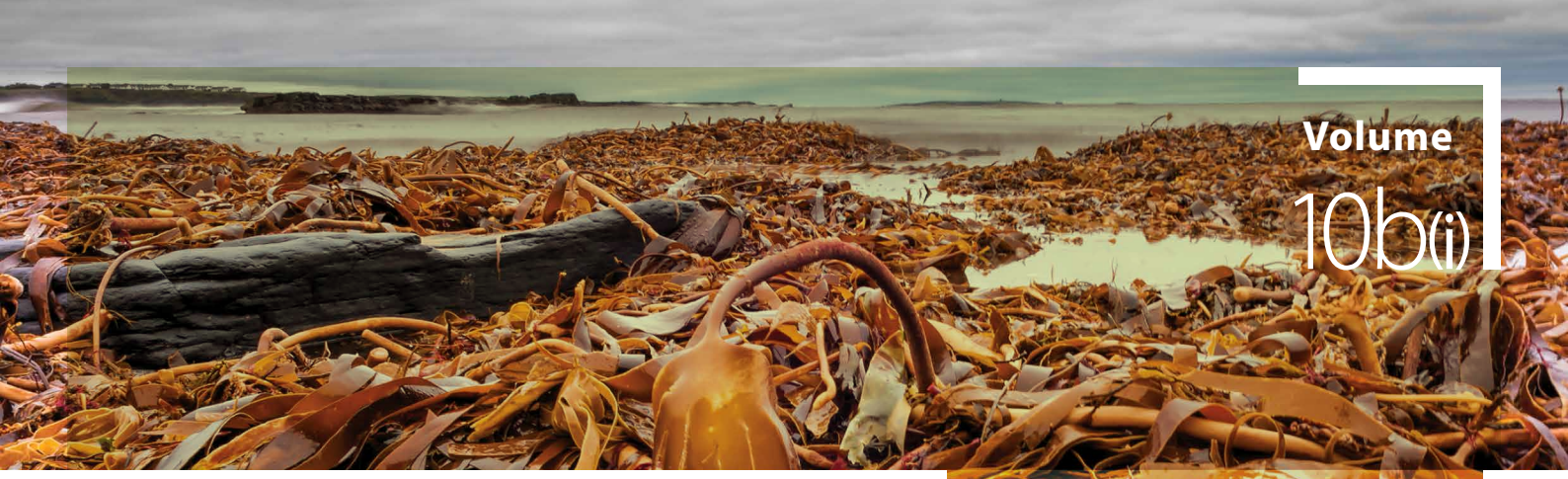

Volume
10b(i)

Comhairle Contae an Chláir
Clare County Council

Clare County Development Plan 2017–2023

Strategic Environmental Assessment

Non Technical Summary

Note to Reader

On the 28th of March 2017, the Minister for the environment, Community and Local Government, Simon Coveney T.D. issued a Ministerial Direction pursuant to Section 31 of the Planning and Development Act 2000 (as amended) in relation to the adopted Clare County Development Plan 2017-2023. The Minister directed that:-

(i) Remove written objective TOU7 Ardcloony and accompanying text, page 19, from Volume 3C: Killaloe Municipal District – Writing Statement and Maps – Interim Version

(ii) Amend the maps for Killaloe which set out the objectives for Ardcloony by changing the zoning objective for lands currently indicated as "TOU7" (tourism) to un-zoned.

The Ministerial Direction took effect from the 28th March 2017.

This document has been altered in accordance with the above Ministerial Direction and supersedes the Clare County Development Plan 2017-2023 Volume 10a Natura Impact Report, dated 25th January 2017.

The Ministerial Direction has also necessitated the alteration of the following accompanying documents:

- ***Volume 1 Written Statement and Maps***
- ***Volume 3c Killaloe Municipal District Written Statement and Maps***
- **Volume 10 Strategic Environmental Assessment**
  - **Part ii) Environmental Report**
  - **Part iii) SEA Statement**
- **Volume 10a Natura Impact Report**
- **Volume 10 Appropriate Assessment Concluding Statement**

Please note that Volumes 1, 3 and 10, as altered on the 28th March 2017, supersede Volumes 1, 3 and 10, dated 25th January 2017.

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Abbreviations

ACA	*Architectural Conservation Area*
CCDP	*Clare County Development Plan*
cSAC	*Candidate Special Area of Conservation*
CSO	*Central Statistics Office*
DoCCAE	*Department of Communications, Climate Action and Environment*
DoAHRRGA	*Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs*
EDEN	*Environmental Data Exchange Network*
EEA	*European Environmental Agency*
EIA	*Environmental Impact Assessment*
ER	*Environmental Report*
EU	*European Union*
GHG	*Green House Gas Emissions*
GIS	*Geographical Information Systems*
GSI	*Geological Survey of Ireland*
HDA	*Habitats Directive Assessment*
IGHP	*Irish Geological Heritage Programme*
IPCC	*Integrated Pollution Prevention and Control*
LCEA	*Limerick Clare Energy Agency*
MWRA	*Mid West Regional Authority*
MWRPG's	*Mid West Regional Planning Guidelines*
NDP	*National Development Plan*
NGO	*Non Governmental Organisation*
NHA	*Natural Heritage Area*
NIAH	*National Inventory of Architectural Heritage*
NPWS	*National Parks and Wildlife Service*
NRA/NTA	*National Roads Authority/National Transport Authority*
NREAP	*National Renewable Energy Action Plan*
NEEAP	*National energy Efficiency Action Plan*
NSS	*National Spatial Strategy*
NTS	*Non Technical Summary*
OPW	*Office of Public Works*
P/P	*Plan/Programme*
PE	*Population Equivalent*
pNHA	*Proposed Natural Heritage Area*
PPP	*Public Private Partnership*
PRP	*Pollution Reduction Programmes*
RBD	*River Basin District*
RBMP	*River Basin Management Plans*
RMP	*Record of Monuments and Places*
RPGs	*Regional Planning Guidelines*
RPS	*Record of Protected Structures*
S.I. No.	*Statutory Instrument Number*
SAA	*Shannon Airport Authority*

SAC	*Special Area of Conservation*
SDZ	*Strategic Development Zone*
SEA	*Strategic Environmental Assessment*
SEO	*Strategic Environmental Objective*
SFRA	*Strategic Flood Risk Assessment*
SIRBD	*Shannon International River Basin District*
SO_2	*Sulphur dioxide*
SPA	*Special Protection Area*
SuDS	*Sustainable Drainage Systems*
WFD	*Water Framework Directive*
WMU	*Water Management Units*
WRBD	*Western River Basin District*
WSIP	*The Water Services Investment Programme*
WWTP	*Waste Water Treatment Plant*

Glossary

Alternatives (Reasonable)	Alternatives should take into account the objectives and geographical scope of the Plan or project (P/P). There can be different ways of fulfilling the P/P objectives, or of dealing with environmental problems. The alternatives should be realistic, capable of implementation and should fall within the legal and geographical competence of the authority concerned.
Appropriate Assessment	An assessment of the effects of a plan or project on the Natura 2000 network. The Natura 2000 network comprises Special Protection Areas under the Birds Directive, Special Areas of Conservation under the Habitats Directive and Ramsar sites designated under the Ramsar Convention (collectively referred to as European sites).
Baseline environment	A description of the present state of the environment of the P/P area.
Baseline Survey	Description of the existing environment against which future changes can be measured.
Biodiversity and Flora and Fauna	Biodiversity is the variability among living organisms from all sources including inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part; this includes diversity within species, between species and of ecosystems' (United Nations Convention on Biological Diversity 1992). Flora is all of the plants found in a given area. Fauna is all of the animals found in a given area.
Biotic Index Values (Q Values)	The Biotic Index Values, or Q values, are assigned to rivers in accordance with biological monitoring of surface waters - low Q ratings, as low as Q1, are indicative of low biodiversity and polluted waters, and high Q ratings, as high as Q5, are indicative of high biodiversity and unpolluted waters. Good status as defined by the Water Framework Directive equates to approximately Q4 in the national scheme of biological classification of rivers as set out by the Environmental Protection Agency.
Birds Directive	Council Directive of 2nd April 1979 on the conservation of wild birds (79/409/EEC).
Built Environment	Refers to both architectural heritage and archaeological heritage.
Cumulative Effects	Effects on the environment that result from incremental changes caused by the strategic action together with other past, present, and reasonably foreseeable future actions. These effects can result from individually minor but collectively significant actions taking place over time or space
Data	Includes environmental data, proxy data, any other relevant statistical data.
Ecology	The study of relationships between living organisms and between organisms and their environment (especially animal and plant communities), their energy flows and their interactions with their surroundings.
Environmental Assessment	The preparation of an environmental report, the carrying out of consultations, the taking into account of the environmental report and the results of the consultations in decision-making and the provision of information on the decision (in accordance with Articles 4 to 9 of the SEA Directive).
Environmental	Environmental resources, issues and trends in the area affected by

Characteristics	the P/P.
Environmental Impact Assessment (EIA)	An ordered exercise designed to enable the environmental impacts of a proposed development/project to be anticipated before the project is carried out.
Environmental Impact Statement (EIS)	A statement of results from the ordered exercise which focuses on anticipating all environmental impacts of significance of a proposed development, prior to implementation or construction, and which specifies those measures which should be taken to eliminate or mitigate such impacts to an acceptable level.
Environmental indicator	An environmental indicator is a measure of an environmental variable over time, used to measure achievement of environmental objectives and targets.
Environmental objective	Environmental objectives are broad, overarching principles which should specify a desired direction of environmental change.
Environmental Problems	Annex I of Directive 2001/42/EC of the European Parliament and of the Council of Ministers, of 27 June 2001, on the assessment of the effects of certain plans and programmes on the environment (the Strategic Environmental Assessment Directive) requires that information is provided on 'any existing environmental problems which are relevant to the plan or programme', thus, helping to ensure that the proposed strategic action does not make existing environmental problems worse. Environmental problems arise where there is a conflict between current environmental conditions and ideal targets. If environmental problems are identified at the outset they can help focus attention on important issues and geographical areas where environmental effects of the plan or programme may be likely.
Environmental Receptors	Include biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage (including architectural and archaeological) and landscape as listed in the SEA Directive. This list is not exhaustive, and can include other receptors which may arise for a particular P/P.
Environmental Report (ER)	A document required by the SEA Directive as part of an environmental assessment which identifies, describes and evaluates the likely significant effects on the environment of implementing a plan or programme.
Environmental Targets	A target usually underpins an objective often having a time deadline that should be met and should be accompanied by limits or thresholds.
Environmental Vectors	Environmental vectors are environmental components, such as air, water or soil, through which contaminants or pollutants, which has the potential to cause harm, can be transported so that they come into contact with human beings.
Evolution of the Baseline	A description of the future state of the baseline in the absence of a plan or programme assuming 'business as usual' or 'do nothing' scenarios, depending on which is more reasonable for the P/P being proposed.
Geographical Information System (GIS)	is a computer system that collects, stores, views and analyses geographical information and commonly creates maps as an output
Geology	Science of the earth, including the composition, structure and origin

	of its ROCKS
Habitat	Area in which an organism or group of organisms live.
Habitats Directive	Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora.
Habitats Directive Assessment	An assessment of the effects of a plan or project on the Natura 2000 network. The Natura 2000 network comprises Special Protection Areas under the Birds Directive, Special Areas of Conservation under the Habitats Directive and Ramsar sites designated under the Ramsar Convention (collectively referred to as European sites)
Hierarchy of Plans	Both higher and lower level P/P relevant to the P/P being assessed.
Indirect effect	Any aspect of a P/P that may have an impact (positive or negative) on the environment, but that is not a direct result of the proposed P/P. May also be referred to as a secondary effect
Interrelationships	Associations or linkages, related to environmental impact of the proposed P/P usually on environmental receptors.
Issues Paper	Paper produced as part of the consultation process, usually for Land Use Plans, to facilitate consultation with stakeholders on key issues.
Key environmental issues	Those significant environmental issues, which are of particular relevance and significance within a P/P area and/or the zone of influence of that P/P. These issues should be identified during SEA Scoping process.
Key environmental receptors	Aspects of the environment likely to be significantly impacted by the proposed P/P.
Material Assets	Critical infrastructure essential for the functioning of society such as: electricity generation and distribution, water supply, wastewater treatment transportation etc.
Member States	Those countries that belong to the European Union.
Mitigate	To make or become less severe or harsh
Mitigation Measures	Mitigation measures are measures envisaged to prevent, reduces 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 involves ameliorating significant negative effects. Where there are significant negative effects, consideration should be given in the first instance to preventing such effects or, where this is not possible, to lessening or offsetting those effects. Mitigation measures can be roughly divided into those that: avoid effects; reduce the magnitude or extent, probability and/or severity of effects; repair effects after they have occurred; and compensate for effects, balancing out negative impacts with other positive ones.
Monitoring	A continuing assessment of environmental conditions at, and surrounding, the plan or programme. This determines if effects occur as predicted or if operations remain within acceptable limits, and if mitigation measures are as effective as predicted. The primary purpose of monitoring is to identify significant environmental effects which arise during the implementation stage against those predicted during the plan preparation stage.
Monitoring Programme	A detailed description of the monitoring arrangements to be put in place to carry out the monitoring of the impact of the proposed P/P on the environment including; frequency of monitoring, who has responsibility for monitoring, and responses if monitoring identifies

	significant negative impacts.
Natura 2000 Site	Designated European Site. In combination Special Areas of Conservation and Special Protection Areas will constitute Natura 2000 network of protected sites for habitats and species across the EU.
Natural Heritage	Refers to habitats and species of flora and fauna.
Non-technical summary	A summary of the findings of the ER, summarized under the headings listed in Annex 1 of the SEA Directive that can be readily understood by decision-makers and by the general public. It should accurately reflect the findings of the ER.
Plan or Programme	Including those co-financed by the European Community, as well as any modifications to them: - which are subject to preparation and/or adoption by an authority at national, regional or local level or which are prepared by an authority for adoption, through a legislative procedure by Parliament or Government, and - which are required by legislative, regulatory or administrative provisions. In accordance with the SEA Directive, P/P that require SEA are those that fulfill the conditions listed in Article 2(a) and Article 3 of the SEA Directive.
Post-mitigation residual impacts	Environmental effects that remain after mitigation measures have been employed.
Protected Structure	Protected Structure is the term used in the Planning Act of 2000 to define a structure included by a planning authority in its Record of Protected Structures. Such a structure shall not be altered or demolished in whole or part without obtaining planning permission or confirmation from the planning authority that the part of the structure to be altered is not protected.
Proxy data	Is a measure of activity resulting from a P/P which provides information on environmental impact without the need for a direct measure of an environmental receptor. For example, an increase in the number of vehicles (activity resulting from a P/P) can provide information on the impact on air quality and greenhouse gases without having to measure the concentration of these parameters in the receiving environmental receptor.
Public	One or more natural or legal persons and, in accordance with national legislation or practice, their associations, organisations or groups.
Recorded Monument	A monument included in the list and marked on the map which comprises the Record of Monuments and Places that is set out County by County under Section 12 of the National Monuments (Amendment) Act, 1994 by the Archaeological Survey of Ireland. The definition includes Zones of Archaeological Potential in towns and all other monuments of archaeological interest which have so far been identified. Any works at or in relation to a recorded monument requires two months notice to the Department of the Environment, Heritage and Local Government under section 12 of the National Monuments (Amendment) Act, 1994.
Scoping	The process of deciding the content and level of detail of an SEA, including the key environmental issues, likely significant environmental effects and alternatives which need to be considered, the assessment methods to be employed, and the structure and

	contents of the Environmental Report.
Screening	The determination of whether implementation of a P/P would be likely to have significant environmental effects on the environment. The process of deciding whether a P/P requires SEA.
SEA Directive	Directive 2001/42/EC 'on the assessment of the effects of certain plans and programmes on the environment'.
SEA Statement	A statement summarising: - how environmental considerations have been integrated into the P/P - how the ER, the opinions of the public and designated authorities, and the results of transboundary consultations have been taken into account - the reasons for choosing the P/P as adopted in the light of other reasonable alternatives.
Secondary effect	Effects that are not a direct result of the P/P, same as indirect effect.
Sensitivity	Potential for significant change to any element in the environment that is subject to impacts.
Short-term effects	These are typical of those effects that may occur during construction stage of a development, for example, the increased traffic going to and from a site during construction, or, the noise associated with construction activities.
Significant effects	Effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors.
SPA	Special Protection Area under Birds Directive (79/409/EEC), designated for bird species listed in Annex I of the Directive, in particular internationally important concentrations of migratory and wetland birds. Designation is focused on habitats of these species.
Statutory Authority	The authority by which or on whose behalf the plan or programme is prepared.
Statutory Instrument	Any order, regulation, rule, scheme or bye-law made in exercise of a power conferred by statute.
Strategic Actions	Strategic actions include: Policies, which may be considered as inspiration and guidance for action and which set the framework for plans and programmes; Plans, sets of co-ordinated and timed objectives for the implementation of the policy; and Programmes, sets of projects in a particular area.
Strategic Environmental Assessment (SEA)	Strategic Environmental Assessment (SEA) is the formal, systematic evaluation of the likely significant environmental effects of implementing a plan or programme before a decision is made to adopt it. The objective of this Directive is to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development, by ensuring that, in accordance with this Directive, an environmental assessment is carried out of certain plans and programmes which are likely to have significant effects on the environment
Strategic	Strategic Environmental Objectives (SEOs) are methodological

Environmental Objective (SEO)	measures which are developed from international, national and regional policies which generally govern environmental protection objectives and against which the environmental effects of the County Development Plan can be tested. The SEOs are used as standards against which the objectives of the County Development Plan can be evaluated in order to help identify areas in which significant adverse impacts are likely to occur, if not mitigated.
Synergistic effect	Effects that, when totalled, result in a greater or lesser effect than the sum of the individual effects.
Threshold	Magnitude of a project, which if exceeded, will trigger the requirement for an Environmental Impact Assessment.
Transboundary Consultation	If a plan or programme is being prepared that is likely to have significant effects on the environment in another Member State, or where a Member State likely to be significantly affected so requests, the Member State in whose territory the plan or programme is being prepared shall, before the plan or programmes adoption or submission to the legislative procedure, forward a copy of the plan or programme and the relevant environmental report to the other Member State.
Zone of Influence	The area over which a plan can impact on the environment.

1. Introduction

1.1 Purpose of this Summary

This is the non-technical summary of the environmental report for the Strategic Environmental Assessment (SEA) of the Clare County Development Plan 2017 – 2023. SEA is a key process that promotes sustainable development across plans and programmes. The purpose of the SEA is to formally and systemically assess the likely significant effects of implementing a plan or programme, in this instance the Clare County Development Plan 2017-2023. (CCDP)

The SEA Environmental Report (ER) and Non-Technical Summary (NTS) set out the likely significant environmental effects of the proposed plan on County Clare over the lifetime of the plan. The report identified the significant environmental effects of the Plan on the environment and discusses mitigation measures to reduce these effects. The purpose of the ER is to identify, describe, and evaluate the likely significant effects on the environment of implementing the proposed Clare County Development Plan 2017-2023 and should be read in conjunction with the Clare CDP itself.

The ER and NTS documents the SEA process and is the key consultation document in the SEA process and facilitates interested parties to comment on the environmental issues associated with the Clare CDP.

1.2 Key steps in SEA, AA and how they relate to the preparation of the Clare County Development Plan 2017-2023

The ER contains the findings of the assessment of the likely significant effects on the environment, of implementing the Clare CDP. SEA is required under the European Directive (2001/42/EC) on the Assessment of the Effects of Certain Plans and Programmes on the Environment (the SEA Directive), was transposed into national legislation in Ireland by the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (S.I. 435/2004) and the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (S.I. 436/2004). Further to the transposition of this Directive two amending regulations were signed into Irish law on the 3rd of May 2011 (amending the original transposing regulations):

- **European Communities (Environmental Assessment of Certain Plans and Programmes) (Amendment) Regulations 2011,** (S.I. No. 200 of 2011), amending the *European Communities* (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (S.I. No. 435 of 2004),
- **Planning and Development (Strategic Environmental Assessment) (Amendment Regulations 2011,** (S.I. No. 201 of 2011), amending the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (S.I. No. 436 of 2004).

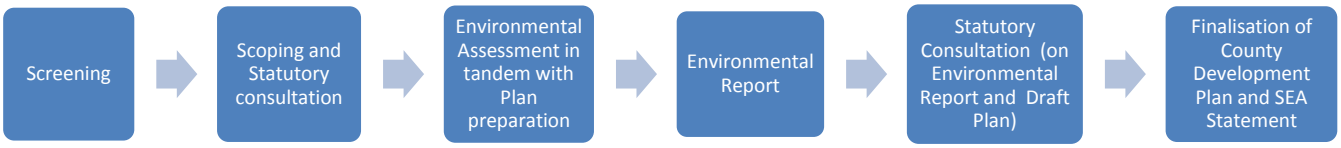

Figure 1.0 Summary of SEA Stages

Strategic Environmental Assessment (SEA) is a process for evaluation, at the earliest appropriate stage, the environmental effects of plans or programmes before they are adopted. It also gives the public and other interested parties an opportunity to comment and to be kept informed of decisions and how they were made. An early consideration of environmental concerns in the planning process creates an opportunity for environmental factors to be considered explicitly alongside other factors such as social, technical or economic aspects.

The preparation of the Clare County Development Plan 2017-2023 requires a full SEA as outlined in **Chapter 1** of the **SEA ER.** The SEA process can be categorised into a number of stages as summarised in **Table 1.0**.

Table 1.0 Summary of the Strategic Environmental Assessment Process

Stage	Comments
Screening	A screening was undertaken to determine the need for environmental assessment of the Clare County Development Plan 2017-2023 taking account of relevant criteria set out in schedule 2A.
Scoping	Scoping was conducted to determine the baseline environmental parameter data and issues to be considered further in the Environmental Report. Submissions received from Environmental Authorities will be incorporated into the Environmental Report.
Consultation with the **Environmental Authorities**	Consultation will be conducted throughout the SEA process and Plan making process.
Preparation of Environmental Report Clare County Development Plan 2017-2023 including: • **Environmental baseline data** • **Environmental Objectives** • **Development Plan Objectives and zoning assessment** • **Consultation with EPA, etc.** • **Assessment of Alternatives** • **Mitigation measures identified** • **Monitoring measures identified**	A multi disciplinary team is established to create policy consistent documents and to examine the effects on the environment of implementing the Plan. Objectives and land-use zoning included in the Plan will be assessed through- out the Plan making process. Alternative options will be identified and assessed culminating in defining a preferred alternative for the Development Plan. Feedback from on-going Plan preparation process and Environmental Report preparation. Mitigation measures will be discussed and chosen. Monitoring will be incorporated with any existing methods.
Non-Technical Summary	A summary of the findings of the Environmental Report, summarised under the headings listed in Annex 1 of the SEA Directive, which can be readily understood by decision-makers and by the general public. It should accurately reflect the findings of the Environmental Report.

Strategic Environmental Assessment (SEA) Statement	An outline of how environmental considerations are integrated into the Plan; how the Environmental Report, the opinions of the public and statutory authorities and the results of trans-boundary consultations are taken into account, and the reasons for choosing the Plan as adopted in the light of other reasonable alternatives.
Monitoring the Plan	Monitoring environmental effects over the lifetime of the Plan

The County Development Plan sets out an overall strategy for the proper planning and sustainable development of the County over a six year period. This will be the 7th County Development Plan to be prepared since 1964. The new County Development Plan is a strategic document setting the vision and direction for the future development of County Clare for the benefit of all its citizens up to 2023. The existing County Development Plan was adopted on the 10th January, 2011. Section 11 of the Planning and Development Act, 2000 (as amended) requires the Planning Authority to prepare a new Development Plan every six years for its jurisdiction and to commence working on a new plan within 4 years of its adoption of the plan. As the current plan was adopted on the 10th January 2011, the process of review commenced on the 9th of January 2015 with the publication of an Issues Booklet, public notice followed by public consultation sessions.

This new County Development Plan differs in that it incorporates lands previously within the remit of, and governed by the Ennis and Environs Development Plan 2008-2014 and the Kilrush Development Plan 2014 -2020. On adoption, the new County Development Plan will govern the overall development of the County including the towns of Ennis and Kilrush incorporating all previous Local Area Plans prepared, with the exception of Shannon.

Table 2.0 provides an outline of the development plan review, the SEA process and the Appropriate Assessment.

Integration of the County Development Plan, Strategic Environmental Assessment and Appropriate Assessment Processes - The SEA legislation and guidelines highlight the importance of the integration between the preparation of the Development Plan and the SEA and AA processes. **Table 2.0** shows how the processes have been integrated throughout. The iterative nature of the SEA process is such that the County Development Plan is informed by environmental considerations throughout the preparation of the Plan and the development of the Plan objectives and land-use zonings. The Natura Impact Report is a separate document to the Environmental Report both of which accompany the County Development Plan.

Table 2.0 The integrated processes of preparation and consultation for the Clare County Development Plan 2017-2023, Strategic Environmental Assessment and Appropriate Assessment

Clare County Development Plan 2017-2023	Strategic Environmental Assessment (SEA)and Appropriate Assessment (AA)
Commence preparation of Draft Plan Pre-Draft Consultation Period **1st October 2015 – 25th November 2015**	Commence review and preparation of SEA Scoping Process Pre-Draft Consultation Period **1st October 2015 – 25th November 2015**
Commencement of public display and invitation of submissions on Draft Plan, Environmental Report and Natura Impact Report **8th December 2015** Closing date for public submissions on Draft Plan **29th February 2016**	
Chief Executives Report on Submissions received to Draft Plan, Environmental Report and Natura Impact Report (for Elected Members) **19th May 2016**	
Consideration of Chief Executive's Report by Elected Members (resolve to alter or make, amend or revoke Draft Plan, Environmental Report and Natura Impact Report) **25th July 2016**	
	Determination of Requirement for SEA/AA in accordance with S.12 of the Planning & Development Act (within 2 weeks of resolution)[1]
Public Display of Amendments to Draft Plan and consultation period **13th September 2016 – 12th October 2016 (inclusive)***	Public Display of Amendments to Environmental Reports and consultation period **13th September 2016 – 12th October 2016 (inclusive)**
Submission of Chief Executive's Report to Members on submissions on the proposed material alterations to the Draft Plan, Environmental Report Addendum and Natura Impact Report **8th November 2016 (inclusive)**	
Consideration of Chief Executives Report by Elected Members (resolve to make, amend or revoke Draft Plan, Environmental Report and Natura Impact Report) **19th December 2016 (inclusive)**	
The Council received a notice of intent in accordance with S.31 of the Planning & Development Act, 2000 (as amended) from Minister for Housing, Planning, Community and Local Government, to issue a direction in relation to a specific element of the Clare County Development Plan 2017-2023 **23rd January 2017**	
Clare County Development Plan 2017-2023 comes into effect 4 weeks after adoption, accompanied by the Environmental Report and SEA Statement and the Natura Impact Report **25th January 2017**	
Notice of Draft Ministerial Direction on the making of the Clare County Development Plan 2017-2023. Public Display of Draft Ministerial Direction **31st January – 13th February 2017 (inclusive)**	
Chief Executive's Report on submissions and observations received on notice of intent to issue a Ministerial Direction in relation to the making of the Clare County Development Plan 2017-2023 submitted to the Minister for Housing, Planning, Community and Local Government and to the elected Members of Clare County Council **10th March 2017**	
Minister for Housing, Planning, Community and Local Government, decision to issue Direction	

relating to the Clare County Development Plan 2017-2023 **28th March 2017**
Notice of Ministers decision to issue a Direction issued to Elected Members and the Public **29th March 2017**
Note1 – The Planning & Development Act 2010 allows for the Chief Executive to allocate an additional discretionary time period to allow for the carrying out of SEA/AA in respect of any proposed material alterations to the Draft Plan.

1.3 County Clare

County Clare is situated on the west coast of Ireland in the province of Munster, covering an area of 318,784 hectares (787,715 acres) and home to a population of 117,196 (Census 2011). It is bounded by the counties of Galway to the north, Tipperary to the east and Limerick to the south. Its natural boundaries comprise of Galway Bay to the north, the River Shannon and Lough Derg to the east and the Shannon Estuary to the south and the Atlantic seaboard to the west.

Ennis is the County town and the administrative centre of County Clare as well as a designated Hub town. Shannon is a large town in the south of the County and is a major industrial and employment centre for the whole Mid-West region and is a designated Gateway under the National Spatial Strategy. The towns of Kilrush, Ennistymon and Scarriff provide services for the surrounding hinterland. The County is divided into four municipal districts; West Clare, Ennis, Shannon and Killaloe as shown in **Figure 2.0** below.

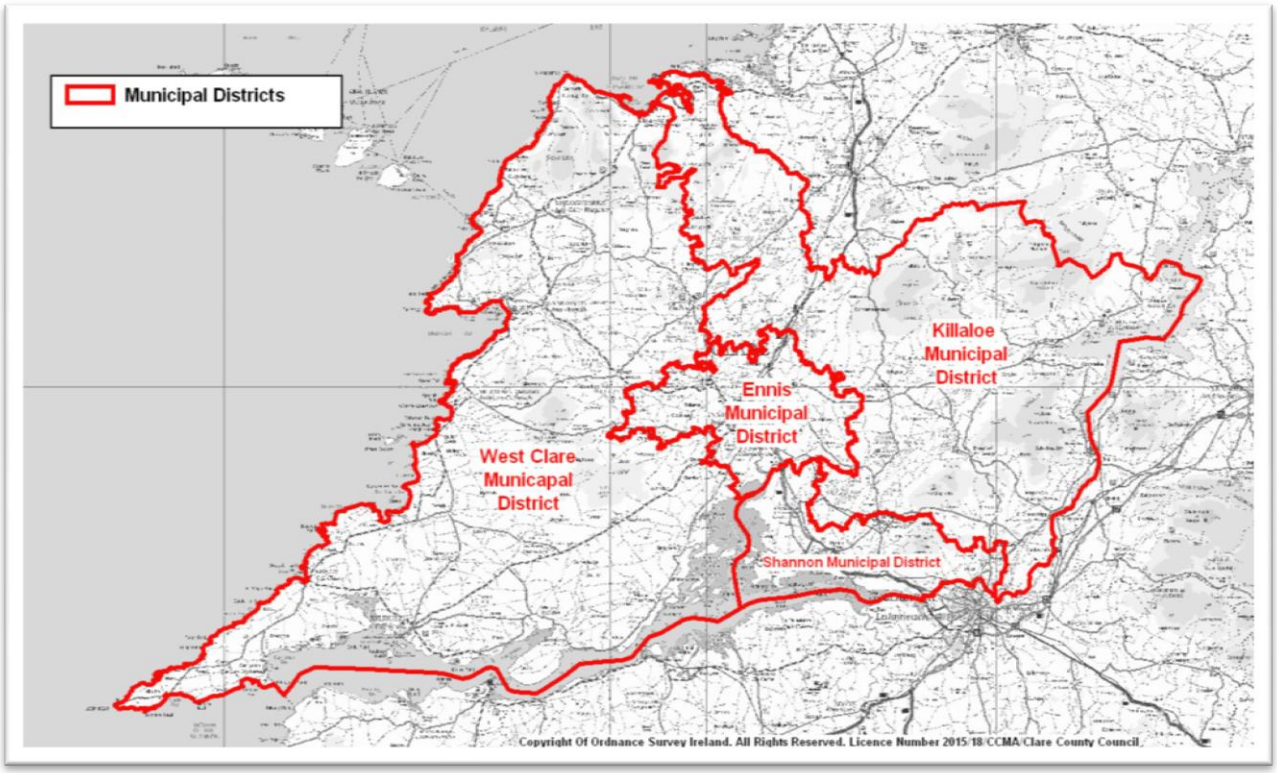

Figure 2.0 County boundary showing geographical extent of municipal districts

1.3 Content of the Clare CDP

The Clare County Development Plan 2017-2023 takes into account national and regional planning guidelines, strategies and policy documents. It is also informed by particular national and global environmental issues that are accepted as being critical to the formulation and implementation of sustainable development. They include climate change, flooding, renewable and alternative energy. In addition, the Clare County Development Plan 2017-2023 has been prepared in compliance with the requirements of the Strategic Environmental Assessment Directive (2001/42/EC) and the EU Habitats Directive (92/43/EEC).

The Clare County Development Plan 2017-2023 has regard to other relevant local policy documents in County Clare. The objectives contained in the County Development Plan complement the goals and aims of the Clare County Council Local Economic & Community Plan 2015-2021, Clare County Council Corporate Plan, the Limerick and Clare Sports and Physical Recreation Strategy and the Clare Traveller Accommodation Strategy. Moreover, the development plan commits to equality, accessibility and gender proofing throughout the preparation of the plan, policy formation and its implementation.

The format of the Clare County Development Plan 2017-2023 reflects the challenges and opportunities facing the county over the period of the plan as well as the specific and unique issues pertaining to land-use and the socio-economic development of the county.

The Clare County Development Plan 2017-2023 is the primary policy document for planning policy throughout the functional area of Clare County Council. The plan also contains settlement plans for all of towns and villages in the county, with the exception of Shannon town. Shannon, as the designated Gateway, has its own dedicated local area plan. This provides the user with a simplified and user-friendly approach to land-use and planning in the county.

The plan has been written and presented in a user-friendly manner. To assist this, a definition of the technical terms used is provided in the glossary of terms.

The Clare County Development Plan 2017-2023 consists of 10 volumes, as follows:

Volume 1 - Written Statement

This contains the written text and constitutes the main body of the document outlining the vision, Core Strategy and objectives for the different policy areas addressed by the development plan. The development plan contains the mandatory objectives as required by the Planning and Development Act 2000 (as amended), as specified in Section 1.1.1 above.

Volume 2 - Maps

This volume contains all the large scale maps referred to in Volume 1 and which give effect to the designations as contained in the written statement.

Volume 3 – Municipal District Settlement Plans

This volume contains individual settlement plans and land use zoning details for each of the towns and villages in the municipal districts of the County as follows:

Volume 3(a) – Ennis Municipal District Settlement Plans

Volume 3(b) – Shannon Municipal District Settlement Plans

Volume 3(c) – Killaloe Municipal District Settlement Plans

Volume 3(d) – West Clare Municipal District Settlement Plans

Volume 4 - Record of Protected Structures

A Protected Structure is a structure that is considered to be of special interest from an architectural, historical, archaeological, artistic, cultural, scientific, social and technical point of view. There are over 600 Protected Structures in the Clare County Development Plan and details of all Protected Structures are entered in this Record of Protected Structures.

Volume 5 – Clare County Wind Energy Strategy

This volume comprises a detailed county-wide Wind Energy Strategy, supplemented by maps which set out Clare County Council's strategy for informing wind energy development, having regard to economic, environmental and visual issues.

Volume 6 – Clare Renewable Energy Strategy 2017-2023

This volume outlines the renewable energy resource that is deliverable within County Clare including issues such as micro-renewable energy and energy storage.

Volume 7 – Strategic Integrated Framework Plan (SIFP) for the Shannon Estuary

This volume comprises the SIFP, an inter-jurisdictional land and marine-based framework to guide the future development and management of the Shannon Estuary.

Volume 8 – Retail Strategy for the Mid-West

This volume comprises the Retail Strategy for the Mid-West region, which is intended to provide a strategic region-wide approach to achieving a balance in retail development.

Volume 9 – Joint Housing Strategy for Clare Local Authorities and Limerick City & County Councils 2010-2017

This Volume comprises a joint Housing Strategy, prepared in accordance with Part V of the Planning and Development Act 2000 (as amended) and covering the functional areas of Limerick County Council, Limerick City Council and Clare County Council.

Volume 10 Environmental Appraisal of the Plan

This Volume of the Plan comprises a suite of environmental assessments, in full compliance with the requirement of the Habitats Directive, the Strategic Environmental Assessment Directive and the Flood Directive as follows:

Volume 10a Natura Impact Report

Volume 10b (i) Strategic Environmental Assessment – Non Technical Summary

Volume 10b (ii)	Strategic Environmental Assessment – Environmental Report
Volume 10b (iii)	Strategic Environmental Assessment - Statement
Volume 10c	Strategic Flood Risk Assessment

2. Relationship to other plans, policies and programmes

The Clare County Development Plan 2017 - 2023 nestles within a clear hierarchy of spatial policy documents. This hierarchy of strategies, policies, plans, etc. detailed in Chapter 1 of the Environmental Report, follows a format which commences with high level International and/or EU Directives and Policy documents, feeding progressively downwards into site specific local plans, and their policies and objectives.

This County Development Plan is important in terms of the development of the County, and it must also adhere to policy and strategic options which are pre-determined by higher level plans, guidelines, etc. The County Development Plan will be affected by, and will affect a wide range of other relevant plans and programmes, and environmental legislation, policies and objectives. It is therefore important to identify relevant plans and programmes which will influence the CCDP 2017-2023 that must be reviewed in the context of SEA.

It is clear from this analysis that a distinction must be made between different sets of objectives, which have an influence on the preparation of the Clare County Development Plan 2017-2023. International and National strategies and policies have a strong role to play in establishing higher level agendas such as climate change, while the County Plan objectives are more specific and localised in their orientation. Additionally, a third set of objectives, i.e. environmental objectives (see Chapter 6 – Strategic Environmental Objectives, Targets and Indicators) must also be taken into account in this Review.

In reviewing other plans, the following questions were asked;

- Does the Plan contribute to the fulfillment of objectives and goals set in other Plans?
- To what degree are the goals and objectives set in other plans and programmes impacted by the Plan?

The findings of the review helped define the objectives for the SEA and informed the assessment of alternative options. Some of the key Plans, Programmes and Policies of key relevance to Clare County Council and the development of the County Development Plan include;

- The National Spatial Strategy 2002 – 2020
- EU Birds and Habitats Directive
- Floods Directive
- The Drinking Water Directive
- Clare Wind Energy Strategy 2011 – 2017
- Clare Renewable Energy Strategy 2014 -2020
- Irish Water Services Strategic Plan (including the associated SEA and AA) 2015

3. Current Environmental Baseline in County Clare

Chapter 5 of the SEA ER describes the environmental baseline for the development plan area. The baseline information presents the environmental context within which the Clare County Development Plan 2017-2023 will operate and the opportunities, constraints and targets placed on the Plan in this regard. The environmental data is described in line with the legislative requirements of the SEA Directive and Regulations, as amended, under the following environmental parameter headings:

- Biodiversity, Flora and Fauna
- Population, Human Health and Quality of Life
- Soil and Geology
- Air and Climate
- Water
- Material Assets
- Cultural Heritage
- Landscape

Each parameter and its interrelationships with the other environmental parameters are discussed under each parameter section. SEA baseline data required for the Plan review or assessment was collated under the following headings;

- Key Legislation
- Description of the parameter in the Plan Area
- Issues and Threats in the Plan area
- Evolution of the parameter in the absence of the Plan
- Data gaps/difficulties
- Inter-relationship with Other Environmental Parameters
- SEA Recommendations

A considerable amount of data was gathered, collated and reviewed in preparing the SEA Environmental Report and Non Technical Summary associated with the Plan. However, there were a number of areas where data did not exist was dated, was not freely available or it was not possible to extract it to a county level. Significant gaps in the environmental parameters data are discussed under each parameter section. Maps relating to each environmental parameter are located in Chapter 5 of the Environmental Report.

3.1 Biodiversity, Flora and Fauna

The Plan area is rich in biodiversity, containing many important, and protected, habitats and species such as the Shannon Estuary, lakes, turloughs, fens, wetlands, woodlands, bats, wildfowl (duck and geese), waders, salmon, lamprey and otters. However, it also contains many other habitats which are not protected such as scrub, parks, streams, hedgerows, tree lines, roadside verges, housing estate open spaces and gardens. It is these locally important habitats and species within the landscape, including extensive areas of wetland, fens, broadleaf woodlands, grasslands and

turloughs, which provide links between the more rare and protected habitats, and are essential for the migration, dispersal and genetic exchange of wild plants and animals such as garden birds (robins, wrens, finches, etc.) and migrant summer visitors (swallows, cuckoos, warblers, etc), otters, hedgehogs, bats, pigmy shrew and other Irish mammals, lamprey, salmon and other fish species, and a variety of invertebrates, including beetles, bees, butterflies, dragonflies and damselflies. They also allow for the spread of seeds, which benefit the wildflower populations of County Clare. It is recognised that many rare and protected species are reliant on locally important species, and as such the protection of common habitats and species should not be underestimated.

Within County Clare there are habitats of high biodiversity and conservation value, including the wildlife sanctuary of Mutton Island and the Keelhilla nature reserve. There are a number of designated sites associated within the county which are designated as Ramsar Sites, Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Natural Heritage Areas (NHAs).

Natural Heritage Areas also have a significant role in supporting the species using Natura 2000 sites mainly relating to mobile fauna such as mammals and birds which may use pNHAs and NHAs as "stepping stones" between European sites. Article 10 of the Habitats Directive and the Habitats Regulations 2011, place a high degree of importance on such non designated features that connect the Natura 2000 network. Features such as ponds, woodlands and important hedgerows form key "stepping stones".

Special Areas of Conservation (SACs) have been selected for protection under the European Council Directive on the conservation of natural habitats and of wild fauna and flora (92/43/EEC) - referred to as the Habitats Directive. The Habitats Directive seeks to establish the Natura 2000 network, a network of protected areas (European Sites) throughout the European Union. It is the responsibility of each Member State to designate SACs to protect habitats and species, which, together with Special Protection Areas (SPAs) designated under the Conservation of Wild Birds Directive (79/409/EEC), form the Natura 2000 network. The integrity of a European Site (referred to in Article 6.3 of the EU Habitats Directive) is determined based on the conservation status of the qualifying features of the SAC. The qualifying features for the designated sites have been obtained through a review of the Conservation Objectives available from the National Parks and Wildlife Service (NPWS).

In total, Clare has 37 Special Areas of Conservation (SACs), 10 Special Protection Areas (SPAs), 14 Natural Heritage Areas (NHAs) and 61 proposed Natural Heritage Areas (pNHAs) (Note; some of these pNHA are also SACs and SPAs)

3.1.1 Current Issues and Problems

Section 5.6.21 of the **SEA ER** outlines the key issues and threats associated with the Biodiversity, Flora and Fauna parameter. To summarise some of the key ones identified related to habitat loss, loss of biodiversity/stepping stones or features of ecological interest and an under appreciation of their importance to designated sites, impacts on water quality and of particular and recent concern in County Clare the issues surrounding Climate Change and Flooding which has significant inter-relationships with Population and Human Health.

3.1.2 Evolution of Biodiversity, Flora and Fauna in the Absence of the Clare County Development Plan

A wide range of economic and social benefits and services result from the protection of biodiversity, for example, biodiversity forms the basis of our landscapes, provides for food and clean water supplies, opportunities for waste disposal, nutrient recycling, flood storage and regulation and much more. In the absence of the new Plan pressures on natural resources would continue, though the rare or threatened habitats protected under EU and national legislation would continue to be protected.

In the absence of a Clare County Development Plan, there would be no framework to guide where development should occur and planning applications would be assessed on a case by case basis with no overall vision for the Plan area. Flora and fauna, habitats and ecological connectivity would be protected under a number of largely independent strategic actions relating to biodiversity and flora and fauna protection. The evolution of biodiversity and flora and fauna would be dependent on the rate and extent of any such developments which would take place. There would be no consideration of the inter-connections between such things as climate change and biodiversity and therefore no provisions made to contend with future climate change and how to incorporate mitigation and adaptation measures so as to avoid or minimise significant effects on biodiversity.

Development along or adjacent to the banks of rivers could result in a reduction in ecological connectivity within and between these and other habitats. Pollution of water bodies as a result of any future development along river catchments would be likely to adversely impact aquatic biodiversity and flora and fauna including salmonid species and other species protected under Annex II of the Habitats Directive. Beneficial effects upon biodiversity and flora and fauna which would be likely to arise out of the specific policies and objectives included in the new Plan would not be realised.

In the absence of the Clare County Development Plan, any greenfield development would adversely impact upon biodiversity and flora and fauna by replacing natural or semi natural habitats with artificial surfaces. The significance of such impacts would be dependent on whether such developments would result in the loss of habitats or species of importance as well as the cumulative loss and fragmentation of habitats and species as a result of all Greenfield developments. The Clare County Development Plan for the county could contribute to development occurring in a planned and sustainable manner, by incorporating ecological protection required by the Habitats Directive within an integrated planning framework for development management of vulnerable areas, which would not be presented in the absence of a Development Plan, resulting in less effective protection of ecological resources.

3.2 Population, Human Health and Quality of Life

Currently, the population of County Clare is 117,195 (CSO, 2011). The county population increased from 110,950 in 2006 to 117,195 in 2011; a growth of 5.63% for that period compared with national growth of 8.2% over the same period. Kilrush Town was the only area within County Clare which experienced a decrease in population during the period between 2002 and 2006. The same area experienced the largest decrease in population of 4.4% between 2006 and 2011. The Kilrush Rural Area was the only other area within County Clare to record a decrease in population in the 2011

census. The largest population growth within Clare between 2006 and 2011 was in Tulla Rural Area which experienced a population increase of 14.4%. The population and land allocation or zoning for housing is a critical consideration of the Clare County Development Plan and the assessment of environmental impacts associated with this provision in the SEA. Services associated with housing provision are another important element of the Clare County Development Plan and SEA and include wastewater, drinking water, transport and other infrastructural provision. These key elements have also been carefully considered in the assessment of zonings associated with Volume 3 which are documented in **Appendix B** of the **SEA ER.**

Human health can be determined by social, environmental and economic factor, amongst other. Human health may be impacted upon in a variety of ways and by a number of environmental receptors such as water, biodiversity, climate, flooding, air and major accidents, etc. Potential impacts on population and human health include inadequate water and wastewater and waste infrastructure, contamination of soils, excessive noise, flooding and poor air quality in areas where there are large volumes of traffic and the associated health impacts.

3.2.1 Current Issues and Problems

Figure 5.7.1 of the **SEA ER** outlines the District Electoral Divisions (DEDs) within County Clare as shown below in **Figure 3.0**. Key to this is the largely rural nature of the county with a strong preference for growth within the key towns of Kilrush, Ennis, Ennistymon and towards the settlements in the south east towards the Limerick border which is clearly evident in the DED population map. The key challenge for County Clare is not about retaining the young working population of the county it is about restoring it to pre recession levels. The provision of jobs and services in rural areas is key to this with the Action Plan for Jobs in the Mid West 2015 – 2017 a key document in its realization. The increasing trend of elderly age cohorts and their needs must be catered for. There needs to be incentives for the younger age cohorts within the Plan area to live within it and to encourage additional employment opportunities in order to avoid a trend of further outward movement from the Plan area in pursuit of employment.

3.2.2 Evolution of Population, Human Health and Quality of Life in the Absence of the Clare County Development Plan

In the absence of the Plan, the process for assessing the issues which affect all of the inhabitants within the Plan area will go unchecked, resulting in deterioration in the environment and lack of critical capital expenditure in terms of targeted infrastructural development and employment opportunities. The required population target will not be provided for by an adequate level of service provisions and the environmental consequences would be both deleterious and undesirable.

In order to properly plan for the sustainable development of the Plan area, it is essential to be aware of the population for whom the Plan area will cater. The assigned target population of 31,956 to 2020 must be taken into account when formulating objectives and policies for the settlements in the Plan area. In assessing demographic projections, cognisance has been taken of the impact of population projections on housing, education and workforce. In the absence of the Plan, Core Strategy and population targets; infrastructure, including services and housing provision would not be catered for accurately. Issues affecting the current population in addition to the population

increase may not be realised and could result in deterioration of the environment and mismanaged resources.

The Clare CDP also presents an opportunity to strategically plan and promote employment opportunities and increasing the attractiveness of the county as a place to work and live in. In addition the plan can ensure the proper provision of serviced lands in appropriate places and the identification of opportunity sites across the county in various settlements. In addition through the incorporation of other volumes such as the Strategic Integrated Framework Plan (SIFP) opportunities for future strategic development are incorporated into the Plan. In the absence of the plan there would be no strategic guidance or direction of resources to appropriate areas, and the cumulative effects on populations and human heath in the county could be significant.

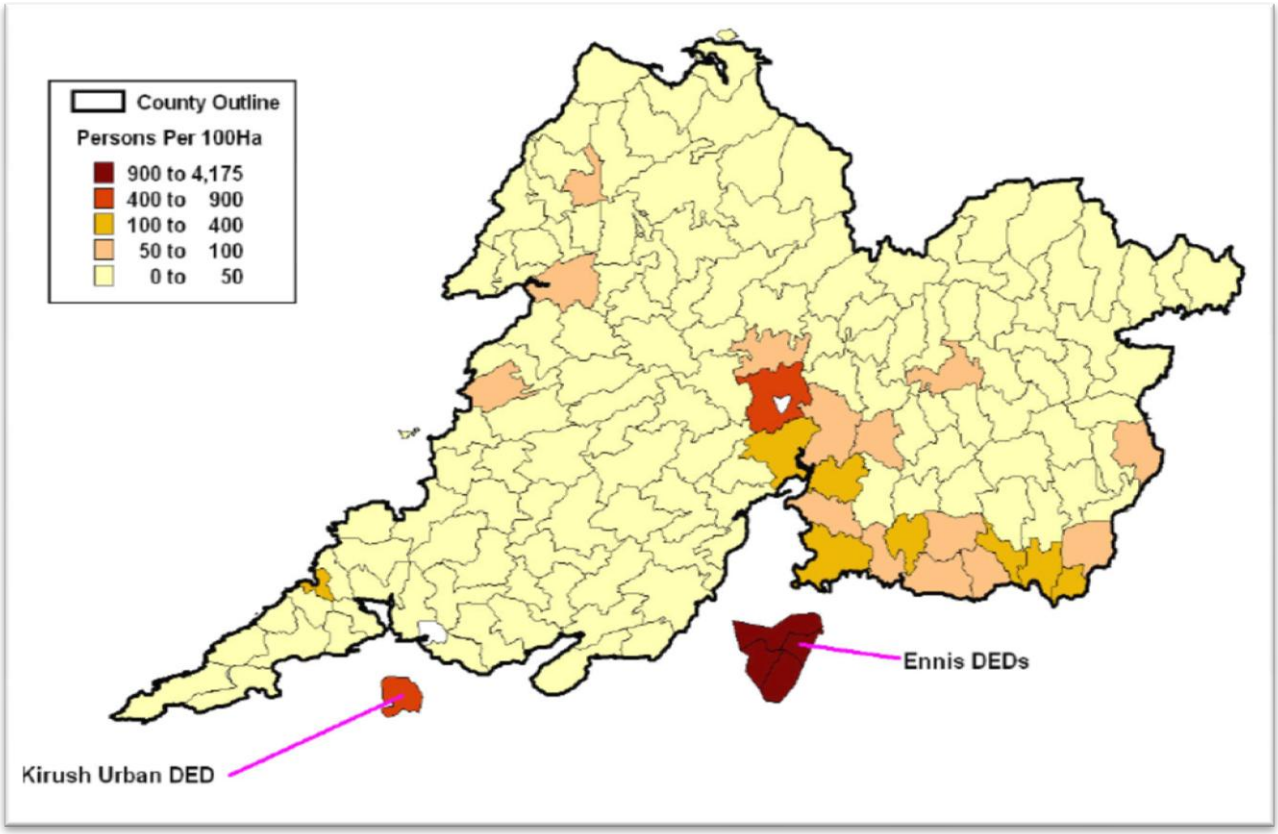

Figure 3.0 Population in Clare by District Electoral Division

3.3 Soil and Geology

Soil comprises for the most part of organic matter, minerals and fine to course grained weathered rock. The variability of the constituent parts and the percentage content of each in the soil matrix results in differing characteristics. Soil is a complex mixture of weathered minerals, living organisms, organic matter in various stages of decomposition, gases and water. Numerous natural factors influence the composition of soils, notably bedrock, climate and topography.

Soils have a number of functions including supporting plant life and life within the soil, biogeochemical cycling of elements, energy cycles, water storage and exchange and ecosystem

productivity. Soil formation occurs over very long timescales, and can be considered a non-renewable resource.

The western area of County Clare consists of Namurian sandstone and shale which are sedimentary rocks. Marine shelf facies stretches from the north of Clare, through the centre of the county, down to the southern centre of the county and also into the east – the last glaciation event carved into these deposits which now form the limestone pavements making up the Burren landscape. The south of Clare also contains three small areas of Waulsortian mudbank deposits. The east of the county consists of three corridors and four small areas of Waulsortian mudbank. In addition, there are two patches of marine shelf facies, two corridors and six patches of Courceyan limestone, two large and two small areas of Upper Devonian to Lower Carboniferous Old Red Sandstone, five areas of Silurian sandstone/greywacke/ shale, two small areas of Mid to Upper Ordovician acid volcanics, two small areas of marine shelf facies, two small areas of Mid to Upper Ordovician slate, one small area of Carboniferous volcanics and minor intrusions and three corridors and three small areas of lower limestone shale.

There are 89 sites of geological importance within County Clare, which include cave systems, limestone pavements and mushroom stones. The Geological Survey of Ireland (GSI) has identified some of these areas as Geological Heritage Sites as part of their Irish Geological Heritage Programme.

3.3.1 Current Issues and Problems

Some of the key issues and environmental problems associated with soils and geology within County Clare include Quarrying or the extraction of sand, gravel or rock together with issues surrounding contaminated sites or contaminated soils. Soil erosion/loss or movement can occur or coinside with construction activities such as windfarm developments and forestry operations carried out in peat areas of the county in particular.

3.3.2 Evolution of Soil and Geology in the Absence of the Clare County Development Plan

In the absence of a Soil Directive which would encourage the rehabilitation of brownfield sites and therefore reduce the depletion of Greenfield sites the CDP is a key document in directing growth towards brownfield sites in Clare. In its absence development would be likely to occur on an increased basis within Greenfield sites thereby reducing and sealing off (soil sealing) the non-renewable subsoil and soil resources. In the absence of soil protection there would also be knock on effects for water quality where runoff from excavation or ground disturbance lead to groundwater quality and potentially surface water quality issues.

3.4 Air and Climate

Air quality is dependent on a number of factors including the source of potential pollutants and weather conditions. The Air Framework Directive (96/62/EC) requires member states to divide countries into zones for the assessment and management of air quality. Ireland is divided into four zones which include:

- Zone A – Dublin Corporation
- Zone B – Cork Conurbation
- Zone C – Other Cities and large towns; and

- Zone D – Rural Ireland.

The majority of County Clare falls within Zone D with the exception of Ennis Town and surrounding urban area which falls under Zone C. Transport and industries are the main influences on air quality in County Clare. Ennis and Environs falls within Zone C and the main influences on air quality here are from transport and industrial activity. The Environmental Protection Agency (EPA) manages the ambient Air Quality Network and there is a monitoring station located in Ennis at the Local Authority building at Waterpark House. The air quality index is calculated based on the information gathered from the monitoring stations using a Quality Index for Health, which is calculated every hour and indicates if air quality is good, fair, poor or very poor. The air quality in the Rural West Region and County Clare is "good" with daily up to date information available for download from http://www.epa.ie/air/quality/#.VgAeTlc4ygI

3.4.1 Current Issues and Problems

Most greenhouse emissions are related to energy generation, transport, agriculture, and industry sectors. Focus is being put on predicting how a changing climate will impact on some of our most threatened species, for example, species at the range limits. Sea level rise is another issue of concern. Alternative energy options are being explored in the County. A common concern in relation to wind energy developments relates to impacts on peat soils and hydrogeology, impacts on bird species, and habitat disturbance. These are discussed in more detail in the Clare Wind Energy Strategy – Vol. 5 of Clare County Development Plan 2017 - 2023. Alternative modes of transport for all ages will be encouraged within built up settlements which will seek to address urban traffic generated air pollution by reducing car dependency. Rural areas in the plan area due to their size and low density are unlikely to give rise to urban generated air pollution.

3.4.2 Evolution of Soil and Geology in the Absence of the Clare County Development Plan

Climate change is predicted to increase problems of flooding and potential increase in periodic droughts due to changes in rainfall patterns. Provision needs to be incorporated into the Plan for mitigation and adaptation measures to provide for the Plan area to become resilient to meeting the challenges of climate change. If the Plan were not to be implemented flooding would become an unmanaged phenomenon with significant environmental effects across all the environmental parameters set out in this report.

3.5 Water

This section looked primarily at water quality in accordance with the Water Framework Directive and also looked at Flooding and Climate Change to a degree although this is dealt with across a number of the SEA parameters as there is significant inter-relationships.

The WFD water body status of the surface and groundwater bodies within County Clare and published by the EPA in 2015 is summarised in **Table 3.1**.

Water Body Type	No. Water Bodies	% Water Bodies	% Water Bodies
River Water Bodies			
High Status	16	11.4%	**50%**
Good Status	54	38.6%	
Moderate Status	21	15%	**30%**
Poor Status	21	15%	
Bad Status	0	0%	
Unassigned	28	20%	**20%**
Lake Water Bodies			
High Status	3	8.6%	**25.7%**
Good Status	6	17.1%	
Moderate Status	8	22.6%	**30.9%**
Poor Status	1	2.6%	
Bad Status	2	5.7%	
Unassigned	15	42.8%	**42.8%**
Transitional and Coastal Water Bodies			
High Status	8	47%	**70.5%**
Good Status	4	23.5%	
Moderate Status	5	29.4%	**29.4%**
Poor Status	0	0%	
Bad Status	0	0%	
Unassigned	0	0%	
Groundwater Bodies			
High Status		0%	**3.4%**
Good Status	1	3.4%	
Moderate Status		0%	**96.5%**
Poor Status	28	96.5%	
Bad Status		0%	
Unassigned		0%	**0%**

Table 3.0 Water Framework Directive Status

The reason for the classification of river water waters as 'less than good status' is mainly due to the results of macroinvertebrate sampling. In some cases, physico-chemical, diatom or fish sampling results are the cause for a less than good classification. Approximately one third of the river water bodies in County Clare have extended deadlines, i.e. beyond the first river basin management cycle (2015), for the achievement of the WFD core objectives. The core objectives are the prevention of deterioration, restoration good status, reduction in chemical pollution and achievement of water related protected areas objectives. These alternative objectives are due to a range of pressures and conditions including waste water treatment plants, agriculture, morphological pressures, the presence of gley soils, the conservation status of protected species, e.g. freshwater pearl mussels, and the current level of impact at the water body. Two water bodies have extended deadlines to 2027 due to the presence of forestry and acidification risks.

The reason for the classification of lake water bodies as 'less than good status' is mainly due to the results of macroinvertebrates, chlorophyll and physico-chemical sampling as well as morphological

and fish surveys. Several lake water bodies have extended deadlines associated with them due to their location in karst environments.

3.6 Flooding

Flooding is a major issue in relation to County Clare, particularly over recent years and the issues of flood risk management; through mitigation and adaptation measures and developing overall resilience to climate change are of critical importance. A strategic approach to the management of flood risk is important in County Clare as the risks are varied and disparate, with scales of risk and scales of existing and proposed development varying greatly across the county.

Following the Planning Guidelines, development should always be located in areas of lowest flood risk first, and only when it has been established that there are no suitable alternative options should development (of the lowest vulnerability) proceed. Consideration may then be given to factors which moderate risks, such as defences, and finally consideration of suitable flood risk mitigation and site management measures is necessary.

It is important to note that whilst it may be technically feasible to mitigate or manage flood risk at site level, strategically it may not be a sustainable approach.

Flooding can be exacerbated by development through removal of flood plain and therefore flood storage, by altering watercourses and increasing surface water run-off. Flooding can also pose a threat of water contamination due to inundation of waste water treatment systems, agricultural run-off and surface water run-off from developments.

A Strategic Flood Risk Assessment has been undertaken for the Plan area which accompanies the Plan. Flood Risk Zones A, B together with Recorded Flood events are presented in **Figure 5.10.7.** The CFRAM study, which is central to the development of a long-term strategy for the reduction and management of flooding, has produced draft flood risk maps for the Shannon River Basin District. These define the current and future flood-risk and set out how the risk can be managed and will correlate to the Flood Risk Assessment undertaken for the plan area.

3.5.1 Current Issues and Problems

There is a significant issue in relation to the use of groundwater for individual wells for houses. There is a need for stringent assessment due to groundwater vulnerability, to assess for sewage leakages, industrial contamination etc. There is also a public health issue in relation to the contamination of water supplies.

Water usage - Volume of water lost through leakages in pipe infrastructure is not only a local or county level issue but a county wide issue. A significant pipe rehabilitation programme is needed. Further education and information on water conservation and usage for water users is needed.

Domestic oil tank leakages/spills - It is not a requirement for the bunding of domestic oil tanks to reduce any spill or leakage of oil permeating through the soil and potentially contaminating groundwater. The Plan area has a regionally important aquifer with high to extreme groundwater vulnerability over the catchment of the main drinking water supply of Drumcliff Springs which presents a potential threat to human health.

Similarly vehicle refinishing facilities and dry cleaning facilities pose a potential threat to contamination of surface water and groundwater as a result of accidental discharge from certified facilities of waste into drains and sewers, in addition to the possible discharge from facilities that remain unregistered and consequently without any certificate of compliance for their operation.

The main pressures on water quality arise from a number of sources including, agriculture, wastewater and industrial discharges, wastewater from un-sewered properties, over capacity of WWTP and pumping stations, forestry, landfills, quarries, contaminated lands. Water quality can also be affected by water abstraction, land drainage works, and flood protection works. Recreational activities can also give rise to water quality issues.

Water abstraction

In March 2015, Irish Water published a *Project Need Report* which outlined the need for the Eastern and Midlands Region Water Supply Project in a national context. It included assessments of projected population and industrial growth (2014-2050) and savings expected from water conservation and leakage management. Between 2007 and 2011, ten new water supply options for meeting projected growth in water demand in the East and Midlands of Ireland were evaluated at a 'high' level as part of the legal process under the Strategic Environmental Assessment (SEA). Out of the ten Water Supply Options evaluated at this 'high level,' four were identified as technically viable options.

These four Options were independently validated by Irish Water and were found to remain appropriate to be brought forward for further consideration in the planning process. In November 2015, Irish Water published their Preliminary Options Appraisal Report which was based on an extensive assessment process applied to the four potential options. The report has found that two of the four options remain as potential viable solutions; they are the abstraction of water from the lower Shannon at Parteen Basin in Tipperary or desalination of water from the Irish Sea in Dublin. Of these two, the report identifies abstraction of water at Parteen Basin as Irish Water's emerging preferred option.

The proposed water abstraction from Lough Derg could lead to potential ecological, environmental and climate change effects amongst others. **Figure 5.10.9** provides an indication of the four options which have been independently validated by Irish Water which include;

- Desalination (Irish Sea)
- Lough Derg (direct)
- Lough Derg (with storage)
- Parteen Basin (direct) (**Emerging preferred option**)

The Preliminary Options Apprasial Report outlines how the abstraction at Parteen Basin has the least environmental impact of the four options under consideration. It can avail of existing "hydro-power" infrastructure which ensures that the proposed water abstraction can be implemented within existing normal operating water levels and with no impact on statutory flow requirements in the Lower Shannon meaning that there is very limited impact on the lake. According to Irish Water

abstraction from hydro-power facilities is common practice worldwide and the Parteen Basin option will use only a small fraction (approximately 2%) of 'hydro-power' water that would otherwise have been used for power generation and then discharged to sea. The Preliminary Options Appraisal Report concluded that desalination, as the only other potentially viable option at this stage of the project, is much less suitable than the Parteen Basin option, due primarily to higher costs, being a Dublin centric solution, and being a less environmentally friendly option with a considerably higher energy requirement, chemical usage and being discharge.

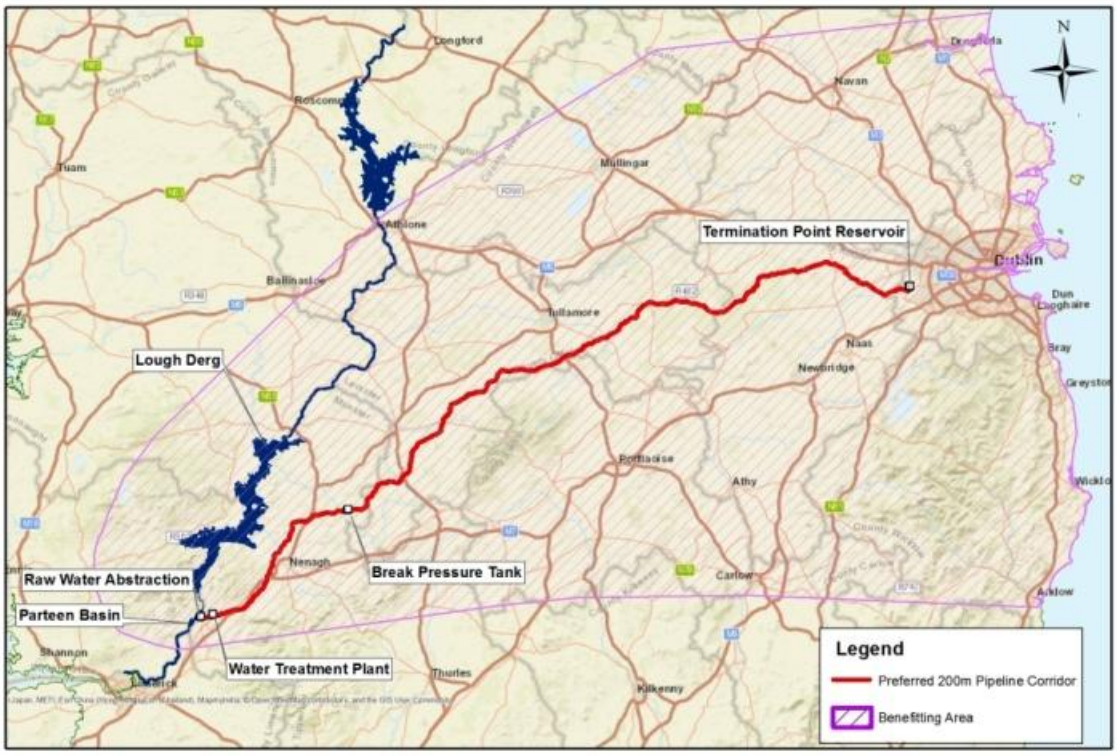

Figure 4.0 The Preferred Scheme

(Source; Water Supply Project Eastern and Midlands Region Options Working Paper)

The Water Supply Project underwent rigorous environmental assessment to ensure that all possible relevant factors were examined in reaching a final decision on the best option. As part of that process, a 10 week period of public consultation on the 'Preliminary Options Appraisal Report' was undertaken. Irish Water has now launched the fourth public consultation phase on the Preferred Scheme. This will represent the first major comprehensive upgrade of 'new source' infrastructure in over 60 years and will meet the domestic and commercial needs of over 40% of Ireland's population into the medium to long term future**.** On 8 November 2016, Irish Water published the Final Options Appraisal Report (FOAR) which identified abstraction from the Parteen Basin in Tipperary as the Preferred Scheme for a new source of water supply for the Eastern and Midlands Region. Alongside the FOAR, Irish Water has also published an Environmental Impact Statement (EIS) Scoping Report . The EIS Scoping Report considers potential issues which may arise from the preferred scheme and describes how any impacts will be assessed.

3.5.2 Evolution of Soil and Geology in the Absence of the Clare County Development Plan 2017-2023

Whilst there is a significant amount of European and national legislation for the protection and enhancement of water resources and quality, the primary issues affecting water quality and flood control such as population increase, loss of floodplain, increased run-off which can be controlled locally through the Plan process will not be adequately addressed. In the absence of the Plan, the process for assessing the issues which affect the surface water and groundwater resources of the County will go unchecked, resulting in a general deterioration in this aspect of the environment.

3.6 Material Assets

Material assets are defined as the critical infrastructure essential for the functioning of society such as water supply, wastewater treatment, transportation etc. This section will address the following:

1. Transportation
2. Waste Management
3. Water Supply
4. Wastewater Treatment Infrastructure
5. Renewable and alternative energy

3.6.1 Transportation

Access to an efficient transport network contributes to opportunities for all sectors of the population to access services, facilities and social networks that are necessary to meet daily needs. Ease of accessibility enhances quality of life, promotes social inclusion, presents opportunities and promotes human health through expansion of cycle and walking infrastructure.

Road Network

The road network in the county is made up of motorway, national primary roads, and national secondary roads, regional and local roads. County Clare has a large rural area with a dispersed population with the result that the car is the predominant mode of transport. The maintenance and upgrade of the existing road network and, where necessary, the provision of new road networks or realignments are essential to achieve modern high standards.

The existing main roads include; the M18 motorway which by-passes Ennis, connects the town to the national motorway network and two National Primary Routes, the N18 Galway-Limerick and the N19 which starts at Shannon Airport and leads on to the N18. The National Secondary roads include the N85 Ennis-Lahinch, N67 Killimer-Ballyvaughan and the N68 Ennis to Kilrush routes.

The M18 has much improved road connectivity nationally, reducing travel times significantly to Dublin, Cork, Limerick and Galway, with the section of the M18 between Gort and Galway scheduled to commence in October 2014. It has also contributed to a significant benefit in reduced local travel patterns to places of employment, including Shannon.

Bus Network

Bus Eireann operates regular services from their centrally located newly refurbished bus station to Shannon Airport, Galway, Limerick, Cork and Dublin. Private operator, Dublin Coach also operate several (up to 25 during peak times) daily express services between Ennis, Limerick, Kildare and Dublin. Bus Eireann also provides an infrequent service from Ennis to north and west Clare and a regular service to Shannon Airport.

Local Services are provided for by Clare Bus, a not-for-profit bus service, which has a large number of routes that connect Ennis with its extensive rural hinterland. The services provided are designed to support communities and increase transport options at a local level while opening up access to the national transport network. The route schedules connect with national transport links provided by Bus Eireann, Dublin Coach and Irish Rail in Ennis.

Rail Network

The rail services within County Clare consist of a branch off the Limerick line which serves Ennis. Land has been designated for a new station and park and ride facility at Clarecastle. The Western Rail Corridor has been opened recently and it involved upgrading 36 miles of track and associated infrastructure, as well as the provision of five stations at Gort, Ardrahan, Craughwell, Sixmilebridge and Oranmore. Ennis is situated on the western rail corridor which has undergone substantial investment over recent years. Ennis rail and bus station is located within walking distance of the town centre of Ennis. There are park and ride facilities at the station. The regular routes serviced from Ennis include a Limerick/Dublin service, Limerick/Cork/Tralee and Galway/Limerick services.

Air

Shannon Airport is located within the southern part of the county. It is a critical element of the transport network in the region with both a national and international role. It is strategically located between Limerick and Galway with capacity to serve an increased market to the west should future development take place in the Shannon Estuary which requires air transport. The Airport boasts the longest runway in Ireland, at 3,199 metres in length, 45 metres wide and in operation 24 hours per day, 365 days per year with 24 stands. The Airport has both scheduled and chartered flights to a range of destinations and has 30 aircraft stands. In 2000, the new terminal building at Shannon Airport was opened. The Mid-West RPGs highlight the importance of Shannon International Airport as a key hub both for national and international air travel. Aviation is vital to the future business of the country in terms of tourism and trade and connectivity between airports and public transport is a key element of this.

3.6.2 Waste Management

Clare falls under the Southern Region Waste Management Plan area for which the management plan was published in May 2015. Within the County Development Plan Area there are a range of waste recycling facilities which include 5 recycling centres and transfer stations as follows;

- Central Waste Management Facility, Inagh
- Ennis Recycling Centre, Ennis

- Lisdeen Recycling Centre and transfer station, Kilkee
- Scarriff recycling centre and transfer station, Scarriff
- Shannon recycling centre

Domestic and commercial waste collection is undertaken solely by private permitted collectors, which include waste separation to aid waste recycling. There is an extensive education and awareness programme of waste prevention initiatives in order to minimise waste going to landfill.

3.6.3 Water Services Infrastructure

The responsibility for the provision and management of water services (water supply and wastewater but excluding storm/surface water other than where sewage has been combined with surface water) was transferred to Irish Water on the first of January 2014. Whilst Clare County Council no longer has a remit in the management and provision of water and wastewater infrastructure, this development plan sets out the water services infrastructure priorities for residents, business and stakeholders in Clare. Irish Water is committed to providing strategic treatment capacity to facilitate the core (residential) strategies identified in this county development plan, subject to the availability of funding and environmental constraints.

Irish Water is currently analysing water services infrastructure needs at a national level and identifying priority projects for inclusion in the next Capital Investment Plan (CIP 2017-2022). Priorities must include investment to ensure acceptable service levels to existing customers, achieving regulatory compliance. Requirements to cater for future growth are also being considered. The CIP will be evaluated by the Commission for Energy Regulation who will approve or otherwise the budget presented by Irish Water for capital investment in infrastructure.

Water Supply

Irish Water is currently carrying out a strategic review of water supply in the Mid-West Region. Initial indications are that the Clareville Water Treatment Plant in Limerick, which currently serves Limerick City and its environs, has the capabilities to supply a large regional area within the Mid-West. This could include augmentation of the Shannon/Sixmilebridge and Ennis Water Supply Schemes, utilising the existing pipe network installed on the N18 and N85.

In general, there is sufficient water supply treatment capacity in the county to meet the needs of the target population identified in the core strategies. Many of the water treatment plants supply water to a number of settlements in a “Water Supply Zone”(WSZ) and WSZs may be linked together to form a water resource zone. It is Irish Waters objective to interlink WSZs, where appropriate, to increase the resilience (reliability) of the water supply system. Network reinforcement is likely to be required to ensure that water supply can be moved around the network to where it is needed. In addition, many of the water treatment plants in the county need upgrading in order to ensure that water is produced to the required standards as set out in the relevant Drinking Water Regulations.

Water Safety Plans

A Water safety plan is a plan to ensure the safety of drinking water through the use of a comprehensive risk assessment and risk management approach that encompasses all steps in water supply from catchment management, the treatment plant and through to the consumers tap. The

principles and concepts of risk management are used and then a multi-barrier approach to reduce the risk is put in place.

Water Supply and Climate Change

The onset of climate change and predicted change in weather patterns, culminating in an increase in dry spells of weather and of rain surges, have potential implications on water supply. Already the water supply sources within the county comes under strain during more prolonged spells of dry weather, which are set to increase in years to come. Measures need to be put in place to adapt to predicted weather changes in terms of ensuring an adequate supply of clean water to the existing and future population of the plan area.

Wastewater Treatment

The Urban Wastewater Treatment Directive (91/271/EEC, amended by Directive 98/15/EEC) aims to protect the environment from the adverse effects of wastewater discharges by ensuring that wastewater is appropriately treated before it is discharged to the environment. Such treatment is essential in order to meet the requirements of the WFD.

Wastewater within the county is treated either through wastewater treatment plants (48%) or individual septic tank units (44%). Many of the buildings which are located outside of the larger towns and villages are not connected to the public wastewater disposal system, and the effluent must be treated by individual proprietary wastewater treatment plants and septic tanks. There are 31 urban wastewater treatment plants in County Clare.

Wastewater services tend to be associated with individual settlements/agglomerations and there are significant service and compliance issues in many existing wastewater systems in Clare. The safe treatment and disposal of sewerage is fundamental to the sustainable development of our society. The treatment of wastewater is either through wastewater treatment plants or individual septic tank units.

Irish Water has responsibility for provision and management of wastewater facilities serving sewered towns and villages, including the management of storm water. The maintenance, upgrading and provision of the County's wastewater drainage system is essential to accommodate future development requirements and to ensure the sustainable development and environmental protection of the county. At present there are significant service and compliance issues in many existing wastewater systems in County Clare. **Figure 5.0** summarises the percentage by 'Types of Wastewater Systems in County Clare'.

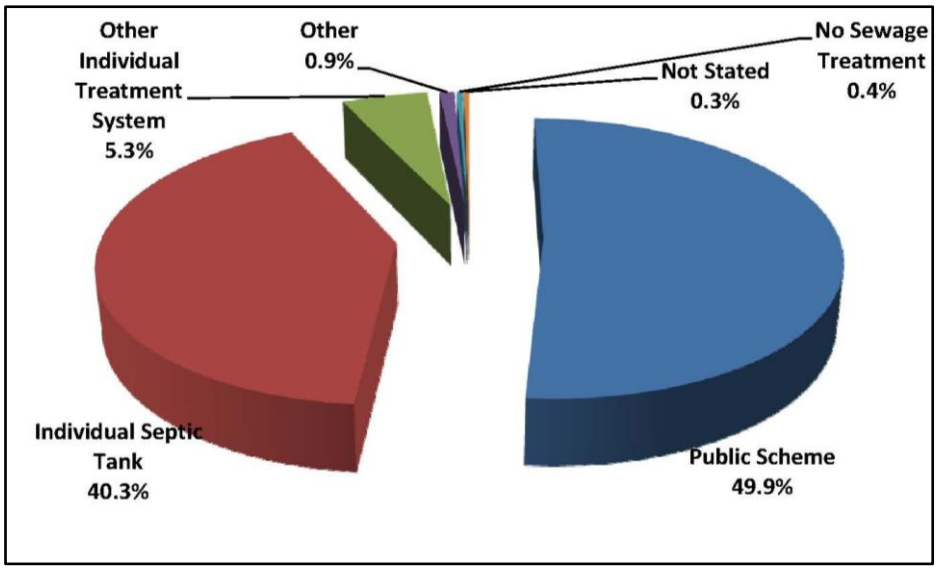

Figure 5.0 Types of Wastewater Systems County Clare 2011

(Source; CSO 2011)

Outside of the larger towns and villages most developments in County Clare are treated by individual proprietary wastewater treatment plants and septic tanks. Developments in these unserviced areas must demonstrate that the onsite on-site wastewater treatment system can safely and adequately dispose of effluent in accordance with the relevant EPA *Code of Practice*.

3.6.4 Renewable Energy

The term 'renewable energy' refers to those energy flows that occur naturally and repeatedly in the environment including the sun, wind, oceans and the fall of water. Geothermal energy, plant material and combustible or digestible agricultural, domestic or industrial waste may also be regarded as renewable sources of energy. The Council recognises the importance of developing renewable energy sources in the interest of achieving a low carbon economy and security of energy supply.

A Wind Energy Strategy and a Renewable Energy Strategy have been prepared for County Clare and comprise Volumes 5 and 6 of this plan respectively. The Wind Energy Strategy identifies the optimum locations for wind energy developments in the county having regard to environmental and geographical constraints and the protection of the amenities of local residents. A new Wind Energy Strategy will be prepared for County Clare during the lifetime of this plan.

The Clare County Renewable Energy Strategy (RES) (Vol. 6 of the CDP 2017 – 2023) sets out the renewable energy resource targets for County Clare up to 2020. It outlines the potential for a range of renewable resources, including Bioenergy (Biomass) and Anaerobic Digestion, Micro Renewables, Geothermal & Ground Source Heat Pump, Solar, Onshore Wind, Marine Renewables (Wave and Tidal Energy), Pumped Hydro Energy Storage and Micro Hydroelectric Power. It acknowledges the significant contribution such renewables can make to County Clare, becoming more energy secure and less reliant on traditional fossil fuels, thus enabling future energy export and meeting assigned targets.

Table 4.0 provides a summary of the principal energy and emissions data based on the fuel type consumed in County Clare. In addition **Table 5.0** provides a breakdown of the fuel consumption on a sector by sector basis indicating transport as the highest consumer within the county.

Table 4.0 County Clare Energy Consumption – 2010 - 2020 by Fuel

County Clare Energy Consumption – GWh / yr – By Fuel	2010	2020 Baseline	2020 NEEAP/NREAP
Electricity	682.0	775.7	750.2
Natural Gas	505.1	613.3	468.1
Oil	2,185.3	2,399.4	2,034.8
Coal	111.3	55.4	52.1
Peat	77.5	42.4	39.0
Renewables	108.0	109.7	294.0
Grand Total	**3,669.2**	**3,995.9**	**3,638.3**

Table 5.0 County Clare Energy Consumption – 2010 - 2020 by Sector

County Clare Energy Consumption – GWh / yr – By Sector	2010	2020 Baseline	2020 NEEAP/NREAP
Agriculture	153.1	212.5	212.5
Commercial	500.2	568.5	460.7
Industry	724.7	798.9	787.1
Residential	997.1	967.8	774.1
Transport	1,294.1	1,448.1	1,403.8
Grand Total	**3,669.2**	**3,995.9**	**3,638.3**

3.6.5 Current Issues and Problems

- Neighbourhood centres served by domestic sewers – the disposal of hot counter/takeaway cooking oils etc. can cause accumulation of fats and oils and impact on residential sewage lines. Where these uses need to be accommodated use mitigation re education re proper disposal of such things.
- Problem of pumping station maintenance and potential risk of pollution as a result of operation malfunction. A pump health check should be undertaken during the lifetime of the Plan.
- Developments that are being considered should include an assessment of where the effluent is going and as to whether there is the pumping capacity to cope with the additional load that the development will generate.
- Promote water harvesting and conservation.
- There is a need to increase energy efficiency and conservation within County Clare and it is obliged to reduce energy and CO2 emissions by 33% by 2020.
- For offshore wind developments, there is a lack of a National Marine Spatial Strategy, along with the need to balance the installation of such developments with fishing, aquaculture, tourist and navigational needs and interests.

- There is insufficient waste water treatment to cater for existing and projected population growth in the county. Therefore there is a need to provide additional wastewater treatment infrastructure/ capacity.
- Additional pressures on the environment come from poorly functioning septic tanks which place pressures on surface and groundwater's.
- The travel patterns in Clare are governed to a large extent by private cars. Therefore there are existing pressures on ensuring that the transport network is adequate and maintained. There is a need to look at the provision of public and/ or community transport service options to ensure that the existing and future population growth of County Clare has sufficient access to public transport.
- Lack of a security of supply for thermal treatment facilities is recognised as a threat, as is the lack of adequate facilities for biological waste treatment. New waste management regions, as outlined in the
- DECLG new waste management policy 'A Resource Opportunity', are being drawn up (reducing the number from 10 to 3), which should allow for better efficiency in planning delivery.
- There is high technical potential for hydro power in Clare given the county's large coastline and water resources. Clare has a history of utilising hydro power (e.g. Ardnacrusha hydroelectric power station) –however realistic plans will be influenced by specific site conditions. Developments could also be influenced by fishery interests and seasonal water flow, and balanced with the needs of tourism. Other constraints include establishing adequate grid connections and lack of interconnections with neighbouring countries (connected countries can buy and sell power during seasonal fluctuations without the need to store energy); the need to be in close proximity to existing wind energy developments, high capital costs and policy gaps at the National and Regional level (currently no guidance for energy storage or site selection) are other considerations.
- While Pumped Hydroelectric Energy Storage (PHES) is the most mature and largest energy storage technique available, these developments are also constrained by high capital costs, long lead-in times and policy gaps at the National and Regional levels.
- All renewable energy developments have the potential to effect or impart environmental pressures in particular on biodiversity, habitats/designated areas and water quality, in addition to the visual impact to scenic landscapes and settlements.

3.6.6 Evolution of Material Assets in the Absence of the Clare County Development Plan 2017-2023

The current legislation which provides for the protection and enhancement of the water resources and quality at European, National, Regional and County level will protect and maintain existing water bodies in the Plan area. However, in the absence of the Clare County Development Plan 2017-2023 there would not be a planning framework to regulate aid and control development in accordance with specific local issues in relation to potable water, wastewater treatment, flooding and development. This could result in significant impacts across a range of environmental parameters including biodiversity, water, human health, landscape and soil and geology. In relation to Renewable Energy Developments given the inclusion of the Wind Energy and the Renewable Energy Strategy as separate volumes for which protective objectives and significant mitigation measures

have been incorporated into the 2017 – 2023 County Development Plan this will ensure proposals are directed to appropriate locations and have undergone rigorous and thorough assessment and investigation to ensure only appropriate developments are given planning permission.

3.7 Cultural Heritage

Archaeological Heritage

Archaeological heritage is defined as including structures, places, caves, sites, features or other objects, whether on land underwater or in inter-tidal zones. All archaeological structures, constructions, groups of buildings, developed sites, all recorded monuments as well as their contexts, and moveable objects, situated both on land and underwater are part of the Archaeological Heritage. Therefore the archaeological heritage of the area is not confined to the archaeological sites within the Record of Monuments and Places. It also includes any archaeological sites that may not have been recorded yet, as well as archaeology beneath the ground surface, or underwater as well as the context of any such site discovered.

There are currently c.7500 monuments in Clare, which is more than most counties in Ireland. Notably, there is little evidence from the earliest period, the Mesolithic, but the Neolithic or New Stone Age and subsequent eras are well represented with many sites and artefacts demonstrating life in Clare for the past 6,000 years. These early farmers left little evidence of their settlements but their territorial/burial monuments survive. Large numbers of megalithic structures are found in the Burren including the Poulawack Cairn, a burial mound constructed more than 5500 years ago, which is of National importance. Nearby are Parknabinnia Chambered Tomb and a pre-historic quarry possibly used to extract stone to build these structures. North of this cluster stands what is possibly the most iconic monument in County Clare, the Poulnabrone Portal Tomb. Various megalithic tombs also survive in other areas of County.

Recent archaeological surveys of intertidal areas in the Shannon Estuary have uncovered a wealth of archaeological material including evidence of prehistoric settlement dating back to 7000BC. There are eight submerged forest locations, three of which represent relict woodland that has been inundated by rising water levels and which can date back far into prehistory. The inventory indicates references to 127 ship wrecking events between the sixteenth and the early twentieth century. However, only 16 wreck sites can be located precisely (SIFP SEA Environmental Report). The INFOMAR programme also maintains a Shipwreck Inventory (2002-2013), and from this inventory only one shipwreck location has been mapped in the surrounding waters for County Clare, that of the *SS Premier*.

Architectural Heritage

Part IV of the Planning and Development Act 2000 (as amended) defines the term “architectural heritage” as: structures and buildings together with their settings and attendant grounds, fixtures and fittings, groups of structures and buildings, and sites, which are of architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest” and “where a structure is protected, the protection includes the structure, its interior and the land within its curtilage (including their interiors) and all fixtures and features which form part of the interior or exterior of all these structures”.

There are 857 protected structures in the plan area ranging from churches, bridges, grain stores, houses, shops and public buildings (Refer to **Figure 5.12.1** "Protected Structures" within the **SEA ER**). Many structures of industrial and railway heritage are also included in the Record. The town centre which has survived almost intact since the late 16th century and other groups of buildings in the plan area are designated Architectural Conservation Areas, affording protection to the exterior of all structures within the ACAs in order to protect the unique architectural character of an organically evolved, mediaeval, Gaelic market town.

An ACA refers to a place, area, group of structures or townscape, that is of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest or that contributes to the appreciation of a protected structure, and whose character it is an objective of a Local Area Plan to preserve. Its inclusion within the Plan, in terms of Section 81, Part IV of the Planning and Development Act, 2000 (as amended) affords greater control over the form of development that may be permitted and reduces instances of inappropriate development, demolition and unnecessary change within the designated area.

There is also, in the plan area, a rich heritage of stone buildings and examples of a rich vernacular building tradition which evolved, over many millennia, to suit life in this part of County Clare. While many of these are not included in the Recorded of Protected Structures, they nevertheless contribute to the character of an area by their history, use of local, sustainable materials, classical proportions and inoffensive scale. It is important that such buildings are preserved into the future to maintain the attractive character of our rural landscape and contribute to the amenity and pleasure of residents and visitors alike.

3.7.1 Current Issues and Problems

Although cultural heritage is afforded the highest level of legislative protection, e.g. Record of Protected Structures and Architectural Conservation Areas, impacts may occur due to pressure from inappropriate developments. Significant development pressures may vary depending on the location within the Plan area. Potential impacts can arise or occur in relation to structures, features and landscapes associated with cultural heritage resources. Impacts can be site specific or cumulative and can arise overtime due to the erosion of contributing features that may not be subject to protection (e.g. stone walls).

The Clare CDP though the incorporation of policies and objectives provides significant protection to sites that are listed however, inadvertent or wilful damage can arise in relation to land clearance or land intensification. The Clare CDP through the SEA process has identified the need for buffer zones around these features which have been incorporated into the settlement plan zoning maps contained in Volume 3. While this is a positive step the issue of enforcement of these buffer zones or the understanding that such works can lead to negative impacts is an ongoing concern.

3.7.2 Evolution of Cultural Heritage in the Absence of the Clare County Development Plan

County Clare has a significant assembly of cultural heritage with extensive and effective legislation and guidance from International to national level affording both the architectural and archaeological heritage a high level of protection. However, in the absence of the Clare County Development Plan 2017-2023 there may not be a framework within which to regulate, aid and/or control development whether economic, social or environmental. This may lead to uncontrolled development resulting in

losses and/or deterioration in the cultural heritage of the Plan area. The Record of Protected Structures would remain in place.

Under the above circumstances, the cultural heritage within the administrative/ settlement boundary, in the absence of the Plan would suffer due to insufficient monitoring and guidance. Thus, the evolution of cultural heritage in the absence of the Plan would be highly dependent on the rate and extent of uncontrolled developments. Ultimately, the potential for fragmentation, loss, and/or deterioration of cultural heritage would occur of this irreplaceable resource.

3.8 Landscape

There are two key studies that have been undertaken to characterise the diverse landscapes for the County and combined they provide a detailed set of landscape designations for the County which have been incorporated within the policies and objectives of the County Development Plan. The reports are:

The **CAAS Report (1997)** "Criteria for the Evaluation of Landscape Quality" which identified the visually sensitive features of the landscapes of the County and informed the 1999 Clare County Development Plan; and

The **Heritage Council Landscape Character Study/ERM (2003),** which provided a very detailed characterisation of the different parts of the County, in line with the thinking of the DoEHLG (2000) Landscape and Landscape Assessment Draft Planning Guidelines for Planning Authorities.

The National Landscape Strategy (NLS) for Ireland 2015-2025 seeks to provide a framework for the protection of the many cultural, social, economic and environmental values embedded in the landscape. The objective of the Strategy is to provide the data that will assist in the future decision making process regarding our landscapes, and which will ensure that decisions are made on the basis of factual evidence collected. The NLS will assist in the achievement of greater consistency in decision making across the country when dealing with issues of landscape, in particular via landscape character assessment. It will be used to ensure compliance with the European Landscape Convention and to establish principles for protecting and enhancing the landscape while positively managing its change. It will provide a high level policy framework to achieve balance between the protection, management and planning the landscape by way of supporting actions.

As part of the previous Clare County Development Plan 2011-2017 (as varied), Clare County Council in conjunction with CAAS Environmental Services revisited the policy approach, called "Clare's Living Landscapes". This approach builds on the "Landscape Character Assessment of County Clare".

Landscape Characteristics of the Plan Area

The components of Landscape Character Assessment are Landscape Character Types, Landscape Character Areas and Seascape Character Areas.

Landscape Character Types

There are 26 landscape types identified within the County, sub-divided into three groups, namely Upland Types, Lowland Types and Coastal Types. In addition the Landscape Character Assessment identified:

Habitat Types – an area in which an organism or group of organisms lives and is defined by the living and non-living components of the environment. The latter includes physical, chemical and geographical factors, in addition to human impact or management;

Historical Landscape Types – an archaeological or historic landscape is a discrete landscape based on the "scale and integrity of the archaeological features (that) reflect significantly on the human history and land use of that area".

Landscape Character Areas

Landscape Character Areas (LCA) are units of the landscape that are geographically specific and have their own character and sense of place. Each Landscape Character Area's distinctive character is based upon patterns of geology, landform, land-use, cultural, historical and ecological features. The Landscape Character Assessment for County Clare identified 21 Landscape Character Areas and are shown on **Figure 5.13.1** "Landscape Character Areas" of the **SEA ER**.

Seascape Character Areas

A seascape can be defined as comprising one or more views from land to sea, views from sea to land, views along coastline, and/or the effect on landscape of the conjunction of sea and land. The LCA for County Clare area identified 12 Seascape Character Areas as shown in **Figure 5.13.2** of the SEA ER. They include; Blackhead Bay, Burren, Cliffs of Moher, Liscannor Bay, Malbay, Mutton Island & White Strand, Ballard Bay & Donegal Point, North Loop Head Peninsula, South Loop Head & Shannon Mouth, Lower Shannon, River Shannon and the Fergus Estuary.

Within the Landscape Character Assessment a Seascape is defined as comprising of one or more of the following:

- views from land to sea;
- views from sea to land;
- views along coastline;
- the effect on landscape of the conjunction of sea and land.

3.8.1 Current Issues and Problems

The intrusion onto greenfield sites for development can have a significant effect on the landscape and local landscape features in rural and urban areas.

The character and landscape of seascapes can be compromised as a result of development. The visual impact of a development on the landscape should be considered from various visual aspects and in combination with any surrounding development. A failure to consider proposals in the context of potential cumulative effects on the landscape presents a serious threat to future landscapes. Areas along the Fergus and Shannon estuaries, along the west coast of County Clare and within the heritage landscape of the Burren and North Clare which experience development of one-off houses and other urban type development are having adverse visual impacts on the landscape due to its low capacity to absorb development. The cumulative effect of individual one-off houses has the potential to have a significant effect on the landscape.

3.8.2 Evolution of Landscape in the Absence of the Clare County Development Plan

In the absence of the Clare County Development Plan 2017-2023 there would be no framework within which to regulate, aid and/or manage future economic, social or environmental development. A lack of development objectives would lead to uncontrolled development with no framework for directing development to appropriate locations. Certain areas could experience particular development pressure, for example, along the Fergus estuary which has limited capacity for development before contributing to the degradation of the landscape. The Plan will include objectives that provide for the preservation, protection and enhancement of the landscape as part of an integrated sustainable planned approach to future development within the Plan area. Therefore the absence of the Plan would remove such protection and enhancement measures for the landscape, potentially leading to its fragmentation, loss and deterioration.

3.9 Environmental Sensitivities

Sensitivity mapping is a means of assessing the overall vulnerability of the County using the key baseline datasets collated as part of the SEA ER. The Environmental Sensitivity Map provided spatial evidence to support the Strategic Environmental Assessment (SEA) across a number of sectors. The mapping assisted in achieving environmental sustainability by providing a thematic map which could assist the assessment in directing development/zoning/identification of objectives and policies away from environmentally sensitive areas thereby informing on cumulative/in-combination effects and supporting the formulation of spatially-specific mitigation measures.

The map effectively reflects where the key concentrations of sensitivity are situated within the plan area. These include:

- The Northern area of the Plan (North Clare) – in and around the Burren which contains a number of NHAs, wetlands, rock at or near the surface and a heritage landscape.
- The Southern area of the Plan (along and including the Shannon Estuary)– This includes the Cloon River (FPM SAC), the Gaurus River and flood plain, River Fergus and flood plain (to the east), Ballybeg Lough, Newhall and Edenvale Estate (south-west) and the Shannon Estuary containing heritage landscapes and surface waters that are nutrient sensitive.
- The central area of the plan (including Ennis and on to North East Clare) – this includes key SPAs and NHAs which are protected for the Hen Harrier, moderate to poor river status, a high number of protected bat roosts, high to extreme groundwater vulnerability and areas of heritage landscape to the east.

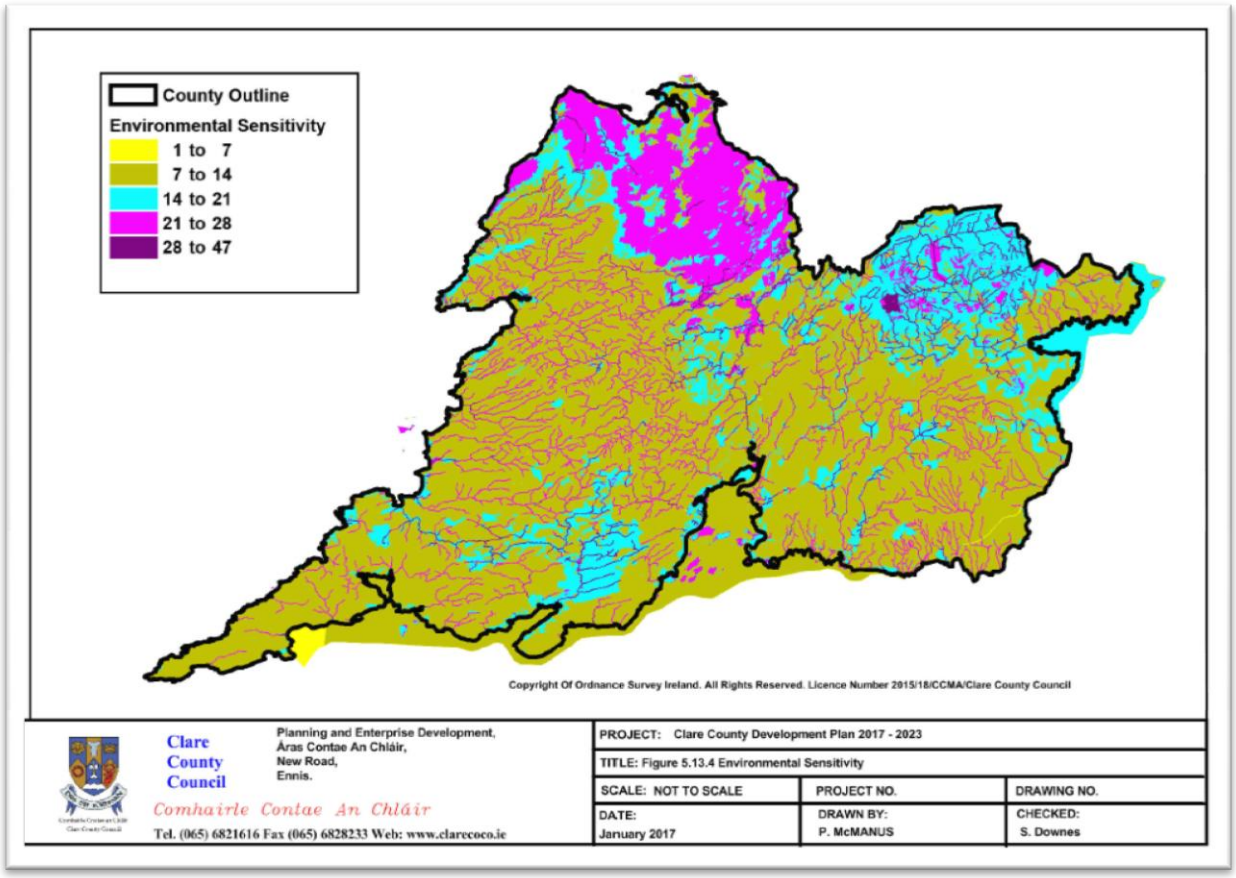

Figure 6.0 Environmental Sensitivities

The key datasets used to inform this sensitivity mapping were as follows;

- Landscape Character Areas
- Ecological Designations (SAC, SPAs, NHAs)
- Groundwater Vulnerability
- Source Protection Areas
- Flooding
- WFD River and Groundwater and TraC status
- Nature Reserves
- Wetland Habitats

Having set out the environmental baseline for the Plan area it highlighted the potential challenge for the plan makers in identifying the required amount of appropriate lands to meet future growth needs. This assisted and informed the development of alternatives as set out in **Chapter 7**.

4. Strategic Environmental Objectives

Having established the environmental baseline under each of the environmental parameters in the preceding chapter, the key environmental issues have been identified. Taking account of these issues a series of Strategic Environmental Objectives have been compiled as a mechanism for ensuring environmental protection. The SEOs are applied as follows:

1. As measures against which the implementation of the Plan objectives and zoning objectives can be assessed for potential environmental impacts.
2. As measures for monitoring any actual environmental impacts as a consequence of implementing the Plan, by devising a series of targets and indicators for each of the SEOs.

Strategic Environmental Objectives (SEOs) are methodological measures against which the environmental effects of the implementation of the Clare County Development Plan 2017-2023 can be tested. If complied with in full, SEOs would result in an environmentally neutral impact from the implementation of the Plan. The SEOs are set out under a range of topics and are used as standards against which the provisions of the Plan can be evaluated in order to help identify areas in which significant adverse impacts are likely to occur, if unmitigated.

SEOs are distinct from the objectives of the Plan, although they will often overlap and are developed from International, National and Regional policies which generally govern environmental protection objectives. Such policies include those of various European Directives which have been transposed into Irish law, all of which are intended to be implemented at County level and integrated into any Plan for the County.

The overall aim of the SEA is to facilitate environmental protection and to allow the integration of environmental considerations into the development of the Clare CDP. To that end, the SEA process assesses the Clare CDP as it evolves in terms of its environmental impacts, positive, negative, neutral, cumulative and synergistic and also in terms of duration i.e. short, medium, long terms, temporary, permanent and secondary effects. The SEA process highlights how improvements can be integrated into the Clare CDP to increase its environmental performance and maintain environmental resources such as soils. The Strategic Environmental Objectives were therefore used to assess all the policies, objectives and landuse zonings within the CDP and were also used as the basis for the monitoring programme which is outlined in Section 7 of the NTS.

5. Development and Consideration of Alternatives

The development and assessment of alternatives is a legal requirement under the SEA Directive and Regulations. Article 5(1) of the SEA Directive and 13E(1) of the Planning Development (Strategic Environmental Assessment) Regulations 2004 (as amended 2011) requires that the Planning Authority considers within the Environmental Report:

- **Reasonable** alternatives taking into account the objectives and the geographical scope of the plan or programme;
- The alternatives are **identified, described** and **evaluated**;
- An outline of the **reasons** for selecting the alternatives dealt with;
- A **description of how the assessment was undertaken** including any difficulties (such as technical deficiencies or lack of know-how encountered in compiling the required information.

Alternatives should not be retrospectively considered but they should be developed as the SEA and plan develops.

Option 1: Amend settlement hierarchy and review growth in fewer areas in line with infrastructural provisions and outside of high risk areas e.g. flooding, protected areas, areas susceptible to issues arising from climate change.

This alternative is to amend the number of settlements within the plan area, reducing the number of smaller settlements, and targeting growth in a fewer number of locations where appropriate infrastructure is already in place. This would see a smaller number of existing settlements prioritised for development. Designated areas (European Sites, Groundwater Protection Zones etc.) would be subject to appropriate environmental protection measures in line with the regulatory framework. Rural development policies would support agriculture, forestry, renewable energy and tourism

Option Two: Dispersed Settlement led approach (Unrestricted settlement)

This scenario envisages growth of all settlements within the County with heavy emphasis on accommodating housing within all settlements. Other than Ennis and other large towns (such as Shannon and Kilrush) there would be no hierarchy and growth would be envisaged in all settlements). Designated areas (European Sites, Groundwater Protection zones etc.) would be subject to appropriate environmental protection measures in line with the regulatory framework. As per Option 1, rural development policies would support agriculture, forestry, renewable energy and tourism.

This option is in effect an unrestricted option.

Option Three: Strategic Planning Approach/Balanced Approach

This scenario is a planned sustainable development approach to planning in the County. Development will be focused within zoned and serviced areas. This scenario plans for the strengthening of rural villages and residential development into designated settlements. Appropriate environmental protection measures will be implemented for designated areas. In this scenario

particular rural development activities would be more strategic and certain areas identified to support tourism and renewable energy.

Option Four: Employment led growth

This scenario looks at employment-led growth which focuses development in key locations where employment growth is more likely to be delivered and differed from previous Plan strategies which spread growth based on the size and scale of the settlement in accordance with the core strategy. The scenario focused on key variations to the 2011-2017 CDP which included the focus of economic development in the Shannon Estuary and its hinterland identified through the SIFP and the identification of a key infrastructural safeguard in the Limerick Northern Distributor Route which seeks to open up access to UL and the National Technology Park in Limerick for employment and education. In addition the identification of potential sources of employment outside the settlement boundary for example at junction 12 in Ennis which was identified as a key employment opportunity.

Option 5: Strategic Planning for Sustainable Growth

This scenario involves strategic planning taking into account all new and improved policies. Planning authorities and those interacting with the planning process have, in the past few years, had to address a wide range of new policy and legislative requirements. These guidelines, up-dates to Directives and subsequent regulations are designed at ensuring all growth and development is carried out in a sustainable fashion.

Other Sub Options and prioritised development strategies

During the course of development of the County Development Plan and through round table discussions between both the Planning and Environmental Assessment teams, discussions took please in relation to the identification of a series of Opportunity Sites within towns and villages across the county. A strategic approach to the best use of these sites as a means to facilitate redevelopment which would make a significant positive contribution to the settlement was identified. These Opportunity Sites are existing sites which would represent a sustainable reuse and long term significant contribution to the overall appearance and amenity in the area together with the potential to create employment opportunities within the settlement. This strategy was brought forward in the following settlements;

- Ennis
- Kilrush
- Ennistymon
- Lahinch
- Scarriff/Tuamgraney
- Killaloe
- Kilkee
- Lisdoonvarna
- Tulla
- Newmarket-on-Fergus
- Sixmilebridge

Preferred Option

Following an assessment and evaluation of the alternatives set out in this chapter together with round table discussions between the plan making and environmental teams the preferred way forward in relation to the future land-use plan for the County is a combination of **Option 3 (Strategic Planning Approach/Balanced Approach)** and **Options 5 (Strategic Planning for Sustainable Growth).** Both options contain similarities in terms of preparing a Clare County Development Plan with a defined plan area, within which the settlement hierarchy will be defined in line with the requirements of the core strategy. Areas of environmental sensitivity, including designated sites and natural flood plains located within or adjacent to the settlement areas will be included and zoned accordingly for their protection within the settlement boundary and others will be within the Plan boundary, as will areas at risk of flooding (defined as Flood Risk Zones A, B and C). This strategic planning approach aligns more closely with European and National Policy and regulation, directs development to serviced lands, focuses on town centres for service provision and supports Ennis as a 'hub' town and Shannon as a 'gateway'. The settlement hierarchy remains on an evidence base and with the responsibility for the provision and management of water services (water supply and wastewater but excluding storm/surface water other than where sewage has been combined with surface water) being transferred to Irish Water they are committed to providing a strategic treatment capacity to facilitate the core (residential) strategies identified in this county development plan, subject to the availability of funding and environmental constraints. This alternative, in favouring strategic planning, which is carried out in a sustainable manner also aligns with Volume 7 (SIFP) of the CDP. The SIFP identifies the nature of development, economic growth and employment that can be sustainably accommodated within the Shannon Estuary which is a key feature of the Development Plan area. The SIFP in its process sought to;

- Facilitate the long term conservation of the Shannon Estuary as an entire ecosystem whilst enabling the development of a broad range of appropriate activities in a sustainable manner
- Encourage, facilitate and promote a balanced approach to harnessing the Estuary's growth potential
- Ensuring careful protection, management and enhancement of the area's natural resources
- Deliver a coordinated, sustainable and innovative approach to the optimisation of the estuarine resource through the continued proactive involvement of all key stakeholders

The preparation of the Environmental Sensitivity Map also fed into the assessment of alternatives through highlighting the overall vulnerability of the county using different indicators which served to inform the development and ultimate selection of the preferred option.

6. Assessment of Effects of Implementing the Clare County Development Plan 2017-2023

6.1 Introduction

The purpose of this section of the Environmental report is to predict and evaluate as far as possible the environmental effects of this plan for County Clare. This section of the non technical report is a summary of the detailed assessment of the objectives, land-use zonings and volumes contained within the Clare County Development Plan, which will identify where, if any, effects on the environment may occur. These may be positive or negative effects, direct, indirect, synergistic, cumulative and/or in-combination effects.

Three elements of assessment were undertaken which included:

1. An assessment of the objectives of the Plan (See **Appendix A of the SEA ER**);
2. An assessment of the land-use zonings and site specific development objectives (See **Appendix B of the SEA ER**);
3. An assessment of cumulative and in-combination effects (See **Appendix C Tables 8.2 – 8.5 of the SEA ER**).

The assessment process has been undertaken using matrix assessments which reflect ratings in relation to potential significant effects on the environment as a result of implementation. The matrix assessment ratings used are as follows:

(+)	reflects a potential positive effect
(-)	reflects a potential negative effect
(+/-)	reflects that positive and negative effects are likely or that in the absence of further detail the effect is unclear
(0)	reflects a neutral or uncertain effect

Where there is a combination of these symbols (0/+ or 0/-) this indicates that any effect maybe neutral or positive, or neutral or negative depending on how the objective is delivered.

Where negative effects are identified mitigation measures are recommended to either include new objectives, or to amend or include additional text within the Plan objectives and/or zoning objectives.

6.2 Assessment of Plan Objectives

By assessing the Plan objectives in Volume 1 of the Clare County Development Plan against the environmental objectives it identified where there were any incompatibilities and/or conflicts between them and where environmental considerations needed to be strengthened. Where considered necessary the assessment resulted in recommended mitigation for some objectives. The assessment matrix is included in **Appendix A** of the **SEA ER** and mitigation is addressed in **Section 7** of this NTS.

Each Chapter of the Clare County Development Plan 2017 – 2023 list the objectives relating to the particular topic of that Chapter as outlined below:

Chapter 1 Introduction and Vision

Chapter 2 Core Strategy

Chapter 3 Settlement Strategy

Chapter 4 Housing

Chapter 5 Community Development and Social Infrastructure

Chapter 6 Economic Development and Enterprise

Chapter 7 Retail

Chapter 8 Physical Infrastructure

Chapter 9 Tourism

Chapter 10 Rural Development & Natural Resources

Chapter 11 Shannon Estuary

Chapter 12 Marine and Coastal Zone Management

Chapter 13 Landscape

Chapter 14 Biodiversity, Natural Heritage and Green Infrastructure

Chapter 15 Architectural, Archaeological and Cultural Heritage

Chapter 16 Towns and Villages

Chapter 17 Design and the Built Environment

Chapter 18 Climate Change, Flooding and Low Carbon Strategy

Chapter 19 Land Use and Zoning

Chapter 20 Implementation and Monitoring

Each Chapter's objectives were evaluated against the criteria in **Table 6.0.** The criterion considers whether or not the objectives were likely to improve conflict or have a neutral interaction with the provisions of the Plan.

Table 6.0 Criteria for Appraising the Effect of the Plan Objectives on the SEOs

Parameter	Compatibility Criteria
Biodiversity	
Population (incl. Human Health and Quality of Life	
Soil & Geology	
Water	
Air Quality and Climatic Factors	
Material Assets	
Waste	
Water Supply	
Waste Supply	
Renewable Energy	
Cultural Heritage	
Landscape	

+	**Reflects a potential positive effect**	-	**Reflects a potential negative effect**
0	Reflects a neutral or uncertain effect	+/-	Reflects that positive and negative effects are likely or that in the absence of further detail the effects is unclear

The assessment resulted in suggested changes or recommendations for 55 of the CDP Objectives. In total 39 of these recommendations were taken on board within the Plan. In addition following recommendation a further 2 new objectives were added based on the findings of the SEA.

6.3 Land use Zoning

In considering land appropriate for development for particular uses, SEA has contributed to identifying where sites are unsuitable; those that required amendment in terms of area, nature or extent; those suitable with specific requirements set out in site development objectives; and those which are generally acceptable.

Where the process has identified sites where the impact is uncertain due to location specific issues and where a small number of areas have been identified to have a potential negative effect on the environment, mitigation measures are proposed which are designed to limit or eliminate identified impacts. In addition, monitoring the implementation of the Plan, as discussed in **Chapter 10 of the SEA ER**, will ensure that if there is any impact it will be identified and appropriate mitigation can then be put in place.

In zoning land for different land-uses in the Clare County Development Plan, the zonings are categorised in accordance with Myplan.ie[1]. The zoning classifications and definitions are set out in **Table 8.2** of the **SEA ER**.

The assessment of land-use zonings involved both desk top (GIS, aerial photography) and on-site assessment. This process resulted in an on-going flow of environmental information with regard to site specific land-use zoning proposals. Consequently, the iterative nature of the SEA process has meant that in the evolution of the proposed land-use zonings presented in the Plan, they have been informed by environmental assessment. This has lead to a number of zoning adjustments in the course of its preparation in relation to boundaries, zoning removal, and suggested inclusion of alternative areas and in some cases specific mitigation provisions within specific zoning objectives. The Plan also had the benefit of the Appropriate Assessment and Strategic Flood Risk Assessment, both of which the SEA had regard to in its assessment.

Appendix B of the **SEA ER** provides a settlement by settlement assessment against the Strategic Environmental Objectives. It provides an analysis of the zoning in black, suggested amendments and mitigation in red text and subsequently the resolution in relation to incorporation into the Draft Plan in purple text.

6.4 Cumulative and In-combination effects

This section of the Environmental Report provides an outline of the potential cumulative and in-combination effects on the environment as a result of implementation of the County Development Plan 2017-2023.

Cumulative effects are referred to in a number of SEA Guidance documents and are defined in the EPA Sea Process Checklist as “effects on the environment that result from incremental changes caused by the strategic action together with other past, present and reasonably foreseeable future actions. These effects can result from individually minor but collectively significant actions taking place over time or space” (EPA SEA Process Checklist (2011)). These effects can be insignificant individually but cumulatively over time and from a number of sources can result in the degradation

[1] Department of Environment, Community and Local Government Initiative

of sensitive environmental resources. The assessment of cumulative effects is a requirement of the SEA Directive (2001/42/EC).

The 2004 Guidelines produced by the DECLG outlines that the SEA process is in a good position to address cumulative effects for which the Environmental Impact Assessment process is not equipped to deal with. Due to the strategic nature of the SEA process a forum is provided in which cumulative effects can be addressed. The EPA is presently undertaking a study in relation to cumulative effects and it is anticipated that a draft *Cumulative Effects – Best Practice Guidance Document* will be available soon to SEA practitioners.

The EPA Strive Report 2007-2013 on 'Integrated Biodiversity Impact Assessment' describes cumulative effects as incremental effects resulting from a combination of two or more individual effects, or from an interaction between individual effects – which may lead to a synergistic effect (i.e. greater than the sum of the individual effects), or any progressive effect likely to emerge over time.

6.4.1 Assessment Approach

The following approach has been undertaken in relation to assessing the potential cumulative and in-combination effects of the County Development Plan. It includes;

- An assessment of International, National, Regional and Local Plans, Policies and Programmes that have the potential for cumulative or in-combination effects
- An assessment of the County Development Plan Objectives 2017- 2023 in relation to the other objectives contained within Volumes 5,6,7,8 & 9
- An assessment of the key elements of the County Development Plan against one another to identify any internal conflict between the policies and objectives (In-combination effects)

6.4.2 Cumulative effects with other plans and programmes

This section focuses on international, national, regional and local plans, policies and programmes that have the potential for cumulative or in-combination effects with the County Development Plan. The assessment is contained in **Appendix C Tables 8.1 to 8.4** of the **SEA ER.** In addition an assessment of the in-combination and cumulative effects of Volumes 5, 6 and 7 was undertaken within **Chapter 8** of the **SEA ER** the results of which are documented in **Table 8.3.** Further details in relation to mitigation measures associated with this assessment of the incorporated volumes can be found in **Chapter 9** of the **SEA ER.**

7. Monitoring

Article 10 of the Strategic Environmental Assessment Directive (2001/42/EEC) requires that monitoring must be undertaken of the significant environmental effects directly related to the implementation of the Plan. This is to provide for any unforeseen adverse effects to be identified at an early stage in its implementation, allowing for appropriate remedial action to be undertaken.

The primary purpose of monitoring is to allow the actual impacts of the Clare County Development Plan 2017-2023 on adoption to be assessed against the Strategic Environmental Objectives and their associated targets and indicators. The indicators used will show changes that would be attributable to the implementation of the County Development Plan 2017-2023.

Monitoring can use existing sources of information and does not necessarily require new research to be undertaken, but can be effective in identifying where additional research should be targeted to supplement where information is deficient. **Table 10.1** sets out the strategic environmental objectives, targets and indicators to applied in monitoring the significant environmental effects of the implementation of the plan, in accordance with Section 13J(2) of the Planning and Development (SEA) Regulations 2004, as amended. It is proposed that the SEA monitoring reporting should go parallel with the reviewing of the Clare CDP.

Table 7.0 below presents the SEA Monitoring Table. The SEA Objectives formed the basis of the assessment of the Clare CDP and it includes targets (overall aim), indicators (measurement of monitoring change), data sources and agency/body responsible for the monitoring.

Table 7.0 Monitoring Table

Strategic Environmental Objective	Target	Indicator/Data Sources	Source/Responsibility/Frequency
Population, Human Health and Quality of Life			
P1 – Protect, enhance and improve people's quality of life based on high quality residential, community, educational, working and recreational environments and on sustainable travel patterns.	Increase in the number of green spaces and amenities available to the public. Improved trends in perceived quality of life related to these matters. Bonds to ensure the completion of developments until taken charge. No significant deterioration in human health as a result of environmental factors.	No/area of green spaces and amenities available to the public. Improved trends in perceived quality of life related to these matters as gathered through surveys. Employment rates over the lifetime of the Plan. Completion handover of development to CCC. Availability of public transport/ smarter travel initiatives. Occurrence of any decline in human health around the plan area.	CSO – every six years in line with census CCC - Annual Iarnrod Eireann - Annual Bus Eireann – Annual
P2 - To protect human health from hazards or nuisances arising from incompatible land uses/developments.	No spatial concentrations of health problems arising from environmental factors.	Any occurrence of spatially concentrated deterioration in human health.	CSO – every six years and as results arise on a yearly basis from the 2016 census CCC – Annual
P3 - Provision of green spaces for amenity and recreational uses.	Increase in the number of green spaces and amenities available to the public.	No. /area of green spaces and amenities available to the public.	CCC – Annual
Biodiversity			
B1 – Protect, conserve, enhance where possible and avoid loss of diversity and integrity of the broad range of habitats, species and wildlife corridors.	No reduction in length or loss of hedgerows. Operators who conduct mechanical hedge cutting should have achieved the Teagasc proficiency standard MT 1302-Mechanical Hedge Trimming. 30% broadleaf/native afforestation. Protection and promotion of non-designated salmonid rivers. No. ecological networks or parts thereof which provide significant	Percentage of unique habitats and species lost in non-designated sites over the lifetime of the Plan through trending of annual/bi-annual surveys. Percentage of broadleaf/native afforestation. Percentage loss of connectivity between areas of local biodiversity importance as a result of implementation of the Clare County Development Plan as evidenced from a resurvey of CORINE mapping.	CCC – Annual/bi-annual surveys OPW - Annual Coillte- Annual NPWS – Annual or as and when surveys completed by NPWS for National Monitoring programmes on a rolling basis and/or surveillance monitoring undertaken for compliance with Article 17 of the Habitats Directive and reported on every 6 years.

	connectivity between areas of local biodiversity to be lost without remediation as a result of implementation of the Clare County Development Plan 2017 – 2023 Afford the same level of protection to Margaritifera Sensitive Areas as is afforded to Freshwater Pearl Mussel SAC rivers	Decrease in population of freshwater pearl mussels in *Margaritifera* sensitive areas and/or habitat and water quality deterioration.	CCC - Annual OPW - Annual National Biodiversity Data Centre – Annual Shannon RBD/National RBD – First and second RBMP Cycle
B2 – To achieve the conservation objectives of European Sites (SACs and SPAs) and other sites of nature conservation.	No loss of protected habitats and species during the lifetime of the Plan. No compromise in the favourable conservation condition of European sites. No compromise or impact on the achievement of the favourable conservation condition objectives (whether maintain or restore) of European sites.	Designation of additional areas due to biodiversity and/or geological value. Percentage of unique habitats and species lost in designated sites through trending of annual surveys. No./percentage of developments in/near Natura 2000 network. Percentage of European sites in the plan area that are at 'Favourable' conservation status. Percentage of Qualifying Interest Features which have achieved their specific objectives of maintain or restore.	
B3 - Conserve and protect other sites of nature conservation including NHAs, pNHAs, National Parks, Nature Reserves, Wildfowl Sanctuaries as well as protected species outside these areas as covered by the Wildlife Act.	No loss of protected habitats & species during the lifetime of the Plan. Submission of Screening Report or Natura Impact Statement for proposed developments with planning applications in/and/or near European Sites.	Percentage of unique habitats and species lost in designated sites through trending of annual surveys. Provision/No. of Screening Reports/Natura Impact Statements with developments proposed for sites in/and/or near European sites.	
B4 - Meet the requirements of the Water Framework Directive and the Shannon River Basin Management Plan/National River Basin Management Plan	All waters within the plan area to achieve the requirements of the WFD and the relevant River Basin Management Plan by 2027. Ensure provision of riparian zones at project/site level.	No. of surface and groundwater bodies achieving "Good Status". No of waterbodies indicating deterioration in status. No. of planning applications with sufficient inclusion of buffer zones where necessary and applicable.	
B5 – To minimise and, where possible, eliminate threats to bio-diversity including invasive species.	Prevent the introduction of new invasive or alien species. Control/manage new invasive	No., type and location of invasive species identified. No. of actions achieved under the Biodiversity	

	species. Control/manage/eradicate invasive species throughout the county.	Action Plan. Increase/decrease in coverage of invasive species identified. No. of submissions/observations submitted through invasive species Ireland "Alien Watch". www.invasivespeciesireland.com/alien-watch The National Biodiversity Data Centre will track success in the implementation of the All-Ireland Pollinator Plan by measuring increases in the abundance and diversity of pollinators within the Irish landscape as the 81 actions are implemented.	
B6 - Promote green infrastructure networks, including riparian zones and wildlife corridors.	Ensure new development is set back from rivers. The recommended width for larger river channels (>10m) is 35m to 60m and for smaller channels (<10m) is 20m or greater. The determined width should be tailored to site specific, river reach or lakeshore characteristics and their associated habitats. It is important that the buffer zone is large enough to protect the ecological integrity of the river (including emergent vegetation), the riparian zone (bank side vegetation including trees) and takes into account the human history of the area.	No. planning permissions close to water.	
Soil and Geology			
S1 – To maximise the sustainable re-use of the existing built environment, derelict, disused and infill sites (brownfield sites), rather	Preference for development on brownfield site over green field. Specified % of new applications granted to be on brownfield sites.	No/% of new developments on brownfield sites. Area of brownfield land developed over the plan period. % of total greenfield land developed.	CCC – Annual through a review of planning applications

than greenfield sites.	Limited and controlled development of greenfield sites. Re-use of soil from redeveloped sites where possible. No incidences of soil contamination.	Level of urbanisation. Excessive land-filling of quality soil. Incidences of soil contamination.	
S2 – Minimise the excavation and movement of soils within site works.	Limited and controlled development of greenfield sites. Limit the amount of excavation in sensitive locations for example peat excavation in wind farm sites.	Volume of construction and demolition waste recycled. No. of brownfield sites that have been redeveloped.	CCC – Annual
S3 – Minimise the consumption of non-renewable deposits on site.	Re-use of soils from redeveloped sites where possible. Increased provision of construction and demolition waste facilities.	Excessive land-filling of quality soils. No. of facilities for Construction and Demolition Waste.	CCC – Annual
S4 - Minimise the amount of waste to landfill from site.	Reduction in the quantities of waste sent to landfill. Increase in the quantities of waste sent for recycling. Increase in the number of bring banks in the plan area. Compliance with the Southern Region Waste Management Plan.	Quantity of household waste sent to landfill. Quantity of household waste sent to recycling. The number of bring banks provided for in the plan area. Compliance with the Southern Region Waste Management Plan. Statistical Indicators (Primary and Secondary) reported on through the Southern Waste Region Statistical Indicators Annual Report.	CCC EPA Southern Waste Region – Annually through Statistical Indicators Report and Waste Management Plan Annual Report.
S5 - Conserve, protect and avoid loss of diversity and integrity of designated habitats, geological features, species or their sustaining resources in designated ecological sites.	No loss of diversity and integrity of designated habitats, geological features, species or their sustaining resources in designated ecological sites. Designation of sites as County	Percentage of habitats, geological features, species etc. Lost over the lifetime of the Plan through trending of annual/bi-annual surveys.	GSI

	Geological Sites.	No. of areas designated as County Geological Sites.	CCC - Annual
Water			
W1 – Protect and enhance the status of aquatic ecosystems and, with regard to their water needs, terrestrial ecosystems and wetlands directly depending on the aquatic ecosystem (quality, level, flow).	To achieve a Q rating of 4 'good' quality status by 2015.	Biotic quality rating of river waters at EPA monitoring locations.	EPA – Annual as recorded through the WFD Monitoring Programme
W2 – Monitor the on-going trends in water quality status.	Demonstrate an on-going status improvement and an upward trend in water quality.	Progression from bad to poor, poor to moderate, moderate to good and good to high in terms of WFD Status.	EPA EDEN Portal – As up-dated through the 2nd River Basin Management cycle by the EPA.
W3 – Maintain or improve the quality of surface water and groundwater (including estuarine) to status objectives as set out in the Water Framework Directive (WFD), the Shannon River Basin Management Plan and POMS.	Improvement or at least no deterioration in surface water quality by 2015.	Changes in receiving water quality as identified during water quality monitoring for WFD, ShIRBMP/National RBMP conducted by CCC and EPA.	CCC – As reported through the 1st and 2nd River Basin Management Plan. EPA – As reported through the 1st and 2nd River Basin Management Plan.
W4 – Implement appropriate sustainable drainage systems (SuDS) in the County.	New drainage systems to be compliant with SUDs.	No. of developments granted planning permission that incorporate SUDs.	CCC – Quarterely planning permissions granted.
W5 – Reduce the impact of polluting substances to all waters and prevent pollution and contamination of ground water by adhering to aquifer protection plans and to maintain and improve the quality of drinking water supplies.	Improvement or at least no deterioration in surface and groundwaters by 2015.	Changes in receiving waters and groundwater quality as identified by water quality monitoring programmes conducted by CCC and EPA.	CCC - Annual EPA – Annual
W6 - Promote sustainable water use and water conservation in the plan area and to maintain and improve the quality of drinking water supplies.	Pressure on water and waste water treatment plants.	Decrease in no. of water shortage notices issued during drought periods. Decrease in the amount of water consumed per household in the plan area.	CCC/Irish Water
W7 –Protect flood plains and areas of flood risk from development	In accordance with OPW/DOEHLG, all planning applications within designated Flood Risk Zones A and B	Level and location of flooding.	CCC – Records obtained as and when flood events occur

through avoidance, mitigation and adaptation measures.	as identified in the Strategic Flood Risk Assessment for the plan are required to undertake Flood Risk Assessment.		OPW – As updated on http://www.floods.ie/ and once CFRAMS final maps become available in 2017 and are updated as part of the overall implementation of the Floods Directive in Ireland.
W8 – To promote a responsible attitude to recreation and amenity use of water in relation to water quality and disturbance to species and to prevent pollution and contamination of designated bathing waters.	Maintain water quality, no pollution or contamination issues in our rivers and lakes in particular but also our estuaries and all waters designated as bathing waters.	Adherence to bathing water guidance and standards in accordance with the bathing water Directive and associated regulation Regulation (S.I. No. 79 of 2008).	Retention or approval for Blue Flag status - The Blue Flag is operated in Ireland by An Taisce-The National Trust for Ireland on behalf of the Foundation for Environmental Education (FEE) – Annually Progression of bathing waters from 'sufficient' to 'good' to 'excellent' with no waters categorsised as 'poor' in accordance with the water quality standards specified in the 2008 Regulations with a classification of at least 'sufficient' to be achieved for all bathing waters.
Air and Climate Change			
C1 – Minimise all forms of air pollution and maintain/improve ambient air quality.	Maintain ambient air quality through reduction of private vehicle usage.	Air quality indicators.	CCC - Annual EPA - Annual
C2 – Minimise emissions of greenhouse gases and contribute to a reduction and avoidance of human-induced global climate change.	Provide for increased use of public transport. Increase number of cycle lanes and pedestrian routes in the plan area. Establish incentives/increase no. of permissions for renewable energy projects.	Use of public transport. Provision of cycle lanes and walking routes. No. of grants given for insulation works; energy efficiency of new buildings – energy rating figures. No. of planning applications for residential houses with low carbon footprint. No. Of wind turbines permitted which may contribute to mitigation of, and adaptation to	CCC – Annual as new cycle strategy and/or Green Infrastructure is published. CSO – Annual as figures/reports based on 2016 census become available. CCC – No and type of planning applications in relation to low carbon residential housing and wind turbines and/or commencement of construction

		Climate Change. Location of permitted wind farms within areas of the greatest wind energy resource in County Clare as depicted through the SEAI Wind Atlas. http://maps.seai.ie/wind/	of such on an annual basis. SEAI
C3 - Reduce car dependency within the plan area by way of an integrated approach to sustainable urban transport.	An increase in the percentage of the population travelling to work or school by public transport or non-mechanical means. A decrease in the average distance travelled to work or school by the population of the plan area.	Percentage population within the plan area travelling to work or school by public transport or non-mechanical means. Average distance travelled to work or school by the population of the plan area.	CSO – every 6 years through census information.
Material Assets – Transport			
T1 – Maximise sustainable modes of transport and encourage use of walkways/cycle paths as alternative routes to school, work, and shops.	An increase in provision of cycle lanes and pedestrian routes. An increase in population travelling to work and school by public transport or non-motorised transport. A reduction in the distance travelled to work or school by the population of the plan area.	No. of cycle lanes and pedestrian routes provided in the plan area. Percentage of the population within the plan area travelling to work or school by public transport or non-mechanical means. Average distance travelled to work or school by the population of the plan area. Number of private cars on road as a percentage of Annual Average Daily Traffic (AADT).	CCC – Achievement of Clare County Council Active Travel under the Departments Smarter Travel Scheme annually. CSO – every 6 years through census information. NRA
T2 - Provide for ease of movement for all road users and to promote development patterns that protect and enhance road safety.	Reduce the number of private vehicles on the road. Increase in public transport. Increase cycle and walking modes of transport. Integrated traffic management plan for the plan area.	No. of private cars on the road as a percentage of AADT. No. of applications for the Bike to Work Scheme. Traffic survey and pedestrian surveys undertaken in the preparation of a traffic management plan.	CCC - ongoing

Material Assets – Waste			
WA1 – Implement the waste pyramid and encourage reuse/recycling of material wherever possible.	Reduction in the quantities of waste sent to landfill. Increase in the quantities of waste sent for recycling. Increase in the number of bring banks in the plan area. Compliance with the Southern Region Waste Management Plan	Quantity of household waste sent to landfill. Quantity of household waste sent to recycling. The number of bring banks provided for in the plan area. Compliance with the Southern Region Waste Management Plan.	CCC – Environment Department statistics and reports. Southern Waste Region – Annually through Statistical Indicators Report and Waste Management Plan Annual Report
Material Assets – Water Supply			
WS1 - To ensure adequate and clean drinking water supplies.	Upgrade existing water treatment plants within the plan area.	Number of upgrades undertaken within the plan area.	Irish Water – Achievement of Water Services Strategic Plan objectives Irish Water – The implementation of the Lead Mitigation Plan over the lifetime of the County Development Plan to achieve safe, clean drinking water for all.
WS2 - Improve efficiency in distribution of potable water to the population through pipe rehabilitation and to promote water conservation and sustainable water usage for long-term protection of available water resources.	Reduce the amount of water usage. Reduce the amount of water lost through pipe leakage (currently 65%) through the pipe rehabilitation. Increase usage of water collected through water harvesting.	Water meter readings (Reintroduction of water charges based on conservation). Sale of water harvesting butts. Retrofitting of rainwater harvesting units.	Irish Water – reduction in household costs for water charges based on conservation (This is dependent on water charges being reintroduced; meter readings are still on-going in the absence of charges.
Material Assets – Waste Water			
WW1 - To ensure that all zoned lands (existing and proposed) are connected to the public sewer network ensuring treatment of wastewater which meets EU requirements prior to discharge.	Upgrade existing wastewater treatment plant infrastructure identified within the plan as being insufficient, based on existing and forecasted population demands to meet EU requirements.	Upgraded Waste Water Treatment Plants within the plan area.	Irish Water -Achievement of Water Services Strategic Plan objectives. CCC – granting of permission conditioned based on a future WWTP upgrade. CCC – refusal of permission as no

			upgrade to WWTP due to take place.
WW2 - Reduce the dependency on individual proprietary wastewater treatment facilities and ensure the highest standards possible in existing and future wastewater treatment facilities.	Testing of individual proprietary wastewater treatment facilities in line with EU/National guidance. Sustainable alternative individual proprietary WWT facilities. Measures to promote encourage and incentivise a change from traditional WWTS to alternative sustainable systems.	No. planning applications for single houses within the plan area, served by individual WWT facility. Testing of individual WWT facilities. Types/usage/percentage using sustainable methods of WWT.	CCC – ongoing.
Material Assets – Renewable Energy			
RE1 - Reduce waste of energy, promote use of renewable energy sources and support energy conservation initiatives across all sectors including the development of low carbon business practices and buildings.	Increase in renewable energy developments.	No. of renewable energy developments granted planning permission. Establishment of R&D projects (one or more). Meet or exceed County contributions to national renewable energy targets. Meet or exceed County contributions to national energy efficiency/conservation targets. In line with the Wind Energy Strategy (Volume 5 of the Development Plan) achieve the minimum target of 550MW from wind energy by 2017. The number of hectares of land that has been converted to use for Bio energy production utilising Miscanthus; Oilseed Rape; Reed Canary Grass or SRC Willow. (Suitable lands have been identified through the SEAI Bioenergy Map http://maps.seai.ie/bioenergy/).	CCC – new solar frams, windfarms or other renewable energy developments granted. LCEA, Clare CoCo, SIFP – number of new R&D projects within the Plan area e.g. testing of tidal energy devices. Southern and Eastern Regional Assembly.
Cultural Heritage			

CH1 – Protect and conserve the cultural heritage including the built environment and settings; archaeological (recorded and unrecorded monuments), architectural (Protected Structures, Architectural Conservation Areas, vernacular buildings, materials and urban fabric) and manmade landscape features (e.g. field walls, footpaths, gate piers etc.).	No permitted development which involves loss of cultural heritage, including protected structures, archaeological sites, Architectural Conservations Areas and landscape features.	No. of developments permitted during the lifetime of the plan which will result in the loss or partial loss of protected structures or sites of archaeological status. No. of additions to the list of Protected Structures. No. of additions to the list of Architectural Conservation Areas. Development of cultural heritage areas for amenity resources.	CCC - ongoing
CH2 – To protect, conserve and enhance local folklore, traditions and placenames within the Plan area.	To increase the use of local placenames within the plan area.	No. Of applications which are referred to the Conservation and Heritage Officers.	CCC - ongoing
CH3 – To ensure the restoration and re-use of existing uninhabited and derelict structures where possible opposed to demolition and new build (to promote sustainability and reduce landfill).	To increase the number of uninhabited and derelict structures that are restored opposed to demolition.	No. planning applications for restoration/re-use of vacant and derelict structures. No. planning applications for demolition and redevelopment of vacant and derelict sites.	CCC - ongoing
Landscape			
L1 – Conserve, protect and enhance valued natural, cultural and built landscapes, views of local value and features including those of geological and aesthetic value.	Ensure no significant disruption of historic/cultural landscapes and features through objectives of the County Development Plan.	No. of developments permitted and their impacts on cultural/historic landscapes. No. of developments located within Scenic Route or no degradation of areas designated as Heritage Landscapes (Locations in text and on maps). No. of developments located within a designated scenic view or route or high landscape area in County Clare that disrupt views (based on the LCA).	CCC – ongoing Heritage Council - ongoing Fáilte Ireland - ongoing GSI - ongoing NPWS - ongoing

		Development and application of framework in relation to the application of LCA and their contribution to SEA.	EPA SEA Unit in conjunction with CCC
L2 - Maintain and enhance landscape quality within the plan area by minimising visual impacts through appropriate design, assessment and siting.	No significant visual impact from development. Ensure no significant disruption of high landscape values.	No. of developments located within a high landscape area that disrupt views (based on LCA): Loss of vistas/views. Loss of trees. Loss of amenity woodland. No of large scale developments permitted.	CCC - ongoing

8. Conclusion

The Clare County Development Plan sets out an overall Vision, goals, policies and objectives for the period 2017 – 2023 which seeks to provide for the long term planning and overall benefit of the county. The SEA Environmental report demonstrates how environmental parameters have been addressed in the plan preparation process. The SEA, AA and SFRA have informed the plan through an ongoing iterative process that incorporated environmental considerations and sensitivities throughout the plan development. The SEA and AA have been undertaken in line with the Planning and Development (Strategic environmental Assessment) Regulations 2004 to 2011 (as amended) and the European Communities (Natural Habitats) Regulations 2011. Subject to the full and proper implementation of the mitigation measures outlined in this SEA Environmental Report which have been incorporated into the Clare County Development Plan 2017-2023 it is considered that significant adverse impacts on the environment will be avoided.

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- Volume 10b Appendix A

On the 28th of March 2017, the Minister for the environment, Community and Local Government, Simon Coveney T.D. issued a Ministerial Direction pursuant to Section 31 of the Planning and Development Act 2000 (as amended) in relation to the adopted Clare County Development Plan 2017-2023. The Minister directed that:-

(i) Remove written objective TOU7 Ardcloony and accompanying text, page 19, from Volume 3C: Killaloe Municipal District – Writing Statement and Maps – Interim Version

(ii) Amend the maps for Killaloe which set out the objectives for Ardcloony by changing the zoning objective for lands currently indicated as “TOU7” (tourism) to un-zoned.

The Ministerial Direction is outlined in details in the Clare County Development Plan SEA Environmental Report, SEA Statement and Natura Impact Report as altered on the 25th January 2017.


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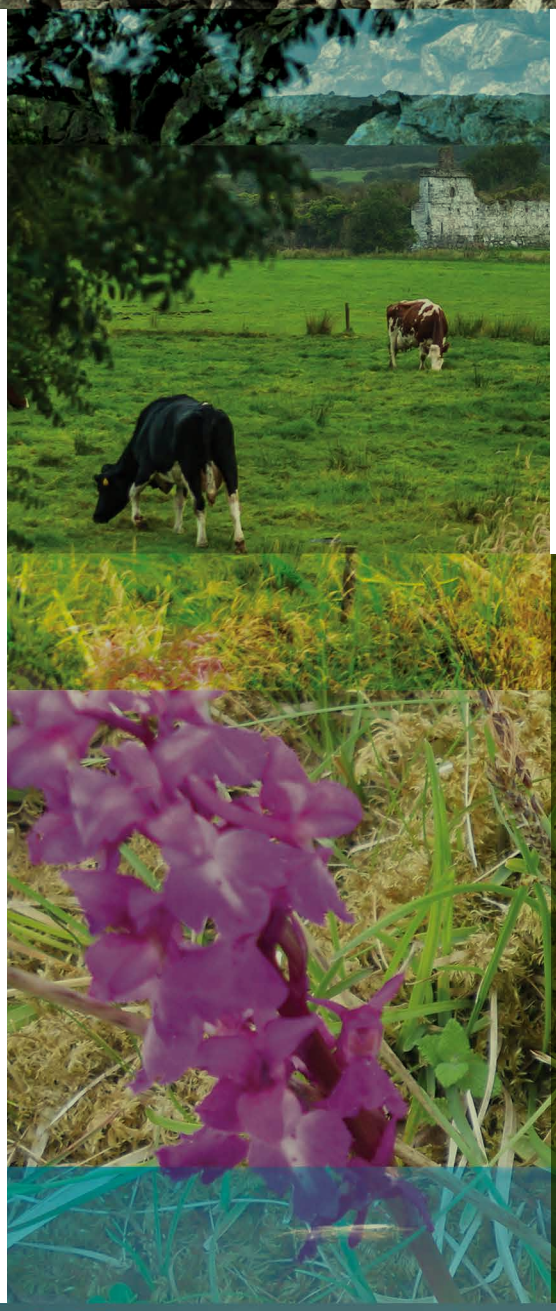
AREA

CLARE COUNTY
DEVELOPMENT PLAN
2017
2023



Comhairle Contae an Chláir
Clare County Council

Clare County Council,
Áras Contae an Chláir,
New Road,
Ennis, Co. Clare

Tel: +353 (65) 682 1616
planoff@clarecoco.ie
www.clarecoco.ie

10b(i)

Clare County Development Plan 2017–2023

Strategic Environmental Assessment

Non Technical Summary