requirements of the Habitats Directive and may only proceed where it can be shown that they will not have significant negative impact on the SPA and nearby SAC.</p> <p>A buffer zone will be required between any development proposed for this zone and the SPA. The size of the buffer zone will be determined at project level.</p> <p>Any development proposals on this site will normally be accompanied by a flood risk</p>

Obj. No.	Amendment Ref	Original wording of obj. in draft plan	Recommendation from AA process	Proposed change arising from AA of draft plan
				assessment that complies with Chapter 5 of the Ministerial Guidelines 'The Planning System and Flood Risk Management' as described in objectives FD 1-4, 1-5 and 1-6 in Section 1 of this plan.
Toon Bridge	MM 03.35.05	n/a	Modify development boundary	Amend the development boundary to remove areas of SAC from within the development boundary.

3.3 Habitats Directive Assessment of Proposed Amendments

3.3.1 In April 2011, proposed amendments to the draft plan, were screened to determine whether these were likely to give rise to significant impacts on Natura 2000 sites (see **Table 3.4** below). No significant impacts on Natura 2000 sites were identified from the proposed amendments to the Macroom Electoral Local Area Plan.

Table 3:4 Assessment of potential for impact of proposed amendments to Macroom EA Local Area Plan on Natura 2000 sites.

Issues Examined	y/n	Amendment Ref. No	Relevant Settlement	Natura 2000 site which may be impacted	Details of proposed amendment	Potential Impact
Population target increases for settlements giving rise to possible impacts on Natura 2000 sites.	N	n/a	n/a	n/a	n/a	n/a
Proposed new zonings within Natura 2000 sites.	N	n/a	n/a	n/a	n/a	n/a
New zonings or expansion of development boundaries adjacent to Natura 2000 sites.	Y	MN.03.04.04	Ballyvourney	St. Gobnait's Wood SAC	Proposed amendment to create special development zone (X-01) adjacent to Special Area of Conservation.	Potential for impacts on habitats and species within SAC.
Re-instatement of areas from 2005 plan into development boundaries, previously removed on grounds of flood risk which could have impacts on Natura 2000 sites.	N	n/a	n/a	n/a	n/a	n/a
Recommendations from NIR I not included in amendments.	N	n/a	n/a	n/a	n/a	n/a
Other amendments that	N	n/a	n/a	n/a	n/a	n/a

Issues Examined	y/n	Amendment Ref. No	Relevant Settlement	Natura 2000 site which may be impacted	Details of proposed amendment	Potential Impact
may give rise to impacts on Natura 2000 sites.						

3.3.2 Fifteen submissions were made in relation to these proposed amendments during the public consultation process on the proposed amendment. These submissions and any further changes to the plan which were considered by the Manager arising from same, were reviewed to determine whether changes arising from the submissions would have implications for the Natura 2000 network. No further impacts were identified, and therefore, no further recommendations for modifications to the plan which might give rise to impacts on Natura 2000 sites were made arising from the submissions received on the proposed amendments.

3.3.3 One recommendation was made for a modification to a proposed amendment to the draft plan. This was put before Cork County Council in the *Report to Members Macroom Electoral Area Local Area Plan Public Consultation Draft, Manager's Opinion on the Issues Raised by Submissions on Proposed Amendments and Manager's Recommendations* (June 2011 and was accepted by the Council at their meeting of 25th July.

3.3.4 This recommendation is set out in **Table 3.5** below. The full assessment is available for review in *Natura Impact Report II for the proposed amendments to the draft Macroom EA Local Area Plan, April, 2011*.

Table 3.5 Summary of Recommendations for Changes to be made to Plan Arising from Appropriate Assessment of Proposed Amendments

Obj No.	Amendment Ref	Proposed amendment (amendment to original objective is shown in bold)	Recommendation from appropriate assessment of proposed amendment	Proposed change arising from AA of proposed amendment
Ballyvourney X-01	MM 03.04.04	Re-instate X-01 zoning on Colaiste Iosagain site in Ballyvourney/ Ballymakeery. Opportunity site to redevelop former secondary school for tourism/community/ rural development'	Modify wording of objective.	Amend wording of X-01 to include the following: This zone is immediately adjacent to the St.Gobnait's Special Area of Conservation any development proposals may require the provision of a Natura Impact Statement and can only proceed where it can be shown that it will not have significant impacts on St.Gobnait's SAC. A buffer zone is likely to be required between any permitted development and the SAC, the size and scale of which will be determined at project level.

4 Appropriate Assessment Conclusion – Finding of No Significant Effects Matrix

Information Relating To The Plan And Natura Sites Within Potential Impact Zone	
Plan Name	Macroom EA Local Area Plan, 2011
Natura 2000 sites within potential impact zone of the plan	<p>Special Areas of Conservation: St. Gobnait's Wood SAC 000106; The Gearagh SAC 000108; Killarney National Park, Macgillycuddy Reeks and Caragh River Catchment SAC 000365; Great Island Channel SAC 001058; Courtmacsherry Estuary SAC 001230; Derryclogher (Knockboy) Bog SAC 001873; Mullaghanish Bog SAC 001890; Ballyhoura Mountains SAC 002036; Blackwater River 2170; Bandon River SAC 002171.</p> <p>Special Protection Areas: Cork Harbour SPA 004030; Clonakilty SPA 004081; River; The Gearagh SPA 004109; Mullaghanish to Musheramore SPA 4162; Courtmacsherry Estuary SPA 4219</p>
Description of the plan	<p>The Macroom EA Local Area Plan sets out the approach for the local level implementation of the overall planning strategy for the County as set out in the County Development Plan 2009. It consists of a written statement with objectives relating to population targets, housing strategy, settlement strategies and boundaries, economic development, flood risk assessment, climate change and biodiversity strategies. It contains three main sections as follows:</p> <p>Section 1: Introduction to the Macroom Electoral Area Local Area Plan This section summarises the content of the plan and its relationship to other plans. It contains information relating to the process that has been followed in the making of the plan including the approach to consultation and zoning etc. The main towns, villages and other settlements within the electoral area are identified in this section. Policies relating to assessment of flood risk and the protection of the green belt which apply to the entire electoral area are also included in this section.</p> <p>Section 2: Local Area Strategy This section of the plan sets out the overall strategy for Macroom Electoral Area as a whole. It presents a summary and analysis of the growth and population targets used in the plan and gives details of the main employment and economic considerations, education and infrastructure requirements and key environmental considerations. It sets out an overall vision for the electoral area and contains policy statements relating to the provision of a sustainable water supply and treatment system as well as environmental assessment requirements.</p> <p>Section 3: Settlements and Other Locations. This section of the document sets out more specific objectives and</p>

	zonings relating to population targets, residential, commercial and industrial development, the provision of infrastructural, community and recreational facilities etc for each of the main towns, key villages, and other villages, village nuclei and small settlements within the electoral area.								
Is the proposed plan directly connected with or necessary to the management of the Natura 2000 sites identified above	No								
Assessment of Significant Effects									
Describe how the plan (alone or in combination is likely to affect Natura 2000 sites)	<p>Three Natura 2000 were identified which may be impacted by policy proposed in this plan. These were St. Gobnait's Wood SAC and the Gearagh SAC and the Gearagh SPA.</p> <table border="0"> <thead> <tr> <th style="text-align: left;">Potential Impacts</th> <th style="text-align: left;">Activities which could give rise to these</th> </tr> </thead> <tbody> <tr> <td>Impacts on water quality and levels.</td> <td>Targeted increases in population of settlements without provision for adequate waste water treatment could affect the Gearagh SAC. .</td> </tr> <tr> <td>Direct impacts on habitats giving rise to habitat loss, deterioration or fragmentation.</td> <td>Zoning of land within Natura 2000 sites, extension of settlement boundaries into Natura 2000 sites at Toon Bridge (the Gearagh) and at Ballyvourney (could affect St. Gobnait's Wood).</td> </tr> <tr> <td>Disturbance to species.</td> <td>Zoning for development within or close to sites used as breeding or feeding areas by protected species. In particular, the overlapping of the Toon Bridge settlement boundary with the Gearagh SPA could give rise to possible disturbance impacts on species for which the SPA is designated.</td> </tr> </tbody> </table>	Potential Impacts	Activities which could give rise to these	Impacts on water quality and levels.	Targeted increases in population of settlements without provision for adequate waste water treatment could affect the Gearagh SAC. .	Direct impacts on habitats giving rise to habitat loss, deterioration or fragmentation.	Zoning of land within Natura 2000 sites, extension of settlement boundaries into Natura 2000 sites at Toon Bridge (the Gearagh) and at Ballyvourney (could affect St. Gobnait's Wood).	Disturbance to species.	Zoning for development within or close to sites used as breeding or feeding areas by protected species. In particular, the overlapping of the Toon Bridge settlement boundary with the Gearagh SPA could give rise to possible disturbance impacts on species for which the SPA is designated.
Potential Impacts	Activities which could give rise to these								
Impacts on water quality and levels.	Targeted increases in population of settlements without provision for adequate waste water treatment could affect the Gearagh SAC. .								
Direct impacts on habitats giving rise to habitat loss, deterioration or fragmentation.	Zoning of land within Natura 2000 sites, extension of settlement boundaries into Natura 2000 sites at Toon Bridge (the Gearagh) and at Ballyvourney (could affect St. Gobnait's Wood).								
Disturbance to species.	Zoning for development within or close to sites used as breeding or feeding areas by protected species. In particular, the overlapping of the Toon Bridge settlement boundary with the Gearagh SPA could give rise to possible disturbance impacts on species for which the SPA is designated.								
Are there other projects or plans that together with the plan	Cork County Development Plan 2009. Development provided for by this plan (chap 4) could give rise to cumulative impacts on water quality in the Gearagh Special Area of Conservation.								

being assessed could affect the site (provide details)	Macroom Town Plan, 2009-2015. Development provided for by this plan could give rise to cumulative impacts on water quality and on habitats in the Gearagh Special Area of Conservation.
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<p>Explain why these effects are not considered significant</p>	<p>Impacts on water quality and levels.</p> <ol style="list-style-type: none"> 1. Modifications were made to the following policies in Inchigeelagh and Toon Bridge to ensure that development in the relevant settlements can only proceed when adequate provision has been made for waste water treatment and to make provision for SUDS and Stormwater Attenuation measures a requirement where necessary. 2. Provision was made for the establishment of buffer zones between development and watercourses susceptible to pollution at Toon Bridge. <p>Direct impacts on habitats.</p> <ol style="list-style-type: none"> 3. Alterations were made to the boundaries of the following settlements Ballyvourney and Toon Bridge to exclude sites designated for nature conservation from within the settlement boundaries. 4. Modifications were made to open space zonings in Toon Bridge which occur within Special Areas of Conservation and Special Protection Areas to clarify that these spaces are not suitable for development. 5. Modifications were made to objectives, settlement boundaries and zonings as set out under impacts on water quality above, will also provide for the protection of water dependant habitats. <p>Species protection.</p> <ol style="list-style-type: none"> 6. Modifications made to objectives, settlement boundaries and zonings as set out under impacts on water quality above, will also provide for the protection of water dependant species. 7. Modifications were made to the wording of the following objectives U-02 and U-03 in Ballymakeery/Ballyvourney to ensure that the provision of proposed amenity walks in areas which could give rise to disturbance to species will only be completed following ecological assessment. <p>Introduction of new objectives to the plan.</p> <ol style="list-style-type: none"> 8. Two new objectives were included into the plan arising from the AA process. These commit CCC to the protection of Natura 2000 sites, ecological corridors, areas and habitats of local biodiversity value within the plan area and its environs . Maps and lists of all designated sites were added to the final draft of the plan.
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Appropriate Assessment Conclusion	On the basis of the changes set out above, it is concluded that the Macroom EA Local Area Plan will not give rise to impacts on the integrity of the Natura 2000 network.
List of agencies consulted	The National Parks and Wildlife Service was consulted and advised at all stages of the appropriate assessment process for this plan. This was completed through bilateral meetings which were held with local and regional staff of the NPWS. Natura Impact Reports were referred to statutory consultees and were available for review and consultation through the CCC website.
Response to consultation	All of the recommendations made by the NPWS were integrated into the Natura Impact Reports.
Data Collected To Carry Out The Assessment	
Who carried out the assessment	Planning Policy Unit, Cork County Council
Sources of data	National Parks and Wildlife Service Site Synopses and other data relating to Natura 2000 sites.
Level of assessment completed	Screening for impacts on all Natura 2000 sites within the potential impact zone of the plan. Appropriate assessment for those sites where significant impacts could not be ruled out at screening stage.
Where can the full results of the assessment be accessed and viewed	The full AA process may be tracked through Natura Impact Report I, prepared for draft plan, Natura Impact II, prepared for draft amendments and this final report.

5 Implementation of Mitigation and Monitoring Measures

The following table summarises the changes made to the plan to ensure the protection of the Natura 2000 network, and sets out how the implementation of these measures will be monitored over the lifetime of the plan.

Table 5.1 Mitigation and Monitoring Measures for the Macroom EA Local Area Plan, 2011

Mitigation measure	How will mitigation measures reduce adverse impacts on integrity of Natura 2000 sites.	How will measures be implemented and by whom	When will measures be implemented	How will mitigation be monitored
<p>Commitment in plan to prevent commencement of discharge from new developments in certain settlements until sufficient capacity for treatment of waste water is in place to ensure that legal water quality standards are met; and to ensure the integration of SUDS and stormwater attenuation into planned developments in specified zones (LAS 2-1 and development objectives for a number of</p>	<p>The aim of this measure is to protect water quality and minimise flood risk. Its implementation will ensure that there will be no additional nutrient input to designated waterbodies arising from development provided for by this plan. It will help to prevent siltation of the freshwater system, and will provide for the attenuation of surface / flood waters for any development provided for by this plan with specified zones, thereby protecting</p>	<p>Implementation will be achieved through the planning process by CCC. Permissions can only be granted for developments within LAP settlements where there is sufficient capacity to treat waste water to required standards and where adequate provision has been made for SUDS and stormwater attenuation in specified zones.</p> <p>Development of stormwater and waste water plan to be agreed with National Parks and Wildlife Service and EPA.</p>	<p>For lifetime of plan.</p>	<p>Review progress with planned upgrades for treatment plants. Review planning permissions granted/population increases in specified settlements during lifetime of plan and cross check against individual waste water treatment plant capacity at plan review stage.</p> <p>Review conditions of grant for developments permitted in accordance with plan policy within specified zones to establish numbers of these that have incorporated required measures at plan review stage.</p>

Mitigation measure	How will mitigation measures reduce adverse impacts on integrity of Natura 2000 sites.	How will measures be implemented and by whom	When will measures be implemented	How will mitigation be monitored
specified settlements).	freshwater systems from storm surges.			
Commitment in plan to ensure that all development facilitated through this plan is subject to the appropriate level of environmental assessment in accordance with the Habitats, Birds, EIA and SEA Directives; to provide protection to sites (proposed and designated) for nature conservation; and to maintain where possible features of the landscape of biodiversity value outside designated sites (LAS 2-2, 2-3 and 2-4 and development objectives for a number of	The aim of these measures is to commit CCC to protecting sites designated for nature conservation and biodiversity generally. This will be achieved by assessing all development proposals provided for by this plan in accordance with the provisions of the relevant legislation. This measure will reduce the risk of the Council authorising any activity which could have a negative impact on the Natura 2000 network, or on ecological features of the landscape which connect the network.	This measure will be implemented through the planning process.	Throughout the lifetime of this plan.	To be determined.

Mitigation measure	How will mitigation measures reduce adverse impacts on integrity of Natura 2000 sites.	How will measures be implemented and by whom	When will measures be implemented	How will mitigation be monitored
specified settlements).				
Removal of designated land from settlement boundaries.	This measure will reduce pressure for development within designated sites.	Measure to be implemented by CCC during plan making stage.	This measure has been implemented.	<p>Establish current level of development and ecological status of areas removed from settlement boundaries during plan making process by end of 2011.</p> <p>Examine status of these areas at plan review stage to determine if any development or alteration has taken place arising from policies set out in this plan.</p>
Provision for maintenance of buffer zones between Natura 2000 sites and proposed development.	This measure has been specified for zones or areas adjacent to Natura 2000 sites, where it is considered that development could give rise to impacts on habitats or disturbance to species for which the Natura 2000 sites are designated. Developments in such locations will require the	Implementation will be achieved through the planning process by CCC. Development proposals within certain zones or settlement areas adjacent to Natura 2000 sites must provide for the maintenance of a buffer zone between the development site and the Natura 2000 site.	Lifetime of plan.	<p>Establish current level of development and ecological status of identified areas by end of 2011.</p> <p>Examine these areas during review of LAP to determine if buffers have been provided for developments that have been permitted and/or built within the relevant zones.</p>

Mitigation measure	How will mitigation measures reduce adverse impacts on integrity of Natura 2000 sites.	How will measures be implemented and by whom	When will measures be implemented	How will mitigation be monitored
	provision of Natura Impacts Statements where significant impacts on designated sites cannot be ruled out.			
Requirement for provision of ecological reports to be prepared for certain recreational initiatives where these are within or adjacent to Natura 2000 sites.	The aim of this measure is to ensure that full consideration of impacts on habitats and species is made at the planning stage for such projects to ensure that they are designed in a manner which avoids such impacts.	Implementation will generally be achieved by CCC as most of these developments are completed by the Council. Where walkways or cyclepaths are planned in or close to Natura 2000 sites, these should only proceed where full assessment of potential impacts on Natura 2000 sites has been completed. This will normally be done as part of the Part 8 process.	Lifetime of the plan.	Establish current level of development and ecological status in identified areas by end of 2011. Review status of these areas at plan review stage to determine if any development or alteration has taken place.

6 References and Data Used

Cork County Council, Macroom Draft Electoral Area Local Area Plan, November, 2010.

Cork County Council, Natura Impact Report on Macroom Draft Electoral Area Local Area Plan, February 2011.

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Appendix I: Timetable for the Making of the Macroom Electoral Area Local Area Plan.

Date	Plan Making Stage	Habitats Directive Assessment Stage	Comment
22 nd Nov 2010	Publication of draft plan.		
22 nd Nov 2010– 12 th Jan 2011	Public consultation on draft plan.	Preparation of first Natura Impact Report on draft plan. Consultation with National Parks and Wildlife Service.	
23 rd Feb 2011	Publication of Managers Report summarising consultation submissions and containing recommendations of manager on same. This report incorporated the recommendations of the first Natura Impact Report on the draft plan.	Issue of first Natura Impact Report on draft plan.	All recommendations contained in first Natura Impact Report were subsumed into the Managers Report to Council.
30 th /31 st Mar 2011	Council members vote to propose amendments to plan.		<p>All recommendations in Managers Report arising from the AA process were accepted by Council and were therefore proposed as amendments to the plan.</p> <p>In addition, a number of new amendments were proposed by Councillors which required screening for AA.</p>
31 st Mar – 20 th Apr 2011	Preparation of proposed amendments to draft plan for publication.	Preparation of second Natura Impact Report on proposed amendments to plan. Consultation with National Parks and Wildlife Service.	

Date	Plan Making Stage	Habitats Directive Assessment Stage	Comment
21 st Apr 2011	Proposed amendments to draft plan published.	Publication of second Natura Impact Report on proposed amendments to plan.	
21 st April – 18 th May	Public consultation on proposed amendments.	Public consultation on second Natura Impact Report (proposed amendments to plan).	
19 th May – 10 th June.	Review of consultation submissions and preparation of 2 nd Managers Report	Review of consultation submissions and managers opinion on same to identify issues which might give rise to impacts on Natura 2000 sites.	15 submissions received in relation to proposed amendments to plan. No modifications were recommended by the Manager to be made to amendments on foot of these submissions which might give rise to impacts on Natura 2000 sites.
15 th June	Publication of 2 nd Managers Report summarising consultation submissions on proposed amendments to plan and containing recommendations of manager on same. This report incorporated the recommendations of the second Natura Impact Report.	Preparation of final Natura Impact Report for Macroom Electoral Area Local Area Plan.	
19 th July	Council meeting to review Managers Report and consider recommendations in relation to proposed amendments.		
26 th July	Council members vote to make or modify Local Area Plan.		All amendments arising from AA process were accepted by Council

Date	Plan Making Stage	Habitats Directive Assessment Stage	Comment
			members.

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Macroom Electoral Area Local Area Plan

Strategic Environmental Assessment
Statement

August 2011

Section 1 – Introduction

Terms of Reference

This is the SEA Statement of the **Macroom Electoral Area Local Area Plan** and forms the final part of the requirements for the Strategic Environmental Assessment (SEA) of the Plan.

SEA Definition

SEA is a systematic process of predicting and evaluating the likely environmental effects of implementing a plan, or other strategic action, in order to ensure that these effects are appropriately addressed at the earliest stage of decision-making.

Legislative Context

Directive 2001/42/EC of the European Parliament and of the Council, of 27 June 2001, on the assessment of the effects of certain plans and programmes on the environment, referred to hereafter as the SEA Directive, introduced the requirement that SEA be carried out on plans and programmes, which are prepared for a number of sectors, including land use planning. The SEA Directive was transposed into Irish Law through the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (SI No. 435 of 2004), and, the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (SI No. 436 of 2004). Both sets of regulations became operational on the 21st of July 2004. The SEA Directive and the instruments transposing it into Irish Law require that after the adoption of a plan or programme, the plan or programme making authority is required to make a Statement available to the public, the competent environmental authorities and, where relevant, neighbouring countries. This Statement is referred to as an SEA Statement.

Content of the SEA Statement

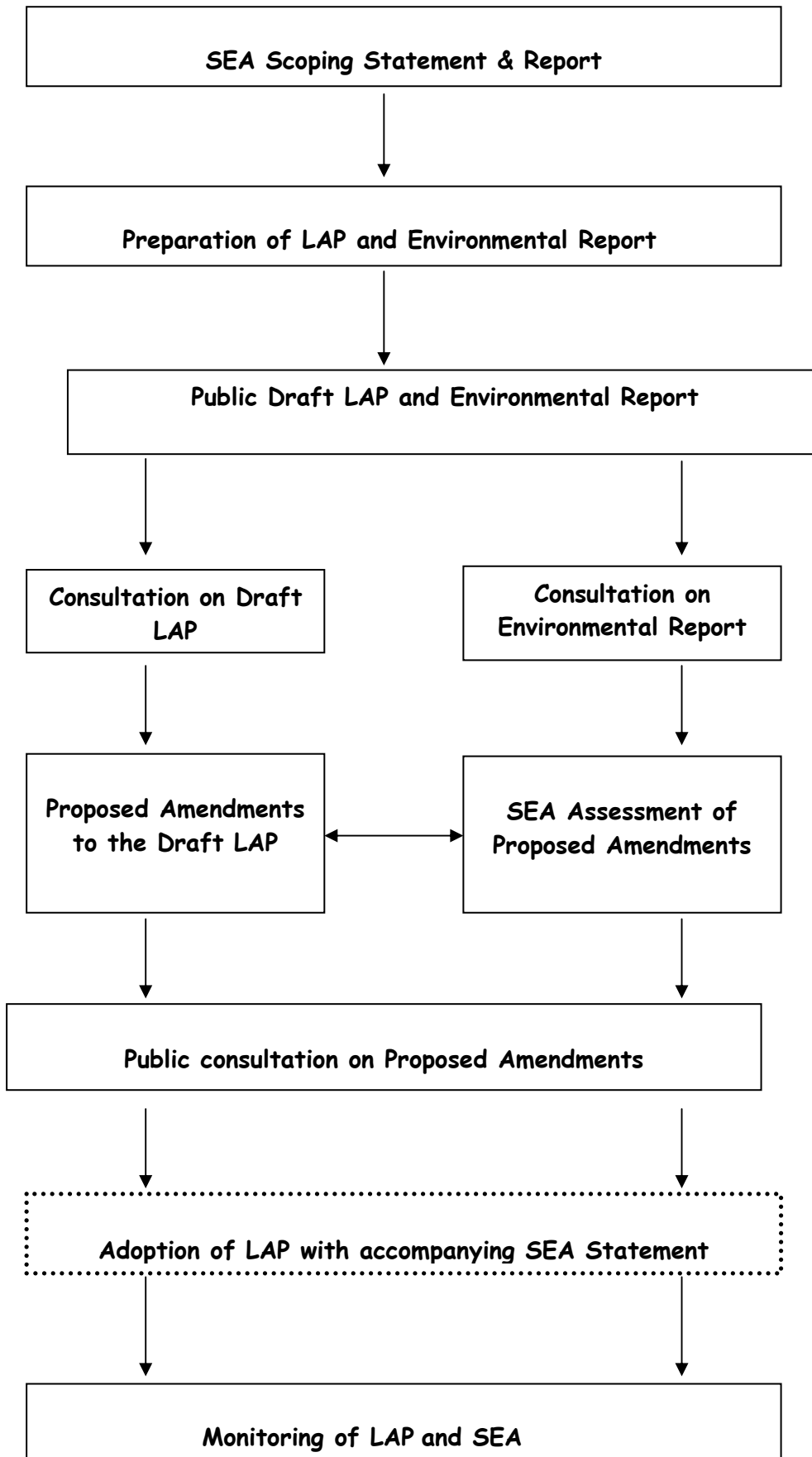
The SEA Statement is required to include information summarising:

- (a) how environmental considerations have been integrated into the plan
- (b) how
 - the environmental report,
 - any submission or observation to the planning authority in response to a notice under section 20(3) of the Act, and
 - any consultations under article 14 Fhave been taken into account during the preparation of the plan,
- (c) the reasons for choosing the plan, as adopted, in light of the other reasonable alternatives dealt with, and
- (d) the measures decided upon to monitor, in accordance with Article 14J, the significant environmental effects of implementation of the plan.

The Guidelines on the implementation of the SEA Directive state that the SEA statement should summarise the issues and concisely address them. Each of the above points has been addressed and is included in the various sections of the SEA statement which follow. The influence of the SEA on the LAP making process is outlined in the following flow chart (**Figure 1**).

The SEA statement tracks the progression of the plan as presented in the diagram, highlights how environmental considerations have been taken into account and sets out the detailed monitoring for the plan in the final section which it is intended will be reviewed over the lifetime of the plan.

Influence of SEA on the LAP Review Process: (Figure 1)



Section 2 - How Environmental Considerations and the Environmental Report were factored into the plan:

This Local Area Plan as well as the other nine Electoral Area Local Area Plans are considered to be middle order plans fitting between the County Development Plan and small scale plans and local area plans for example for an individual settlement. Because of this the approach taken needed to look at the overall issues of the Local Area Plan while also relating to individual settlements and objectives. While environmental issues related to individual sites/ settlements and objectives it is considered that the environmental process' most effective input was on the broader/wider scale. This is also reflected in the methodology for the provision of mitigation measures outlined in Chapter 10 of the Environmental Report which addressed the strategic level through assessment of the scenario/alternatives while the second approach addressed the common issues repeated throughout the Local Area Plan.

These middle order plans cover an entire electoral area with the broad distribution of population of main towns, villages and rural areas coming from the County Development Plan 2009. In some cases there may have been some minor changes made to the figures in the Local Area Plan but in general the figures used were in line with those of the Strategic Planning Areas set out in the County Development Plan and were consistent with the figures outlined in the Regional Planning Guidelines 2010.

Consultation:

In terms of the SEA and AA, there have been a number of consultations over the course of the preparation of the Macroon Electoral Area Local Area Plan 2011-2017 which was prepared at the same time as the remaining nine electoral areas in the county. An Outline Strategy was prepared for the Macroon LAP and included a broad checklist of the main environmental indicators within the electoral Area. The Strategy was on public display during January and February 2010.

Following this a scoping report was prepared and sent to the statutory consultees including the Environmental Protection Agency, the Department of Environment, Heritage and Local Government and the Department of Communications, Marine & Natural Resources. Five submissions on the Scoping Report were received which in some cases were also applicable to the other Electoral Area Local Area Plans being prepared simultaneously. The comments made at this stage of the process by the statutory consultees related to the scope and level of detail to be included in the SEA and were brought forward into the Environmental Report.

The next period of consultation included public display of the Draft Macroon Electoral Area Local Area Plan alongside the SEA Environmental Report during the period of 22nd November 2010 to 12th January 2011. A total of 65 submissions were received on this suite of documents, including submissions from the EPA and DoEHLG.

It was agreed that some of the comments in the submissions made be incorporated as non material changes in the final document while other changes were put forward as proposed changes to the text and objectives to the Draft Plan.

The final stage of consultation took place between 21st April and 18th May 2011 when amendments to the Draft Plan and a SEA Screening Report and Natura Impact Report (II) were on public display. 15 submissions were received at this stage of public consultation including submissions from the EPA and DOEHLG.

Section 3 of this Statement deals specifically with the Submissions and Observations received and the issues raised in these submissions.

Strategic Environmental Assessment

A number of distinct stages of the process during which environmental issues have been highlighted and the SEA methodology applied are outlined in this section. These are as follows:

Stage 1 – Preparation of the Draft LAP (Scoping and Environmental Report)

Stage 2 – Screening Matrix and Evaluation of the Draft LAP Objectives

Stage 3 – The Amendment Stage (SEA of the Proposed Material Amendment to the Draft Plan)

Stage 1 – Preparation of the Draft LAP (Scoping and Environmental Report)

Scoping:

Chapter 4 of the Environmental Report outlines the methodology of the preparation of the LAP and Environmental Report.

Initially, the Planning Authority engaged in a scoping exercise to determine the range of environmental issues and the level of detail to be included in the Environmental Report, which were decided upon, in consultation with the prescribed environmental authorities as a requirement of the SEA Regulations and Guidelines. The scoping and information gathering stage allowed for the collection of existing environmental baseline information in order to describe the current state of the environment in the Electoral Area. This is outlined in the Scoping Statement. The comments made at this stage of the process by the statutory consultees related to the scope and level of detail to be included in the SEA and were brought forward into the Environmental Report.

The Environmental Report:

Having established in the Scoping Report the environmental baseline the key aspect of the SEA was the collection of relevant baseline data for the Macroom Electoral Area. The collection of this information has informed the identification of key environmental sensitivities, sensitive areas and areas of pressure within the electoral area.

The SEA used a system of Environmental Protection Objectives (EPOs) with targets and indicators in the assessment of the Draft Local Area Plan. Baseline data collection and the preparation of sensitivity mapping have focussed the EPOs at the plan level and at issues relevant to the Macroom Electoral Area.

Where it was demonstrated that conflict with environmental objectives arose, measures were proposed which sought to mitigate against any potential negative environmental effects. This has occurred throughout the preparation of the LAP and the Amendments.

Alternative frameworks:

The Environmental Report is required by the SEA Directive to consider reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme and the significant environmental effects of the alternatives selected. Alternatives were formulated having regard to the objectives of the LAP. The alternatives are explored in Chapter 8 of the Environmental Report and a further expansion on these alternatives is outlined in **Section 4** of this SEA Statement.

Stage 2 – Matrix and Evaluation of the Draft LAP Objectives:

Before the publication of the Draft LAP, the objectives contained in the Draft Local Area Plan were evaluated against the Environmental Protection Objectives (EPO's) which were created for the LAP SEA within a series of matrices. These completed matrices are outlined in **Chapter 9** of the Environmental Report.

This stage identified whether the Draft LAP objectives would be likely to have either:

- No likely interaction with EPOs (they are likely to have no interaction with the status of the environment);
- A positive interaction with EPOs (they are likely to improve the status of the environment);
- A potentially conflicting interaction with EPOs
- An uncertain interaction with EPOs (the interaction with the status of the environment is uncertain)

Arising from this analysis and where a negative assessment was recorded, the SEA provided/ suggested mitigation measures in the form of:

- Changing the wording of an existing objective
- Deleting the objective
- Addition of a new objective

The matrix in Chapter 9 of the Environmental Report includes a 'tick' where the Environmental Report's recommendation was accepted in full and changes made appropriately in the Local Area Plan document. A 'dash' was entered where the Environmental Report's recommendation was partly accepted. A 'cross' was entered where the Environmental Report's recommendation was rejected and not entered into the Local Area Plan document.

This process was carried out simultaneously on the other nine other Electoral Area Local Area Plans throughout the county and the environmental impacts of these plans were considered as part of the overall assessment of this plan.

Mitigation Measures were detailed in Chapter 10 of the Environmental Report which related to wastewater infrastructure, impacts on biodiversity, provision for individual housing within settlements, serving of developments by private schemes or private group water schemes, the need to screen for SEA and AA masterplan studies and other landuse plans referred to in the Draft Local Area Plan, references to walkways and roadways, waste management, flooding objectives, water quality tables, inclusion of definition of sustainable, and tourism. One of the main environmental issue was the correlation between the population targets and growth of settlements and the waste water infrastructure of these settlements within the electoral area. A number of mitigation measures had been incorporated into the the local area plan and it was stated in the Environmental Report that there was an opportunity for the outstanding mitigation measures be incorporated at the amendment stage.

Stage 3: The Amendment Stage (SEA of the Proposed Material Amendment to the Draft Plan)

The amendments as outlined in the Managers Report (February 2011) in line with Section 20(3) of the Planning and Development Acts were examined in order to assess the significant effects on the environment that were likely to occur as a result of the recommended amendments to the Draft LAP. The same methodology was used in the Environmental Report thus a matrix was prepared and all the proposed amendments were assessed. The matrix was used as a screening process where new and modified policies, objectives and text were formally assessed by identifying whether the change(s) would be likely to have significant environmental effects. Generally it was found that the amendments fitted into the following broad categories:

- 1) Changes to text which have minor significance
- 2) Changes to text which have major significance
- 3) Changes to objective which have minor significance
- 4) Changes to objective which have major significance
- 5) New designation of GB 1-2 within the greenbelt
- 6) Extension to development boundary
- 7) New Settlement

After screening (using the matrix approach) a proposed amendment was either 'screened out' or was concluded as 'possible environmental effects identified'. In relation to the latter it was necessary to provide mitigation measures where potential conflicts were found with the EPOs. The assessment was carried out

having regard also to the parallel process of Appropriate Assessment and where relevant mitigation measures from the AA were carried through into the SEA (See Appendix One).

Mitigation measures took the form of:

- Changing the wording of an amendment
- Deleting the amendment
- Addition of a new amendment

EU Habitats Directive- Appropriate Assessment

Another key aspect of the assessment process was the undertaking of an Appropriate Assessment of the plan. This parallel process ensured that environmental considerations, specifically focused on Natura 2000 sites, were integrated into the plan as it was developed. The Natura Impact Report III includes details of all the changes made to the Draft LAP as a result of Appropriate Assessment.

One of the main influences of the Environmental Assessment on the Local Area Plan was the introduction of an approach to protect water quality of water bodies identified in the Water Framework Plan. This was incorporated into the Local Area Plan with an overall aim to provide a fail safe mechanism to prevent development in the plan which would result in the degradation of water quality. Having assessed the carrying capacity of settlements changes have been made to the population distribution in some cases from smaller and rural areas to the main towns based on sustainable environmental capacity while the overall population target for the electoral area remains the same. This is further supported by the revision of the wording of general objectives relating to settlements contained in Section 2 of the plan e.g. LAS 2-1 (in Section 2) and in the DB (Development Boundary) objectives in Section 3 relating to specific settlements. Connected to population distribution was the matter of demographic pressure in rural hinterlands for individual housing. In order to meet this pressure, the approach taken by the local area plan was to provide lands in more sustainable locations i.e. the towns, with the effect of keeping the population targets in the villages lowered.

In relation to Flood Risk Assessment at Draft Stage of the plan the environmental assessment sought clarification and some changes to development in areas at risk of flooding. In the Draft Plan, if land was located within a flood risk area it was generally not included within the development boundary. Where such land was included then objectives relating to that land included a requirement for a more detailed flood risk assessment to be carried out. At the amendment stage of the process, and following public consultation on the proposed amendments, the approach of the plan to zoning land in areas of flood risk was modified in recognition of lands already been zoned in an earlier development plan or planning permission had already been granted for their development, or there were some local ambiguities in the flood risk mapping. Where such zonings were included in the plan, precautionary text was included in the specific objective to highlight the need for a flood risk assessment as part of the development management process. In the smaller settlements which do not have specific zoning objectives, the flood risk areas are protected by the more general development boundary objectives and by objectives in Section One of the Plan.

In the SEA Screening of the Proposed Amendments document the SEA response was to exclude these sites from development boundaries. Although this was the preferred approach of the SEA it is recognised however, that the development in flood risk areas objectives (which have been modified as part of the process and included in site specific objectives) provide an adequate mitigation measure in relation to flooding concerns of these sites.

In relation to biodiversity in general and Natura 2000 sites a number of changes to objectives have been made recognising the importance of the biodiversity of the Local Area Plan as a whole with the inclusion of a number of new objectives LAS 2-2 to 2-4 which firstly ensure the parallel development and implementation of a range of sustainable measures to protect the integrity of the biodiversity of the area while also linking the objectives relating to biodiversity in the County Development Plan 2009 to the Local Area Plan. The SEA process also highlights issues in relation to some settlement specific objectives within or in close proximity to Natura 2000 sites as well as NHAs. With the integration of the SEA and AA process a number of changes have been made to specific objectives relating to settlements while the majority of zonings or development boundaries located within Natura 2000 sites have been removed with the only exception being where a site was zoned for open

space and it was considered that retaining this type of zoning was the best means of protecting the biodiversity of the site.

Table 2.1 Sites removed from settlements due to their Natura 2000 designation

Change No.	Settlement Name	Zoning Ref. If applicable
MM.03.35.05	Toon Bridge	Unzoned areas of SAC within the development boundary
MM.03.04.03	Ballymakeery/Ballyvourney	Unzoned area within SAC from development boundary

Table 2.2 Summary of Recommendations for Changes Arising from SEA

Amendment/Objective No.	Amendment Ref	Issue	Recommendation from SEA process	Change made to plan arising from SEA process
Paragraph 1.6.4	MM 01.06.01	Change introduced at Amendment Stage	Screened Out at Proposed Amendment Stage	Screened Out
New Objective	MM 01.06.02	Change introduced at Amendment Stage	Screened Out at Proposed Amendment Stage	Screened Out
Paragraph 1.7.9	MM 01.07.01	Change introduced at Amendment Stage	Screened Out at Proposed Amendment Stage	Screened Out
Replace Paragraph 1.7.10 with new text	MM.01.07.02	Issue Nine in the Environmental Report*	SEA raised concerns in relation to zoning/inclusion of sites within development boundaries.	The inclusion of paragraph 1.7.10 partially addresses the concerns of SEA in the Final Plan.
Replace Paragraph 1.7.12 with new text	MM.01.07.03	Change introduced at Amendment Stage	Screened Out at Proposed Amendment Stage	Screened Out
Amend Paragraph 1.7.13	MM.01.07.04	Change introduced at Amendment Stage	Screened Out at Proposed Amendment Stage	Screened Out
Replace Objective FD 1-4	MM.01.07.05	Change introduced at Amendment Stage. Previous amendment made at Draft Stage.	Screened Out at Proposed Amendment Stage	Screened Out
GB 1-1b	MM.01.10.01	Change introduced at Amendment Stage	Screened Out at Proposed Amendment Stage	Screened Out
Table 2.5 Ballingearry	MM.02.02.01	Change introduced at Amendment Stage	Screened Out at Proposed Amendment Stage	Screened Out
Additional text paragraph 2.2.24 and 2.2.25	MM.02.02.02	Change introduced at Amendment Stage	Screened Out at Proposed Amendment Stage	Screened Out
Additional text after paragraph 2.2.21	MM.02.02.03	Inclusion of 'in a sustainable manner'	Raised at SEA of Proposed Material Amendment to the Draft Plan Stage	Included in Final Plan
LAS 2-1	MM 02.02.04	Issue raised at pre draft stage and Issue One in Environmental Report	Included objective in Draft Plan Modify wording of objective.	Inclusion of Objective LAS 2-1 in Draft Plan which was further modified and incorporated HDA recommendations in the Final Plan
LAS 2-2	MM.02.02.05	Issue raised at pre draft stage	Include wording to acknowledge that future projects will be subject to SEA, HDA and EIA	Objective LAS 2-2 included in Draft Plan and wording amended in Final Plan.

Amendment/Objective No.	Amendment Ref	Issue	Recommendation from SEA process	Change made to plan arising from SEA process
LAS 2-3	MM.02.02.06	Issue Two		New objective LAS 2-3 included in Final Plan
LAS 2-4	MM.02.02.07	Issue Two		New objective LAS 2-4 included in Final Plan
T-01 and paragraph 1.4.18 Ballincollig	MM.03.01.01	Change introduced at Amendment Stage	Screened Out at Proposed Amendment Stage	Screened Out
T-04 Ballincollig	MM.03.01.03	Change introduced at Amendment Stage	Screened Out at Proposed Amendment Stage	Screened Out
O-05 Ballincollig	MM.03.01.04	Change introduced at Amendment Stage	Omit zoning	SEA Change was not incorporated in Final Plan
T-03 Ballincollig	MM.03.01.05	Change introduced at Amendment Stage	Screened Out at Proposed Amendment Stage	Screened Out
O-01 Ballincollig	MM.03.01.06	Change introduced at Amendment Stage	Screened Out at Proposed Amendment Stage	Screened Out
DB-01 Ballincollig	MM.03.01.07	Insert word 'sustainable' in objective.	Amend wording to objective at proposed Amendment Stage	Included in Final Plan
O-01 Ballincollig	MM.03.01.08	Change introduced at Amendment Stage	Omit change to zoning	SEA Change was not incorporated in Final Plan
R-04 Ballincollig	MM.03.01.09	Change introduced at Amendment Stage	Omit change to zoning	SEA Change was not incorporated in Final Plan
DB-01 Macroom	MM.03.02.01	Insert word 'sustainable' in objective.	Amend wording to objective at proposed Amendment Stage	Included in Final Plan
Paragraph 3.2.5 Ballingeary	MM.03.03.01	Change introduced at Amendment Stage	Screened Out at Proposed Amendment Stage	Screened Out
U-02 Ballymakeery/Ballyvourney	MM.03.04.01	Change introduced at Amendment Stage	Screened Out at Proposed Amendment Stage	Included in Final Plan and also incorporates HDA recommendation
U-03 Ballymakeery/Ballyvourney	MM.03.04.02	Change introduced at Amendment Stage	Screened Out at Proposed Amendment Stage	Included in Final Plan and also incorporates HDA recommendation
Ballymakeery/Ballyvourney	MM.03.04.03	Remove areas of unzoned SAC from development boundary. Change introduced at Amendment Stage	Screened Out at Proposed Amendment Stage	SEA agreed with change
X-01 Ballymakeery/Ballyvourney	MM.03.04.04	Change introduced at Amendment Stage	Screened Out at Proposed Amendment Stage	Screened Out
Paragraph 5.4.4 Coachford	MM.03.05.01	Change introduced at Amendment Stage	Screened Out at Proposed Amendment Stage	Screened Out
Coachford	MM.03.05.02	Change introduced at Amendment Stage	Omit extension to development boundary.	SEA Change was not incorporated in Final Plan
Coachford	MM.03.05.03	Change introduced at Amendment Stage	Omit extension to development boundary.	SEA Change was not incorporated in Final Plan
Coachford	MM.03.05.04	Change introduced at Amendment Stage	Omit extension to development boundary.	SEA Change was not incorporated in Final Plan
B-01 Killumney/Ovens	MM.03.06.02	Change introduced at Amendment Stage	Screened Out at Proposed Amendment	Screened Out

Amendment/Objective No.	Amendment Ref	Issue	Recommendation from SEA process	Change made to plan arising from SEA process
			Stage	
X-01 Killumney/Ovens	MM.03.06.03	Change introduced at Amendment Stage	Omit extension to development boundary.	SEA Change was not incorporated in Final Plan
Killumney/Ovens	MM.03.06.04	Change introduced at Amendment Stage	Omit extension to development boundary.	SEA Change was not incorporated in Final Plan
C-01 and Paragraph 9.3.2 Ballynora	MM.03.09.01	Change introduced at Amendment Stage	Omit extension to development boundary.	SEA Change was not incorporated in Final Plan
Clondrohid	MM.03.10.01	Change introduced at Amendment Stage	Omit extension to development boundary.	SEA Change was not incorporated in Final Plan
Paragraph 11.4.1 Cloughduv	MM.03.11.01	Change introduced at Amendment Stage	Screened Out at Proposed Amendment Stage	Screened Out
DB-01 (c) Inchigeelagh	MM.03.14.01	Issue Three	Change wording to objective	Included in Final Plan and also incorporates HDA recommendation
DB-01(d) Inchigeelagh	MM.03.14.02	Issue Four	Change wording to objective	Included in Final Plan and also incorporates HDA recommendation
DB-01(a) Toon Bridge	MM.03.35.01	Issue Three	Change wording to objective	Included in Final Plan and also incorporates HDA recommendation
DB-01(b) Toon Bridge	MM.03.35.02	Issue Four	Change wording to objective	Included in Final Plan and also incorporates HDA recommendation
T-01 Toon Bridge	MM.03.35.03	Issue Two	Change wording of objective	Included in Final Plan and also incorporates HDA recommendation
O-01 Toon Bridge	MM.03.35.04	Issue Two	Change wording of objective	Included in Final Plan and also incorporates HDA recommendation
Toon Bridge	MM.03.35.05	Issue Two	Agreed with proposal to remove unzoned areas of SAC within the development boundary	Included in Final Plan and also incorporates HDA recommendation
Farran/Farran Lower	MM.03.38.01	Change introduced at Amendment Stage	Screened Out at Proposed Amendment Stage	Screened Out
Paragraoh 6.2.13 Killumney/Ovens	MM1	Include additional wording to Paragraph 6.2.13	Supplementary Agreed Change introduced at Special Council Meeting 19 th July 2011	Screened Out

***Issues identified in the Environmental Report Issue One** –The Correlation between Population Targets for the Main Towns and Infrastructure **Issue Two**- impacts on Biodiversity **Issue Three**- Provision for individual dwellings in settlements or small scale development in areas without public infrastructure to provide individual treatment systems. **Issue Four**- References to development being served by private schemes or private group water schemes. **Issue Five**- Inclusion of requirement for screening for SEA and AA as part of preparation of Masterplans, Traffic/Transportation Studies, Other Studies and Land use Plans in the specific objective. **Issue six**- References are made to specific roadways and walkways provision which have not been clarified whether have been subject to SEA or AA assessment. **Issue seven**-References made in open space objectives to landscaping and provision of walkways without any wording relation to protection biodiversity etc. **Issue eight**-Waste Management **Issue nine**- Flooding Objectives **Issue ten**-Water Quality tables **Issue Eleven**- Inclusion of Definition of Sustainable **Issue Twelve**-Tourism

Section 3 - Summary of how submissions and consultations were taken into account

Introduction

This section details how the submissions and observations made on the Environmental Report and SEA process have been taken into account during the preparation of the plan.

SEA Scoping Consultations

Public Consultation regarding the local area plans commenced in January 2010 with the publication of the Outline Strategies and public meetings to facilitate consultation. 58 submissions were received on this pre-draft document mainly relating to zoning issues.

A Scoping Report was then prepared by the Planning Policy Unit in August 2010 which identified the key environmental issues that would be addressed appropriately in the Environmental Report and was sent to the statutory Environmental Authorities.

Five submissions on the Scoping Report were received from the Environmental Protection Agency, Shannon River Basin District, Cork City Council, Development Applications Unit, Department of the Environment, Heritage and Local Government, and Department of Communications, Energy and Natural Resources that related to a number of issues and were taken into account in the preparation of the Environmental Report.

Submissions and Observations on the Environmental Report and Draft Plan

The Macroom Electoral Area Local Area Plan, Public Consultation Draft, was published on the 22nd November 2010 and was made available to the public until the 12th January 2011. 65 submissions were made during the Draft Plan stage. Most of the submissions received were related to specific issues included in the plan itself rather than on the content of the SEA Environmental Report. The submissions received from the Environmental Protection Agency and the Department of the Environment, Heritage and Local Government related to the Environmental Report and on the SEA process. These submissions related to a number of issues and any changes necessitated as a result of the submissions received were reviewed by the SEA team and recommendations were made accordingly.

The following table outlines submissions which related to matters raised in the Environmental Report and the general environmental assessment received from Statutory Bodies. The Manager's Report on the Draft Plan includes a summary of all submissions received.

Table 3.1 Summary of Submissions on the Draft Local Area Plan received from Statutory Bodies

Name of Submitter	Summary of Submission	How this was taken on board
EPA	<p>A comprehensive submission was received from the EPA relating to a) Integration of environmental considerations in the landuse plans, b) General comments on the EALAP Environmental Report c) General comments on the EALAP and d) Specific comments on the EALAP.</p> <p>The EPA include a number of key recommendations to be included in the local area plan in the form of policy/objectives. These relate to water quality, drinking water, waste water, fisheries, flooding, biodiversity, groundwater, landscape and master plans.</p> <p>The overall comment relates to the lack of</p>	<p>The EPA recommendation informed the SEA Team's recommendations for changes to the Draft Plan which in many cases were incorporated into the Final Plan. Table 2.2 outlines the changes made from the Draft to Final Plan stage</p>

	<p>integration of the environmental considerations and recommendations that have been set out in the EALAP Environmental Report and the need to better address and incorporate in the Draft EALAP the implications of infrastructural deficiencies and further development, and associated potential implications of cumulative development on environmental sensitivities and vulnerabilities identified.</p>	
DoEHLG	<p>Submission complements the Council on its approach to setting housing targets in villages, revised zoning categories and definitions, introduction of a clear policy guidance on flooding, incorporating clear guidance on appropriate scale of new residential development and inclusion of the islands into the settlement network.</p> <p>Emphasises the importance of adopting the Core Strategy into CDP by September 2011 and ensuring that LAP's policies (in particular Phasing of development, towns/village growth balance, growth in CASP Ring) are aligned with it.</p> <p>Note that Appropriate Assessment should be undertaken at the draft LAP stage.</p> <p>Need further clarification of how housing and population targets were arrived at. If there is an excessive amount of residentially zoned land then a clear phasing regime or rezoning is required. Need to indicate clearly how the significant turnaround in the growth balance between rural areas and main towns is to be achieved.</p> <p>Guidance is given on what constitutes Archaeological heritage and it is suggested that Recorded and National Monuments should be shown on settlement maps including lines of medieval town walls. Suggest that specific policies and objectives on archaeological heritage should be included in LAP's. Specific comments are made about Architectural Heritage in some LAP's expressing the need for greater clarity. Changes/additions relating to objectives relating to nature Conservation in some LAP's are proposed.</p>	<p>Many of the recommendations made have been incorporated through amendments to overall and site specific objectives of the plan.</p>
OPW	<p>The submission welcomes the approach taken to flooding and recommends a number of changes:</p> <p>Section 1.7.7 – broaden the list of information to include, where applicable, reports or flood maps from localised flood studies. Section 1.7.9 -references to the Draft Indicative Flood Extent Maps should include reference to “three areas of flood risk”, including Zone C (low probability of flooding) and that text describing Flood Zone B should reference, where applicable, the implementation of the Justification Test, similar to the text on Zone A. Objective FD1-4 - amend to include reference to the planning principles and the sequential approach and to the avoidance of flood-prone areas when designing the layout of development. Zoning Objectives - amend plans to ensure the planning principles, sequential approach and the justification test is included with each objective. Strengthen</p>	<p>The recommendations of OPW are incorporated into the Flood Risk Assessment of the electoral area and into the revised wording of site specific objectives.</p>

	<p>wording so that development proposals <i>shall / should be</i> accompanied by an FRA.</p> <p>All settlements - Plan should note that "possible local flood issues should be considered with respect to all sites, with a detailed site-specific flood risk assessment undertaken as appropriate. Submission continues to highlight the need for a consistent approach to the use of the Sequential Approach and the Justification Test (in some areas lands are zoned even through they are almost entirely within both Flood Zones A and B). Justification Test be fully applied to confirm the suitability of such zoned sites.</p>	
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The submissions received at Draft Plan stage in relation to or relevant to the SEA process were reviewed and discussed and which informed the SEA recommendations of changes to be made to the Draft Plan. Following on from the assessment of submissions received the SEA Team prepared a series of recommendations which were generally in the form of new objectives or additions to wording of existing objectives or deletions of objectives. Some of the matters raised in the submissions received related to issues which were dealt with through the Appropriate Assessment process. Many of the SEA recommendations were incorporated into the Final Plan.

In relation to the draft plan stage of the LAP, the Manager's Report 20(3) outlines how the submissions were taken into consideration by the Plan Team and make recommendations in relation to draft proposed changes to the draft plan. It was also referred to in this report that some changes as a result of considerations of submissions required 'non material' changes which did not require to be part of the proposed amendment for public consultation.

Submissions and Observations for the Proposed Amendments

15 submissions were received during the public consultation period of the proposed amendments to the Draft Macroom Electoral Area Local Area Plan including submissions from the Environmental Protection Agency, OPW and the Department of the Environment.

The following table outlines submissions which related to matters raised in the Environmental Report and the general environmental assessment received from Statutory Bodies. The Manager's Report on the Draft Plan includes a summary of all submissions received.

Table 3.2 Summary of Submissions on the Amendment to the Draft Local Area Plan received from Statutory Bodies

Name of Submitter	Summary of Submission	How this was taken on board
EPA	The submission notes that a number of amendments have potential to conflict with the status of the Environmental Protection Objectives and recommends that the mitigation measures set out in the SEA screening be implemented.	Many of the recommendations from the EPA and the SEA process were incorporated into the Final Plan and are outlined in Table 2.2
OPW	With respect to the consideration of flood risk in the proposed amendments to the Draft LAPs, the OPW notes that areas which, based on the best-available information are indicated as being prone to flood risk, are being proposed (under the amendments) for zoning for development. The OPW does not consider this desirable, noting that it is the intent of the Guidelines on the Planning System and Flood Risk Management (November 2009) to address flood risk within the planning system at the forward planning stage, rather than at the development management stage, and the precautionary approach advocated	The recommendations of OPW are incorporated into the Flood Risk Assessment of the electoral area and into the revised wording of site specific objectives.

	<p>within the Guidelines would suggest that such sites should not be zoned for development.</p> <p>The OPW does however recognise that there may be localised inaccuracies within the flood maps currently available, and welcome the clear requirement for a flood risk assessment to be undertaken for all sites where the flood maps indicate that the site may be prone to flooding. The OPW strongly urges the council to apply this requirement rigorously, and to ensure that flood risk assessments submitted are carefully audited to ensure that all relevant and available information has been captured, collated and considered, and that the assessment has been undertaken accurately using best-practice methodologies and techniques.</p>	
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In relation to proposed amendments stage of the Local Area Plan, the Manager's Report 20(K) outlines how the submissions were taken into consideration and makes recommendations in relation to the proposed amendments. Some of the Manager's Report Recommendations incorporate SEA considerations while others refer to the SEA considerations but recommend to proceed with the change.

Section 4 - Reasons for choosing the plan as adopted, in light of other reasonable alternatives considered.

Introduction

This Section details the alternatives, which were identified and evaluated for likely environmental and planning effects as part of the SEA process for the LAP.

Selecting the Alternative Plan Options

The alternative scenarios that were proposed in the Local Area Plan for the electoral area were provided in the Environmental Report and the preferred strategy from an environmental perspective was provided. Mitigation measures which attempt to prevent, reduce and as fully as possible offset any significant adverse effects of the environment of implementing the preferred alternative were identified where applicable.

During the preparation process of the draft LAP, 3 Scenarios were proposed. These are outlined in detail in Chapter 8 of the Environmental Report and the LAP's preferred Scenario (i.e. the Scenario that forms the basis of the draft LAP) has been presented.

The Scenarios

The Scenarios considered were set at the electoral area level rather than having Scenarios for every settlement. In this way the cumulative impact of development and population distribution across the electoral area could be assessed. The SEA scenario assessment was based on these alternative growth scenarios and each of the proposed development options were assessed against the EPO's, types of cumulative effects, the cumulative environmental sensitivity map and individual environmental issues that were identified in the environmental baseline (see Table 4.1 below)

For the **Macroon** Electoral Area, 3 alternative scenarios were identified that could achieve the level of growth targeted for the **Macroon** Electoral Area, as set out in the Cork County Development Plan 2009. The scenarios that were considered in the preparation of the Local Area Plan were as follows;

- **High Urban and Modest Rural Growth** – this is the scenario wherein a significant proportion of the target growth is concentrated within the principle urban areas within the electoral area with provision included for relatively modest growth in the smaller settlements.
- **Low Urban and High Rural Growth**- this alternative is to focus growth in the key villages, villages and village nuclei, while limiting the level of growth in the urban areas.
- **Amend settlement hierarchy and revise growth in fewer areas in line with infrastructural provision** – this alternative is to amend the number of settlements within the electoral area, reducing the number of smaller settlements, and targeting growth in a fewer number of locations where appropriate infrastructure is in place.

Findings of Scenario Evaluation

From an examination of the above scenarios it was considered that **Scenario 2** was the least preferred Scenario from an environmental perspective. **Scenario 1** and 3 are quite similar in that they proposed significant population growth in the main urban settlements but both require a substantial amount of funding and infrastructure to reach their targets. Overall the scenario assessment found that **Scenario 3** was the preferred Scenario from an environmental perspective and the Environmental Report stated that there remained serious concerns over the provision of infrastructure in a timely manner to accommodate the proposed population targets. However **Scenarios 1** was the preferred scenario in the LAP thus mitigation measures were outlined in Chapter 8 and Chapter 10 of the Environmental

Report and as stated in Section 2 of this document a number of changes have been made to address these concerns.

Table 4.1 below outlines the assessment of the Scenarios.

Types of Cumulative Effects		
Cumulative Effects	Affected Receptor	Causes
Habitat fragmentation	Biodiversity	Use of land for flood management, transport infrastructure and industrial development. Zoning of Greenfield lands
Climate Change	Air and Climate	Greenhouse gas emissions from industrial development and increases in traffic volumes
Loss of tranquillity	Population and Human Health	Industrial development and increases in traffic volumes
Deterioration in drinking water quality	Population and Human Health	Inappropriate wastewater treatment and inappropriate drinking water treatment
Deterioration in water quality	Water	Inappropriate wastewater treatment
Loss of agricultural lands	Soils and Geology	Zoning of Greenfield lands
Loss of natural landscape features	Landscape	Zoning of Greenfield lands. Road infrastructure

Comparison of Alternatives - Cumulative Effects

LAP Objective	Possible Cumulative Effects							
	Habitat fragmentation	Climate Change	Loss of tranquillity	Deterioration in drinking water quality	Deterioration in water quality	Loss of agricultural lands	Loss of natural landscape features	COMMENTS
Option 1	-	+	-	-	-	0	+	
Option 2	-	-	-	-	-	-	-	Most likely to have significant cumulative effects
Option 3	+	+	0	?	?	+	+	Least likely to have significant cumulative effects

Key:

+ likely to have no significant effect - likely to have a negative effect 0 neutral ? uncertain

Section 5 - Monitoring Measures:

Introduction

The SEA Directive requires that the significant environmental effects of the implementation of plans are monitored in order to identify, at an early stage, unforeseen adverse effects and to be able to undertake appropriate remedial action. Monitoring can also be used to analyse whether the LAP is achieving its Environmental Protection Objectives and targets, whether such objectives need to be re-examined and whether the proposed mitigation measures are being implemented.

Cork County Council is thus required to monitor the significant environmental effects arising from the implementation of the LAP. This SEA statement identifies the final proposals for monitoring the LAP (see tables on EPOs & monitoring targets and indicators below). These EPOs, monitoring targets and indicators have been revised/updated based on submissions received, issues raised in AA and from consultation with internal sections of the Council. The primary purpose of monitoring is to cross check significant environmental impacts which arise during the implementation stage against those predicted during the preparation stage of the plan.

Monitoring Methodology:

Indicators and Targets

The monitoring proposals are based around the indicators which were chosen earlier in the process but which now have been refined. These indicators allow quantitative measures of trends and progress over time relating to the Environmental Protection Objectives used in the evaluation. Focus will be given to indicators that are relevant to the likely significant environmental effects of implementing the LAP and existing monitoring arrangements will be used in order to monitor the selected indicators. Each indicator to be monitored is accompanied by targets derived from the relevant legislation and from the advice of bodies consulted.

Monitoring Process:

The monitoring process assesses the progress of environmental components of the Plan and environmental targets through monitoring indicators.

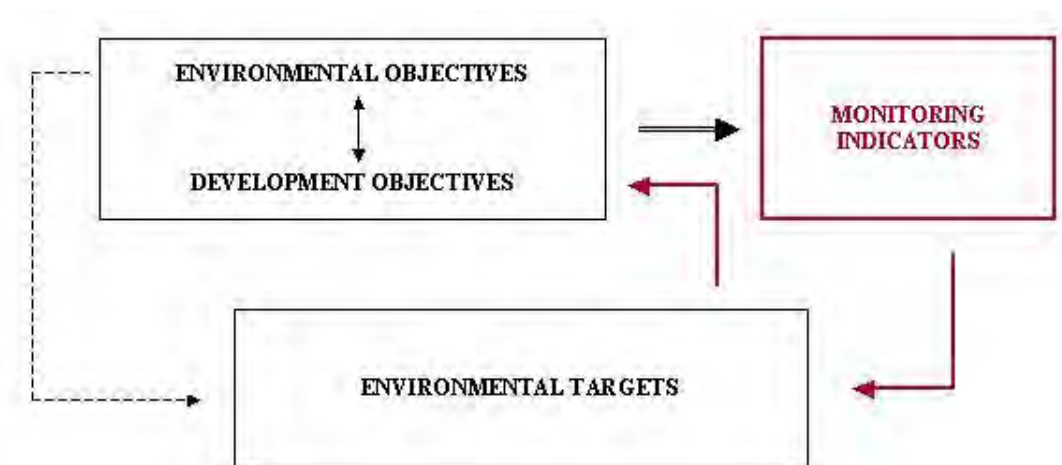


Figure 2

The emphasis in the monitoring of objectives and targets is on those monitoring indicators which are available within Cork County Council.

A dependence on external information may be required in certain areas, however it is difficult to ascertain if this information will become frequently and readily available during the monitoring period. This reality is reflected in the matrix that follows relating to the monitoring indicators.

The monitoring process system can be split into several following stages:

- Collection of data (acquisition)
- Processing the data (analysis of collected data)
- Evaluation and interpretation
- Consideration of consequences (review of Plan policies)

A Geographical Information System (GIS) based monitoring system could be used to monitor and assess the implementation of the plan.

Table 5.1 EPO's, MONITORING TARGETS AND INDICATORS

EPO	ENVIRONMENTAL OBJECTIVE	TARGET	MONITORING INDICATORS	DATA SOURCE	ACCESSIBILITY
B1	Avoid significant adverse impacts (direct, cumulative and indirect) arising from the implementation of this Plan and also protecting the integrity of Protected Sites.	No significant adverse impacts, (direct, cumulative and indirect impacts), to relevant habitats, species or their sustaining resources arising from the implementation of this plan and provision of adequate and appropriate buffer zones.	Buffer zones provided in relation to development proposed as per Objectives: Ballyvourney/Ballymakeery X-01, Toon Bridge T-01 and O-01. Refer also to the monitoring protocols of the AA process.	PPU, National Parks and Wildlife Service.	Potentially available within Cork County Council
B2	Protect habitats and species of biodiversity value where these occur outside designated sites.	No net loss of biodiversity through the implementation of this plan.	Number of new developments arising from the implementation of this plan which include SUDS and discharge within, adjacent to or upstream from Natura 2000 sites with water dependant habitats or species. Number of new water abstractions and increases in water abstractions within or upstream from Natura 2000 sites with water dependant habitats or species. Number of wastewater treatments plants which are operating at over capacity and discharge within or upstream from Natura 2000 sites with water dependant habitats or species.	PPU which will be dependent on the development of a monitoring system and the establishment of existing baselines. National Parks and Wildlife Service.	Potentially available within Cork County Council
S1	To maximise the sustainable re-use of Brownfield lands and the existing built environment, rather than developing Greenfield lands while		Ratio of urban housing to rural housing during the Plan lifetime (i.e. Ratio of dwellings	Cork County Council	Potentially available within Cork County Council

EPO	ENVIRONMENTAL OBJECTIVE	TARGET	MONITORING INDICATORS	DATA SOURCE	ACCESSIBILITY
	also protecting agriculturally productive lands.	<p>The ratio of urban housing should not be less than rural housing.</p> <p>Identification of Brownfield lands within the electoral area and the preparation of planning briefs for these lands during the lifetime of the plan</p>	<p>permitted inside the development boundaries of settlements to dwellings permitted outside the development boundary).</p> <p>Ratio of dwellings permitted inside the development boundaries of Main Towns to dwellings permitted in the Greenbelts of the Main Towns.</p> <p>Number of planning briefs for Brownfield lands prepared during the LAP lifetime</p>		
W1	Improve water quality to comply with the standards of the Water Framework Directive	Improvement or at least no deterioration in water quality in rivers, lakes and groundwater.	<p>Achievement of the Status Objectives of the River Basin Management Plans; % increase or decrease in numbers of water bodies at good status compared with the baselines of 2011.</p> <p>% of municipal wastewater discharges achieving secondary and tertiary treatment in the electoral area.</p> <p>Q values recorded downstream from existing wastewater treatment plants.</p>	Water Framework Directive: RBD's, EPA, Cork County Council	Dependent on external information. Some information potentially available within Cork County Council
	To manage zones vulnerable to flooding in a sustainable manner	Avoid development in areas at risk of flooding, particularly floodplains identified in the Local Area Plan, unless there are	Amount of new developments permitted within flood plains; Annual costs of damage related to flood events.	OPW, Cork County Council	Dependent on external information. Some information potentially available within Cork County Council

EPO	ENVIRONMENTAL OBJECTIVE	TARGET	MONITORING INDICATORS	DATA SOURCE	ACCESSIBILITY
		proven wider sustainability grounds that justify appropriate development and where the flood risk can be reduced or managed to an acceptable level without increasing flood risk elsewhere			
A1	Maintain and where possible improve air quality standards through the reduction of emissions through the promotion of sustainable commuting	To remain within good air quality standards	Air quality monitoring standards within the County.	EPA	Dependent on external information
		To increase the number of sustainable cycle friendly measures in the electoral area within the lifetime of the Plan.	Number of cycle friendly measures provided in the electoral area within the lifetime of the Plan.	Cork County Council	Potentially available within Cork County Council
		To increase the number of sustainable walking routes within settlements in the electoral area within the lifetime of the Plan.	Number of walking route provided and constructed within settlements in the electoral area within the lifetime of the Plan.	Cork County Council	Potentially available within Cork County Council

EPO	ENVIRONMENTAL OBJECTIVE	TARGET	MONITORING INDICATORS	DATA SOURCE	ACCESSIBILITY
A2	Improve people's quality of life based on high-quality residential, working and recreational environments and on sustainable travel patterns;	Increase modal shift to public transport and Reduction in journey to work (time/distance)	Journey to work times; % of commuters using public transport; % of commuters cycling to work; % of commuters walking to work;	CSO	Dependent on external information
PH1	Ensure that adequate wastewater infrastructure is in place and promote the sustainable development of new infrastructure.	Settlements especially main towns, key villages and villages to be adequately served by a public waste water treatment plant over the lifetime of the LAP.	Number of Wastewater Discharge Licences and Certificates granted by EPA for wastewater treatment plants. Number of wastewater treatment plants which are in compliance or are in breach of Wastewater Discharge Licences and Certs. % of settlements in electoral area which have an appropriate and sustainable municipal wastewater treatment system that is operating in a sustainable manner and is not operating at capacity or over capacity.	EPA, Engineering Section of Cork County Council	Dependent on external information. Some information available within Cork County Council
PH2	To maintain and improve the quality of drinking water supplies to comply with regulations and to reduce leakages in existing drinking water infrastructure.	To maintain and improve drinking water quality in the LAP to comply with the requirements of the European Communities (Drinking Water) Regulations and to reduce leakage in existing infrastructure.	Number of occurrences in the EPA's Remedial Action List (RALs) over the lifetime of the LAP. % leakage in existing drinking water infrastructure.	EPA, Environmental Section of Cork County Council	Dependent on external information. Some information available within Cork County Council

EPO	ENVIRONMENTAL OBJECTIVE	TARGET	MONITORING INDICATORS	DATA SOURCE	ACCESSIBILITY
CH1	Promote the protection and conservation of the cultural heritage including Gaeltachtaí, architectural and archaeological heritage;	<p>To maintain the number of Architectural Conservation Areas (ACAs) and structures under the Record of Protected Structures (RPS).</p> <p>To maintain and/or increase the extent of existing Architectural Conservation Areas (ACAs)</p> <p>To increase the number of Architectural Conservation Areas (ACAs) in the electoral area and to extend the Record of Protected Structures (RPS)</p> <p>To maintain the archaeological monuments and their setting of identified in the Sites and Monuments Record (SMR) and the Record of Monuments (RMP).</p>	<p>Number of ACAs and Protected Structures added to the County Development Plan or LAPs.</p> <p>Area and extent of existing Architectural Conservation Areas (ACAs).</p> <p>% of villages that have design statements in the Electoral Area</p> <p>The number of monuments on the Sites and Monuments Record (SMR) and the Record of Monuments (RMP) and their Zones of Archaeological Potentials impacted by development granted planning permission.</p>	<p>Heritage Department of Cork County Council</p> <p>The Archaeological Survey of Ireland's data base; Heritage Unit Cork County Council</p>	Potentially available within Cork County Council
L1	Protect natural and historic landscapes and features within them in a sustainable manner	<p>Maintain clear urban/rural distinction</p> <p>To achieve a higher ratio of residential development in settlements</p>	Ratio of urban housing to rural housing during the Plan lifetime (i.e. Ratio of dwellings permitted inside the development boundaries of settlements to dwellings	Cork County Council	Potentially available within Cork County Council

EPO	ENVIRONMENTAL OBJECTIVE	TARGET	MONITORING INDICATORS	DATA SOURCE	ACCESSIBILITY
		compared to residential development in areas outside settlement development boundaries	permitted outside the development boundary).		
		Enhance provision of, and access to, green space within the development boundary of Main Towns in the Electoral Area.	Number of passive and active recreational uses (including sporting facilities) that have been provided and made available to public within the development boundary of Main Towns in the Electoral Area over the lifetime of the Plan.	Cork County Council	Potentially available within Cork County Council
M1	To minimise waste production and reduce the volume of waste to landfill and to operate sustainable waste management practices	To promote sustainable waste management infrastructure and practices by increasing the number of bring banks, civic amenity facilities and other recycling and waste reduction facilities provided in the electoral area during the lifetime of the Plan.	The number of bring banks, civic amenity facilities and other recycling and waste reduction facilities provided in the electoral area during the lifetime of the Plan. % landfill waste % of waste recycled % diversion of biodegradable waste from landfill	Environmental Section of Cork County Council	Potentially available within Cork County Council

Appendix One

SEA Screening of the Proposed Amendments

Proposed Amendment	<u>No likely</u> interaction with status of EPOs	Likely to improve status of EPOs	<u>Potential Conflict</u> with status of EPOs	Uncertain interaction with status of EPOs	Conclusion
MM 01.06.01	B1 B2 S1 W1 PH1 PH2 A1 A2 CH1 L1 M1				Screened Out
MM 01.06.02	B1 B2 S1 W1 PH1 PH2 A1 A2 CH1 L1 M1				Screened Out
MM 01.07.01	B1 B2 S1 W1 PH1 PH2 A1 A2 CH1 L1 M1				Screened Out
MM 01.07.02	B1 B2 S1 W1 PH1 PH2 A1 A2 CH1 L1 M1				Screened Out
MM 01.07.03	B1 B2 S1 W1 PH1 PH2 A1 A2 CH1 L1 M1				Screened Out
MM 01.07.04	B1 B2 S1 W1 PH1 PH2 A1 A2 CH1 L1 M1				Screened Out
MM 01.07.05	B1 B2 S1 W1 PH1 PH2 A1 A2 CH1 L1 M1				Screened Out
MM 01.10.01	B1 B2 S1 W1 PH1 PH2 A1 A2 CH1 L1 M1				Screened Out

Proposed Amendment	No likely interaction with status of EPOs	Likely to improve status of EPOs	Potential Conflict with status of EPOs	Uncertain interaction with status of EPOs	Conclusion
MM 02.02.01	B1 B2 S1 W1 PH1 PH2 A1 A2 CH1 L1 M1				Screened Out
MM 02.02.02	B1 B2 S1 W1 PH1 PH2 A1 A2 CH1 L1 M1				Screened Out
MM 02.02.03			B1 W1 W2 PH1 PH2	B2 S1 A1 A2 CH1 L1 M1	Possible environmental effects identified
MM 02.02.04	B1 B2 S1 W1 PH1 PH2 A1 A2 CH1 L1 M1				Screened Out
MM02.02.05	B1 B2 S1 W1 PH1 PH2 A1 A2 CH1 L1 M1				Screened Out
MM 02.02.06	B1 B2 S1 W1 PH1 PH2 A1 A2 CH1 L1 M1				Screened Out
MM 02.02.07	B1 B2 S1 W1 PH1 PH2 A1 A2 CH1 L1 M1				Screened Out
MM 03.01.01	B1 B2 S1 W1 PH1 PH2 A1 A2 CH1 L1 M1				Screened Out
MM 03.01.03	B1 B2 S1 W1 PH1 PH2 A1 A2 CH1 L1 M1				Screened Out

Proposed Amendment	No likely interaction with status of EPOs	Likely to improve status of EPOs	Potential Conflict with status of EPOs	Uncertain interaction with status of EPOs	Conclusion
MM 03.01.04			B1 W1 W2 PH1 PH2	B2 S1 A1 A2 CH1 L1 M1	Possible environmental effects identified
MM 03.01.05	B1 B2 S1 W1 PH1 PH2 A1 A2 CH1 L1 M1				Screened Out
MM 03.01.06	B1 B2 S1 W1 PH1 PH2 A1 A2 CH1 L1 M1				Screened Out
MM 03.01.07	B1 B2 S1 W1 PH1 PH2 A1 A2 CH1 L1 M1				Screened Out
MM 03.01.08			B1 W1 W2 PH1 PH2	B2 S1 A1 A2 CH1 L1 M1	Possible environmental effects identified
MM 03.01.09	B2		B1 W1 W2 PH1 PH2 S1 A1 A2 CH1 L1 M1		Possible environmental effects identified
MM 03.02.01	B1 B2 S1 W1 PH1 PH2 A1 A2 CH1 L1 M1				Screened Out
MM 03.03.01	B1 B2 S1 W1 PH1 PH2 A1 A2 CH1 L1 M1				Screened Out
MM 03.04.01	B1 B2 S1 W1 PH1 PH2 A1 A2 CH1 L1 M1				Screened Out

Proposed Amendment	No likely interaction with status of EPOs	Likely to improve status of EPOs	Potential Conflict with status of EPOs	Uncertain interaction with status of EPOs	Conclusion
MM 03.04.02	B1 B2 S1 W1 PH1 PH2 A1 A2 CH1 L1 M1				Screened Out
MM 03.04.03	B1 B2 S1 W1 PH1 PH2 A1 A2 CH1 L1 M1				Screened Out
MM 03.04.04	B1 B2 S1 W1 PH1 PH2 A1 A2 CH1 L1 M1				Screened Out
MM 03.05.01	B1 B2 S1 W1 PH1 PH2 A1 A2 CH1 L1 M1				Screened Out
MM 03.05.02	B2		B1 W1 W2 PH1 PH2 S1 A1 A2 CH1 L1 M1		Possible environmental effects identified
MM 03.05.03	B2		B1 W1 W2 PH1 PH2 S1 A1 A2 CH1 L1 M1		Possible environmental effects identified
MM 03.05.04	B2		B1 W1 W2 PH1 PH2 S1 A1 A2 CH1 L1 M1		Possible environmental effects identified
MM 03.06.02	B1 B2 S1 W1 PH1 PH2 A1 A2 CH1 L1 M1				Screened Out
MM 03.06.03	B2		B1 W1 W2 PH1 PH2 S1 A1 A2 CH1 L1 M1		Possible environmental effects identified

Proposed Amendment	No likely interaction with status of EPOs	Likely to improve status of EPOs	Potential Conflict with status of EPOs	Uncertain interaction with status of EPOs	Conclusion
MM 03.06.04	B2		B1 W1 W2 PH1 PH2 S1 A1 A2 CH1 L1 M1		Possible environmental effects identified
MM 03.06.05	B2		B1 W1 W2 PH1 PH2 S1 A1 A2 CH1 L1 M1		Possible environmental effects identified
MM 03.09.01	B2		B1 W1 W2 PH1 PH2 S1 A1 A2 CH1 L1 M1		Possible environmental effects identified
MM 03.10.01	B2		B1 W1 W2 PH1 PH2 S1 A1 A2 CH1 L1 M1		Possible environmental effects identified
MM 03.11.01	B1 B2 S1 W1 PH1 PH2 A1 A2 CH1 L1 M1				Screened Out
MM 03.14.01	B1 B2 S1 W1 PH1 PH2 A1 A2 CH1 L1 M1				Screened Out
MM 03.14.02	B1 B2 S1 W1 PH1 PH2 A1 A2 CH1 L1 M1				Screened Out
MM 03.35.01	B1 B2 S1 W1 PH1 PH2 A1 A2 CH1 L1 M1				Screened Out
MM 03.35.02	B1 B2 S1 W1 PH1 PH2 A1 A2 CH1 L1 M1				Screened Out

Proposed Amendment	<u>No likely</u> interaction with status of EPOs	Likely to improve status of EPOs	<u>Potential Conflict</u> with status of EPOs	Uncertain interaction with status of EPOs	Conclusion
MM 03.35.03	B1 B2 S1 W1 PH1 PH2 A1 A2 CH1 L1 M1				Screened Out
MM 03.35.04	B1 B2 S1 W1 PH1 PH2 A1 A2 CH1 L1 M1				Screened Out
MM 03.35.05	B1 B2 S1 W1 PH1 PH2 A1 A2 CH1 L1 M1				Screened Out
MM 03.38.01	B1 B2 S1 W1 PH1 PH2 A1 A2 CH1 L1 M1				Screened Out

Mitigation Measures

Amendment reference number **MM 02.02.03** requires additional wording.

Mitigation Measure: add "in a sustainable manner" after ".....future economic base for the region and nationally".

There are a number of concerns regarding the following amendment reference numbers:

MM 03.05.02, MM 03.05.03, MM 03.05.04, MM 03.06.03, MM 03.06.04, MM 03.06.05, MM 03.09.01, MM 02.10.01, MM 03.01.09. Significant environmental impacts are likely due to:

- a) Concerns over wastewater facilities to deal with additional discharges arising from any future development of these areas
- b) possible negative impacts on water quality resulting from additional wastewater discharges,
- c) may lead to urban sprawl rather than consolidation of the settlement
- d) reduction in agricultural productive soil

Mitigation Measure: omit amendments **MM 03.05.02, MM 03.05.03, MM 03.05.04, MM 03.06.03, MM 03.06.04, MM 03.06.05, MM 03.09.01, MM 02.10.01, MM 03.01.09**

There are concerns regarding amendment reference number: **MM 03.01.08** due to the reduction of the open space zoning.

Mitigation Measure: omit amendment **MM 03.01.08**

There are concerns regarding amendment reference number: **MM 03.01.04** due to the provision of residential development on lands previously zoned for open space.

Mitigation Measure: omit amendments **MM 03.01.04**

Colour pages
to be agreed with printer

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Macroom Electoral Area Local Area Plan

Strategic Flood Risk Assessment Report

August 2011

Document Verification

Page 1 of 1

Job Title: Macroom Electoral Area Local Area Plan Strategic Flood Risk Assessment						
Document Title: Macroom Electoral Area Local Area Plan Strategic Flood Risk Assessment.						
Document Ref: Strategic Flood Risk Assessment.						
Revision	Date	Filename:				
		Description: This report the process involved in assessing the lands zoned within the Macroom Electoral Area for potential flood risk.				
			Prepared by	Drawn by	Checked by	Approved by
1.0		<i>Name</i>	SG		AH	AH

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Section 1 Introduction

1.1 Scope and Objectives

- 1.1.1 As part of the review of its Electoral Area Local Area Plans and in order to meet the needs of the Strategic Environmental Assessment process and the requirements of the Department of the Environment, Heritage and Local Government / Office of Public Works Guidelines, “The Planning System and Flood Risk Management” (2009), Cork County Council undertook a county wide Strategic Flood Risk Assessment. This assessment provides a broad assessment of flood risk within the county and has informed strategic land-use planning decisions within the local area plan process.
- 1.1.2 The assessment provides for an improved understanding of flood risk issues within the County and includes a series of flood extent maps covering the main settlements. The maps identify the extent of floodplains that should be safeguarded from development and will support the application of the sequential approach, and the justification test as appropriate, in areas where development is proposed.
- 1.1.3 This report sets out how the Flood Risk Assessment was undertaken, as well as how its findings were addressed and integrated into the Macroom Local Area Plan. The report should be read in conjunction with the Macroom Local Area Plan and the associated maps. The Electoral Area Map, on page iii of the Local Area Plan, identifies the specific areas covered by the Flood Risk Assessment.

1.2 Report Structure

- 1.2.1 Section 2 of this report provides a brief introduction to the Macroom Electoral Area, identifying the settlement hierarchy and the key population and household growth targets for the respective categories of settlement with the settlement hierarchy.
- 1.2.2 Section 3 examines the main sources of flood risk within the electoral area and recent flood events.
- 1.2.3 Section 4 will examine how the issue of managing flood risk was addressed in the review of the Macroom Local Area Plan and outlines the main provisions of the adopted strategy.
- 1.2.4 Section 5 will set out what this assessment has achieved in terms of managing the adverse effects of flooding within the Macroom Electoral Area. It will also identify how the flood risk management strategy identified in the local area plan should be reviewed and monitored over the lifetime of the plan.

1.3 The Planning System and Flood Risk

- 1.3.1 ‘The Planning System and Flood Risk Management: Guidelines for Planning Authorities’, published in November 2009, describe flooding as a natural process that can occur at any time and in a wide variety of locations. Flooding can often be beneficial and many habitats rely on periodic inundation. However, when flooding interacts with human development, it can threaten people, their property and the environment. Flooding may be from rivers, the sea, groundwater, sewers or

overland flow caused by intense or prolonged periods of rainfall. The frequency and severity of flooding is likely to increase in the future, due to the effects of climate change.

- 1.3.2 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 control purposes. For this to be achieved, flood risk must be assessed as early as possible in the planning process.
- 1.3.3 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 floodplains;
 - 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".
- 1.3.4 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 'Planning System and Flood Risk Management' works 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.

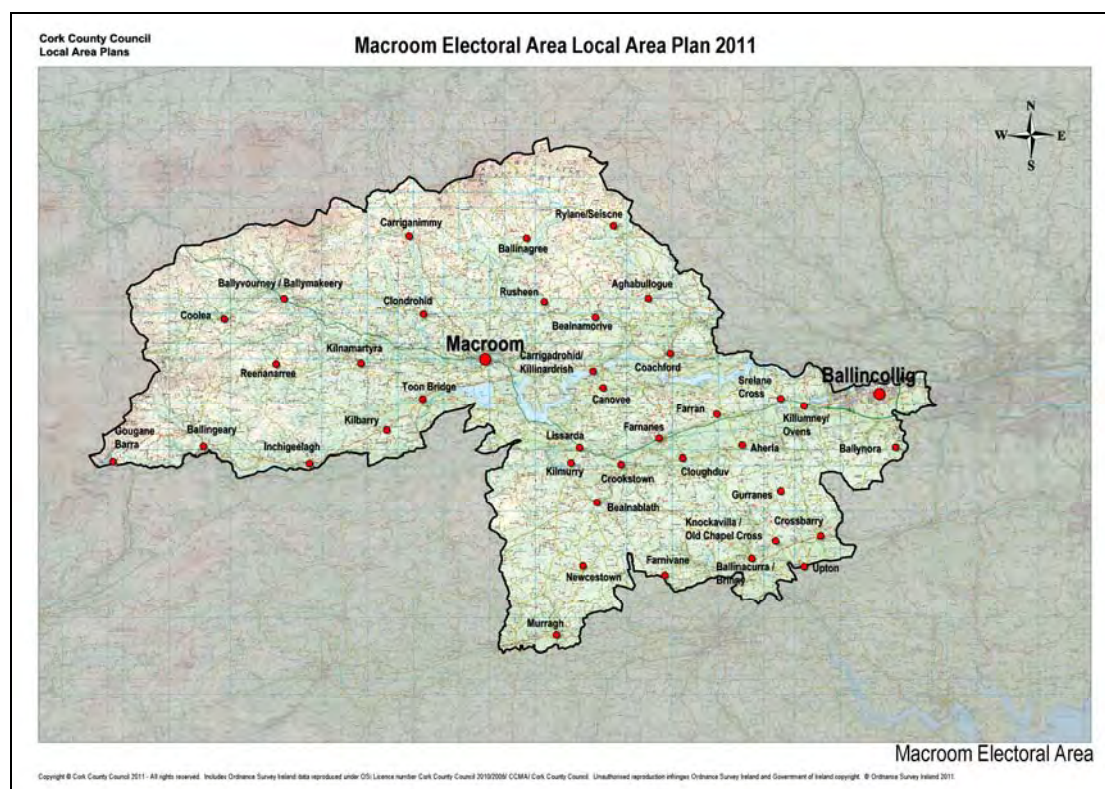
1.4 Definition of Flood Risk

- 1.4.1 Prior to discussing the management of flood risk, it is helpful to understand what is meant by the term. It is also important to define the components of flood risk in order to apply the principles of the Planning System and Flood Risk Management in a consistent manner.
- 1.4.2 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

- 1.4.3 Likelihood of flooding is normally defined as the percentage probability of a flood of a given severity occurring in any given year. For example, a 1% probability indicates the severity of a flood that is expected to be exceeded on average once in 100 years, i.e. it has a 1 in 100 chance of occurring in any given year.
- 1.4.4 In the Local Area Plan, flood risks are defined in relation to the following zones;
- **Flood Zone A:** where the probability of flooding from rivers and the sea is highest (greater than 1% or 1 in 100 for river flooding or 0.5% or 1 in 200 for coastal flooding);
 - **Flood Zone B:** where the probability of flooding from rivers and the sea is moderate (between 0.1% or 1 in 1000 and 1% or 1 in 100 for river flooding or between 0.1% or 1 in 1000 and 0.5% or 1 in 200 for coastal flooding);
 - Elsewhere, sometimes referred to as **Zone C**, the probability of flooding from rivers and the sea is low (less than 0.1% or 1 in 1000 for both river and coastal flooding). This zone covers all areas of the plan which are not in zones A or B.
- 1.4.5 Consequences of flooding depend on the hazards caused by flooding (depth of water, speed of flow, rate of onset, duration, wave-action effects, water quality) and the vulnerability of receptors (type of development, nature, e.g. age-structure, of the population, presence and reliability of mitigation measures etc).
- 1.4.6 The 'Planning System and Flood Risk Management' provides three vulnerability categories, based on the type of development, which are detailed in table 3.1 of the Guidelines, and are summarised as:
- Highly vulnerable, including residential properties, essential infrastructure and emergency service facilities;
 - Less vulnerable, such as retail and commercial and local transport infrastructure;
 - Water compatible, including open space, outdoor recreation and associated essential facilities, such as changing rooms.

Section 2 Local Study Area



2.1 Introduction: The Macroom Electoral Area

2.1.1 The Macroom Electoral Area is split between three of the Strategic Planning Areas as defined in the County Development Plan 2009, the County Metropolitan Strategic Planning Area, CASP Ring Strategic Planning Area and the West Strategic Planning Area. Macroom EA is a predominantly rural electoral area that accommodates an extensive network of settlements as follows;

- Two main settlements of Ballincollig and Macroom;
- Four Key Villages comprising of Ballingeary, Ballyvourney/Ballymakeery, Coachford and Killumney/Ovens;;
- Twelve villages comprising Aghabullogue, Aherla, Ballynora, Clondrohid, Cloughduv, Crookstown, Crossbarry, Inchigeelagh, Kilmurry, Kilnamartyra, Newcestown, Rylane/Seiscne;
- Eighteen village nuclei comprising Ballinacurra/Brinny, Ballinagree, Bealnamorive, Canovee, Carrigadrohid/Killinardrish, Carriganimmy, Coolea, Farnanes, Farnivane, Kilbarry, Knockavilla/Old Chapel Cross, Lissarda, Murragh, Reananerree, Rusheen, Tooms, Toon Bridge, Upton.
- Five other locations comprising Bealnablath, Farran/Lower Farran, Gougane Barra, Gurranes, Srelane Cross.

2.2 Population and Household Growth

2.2.1 The table below summarises the population targets for the Macroom Electoral Area up to 2020, set out in the Cork County Development Plan 2009. The 2020 population target for this electoral area is 50,305 persons, a 20% increase over 14 years. To make the best use of public investment in infrastructure and to maintain a good standard of environment, 69% of this growth will be concentrated in the main urban areas, reflecting the strategic aim of both the CASP Update and the Cork County Development Plan 2009 to accelerate the rate of growth in the main towns while still maintaining growth in the rural areas.

Settlement Hierarchy Macroom Electoral Area	Population		
	2006	Growth 2006-2020	2020 Target
Ballincollig	15,760	5,670	21,430
Macroom	3,553	798	4,351
Villages and Rural	22,741	1,783	24,524
Total Population	42,054	8,251	50,305

2.2.2 The following table outlines the corresponding households based on the above population targets to 2020. It gives an indication as to the overall requirement of new dwellings in the electoral area as a whole. It is assumed that average household size will continue to fall in line with EU trends and a generous allowance has been made for vacancies in order to accommodate the target population, up to 8,603 new dwellings could be required for the period 2006-2020.

Settlement Hierarchy Macroom Electoral Area	Households		
	2006	Growth 2006-2020	2020 Target
Ballincollig	5,236	3,640	8,876
Macroom	1,209	671	1,880
Villages and Rural	7,410	2,307	9,717
Total Households	13,855	6,618	20,473
New Dwellings Required		8,603	

2.2.3 In reviewing the Macroom Local Area Plan a detailed assessment of villages was completed which indicated that many villages and smaller settlements could not, for a variety of reasons, accommodate large numbers of dwellings. The strategy adopted therefore makes provision for relatively modest growth in the village network. To compensate, increased provision has been made for additional growth in the towns, where infrastructure is more readily available or can more be provided in a more sustainable manner and the extra housing can be more readily assimilated.

2.3 Environment and Heritage

- 2.3.1 European and National legislation now protect the most valuable of our remaining wild places, through designation of sites as proposed Natural Heritage Areas, candidate Special Areas of Conservation and Special Protection Areas. The current list of protected sites is contained in the County Development Plan 2009 and is shown on the Heritage and Scenic Amenity Maps in Volume 3 in that Plan. Designated sites in the Macroom Electoral Area are detailed in the table below.

Table 1 Designated Sites in the Macroom Electoral Area		
Code	Description	Natura 2000 Site
SAC-0106	St. Gobnait's Wood	Yes
SAC-0108	The Gearagh	Yes
SAC-1873	Derryclogher (Knockboy) Bog	Yes
SAC-1890	Mullaghanish Bog	Yes
SPA-4109	The Gearagh	Yes
SPA-4162	Mullaghanish to Musheramore Mountains	Yes
NHA-2386	Conigar Bog	No
pNHA-0094	Lee Valley	No
pNHA-0106	St Gobnait's Wood	No
pNHA-0108	The Gearagh	No
pNHA-1055	Glashgarriff River	No
pNHA-1065	Lough Allua	No
pNHA-1067	Lough Gal	No
pNHA-1248	Prohus Wood	No
pNHA-1890	Mullaghanish Bog	No

- 2.3.2 To date, sites of geological interest have not been comprehensively covered by the existing nature conservation designations. Cork County Council recognises the importance of geological heritage and to this end has listed in the County Development Plan 2009 the important geological features within the County with the intention of maintaining their possible conservation value.
- 2.3.3 In terms of built heritage, there are numerous recorded monuments and protected structures throughout the electoral area and these are detailed in the County Development Plan 2009.

Section 3 Flood Risk in Macroom

3.1 Flooding Data

3.1.1 In order to provide information about possible flood risks, the County Council, in close association with the OPW, compiled a series of indicative maps showing areas that could be at risk from flooding. To facilitate the preparation of the Macroom Local Area Plan, the maps concentrated on the areas close to recognised settlements. The information about flood risks that has been used in the preparation of this plan has been collated from a number of sources including:

- Draft River Lee Catchment Flood Risk Assessment and Management Study (Lee CFRAMS) commissioned and published by the Office of Public Works. The CFRAM Study for the River Lee Catchment is one of three such studies being carried out as 'pilots' for a national programme of similar studies to be implemented over the coming years. The methodology of the CFRAM Study is based on 'best international practice' for the assessment and management of flood risks and includes data for the fluvial and tidal flood risks in the catchment. It is anticipated that this study will be finalised during early 2011 and that the final outputs of the study can be included in this plan before it is finalised.
- 'Floodmaps.ie' – The national flood hazard mapping website operated by the Office of Public Works, where information about past flood events is recorded and made available to the public. 'Flood point' information available on this site has not been included for technical reasons.
- 'Flood Hazard Mapping' for fluvial and tidal areas commissioned by Cork County Council from JBA Consulting. These indicative flood extent maps provide flood extent information for river catchments where a more detailed CFRAMS study is not currently available.

3.2.2 In line with advice from the OPW, the County Council has amalgamated the information from these sources into a single 'Indicative Flood Extent Map' for the settlements of this electoral area. The map has been used as the basis for the flood risk assessment of this plan and extracts from it appear on the various maps prepared for the settlements of this electoral area.

3.2 Sources of Flooding

3.2.1 This SFRA has primarily reviewed flood risk from fluvial and coastal sources. Other flood risks from pluvial and groundwater sources or from drainage systems, reservoirs and canals and other artificial or man-made systems have not been considered in detail in this study and risks must be individually assessed at the project stage.

3.2.2 This approach has been adopted for two main reasons. Firstly, the review of flooding in the Macroom Electoral Area shows rivers and coastal flooding to be the most common source of damage. It is these sources of flooding that have been taken account of in the Local Area Plan process. Other sources of flooding are considered to present a lesser risk in this Electoral Area but should be considered at the planning application stage. Secondly, Flood Zones in the 'Planning System and Flood Risk Management' are defined on the basis of fluvial, and where appropriate, tidal flood risk. In addition, the SFRA should be based on readily derivable information,

and records and indicators for fluvial flood risk are generally more abundant than for other sources of flooding.

3.3 Fluvial Flooding

- 3.3.1 Flooding of watercourses is associated with the exceeding 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 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, the two giving two very different responses during large rainfall events.
- 3.3.2 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.
- 3.3.3 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. These structures are also vulnerable to blockage by natural debris within the channel or by fly tipping and waste.
- 3.3.4 Rivers are the primary cause of flooding in the Macroom Electoral Area; with flood events attributed to fluvial sources ranging from the major rivers, including the River Lee and its main tributaries which include the Sullane River and the River Bride, the BunSheelin River, the Owenboy River, the Curraheen River and smaller tributaries drains and natural lakes.
- 3.3.5 Generally fluvial flooding in the Lee catchment is as a result of prolonged heavy rainfall in the Shehy, Boggeragh and Derrynasaggart Mountains to the west and northwest of the catchment causing large volumes of water to pass down through the Sullane and Lee Rivers. This water gradually slows down as it passes through Lough Allua and the Lee reservoirs further downstream. However, the flow in the River Lee also gradually increases further downstream as more tributaries join and contribute to flows.

Rivers in the Macroom Electoral Area

The River Lee

- 3.3.6 The River Lee has its source in the Shehy Mountains near Gougane Barra. The Lee flows from the lake of Gougane Barra as a fast paced torrent, but eases at Ballingearry and flows into Lough Allua. Departing the lough, east, it again becomes rapid before flowing into the Inniscarra reservoir created by Inniscarra Dam. Moving on, it flows out of Inniscarra dam, a gentle river until it comes to Ballincollig weir located in Ballincollig Park. It then flows into the city under Inniscarra Bridge and flows parallel to the Carrigrohane road. Along this section gauges monitor the water levels from the Inniscarra Dam. It flows over the Lee weir and then is split into the

north and south channel by a sluice. The two channels join again at the Cork docks and enter the sea at Cobh.

- 3.3.7 The main tributaries of the River Lee upstream of Cork City include the Sullane River, the River Laney, the Dripsey River, the River Bride and the Shournagh River. The flows in the River Lee are influenced and partly controlled by the Carrigadrohid and Inniscarra hydro-electric dams owned by the Electricity Supply Board (ESB).
- 3.3.8 The Lee catchment covers an area of approximately 2,000 square kilometres. The catchment is defined by the land area drained by the River Lee, its tributaries and Cork Harbour. To facilitate analysis of flood risk, the catchment has been broken down into nine subcatchments as follows: Upper River Lee; Lower River Lee; Tramore/Douglas River; Kiln River; Glashaboy River; Owennacurra River; Carrigtohill area; Owenboy River; and Cork Harbour. The majority of the Macroom Electoral Area is covered by the sub catchments of the Upper Lee and Lower Lee with part of the southern Electoral Area falling into the Owenboy River catchment. The Upper Lee system flows between Gougane Barra and the Inniscarra Dam. The Lower Lee system runs between Inniscarra dam and the City boundary before entering Lough Mahon.
- 3.3.9 There is a history of frequent floods within the Lee Catchment which cause damage to public roads, properties and farmland and result from both fluvial and tidal mechanisms. In the recent past, notable flood events have occurred in August 1986, November 2000, November 2002, October 2004, December 2006 and most recently in November 2009.
- 3.3.10 Flooding downstream of Inishcarra Dam is affected by a number of factors including the additional flows to the River Lee from the Bride, Shournagh and Curragheen catchments which comprise over 30% of the overall River Lee catchment area. Additionally, high tide levels and storm surges affect water levels in the River Lee in the vicinity of Cork City.

The River Sullane

- 3.3.11 The River Sullane runs from the mountains between County Cork and County Kerry in southern Ireland. It runs through the centre of Macroom, to which it provides drinking water (and occasionally floods), joins the River Launa one kilometre east of the town, before joining the River Lee a further kilometre east.
- 3.3.12 The River Sullane flows in a North-Easterly direction towards Ballyvourney which is on the main Cork/Killarney Road. From Ballyvourney it follows close to the main road all the way to Macroom. There are no lakes to be found along its course. There are several white water stretches which make the river ideal for canoeing. It is not until the Sullane reaches the Western outskirts of Macroom that it becomes more sedate and wider. The Sullane is joined by the Larne which flows from the North of Macroom just before it meets the Lee at the Two Mile Bridge.

The Bunsheelin River

- 3.3.13 The Lee is joined by the Bunsheelin River at Ballingeary before flowing into Lough Allua, a chain of lakes to the east of the village. The OPW records one flood event in Ballingeary in November 2009 when torrential rain resulted in the Bunsheelin River bursting its banks at the eastern end of the village. The floodwaters caused extensive damage throughout the village.

The River Bride

- 3.3.14 The River Bride flows through the western end of Crookstown and along the southern part of Killumney/Ovens and is an important angling river. Some lands in close proximity to the River Bride may be liable to flooding.
- 3.3.15 Other Rivers in the Electoral Area include the Delehinagh River, River Foherish, Buingea River, River Cumner, Owenboy River and Curraheen River.

3.4 Other Sources of Flooding

3.4.1 Other sources of flooding including pluvial, ground water, drainage systems and reservoirs are detailed below. Risks from these sources have not been specifically addressed in the Flood Risk Assessment undertaken for the Macroom Electoral Area and need to be assessed at the planning application stage.

- **Pluvial Flooding:** Pluvial flooding is a result of rainfall generated overland flows of water. 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. Whilst the potential for surface water flow paths or ponding should not necessarily impede or restrict development, applications in such areas need to consider drainage thoroughly so as to ensure risks do not increase in the future.
- **Groundwater Flooding:** High groundwater levels can cause smaller scale flooding in areas. Groundwater flooding is caused by the emergence of water originating from underground, and is particularly common in karstic landscapes. This type of flooding is more localised and harder to predict. This can emerge from either point or diffuse locations. The occurrence of groundwater flooding is usually very local and unlike flooding from rivers and the sea, 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.
- **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. This type of flooding is more localised and harder to predict. Flooding in certain urban areas can also be attributed to sewers. Sewers have a finite capacity which, during certain load conditions, will be exceeded. 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.
- **Flooding from Reservoirs, Lakes and other Artificial Sources:** Reservoirs can be a major source of flood risk, as demonstrated in the 2009 flood, when waters released from the Inniscarra dam flooded significant sections of Cork City and some parts of the Macroom Electoral Area. The Inniscarra reservoir itself is a

very large body of water stretching from Inniscarra village to Carrigadrohid. The two dams at Carrigadrohid and Inniscarra, manage the flow of water from the Upper Lee catchment to the Lower Lee catchment. The dams play an important role in the management of flood risk in the Lee valley through the provision of storage and controlled discharge of flood waters. The River Lee hydro-electric scheme was built during the period 1952 to 1957. Inniscarra Dam is located approximately 13km west of Cork City with Carrigadrohid Dam a further 14km upstream. The construction of the dams created two lakes which stretch from Inniscarra upstream to the Gearagh near Macroom.

Section 4 Addressing Flood Risk in the Macroom Local Area Plan

4.1 Introduction

4.1.1 This section details the approach to Flood Risk Management adopted in the Macroom Electoral Area Local Area Plan.

4.2 Flood Risk Management Strategy

4.2.1 In preparing its Local Area Plan strategy for the management of flood risks, the Council has had regard to its obligations under the Guidelines and has conferred with officials of the OPW, the lead agency for flood risk management in Ireland, in completing the county wide assessment of flood risks and in formulating the strategy which has informed the preparation the Local Area Plan.

4.2.2 The majority of towns, villages and smaller settlements have a river or stream either running through the built-up area or close by and are inevitably exposed to some degree of flood risk when those rivers or streams overflow their normal course.

4.2.3 The approach adopted has generally been to:

- Include 'Indicative Flood Extent Maps' to Identify the areas within settlements which are at risk of flooding;
- Avoid development in areas at risk of flooding; and
- Where development in floodplains cannot be avoided, to take a sequential approach to flood risk management based on avoidance, reduction and mitigation of risk.

4.2.4 In response to local circumstances, particularly where there may be some uncertainties in relation to flood risk data or where land has been zoned in a previous plan or planning permission has already been granted, the approach has been modified and lands have been zoned for development with a requirement that a detailed site specific flood risk assessment be carried out at the project stage. This is explained in more detail below.

4.3 Indicative Flood Extent Maps/Flood Zones A and B

4.3.1 Completion of the county wide flood risk assessment has provided information in relation to the areas at risk of flooding within the settlements and this has been included within the Local Area Plan in the form of 'Indicative Flood Extent Maps' which provide information on three main areas of flood risk:

- Zone A – High probability of flooding. Most areas of the County that are subject to flood risks fall into this category. Here, most types of development would be considered inappropriate. Development in this zone should be avoided and/or only considered in exceptional circumstances, such as in major urban or town centres, or in the case of essential infrastructure that cannot be located elsewhere. A Justification Test set out in Ministerial Guidelines applies to proposals in this zone. Only water-compatible development, such as docks and marinas, dockside activities that require a waterside location, amenity open space, outdoor sports and recreation, would be considered appropriate in this zone.

- Zone B - Moderate probability of flooding. In most parts of the County this designation applies only to limited areas of land. In only a few locations do significant sites fall into this category. Here, 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. Less vulnerable development, such as retail, commercial and industrial uses, sites used for short-let for caravans and camping and secondary strategic transport and utilities infrastructure, and water-compatible development might be considered appropriate in this zone.
- Elsewhere (referred to in the Guidelines as Flood Zone C) – Localised flooding from sources other than rivers and the coast can still occur and may need to be taken into account at the planning application stage.

4.3.2 The inclusion of Indicative Flood Extent maps for the settlements of the electoral area is the first step in managing flood risk in the future. The maps are indicative in nature and are intended to primarily function as a screening tool. The areas at risk may be more or less extensive in practice than indicated in the flood mapping. The mapping will be refined where possible over time as more detailed flood risk assessments are completed by the OPW. The maps do not take into account flood defences or manmade structures such as bridges, weirs or culverts. This is accordance with the requirements of the Guidelines which specify an undefended assessment of risk.

4.3.3 Flood risk to each settlement has been appraised based on the Flood Zones which cross the settlement boundary, and is summarised in Table 4.1. Where settlements are identified as being wholly outside flood zone A or B, no further review of fluvial flood risk is required. Where some of the settlement is within either Flood Zone A or B, the need for a further review of flood risk, and the specific zoning objectives, is required.

Table 4.1: Flood Risk by Settlement		
Settlement	Fluvial Flood Risk within Development Boundary	Comment
Main Settlements		
Ballincollig	Yes	All development proposals within the Indicative Flood Risk Areas must satisfy the 'Development Plan' justification test for projects in Flood Zone A/B either as part of the preparation of this LAP (see table 4.2) or at the planning application stage. Where the 'Development Plan' justification test is satisfied, site specific Flood Risk Assessment is necessary.
Macroom	Yes	

Table 4.1: Flood Risk by Settlement		
Settlement	Fluvial Flood Risk within Development Boundary	Comment
Key Villages		
Ballingeary	Yes	All development proposals within the Indicative Flood Risk Areas must satisfy the 'Development Plan' justification test for projects in Flood Zone A/B either as part of the preparation of this LAP (see table 4.2) or at the planning application stage. Where the 'Development Plan' justification test is satisfied, site specific Flood Risk Assessment is necessary.
Ballymakeery/Ballyvourney	Yes	
Coachford	Yes	
Killumney/Ovens	Yes	
Villages		
Aghabullogue	No	Proceed as zoned in the Local Area Plan.
Aherla	Yes	All development proposals within the Indicative Flood Risk Areas must satisfy the 'Development Plan' justification test for projects in Flood Zone A/B either as part of the preparation of this LAP (see table 4.2) or at the planning application stage. Where the 'Development Plan' justification test is satisfied, site specific Flood Risk Assessment is necessary.
Ballynora	Yes	All development proposals within the Indicative Flood Risk Areas must satisfy the 'Development Plan' justification test for projects in Flood Zone A/B either as part of the preparation of this LAP (see table 4.2) or at the planning application stage. Where the 'Development Plan' justification test is satisfied, site specific Flood Risk Assessment is necessary.
Clondrohid	No	Proceed as zoned in the Local Area Plan.
Cloughduv	No	Proceed as zoned in the Local Area Plan.

Table 4.1: Flood Risk by Settlement		
Settlement	Fluvial Flood Risk within Development Boundary	Comment
Crookstown	Yes	All development proposals within the Indicative Flood Risk Areas must satisfy the 'Development Plan' justification test for projects in Flood Zone A/B either as part of the preparation of this LAP (see table 4.2) or at the planning application stage. Where the 'Development Plan' justification test is satisfied, site specific Flood Risk Assessment is necessary.
Crossbarry	Yes	All development proposals within the Indicative Flood Risk Areas must satisfy the 'Development Plan' justification test for projects in Flood Zone A/B either as part of the preparation of this LAP (see table 4.2) or at the planning application stage. Where the 'Development Plan' justification test is satisfied, site specific Flood Risk Assessment is necessary.
Inchigeelagh	Yes	All development proposals within the Indicative Flood Risk Areas must satisfy the 'Development Plan' justification test for projects in Flood Zone A/B either as part of the preparation of this LAP (see table 4.2) or at the planning application stage. Where the 'Development Plan' justification test is satisfied, site specific Flood Risk Assessment is necessary.
Kilmurry	No	Proceed as zoned in the Local Area Plan.
Kilnamartyra	No	Proceed as zoned in the Local Area Plan.
Newcestown	No	Proceed as zoned in the Local Area Plan.
Rylane/Seiscne	No	Proceed as zoned in the Local Area Plan.

Table 4.1: Flood Risk by Settlement		
Settlement	Fluvial Flood Risk within Development Boundary	Comment
Village Nuclei		
Ballinacurra/Brinny	Yes	All development proposals within the Indicative Flood Risk Areas must satisfy the 'Development Plan' justification test for projects in Flood Zone A/B either as part of the preparation of this LAP (see table 4.2) or at the planning application stage. Where the 'Development Plan' justification test is satisfied, site specific Flood Risk Assessment is necessary.
Ballinagree	No	Proceed as zoned in the Local Area Plan.
Bealnamorive	Yes	All development proposals within the Indicative Flood Risk Areas must satisfy the 'Development Plan' justification test for projects in Flood Zone A/B either as part of the preparation of this LAP (see table 4.2) or at the planning application stage. Where the 'Development Plan' justification test is satisfied, site specific Flood Risk Assessment is necessary.
Canovee	No	Proceed as zoned in the Local Area Plan.
Carrigadrohid/Killnardrish	Yes	All development proposals within the Indicative Flood Risk Areas must satisfy the 'Development Plan' justification test for projects in Flood Zone A/B either as part of the preparation of this LAP (see table 4.2) or at the planning application stage. Where the 'Development Plan' justification test is satisfied, site specific Flood Risk Assessment is necessary.
Carriganimmy	Yes	All development proposals within the Indicative Flood Risk Areas must satisfy the 'Development Plan' justification test for projects in Flood Zone A/B either as part of the preparation of this LAP (see table 4.2) or at the planning application stage. Where the 'Development Plan'

Table 4.1: Flood Risk by Settlement		
Settlement	Fluvial Flood Risk within Development Boundary	Comment
		justification test is satisfied, site specific Flood Risk Assessment is necessary.
Coolea	Yes	All development proposals within the Indicative Flood Risk Areas must satisfy the 'Development Plan' justification test for projects in Flood Zone A/B either as part of the preparation of this LAP (see table 4.2) or at the planning application stage. Where the 'Development Plan' justification test is satisfied, site specific Flood Risk Assessment is necessary.
Farnanes	Yes	All development proposals within the Indicative Flood Risk Areas must satisfy the 'Development Plan' justification test for projects in Flood Zone A/B either as part of the preparation of this LAP (see table 4.2) or at the planning application stage. Where the 'Development Plan' justification test is satisfied, site specific Flood Risk Assessment is necessary.
Farnivane	No	Proceed as zoned in the Local Area Plan.
Kilbarry	Yes	All development proposals within the Indicative Flood Risk Areas must satisfy the 'Development Plan' justification test for projects in Flood Zone A/B either as part of the preparation of this LAP (see table 4.2) or at the planning application stage. Where the 'Development Plan' justification test is satisfied, site specific Flood Risk Assessment is necessary.
Knockavilla/Old Chapel Cross	No	Proceed as zoned in the Local Area Plan.
Lissarda	No	Proceed as zoned in the Local Area Plan.
Murragh	No	Proceed as zoned in the Local Area Plan.

Table 4.1: Flood Risk by Settlement		
Settlement	Fluvial Flood Risk within Development Boundary	Comment
Reananerree	No	Proceed as zoned in the Local Area Plan.
Rusheen	Yes	All development proposals within the Indicative Flood Risk Areas must satisfy the 'Development Plan' justification test for projects in Flood Zone A/B either as part of the preparation of this LAP (see table 4.2) or at the planning application stage. Where the 'Development Plan' justification test is satisfied, site specific Flood Risk Assessment is necessary.
Tooms	Yes	All development proposals within the Indicative Flood Risk Areas must satisfy the 'Development Plan' justification test for projects in Flood Zone A/B either as part of the preparation of this LAP (see table 4.2) or at the planning application stage. Where the 'Development Plan' justification test is satisfied, site specific Flood Risk Assessment is necessary.
Toon Bridge	Yes	All development proposals within the Indicative Flood Risk Areas must satisfy the 'Development Plan' justification test for projects in Flood Zone A/B either as part of the preparation of this LAP (see table 4.2) or at the planning application stage. Where the 'Development Plan' justification test is satisfied, site specific Flood Risk Assessment is necessary.
Upton	No	Proceed as zoned in the Local Area Plan.

4.4 The Approach to Zoning in the Local Area Plan in Areas at Risk of Flooding

4.4.1 Within the areas identified as being at risk (Zone A or B), all proposals for development will need to comply with the Ministerial Guidelines – ‘The Planning System and Flood Risk Management. In this LAP, proposals for development within the Indicative Flood Risk Areas have been included in the plan where either:

- The proposal has satisfied the ‘Development Plan Justification Test’ set out in the Ministerial Guidelines;
- The proposals stemmed from a similar proposal in a previous plan and has been included in this plan in order to facilitate the local verification of the Indicative Flood Risk Maps at the project planning/planning application stage; or
- In a limited number of cases, for another reason

4.4.2 Generally, the purpose of zoning is to indicate to property owners and members of the public the types of development which the Planning Authority considers most appropriate in each land use category. Zoning is designed to reduce conflicting uses within areas, to protect resources and, in association with phasing, to ensure that land suitable for development is used to the best advantage of the community as a whole.

4.4.3 In the preparation of the Macroom LAP, proposed zonings were generally assessed relative to the provisions of the Guidelines and the Justification Test for Development Plans as detailed in the Guidelines. The Justification Test is required in situations where the planning authority needs to consider future development in areas at a high or moderate risk of flooding, for uses or development vulnerable to flooding that would otherwise be inappropriate. In such circumstances, all of the following criteria must be satisfied :

- the urban settlement is targeted for growth in the NSS, RPGs, or statutory plans defined under the provisions of the Planning and Development Act, 2000, as amended.
- 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
- A flood 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 the development will not cause adverse impacts elsewhere.

- 4.4.4 In the preparation of the Macroom Local Areas Plans the final element of the justification test, which requires a site specific flood risk assessment to be carried out, was not undertaken. Instead, precautionary text has been included in the specific objective recognising the need for a Site Specific Flood Risk Assessment at the project stage.
- 4.4.5 In some cases, certain zonings were included in areas at risk of flooding, even when such zoning did not pass the Justification Test as a response to a desire to retain those zonings where planning permission had been granted or where the zoning had already been made in a previous plan. This approach also allows for local ambiguities in the flood risk mapping to be tested at the project stage. Transitional measures have also been included in the Local Area Plan to deal with outstanding planning permissions. Where such zonings are included in the Plan, precautionary text was included in the specific objective to highlight the need for a flood risk assessment at the project stage. Development proposals on zonings within areas at risk of flooding will also be subject to the Development Management Justification Test, details of which are set out in the Guidelines.
- 4.4.6 The table below lists the specific zoned sites within the Macroom Electoral Area that are located within either Flood Zone A or B and the circumstances of their inclusion.

Table 4.2: Specific land Use Zonings located within Flood Zone A or B				
Settlement	Zoning Objective	Development Plan Justification Test and Other Assessment Criteria	Reason for Inclusion in the LAP	Comment
Ballincollig	X-01	Justification Test	✓	Only a small part of this site is subject to flood risk. Precautionary text has been included in the specific objective recognising the need for a Site Specific Flood Risk Assessment at the project stage. Part of this site was previously zoned X-02 for mixed use development including residential. Part of the site was also previously zoned R-17 for medium density residential development.
		Historical Zonings	n/a	-

Table 4.2: Specific land Use Zonings located within Flood Zone A or B				
Settlement	Zoning Objective	Development Plan Justification Test and Other Assessment Criteria	Reason for Inclusion in the LAP	Comment
		Other	n/a	-
Macroom	B-01 (part)	Justification Test	n/a	-
		Historical Zonings	n/a	-
		Other	n/a	Only a small part of this site is subject to flood risk Precautionary text has been included in the specific objective recognising the need for a Site Specific Flood Risk Assessment at the project stage. The site was previously zoned for industry in the 2005 Local Area Plan
Ballymakeery/ Ballyvourney	X-01	Justification Test	n/a	-
		Historical Zonings	✓	Previously zoned as an opportunity site in the 2005 Local Area Plan. Precautionary text has been included in the specific objective recognising the need for a Site Specific Flood Risk Assessment at the project stage.
		Other	n/a	-
Killumney/Ovens	X-01 (part)	Justification Test	n/a	-

Table 4.2: Specific land Use Zonings located within Flood Zone A or B				
Settlement	Zoning Objective	Development Plan Justification Test and Other Assessment Criteria	Reason for Inclusion in the LAP	Comment
		Historical Zonings	✓	Previously zoned as an opportunity site in the 2005 Local Area Plan. Precautionary text has been included in the specific objective recognising the need for a Site Specific Flood Risk Assessment at the project stage.
		Other	n/a	-
Ballynora	C-01 (part)	Justification Test	✓	Precautionary text has been included in the specific objective recognising the need for a Site Specific Flood Risk Assessment at the project stage.
		Historical Zonings	n/a	-
		Other	n/a	-
Toon Bridge	T-01	Justification Test	n/a	-
		Historical Zonings	✓	Previously zoned for village centre uses in the 2005 Local Area Plan. Precautionary text has been included in the specific objective recognising the need for a Site Specific Flood Risk Assessment at the project stage.
		Other	n/a	-

Note: Proposals for 'open space or outdoor recreation development have not been included in table 4.2 because these are normally water compatible forms of development and, therefore, do not need to be subjected to the 'Development Plan' justification test. However, an appropriate flood risk assessment will be necessary at the project planning/planning application stage.

4.5 Requirements for Site Specific Flood Risk Assessments

4.5.1 Within Indicative Flood Risk Areas, only development proposals that are consistent with a specific zoning objective that satisfied the 'Development Plan Justification Test' as part of this LAP (see table 4.2) may proceed to site specific flood risk assessment at the planning application stage. All other proposals on land that does not benefit from a specific objective (such as land within a development boundary), where the specific objective was brought forward from a previous plan or where the proposal was included in this LAP for another reason must satisfy the 'Development Plan Justification Test' at the planning application stage. Table 4.2 provides detailed guidance.

4.5.2 In order to reflect the possibility that the 'Indicative Flood Extent Maps' may inevitably include some localised uncertainties, the site-specific flood risk assessment process is divided into two stages. The initial stage in the process has been provided in order to allow the Indicative Flood Risk Map to be locally verified in cases of uncertainty. This stage is intended to be carried out relatively quickly and at modest expense

The first stage in the assessment process will include:

- An examination of all sources of flooding that may affect a particular location, in addition to the fluvial and tidal risk represented in the indicative flood risk maps.
- A review of all available flood related information, including the flood zone maps and historical flood records (from www.floodmaps.ie, and through wider internet / newspaper / library search/ local knowledge of flooding in the area).
- An appraisal of the relevance and likely accuracy / adequacy of the existing information. For example, if the outline is from CFRAM or other detailed study they can be relied on to a greater extent than if they are from other sources.
- Site cross sections or spot levels, including the river and surrounding lands.
- Description of the site and surrounding area, including ground conditions, levels and land use.
- Commentary on any localised uncertainty in the existing flood mapping and other sources of flood risk information and the site area.
- Proposal as to the appropriate course of action which could be either:
 - further study;
 - revision of proposals to avoid area shown at risk of flooding; or
 - continue with development as proposed (if the site is clearly demonstrated to be outside flood zones A or B and has been shown to be not at flood risk).

- 4.5.3 It is recommended that intending applicants for planning permission should carry out this first stage of the site-specific flood risk assessment process well in advance of the submission of their application for planning permission and that its recommendations should be brought to the attention of Council staff as part of a pre-planning meeting.
- 4.5.4 Where the first stage of the site-specific flood risk assessment indicates further study is required then, if the 'Development Plan Justification Test' was satisfied as part of the making of this LAP (see table 4.2) the normal course of action will be to carry out a detailed site specific flood risk assessment in line with Chapter 5 of the Ministerial Guidelines before an application for planning permission can be considered. If the 'Development Plan Justification Test' was not satisfied as part of this LAP, then it will normally be considered inappropriate to take the proposal to a further stage of assessment unless the County Council has indicated in writing that the proposal is considered to satisfy that test.
- 4.5.5 Where the County Council have indicated in writing that they are in agreement with any proposals for avoidance or that the initial study shows satisfactorily that the site is not at risk of flooding then, subject to other proper planning considerations, an application for planning permission may be favourably considered.
- 4.5.6 Where it can be satisfactorily shown in the detailed site-specific flood risk assessment that the proposed development, and its infrastructure, will avoid significant risks of flooding in line with the principles set out in the Ministerial Guidelines, then, subject to other relevant proper planning considerations, permission may be granted for the development.
- 4.5.7 However, where the site does **not** benefit from a specific zoning objective and there are significant residual flood risks to the proposed development or its occupiers, conflicting with the approach recommended in the Ministerial Guidelines, it is unlikely that permission will be granted unless all of the following are satisfied:
- The proposal is within an urban settlement, targeted for growth under the National Spatial Strategy, regional planning guidelines, and statutory plans (including this local area plan).
 - The development of the lands for the particular use or development type is required to achieve the proper planning and sustainable development of the urban settlement and, in particular:
 - Is essential to facilitate regeneration and/or expansion of the centre of the urban settlement;
 - Comprises significant previously developed and/or under-utilised lands;
 - Is within or adjoining the core of an established or designated urban settlement;
 - Will be essential in achieving compact and sustainable urban growth; and
 - There are no suitable alternative lands for the particular use or development type, in areas at lower risk of flooding within or adjoining the core of the urban settlement.

Section 5 Flood Risk in the Future

5.1 What has the LAP Achieved

5.1.1 The inclusion of indicative flood extent maps for the settlements of the electoral area is the first step in managing flood risk in the future. The maps are primarily intended to function as a screening tool. They are not a substitute for detailed hydraulic modelling, such as may be required to assess the level of flood risk for a specific development. The flood maps should be used to guide decision making when determining whether a detailed Flood Risk Assessment is required for any given site. The maps are intended for guidance, and cannot provide details for individual properties.

5.2 Flood Risk and Development Management

5.2.1 The following key requirements for the management of development in areas at risk of flooding shall be adhered to:

- a) All development proposals within, or incorporating, areas at risk of flooding are required to undertake a flood risk assessment. This can be carried out in two stages as outlined in section 4.4 of this document.
- b) Where the first stage of the site-specific flood risk assessment indicates further study is required then the normal course of action will be to proceed to a Stage Two Strategic Flood Risk Assessment. The findings of this assessment will need to demonstrate that the proposed development satisfies all the provisions of the Development Management Justification Test, as detailed in the Guidelines.
- c) Thereafter, where development has to take place in areas at risk of flooding, the risks should be mitigated and managed through the location, layout and design of the development to reduce such risks to an acceptable level.
- d) 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 Planning Guidelines: The Planning System and Flood Risk Management.
- e) Where flood risk constitutes a significant environmental effect of a development proposal, a sub-threshold EIS may be triggered. Screening for EIA should be an integral part of all planning applications in areas at risk of flooding.
- f) Any proposal in an area at risk of flooding that is considered acceptable in principle must demonstrate that appropriate mitigation measures can be put in place and that residual risks can be managed to acceptable levels. Addressing flood risk in the design of new development should consider the following:
 - Locating development away from areas at risk of flooding, where possible.
 - Substituting more vulnerable land uses with less vulnerable ones.
 - Identifying and protecting land required for current and future flood risk management, such as conveyance routes, flood storage areas and flood protection schemes etc.
 - Addressing the need for effective emergency response planning for flood events in areas of new development.

- g) Site layout, landscape planning and drainage of new development must be closely integrated to play an effective role in flood-reduction. As such, proposals should clearly indicate:
- The use of Sustainable Drainage Systems (SuDS) to manage surface water run-off.
 - Water conveyancing routes free of barriers such as walls or buildings.
 - The signing of floodplain areas to indicate the shared use of the land and to identify safe access routes.
- h) To ensure that adequate measures are put in place to deal with residual risks, proposals should demonstrate the use of flood-resistant construction measures that are aimed at preventing water from entering a building and that mitigate the damage floodwater causes to buildings. Alternatively, designs for flood resilient construction may be adopted where it can be demonstrated that entry of floodwater into buildings is preferable to limit damage caused by floodwater and allow relatively quick recovery. Such measures include the design and specification of internal building services and finishes. Further detail on flood resilience and flood resistance are included in the Technical Appendices of the Planning Guidelines, The Planning System and Flood Risk Management.

5.3 Monitoring and Review

5.3.1 Information in relation to flood risk will be monitored and reviewed by the Council and the Flood Risk Assessment will be updated as appropriate as new information becomes available. There are a number of key outputs from possible future studies and datasets which could inform any update of the FRA as availability allows. A list of potential sources of information which will inform an FRA review is provided in the table below.

Potential Sources of information on Flood Risk		
Data	Source	Timeframe
Preliminary flood risk maps - including pluvial and groundwater	OPW under the Floods Directive	2013
CFRAM Studies a) Preliminary Flood Risk Assessment b) production of the flood maps c) production of Flood Risk management Plans	OPW	a) End 2011 b) 2013 c) 2015
County Development Plan Updates	Cork County Council	2012
Flood maps of other sources,	Various	Unknown

such as canal breach and drainage networks		
Significant flood events	Various	Unknown
Changes to Planning and / or Flood Management Policy	DoEHLG / OPW / Cork County Council	Unknown
SFRAs for Electoral Area Local Area Plans	Cork County Council	Upon LAP review
SFRAs for Town Plans	Cork County Council / Town Councils	Upon Plan review
Detailed FRAs	Various	Unknown
Flood Defence Feasibility / Design Reports	OPW primarily	Unknown



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