

SEA STATEMENT

FOR THE

KILDARE COUNTY DEVELOPMENT PLAN 2017-2023

STRATEGIC ENVIRONMENTAL ASSESSMENT

for: Kildare County Council

Áras Chill Dara
Devoy Park
Naas
County Kildare



by: CAAS Ltd.

2nd Floor, The Courtyard
25 Great Strand Street
Dublin 1



FEBRUARY 2017

Table of Contents

Section 1	Introduction	1
1.1	Terms of Reference	1
1.2	SEA Definition	1
1.3	Legislative Context.....	1
1.4	Content of the SEA Statement	1
1.5	Implications of SEA for the Plan	2
Section 2	How Environmental Considerations were integrated into the Plan.....	3
2.1	Introduction	3
2.2	Consultations	3
2.3	Communication of environmental sensitivities.....	3
2.4	Suggestions of Plan provisions to mitigate effects.....	4
Section 3	Environmental Report and Submissions & Observations.....	12
3.1	Introduction	12
3.2	SEA Scoping Submissions	12
3.3	Submissions on the Environmental Report	12
3.4	Environmental Report	13
Section 4	Alternative Scenarios and the Plan	14
4.1	Description of Alternatives.....	14
4.2	Evaluation of Alternative Scenarios.....	16
4.3	Reasons for choosing the Draft Plan in light of the other alternatives dealt with	18
Section 5	Monitoring Measures.....	19
5.1	Introduction	19
5.2	Indicators and Targets	19
5.3	Sources	19
5.4	Reporting and Responsibility.....	19
5.5	Thresholds	20

Section 1 Introduction

1.1 Terms of Reference

This is the SEA Statement for Kildare County Development Plan 2017-2023 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 (Statutory Instrument Number (SI No. 435 of 2004) and the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (SI No. 436 of 2004). Both sets of Regulations became operational on 21 July 2004. The Regulations have been amended by the European Communities (Environmental Assessment of Certain Plans and Programmes) (Amendment) Regulations 2011 (SI No. 200 of 2011) and the Planning and Development (SEA) (Amendment) Regulations 2011 (SI No. 201 of 2011).

Article 7 of the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (SI No. 436 of 2004) as amended requires that Strategic Environmental Assessment is undertaken for the preparation of certain Development Plans.

Where SEA is undertaken, the Regulations require that a Statement available to the public and the competent environmental authorities after the making of a Development Plan. This Statement is referred to as an SEA Statement¹.

1.4 Content of the SEA Statement

The SEA Statement is required to include information summarising:

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

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

1.5 Implications of SEA for the Plan

Members of the planning authority have taken into account the findings of all relevant SEA output during their consideration of the Draft Plan and before its adoption.

Kildare County Council prepared the Draft Kildare County Development Plan in accordance with Sections 11 and 12 of the Planning and Development Act 2000 (as amended).

SEA was undertaken on the Draft Plan in order to comply with the SEA Directive and transposing Regulations – the SEA Environmental Report contains the findings of this assessment. Appropriate Assessment² (AA) was also undertaken on the Draft Plan in order to comply with the Habitats Directive and transposing Regulations – the AA Natura Impact Report contains the findings of this assessment. A Strategic Flood Risk Assessment (SFRA) was also undertaken in order to comply with the Flood Risk Management Guidelines.

The Draft Plan and associated documents, including those relating to the SEA, AA and SFRA processes, were placed on public display and submissions were invited. Submissions were responded to in a Chief Executive's Report. Some submissions resulted in updates being made to SEA, AA and SFRA documentation.

At a Council meeting, the Members of the Council, by Resolution, proposed Material Alterations to the County Development Plan.

SEA and AA were undertaken on the Proposed Material Alterations and the findings of these assessments accompanied the Proposed Material Alterations on public display.

At a council meeting, a number of the Proposed Material Alterations were adopted as part of the final Plan (some with further modifications) and a number of Proposed Material Alterations were not adopted.

After the adoption of the Plan, the Environmental Report that was originally placed on public display alongside the Draft Plan was updated in order to take account of both recommendations contained in submissions made during the process and changes to the Draft Plan that were made on foot of submissions. This SEA Statement was also prepared.

² Appropriate Assessment is an impact assessment process concerning Natura 2000 Sites.

Section 2 How Environmental Considerations were integrated into the Plan

2.1 Introduction

Environmental considerations were integrated into the Plan through:

- Consultations with environmental authorities;
- Communication of environmental sensitivities through the SEA and associated Appropriate Assessment (AA) and Strategic Flood Risk Assessment (SFRA) processes; and
- Suggestions of Plan provisions to mitigate effects.

In addition, far in advance of both the submission of the pre-Draft Plan to the Elected Members for approval and the placing of the Draft Plan (and associated SEA, AA and SFRA documents) on public display, Kildare County Council undertook various works in order to inform the preparation of the Plan.

The findings of this strategic work have been integrated into the Proposed Draft Plan, contributing towards both environmental protection and management and sustainable development within the County.

Strategic work done by the Council includes background work in relation to Plan strategies and other provisions for a variety of sectors including:

- Settlement and Economic Development;
- Enterprise and Tourism;
- Movement and Transportation;
- Infrastructure, energy and communications;
- Retail;
- Rural Development;
- Social, Community and Cultural Development;
- Architectural and Archaeological protection;
- Natural Heritage and Green Infrastructure;
- Landscape, Recreation and Amenities;
- Urban Design and Rural Design

2.2 Consultations

As environmental authorities identified under the Planning and Development (SEA) Regulations, as amended, the following authorities were sent SEA scoping notices indicating that submissions or observations in relation to the scope and level of detail of the information to be included in the environmental report could be made to the Council: Environmental Protection Agency, Department of Communications, Energy and Natural Resources, Department of the Environment, Community and Local Government, Department of Arts, Heritage and the Gaeltacht, Wexford County Council, Meath County Council, Offaly County Council, Laois County Council, Carlow County Council, South Dublin County Council, Fingal County Council, Wicklow County Council.

Further detail on submissions made on foot of the SEA scoping notice is provided under Section 3.2.

Furthermore, submissions were made on the Draft Plan and SEA Environmental Report while they were on public display and these resulted in updates being made to the SEA documents (see Section 3.3).

2.3 Communication of environmental sensitivities

2.3.1 Overview

Environmental considerations were integrated into the Draft Plan before it was placed on public display. 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 unmitigated.

The sensitivities were communicated to the Plan-making team on a regular basis from the outset of the Plan preparation process. Identifying areas with the most limited carrying

capacity within the Plan area helped future growth to be diverted away from these areas.

Sensitivities included the following:

- CORINE Land Cover Data;
- Special Protected Areas, Special Areas of Conservation, Natural Heritage Areas, proposed Natural Heritage Areas and River Basin Districts;
- Soil Type;
- Geological Heritage Sites;
- Water Framework Directive (WFD) Status of Surface Waters;
- WFD Status of Groundwater;
- Groundwater Productivity;
- Groundwater Vulnerability;
- Entries to the WFD Register of Protected Areas (RPA);
- Flood Risk Indicators;
- Archaeological Heritage - Entries to the Record of Monuments and Places;
- Architectural Heritage - Entries to the Record of Protected Structures and Architectural Conservation Areas;
- Landscape Sensitivity; and
- View Points and Prospects

A number of these sensitivities are mapped on Figures 2.1, 2.2 and 2.3.

In order to identify where most sensitivities within the County occur, a number of the environmental sensitivities listed above were weighted and mapped overlapping each other. Figure 2.4 provides an overlay of environmental sensitivities for the County.

It is emphasised that the occurrence of environmental sensitivities does not preclude development; rather it flags at a strategic level that the mitigation measures - which have been integrated into the Plan - will need to be complied with in order to ensure that the implementation of the Plan contributes towards environmental protection.

The overlay mapping shows that most of the County is of a low sensitivity. The level of environmental sensitivity increases towards the centre of the County, concentrated between the areas of Kildare Town, Kilcullen and Newbridge. This is due to a variety of overlapping and related factors including soil type (peat), groundwater status (bad), landscape value (exceptional), ecological designation (proposed

Natural Heritage Area) and geological designation (County Geological Heritage Area).

Elevated levels of sensitivity are found in the foothills to the west of the Kildare/Wicklow county Boundary.

Appropriate Assessment

A Stage 2 Appropriate Assessment (AA) has been undertaken alongside the preparation of the Plan. The requirement for AA is provided under the EU Habitats Directive (Directive 1992/43/EEC). The AA concluded that the Plan will not have a significant adverse effect on European Sites, and that the integrity of the European Sites, in view of their conservation interests, will not be adversely affected.

The preparation of the Plan, SEA and AA has taken place concurrently and the findings of the AA have informed both the Plan and the SEA. All recommendations made by the AA were integrated into the Plan.

2.3.2 Strategic Flood Risk Assessment

A Strategic Flood Risk Assessment (SFRA) has been undertaken alongside the preparation of the Plan. The requirement for SFRA is provided under 'The Planning System and Flood Risk Management Guidelines for Planning Authorities' (DEHLG, 2009).

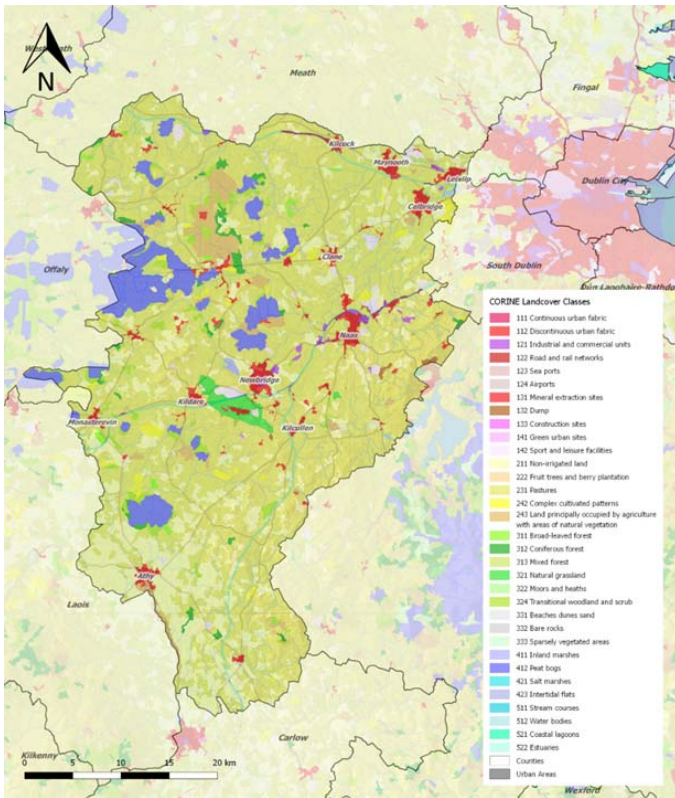
The preparation of the Plan, SEA and SFRA has taken place concurrently and the findings of the SFRA have informed both the Plan and the SEA.

2.4 Suggestions of Plan provisions to mitigate effects

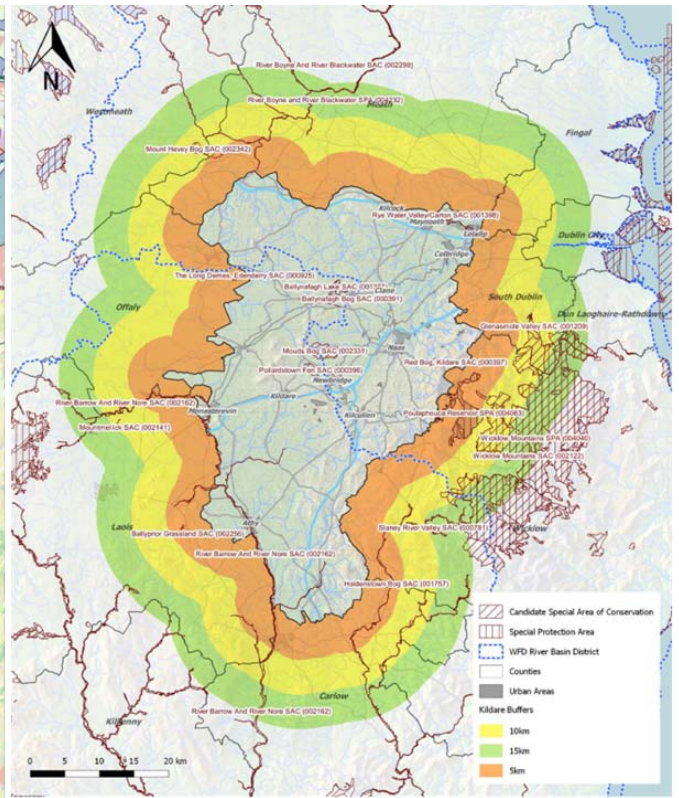
The SEA, AA and SFRA processes suggested various measures for integration into the Plan as provisions (policies and objectives) or parts of provisions in order to mitigate the effects of implementing the Plan and to contribute towards environmental protection and sustainable development.

Mitigation measures are measures envisaged to prevent, reduce and, as fully as possible, offset any significant adverse impacts on the environment of implementing the Plan.

Table 2.1 details key mitigation measure(s) which have been integrated into the Plan under various environmental headings. The integration of these measures into the Plan occurred over a number of iterations and was informed by various communications through the SEA, AA and SFRA processes.



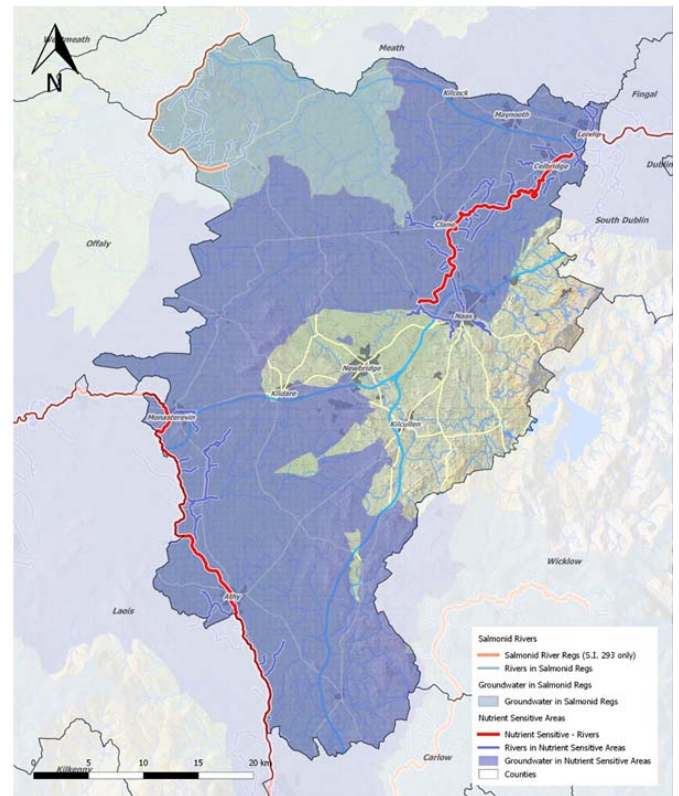
CORINE Land Cover Map



SPAs and SACs with names and 15km Buffer Areas

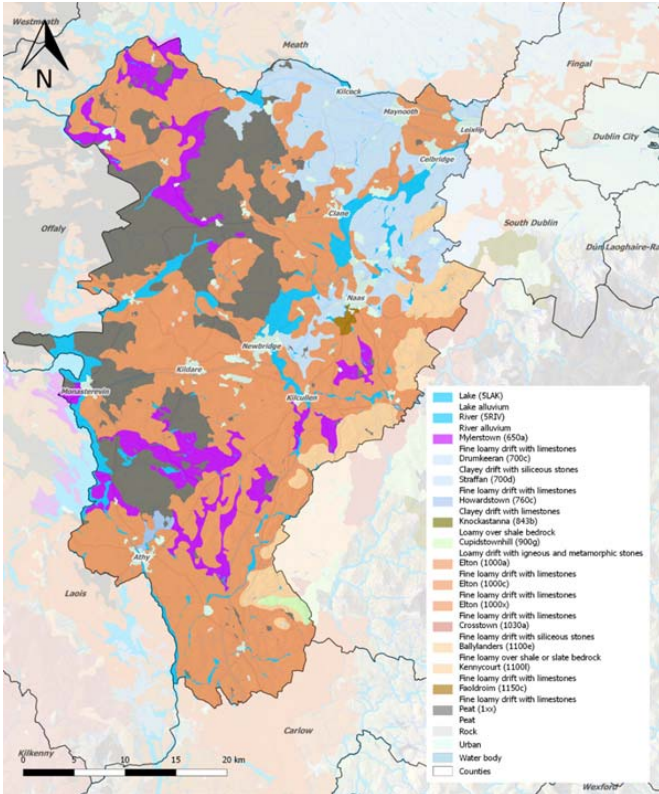


NHAs and pNHAs within County

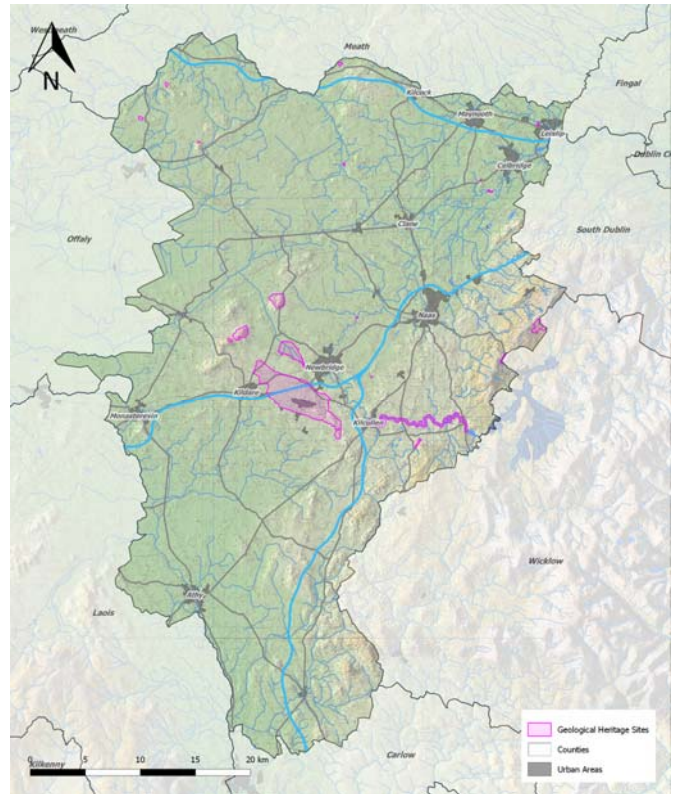


Designated Salmonid Waters

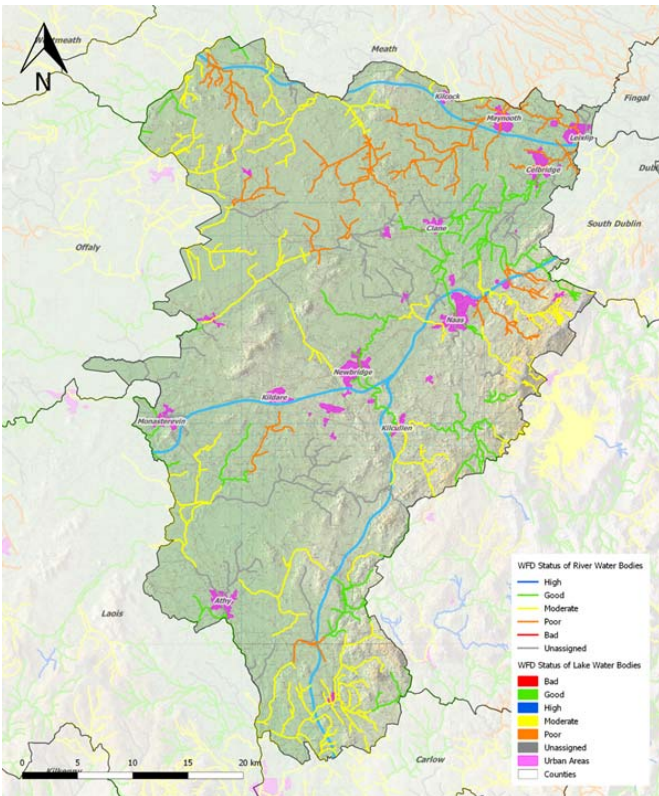
Figure 2.1 Selection of Environmental Sensitivities (1 of 3)



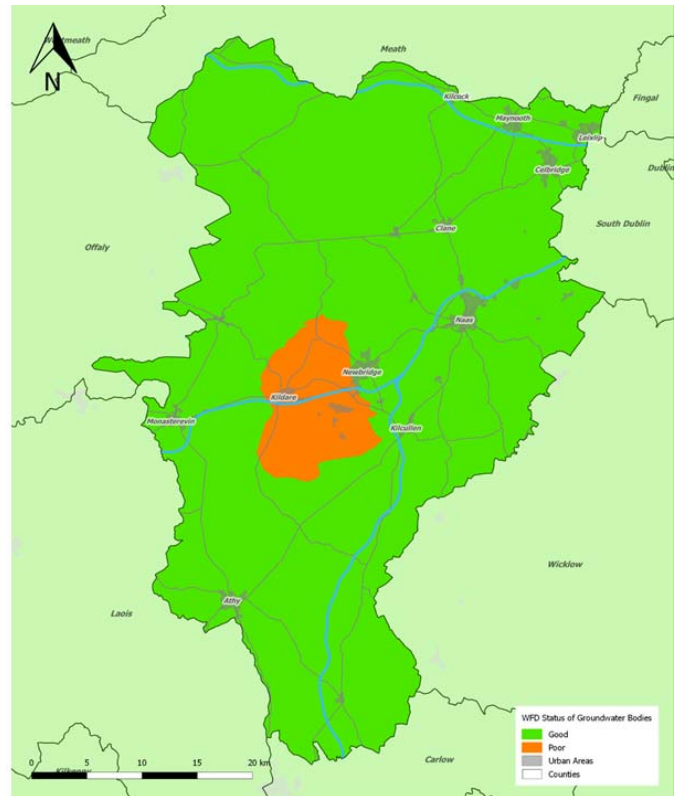
Soils



County Geological Sites

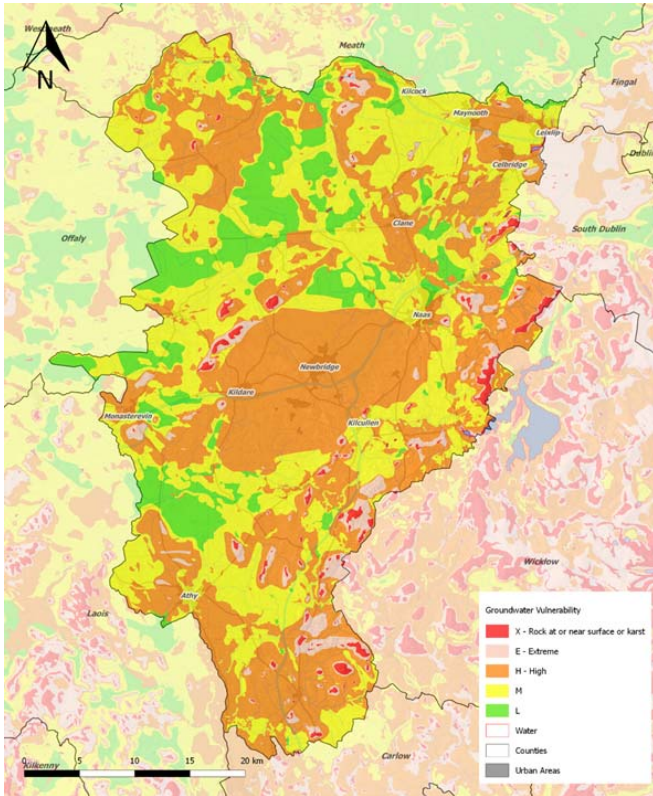


Status of Surface Waters

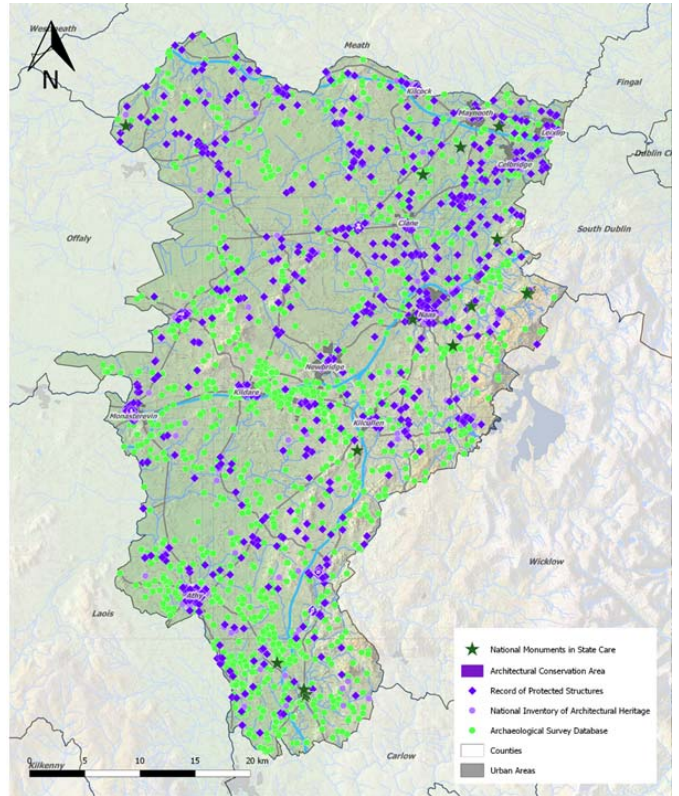


Groundwater Status

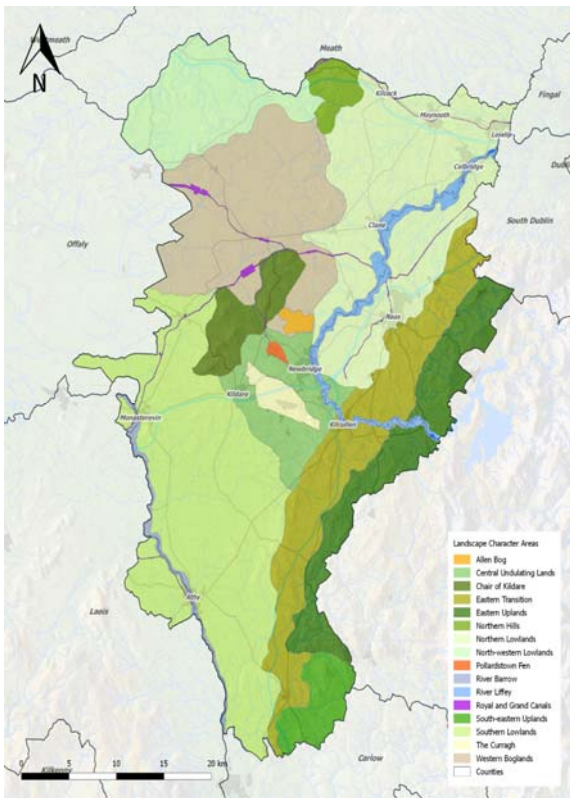
Figure 2.2 Selection of Environmental Sensitivities (2 of 3)



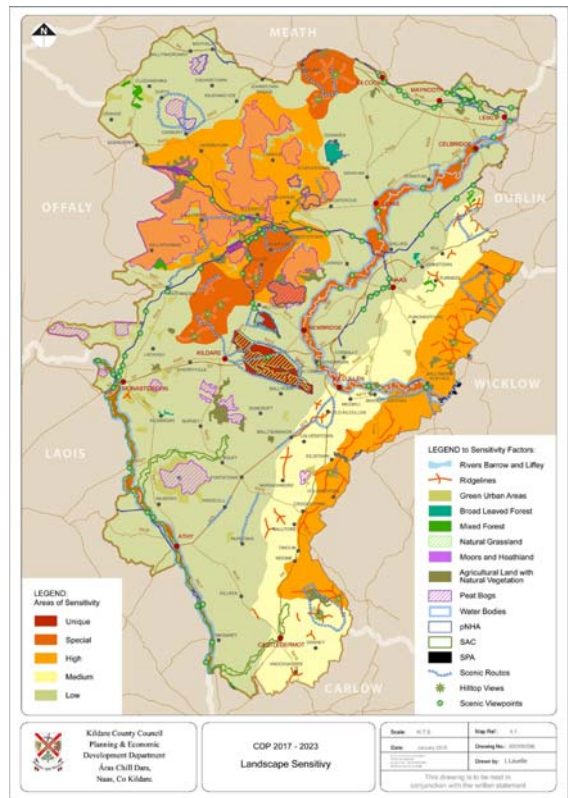
Groundwater Vulnerability



Archaeological and Architectural Heritage Designations



Landscape Category Map



Sensitivity Ratings and Factors

Figure 2.3 Selection of Environmental Sensitivities (3 of 3)

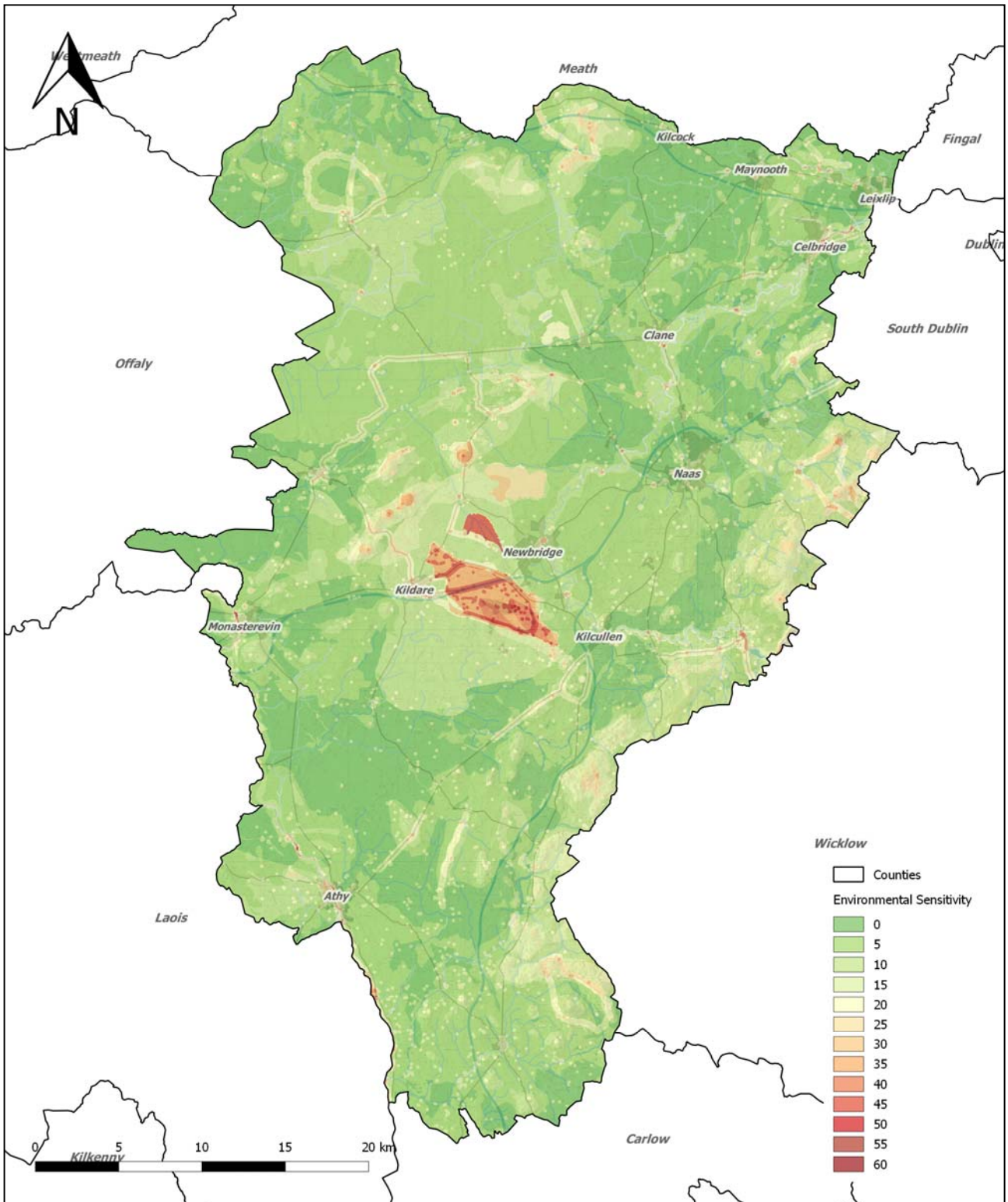


Figure 2.4 Overlay of Environmental Sensitivities

Source: CAAS (2016)

Table 2.1 Potential Effects and Mitigation Measures

Environmental Component	Potential Effect, if unmitigated	Mitigation Measures, including
Biodiversity and Flora and Fauna	<ul style="list-style-type: none"> • Arising from both construction and operation of development and associated infrastructure: loss of/damage to biodiversity in designated sites (including Natura 2000 Sites and Wildlife Sites) and Annexed habitats and species, listed species, ecological connectivity and non-designated habitats; and disturbance to biodiversity and flora and fauna • Habitat loss, fragmentation and deterioration, including patch size and edge effects • Disturbance (e.g. due to noise and lighting along transport corridors) and displacement of protected species 	<ul style="list-style-type: none"> • Chapter 13: Natural Heritage and Green Infrastructure Aim • Policies: NH 1 to NH 16, GI 1 to GI 30, WE 2, EI 16, WC 4, PF 2, WS 13 • Objectives: NHO1 to NHO 10, GIO 1 to GIO 5 • See also various provisions under the environmental components of soil and water
Population and Human Health	<ul style="list-style-type: none"> • Potential interactions if effects upon environmental vectors such as water and air are not mitigated 	<ul style="list-style-type: none"> • Environmental Services Aim • Policies: ECD 21, ECD 22, RS 3, RS 4, WM 2, WM 3, PC 1 to PC 10, WS 7 • Objectives: RSO 3 • See also various provisions under the environmental components of soil, water, air and material assets
Soil	<ul style="list-style-type: none"> • Damage to the hydrogeological and ecological function of the soil resource 	<ul style="list-style-type: none"> • Policies: ECD 21, ECD 22, • See also various provisions under the environmental components of water and material assets
Water	<ul style="list-style-type: none"> • Adverse impacts upon the status of water bodies, including downstream bathing waters, arising from changes in quality, flow and/or morphology • Increase in the risk of flooding 	<ul style="list-style-type: none"> • Policies WS 9, WS 10, WS 11, WS12, WQ 1 to WQ 6, SW 1, SW 2, SW 3, SW 18 • (Flood) Policies SW 1 to SW 20 • (Flood) Objectives WDO 1, WDO 3, WDO 5 and WDO 7 • See also various provisions under the environmental components of soil and material assets
Material Assets	<ul style="list-style-type: none"> • Failure to provide adequate and appropriate waste water treatment (water services infrastructure and capacity is needed to ensure the mitigation of potential conflicts) • Failure to comply with drinking water regulations and serve new development with adequate drinking water that is both wholesome and clean (water services infrastructure and capacity is needed to ensure the mitigation of potential conflicts) • Increases in waste levels 	<ul style="list-style-type: none"> • Water Infrastructure and Flooding Strategy, Objectives • Policies WS 1 to WS13, WW 1 to WW 13, WM 1 to WM 18 • Objectives WDO 1, WDO 8

Environmental Component	Potential Effect, if unmitigated	Mitigation Measures, including
Air and Climatic Factors	<ul style="list-style-type: none"> Emissions to air including greenhouse gas emissions and other emissions 	<ul style="list-style-type: none"> Policies EB 1, RE 10, GI 23 Objectives ERO 1 Overall approach by the Plan and all provisions relating to development and sustainable mobility in the County
Cultural Heritage	<ul style="list-style-type: none"> Potential effects on protected and unknown archaeology and protected architecture arising from construction and operation activities 	<ul style="list-style-type: none"> Policies PS 1 to PS 21, CH1 to CH 9, VA 1 to VA8, ACA 1 to ACA 5, AH 1 to AH 11, AH 1 to AH 2, HF 1 Objectives PSO 1 to PSO 8, ACO 1 to ACO 4, CHO 1 to CHO 2, VAO 1 to VAO 2, ACAO 1 to ACAO 3, AO 1 to AO 5, HFO 1 to HFO 2
Landscape	<ul style="list-style-type: none"> Occurrence of adverse visual impacts and conflicts with the appropriate protection of statutory designations relating to the landscape 	<ul style="list-style-type: none"> Policies LA 1 to LA 7, LU 1 to LU 5, TA 1 to TA 4, WC 1 to WC 8, CU 1 to CU 4, PF 1 to PF 3, LL 1 to LL 5, SR 1 to SR2, WV 1 to WV 3 Objectives LO 1 to LO 11

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 Submissions

3.2.1 Introduction

As environmental authorities identified under the Planning and Development (SEA) Regulations, as amended, the following authorities were sent SEA scoping notices indicating that submissions or observations in relation to the scope and level of detail of the information to be included in the environmental report could be made to the Council: Environmental Protection Agency, Department of Communications, Energy and Natural Resources, Department of Agriculture, Fisheries and Food, Department of the Environment, Community and Local Government, Department of Arts, Heritage and the Gaeltacht, Wexford County Council, Meath County Council, Offaly County Council, Laois County Council, Carlow County Council, South Dublin County Council, Fingal County Council, Wicklow County Council.

Submissions were made by Environmental Protection Agency (EPA) and the Department of Arts, Heritage and the Gaeltacht (DAHG) during the SEA Scoping/ Plan Preparation process. These submissions influenced the scope of the assessments as detailed in the final SEA Scoping Report.

Specific comments were provided by the EPA on:

- The need to be consistent with key relevant higher-level plans/programmes in the planning hierarchy and be set in the context of national SEA Regulations, Planning and Development Regulations and associated DECLG Guidelines.

- Ensuring compliance with the requirements of Article 6 of the Habitats Directive. In addition to high level goals and challenges the EPA also outlined the key environmental aspects to be incorporated into the SEA and Draft Plan;
- The support and provision of a safe and secure drinking water supply;
- The support the provision of adequate and appropriate waste water treatment;
- The protection of surface and ground water resources;
- Promoting the protection of Biodiversity;
- Referencing and promoting the implementation of Noise Directive and associated national regulations;
- Promoting the integration of land use zoning and development to existing and planned availability of water infrastructure and capacity;
- Taking into account areas of high Radon concentrations to be taken into account;
- The protection of designated landscapes;
- The protection of designated Geological and Geomorphological NHAs/pNHAs;
- Promoting development of Integrated Traffic Management Plans.

The submission from the DAHG provided information/suggestions on topics including AA, SEA and protection of ecology. A key objective to protect the historic core of the county's towns and villages was also recommended (this was integrated into Plan Objective AO 3).

3.3 Submissions on the Environmental Report

Furthermore, submissions were made on the Draft Plan and SEA Environmental Report while they were on public display and some of these resulted in updates being made to the SEA documents.

Submissions included those made by the Environmental Protection Agency, the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs, the Department of

Communications Energy and Natural Resources, Bord na Móna, and Element Power Ireland. Updates made to the Environmental Report on foot of these submissions include the following:

- To insert Figure 4.13 Overlay Mapping of Environmental Sensitivities into the Non-Technical Summary
- To expand upon the detail regarding the SFRA that was undertaken on the Plan in the SEA Environmental Report Non-Technical Summary
- To include text before Table 10.1
- To give reference in Appendix I 'Relationships with Legislation and Other Plans and Programmes' to the SEA Environmental Report, plans/policies that have not yet been adopted
- To add text concerning Water Service provisions and associated effects to Section 8 of the SEA Environmental Report.
- To amend text in Section 4.3.4 Candidate Special Areas of Conservation.
- To update SEO B3 to become the following 'To avoid significant impacts on relevant habitats, species, environmental features or other sustaining resources in designated sites including Wildlife Sites³ and to ensure compliance with the Wildlife Act 1976-2010 with regard to the protection of species listed within these acts
- To update the evaluations in the SEA Environmental Report for 'Water based activities and developments along river and canal banks such as walking and cycling routes'

³ The Planning and Development Act 2010 defines a 'wildlife site' as: (a) an area proposed as a natural heritage area and the subject of a notice made under section 16(1) of the Wildlife (Amendment) Act 2000, (b) an area designated as or proposed to be designated as a natural heritage area by a natural heritage area order made under section 18 of the Wildlife (Amendment) Act 2000, (c) a nature reserve established or proposed to be established under an establishment order made under section 15 (amended by section 26 of the Wildlife (Amendment) Act 2000) of the Wildlife Act 1976, (d) a nature reserve recognised or proposed to be recognised under a recognition order made under section 16 (amended by section 27 of the Wildlife (Amendment) Act 2000) of the Wildlife Act 1976, or (e) a refuge for fauna or flora designated or proposed to be designated under a designation order made under section 17 (amended by section 28 of the Wildlife (Amendment) Act 2000) of the Wildlife Act 1976.

3.4 Environmental Report

Kildare County Council prepared the Draft Kildare County Development Plan in accordance with Sections 11 and 12 of the Planning and Development Act 2000 (as amended).

SEA was undertaken on the Draft Plan in order to comply with the SEA Directive and transposing Regulations – the SEA Environmental Report contains the findings of this assessment. Appropriate Assessment (AA) was also undertaken on the Draft Plan in order to comply with the Habitats Directive and transposing Regulations – the AA Natura Impact Report contains the findings of this assessment. A Strategic Flood Risk Assessment (SFRA) was also undertaken in order to comply with the Flood Risk Management Guidelines.

The Draft Plan and associated documents, including those relating to the SEA, AA and SFRA processes, were placed on public display and submissions were invited. Submissions were responded to in a Chief Executive's Report. Some submissions resulted in updates being made to SEA, AA and SFRA documentation.

In November 2016, the Members of the Council adopted, by Resolution, proposed Material Alterations to the Draft County Development Plan.

SEA and AA Screenings were undertaken on the Proposed Material Alterations and the findings of these assessments accompanied the Proposed Material Alterations on public display.

A number of the Proposed Material Alterations were adopted as part of the final Plan (some with further modifications) and a number of Proposed Material Alterations were not adopted.

After the adoption of the Plan, the Environmental Report that was originally placed on public display alongside the Draft Plan was updated in order to take account of both recommendations contained in submissions made during the process and changes to the Draft Plan that were made on foot of submissions. This SEA Statement was also prepared.

Members of the planning authority have taken into account the findings of all relevant SEA output during their consideration of the Draft Plan and before its adoption.

Section 4 Alternative Scenarios and the Plan

4.1 Description of Alternatives

One of the critical roles of the SEA is to facilitate an evaluation of the likely environmental consequences of a range of alternative scenarios for accommodating future growth in County Kildare.

A wide range of Scenarios (1-4) were evaluated for the last (2011 to 2017) County Development Plan.

At that time, Scenario 4 'Centred Development Strategy' was chosen to be developed for the Development Plan by the Plan-making team and adopted by the Elected Members having regard to both:

1. The environmental effects which were identified by the Strategic Environmental Assessment; and
2. Planning - including social and economic – effects.

Scenario 4 envisaged a concentration of development, population and demands for infrastructural capacity into the north-eastern part of the County.

It also envisioned concentrations of growth in the central corridor where the majority of the rest of the population and development are likely to concentrate because this area is already well served by road, rail, power and gas corridors.

This strategy also envisaged sufficient levels of continued rural development to sustain the future viability of smaller more dispersed rural communities.

Since 2011, the continued low levels of economic growth have caused the trends to have conformed more closely with Scenario 3 and parts of Scenario 2.

These envisaged less balanced developments in the County with a concentration of development, population in areas with relatively high concentrations in installed infrastructure with spare capacity – existing and planned.

It also envisioned concentrations of growth in the central corridor where the majority of the rest of the population and development are likely to concentrate because this area is already well served by road, rail, power and gas corridors.

These scenarios envisaged weaker and less co-ordinated development in weaker areas – both in the south and outside of the environs of the Strategic Transportation Corridor.

Having regard to this review of outcomes it appears that the following range of Alternatives Scenarios fulfil the requirements of being realistic, capable of implementation, and representing a range of different approaches within statutory and operational requirements of the County Development Plan.

Note that the experience gained from examining the outcomes of actual development versus the scenarios that were examined for the previous (2011 – 2017) Kildare County Development Plan provides increased certainty and a lower range of differences for the scenarios that are examined in this assessment.

Pressure for development will return rapidly which will put pressure on plans and places where growth has been muted since 2006. As growth resumes differences between these scenarios – slight at first – will quickly diverge leading to markedly different environmental outcomes.

The scenarios suggest that the principal difference that are likely to arise will be in rural areas, small settlements and areas at a remove from the Strategic Transportation Corridors. In Scenario One and Scenario Two the plans for these areas will be less effective – leading to higher environmental pressures. Scenario Three, by contrast, envisages plan-led development that will significantly improve synergies causing increased, but balanced and more sustainable growth – throughout the County – with least impacts on the environment.

Scenario One 'Business as Usual' Trend Change

There will be very strong, but weakly co-ordinated growth within and adjacent to major settlements within the Strategic Transportation Corridor and the Metropolitan Areas of the North East. Elsewhere there will be markedly weaker growth due to the lack of integrated provision of services and accommodation. There will be strong and persistent patterns of social and economic imbalance between the north-east and southern parts of the county.

Scenario Two 'Mixed Planning' Uneven Outcomes

There will be very strong growth within the Strategic Transportation Corridor and the Metropolitan Areas of the North East. The need to co-ordinate key infrastructural resources – especially energy, water services and transportation – will enforce very strong planning and co-ordination in these areas. Elsewhere a variety of very local interests will militate against an orderly or sustainable provision of services which will produce uneven patterns of settlement and enterprise.

Scenario Three 'Strong Planning' Balanced Outcomes

This Scenario envisages an effective County Development Plan ensuring that the Metropolitan areas of the North East will continue to grow strongly and quickly – but with increased connectivity into the strengthening urban centres of Kildare – rather than Dublin.

This Scenario also envisages that through the planning framework provided by the County Development Plan, the new Kildare Local Economic and Community Plan will make a difference in bringing higher levels of economic development and prosperity to more peripheral settlements and rural areas outside of the Strategic Transportation Corridors and in the south of the County.

4.2 Evaluation of Alternative Scenarios

The table overleaf summarises the evaluation of environmental effects of the alternative scenarios that is provided in the SEA Environmental Report.

The provisions of the alternatives are evaluated using compatibility criteria in order to determine how they would be likely to affect the status of the Strategic Environmental Objectives or SEOs. SEOs used by the assessment are as follows:

- **SEO B1** To ensure compliance with the Habitats and Birds Directives with regard to the protection of Natura 2000 Sites and Annexed habitats and species
- **SEO B2** To ensure compliance with Article 10 of the Habitats Directive with regard to the management of features of the landscape which - by virtue of their linear and continuous structure or their function act as stepping stones (designated or not) - are of major importance for wild fauna and flora and essential for the migration, dispersal and genetic exchange of wild species
- **SEO B3** To avoid significant impacts on relevant habitats, species, environmental features or other sustaining resources in designated sites including Wildlife Sites and to ensure compliance with the Wildlife Acts 1976-2010 with regard to the protection of listed species
- **SEO PHH1** To protect populations and human health from exposure to incompatible land uses
- **SEO S1** To avoid damage to the hydrogeological and ecological function of the soil resource
- **SEO W1** To maintain and improve, where possible, the quality and status of surface waters
- **SEO W2** To prevent pollution and contamination of ground water
- **SEO W3** To comply as appropriate with the provisions of the Planning System and Flood Risk Management: Guidelines for Planning Authorities (DEHLG, 2009)
- **SEO M1** To serve new development with adequate and appropriate waste water treatment
- **SEO M2** To serve new development with adequate drinking water that is both wholesome and clean
- **SEO M3** To reduce waste volumes, minimise waste to landfill and increase recycling and reuse
- **SEO C1** To reduce travel related emissions to air and to encourage modal change from car to more sustainable forms of transport
- **SEO CH1** To protect archaeological heritage including entries to the Record of Monuments and Places and/or their context
- **SEO CH2** To protect architectural heritage including entries to the Record of Protected Structures and Architectural Conservation Areas and their context
- **SEO L1** To minimise significant adverse visual impacts within and adjacent to the County

The SEOs and the alternatives are arrayed against each other to identify which interactions - if any - would cause effects on specific components of the environment. Where the appraisal identifies a conflict with the status of an SEO the relevant SEO code is entered into the conflict column - e.g. B1 which stands for the SEO likely to be affected - in this instance 'to ensure compliance with the Habitats Directive with regard to the protection of Natura 2000 Sites and Annexed habitats and species'.

The interactions identified are reflective of likely significant environmental effects⁴:

1. Interactions that would be likely to improve the status of a particular SEO would be likely to result in a significant positive effect on the environmental component to which the SEO relates. The extent of positive effects which would be likely to occur varies and there are three 'likely to improve columns'.
2. Interactions that would potentially conflict with the status of an SEO and would be likely to be mitigated are divided into three groups:
 - Interactions that would conflict the least with the status of SEOs – these would be likely to be mitigated to a greater degree and significant adverse effects would be less likely;
 - Interactions that would conflict more with status of SEOs - these would be likely to be mitigated to an intermediate degree and significant adverse effects would be more likely.
 - Interactions that would conflict the most with status of SEOs - these would be likely to be mitigated to a lesser degree and significant adverse effects would be more likely.

⁴ These effects include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects.

Table 4.1 Evaluation of Alternative Scenarios against SEOs

	Likely to Improve status of SEOs to a greater degree	Likely to Improve status of SEOs to an intermediate degree	Likely to Improve status of SEOs to a lesser degree	Least Potential Conflict with status of SEOs - likely to be mitigated to greater degree, significant adverse effects less likely	More Potential Conflict with status of SEOs - likely to be mitigated to an intermediate degree, significant adverse effects more likely	Most Potential Conflict with status of SEOs - likely to be mitigated to lesser degree, significant adverse effects more likely
Scenario 1:	This scenario will place most pressure on environmental resources throughout the County due to the dispersed and uncoordinated expenditure on important infrastructure – which will lessen its effectiveness. Further environmental pressure would result from the overwhelming of the provisions of Local Area Plans by excess (unplanned) and inappropriate development within the immediate environs of larger settlements. This will lead to increasing development taking place outside a strong and well-regulated planning framework. These factors would lead to mixed – occasionally poor – environmental outcomes in other areas – especially in more rural or underdeveloped settlements.					
			B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1			B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1
Scenario 2:	Along with Scenario 3, Scenario 2 results in least pressure on environmental resources in the north-east and within the immediate environs of larger settlements because development will take place within a strong and well-regulated planning framework. Environmental outcomes would be mixed in other areas – especially in more rural or underdeveloped settlements. In these areas development, would be less orderly and not accompanied by relevant services.					
		B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1			B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1	
Scenario 3:	Strategic, planned concentrations of development would occur within established settlements results in: higher levels of sustainable development and environmental protection and management; least pressure on natural resources or water-based infrastructure throughout the County; and lowest overall impacts on other environmental resources (ranging from air quality and landscape through to cultural heritage) because development will take place within a strong and well-regulated planning framework.					
	B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1			B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1		

4.3 Reasons for choosing the Draft Plan in light of the other alternatives dealt with

The alternative scenario for the County Development Plan which has emerged from the planning/SEA process is Scenario 3 (see Section 4.1 above).

This scenario contributes the greatest extent towards sustainable development and environmental protection and management is the preferred and selected alternative scenario which has been developed for the strategy for the Plan which focuses on building strong urban centres while protecting the rural hinterlands.

The Plan was developed by the Planning Team, placed on public display as the Draft Plan and eventually adopted by the Elected Members having regard to both:

1. The environmental considerations, which are summarised above; and
2. Planning - including social and economic - effects which also considered by the Council.

By complying with appropriate mitigation measures - including those which have been integrated into the Plan (please refer also to Section 2) - potential adverse environmental effects which could arise as a result of implementing this scenario would be likely to be avoided, reduced or offset.

Section 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 details the measures which will be used in order to monitor the likely significant effects of implementing the Plan.

Monitoring can enable, at an early stage, the identification of unforeseen adverse effects and the undertaking of appropriate remedial action.

5.2 Indicators and Targets

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

Table 5.1 overleaf shows the indicators and targets which have been selected for monitoring the likely significant environmental effects of implementing the Plan, if unmitigated.

The Monitoring Programme may be updated to deal with specific environmental issues - including unforeseen effects - as they arise. Such issues may be identified by the Council or identified to the Council by other agencies.

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.

Internal monitoring of the environmental effects of grants of permission in the Council will provide monitoring of various indicators

and targets on a grant of permission by grant of permission⁵ basis. Where significant effects - including positive, negative, cumulative and indirect - have the potential 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 Reporting and Responsibility

A stand-alone Monitoring Report on the significant environmental effects of implementing the Plan will be prepared in advance of the beginning of the review of the Plan. This report should address the indicators set out below.

The Council is responsible for the ongoing review of indicators and targets, collating existing relevant monitored data, the preparation of monitoring evaluation report(s), the publication of these reports and, if necessary, the carrying out of corrective action.

Kildare County Council is responsible for the implementation of the SEA Monitoring Programme including:

- Linking SEA monitoring output with the mid-term review of the Development Plan;
- Monitoring specific indicators and identifying any significant effects, including cumulative effects;
- Reviewing the effectiveness of monitoring/mitigation measures during the lifetime of the Plan; and
- Identifying any cumulative effects.

⁵ The likely significant effects of development proposals on environmental sensitivities are further determined during the development management process. By documenting this determination (e.g. whether a proposed development will impact upon a Protected Structure or whether a proposed development can be adequately served with water services) while granting permissions, or at a later date, the requirement to monitor the effects of implementing the Plan can be achieved.

5.5 Thresholds

Thresholds at which corrective action will be considered include:

- The occurrence of flood events;
- Court cases taken by the Department of Arts, Heritage and the Gaeltacht regarding impacts upon archaeological heritage including entries to the RMP;
- Complaints received from statutory consultees regarding avoidable environmental impacts resulting from development which is granted permission under the Plan;
- Boil notices on drinking water; and
- Fish kills.

Table 5.1 Selected Indicators, Targets and Monitoring Sources

Environmental Component	Selected Indicator(s)	Selected Target(s)	Source (Frequency)
Biodiversity, Flora and Fauna	B1: Conservation status of habitats and species as assessed under Article 17 of the Habitats Directive	B1: Maintenance of favourable conservation status for all habitats and species protected under National and International legislation to be unaffected by implementation of the Plan ⁶	<ul style="list-style-type: none"> • Internal monitoring of likely significant environmental effects of grants of permission (grant by grant). • Department of Arts, Heritage and the Gaeltacht report of the implementation of the measures contained in the Habitats Directive - as required by Article 17 of the Directive (every 6 years). • Department of Arts, Heritage and the Gaeltacht's National Monitoring Report for the Birds Directive under Article 12 (every 3 years). • Consultations with the NPWS (at monitoring evaluation - see Section 5.4).
	B2: Percentage loss of functional connectivity without remediation resulting from development provided for by the Plan	B2: No significant ecological networks or parts thereof which provide functional connectivity to be lost without remediation resulting from development provided for by the Plan	<ul style="list-style-type: none"> • Internal monitoring of likely significant environmental effects of grants of permission (grant by grant). • CORINE mapping resurvey (every c. 5 years). • Review of Council Ecological Network Mapping
	B3i: Number of significant impacts on relevant habitats, species, environmental features or other sustaining resources in designated sites including Wildlife Sites resulting from development provided for by the Plan B3ii: Number of significant impacts on the protection of listed species	B3i: Avoid significant impacts on relevant habitats, species, environmental features or other sustaining resources in designated sites including Wildlife Sites resulting from development provided for by the Plan B3ii: No significant impacts on the protection of listed species	<ul style="list-style-type: none"> • Internal monitoring of likely significant environmental effects of grants of permission (grant by grant). • Consultations with the NPWS (at monitoring evaluation - see Section 5.4).
Population and Human Health	PHH1: Occurrence (any) of a spatially concentrated deterioration in human health arising from environmental factors resulting from development provided for by the Plan, as identified by the Health Service Executive and Environmental Protection Agency	PHH1: No spatial concentrations of health problems arising from environmental factors as a result of implementing the Plan	<ul style="list-style-type: none"> • Consultations with EPA and Health Service Executive (at monitoring evaluation - see Section 5.4).
Soil	S1: Soil extent and hydraulic connectivity	S1: To minimise reductions in soil extent and hydraulic connectivity	<ul style="list-style-type: none"> • Internal monitoring of likely significant environmental effects of grants of permission (grant by grant).

⁶ Except as provided for in Section 6(4) of the Habitats Directive, viz. There must be:

- (a) no alternative solution available;
(b) imperative reasons of overriding public interest for the plan to proceed; and
(c) adequate compensatory measures in place.

SEA Statement for the Kildare County Development Plan 2017-2023

Environmental Component	Selected Indicator(s)	Selected Target(s)	Source (Frequency)
Water	W1i: Classification of Overall Status (comprised of ecological and chemical status) under the European Communities Environmental Objectives (Surface Waters) Regulations 2009 (SI No. 272 of 2009) W1ii: Mandatory and Guide values as set by the EU Bathing Water Directive and transposing Bathing Water Quality Regulations (SI No. 79 of 2008)	W1i: Not to cause deterioration in the status of any surface water or affect the ability of any surface water to achieve 'good status' ⁷ by 2015 W1ii: To achieve - as a minimum - Mandatory values and, where possible, to achieve Guide values as set by the EU Bathing Water Directive and transposing Bathing Water Quality Regulations (SI No. 79 of 2008)	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission (grant by grant). Data issued under the Water Framework Directive Monitoring Programme for Ireland (multi-annual). EPA <i>the Quality of Bathing Water in Ireland</i> reports.
	W2: Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC	W2: Not to affect the ability of groundwater to comply with Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission (grant by grant). Data issued under the Water Framework Directive Monitoring Programme for Ireland (multi-annual).
	W3: Number of incompatible developments granted permission on lands which pose - or are likely to pose in the future - a significant flood risk	W3: Minimise developments granted permission on lands which pose - or are likely to pose in the future - a significant flood risk in compliance with <i>The Planning System and Flood Risk Management Guidelines for Planning Authorities</i>	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission (grant by grant).
Material Assets	M1: Number of new developments granted permission which can be adequately and appropriately served with waste water treatment over the lifetime of the Plan	M1: All new developments granted permission to be connected to and adequately and appropriately served by waste water treatment over the lifetime of the Plan	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission (grant by grant).
	M2: Number of non-compliances with the 48 parameters identified in the European Communities (Drinking Water) Regulations (No. 2) 2007 which present a potential danger to human health as a result of implementing the Plan	M2: No non-compliances with the 48 parameters identified in the European Communities (Drinking Water) Regulations (No. 2) 2007 which present a potential danger to human health as a result of implementing the Plan	<ul style="list-style-type: none"> EPA The Provision and Quality of Drinking Water in Ireland reports (multi-annual). EPA Remedial Action List (every quarter).
	M3i: Total collected and brought household waste M3ii: Packaging recovered (t) by self-complying packagers	M3i: Minimise increases in and, where possible, reduce household waste generation M3ii: Maximise increases in packaging recovered (t) by self-complying packagers	<ul style="list-style-type: none"> EPA National Waste Reports EPA Ireland's Environment Reports
Air and Climatic Factors	C1: Percentage of population travelling to work, school or college by public transport or non-mechanical means	C1: An increase in the percentage of the population travelling to work, school or college by public transport or non-mechanical means	<ul style="list-style-type: none"> CSO Population Data (every c. 5 years).

⁷ Good status as defined by the WFD equates to approximately Q4 in the current national biological classification of rivers as set out by the EPA.

SEA Statement for the Kildare County Development Plan 2017-2023

Environmental Component	Selected Indicator(s)	Selected Target(s)	Source (Frequency)
Cultural Heritage	CH1: Percentage of entries to the Record of Monuments and Places - including Areas of Archaeological Potential and Significance (and the context of the above within the surrounding landscape where relevant) - protected from significant adverse effects arising from new development granted permission under the Plan	CH1: Protect entries to the Record of Monuments and Places - including Areas of Archaeological Potential and Significance (and their context of the above within the surrounding landscape where relevant) from significant adverse effects arising from new development granted permission under the Plan	<ul style="list-style-type: none"> • Internal monitoring of likely significant environmental effects of grants of permission (grant by grant). • Consultation with Department of Arts, Heritage and the Gaeltacht (at monitoring evaluation - see Section 5.4).
	CH2: Percentage of entries to the Record of Protected Structures and Architectural Conservation Areas and their context protected from significant adverse effects arising from new development granted permission under the Plan	CH2: Protect entries to the Record of Protected Structures and Architectural Conservation Areas and their context from significant adverse effects arising from new development granted permission under the Plan	<ul style="list-style-type: none"> • Internal monitoring of likely significant environmental effects of grants of permission (grant by grant). • Consultation with Department of Arts, Heritage and the Gaeltacht (at monitoring evaluation - see Section 5.4).
Landscape	L1: Number of complaints received from statutory consultees regarding avoidable adverse visual impacts on the landscape resulting from development which is granted permission under the Plan	L1: No developments permitted which result in avoidable adverse visual impacts on the landscape resulting from development which is granted permission under the Plan	<ul style="list-style-type: none"> • Internal monitoring of likely significant environmental effects of grants of permission (grant by grant).