



Kilkenny City & County Development Plan Strategic Environmental Assessment Statement 2021-2027

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1 Introduction

1.1 Terms of Reference

This is the SEA statement for the Kilkenny County Development Plan 2021.

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, 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 Planning and Development Regulations, 2001, as amended, now form the relevant legislation for SEA of land use planning. Section 13(l) requires 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.

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 Development Plan;
- b) How the following have been taken into account during the Council's consideration of the draft Development Plan:
 - The environmental report,
 - Submissions and observations made to the planning authority on the Development Plan and Environmental Report, and
 - Any transboundary consultations.
- c) The reasons for choosing the Development 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 Development Plan.

1.5 Implications of SEA for the Development Plan

Article 13B of the Planning and Development Regulations 2001 as amended requires that SEA is undertaken for the preparation of Development Plans where the population or the target population of the area is 10,000 persons or more.

The findings of the SEA were expressed in an Environmental Report, which accompanied the Draft Development Plan on public display and was updated in order to take account of recommendations contained in submissions. The Environmental Report was also updated in order to take account of changes which were made to the original, Draft Development Plan that was placed on public display. The Materially Altered Plan underwent SEA, the findings of which were placed on public display alongside the Proposed Material Alterations.

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

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 Development Plan team of environmental considerations and integration of these considerations into the Development Plan;
- Detailing of the baseline situation and identification and mapping of environmental constraints and sensitivities, and
- Integration of environmental measures into the Plan.

2.2 Consultation

There have been three opportunities for consultation with the environmental authorities; at scoping stage (pre-draft), to the Environmental Report on the Draft Plan, and to the Environmental Report on the Proposed Material Alterations to the Draft Plan. There have also been three opportunities for public consultation. The submissions made that referenced environmental considerations, and the integration of considerations, are set out in Section 3.

2.3 Communication of environmental considerations and integration into the Plan

At Draft stage, the Draft Plan and Environmental Report were prepared by an in-house team of planners, as was the case for the Material Alterations stage. This included detailing the baseline situation and identification and mapping of environmental constraints and sensitivities.

CAAS consultancy prepared the Natura Impact Report (NIR) on the Draft, and the NIR of the Material Alterations. 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.

2.4 Integration of Environmental measures into the Development Plan

The formulation of the Plan and the preparation of the SEA 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 significant changes for which the SEA is mainly responsible, which are noted here.

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 used a combination of 'policies', 'objectives', 'actions' and 'development

assessment/management criteria'. This made it more cumbersome for the SEA process. This time around, 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. One example from Vol. 1, Chapter 8 Recreation is: *"8G Investigate the development of a horse trail/bridle path at Woodstock estate."*

This leads to a clear assessment, and should also lead to greater clarity in monitoring the effects of the Plan. 'Development management requirements' were used to set out what would be required to be satisfied as part of any planning application, so for the most part these were used as mitigation measures. An example of one of these from Chapter 9, related to views, is:

"To ensure that development in upland areas or on steep slopes will not have a disproportionate or dominating visual impact (due to excessive bulk, scale or inappropriate siting) and will not significantly interfere or detract from scenic upland vistas..."

Another structural issue, employed in the 2014 Plans, and continued in the 2021 Plan, is the use of 'strategic aims' to set out the overarching aim of each chapter. These strategic aims provide a standard against which every objective within the chapter is measured against.

Furthermore, specific changes to the Development Plan text were introduced as a result of the SEA process. This includes a new chapter on climate change, new sections on pollinators, wetlands, archaeological landscapes and the Blue Dot waterbodies, a new DM requirement for invasives, hedgerows, changes to zoning as a result of the SFRA and also the incorporation of a number of protected views in the City which have arisen following changes in the environment. (See Section 7.1 also.)

Mitigation measures are measures envisaged to prevent, reduce and, as fully as possible, offset any significant adverse impacts on the environment of implementing the development objectives. Mitigation has taken place throughout the plan-making process.

Mitigation took place through the consideration of alternatives, as environmental considerations were communicated to the Planning team to enable them to make an informed choice as to which alternative was put before the Members of the Council.

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 Development Plan.

3.2 SEA Scoping Submissions

In line with article 13D of the Planning and Development Regulations 2001 as amended, the Environmental and Planning Authorities were given notice on the 27th June 2018 of the intention of Kilkenny County Council to carry out an environmental assessment.

A response was received from the Department of Culture, Heritage & the Gaeltacht on the 25th July 2018 in relation to underwater archaeological heritage and to nature conservation.

A response was also received from the EPA (on the 7th June 2018) to the Pre-Draft stage of the Development Plan, which stated that Guidance on the SEA Scoping Process, including an SEA Pack, Integration Guidance, SEA Checklist, SEA Spatial Information Sources and guidance on Integrating Climate Change into SEA, is available on the EPA website and should be considered in the preparation of the SEA.

The comments from both bodies were incorporated within the Scoping Report and were taken into account in the content of the Environmental Report. In particular, the EPA publication, [SEA of Local Authority Land-Use Plans, EPA Recommendations and Resources, Version 1.3](#) was utilised.

3.3 Submissions and observations at pre-draft stage

Public consultation regarding the Plan commenced in early 2018, and was divided into two parts; the awareness raising stage and the formal submissions stage. The awareness raising stage started in early 2018 and the formal stage in April 2018. The formal stage concluded on the 15th of June for public submissions and 22nd August 2018 for statutory bodies. The full pre-draft consultation process is outlined in the *Chief Executive's Report on the Pre-draft Stage* (September 2018).

Submissions from the public were invited between the 20th April and 15th June 2018. Four submissions were received in relation to the SEA, from the EPA (CDP6), An Taisce (CDP27), Irish Water (CDP31) and the Southern Regional Assembly (CDP46). These submissions were addressed in the Chief Executive's Report. The issues raised included compliance with National and Regional policy, the SEA process and resources, water services and infrastructure and general environmental considerations.

These are set out in Table 1 below.

Table 1: Summary of issues raised in Pre-Draft Consultation

Submission ref.	Summary	Chief Executive's Opinion and Recommendation
CDP6 EPA, Tara Higgins	<p>1. This submission details procedure and requirements for the County Development Plan (CDP) with a guidance document also attached. In particular the submission advocates incorporating national guidelines and policy in areas such as water quality, flooding, wastewater treatment, biodiversity and relationship with other plans and programmes and states that the CDP should take account of the key national/regional plans, programmes and strategies including (but not limited to); National Planning Framework (DHPCLG), Rural Development Programme (DHPLG), National CFRAMS Programme (DHPLG), River Basin Management Plan for Ireland, National Biodiversity Plan (DCHG), Water Services Strategic Plan/Capital Investment Programme (Irish Water), Sectoral Climate Change Adaptation Strategies and Low Carbon Roadmaps - Smarter Transport/ Strategic Framework for Integrated Land Transport (DTTAS).</p> <p>2. The CDP should include a commitment to collaborate with Irish Water in the provision of adequate and appropriate critical service infrastructure to cater for future development in the Plan area over the lifetime of the Plan.</p> <p>3. It is suggested that the recommendations, key issues and challenges described in the most recent publication of the State of the Environment Report 2016 should be considered in preparing the Draft Development Plan and associated SEA.</p> <p>4. The submission also notes that EPA SEA WebGIS Search and Reporting tool and the EPA WFD Applications for additional data which may be useful in informing the SEA scoping for the plan.</p>	<p>1. The City & County Development Plan will be subject to the formal SEA process and the SEA and AA statements will be published as part of the preparation of the Draft Plan. The environmental issues raised in the submissions will be addressed as part of the SEA and AA and where required, objectives will be inserted into the draft plan.</p> <p>2. The Planning Authority has initiated a process of consultation with Irish Water and are consulting on their Infrastructure priorities.</p> <p>The State of the Environment report will be considered in the drafting of the plan as a cross cutting issue.</p> <p>3, 4. Noted</p>
An Taisce (CDP27)	<p>This submission raises a number of questions to be considered for the Draft Plan as follows:</p> <p>1. Population</p> <ul style="list-style-type: none"> • Should city and town limits be designated 	<p>1-2. The extent of settlements are already contained by the Plan boundaries. The Plan will accord with the Objectives of the National Planning Framework which supports</p>

<p>to contain sprawl and encourage more compact settlements and active transport?</p> <ul style="list-style-type: none"> • Should we provide more communal green space with allotments in compact settlements so that a sense of community can be better developed? <p>2. Housing/Settlement Strategy</p> <ul style="list-style-type: none"> • Should we build over surface car parks in Kilkenny city in order to bring about densification of dwellings? • Would it be feasible to require all new buildings and renovations to achieve higher energy standards such as NZEB (near zero energy building)? • How can low residential use be addressed so that living centres can be achieved in the city and towns? • Can incentives be improved to encourage micro-generation of renewable energy on individual buildings? • Can we provide charging points for electric vehicles with all buildings? <p>3. Economic Development and Employment</p> <ul style="list-style-type: none"> • How can we build on Kilkenny's existing reputation and skills for agribusiness, design, crafts and information technology? • What courses in an outreach third level educational facility would best contribute to economic development and employment? <p>4. Rural Development</p> <ul style="list-style-type: none"> • What role can the Development Plan play in ensuring that agricultural production is sustainable and thus avoid carbon emissions that will lead to massive EU fines? • Can existing legislation be better enforced so that agricultural practice does not pollute water, poison pollinators or cause loss of biodiversity? • How can transition to less intensive agriculture, organic farming, and humane food production systems be aided? <p>5. Transport and Mobility</p> <ul style="list-style-type: none"> • How can walking routes and cycling routes be made safer and more attractive in the city, towns and villages so that citizens, including children can walk from housing schemes to schools, shops, churches and other services? 	<p>compact settlement and a modal shift towards more sustainable commuting/travel patterns. The Plan will promote the principles of sustainable travel and compact growth. Policies will be included for the provision of recreational facilities, and the issue of allotments will be considered. Methods of increasing density, and promoting infill development in the City and urban centres will be examined. Policies for energy standards and renewable energy will also be included.</p> <p>3. The promotion of Kilkenny as a centre for Agribusiness, design, craft and information technology is a priority that underlies all council activities.</p> <p>4. There will be a chapter on Rural Development in the Plan and this will address climate change, as one of the cross-cutting issues, amongst other issues. Operational farming practices are generally outside the scope of planning and are governed by environmental and agricultural regulations.</p> <p>5. Mobility issues for the city will be considered in the mobility management plan which is under review. Policies and methods of promoting smarter travel throughout the County will be comprehensively addressed in the Plan. The feasibility of park and ride had been previously examined by Kilkenny city.</p> <p>6. Climate change is one of the cross-</p>
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<ul style="list-style-type: none"> • What measures are necessary to provide a park and ride facility (electric) in Kilkenny? • How can the use of public transport be encouraged and are our transport systems sufficiently joined-up? <p>6. Environment and Climate Change</p> <ul style="list-style-type: none"> • What measures can be implemented to reduce carbon emissions in transport and housing? • How can the Development Plan promote increased use of solar power, wind energy and anaerobic digestion of slurry? • Can educational measures be facilitated to bring about a change in lifestyle in the general public necessary for adapting to climate change? • Can we plan to protect wildlife outside of designated areas in the rivers, the hedges, the fields? <p>7. Tourism</p> <ul style="list-style-type: none"> • Where should coach parks be provided in order to get coaches off the roads (e.g. Castle Road) and distribute tourists around Kilkenny City? • Why not provide parking for coaches at the periphery of the City, with transfer to the centre by electric bus? <p>8. Urban and Architectural Design</p> <ul style="list-style-type: none"> • Why is our planning system failing to protect traditional shop fronts or achieve good quality design on new ones? • Are our public spaces designed to be safe for children and for people with disabilities? • Can we design our city, towns and villages to provide safe connectivity for pedestrians and children to walk to facilities? • Is there a need for a city architect to avoid ugly engineered designs for public spaces and structures such as bridges? <p>9. Infrastructure</p> <ul style="list-style-type: none"> • How can we better implement existing legislation to protect the quality of our rivers and groundwaters from agricultural runoff, forestry impacts, sewage and septic tank effluents? • Can we encourage anaerobic digestion of 	<p>cutting issues of the Plan, and will inform the development of policies in relation to every sector. The protection of wildlife, both in designated and non-designated areas, will be addressed in the Heritage chapter.</p> <p>7. A temporary coach parking area will be provided at the Abbey Quarter while development proposals are being formatted. This will help to ease the pressure on the Castle Road.</p> <p>8. The existing county and City Plans contain a suite of policies relating to shop fronts, conservation and heritage. These policies will be examined as part of the review process and where necessary, will be strengthened and improved. All public space once designed to part M compliant standards, will be passively supervised and well lit. A high quality design is a requirement for all private and public with the intention of achieving the most sustainable design outcome.</p> <p>9. Policies for the protection of the environment will be included. Also the Plan will be subject to Strategic Environmental Assessment and Appropriate Assessment. Climate change is one of the cross-cutting issues of the Plan, and will inform the development of policies in relation to every sector.</p> <p>10. Social inclusion is one of the cross cutting issues of the Plan, and will</p>
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	<p>slurry to protect rivers?</p> <ul style="list-style-type: none"> • How can the Development plan encourage conservation of resources, prevention of waste, and promote a circular economy in businesses located in the County? • What measures are necessary to encourage local generation of electricity and achieve a joined-up renewable energy strategy? <p>10. Social, Community and Cultural Development</p> <ul style="list-style-type: none"> • What measures could achieve a more distributive economic model that can help ameliorate social injustice, address the challenges of homelessness and low pay, and allow people the space for better education and participation in community and cultural activities? <p>11. Landscape, Heritage and Green Infrastructure</p> <p>How can the Development Plan encourage better hedgerow maintenance in rural areas i.e. planting of native species instead of walls and fences, protection of wildflowers on banks, layered mowing of verges?</p> <ul style="list-style-type: none"> • How can green infrastructure (system of trees, parks, gardens and wild areas) be better integrated into the planning of towns and villages? • Can we find a way to incorporate wild areas in housing estate parks that provide havens for insects, birds and small mammals? 	<p>inform the development of policies in relation to every sector.</p> <p>11. It is current practice to minimise hedgerow displacement in planning applications in rural areas. Native specimens are required to be planted where hedgerows replacement is deemed necessary. The promotion and establishment of green infrastructure is now an integral part of the plan.</p>
Irish Water (CDP31)	<p>1) This submission includes a summary of IW projects in the Capital Investment Plan and a high level assessment of the water services supply and treatment infrastructure in the main settlements.</p> <p>2) The submission includes a suite of suggested policies and objectives and seeks that a number of them be included in the CDP in relation to protecting IW assets and the environment. At a minimum, IW seek the inclusion of the following policies: To support sustainable water and wastewater infrastructure To work closely with IW to identify and facilitate the timely delivery of the water</p>	<p>1) The information contained in the submission is noted and will be included as relevant, in the Strategic Environmental Assessment and Appropriate Assessments of the Plan.</p> <p>2) The Plan will include a chapter on Infrastructure which will set out policies and objectives in relation to water and wastewater infrastructure, including drainage. All the suggested policies and objectives will be reviewed and incorporated as relevant.</p>

	services required to realise the development objectives of the Plan.	
Southern Regional Assembly (CDP46)	<p>Relevant extract relating to SEA:</p> <p>11. The Draft Plan should contain objectives relating to climate action from the National Mitigation Plan and National Adaptation Framework.</p> <p>12. Compliance with the requirements of the RPGs/RSES in relation to environmental management and relevant Guidance from the Department in relation to Flood Risk Assessment, Strategic Environmental Assessment, Appropriate Assessment, the Water Framework Directive and all relevant EU Directives.</p> <p>13. Objectives for the protection of the environment including natural and built heritage.</p>	11-13. Noted for incorporation
Southern Regional Assembly (CDP46)	<p>Relevant extract relating to SEA:</p> <p>11. The Draft Plan should contain objectives relating to climate action from the National Mitigation Plan and National Adaptation Framework.</p> <p>12. Compliance with the requirements of the RPGs/RSES in relation to environmental management and relevant Guidance from the Department in relation to Flood Risk Assessment, Strategic Environmental Assessment, Appropriate Assessment, the Water Framework Directive and all relevant EU Directives.</p> <p>13. Objectives for the protection of the environment including natural and built heritage.</p>	11-13. Noted for incorporation

3.4 Submissions and observations on the Draft Plan

The Draft Plan was published on the 22nd December 2020 and the submissions period ended on March 12th 2021. Five submissions were received in relation to the SEA, as summarised in Table 2 below:

Table 2: Submissions to SEA at Draft Plan stage

Submission Ref.	Name
KKC162-4	EPA
KK-C162-236	Development Applications Unit (DAU)
KK-C162-265	An Taisce
KK-C162-352	Kieran Butler
KK-C162-404	Southern Regional Assembly

These submissions were addressed in the *Chief Executive's Report on Submissions to the Draft Stage*¹. The issues raised included the cumulative impacts of recreational developments, nitrogen deposition, the analysis of the Preferred Plan scenario and proposed population distribution, as well as general environmental considerations. The recommendations of the Chief Executive were as follows:

- *The AA NIR and ER will be updated to address the cumulative impacts of recreational developments in greater detail.* The NIR was updated in this regard, and the proposed Material Alterations included revised policies on the assessment of recreational projects in Section 9.2.1.1 European sites.
- *Consideration should also be given to monitoring nitrogen deposition in the SEA.* All relevant EPA data sources were included in Chapter 8, Monitoring of the *Environmental Report on the Proposed Material Alterations*.
- *The ER will be amended to include for all proposed changes to the Plan and its objectives as detailed in this Report. This will include a more detailed consideration of the Preferred Plan Scenario and the proposed population distribution in Table 4.7.* The *Environmental Report on the Proposed Material Alterations* was updated to reflect the proposed revised population distribution in Table 4.7.

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 30th of June 2021 and remained on public display until the 28th of July 2021. During the 4 week public consultation period, a total of 628 submissions were received of which 5 referred to the SEA. These are set out in Table 3 below.

Table 3: Summary of Issues raised at Proposed Amendments stage

Submission ref.	Summary	Chief Executive's Opinion and Recommendation
KK-C176-1 EPA	1.The EPA attached a guidance document ' <i>SEA of Local Authority Land Use Plans – EPA Recommendation and Resources.</i> ' This document sets out the EPA key recommendations for integrating environmental considerations into Local Authority Land Use Plans.	1. Noted. 2. Noted.

¹ *Chief Executive's Report on Submissions to the Draft Stage*, May 2021

	<p>2.KCC should ensure that the Plan, as amended, is consistent with the need for proper planning and sustainable development.</p> <p>3.KCC should consider the need to align with national commitments on climate change mitigation and adaptation, as well as incorporating any relevant recommendations in sectoral, regional and local climate adaptation plans.</p> <p>4.KCC should ensure that the alterations are consistent with key relevant higher-level plans and programmes</p> <p>5. Where further changes to the Plan are proposed, these should be screened for likely significant effects in accordance with SEA Regulations</p> <p>6. Once the Plan is adopted KCC should prepare a SEA statement which should be sent any environmental authority consulted during the SEA process and the listed environmental authorities.</p>	<p>3. Noted, see Section 3.4 Renewable Energy Targets.</p> <p>4.The Plan is aligned with National Policy.</p> <p>5. Noted, this will be done.</p> <p>6. Noted, this will be done.</p>
KK-C176-4 Coillte	<p>2. An adequate Strategic Environmental Assessment of the Proposed Plan has not been undertaken, and questions whether an assessment of the objectives of the Proposed Plan, including standards applied to the open to consideration lands and material amendments relating to wind energy, has been undertaken comprehensively in relation to climate and in consideration of the Proposed Plan's interactions with other relevant policies and programmes, namely national policy and the climate action charter.</p>	<p>2.A comprehensive Strategic Environmental Assessment, or SEA, was carried out of the Proposed Materially Altered Plan. Chapter 6 of the Environmental Report (ER) provides an assessment of the Likely Significant Effects on the Environment, addressing every Strategic Aim and Development Objective in the Plan. This included an assessment of all revised Strategic Aims and Development objectives included in the Proposed Material alterations.</p>
KK-C176-17 Christopher O'Keefe	<p>3. I note a document called SEA Environmental Report (incl. Strategic Flood Risk Assessment) & Natura Impact Report, this does not include a document Screening for Appropriate Assessment.</p>	<p>3. The documentation that was placed on public display (the AA Natura Impact Report and Screening for AA Determination) addresses all relevant requirements in relation to AA. Screening has been undertaken. The Screening decision, the determination, addresses the reasons why Stage 2 AA (Natura Impact Report) has been undertaken.</p>

<p>KK-C176-52 Richard Walshe on behalf of Springfield Renewables</p>	<p>3. An adequate Strategic Environmental Assessment of the Proposed Plan has not been undertaken.</p>	<p>3. A comprehensive Strategic Environmental Assessment, or SEA, was carried out of the Proposed Materially Altered Plan. Chapter 6 of the Environmental Report (ER) provides an assessment of the Likely Significant Effects on the Environment, addressing every Strategic Aim and Development Objective in the Plan. This included as assessment of all revised Strategic Aims and Development objectives included in the Proposed Material alterations.</p>
<p>KK-C176-61 Denis Devane on behalf of Wind Energy Ireland</p>	<p>2. An adequate Strategic Environmental Assessment (SEA) of the Proposed Plan has not been undertaken, and questions whether an assessment of the objectives of the Proposed Plan, including standards applied to the open to consideration lands and material amendments relating to wind energy, has been undertaken comprehensively in relation to climate and in consideration of the Proposed Plan's interactions with other relevant policies and programmes, namely national policy and the climate action charter.</p>	<p>2.A comprehensive SEA was carried out of the Proposed Materially Altered Plan. Chapter 6 of the Environmental Report (ER) provides an assessment of the Likely Significant Effects on the Environment, addressing every Strategic Aim and Development Objective in the Plan. This included as assessment of all revised Strategic Aims and Development objectives included in the Proposed Material alterations.</p>

4 Alternatives and the Development Plan

4.1 Introduction

One of the critical roles of the SEA was to facilitate an evaluation of the likely environmental consequences of a range of alternative scenarios for accommodating future growth in County Kilkenny as a result of the Development Plan. Alternatives need to be 'realistic and capable of implementation' and should represent a range of different approaches within the statutory and operational requirements of the particular plan. 3 Alternative Scenarios for the County were considered and these are described below.

4.2 Description of Alternative Plan Scenarios

Alternative 1: Continued consolidation

Alternative 1 concentrates growth mainly into the seven main settlements of Kilkenny, Ferrybank, the Environs of New Ross, the District Towns of Callan, Castlecomer, Graiguenamanagh and Thomastown, with little growth being allocated to the smaller level settlements or to rural areas. Access to public transport is a guiding principle of this approach, and Thomastown, as the only District Town served by rail, is prioritised above the level of the other three District towns.

Wind Energy Strategy:

Wind energy developments are concentrated only where they exist at present, with no allowance made for new locations.

Alternative 2: Dispersed growth

This scenario is one which places very few restrictions on development throughout the Plan area. No specific targets or limitations on growth would be set in the core strategy of the Plan for settlements within the county at a level lower than the hub and gateway. The 'pot' of zoned land, would be distributed amongst all remaining settlements without prioritisation. Development would be allowed to proceed in an ad hoc manner and would follow market forces to a great extent.

Wind Energy Strategy:

Developments such as quarries and wind energy developments would be located where demand is greatest. Most development would occur on greenfield sites.

Alternative 3: Selection of new growth areas

This alternative acknowledges the designation of Kilkenny as a Key Town, and Waterford as a Metropolitan area within the National Planning Framework, but redesignates the 'District Towns'. The 2014 District Towns were designated on the basis of the [Regional Planning Guidelines](#), which categorised towns of between 1,500 and 5,000 as 'District Towns'. The 2016 Census shows that Castlecomer just barely met the 1,500 mark, and Graiguenamanagh's population did not reach it. In this alternative, Piltown and Mooncoin, which have the next highest populations, are designated as District Towns in place of Castlecomer and Graiguenamanagh

Wind Energy Strategy:

As part of this alternative, new areas for wind energy development would be selected on the basis of viability alone. Only those areas with highest wind speeds would be selected for wind farm development, regardless of landscape or heritage sensitivities or the presence or absence of existing wind farms (including those considerations in adjoining local authority areas).

4.3 Evaluation of Alternative Plan Scenarios

Alternative 1: Continued consolidation - Likely significant effects

Environmental impacts

This alternative concentrates populations into locations with existing services and facilities, and access to public transport. Investment in key infrastructure can be concentrated into a very small number of settlements. Sustainable travel is promoted. Valuable natural resources such as water quality are protected through targeted infrastructural measures. No allowance is made for additional wind energy developments, which would result in less use of renewable energy sources.

Planning impacts

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

Alternative 2: Dispersed growth - Likely significant effects

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.

Alternative 3: Selection of new growth areas - Likely significant effects

Environmental impacts

In this alternative, a large growth area would be formed around Ferrybank, Piltown and Mooncoin in the south of the county. As Piltown's wastewater treatment plant is currently overloaded, any additional loading would negatively affect water quality in Piltown. This may have a resulting negative effect on the conservation status of the Lower River Suir cSAC which is located in close proximity to both settlements. Directing growth into the smaller centres of Piltown and Mooncoin would detract from the emphasis on Ferrybank as part of Waterford city, and would result in an increase in unsustainable travel patterns and a negative effect on air quality. As Piltown and Mooncoin 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.

As part of this alternative, new areas for wind energy development would be selected on the basis of viability alone. Only those areas with highest wind speeds would be selected for wind farm development, regardless of landscape sensitivities or the presence or absence of existing wind farms.

Planning impacts

From a social and economic perspective, existing services in Castlecomer and Graiguenamanagh would suffer with the removal of their District Town designation.

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

The preferred alternative which emerged from the evaluation process is Alternative 1, Continued Consolidation, with an element of Alternative 2, Dispersed Growth to encourage some level of growth of the smaller settlements to ensure that these smaller settlements are sustained.

In relation to wind energy, the best solution is the recognition of areas of highest viability (Alternative 3) whilst taking account of landscape sensitivities (Alternative 1). The Adopted Plan includes a Wind energy development strategy based on areas of highest viability, taking environmental sensitivities into account, but also designating some additional areas as unsuitable for wind energy developments on the basis of submissions made to the process.

This scenario contributes towards the protection of the environment and conforms to high level planning objectives.

By complying with appropriate mitigation measures - including those which have been integrated into the Plan - potential adverse environmental effects which could arise as a result of implementing this scenario would be likely to be avoided, reduced or offset.

The preferred settlement hierarchy/Core Strategy is set out in Table 4.

Settlement	Core strategy population allocation
County Kilkenny	11,842
Kilkenny City (Key Town)	4,144
Ferrybank/Belview (Part of Waterford Metropolitan Area)	2320
District Towns	
Callan	441
Castlecomer	264
Graiguenamanagh	278
Thomastown	437
Remainder area to include smaller towns and villages and environs of New Ross and the rural area of the county	3,542
Total	11,842

Section 6 of the Environmental Report evaluates the individual strategic aims and objectives which have been prepared to realise the selected scenario.

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 contains proposals for monitoring the likely significant effects of implementing the Development Plan.

Monitoring enables, at an early stage, the identification of unforeseen adverse effects and the undertaking of appropriate remedial action. In addition to this, monitoring can also play an important role in assessing whether the Development Plan is achieving its environmental objectives and targets - measures which the Plan can help work towards - whether these need to be re-examined and whether the proposed mitigation measures are being implemented.

5.2 Indicators and Targets

Monitoring is based around indicators which allow quantitative measures of trends and progress over time relating to the Strategic Environmental Objectives identified in the SEA Environmental Report and used in the assessment. Each indicator to be monitored is accompanied by the target(s) which were identified with regard to the relevant strategic actions.

Table 5 overleaf shows the indicators and targets which have been selected for monitoring the likely significant environmental effects of implementing the Development 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.

5.3 Sources

Measurements for indicators generally come from existing monitoring sources. Existing monitoring sources include those maintained by the Council and the relevant authorities e.g. the Environmental Protection Agency, the National Parks and Wildlife Service and the Central Statistics Office.

5.4 Reporting

The Council is responsible for monitoring and the preparation of monitoring evaluation report(s), the publication of these reports and, if necessary, the carrying out of corrective action. The Chief Executive's Report on the implementation of the Development Plan, which must be carried out within two years of the making of the Plan, will include detail on the monitoring of the indicators.

The SEA [Guidelines](#) state that monitoring must be linked to earlier stages in the SEA process, in particular to the environmental objectives and issues identified during the preparation of the Environmental Report. It is proposed to base monitoring on a series of indicators which measure changes in the environment, especially changes which are critical in terms of environmental quality, for example water or air pollution levels.

The indicators aim to simplify complex interrelationships and provide information about environmental issues which is easy to understand. A list of environmental indicators and targets is provided in Table 5. The indicators are based on the Strategic Environmental Objectives presented in Chapter 4 of the Environmental Report. While considerable environmental data is directly available to the Council such as water quality, and information on the RPS etc, other sources of information may need to be accessed to provide a comprehensive view of the impact of the Plan. The sources of information are also identified in Table 5.

Environmental indicator assessment during monitoring can show positive/neutral impacts or negative impacts on the environment. Where an indicator value highlights a positive/neutral impact on the environment, it is likely that the objectives of the Plan are well defined with regard to the environment. Conversely where the objectives of the Plan have a negative impact on the environment, it may be necessary to review the objectives of the Plan or to take some other form of intervention. For example, if an objective is having a significant adverse impact, a variation may be considered during the lifetime of the Plan. The Chief Executive's Report on the implementation of the Development Plan will include a review of the indicators.

Table 5 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 (depending on available information from relevant statutory authorities).	At monitoring evaluation
	No deterioration in the quality of protected areas	Overall conservation status of habitats in Co. Kilkenny	NPWS, Report on Overall Conservation Status of Habitats in Ireland listed under the Habitats Directive.	Every 6 years
	No loss of protected species	Overall conservation status of species in Co. Kilkenny, distribution of protected species in Co. Kilkenny	NPWS, Report on Overall Conservation Status of Habitats in Ireland listed under the Habitats Directive. National Biodiversity Data Centre	Every 6 years
	All actions contained within the Biodiversity Plan to be achieved during the lifetime of the County Development Plan.	Number of actions achieved.	Heritage Officer	At monitoring evaluation
	No spread of invasive species within the County	Numbers of new cases identified over 2020 levels	National Biodiversity Data Centre	At monitoring evaluation
Population and Human health	No further loss of population within Graiguenamanagh; total not to decrease on 2016 level.	Total population within Graiguenamanagh.	Census	Next Census
Soil	No significant increase in number of landslides	Total number of landslides	National Landslide Database	At monitoring evaluation

	No significant reduction in peatland; total area not to reduce by 20% over 2012 CORINE level ² .	Total area of peatland	Corine mapping resurvey	Unknown
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	At monitoring evaluation
	No decline in estuarine water quality; no decline in status of estuarine waters from current status (good or moderate)	Status of estuarine waters	EPA	At monitoring evaluation
	No decline in surface water quality; no decline in status of surface waters from current status	Status of surface water	EPA	At monitoring evaluation
	No decline in groundwater quality; no decline in status of groundwater from current status	Status of groundwater	EPA	At monitoring evaluation
	No reduction in processing of waste water and treated effluent quality; no increase in number of waste water treatment plants that fail recommended EPA limits.	Number of waste water treatment plants that fail recommended EPA limits.	EPA	At monitoring evaluation
	Improvement in treatment of waste water; Reduction in <i>Appendix A: Priority areas</i> (3 in 2020)	Number of urban areas around where improvements are needed to resolve our environmental priorities.	Kilkenny County Council Water Services/ Irish Water	At monitoring evaluation
	Improvement in quality of drinking water; Reduction in numbers of public water supplies on the EPA's Remedial Action List, from 5 in 2018.	Numbers of public water supplies on the EPA's Remedial Action List.	EPA	At monitoring evaluation
	Improvement of application of ground water protection scheme.	Number of source protection areas that have been mapped.	GSI & Kilkenny County Council Environment	At monitoring evaluation

² CORINE 2012 shows this at 0.5%.

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	At monitoring evaluation
Climatic factors	Improved Climate Change Adaptation measures.	Implementation of Climate Change Adaptation Strategy Actions.	Kilkenny County Council.	At monitoring evaluation
Material Assets	Increase in afforestation of appropriate woodlands; increase in proportion of mixed and deciduous forest cover over coniferous forestry, as compared to 2012.	Proportion of mixed and deciduous forest cover.	Corine mapping resurvey	Unknown
	Improvements in energy infrastructure; upgrading of the Kilkenny city to Ballyragget line from 38 kv to 110 kv.	Status of the upgrade of the Kilkenny city to Ballyragget line.	Eirgrid	At monitoring evaluation
Cultural Heritage (architectural and archaeological)	Addition in number of structures listed on the RPS; increase in number of protected structures over that listed in 2014 Plan.	Number of protected structures.	Kilkenny County Council	At monitoring evaluation
Landscape	No decrease in sensitive land cover; proportion of county comprising sensitive land cover should not decrease from 2012 level ³ .	Proportion of county comprising sensitive land cover.	Corine mapping resurvey	Unknown
	No reduction in number of protected views. Increase or no change in the number of protected views over that listed in the 2014 Plan – 13 views in City and 32 in County.	Number of protected views.	Kilkenny County Council	At monitoring evaluation

³ CORINE 2012 reports that the proportion of sensitive land cover in the county is at 7.25%.