

# SEA STATEMENT

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OF THE

## KILKENNY COUNTY DEVELOPMENT PLAN 2008-2014 STRATEGIC ENVIRONMENTAL ASSESSMENT



**For: Kilkenny County Council**

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**AUGUST 2008**

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# Section 1 Introduction

## 1.1 Terms of Reference

This is the SEA Statement of the Kilkenny County Development Plan (CDP) 2008-2014 Strategic Environmental Assessment (SEA).

## 1.2 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 appropriate stage of decision-making on a par with economic and social 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 (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 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 (DEHLG, 2004)<sup>1</sup>.

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<sup>1</sup> Department of the Environment, Heritage and Local Government (2004) *Implementation of SEA Directive (2001/42/EC): Guidelines for Regional Authorities and Planning Authorities* Dublin: Government of Ireland.

## 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 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 the Kilkenny County Development Plan]have been taken into account during the preparation of the plan,
- c) the reasons for choosing the plan, as adopted, 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.

## 1.5 Implications of SEA for the Plan

As a result of the aforementioned legislation, the Kilkenny County Development Plan 2008-2014 was required to undergo SEA.

The findings of SEA were expressed in an Environmental Report which was submitted to the Elected Members alongside the Draft Plan. The purpose of the report was to provide a clear understanding of the likely environmental consequences of decisions regarding the future accommodation of growth in County Kilkenny.

Amendments made to the Draft Plan at each stage of the process were evaluated for their environmental consequences and these were

presented to the Elected Members in the form of Addenda. On adoption of the Draft Plan, these Addenda were used to update the original Environmental Report into a final Environmental Report which accompanies the adopted Plan.

At each stage of the process the Elected Members were required by the legislation to take into account the Environmental Report - including the Addenda - before the adoption of the plan or programme.

## Section 2 How Environmental Considerations were integrated into the Plan

### 2.1 Consultations

SEA scoping consultations with the competent environmental authorities - the Environmental Protection Agency, the Department of the Environment, Heritage and Local Government and the Department of Communications, Marine and Natural Resources - informed the type of environmental issues which were chosen to be dealt with by the SEA as well as the level of detail with which these issues were addressed.

Further information on how the outputs of scoping consultations informed the process is provided under Section 3.2.

### 2.2 Early Communication of Environmental Sensitivities

#### 2.2.1.1 Introduction

Significant environmental considerations were integrated into the Draft Plan before it was placed on public display for the first time.

Environmental sensitivities were mapped in order to identify which areas of the County would be most sensitive to development and would suffer the most adverse effects if growth was to be accommodated in those areas.

The sensitivities were communicated to the Plan-making team on a regular basis from the outset of the Plan preparation process. By identifying areas with the most limited carrying capacity in the County the making of recommendations to divert growth away from these areas was facilitated.

A number of sensitivities in the County which were identified and communicated to the Plan making team are shown on Figure 2.1.

#### 2.2.1.2 GIS Mapping including Overlay mapping

A Geographical Information System (GIS) was used in order to map the sensitivities identified above. The GIS allowed for each of these

sensitivities to be weighted and mapped overlapping each other in order to identify where most sensitivities in the County occur. Figure 2.2 shows one of these overlays for the County.

Environmental sensitivities are indicated by colours which range from acute vulnerability (red) to high vulnerability (orange) to moderate vulnerability (yellow) and low vulnerability (green). Where the mapping shows a concentration of environmental sensitivities there is an increased likelihood that development will conflict with these sensitivities and cause environmental deterioration. This is particularly the case where the cumulative development of small-scale projects, such as rural housing, gradually causes a slow deterioration of a resource, such as water quality. Providing this information to the Plan-making team enabled the integration of environmental considerations into the Plan.

### 2.3 Early Identification and Evaluation of Alternatives

A range of potential alternative scenarios (see Section 4) for the types of planning strategies for the County were identified at an early stage in the process and evaluated for their likely significant environmental effects.

Communication of this evaluation enabled the Plan-making team to make an informed choice as to which alternative to put before the Elected Members as the Draft County Development Plan.

Communication of this evaluation to the Elected Members through both the Environmental Report and presentations enabled the Elected Members to make an informed choice with regard to the adoption of the County Development Plan.

GIS software enabled the mapping and quantification of the areas of each scenario which would be most likely to be impacted upon (see Figure 2.3).

## 2.4 Mitigation

Environmental considerations have also been integrated into the adopted Plan through a number of mitigation measures<sup>2</sup> which were recommended to be integrated in the Plan both through communication with the plan-makers and within the Environmental Report.

Measures recommended by the Environmental Report and are shown on Table 2.1.

The following mitigation measures were integrated into the Plan as individual or as part of a number of individual Plan measures

- SP: Subsidiary Plans
- MM1: Designated Ecological Sites
- MM2: Designated Wetland / Peatland Ecological Sites
- MM3: Salmonid Waters Protection
- MM4: Ecological Networks
- MM5: Water Quality Protection
- MM6: Archaeological Heritage
- MM7: Architectural Heritage
- MM8: Landscape Heritage

The following measures were not integrated into the Plan as there are not sufficient resources at the Council to undertake the measures:

- SS: Spatial Strategy for the Kilkenny Hub Corridor Impact Zone
- TS1: Thematic Strategy for Rural Development & Agricultural Restructuring
- TS2: Thematic Strategy for Forestry

It is noted however that a number of policies and objectives integrated into the Plan will contribute to achieving the objectives of these three strategies.

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<sup>2</sup> Mitigation measures are measures envisaged to prevent, reduce and, as fully as possible, offset any significant adverse impacts on the environment of implementing a human action, be it a plan, programme or project. Mitigation measures can be roughly divided into those that: prevent effects; reduce the magnitude or extent, probability and/or severity of effect; repair effects after they have occurred, and; compensate for effects, balancing out negative impacts with other positive ones. Where there are likely to be significant negative effects, consideration should be given in the first instance to preventing these effects or, where this is not possible, to reducing the effects.

## 2.5 The Draft Plan and Amendments

The Draft CDP that emerged from the Plan preparation process and Amendments to this Draft Plan were each placed on public display for various periods of time during which submissions and observations were invited.

At the end of each of these periods a report was prepared by the County Manager proposing changes which arose from certain submissions and observations made during the relevant display period to, where relevant, the Draft Plan or the Amendments.

On each of these occasions, in order to enable the Elected Members make an informed decision an Addendum to the Environmental Report detailing the environmental consequences of changes to the Draft Plan or Amendments contained in the Manager's Report accompanied the Manager's Report.

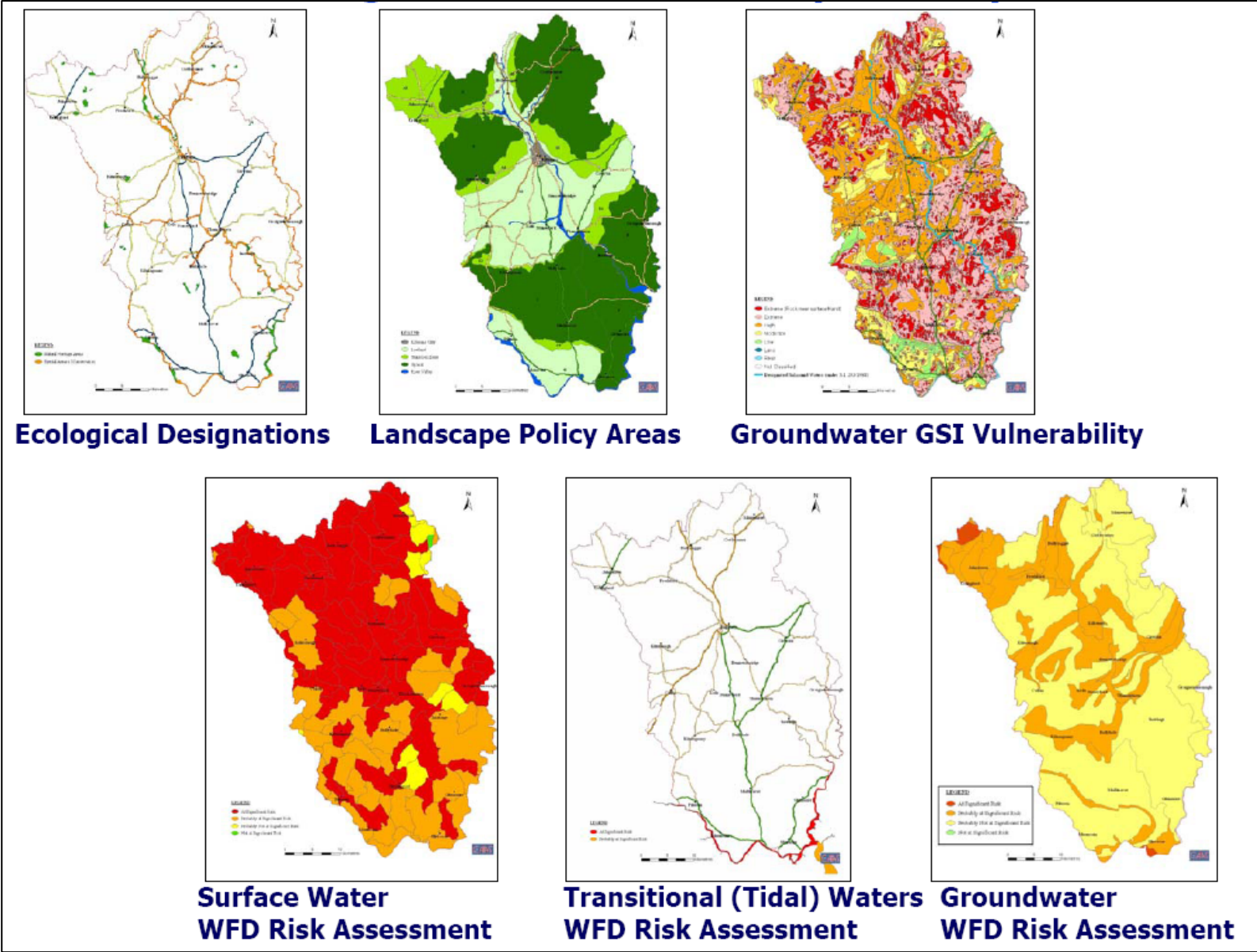
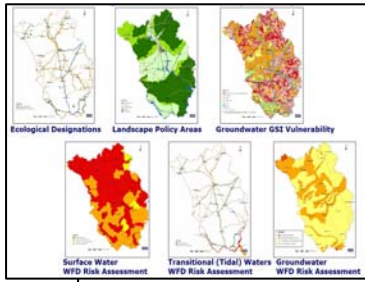


Figure 2.1 Environmental Sensitivities



Maps of sensitivities weighted and mapped overlapping each other in order to identify where most sensitivities in the County occur

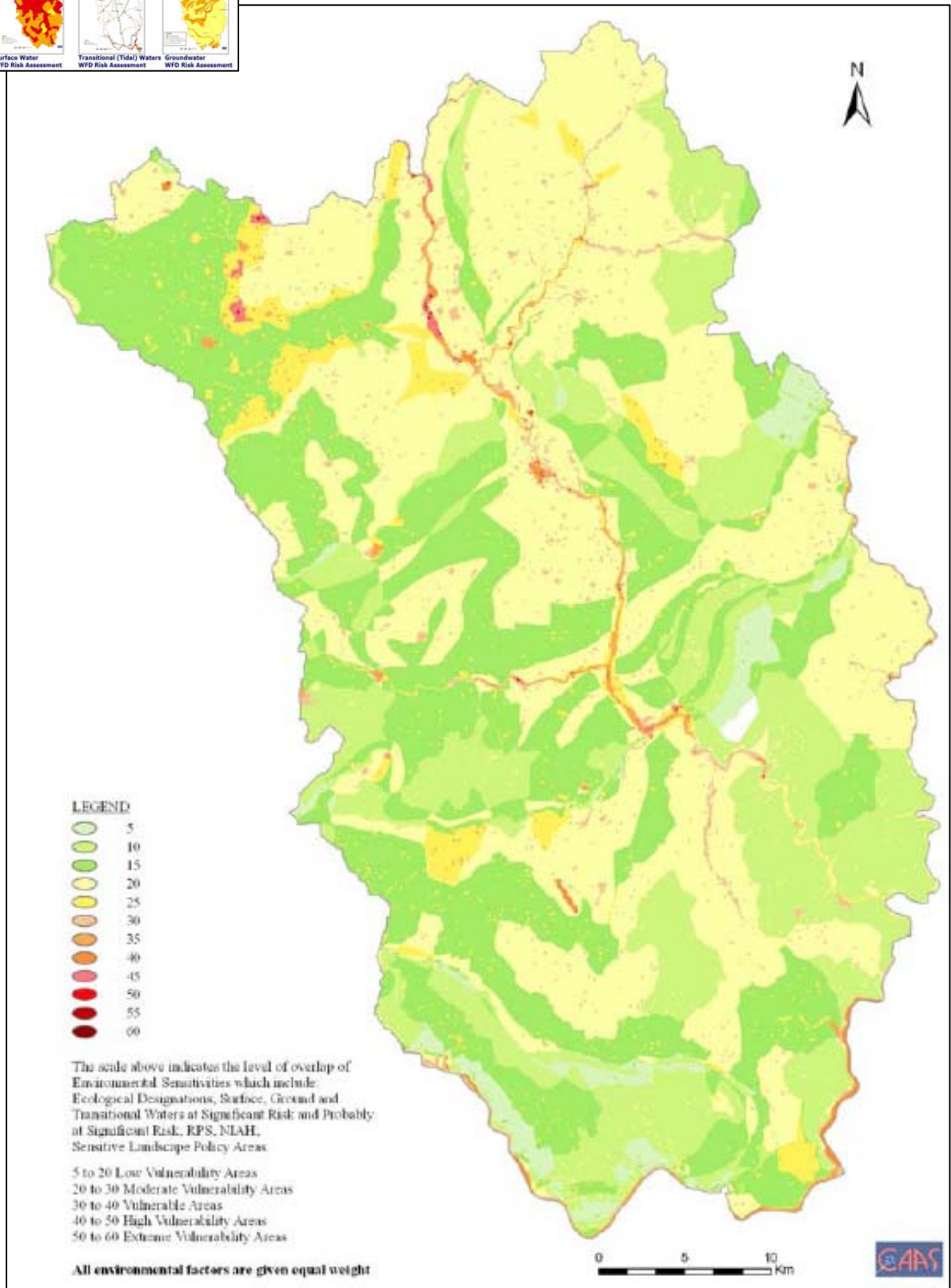
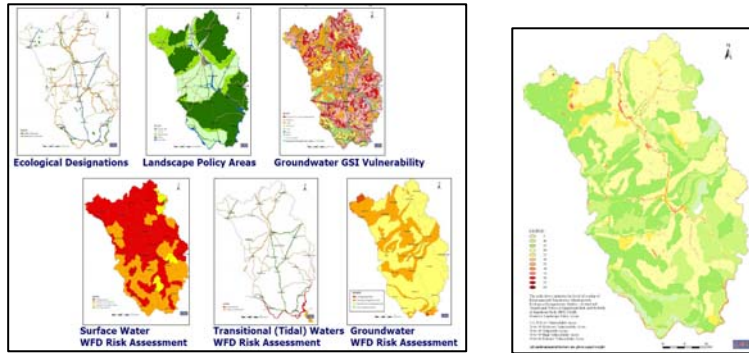


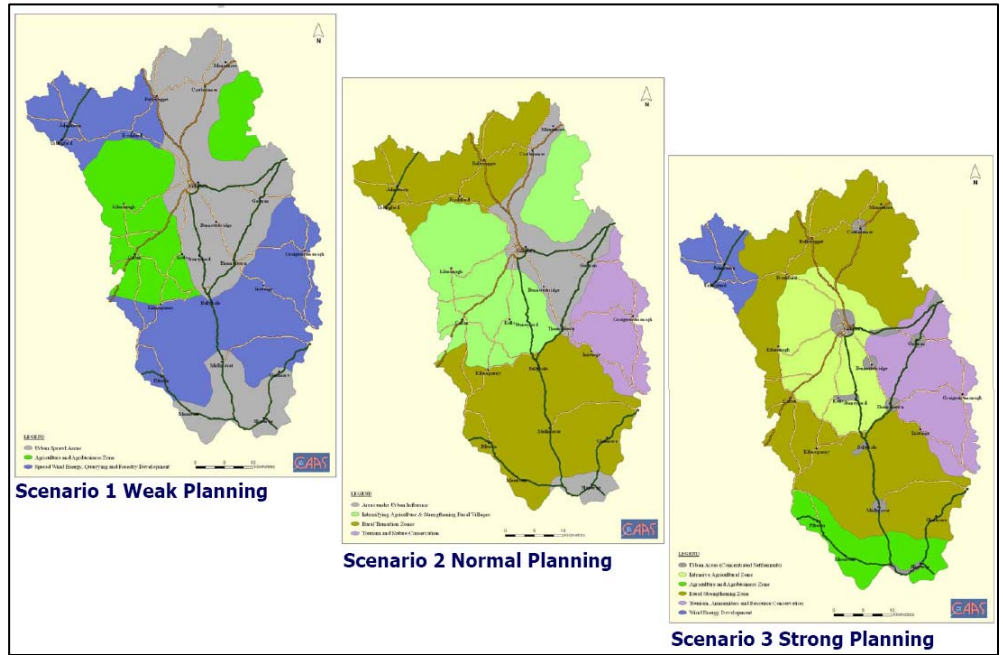
Figure 2.2 Overlay of Environmental Sensitivities



1. Maps of sensitivities weighted and mapped overlapping each other in order to identify where most sensitivities in the County occur



2. Areas of each Scenario which are most likely to come under urban pressure (the grey areas)



3. GIS software enabled the mapping and quantification of the areas of each scenario which would be most likely to be impacted upon

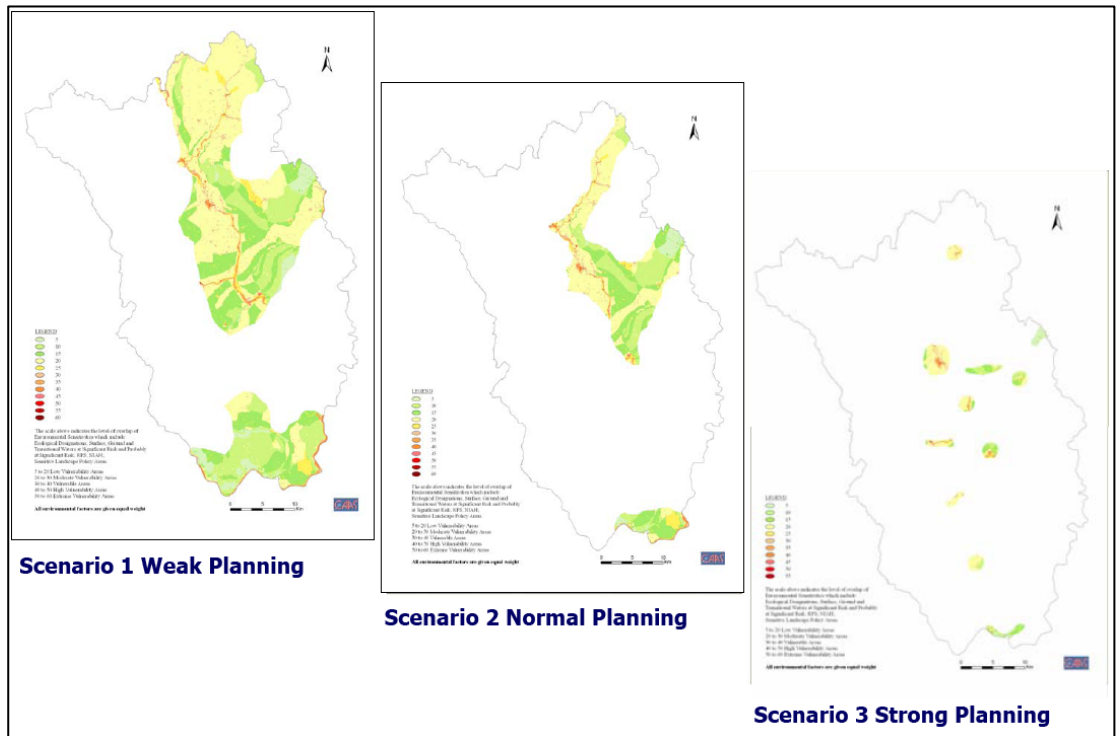


Figure 2.3 Sensitivities, Overlays and Evaluation of Alternatives

SEA Statement of the Kilkenny City and Environs Development Plan 2008-2014  
Strategic Environmental Assessment

Reference	Recommendation
SS: Spatial Strategy for the Kilkenny Hub Corridor Impact Zone	<p>The Kilkenny Hub Corridor Impact Zone has a significant potential to conflict with elevated densities of environmental sensitivities (see Figure 6.1). In order to sustainably facilitate necessary development in this area it will be necessary to prepare a Spatial Strategy to assist in the preparation of future development plans or local area plans. This strategy will identify the location, significance and sensitivity of the range of environmental assets and constraints that occur within these particularly sensitive areas and such relevant sensitivities as may exist in the adjoining buffer zone.</p> <p>The strategy shall demonstrate how the provisions of the CDP can be sustainably accommodated within such sensitive areas.</p>
TS1: Thematic Strategy for Rural Development & Agricultural Restructuring	<p>Kilkenny has a very wide range of land use capability that will result in different parts of the County having very different futures under the onset of the reform of the Common Agricultural Policy. It is likely that areas with marginal agriculture are likely to experience increasing levels of afforestation, alternative enterprises and rural settlement as a result. If these occur in an integrated and coordinated manner then there are likely to be benefits for all - in addition to increased protection for environmental assets such as groundwater, surface water quality, landscape and cultural heritage. A Thematic Spatial Strategy for Agricultural Restructuring will address this need.</p>
TS2: Thematic Strategy for Forestry	<p>A number of social, economic and agricultural forces may combine to see the beginning of a marked increase in afforestation in transitional, lowland and upland landscapes within Kilkenny. If properly harnessed such forestry could positively facilitate many other land-uses - including land-use types which are often difficult to accommodate such as aquifer and surface water protection, tourism, rural housing, mineral extraction, industry, and the provision of infrastructure location. It is proposed that a Thematic Spatial Strategy for Forestry is prepared to this effect.</p>
SP: Subsidiary Plans	<p>(a) Each Local Area Plan (LAP) or framework plan within the County should contain adequate policy and guidance in order to highlight the importance of retaining the unique character and diversity of town and village centres, and provide for their protection.</p> <p>(b) Policies should be amended where necessary to take account of the carrying capacity of the environment - as outlined in this report.</p> <p>(c) Consideration should be given in the drafting of residential policies to targeting the use of brownfield sites as a priority. (d) Residential objectives which promote the identification of opportunities for infill development and consolidation of existing towns and villages to reduce the need to zone additional greenfield lands should be included within LAP subject to stringent design guidance and environmental protection.</p> <p>(e) The inclusion of a policy relating to the integration of the transport system throughout the LAP could have a considerable positive effect.</p> <p>(f) The inclusion of a policy relating to the integrated provision of infrastructure within the LAP, may help in lessening the potential environmental impact of infrastructural requirements to service lands within those LAP, individually and cumulatively.</p>
MM1: Designated Ecological Sites	<p>Establish a buffer, free of development, at least 30m in width around designated ecological sites which may be larger depending on local ecological and drainage conditions and other factors as appropriate.</p>
MM2: Designated Wetland / Peatland Ecological Sites	<p>Planning applications within 30 metres of designated wetland/peatland ecological sites must be accompanied by an eco-hydrological assessment: which complies with Section 18 of the European Communities (Natural Habitats) Regulations 1997; identifies and evaluates the direct and indirect effects which the development would be likely to have upon the designated site, ecological connectivity and drainage. Planning applications must also be accompanied by evidence of consultation between the applicant and the National Parks and Wildlife Service with regard to the findings of this assessment. The need for ecological assessments for planning applications further than the 30 metre distance shall be decided upon on a site by site basis depending on local ecological and drainage conditions and other factors as appropriate.</p>
MM3: Salmonid Waters Protection	<p>A general minimum horizontal setback of 30m from the banks of salmonid waters for new development is to be created. Any planning applications within this setback must demonstrate that any development would not impact upon salmonid species or the habitats which sustain them.</p>
MM4: Ecological Networks	<p>Planning applications must: identify all ecological corridors (including hedgerows and masonry stone walls), likely to be significantly affected, which are present on the relevant lands; identify any losses to these corridors which would result if the application in question was granted and; show that such losses would be fully offset if the application was to be granted through the replacement of the relevant corridors, with corridors composed of similar species or materials, before any losses to the existing corridors occur.</p> <p>Where such opportunity exists between high value biodiversity areas applicants should be encouraged to enhance existing networks or create new networks between local biodiversity areas.</p>

<p>MM5: Water Quality Protection</p>	<p>In order for permission to be granted to new developments, there must be sufficient capacity available to appropriately treat the waste water resulting from such developments. This may be done by: upgrading the capacity of the existing waste water treatment plant and agreeing a new Discharge License with the relevant organisation; sourcing capacity from other existing public waste water treatment plants, or by: constructing a new public waste water treatment plant.</p> <p>Thus new development will be served by either:</p> <p>a. Providing new capacity for public waste water treatment either through the provision of a new public waste water treatment plant or through allocation of additional capacity to existing waste water treatment plants and extending the existing public waste water treatment catchment to serve all possible developments within the plan area</p> <p>Or:</p> <p>b. Treating waste water through the use individual waste water treatment systems, such as septic tanks.</p> <p>If development is served by 'b.' then the conditions outlined in the EPA's (2000) 'Wastewater Treatment Manuals - Treatment Systems for Single Houses' shall be complied with, and:</p> <p>(i) Planning applications must demonstrate that discharges to waters resulting from the granting of the application will comply with standards established under the South East River Basin Management Plan or interim recognized standards pending adoption of the South East River Basin Management Plan</p> <p>(ii) Applicants must submit a site suitability report alongside the planning application which outlines the likely effects on water quality which will be caused as a result of use of the relevant single waste water treatment system on site. This report shall be carried out by an appropriately qualified person. The appropriateness of the qualifications of such a person will be decided by the Planning Authority.</p> <p>(iii) The applicant, if successful with the relevant application, shall submit certification from an appropriately qualified person stating that the treatment system and associated percolation / filter area have been installed in accordance with the requirements of the EPA's (2000) 'Wastewater Treatment Manuals - Treatment Systems for Single Houses'. The applicant shall also submit agreement to maintain the complete system in accordance with the manufacturer's maintenance recommendations, for the lifetime of the system.</p> <p>Note: If capacity in a public waste water treatment scheme is not made available to all development within the plan area in the long term then existing septic tanks, percolation areas and proprietary effluent systems may require to be upgraded in the long term in line with the conditions specified above and a monitoring system set up to the same effect.</p>
<p>MM6: Archaeological Heritage</p>	<p>Planning applications within or adjacent to a buffer zone of 30m from a Site on the Sites and Monument Register must be accompanied by: an archaeological assessment detailing the impacts which the relevant development would have on archaeology in the area, including those impacts relating to the context of archaeology in the surrounding landscape.</p>
<p>MM7: Architectural Heritage</p>	<p>Planning applications within towns identified as having a rich architectural heritage may be required to be accompanied by an assessment to be undertaken by a certified conservation architect detailing the impacts of the relevant development upon the special interest and character of the surrounding architectural heritage. The planning authority should be consulted at an early stage in this regard in order to determine whether there is a need for such an assessment.</p>
<p>MM8: Landscape Heritage</p>	<p>Planning Applications that have the potential to impinge upon the integrity of significant landscape resources may be required to be accompanied by an assessment of the potential landscape and visual impacts of the proposed development - demonstrating that landscape impacts have been anticipated and avoided to a level consistent with the sensitivity of the landscape.</p>

**Table 2.1 Mitigation Measures from Environmental Report**

## Section 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 Consultations

Strategic Environmental Assessment scoping letters were sent to the Department of the Environment, Heritage and Local Government (DEHLG), Department of Communications, Marine and Natural Resources (DCMNR) and Environmental Protection Agency (EPA).

The responses to these letters were taken into account during the carrying out of the Strategic Environmental Assessment.

The Responses were as follows:

- Written response received from DEHLG covering the following topics:
  1. Archaeological heritage Strategic Actions to which the SEA must have regard
  2. Development issues with regard to archaeological heritage
  3. Architectural heritage recommendations for the protection and conservation of architectural heritage
  4. How to define architectural heritage
  5. The level of detail at which architectural heritage should be considered
  6. Data gaps with regard to architectural heritage
  7. How to deal with the 'do-nothing' scenario and monitoring
- A scoping meeting for the Kilkenny City Development Plan SEA was held with the EPA at which a number of County SEA issues were mentioned. In addition the EPA offered guidance regarding SEA methodology, data sources and likely issues in Kilkenny. This guidance was available on an ongoing basis

throughout the Plan preparation process.

- The DCMNR provided a reference to their generic guidelines as to what should be contained in the preparation of any environmental report.

### 3.3 Submissions and Observations

The only submission on the Environmental Report - from the Department of Communications, Marine and Natural Resources (DCMNR) - stated that the Department is satisfied that the SEA has addressed all the key environmental issues of relevance to the DCMNR.

No changes to the Environmental Report were made directly as a result of any submissions or observations. Relevant changes made to the Plan as a result of individual or multiple submissions have been evaluated by the Addenda (see Sections 2.5 and 3.4) and these evaluations have been integrated into the final environmental report.

### 3.4 Environmental Report

The findings of SEA were expressed in an Environmental Report which was submitted to the Elected Members alongside the Draft Plan. The purpose of the report was to provide a clear understanding of the likely environmental consequences of decisions regarding the future accommodation of growth in County Kilkenny.

Amendments made to the Draft Plan at each stage of the process were evaluated for their environmental consequences and these were presented to the Elected Members in the form of Addenda. On adoption of the Draft Plan, these Addenda were used to update the original Environmental Report into a final Environmental Report which accompanies the adopted Plan.

These amendments included alterations of, additions to and removal of Draft Plan provisions.

At each stage of the process the Elected Members were required by the legislation to take into account the Environmental Report - including the Addenda - before the adoption of the Plan.

## Section 4 Alternatives and the Plan

### 4.1 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 Kilkenny County Development Plan.

### 4.2 Scenario 1 - *Weak Planning*

#### 4.2.1 Description

Development under Scenario 1 (see Figure 4.1) strongly follows market demands with little regard to planning or environmental protection.

Extensive areas of weakly controlled development in rural areas surrounding settlement centres results in the development of Urban Sprawl Areas.

These Urban Sprawl Areas which would develop under Scenario 1 currently display the greatest pressures for development, have rising populations, ready access to good road networks and are within the commuting catchments of Kilkenny and Waterford City as well other large settlements such as Thomastown and Castlecomber.

Across these Urban Sprawl Areas settlement is highly dispersed thereby continuing the weakening of villages and towns.

Demand for the development of wind energy, quarrying and forestry enterprises would be satisfied by favouring applications across the north western and southern areas of the County - where these resources are present or where they can be developed from the existing environment - without regard for the carrying capacity of these bands.

Outside of the Urban Sprawl Areas and resource enterprise zones, residual areas of agriculture and agribusiness remain in the eastern lowlands and to the south east of Castlecomber.

### 4.2.2 Evaluation

#### 4.2.2.1 Planning Impacts

This approach does not appear to be set within a plan led or strategy vision for the future. Likely outcome of this approach:

- Ad hoc dispersed rural housing would be likely to draw population away from the towns /villages. This would result in the inability of the town/villages to grow and develop and build up the necessary population base that would generate viable service provision and economic opportunities. The likely outcome is the loss of services and facilities in these towns which in turn would have serious implications for the quality of life for the rural communities.
- Concentration of urban generated housing around the main centres as is currently happening is likely under Scenario 1, with consequences for the orderly and efficient development of newly developing areas on the edges of these towns, obstruction of alignments for future provision of infrastructure, undermining viability of urban public transport and attendant later problems in terms of demands for higher public expenditure.
- Consequences and concerns relating to the sustainable development of key assets such as wind energy, road network, aggregates etc.
- Potential adverse effects on water quality and environmentally sensitive areas, scenic amenities and natural and made heritage resources the sustainable management and development of which do not appear to be taken into consideration in this approach.
- This scenario does not converge with the NSS framework for Kilkenny.

#### 4.2.2.2 Environmental Impacts

##### Surface Water

The bulk of development takes place within the catchments of rivers and streams that are at significant risk of failing to achieve WFD objectives. Developments not connected with waste water treatment plants would cause significant deterioration in the quality of surface waters. There would be significant non-conformances with the provisions of the water Framework Directive.

##### Groundwater

The levels of ad hoc dispersed rural housing would create significant pollution to groundwater throughout areas in the centre of the county and in the environs of Waterford City in the south. There would be significant non-conformances with the provisions of the water Framework Directive.

##### Transitional Waters

The transitional waters of the Rivers Suir and Barrow which are classified as being at significant risk of failing to achieve WFD objectives and are likely to be significantly adversely impacted upon by the extent of rural housing in the south of the County.

##### Ecology

There would be significant breaches of the provisions of the habitats Directive as a result of adverse impacts upon designated ecological sites - including salmonid, riverine and upland habitats - and ecological networks.

##### Cultural Heritage

Likely development pressure areas coincide with concentrations of archaeology and monuments in Kilkenny - emphasising the richness of Kilkenny's heritage and the need to put in place systematic ways of anticipating and avoiding potential archaeological impacts during the development stage.

##### Landscape

There would be significant and widespread deterioration of the character and integrity of most landscapes in the County under this Scenario - with associated impacts on tourism amenities. There would be significant and numerous non-conformities with the provisions of the CDP Landscape Protection Policies

### 4.3 Scenario 2 - *Normal Planning*

#### 4.3.1 Description

Scenario 2 (see Figure 4.2) represents a responsive regime led by strong, but highly differentiated local economic forces – based primarily on the utilisation of existing natural and cultural resources.

Under Scenario 2 the areas which currently display the greatest pressures for development - the 'Areas under Strong Urban Influence' - are encompassed into two extensive planned settlement zones. One, a corridor, is centred on the Kilkenny City Hub and supports the majority of the County's population and their associated employment, services and infrastructure in a network of high quality settlements. This corridor encompasses Castlecomber in the north of the County, Kilkenny City and its environs together with Thomastown in the centre of the County as well as various towns and villages including those which lie on the road network connecting Kilkenny City to Carlow Town. The second planned settlement zone covers the northern environs of the Waterford City Gateway and includes Belview Port.

On the County's most fertile and well drained soils - on the eastern lowlands and to the south east of Castlecomber - agriculture undergoes intensification and supporting rural villages strengthen and thrive.

Less productive, marginal agricultural lands, such as the foothills, experience decline. These areas become Rural Transition Zones whereby agriculture is gradually replaced by scrub and trees - either through the development of forestry or through natural colonisation processes.

Wind energy applications are guided by a Wind Energy Development Strategy to areas with sufficient carrying capacity throughout the County.

Extensive areas of natural beauty are sustained in and around Graiguenamanagh and Brandon Hill in the east of the County which sustain recreation and tourism as well as existing agriculture and forestry enterprises.

## 4.3.2 Evaluation

### 4.3.2.1 Planning Impacts

This scenario has regard to the strategic potential of different parts of the County and the development of this potential in a sustainable manner. It acknowledges the role of existing settlements and also rural settlement. Of the three scenarios presented, it would appear to fit best with the NSS concept.

### 4.3.2.2 Environmental Impacts

#### Surface Water

Almost all of the main urban centres are located within the catchments of rivers and streams that are at significant risk. Virtually all of the associated pressure in adjacent rural areas also occurs in such areas. This means that developments within these areas that are not connected with adequately sized and effectively operated waste water treatment plants would almost certainly cause significant deterioration in the quality of surface waters. This is a significant risk that must be mitigated against by the timely development of appropriate waste water treatment facilities.

#### Groundwater

The soils and geology of County Kilkenny create conditions which mean that groundwater is, at the very least, highly vulnerable to pollution across most of the County, and extremely vulnerable to pollution in many areas. In addition to this vulnerability, much of the lands covered by the 'Areas under Urban Influence' zoning are located over groundwater which is at significant risk or probably at significant risk of failing to meet commitments under the WFD. This means that rural developments including those in the environs of Slieverue, Kilkenny City, Castlecomber, Gowran, Paulstown, Bennetsbridge, Kells, Stoneyford, Thomastown, Ballyhale and Kilmoganny would have to be very carefully prepared and scrutinised in order to anticipate and avoid impacts.

#### Transitional Waters

Development in the northern environs of the Waterford City Gateway, including that at Belview Port, should be served by the appropriate waste water treatment infrastructure in order to avoid impacts upon the transitional waters of the Rivers Suir and Barrow - which are classified as being at significant risk of failing to achieve WFD objectives - and the

estuarine and bathing waters of Waterford Harbour - which are classified as being probably at significant risk of failing to achieve WFD objectives.

#### Ecology

Under this Scenario, with the exception of areas beside salmonid waters - there is a relatively low potential for development and settlement to conflict with nature in most of Kilkenny. However, developments near rivers, many of which are salmonid in County Kilkenny, have to be very carefully prepared and scrutinised in order to anticipate and avoid impacts on these resources.

#### Cultural Heritage

Likely development pressure areas coincide with concentrations of archaeology and monuments in Kilkenny - emphasising the richness of Kilkenny's heritage and the need to put in place systematic ways of anticipating and avoiding potential archaeological impacts during the development stage.

#### Landscape

The majority of the County's valued upland landscape (Policy Area 1) would remain largely unchanged. The planned settlement corridor which is centred on the Kilkenny City Hub is generally located within lowland landscape (Policy Area 2) - which is a predominantly robust type and would continue to exhibit the dynamism and change of an inhabited working landscape. The transitional landscape (Policy Area 4) would continue to exhibit dynamism and change as agriculture declines providing new opportunities for forestry and biodiversity.

## 4.4 Scenario 3 - *Strong Planning*

### 4.4.1 Description

Scenario 3 (see Figure 4.3) represents a highly regulated environment with very strict enforcement of rural planning guidelines.

The majority of the County's population and their associated employment, services and infrastructure are concentrated in high quality urban environments within existing settlement centres. The outer boundaries of these settlement centres are strictly adhered to, expanding only where necessary and towards the most robust environments.



An extensive area of the County is managed and planned as natural amenities subject to strict interpretation of EU Directives. This 'Tourism, Amenity and Resource Conservation' Zone encompasses the valley of the Nore River's during its lower course as well as areas of natural beauty in and around Graiguenamanagh and Brandon Hill.

The east of the County contains designated areas for natural resource enterprises such as forestry, wind energy and mineral extraction.

The south of the County supports agriculture and rural enterprises - based on agri-business, and service functions.

Wind Energy Development is confined to the north west corner of the County in and around the Slieveadaragh Hills.

On the County's most fertile and well drained soils - including those surrounding Kilkenny City - agriculture undergoes intensification.

#### **4.4.1.1 Planning Impacts**

This scenario devises a more strategic role for the towns and villages.

The management of an extensive area of the County as natural amenities subject to strict interpretation of EU Directives would have implications for existing rural communities as it implies that this area would largely be associated with amenity rather than other economic activities which could be carried out in a sustainable manner without impacting on the inherent conservation value of the area.

Rural areas with strong potential for diversification and diversifying areas (NSS) would be unlikely to develop as envisaged in the NSS concept under this Scenario as these areas have a largely passive role under this Scenario.

#### **4.4.1.2 Environmental Impacts**

##### **Surface Water**

Almost all of the main urban centres are located within the catchments of rivers and streams that are at significant risk. Virtually all of the associated pressure in adjacent rural areas also occurs in such areas.

##### **Groundwater**

The soils and geology of County Kilkenny create conditions which mean that groundwater is, at the very least, highly vulnerable to pollution across most of the County, and extremely vulnerable to pollution in many areas. This means that any rural developments permitted under this scenario including those in the environs of Slieverue, Kilkenny City, Castlecomber, Gowran, Paulstown, Bennetsbridge, Kells, Stoneyford, Thomastown, Ballyhale and Kilmoganny would be very carefully prepared and scrutinised in order to anticipate and avoid impacts.

##### **Transitional Waters**

Development in the northern environs of the Waterford City Gateway, including that at Belview Port, would be served by the appropriate waste water treatment infrastructure in order to avoid impacts upon the transitional waters of the Rivers Suir and Barrow - which are classified as being at significant risk of failing to achieve WFD objectives - and the estuarine and bathing waters of Waterford Harbour - which are classified as being probably at significant risk of failing to achieve WFD objectives.

##### **Ecology**

Under this Scenario, with the exception of areas beside salmonid waters - there is a relatively low potential for development and settlement to conflict with nature in most of Kilkenny. However, developments near rivers, many of which are salmonid in County Kilkenny, have to be very carefully prepared and scrutinised in order to anticipate and avoid impacts on these resources.

##### **Cultural Heritage**

Likely development pressure areas coincide with concentrations of archaeology and monuments in Kilkenny - emphasising the richness of Kilkenny's heritage and the need to put in place systematic ways of anticipating and avoiding potential archaeological impacts during the development stage.

##### **Landscape**

The majority of the County's valued upland, landscape [Policy Area 1] would remain largely unchanged - except for localised impacts associated with wind energy projects in the north western corner of the County in and around the Slieveadaragh Hills. The transitional landscape (Policy Area 4) would continue to

exhibit dynamism and change as agriculture declines providing new opportunities for forestry and biodiversity.

#### **4.5 Summary of Analysis**

On the basis of the above analysis Scenario 3 - *Strong Planning* - emerges as the most environmentally sustainable alternative. However, having regard to Planning considerations, Scenario 2 - Normal Planning - emerges as the alternative that balances environmental protection with economic and social development.

#### **4.6 The Adopted County Development Plan**

The County Development Plan that emerged from the plan preparation process and which was adopted approximates well to many aspects of two of the alternative scenarios examined. The Areas under Urban Influence conforms closely to Scenario 2 while the Wind Energy Strategy is closer to Scenario 1.

For analysis purposes, however - having regards to the dominant effect of the settlement strategy -, the analysis of Scenario 2 provides the best approximation of the likely environmental effects of the implementation of the overall plan.

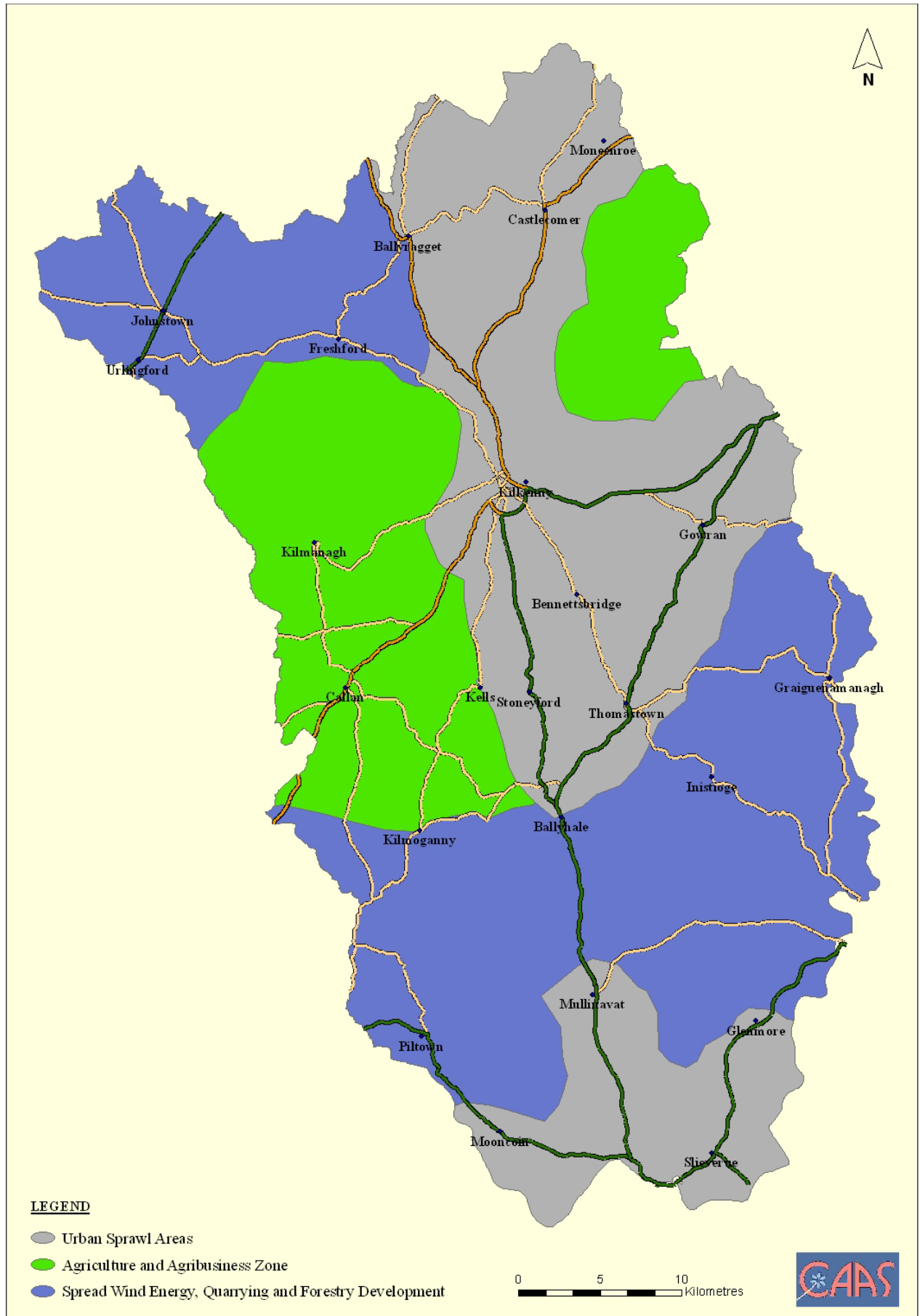


Figure 4.1 Scenario 1: Weak Planning

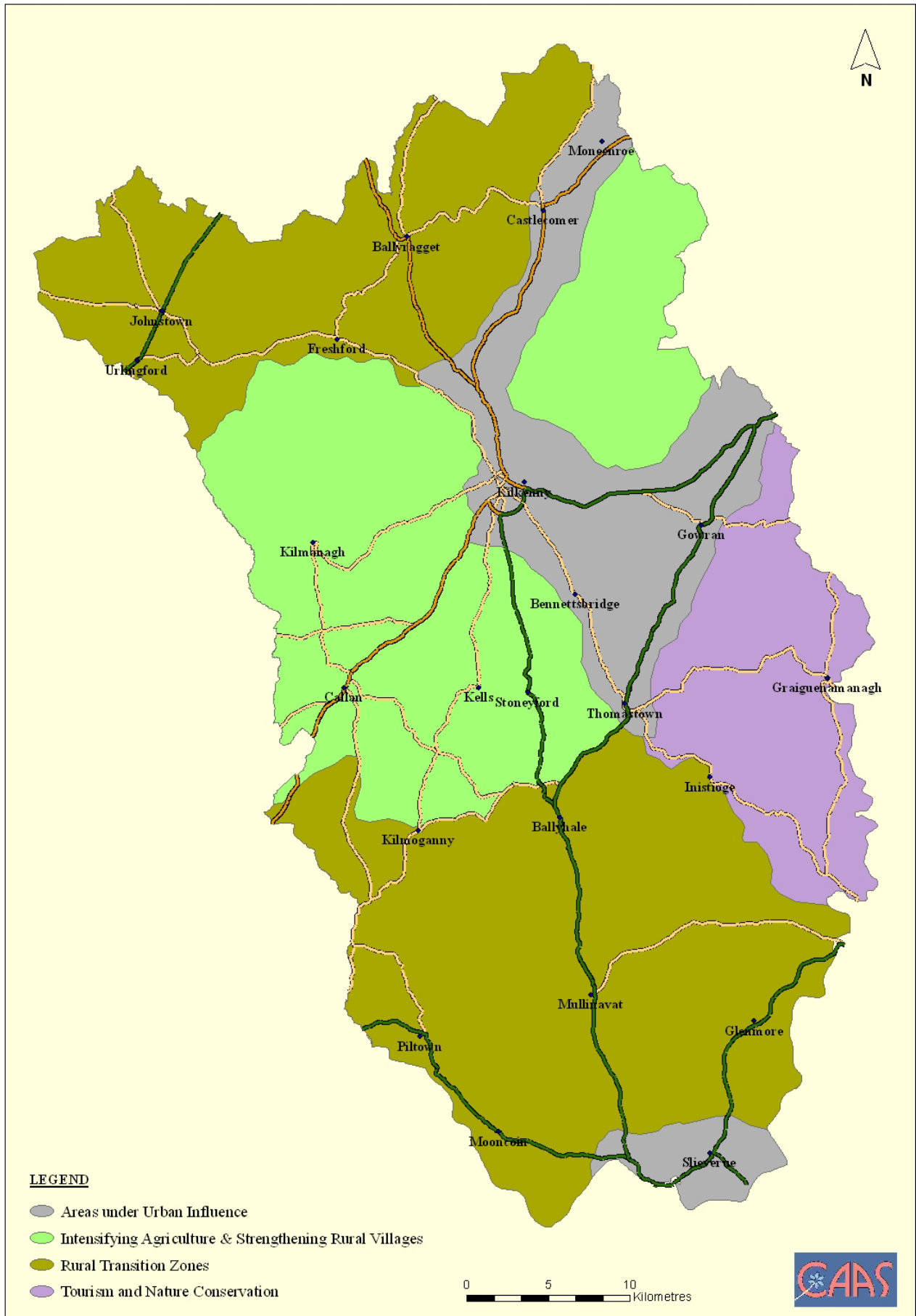


Figure 4.2 Scenario 2: Normal Planning

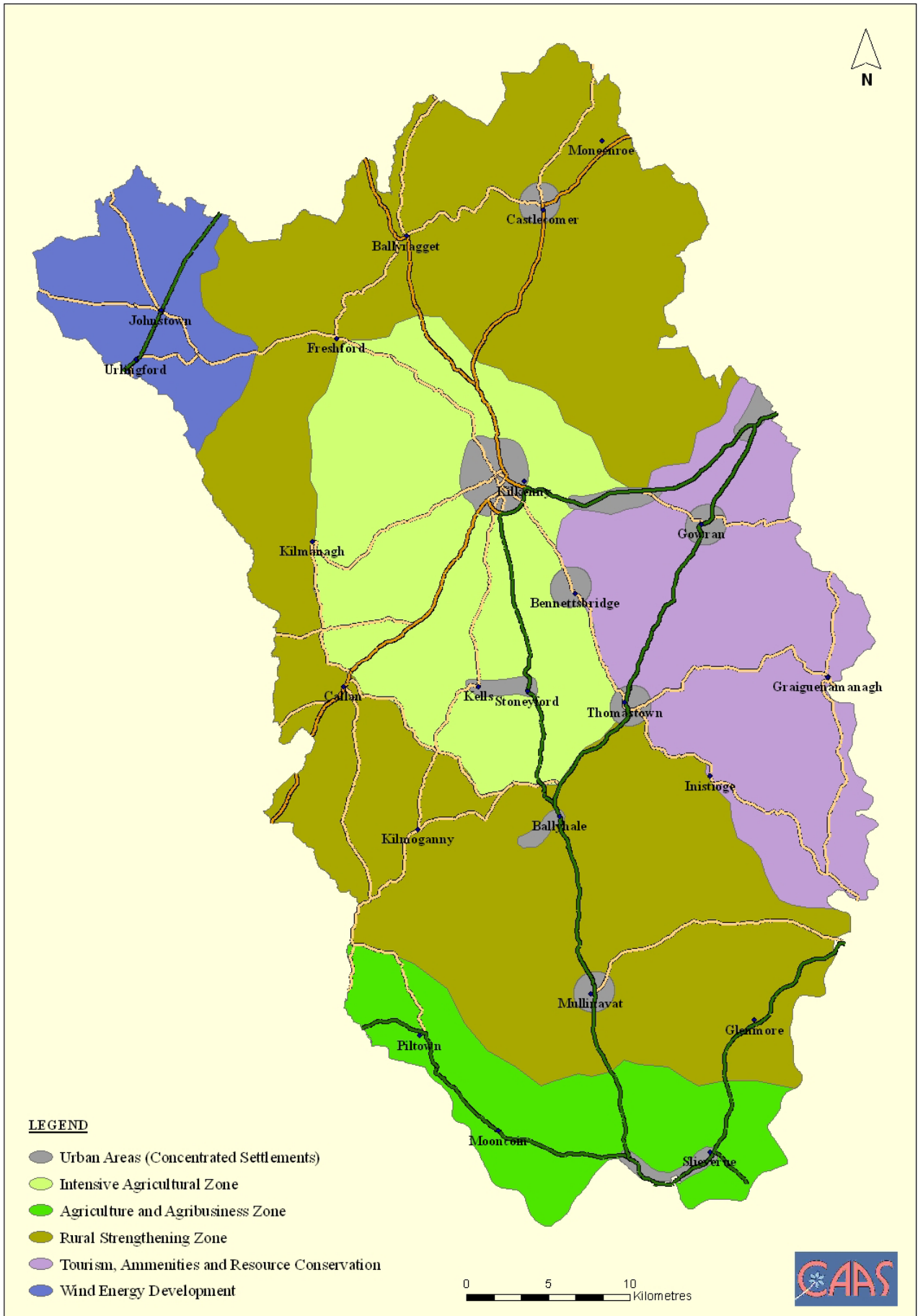


Figure 4.3 Scenario 3: Strong Planning

## Section 5 Monitoring

### 5.1 Introduction

The SEA Directive requires that the significant environmental effects of the implementation of plans and programmes are monitored. This environmental report puts forward proposals for monitoring the County Development Plan (CDP) which are adopted alongside the 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 CDP is achieving its environmental objectives and targets - measures which the CDP can help work towards - whether these need to be reexamined and whether the proposed mitigation measures are being implemented.

### 5.2 Indicators and Targets

Monitoring is based around the indicators which were chosen earlier in the process. These indicators allow quantitative measures of trends and progress over time relating to the Strategic Environmental Objectives used in the evaluation. Focus will be given to indicators which are relevant to the likely significant environmental effects of implementing the CDP and existing monitoring arrangements will be used in order to monitor the selected indicators. Each indicator to be monitored will be accompanied by the relevant target(s) which were identified with regard to the relevant legislation.

Table 5.1 below shows the indicator and targets which have been selected with regard to the monitoring of the plan.

### 5.3 Sources

Measurements for indicators should come from existing monitoring sources and no new monitoring should be required to take place. Existing monitoring sources exist for each of the indicators and include those maintained by Kilkenny County Council and the relevant authorities e.g. the Environmental Protection Agency, the National Parks and Wildlife Service and the Central Statistics Office.

The *Development Management Process* in the County Council will provide passive monitoring of various indicators and targets on an application by application basis. Where significant adverse effects - including positive, negative, cumulative and indirect - are likely to occur upon, for example, entries to the RMP, entries to the RPS or ecological networks as a result of the undertaking of individual projects or multiple individual projects such instances should be identified and recorded and should feed into the monitoring evaluation.

### 5.4 Excluded Indicators and Targets

As noted on Table 5.1 below, monitoring data on Indicator W3 (Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC) may not be available for the preliminary monitoring evaluation as the groundwater threshold values to which this indicator relates have not yet been identified by the EPA.

In addition, future monitoring data for Indicators A1i (Percentage of population within the plan area travelling to work or school by public transport or non-mechanical means) and A1ii (Average distance travelled to work or school by the population of the County) will not be available until the results of the next CSO Census are made available. It is recommended that data for these indicators be sourced for the SEA of the next review of the Plan.

### 5.5 Reporting

A preliminary monitoring evaluation report on the effects of implementing the CDP will be prepared to coincide with the Manager's report to the elected members on the progress achieved in securing CDP objectives within two years of the making of the plan (this Manager's report is required under section 15 of the 2000 Planning Act).

## 5.6 Responsibility

Kilkenny County Council is responsible for collating existing relevant monitored data, the preparation of a monitoring report, the publication of this report and, if necessary, the carrying out of corrective action.

It is recommended that a Steering Committee be established to oversee the monitoring process.

## 5.7 Thresholds

The following thresholds - above which appropriate corrective action should be considered - have been set for the monitoring programme for the plan:

- Any boil notices on drinking water;
- Any fish kills;
- Any court cases taken by the DEHLG regarding impacts upon archaeological heritage including entries to the Record of Monuments and Places; and,
- Any complaints received from statutory consultees regarding avoidable impacts on one, some or all environmental components resulting from development which is granted permission under the CDP.

Environmental Component	Selected Indicator(s)	Selected Target(s)	Sources
<p><b>Biodiversity, Flora and Fauna</b></p>	<p>B1: Percentage of relevant habitats and designated ecological sites lost as a result of implementation of the CDP</p> <p>B2: Number of significant adverse impacts, including direct, cumulative and indirect impacts, to relevant habitats, geological features, species or their sustaining resources in designated ecological sites by development within or adjacent to these sites as a result of implementation of the CDP</p> <p>B3: Percentage loss of connectivity between areas of local biodiversity as a result of implementation of the CDP – as evidenced from a resurvey of CORINE mapping and any habitat mapping which is produced</p>	<p>B1: No losses of relevant habitats, species or their sustaining resources in designated ecological sites as a result of implementation of the CDP</p> <p>B2: No significant adverse impacts, including direct, cumulative and indirect impacts, to relevant habitats, geological features, species or their sustaining resources in designated ecological sites by development within or adjacent to these sites as a result of implementation of the CDP</p> <p>B3: No ecological networks or parts thereof which provide significant connectivity between areas of local biodiversity to be lost without remediation as a result of implementation of the CDP</p>	<p>CORINE Mapping, DEHLG Records &amp; Development Management Process</p> <p>Development Management Process &amp; Consultation with the National Parks and Wildlife Service</p> <p>Remote sensing of trees and hedges combined with CORINE mapping</p>
<p><b>Population and Human Health</b></p>	<p>HH1: Occurrence (any) of a spatially concentrated deterioration in human health</p>	<p>HH1: No spatial concentrations of health problems arising from environmental factors</p>	<p>Kilkenny County Council, EPA, Health and Safety Authority</p>



Environmental Component	Selected Indicator(s)	Selected Target(s)	Sources
<b>Soil</b>	<p>S1: Area of brownfield land developed over the plan period</p> <p>S2: Proportion of excavated area returned to productive use.</p>	<p>S1: Reduced availability of brownfield land (subject to availability on the open market, the demand for such land and the ability for such lands to be sustainably re-used within the provisions of the CDP) at the end of the CDP lifespan</p> <p>S2: All extraction sites to have progressive rehabilitation programmes in place with agreed rehabilitation targets</p>	<p>Development Management Process</p> <p>Development Management Process</p>
<b>Water</b>	<p>W1: Biotic Quality Rating (Q Value)</p> <p>W2: Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC</p> <p>W3: Trophic Status (ATSEBI)</p> <p>W4: Mandatory and Guide values as set by Directive (76/160/EEC)</p>	<p>W1i: To maintain a biotic quality rating of Q4, in line with the requirement to achieve good water status under the Water Framework Directive, by 2015</p> <p>W1ii: To improve biotic quality ratings, where possible, to Q5</p> <p>W2: Compliance with Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC</p> <p>W3: To maintain or to improve trophic status, where relevant, to unpolluted in line with the requirement to achieve good water status under the Water Framework Directive, by 2015</p> <p>W4: To achieve - as a minimum - Mandatory values, and where possible to achieve Guide values as set by Directive (76/160/EEC)</p>	<p>Environmental Protection Agency</p> <p>As noted under Section 5.4, monitoring data may not be available for this indicator when the monitoring evaluation is being prepared.</p> <p>Environmental Protection Agency</p> <p>Environmental Protection Agency</p>

Environmental Component	Selected Indicator(s)	Selected Target(s)	Sources
<b>Air and Climatic Factors</b>	<p>A1i: Percentage of population within the plan area travelling to work or school by public transport or non-mechanical means</p> <p>A1ii: Average distance travelled to work or school by the population of the County</p>	<p>A1i: An increase in the percentage of the population travelling to work or school by public transport or non-mechanical means</p> <p>A1ii: A decrease in the average distance travelled to work or school by the population of the County</p>	Environmental Protection Agency
<b>Material Assets</b>	M1: Number of new developments granted permission which cannot be adequately served by a public waste water treatment plant over the lifetime of the CDP	M1: No new developments granted permission which cannot be adequately served by a public waste water treatment plant over the lifetime of the CDP	CSO [As noted under Section 5.4, monitoring data may not be available for this indicator when the monitoring evaluation is being prepared].
<b>Cultural Heritage</b>	<p>CH1: Number of unauthorised developments occurring over the lifespan of the CDP which result in full or partial loss of: entries to the Record of Monuments and Places; entries to the Register for Historic Monuments; National Monument subject to Preservation Orders, and; the context of the above within the surrounding landscape where relevant.</p> <p>CH2: Number of unauthorised developments occurring over the lifespan of the CDP which result in physical loss or loss to the context in the surrounding landscape or streetscape of: entries to the Record of Protected Structures; Architectural Conservation Areas, or; entries to the National Inventory of Architectural Heritage.</p>	<p>CH1: No unauthorised developments occurring over the lifespan of the CDP which result in full or partial loss of: entries to the Record of Monuments and Places; entries to the Register for Historic Monuments; National Monument subject to Preservation Orders, and; the context of the above within the surrounding landscape where relevant.</p> <p>CH2: No unauthorised developments occurring over the lifespan of the CDP which result in physical loss or loss to the context in the surrounding landscape or streetscape of: entries to the Record of Protected Structures; Architectural Conservation Areas, or; entries to the National Inventory of Architectural Heritage.</p>	<p>Development Management Process; Complaints received from statutory consultees</p> <p>Development Management Process; Complaints received from statutory consultees</p>

Environmental Component	Selected Indicator(s)	Selected Target(s)	Sources
<b>Landscape</b>	L1: Number of complaints received from statutory consultees regarding avoidable impacts on the landscape - especially with regard to sensitive landscape features and designated scenic views - resulting from development which is granted permission under the CDP	L1: No developments permitted which result in avoidable impacts on the landscape - especially with regard to sensitive landscape features and designated scenic views - resulting from development which is granted permission under the CDP	Development Management Process; Complaints received from statutory consultees

**Table 5.1 Selected Indicators, Targets and Monitoring Sources**