

SEA Statement for Ferrybank Belview Local Area Plan 2017



Planning Department
Kilkenny County Council
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1 Introduction

1.1 Terms of Reference

This is the SEA statement for the Ferrybank Belview Local Area Plan 2017. Article 14 of the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (SI No. 436 of 2004) as amended, sets out the requirements for SEA for Local Area Plans.

The findings of the SEA are expressed in an Environmental Report, which accompanied the Draft Plan on public display and was updated in order to take account of recommendations which arose from submissions. Changes which were Material Alterations underwent SEA, the findings of which were placed on public display alongside the Proposed Amendments (Material Alterations).

Members of the planning authority have taken into account the findings of all relevant SEA output during their consideration of the Plan before its adoption. On the making of the Local Area Plan, this SEA Statement was prepared.

1.2 SEA Definition

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

1.3 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 (Statutory Instrument Number (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 21 July 2004. The Regulations have been amended by the European Communities (Environmental Assessment of Certain Plans and Programmes) (Amendment) Regulations 2011 (SI No. 200 of 2011) and the Planning and Development (Strategic Environmental Assessment) (Amendment) Regulations 2011 (SI No. 201 of 2011).

The SEA Directive and the instruments transposing it into Irish Law require that after the making of a Development Plan, the plan or programme making authority is required to make a Statement available to the public and the competent environmental authorities. This Statement is referred to as an SEA Statement (DEHLG, 2004).

1.4 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 following have been taken into account during the preparation of the Plan:
 - the environmental report,
 - submissions and observations made to the planning authority on the Draft Plan and Environmental Report, and
 - any transboundary consultations [this is not relevant to this SEA]
- c) the reasons for choosing the Plan in the light of the other reasonable alternatives dealt with; and
- d) the measures decided upon to monitor the significant environmental effects of implementation of the Plan.

2 How Environmental Considerations were integrated into the Development Plan

2.1 Introduction

Environmental considerations were integrated into the Development Plan at all stages through:

- Consultations with environmental authorities;
- Communication within the Plan team of environmental considerations and integration of these considerations into the Plan;
- Integration of environmental measures into the Plan including SEA, AA and SFRA provisions.

2.2 Consultation

In line with the Planning and Development (SEA) Regulations 2004 as amended¹, the Environmental and Planning Authorities were given notice on the 25th September 2014 of the intention of Kilkenny County Council to carry out an environmental assessment. The bodies notified were:

- The EPA
- Minister for Environment, Community and Local Government.
- Minister for Communications, Energy and Natural Resources.
- Minister for Agriculture, Food and the Marine.
- Minister of Arts, Heritage and Local Government.
- Carlow County Council.
- Waterford City and County Council.
- Wexford County Council.
- Laois County Council
- Tipperary County Council

In addition, submissions were invited on the Draft Plan and Environmental Report while they were on public display, and also at Material Alterations stage. Responses are detailed in Section 3.

2.3 Communication of environmental considerations and integration into the Plan

The Draft Plan, Environmental Report, Strategic Flood Risk Assessment and Natura Impact Report were prepared by an in-house team of planners. The process was an iterative one. Environmental considerations were communicated to the Planning team throughout the plan-making process. This allowed the team to integrate these considerations into the text and maps of the Plan.

¹ Planning and Development Strategic Environmental Assessment (Amendment) Regulations 2011 S.I. 201 of 2011

2.4 Integration of Environmental measures into the Plan

The formulation of the Plan and the preparation of the Environmental Report is an iterative process that takes place over many months and therefore it is difficult to document the evolution of every objective in the Plan. However, there are a number of means through which environmental measures were integrated into the Plan.

In the first place, the entire ethos behind the writing of the Plan was to provide a clarity which could readily be understood, and assessed by the SEA process. This led to a decision from the outset to structure the Plan mainly in terms of 'objectives' and 'development management standards'. The previous Plan included a 'Policies and Objectives' chapter, and a 'Development Management' chapter. The mix of policies, objectives and development management standards made it difficult to assess the environmental impact of the Plan, and was more cumbersome for the SEA process. For the 2017 Plan, objectives were used as the main statement of intent. Objectives had to satisfy the criteria of SMART and be; Specific, Measurable, Attainable, Realistic and Time-sensitive.

This made the assessment clearer, and should lead to greater clarity in monitoring the effects of the Plan. 'Development management standards' were used to set out exactly what would be required to be satisfied as part of any planning application, so for the most part these equate to mitigation measures to ensure the incorporation of environmental measures into the Plan.

Furthermore, specific changes to the text and maps of the LAP were introduced as a result of the SEA process. This includes a section on the National Survey of Native Woodlands (See Chapter 7 of LAP), and also the identification of the SEVESO site in Campile, Co. Wexford, (See Chapter 9) which was not included in the 2009 LAP, as amended.

3 Environmental Report and Submissions & Observations

3.1 Introduction

This section details how both the Environmental Report and submissions and observations made to the planning authority on the Environmental Report and SEA process have been taken into account during the preparation of the Plan.

3.2 SEA Scoping Submissions

In line with the Planning and Development (SEA) Regulations 2004 as amended², the Environmental and Planning Authorities were given notice on the 25th September 2014 of the intention of Kilkenny County Council to carry out an environmental assessment indicating that submissions or observations in relation to the scope and level of detail of the information to be included in the environmental report could be made to the Council.

A response was received from the EPA on the 29th September 2014, which included an SEA pack for all Local Authorities to incorporate in carrying out the Environmental Report. The letter listed general topics to be considered, covering issues such as water quality and flooding. These issues were taken into account during the undertaking of the SEA, SFRA and AA and informed the measures that were integrated into the LAP in relation to sustainable development and environmental protection and management.

A response was received from the Department of Arts, Heritage and the Gaeltacht on the 24th October 2014. This sought that any SEA shall contain a detailed Cultural Heritage Section. The Environmental Report did include a detailed Cultural Heritage section, see Section 3.9 of the ER.

3.3 Submissions and observations at pre-draft stage

Pre-draft public consultation regarding the Plan took place during two separate periods; February-March 2015 and March-April 2016.

The first period comprised a public meeting (held in conjunction with Waterford City and County Council) on the 18th February 2015 in Abbey College in Ferrybank, and also a pre-draft submissions period which ran from the 6th February until the 6th March 2015.

The second pre-draft submissions period ran from 18th March 2016 until 15th April, 2016.

Three submissions were received in relation to the SEA, from the EPA, ref. P1, the Dept. of Arts, Heritage and the Gaeltacht, ref. P2 and Louise Buggy, P27. These submissions were addressed in the Chief Executive's Report, and the relevant extracts are summarised below.

² Planning and Development Strategic Environmental Assessment (Amendment) Regulations 2011 S.I. 201 of 2011

Table 1: Pre-draft submissions

Submission ref.	Summary	Chief Executive’s Opinion and Recommendation
P1 EPA	This submission relates to the notice for SEA Scoping, as sent to the EPA in September 2014. The submission sets out the key environmental issues to be taken into account in the preparation of the SEA and Plan. An SEA checklist is attached to assist in the preparation of the SEA and Plan.	These issues will be addressed herein.
P2 DAHG	This submission relates to the notice for SEA Scoping, as sent to the DAHG in September 2014. The submission requires that a detailed Cultural Heritage Section be included in the SEA to include assessing the management and protection of the terrestrial, coastal, intertidal and underwater archaeological resource.	Cultural heritage section has been included.
P27 Louise Buggy	<p>Seeks that the SEA cover the following:</p> <ul style="list-style-type: none"> • Impacts on cSAC from the private effluent treatment plant at Christendom • Odour from the effluent and rendering plant • The option of decommissioning the private effluent treatment plant 	The EPA license certain activities by means of IPC licenses. An IPC licence is a single integrated licence which covers all emissions from the facility and its environmental management. There are two IPC facilities operating in Christendom; license numbers P0040-01 and P0040-02 and P0205-01 and P0205-02, both named as Anglo Beef Processors Ireland trading as ABP Waterford. Monitoring of these licenses is the remit of the EPA and any queries or complaints in this regard must be addressed to the EPA. It is beyond the scope of this Strategic EA to examine the detail of current practices at existing, licensed facilities.

3.4 Submissions and observations on the Environmental Report

The Draft plan and Environmental Report were published on the 9th June 2017 and remained on public display until the 4th August 2017. A total of 41 submissions were received in total, of which 3 referred to the SEA.

Responses to submissions made on the Environmental Report and AA and SFRA documents during the period of public display were integrated into a Chief Executive’s Report and considered by Kilkenny County Council. The extract from the CE’s Report in relation to these three submissions are summarised in Table 2 below, and together with other changes as recommended in the CE’s Report, a number of changes were proposed as Material Alterations.

Table 2: Submissions to the Draft Plan and Environmental Report

Name	Summary
S1 Department of Housing, Planning, Community and Local Government	<ol style="list-style-type: none"> 1. Department considers the draft provides a strategic framework for proper planning and sustainable development. 2. Department noted 31 Ha for new residential to be developed in sequential and phased manner as well as extensive zoning of “strategic reserve” 3. Agrees with assessment that revitalising the centre of Ferrybank and connecting to Waterford City are main issues. 4. Commends the strategic context in which the plan is set and the collaborative nature of discussions between Kilkenny and Waterford. 5. Objectives in the written statement should be highlighted 6. Welcomes SEA but reminds that Planning Authority should be satisfied that, after consultation with NPWS and OPW, draft plan complies with all Directive requirements. 7. Planning Authority should ensure that draft plan had regard to all relevant International, national guidelines and circulars.
Response Comments of the Department welcomed and noted.	
Recommendation: Objectives in the final written statement will be highlighted.	

Name	Summary
S2 Department of Culture, Heritage and the Gaeltacht	<ol style="list-style-type: none"> 1. Department has been unable to find reference to planning or pre planning consultations with the Development Applications Unit, and recommends routing consultations through the DAU. 2. Draft states River Barrow/Nore SAC is in the Plan. AA screening states the River Barrow/Nore SAC is outside the Plan area. This needs clarification. 3. Walking and cycling along rivers can adversely impact on waterways. LAP objectives WCW 4, 12 and 14 conflict with Heritage objective 7C, which includes enhancing river corridors as habitat networks. Walking and cycling routes need ecological assessment and should not target sensitive ecological sites or parts thereof. 4. The proposed new marina, and any proposals at Grannyferry wetlands needs to be consistent with nature conservation objectives and legal compliance requirements. 5. The following issues in the AA screening need attention: <ul style="list-style-type: none"> • 2009 LAP was subjected to AA and it is not clear why the draft has not • Table 2.4 does not include walking and cycling routes, new bridge across the river or the new Marina • Cumulative Impacts with Waterford need to be considered • LAP has not been assessed in combination with the Waterford New Ross Greenway • Bridge across Suir may require AA for 4 stated reasons 6. The following issues in the SEA need attention:

	<ul style="list-style-type: none"> • Planning Policy Objective should be amended to include protected species • Some sub- objectives under 8A needs to be re-assessed or explained • Objective 8C needs to be reassessed • Source referenced under Table 8.1 needs amending • LA should include planning permissions it grants as a source to assist in determining the loss of habitats and species
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Response

1. A meeting was held with the Local Wildlife Conservation Ranger as part of the consultation process, back in 2014. The new process for consultation with the Department has been noted, and will be followed in the future.

2. The River Barrow SAC is located proximate to, but not within the LAP boundary. The AA screening contains the accurate and up to date boundary line and associated European Sites. The LAP will be updated to correct this discrepancy.

3. Any proposed walking and cycling route will be subject to a project level Appropriate Assessment to ensure no impact on protected ecological sites. The County Development Plan provides the overarching framework for the ecological assessment of all projects, and includes a provision for ecological consideration for the placement and design of these projects (CDP, Chapter 8, p.102). A development management standard to this effect will also be included in the LAP as follows: *Ensure that an ecological assessment is carried out for any proposed development likely to have a significant impact on rare and threatened species including those species protected by law and their habitats. Ensure appropriate avoidance and mitigation measures are incorporated into development proposals as part of any ecological impact assessment.*

Lighting has potential to adversely affect ecological processes, this will be taken into account through the ecological assessment of the project on foot of the policies and objectives within the CDP. A development management standard will be included to cover this as follows: *“All lighting within the Plan area will be directional lighting designed specifically in relation to biodiversity”*.

4. The Plan does not propose a new marina, but references the recommendations of the PLUTS (and the Urban Design Framework Plan for the North Quays) concerning the development of a new marina and waterfront to the north of the River Suir, within Waterford City and County Council’s administrative area.

Any proposals at Grannyferry wetlands would be subject to a project level Appropriate Assessment will be consistent with nature conservation objectives and legal compliance requirements.

5. The AA has been amended to incorporate these issues. An additional Development management standard is proposed on foot of this, in relation to requiring a Construction Environment Management Plan in advance of the construction of transportation infrastructure, including bridges and cycleways. This DM standard should be inserted in Chapter 10 as 10DMC To require Construction Environment Management Plans in advance of the construction of transportation infrastructure, including bridges and cycleways, to incorporate relevant and reliable mitigation measures which have been integrated into the Development Plans and any lower tier Environmental Impact Assessment Report or Appropriate Assessment.

6. SEA –

- PPO will be amended to include protected species.
- Sub-objectives under 8A will be re-assessed.
- Objective 8C will be reassessed
- Source referenced under Table 8.1 will be amended
- The data sources as outlined in Table 8.1 are considered sufficient.

Recommendation:

1. No change recommended.
2. Amend LAP to reflect that River Barrow SAC is located adjacent to, but not within, the LAP boundary.
3. Include development management standards to cover lighting and ecological assessments as outlined above.
4. No change recommended.
5. Revise the AA to take account of the issues raised under Point 5 above. Include new development management standards to cover transportation infrastructure, as outlined above.
6. Amend SEA in line with above.

Name	Summary
<p>S3 Southern Regional Assembly</p>	<ol style="list-style-type: none"> 1. The Regional Assembly considers that the South East Regional Planning Guidelines (SERPG) set the context for the draft LAP for Ferrybank Belview. 2. Six key strategic issues relating to the area covered by the plan are highlighted: <ol style="list-style-type: none"> a. The Role of the Ferrybank Belview LAP in the growth of the Waterford Gateway in support of the SERPG population targets: The draft LAP has incorporated the SERPG/County Development Plan population targets into the Core strategy. When taken together the principles outlined in the Development strategy, the Core Strategy provision for dwelling unit numbers and proposed land use zoning is reasonable and would be consistent, as far as is practicable, with the SERPG. b. Integration of Plan with Waterford City centre and North Quays The draft plan objectives 1D and other supporting statements would be consistent, as far as is practicable, with SERP strategic Goal B2 “to support the development and growth of the Gateway” and the statement on urban Regeneration at Section 4.2 – Regional Gateway. c. Development of the Port of Waterford at Belview as a working port and as a strategic industrial development site. The draft plan overarching statement and Objectives 5A to 5H would be consistent, as far as is practicable, with the SERPG. d. Development of sustainable travel options including public transport and policies to support and facilitate improved access to the city centre, North Quays and wider urban area by walking, cycling and public transport.

	<p>The policies and objectives outlined in the draft plan would assist in the realisation of several SERPG objectives relating to transportation and Smarter Travel and would be consistent, as far as is practicable, with the SERPG.</p> <p>e. Development of a joint retail strategy to cover the Waterford City Area</p> <p>The regional assembly notes that there is no joint retail strategy in place on foot of the requirements for such strategy in both the SERPG and the Retail Planning guidelines. Objective 4B however aims to engage with other relevant Local Authorities within the region to prepare a strategy for the greater Waterford Area. The Regional Assembly encourages the early implementation of Objective 4B.</p> <p>f. Protection of the River Suir as designated European Site and sustainable development of the river and the associated network of green spaces/green infrastructure in the area for recreational and amenity purposes.</p> <p>Section 7.2 and 7.3 describes the unique environmental character and value of the natural heritage of the plan area and the potential of the green infrastructure network. The draft also provides policies to support and encourage recreation and tourism opportunities presented by the extensive shoreline, to create new walkways and develop the abandoned railway line between Waterford and New Ross for cycling and walking.</p> <p>3. SEA was carried out. A Strategic Flood Risk Assessment (SFRA) was done and informed the zoning. No development objectives are predicted to have a significant adverse effect. Some objectives will have an uncertain impact. Mitigation is however proposed in chapter 7 to lessen the possible impact.</p> <p>4. The Regional Authority notes that the need for a full Appropriate Assessment was screened out.</p> <p>5. The Regional Authority welcomes the draft plan and considers that it has successfully identified and addressed key strategic issues in the context of the location of Belview and Ferrybank within the Waterford City Gateway and the draft would be consistent, as far as is practicable, with the SERPGs.</p>
<p>Response: Support for Draft LAP acknowledged.</p>	
<p>Recommendation: No change.</p>	

3.5 Submissions and observations on the Proposed Material Alterations

The Proposed Material Alterations to the Draft plan and Environmental Report were published on the 6th October 2017 and remained on public display until the 3rd November 2017. During the 4 week public consultation period, a total of 9 submissions were received of which none referred to the SEA.

Kilkenny County Council has taken into account the findings of all relevant SEA output during the consideration of the Local Area Plan and before the Plan was adopted. On adoption of the Plan, the original Environmental Report which had been placed on public display alongside the Draft Plan was updated to become a final Environmental Report which is consistent with the adopted Plan, taking into account recommendations included in the submissions as well as alterations that were made to the original Draft Plan that was placed on public display.

4 Alternatives and the Plan

4.1 Introduction

The SEA Directive requires that reasonable alternatives (taking into account the objectives and the geographical scope of the plan or programme) are identified, described and evaluated for their likely significant effects on the environment. The description of the environmental baseline (both maps and text) and Strategic Environmental Objectives (SEOs) are used in the evaluation of alternatives.

4.2 Description of Alternative Plan Scenarios

Three alternative development strategies for Ferrybank-Belview were developed as follows:

Alternative 1: Continued consolidation

Alternative 1 concentrates growth mainly into the existing urban centre of Ferrybank, with little growth being allocated to rural areas. Access to public transport is a guiding principle of this approach.

Alternative 2: Dispersed growth

This scenario is one which places very few restrictions on development throughout the Plan area. The 'pot' of zoned land would be distributed throughout the area, without prioritisation. Development would be allowed to proceed in an ad hoc manner and would follow market forces to a great extent. Most development would occur on greenfield sites at a remove from the existing urban centre.

Alternative 2 envisages potentially inappropriate lands zoned for development without truly assessing the overall implications. Significant levels of ribbon development along roads in the plan area would result. Development would occur in unserved or in insufficiently served areas. It would most likely lead to a highly dispersed settlement pattern.

This would lead to a weakening of the centre of Ferrybank. Whilst this alternative would allow for a freedom of development, it is not sustainable. It would lead to a significant shift towards rural rather than urban development. Ultimately it could lead to a loss of population base within Ferrybank and consequently a loss of critical mass for the development of key services and facilities. Furthermore, urban generated housing within the transport corridors would have long term implications for future road development and would compromise re-alignments, or road geometry with adverse risks to road users. The proliferation of one-off housing would have negative effects on water quality (which is identified as a key EPO for the Plan) and a rise in unsustainable travel patterns with resulting effects on air quality and greenhouse gas emissions. The provision of key services such as water supply and wastewater treatment would become costly in both financial and environmental quality terms.

Alternative 3: Selection of new growth areas

This alternative prioritises areas outside the existing urban centre of Ferrybank for growth, such as Milepost and Mullinabro. Both these small places would be subject to large levels of zoning in this Plan to accommodate the proposed population increase. There are no services in either of these areas to serve such a population increase and this approach would result in an increase in unsustainable travel patterns.

4.3 Evaluation of Alternative Plan Scenarios

This section summarises the evaluation of the Alternative Scenarios that is found in Section 5.5 of the Environmental Report.

Alternative 1: Continued consolidation - Likely significant effects (See Figure 5.1)

Environmental impacts

This alternative concentrates populations into the existing centre of Ferrybank, which has existing services and facilities, and access to public transport. Investment in key infrastructure can be concentrated here and sustainable travel is promoted. Valuable natural resources such as water quality are protected through targeted infrastructural measures.

Planning impacts

This alternative does not support the rural population, which may lead to a population decline in rural areas and in Milepost.

Alternative 2: Dispersed growth - Likely significant effects (See Figure 5.2)

Environmental impacts

The environmental consequences of this alternative are potentially severe. The dispersal of rural housing and other non agriculture related development in the countryside would lead to unsustainable transport patterns; it could lead to a deterioration in ground water quality through the proliferation of septic tanks; surface water quality could be affected through contaminated ground water, habitats and areas of natural interest could be lost or fragmented; and finally a deterioration in landscape quality could ensue.

Planning impacts

The provision of key services such as water supply and wastewater treatment would become costly in both financial and environmental quality terms. The settlement of Ferrybank would suffer from the dilution of its population base.

Alternative 3: Selection of new growth areas - Likely significant effects (See Figure 5.3)

Environmental impacts

In this alternative, large growth areas would be formed around both Milepost and Mullinabro. Directing growth into these smaller centres would detract from the emphasis on Ferrybank as part of the Waterford Gateway, and would result in an increase in unsustainable travel patterns and a negative effect on air quality. As Milepost and Mullinabro were not historically large service centres, there are very few opportunities for brownfield redevelopment, and most development in both would take place on the edges of the centres, on greenfield land. This would have negative environmental effects through the increased replacement of agricultural land by artificial surfaces.

Planning impacts

From a social and economic perspective, existing services in Ferrybank would suffer with the dispersal of population.

4.4 Reasons for choosing the Plan, as adopted, in light of the other reasonable alternatives dealt with

Table 5.3 of the Environmental Report assessed each Alternative against each of the SEA objectives.

Table 5.3: Assessment of Alternatives			
Environmental Parameter – SEA objectives	Alternative		
	1: Continued Consolidation	2: Dispersed Growth	3: Selection of new growth areas
Biodiversity, fauna and flora			
Protect designated sites: SACs, NHAs and SPAs and protected species from development.			
Identify locally important habitats for protection.			
Provide for green infrastructure.			
Concentrate development in areas with least sensitivities.			
Protect, and where appropriate, enhance biodiversity, particularly protected areas and protected species including ecological linkages/corridors.			
Population and Human Health			
Improve people’s quality of life based on sustainable high-quality residential, working and recreational environments and-travel patterns.			
Provide adequate supply of zoned land for all uses in compliance with the National Spatial Strategy, Regional Planning Guidelines and the County Development Plan 2014.			
Promote higher density residential development in suitable locations.			
Promote sustainable transport patterns through appropriate zoning and provision for public transport.			
Require appropriate levels of recreational areas with any residential application.			
Minimise noise, vibration and emissions from traffic			
Require noise controls with all relevant applications.			
Soil			
Maximise the sustainable re-use of brownfield lands, and maximise the use of the existing built environment rather than developing greenfield lands.			
Minimise the consumption of non-renewable sand, gravel and rock deposits			
Minimise the amount of waste to landfill			
Direct development to brownfield lands in preference to developing greenfield lands.			
Encourage rehabilitation of existing housing stock where appropriate.			
Provide appropriate waste disposal facilities, including for composting and recycling in all developments.			
Water			
Protect and enhance the status of aquatic ecosystems and, with regard to their water needs, terrestrial ecosystems and wetlands directly			

depending on the aquatic ecosystems.			
Promote sustainable water use based on a long-term protection of available water resources.			
Reduce progressively discharges of polluting substances to waters			
To comply as appropriate with the provisions of The Planning System and Flood Risk Management Guidelines for Planning Authorities			
Provide for appropriate waste water treatment and disposal, in serviced urban areas and from septic tanks.			
Provide sufficient capacity in water services to serve zoned land.			
Include Strategic Flood Risk Assessment as part of the Plan.			
Air			
Reduce all forms of air pollution			
Promote energy efficient developments.			
Promote sustainable transport patterns through appropriate zoning and provision for public transport.			
Climatic Factors			
Reduce waste of energy, and maximise use of renewable energy sources			
Minimise emissions of greenhouse gases to contribute to a reduction and avoidance of human-induced global climate change			
Reduce the need to travel			
Assess, plan and manage adaptation to climate change impacts			
Promote energy efficient developments.			
Promote sustainable transport patterns through appropriate zoning and provision for public transport.			
Material Assets			
Make best of use of existing infrastructure and promote the sustainable development of new infrastructure.			
Direct development to brownfield lands in preference to developing greenfield lands.			
Encourage rehabilitation of existing housing stock/buildings where appropriate.			
Cultural Heritage			
Conserve and enhance valued natural and historic landscapes, their character and features within them.			
To conserve and protect the archaeological heritage with regard to entries on the RMP.			
To conserve and protect the special interest and character of the architectural heritage with regard to the RPS, the NIAH and ACAs.			
Landscape			
Avoid the loss of designated views.			

Having considered the three alternatives, Alternative 1: Continued Consolidation emerges as the preferred alternative, as this has the fewest potentially negative impacts on the planning policy objectives (PPOs) and Environmental Policy Objectives (EPOs).

5 Monitoring Measures

5.1 Introduction

The SEA Directive requires that the significant environmental effects of the implementation of plans and programmes are monitored. This section outlines the measures for monitoring the likely significant effects of implementing the Plan.

Table 8.1 overleaf shows the indicators and targets which have been selected for monitoring the likely significant environmental effects of implementing the Plan, if unmitigated. The Monitoring Programme may be updated to deal with specific environmental issues - including unforeseen effects - as they arise. Such issues may be identified by the Council or identified to the Council by other agencies.

Table 8.1 Monitoring proposals for environmental categories

Environmental Category	Targets	Selected indicators	Data Sources	Monitoring frequency
Biodiversity -Flora and Fauna	No loss of important and/or designated habitats	Number of sites.	Kilkenny County Council/National Parks and Wildlife Service/Fisheries Board	Ongoing depending on available information from relevant statutory authorities
	No deterioration in the quality of protected areas	Overall conservation status of habitats in Co. Kilkenny	The NPWS; For all European sites: <i>The Status of EU protected Habitats and Species in Ireland</i> (NPWS).	Every 6 years
	No loss of protected species	Overall conservation status of species in Co. Kilkenny, distribution of protected species in Co. Kilkenny	NPWS, <i>The Status of EU protected Habitats and Species in Ireland</i> . National Biodiversity Data Centre	Every 6 years
	No spread of invasive species within the Plan area	Numbers of new cases identified over 2014 levels	National Biodiversity Data Centre	Ongoing depending on available information
Population and Human health	No loss of population within Plan area	Total population within settlement boundary	Census	Next Census
Water	No decline in river water quality; no increase in percentage of sample stations in seriously polluted rivers.	Percentage of sample stations in seriously polluted rivers.	EPA Reports on River water quality	Ongoing depending on available information
	No decline in estuarine water quality; no decline in status of estuarine waters from current status (good or moderate)	Status of estuarine waters	EPA	Ongoing depending on available information
	No decline in surface water quality; no decline in status of surface waters from current status	Status of surface water	EPA	Ongoing depending on available information
	No decline in groundwater quality; no decline in status of groundwater from current status	Status of groundwater	EPA	Ongoing depending on available information
	No reduction in processing of waste water and treated effluent quality; no failure of Belview plant in EPA reports.	Pass or Fail status of Belview plant in EPA reports on Urban Waste Water Treatment.	EPA	Ongoing depending on publication of reports

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	Improvement in quality of drinking water; no Scheme being included on the EPA's Remedial Action List.	Inclusion/not being included on the EPA's Remedial Action List.	EPA	Publication of EPA's Remedial Action List
	Improvement in application of groundwater protection scheme	No significant increase in number of septic tanks permitted within the Plan area	Kilkenny County Council	Periodic review
Air	Increase in proportion of people using sustainable transport	Proportion of people walking, cycling or using public transport to get to school or work.	Census	Next Census
	No decrease in air quality; no exceedances in Nitrogen Dioxide and Ozone.	Exceedances in Nitrogen Dioxide and Ozone.	EPA	Ongoing depending on publication of reports
Cultural Heritage (architectural and archaeological)	Increase, or maintenance of the number of structures listed on the RPS; no reduction of the number of protected structures over that listed in 2009 Plan.	Number of protected structures.	Kilkenny County Council	Periodic review

