Clare County Development Plan **2023–2029**

Volume 10b(ii)

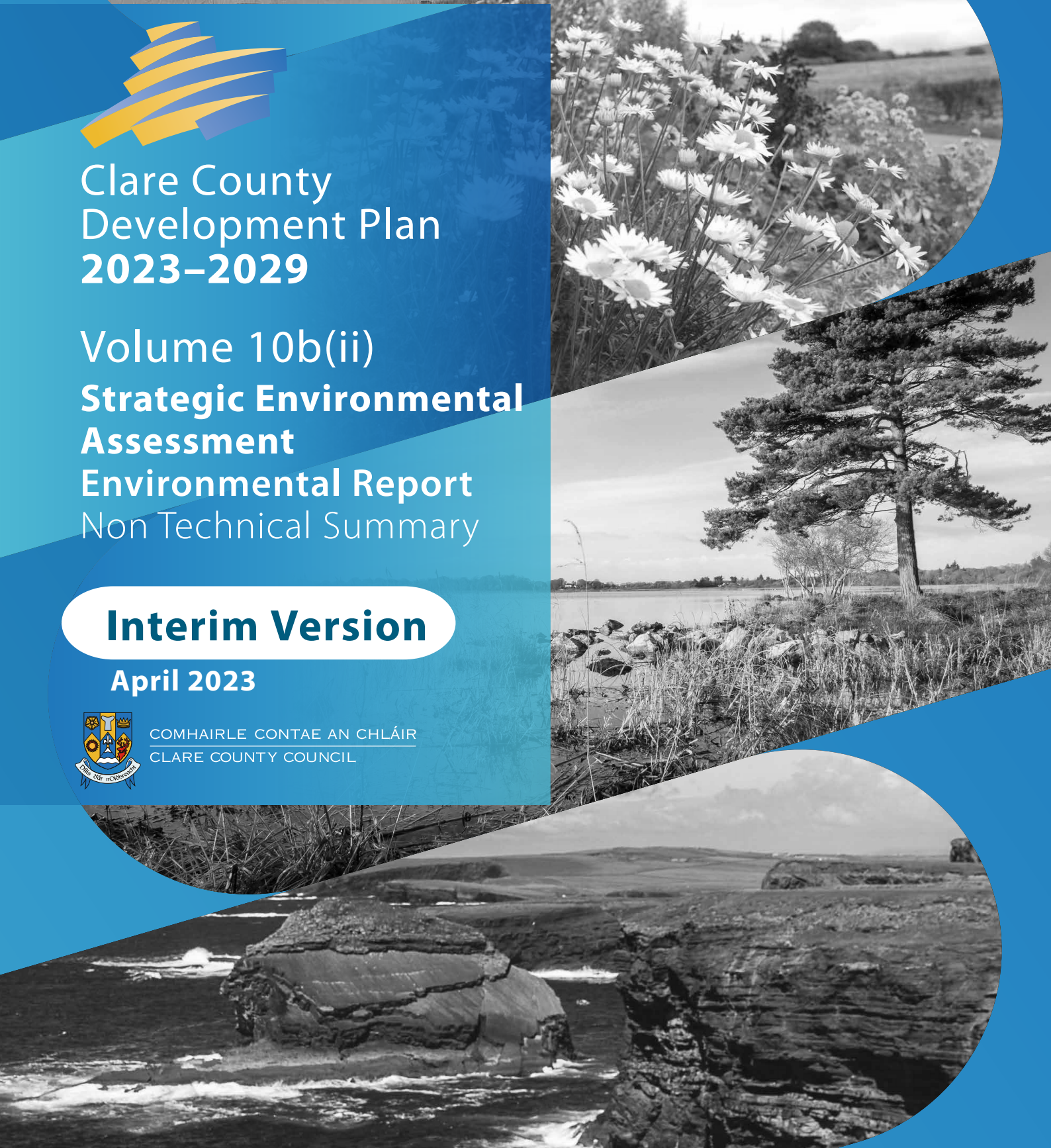
Strategic Environmental Assessment Environmental Report

Non Technical Summary

Interim Version

April 2023

COMHAIRLE CONTAE AN CHLÁIR
CLARE COUNTY COUNCIL



Strategic Environmental Assessment - Environmental Report
Non-Technical Summary

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Abbreviations

ACA	*Architectural Conservation Area*
AA	*Appropriate Assessment*
CCDP	*Clare County Development Plan*
cSAC	*Candidate Special Area of Conservation*
CSO	*Central Statistics Office*
DoECC	*Department of Environment, Climate and Communications*
DoTCAGSM	*Department of Tourism, Culture, Arts, Gaeltacht, Sports, and Media*
EDEN	*Environmental Data Exchange Network*
EEA	*European Environmental Agency*
EIA	*Environmental Impact Assessment*
EIAR	*Environmental Impact Assessment Report*
ER	*Environmental Report*
EU	*European Union*
GHG	*Green House Gas Emissions*
GIS	*Geographical Information Systems*
GSI	*Geological Survey of Ireland*
HAD	*Habitats Directive Assessment*
IGHP	*Irish Geological Heritage Programme*
IPC	*Integrated Pollution Control*
LCEA	*Limerick Clare Energy Agency*
MASP	*Metropolitan Area Strategic Plan*
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*
RSES	*Regional Spatial and Economic Strategy*
RA	*Regional Assembly*
RPS	*Record of Protected Structures*

S.I. No.	*Statutory Instrument Number*
SA	*Shannon Airport*
SCP	*Shannon Commercial Properties*
SG	*Shannon Group*
SAC	*Special Area of Conservation*
SDZ	*Strategic Development Zone*
SEA	*Strategic Environmental Assessment*
SEO	*Strategic Environmental Objective*
SFRA	*Strategic Flood Risk Assessment*
SO_2	*Sulphur dioxide*
SRA	*Southern Regional Assembly*
SPA	*Special Protection Area*
SuDS	*Sustainable Drainage Systems*
TII	*Transport Infrastructure Ireland*
WFD	*Water Framework Directive*
WMU	*Water Management Units*
WSIP	*The Water Services Investment Programme*
WWTP	*Wastewater Treatment Plant*
WTP	*Water Treatment Plant*

Glossary

Alternatives (Reasonable)	Alternatives should consider 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 the plants found in each area. Fauna is all 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, and 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, consideration 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 Characteristics	Environmental resources, issues and trends in the area affected by 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 have 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 relevance and significance within a P/P area and/or the zone of influence of that P/P. These issues should be identified during the 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, reduce and, as fully as possible, offset any significant adverse impacts on the environment of implementing a human action, be it a plan, programme or project. Mitigation 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, can be readily understood by decision-makers and by the 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 fulfil 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 considered - 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, 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 byelaw 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 Environmental Objective (SEO)	Strategic Environmental Objectives (SEOs) are methodological 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 to help identify areas in which significant adverse impacts are likely to occur, if not mitigated.
Synergistic effect	Effects that, when totaled, 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 2023 – 2029. SEA is a key process that promotes sustainable development across plans and programmes. The purpose of the SEA is to assess the likely significant effects of implementing a plan or programme formally and systemically, in this instance the Clare County Development Plan (CDP) 2023-2029.

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 2023-2029 and should be read in conjunction with the 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 2023-2029

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 2023-2029 requires a full SEA as outlined in **Chapter 1** of the **SEA ER.** The SEA process can be categorised into several 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 2023-2029 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 2023-2029 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 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 considered, 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 Development Plan is the principal policy document of the Planning Authority which sets out an overall strategy for the proper planning and sustainable development of its functional area over a 6-year period. Development Plans comprise of a written statement supported by maps indicating the development objectives for the area in question, including several mandatory objectives. A Planning Authority is required to prepare and adopt a Development Plan every 6 years. Not later than 4 years after the adoption of the Development Plan, a Planning Authority is required to review its existing Development Plan and commence the preparation of a new one. The preparation, content and adoption of a Development Plan are governed by the provisions of the Planning and Development Act 2000, as amended. In general, the preparation and adoption of a Development Plan is a 2-year process and involves several stages, the first of which is consultation with the public and other interested bodies The existing Clare County Development Plan 2017-2023 (as varied) was adopted by the Elected Members of Clare County Council on 19th December 2016 and will remain in force until **January 2023** unless otherwise superseded by a revised County Development Plan.

The Government recently published Project Ireland 2040 (National Planning Framework (NPF) and National Development Plan 2018-2027). Clare now forms part of the Southern Regional Assembly with the Regional Spatial and Economic Strategy (RSES) coming into effect on the 31st of January 2020. This included the Limerick-Shannon Metropolitan Area which encompasses Shannon as a key town and will accommodate significant job and population increases within the lifetime of the new Clare County Development Plan 2023-2029.

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 2023-2029, Strategic Environmental Assessment and Appropriate Assessment

Clare County Development Plan 2023-2029	Strategic Environmental Assessment (SEA) and Appropriate Assessment (AA)	Strategic Flood Risk Assessment (SFRA)
Commence preparation of Draft Plan Pre-Draft Consultation Period **18th September 2020 – 16th November 2020**	Commence review and preparation of SEA Scoping Process Pre-Draft Consultation Period **18th September 2020 – 16th November 2020**	Commence review and preparation of flood maps. Pre-Draft Consultation Period **18th September 2020 – 16th November 2020**
Commencement of public display and invitation of submissions on Draft Plan, Environmental Report, Natura Impact Report and Stage 2 Flood Risk Assessment **December 2021** Closing date for public submissions on Draft Plan **March 2022**		
Chief Executives Report on Submissions received to Draft Plan, Environmental Report, Natura Impact Report and Stage 2 Flood Risk Assessment (for Elected Members) **June 2022**		
Consideration of Chief Executive's Report by Elected Members (resolve to alter or make, amend, or revoke Draft Plan, Environmental Report, Natura Impact Report and Strategic Flood Risk Assessment) **March 2022**		
	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. **December 2022**	Public Display of Amendments to Environmental Reports and consultation period **December 2022**	Public Display of Amendments to Strategic Flood Risk Assessment and consultation period **December 2022**
Submission of Chief Executive's Report to Members on submissions on the proposed material alterations to the Draft Plan, Environmental Report Addendum, Natura Impact Report and Strategic Flood Risk Assessment **January 2023**		
Consideration of Chief Executives Report by Elected Members (resolve to make, amend or revoke Draft Plan, Environmental Report, Natura Impact Report, and strategic Flood risk Assessment) **March 2023**		
Clare County Development Plan 2023-2029 comes into effect 4 weeks after adoption, accompanied by the Environmental Report and SEA Statement and the Natura Impact Report **April 2023**		

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 118,817 (Census 2016). The National Planning Framework sets out the population target for growth for the County to 2031. The population target is lower than previous population target allocations for the County. The Core Strategy for the new County Development Plan 2023-2029 must realign population growth in terms of its distribution throughout the towns and villages of the County. It is bounded by the counties of Galway to the north, Tipperary to the east and Limerick to the south. Its natural surface water 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.

The County has a diverse topography, varying from bare limestone pavement to estuarial mudflats and from high Atlantic cliffs to inland water ways and lakes. The County's coastline is 360km in length. Much of the county has underlying limestone strata which is highly permeable. County Clare is noted for its agriculture, tourism and landscapes including the Burren National Park, renowned for its physical and cultural heritage.

Ennis is the County town and the administrative centre of County Clare as well as being identified as a Key Town in the RSES for the Southern Region. As outlined in the Regional Spatial Economic Strategy (RSES) for the Southern Region, Ennis is identified as a large population scale urban centre functioning as self-sustaining regional driver and as a key town. With a population of 25,276 in 2016, it is the largest town in Munster and the fifth largest settlement in the Region. The triangle of Limerick-Shannon-Ennis is recognised as the economic engine of the Mid-West. The M18 has created a greater synergy and connection between Ennis and Galway and there is potential to attract economic drivers/infrastructure such as data centres.

Shannon forms part of the Limerick Shannon Metropolitan Area and is seen as a significant employment centre with assets such as Shannon International Airport, Shannon Free Zone and the International Aviation Services Centre (IASC). The Limerick-Shannon Metropolitan Area Strategic Plan (MASP) seeks to integrate sustainable economic and social development with the protection and enhancement of the natural environmental whilst ensuring our transition to a climate resilient society. Shannon will be a key economic driver within the Metropolitan Area and will accommodate significant job and population increases within the lifetime of the new Clare County Development Plan 2023-2029.

The County is well served by air, road, and rail transport facilities. Shannon International Airport caters for over 2 million passengers per year (pre COVID) providing services to the UK, Europe, and USA. Strategic road access is provided by the Ennis by-pass and the N18/M18 motorway, creating easy connectivity with the rest of the country. The Western Rail Corridor provides regular daily commuter services between Ennis and Limerick to Dublin and between Ennis and Athenry and Galway. Marine access and transport are provided for at Moneypoint, Killimer, Shannon Airport and harbours along the Atlantic coastline. The potential for greater accessibility along the deepwaters of the Shannon Estuary has been the subject of the Strategic Integrated Framework Plan for the Shannon Estuary.

Commerce and trade are the greatest source of employment in the County. Outside the Industrial/business, retail and administrative employment centres of Shannon, Ennis and Kilrush, tourism and agriculture are two of the primary industries in the County.

The physical, social and community infrastructure in the towns and villages around the County continue to be progressed.

As per Volume 3 the county is split into 4 Municipal Districts within which the settlements are contained as per **Figure 2.0.**

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

The County is divided into four municipal districts; West Clare, Ennis, Shannon, and Killaloe as shown in **Figure 2.0** below.

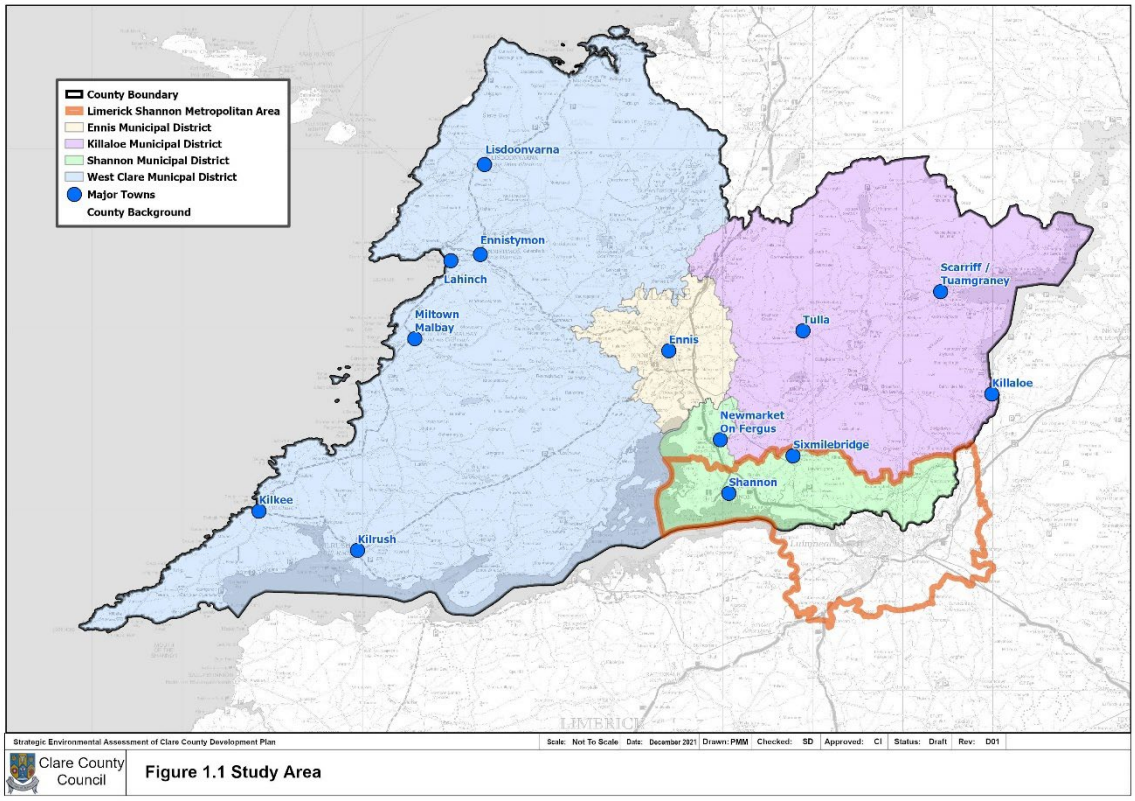


Figure 2.0 County boundary showing geographical extent of municipal districts and Metropolitan Area

1.3 Content of the Clare CDP

The Clare County Development Plan 2023-2029 considers national and regional planning guidelines, strategies, and policy documents. It is also informed by 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 2023-2029 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 2023-2029 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 2023-2029 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 2023-2029 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, except for Shannon Town. As a critical driver within the Limerick-Shannon Metropolitan Area, Shannon is a centre of international business, has strong synergies with Limerick City, Ennis and the wider Region and is central to delivering the ambition for the Limerick-Shannon Metropolitan Area's economic, social diversity and tourism development.

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 2023-2029 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 maps, on a county scale, referred to in Volume 1 and which give effect to the designations as contained in the written statement.

Volume 3 – Municipal District Written Statement and Maps
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 Written Statement and Maps
Volume 3(b) – Shannon Municipal District and Limerick-Shannon Metropolitan Area Written Statement and Maps
Volume 3(c) – Killaloe Municipal District Written Statement and Maps
Volume 3(d) – West Clare Municipal District Written Statement and Maps

Volume 4 - Record of Protected Structures
A Protected Structure is a structure that is of special interest from an architectural, historical, archaeological, artistic, cultural, scientific, social, and technical point of view. Details of all Protected Structures in County Clare are entered in this Record of Protected Structures.

Volume 5 – Clare Renewable Energy Strategy
This volume outlines the renewable energy resource that is deliverable within County Clare including issues such as micro-renewable energy and energy storage.

Volume 6 – Clare 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 7 – Retail Strategy for Limerick-Shannon Metropolitan Area and County Clare
This volume comprises the Retail Strategy for County Clare, and the Limerick-Shannon Metropolitan Area which is intended to provide a strategic county wide approach to achieving a balance in retail development.

Volume 8–Clare County Housing Strategy and Housing Need Demand Assessment
This volume comprises a Housing Strategy and Housing Need Demand Assessment, prepared in accordance with Part V of the Planning and Development Act, 2000 (as amended).

Volume 9 – 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 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 Floods 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 2023-2029 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 Clare CDP 2023-2029 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 2023-2029. 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 considered 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:

- National Planning Framework (NPF) Project 2040
- National Marine Planning Framework 2021
- National Development Plan 2018 – 2027
- Climate Action Plan 2023
- Regional Spatial and Economic Strategy for the Southern Region (RSES)
- EU Birds and Habitats Directive
- Floods Directive
- The Drinking Water Directive
- Clare Wind Energy Strategy 2017-2023
- Clare Renewable Energy Strategy 2017-2023
- Irish Water Services Strategic Plan (including the associated SEA and AA)

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 2023-2029 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 several 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 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 several 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 5.6.24 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 several 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 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 because 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, 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

The National Planning Framework and the Regional Spatial Economic Strategy set out transitional local authority population projections to 2031 which makes provision for the population of County Clare to grow to between 134,000-137,000 by 2031. The Regional Spatial and Economic Strategy for the Southern Region including the Limerick Shannon Metropolitan Area Strategic Plan (MASP) include interim population targets to 2026 and 2031.

The 2016 Census population data for Clare suggests that there is evidence of a continuation of strong growth with an increase of population from 2011-2016 of 1.4% and from 2006-2016 of 7.1% to the current population of 118,817 in County Clare. Our largest town of Ennis has a population of 25,276.

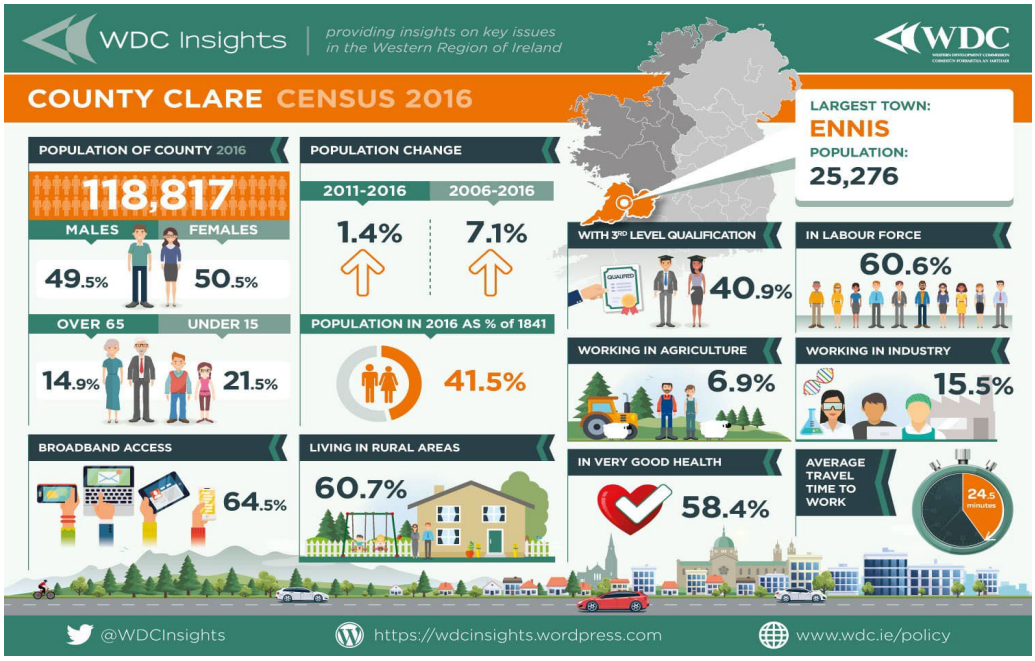


Table 3.0 Key Census 2016 statistics for County Clare

The National Spatial Strategy and the Mid-West Regional Planning Guidelines 2010-2022 have now been superseded by the National Planning Framework (NPF) and the Regional Spatial and Economic Strategy for the Southern Region (RSES) and will inform the preparation of the Clare County Development Plan

The RSES gives effect, at a regional level, to the National Planning Framework together with the National Development Plan. The RSES provides a regional framework for the formulation of the policies and objectives and the overall strategy for sustainable development in the County Development Plan and seeks to ensure the proper balance between the different settlements in the region regarding development, population, and services.

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 several 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

The County of Clare has experienced ever increasing development pressures, but a changing economic climate due to the global world pandemic, the move to net zero carbon emissions and the requirement to decarbonise our very fabric of life is going to change the way we live, work, and recreate. This in turn presents challenges for the future in relation to the provision of housing in rural areas as remote working becomes part of the norm. The trend over the past number of planning cycles has been towards outward movement from the Plan area in pursuit of employment. We now have a real opportunity to retain the younger age cohorts within the area and encourage those who work within the area to also live within it and to encourage additional employment opportunities within the Plan area.

The population of Ennis (including Clarecastle) increased by 2.26% between 2011-2016 and compared with other Hub towns it has seen one of the lowest increases. Of concern is the significantly higher growth seen in the environs which has greater environmental implications.

The unemployment rate in Clare stands at 12.4% (Census 2016). To avoid continued losses there must be a pro-active approach to encourage the existing population of the area to remain by providing employment opportunities, services and resources which will benefit the entire county. There is a need to provide sustainable alternative employment options for the people of Clare. County Clare is ideally placed to provide long term sustainable employment which will address the requirement to achieve net zero emissions by 2050. These opportunities are already in train with the announcement in April 2021 of ESBs plans to progress 2 Offshore Floating Windfarms together with a Green Hydrogen Hub at its current coal fired station at Money point.

Pressure on the existing wastewater infrastructure and water supply and the capacity for it to accommodate growth within each of the settlement areas for residential and employment uses is a significant issue across the county. The same concern exists in relation to water quality and the risk of contamination from the proliferation of individual wastewater treatment units and risk of contamination from oil tank leakages from those located in areas of high groundwater vulnerability across the county.

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 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.

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 National Planning Framework and the Regional Spatial Economic Strategy set out transitional local authority population projections to 2031 which makes provision for the population of County Clare to grow to between 134,000-137,000 by 2031 The assigned target population must be considered 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, which in particular, pertaining to the marine environment and its associated land-based infrastructure such as developments and opportunities surrounding the transition to renewable energy will be critical for County Clare in the future. In the absence of the plan there would be no strategic guidance or direction of resources to appropriate areas such as the Shannon Estuary, and the cumulative effects on populations and human health in the county could be significant.

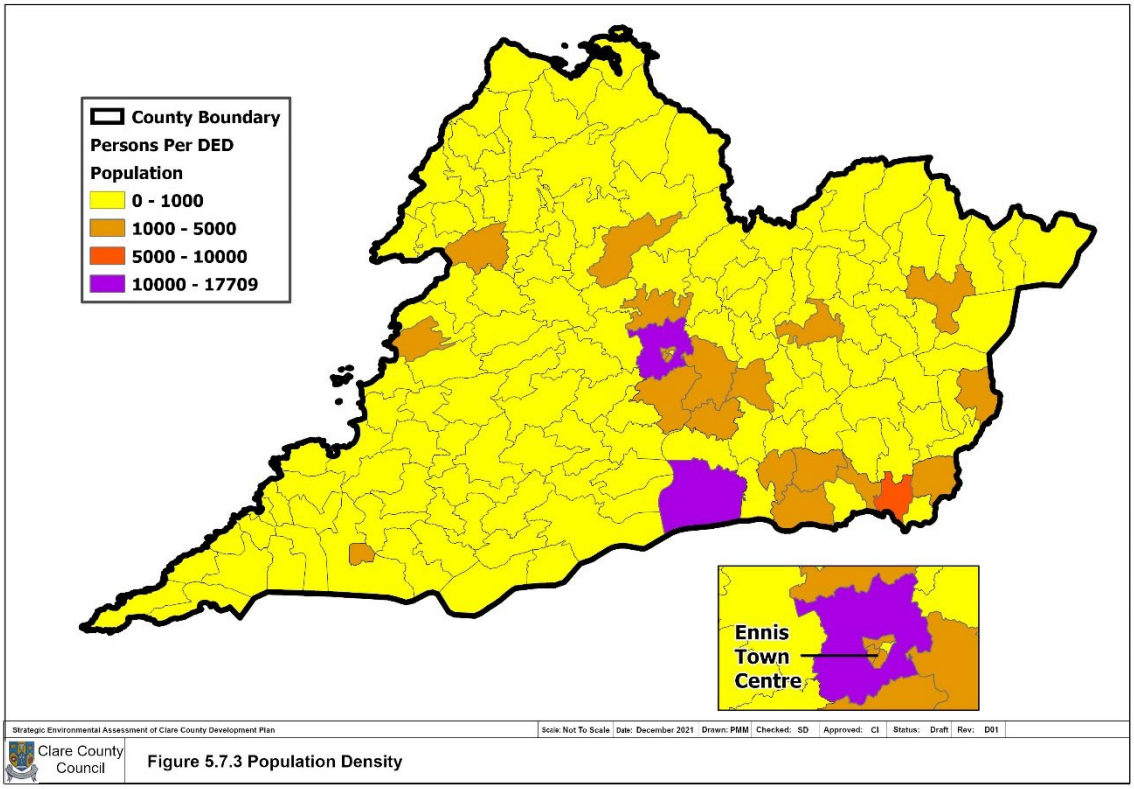


Figure 3.0 Population in Clare by District Electoral Division

3.3 Soil and Geology

Soil comprises for the most part of organic matter, minerals and fine to coarse 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 several 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 stretch from the north of Clare, through the centre of the county, down to the southern centre of the county and 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 45 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 coincide with construction activities such as windfarm developments and forestry operations carried out in peat areas of the county.

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 several 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 except for Ennis Town and the 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 2023 - 2029. 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 looked at Flooding and Climate Change to a degree although this is dealt with across several 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 2018 is summarised in **Table 3.1**.

Water Body Type	No. Water Bodies[1]	% Water Bodies	% Water Bodies
River Water Bodies			
High Status	4	2.5%	**37.5%**
Good Status	48	35%	
Moderate Status	25	18%	**42%**
Poor Status	33	23.5%	
Bad Status	1	0.5%	
Unassigned	26	20%	**20%**
Lake Water Bodies			
High Status	0	0%	**24%**
Good Status	7	24%	
Moderate Status	6	20.5%	**31%**
Poor Status	1	3.5%	
Bad Status	2	7%	
Unassigned	13	45%	**45%**
Transitional and Coastal Water Bodies			
High Status	1	4.5%	**13.5%**
Good Status	2	9%	
Moderate Status	1	4.5%	**18%**
Poor Status	2	9%	
Bad Status	1	4.5%	
Unassigned	16	68.5%	**68.5%**
Groundwater Bodies			
High Status	0	0%	**93%**
Good Status	27	93%	
Moderate Status	0	0%	**7%**
Poor Status	2	7%	
Bad Status	0	0%	
Unassigned	0	0%	**0%**

Table 4.0 Water Framework Directive Status

Of note since the last RBMP is the decline in High Status water bodies across Ireland. In Clare, there are four high status river water bodies, Ardcloony_010, Ayle_010, Corra_020 and Glenmora Wood Stream_010, all of which are within Hydrometric Area 25 – Lower Shannon.

Across Ireland, high ecological status objectives have been set for 319 river water bodies which are either at high status or were at high status in the recent past, but which have since declined[2]. The aim of this is to protect the water bodies which are currently at High Status and restore those which were High Status in the recent past. Of these, 13 High Status Objectives Waters[3] are found within County Clare; Owenslieve_010, Aughaglanna_010, Blackwater (Clare)_010, Ardcloony_010, Broadford_020,

[1] Status taken from EPA data available at https://gis.epa.ie/GetData/Download Accessed May 2021.
[2] https://www.epa.ie/pubs/reports/water/waterqua/Water%20Quality%20in%20Ireland%202013-2018%20(web).pdf
[3] https://data.gov.ie/dataset/high-status-objective-water-bodies

Owenogarney_020, Cloghaun_010, Ayle_010, Graney (Shannon)_030, Corra_020 and Bleach_020. The Owendalulleegh_040 and Owendalulleegh_050 are both found on the border of Clare and Galway and small tributaries of these rivers rise within Clare County.

3.5.1 Current Issues and Problems

Ireland has seen continuing decline in high status water bodies and an increase in the number of water bodies in poor ecological health. The EPA State of the Environment Report 2020 notes that almost half of Ireland's surface water bodies (river, lake, transitional and coastal) are failing to meet their objectives under the WFD. For the water quality reporting period 2013-2018, just over half of Ireland's water bodies (53%) were at Good or High-status ecological status.
An understanding of the significant pressures these water bodies are under and interaction with any marine/land based renewable energy projects is critical.

There continues to be a decline in the number of water bodies reaching or maintaining High ecological status, with only 20 sites reaching Q5 status compared to 500 30 years ago, and an increase in the number of the most polluted water bodies.
In terms of chemical status in surface waters, while some ubiquitous priority substances (e.g., hydrocarbons) continue to be present in some water bodies, use of herbicides is widespread. Three-quarters of surface water bodies assessed for chemical status over the 2013-2018 period had Good chemical status. The majority of groundwaters (92%) have Good chemical status, and 99% have Good quantitative status i.e., rainfall replenishment of groundwater is generally able to sustainably support current abstraction volumes. The Cycle 2 RBMP flagged 6% of groundwater bodies as requiring further assessment for abstraction pressures.
The key pressures on water bodies continues to be agriculture (nutrient run-off and sediment, point pressures such as farmyards), followed by hydro morphological issues (e.g., land drainage, channelisation), urban wastewater discharges and forestry, as well as other pressures. The key nutrients pressures are from phosphorus (the dominant nutrient of concern for surface waters) and nitrate (a particular problem in the south and south-east, as well as for groundwaters). Invasive or alien species remain a problem.

The significant pressures for river and lake water bodies within County Clare include[4];

- Agriculture
- Anthropogenic (include nutrient, chemical, microbiological, organic and sediment pollution.
- Domestic wastewater
- Forestry
- Hydromorphology
- Industry
- Urban runoff
- Urban wastewater
- Abstraction
- Invasive species

[4] 2nd Cycle significant pressures, data available via catchments.ie mapping.

Aquifer vulnerability is Extreme in large areas of the County which will require consideration during construction stage of any renewable energy infrastructure. Large areas of the county are classified as a Regionally Important Aquifer meaning a dependence on groundwater as a supply therefore the potential to impact on groundwater supplies and the limitations in terms of development in proximity to groundwater source protection zones will require consideration.

Karstification is widespread in the northwest of the County, infrastructure development will require careful avoidance and consideration of both known and unknown karst features in terms of potential collapse and the possibility for karst features to become conduits for pollutants to enter.

The provision of a good quality water supply is a critical requirement for attracting investment in the county. The volume of water lost through leakages in pipe infrastructure is not only a local or county level issue but a county wide issue. While a significant pipe rehabilitation programme is underway through Irish Water's National Leakage Reduction Programme, further education and information on water conservation and usage for water users is needed.

The significant pressures for ground water bodies within County Clare include;

- agricultural
- anthropogenic

For the Marine environment the key drivers of pressures and impacts arise from anthropogenic sources such as litter, climate change, noise, and pollution events. Ocean warming and acidification are driven mainly by climate change. These pressures can exacerbate other issues such as impacting native biodiversity, facilitating expansion, or spread of invasive or opportunistic species. Increased flows in rivers could also facilitate increased nutrient transport to the marine environment, combined with climate change, are expected to increase the risk of algal blooms.

Marine litter affects ocean life and pollutes beaches, the water column, and the seafloor. Dredging and dumping at sea is required for maintaining ports and navigational channels and is a licensable activity in Irish waters. Underwater noise is also increasing globally and related primarily to human activities (e.g., for drilling, extraction, navigation, and data imaging purposes). Marine life is often sensitive to noise impacts, particularly whales and dolphins. Seaweed harvesting is another human activity which may impact on coastal biodiversity, particularly where large-scale commercial activity takes place.
Commercial fisheries and aquaculture also place pressure on the marine environment through overfishing/discards of target species and bycatch of non-target species, disruption/destruction of habitats and species from trawling and dredging. Discharges of waste from fish farms is another issue, as is introduction of non-native species or pharmaceuticals for parasite control/anti-fouling agents. Escaped farmed species for instance may impact on the genetic integrity of wild stocks, and there are also landscape/seascape impacts from aquaculture gear. Irish fish stocks have declined due to overfishing and disturbance. Key aspects such as the locations/use of some nursery habitat/feeding areas remains poorly understood; 34 stocks (18%) achieved GES, 44 (22%) did not, with the status of 99 stocks unknown. Disturbance and impacts to seafloor habitats (e.g., from bottom trawl fishing gear)

are widespread in Ireland's continental shelf area (46% of the assessed area is highly disturbed), but not all the maritime area has been assessed.

The significant pressures for transitional water bodies within County Clare include;

- Anthropogenic;
- Agriculture; and
- Hydromorphology

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 across the county.

Following the Planning Guidelines, development should always be 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 wastewater 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 OPW published in early 2018 individual FRMP for each of the 29 River Basins assessed as being at potentially at significant risk of flooding. The FRMP relevant to County Clare is the Shannon Estuary North & Mal Bay River Basin. Areas of Further Assessment (AFAs) within the County include Ennis, Shannon, Kilrush and Kilkee.

Each CFRAM Study has produced flood maps and flood risk management objectives. The CFRAM programme is central to the medium to long-term strategy for the reduction and management of flood risk in Ireland. Flood extent mapping for fluvial, pluvial, and coastal flooding is available on the OPW's dedicated flood map viewer.[5] River Flood Extents and Past Flood Events within County Clare are shown in **Figure 5.10.9 of the SEA ER.**

[5] OPW Flood Maps Viewer: https://www.floodinfo.ie/map/floodmaps/

3.5.2 Evolution of Water in the Absence of the Clare County Development Plan 2023-2029

The eleven existing directives outlined under Article 11 of the WFD would continue to be implemented and enforced for the third cycle of the River Basin Management Plan (RBMP) covering the period 2022-2027, also taking account of the most recent status of water bodies, the outputs of the risk characterisation process as well as the lessons learned from the implementation of the first and second cycle. The Irish Water Business Plan, Water Services Strategic Plan and National Water Resources Plan, would take place independently of the CDP with the expected investment resulting in the provision of new or upgraded plants in 105 agglomerations, leading to some improvements in some water bodies. The existing planning system will need to account for water quality and refer to the programme of measures implemented through the RBMP.

However, without the CDP, water quality is likely to deteriorate due to unplanned development and lack of protection from policies. There is a legislative requirement under the WFD to achieve good status of all water bodies. While efforts to achieve this would continue in the absence of the CDP, the Plan will aim to ensure that the use of and mitigation measures for such waters are given due regard in all development proposals arising from the CDP.

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 twenty-five 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 many 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 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.

Transport For Ireland (TFI) Local Link Limerick Clare has expanded its services in Clare, including the first rural regular services that will run five to seven days a week. The service was launched in March 2021 with the new Local Link route 337 highlighting the Shannon Estuary Way serving Labasheeda, Kildysart, Ballynacally, Kilmurry McMahon, Knock, Killimer, the ferry terminal, and world-famous fishing sites three times a day from Monday to Saturday with a reduced timetable on Sundays.

Local Link will provide access to these areas for staycations and tourists as well as facilitating local resident's transportation needs, providing connectivity between Kilrush and Ennis. The need for the expansion of Local Link services was voiced by the local communities, community groups, Clare County Council and Elected Representatives during a period of public consultation in February 2020.

Working with the NTA's Connecting Ireland Team, Local Link Limerick Clare focused on merging the Bus Éireann rural services in Clare that were reconfigured under the July stimulus and enhancing the services to meet the needs identified by those who took part in the public consultation.

Rail Network

The rail services within County Clare consist of a branch off the Limerick line which serves Ennis. The Draft Limerick Shannon Metropolitan Area Transport Strategy promotes an integrated transport strategy for walking, cycling, bus, rail and road to support planned growth up to 2040. The Western Rail Corridor underwent significant upgrades with 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. There is no rail line serving Shannon, with the closest station located in Sixmilebridge, approximately 6km east of Shannon town centre. Bus route 343 operated by Bus Éireann provides an infrequent connection between Shannon Town Centre

and Sixmilebridge station. It is noted that the Shannon Town and Environs Local Area Plan includes an objective to link Shannon with Sixmilebridge station via a direct shuttle bus in the short-term. The draft LSMATS indicates that connectivity to Shannon will be significantly improved over the lifetime of the Strategy with existing bus services being enhanced with some new additional services, including the better linking of Sixmilebridge Train station to Shannon Airport together with exploiting the potential for a new rail line spur to Shannon Town and Shannon Airport. At present, flooding frequently closes the Limerick-Ennis line at Ballycar causing severe disruption to the LSMA Rail Network. Iarnród Éireann are currently investigating a technical solution to alleviate this flooding. In line with Objective RL8 of the Draft LSMATS the Clare County Development Plan should support the intention of the NTA and the local authorities to work in collaboration with Iarnród Éireann and other relevant stakeholders to resolve the localised flooding issue on the Limerick-Ennis line at Ballycar.

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. Passenger numbers in 2017 were 1.75 million but existing infrastructure at Shannon has the capacity to deal with 4.5 million passengers without additional investment. The RSES for the Southern Region identifies Shannon International Airport as an International Gateway to the West of Ireland with an ambition to increase connectivity and create a rail link between Limerick City and Shannon International Airport. The 2017-2023 CDP contained an infrastructural safeguard for a rail line to be provided to Shannon town and International Airport. This should be supported and promoted within the new CDP 2023-2029. In addition, prioritisation must be given to progressing improvements and upgrades to the existing N19 road access from the motorway to Shannon International Airport. Aviation is vital to the future business of the county in terms of tourism and trade and connectivity between airports and public transport together with key nodal points within the county is a key element of this. There is an opportunity to expand the international offering at Shannon Airport through linkages with Cruise Shannon Estuary. In support of the development of the Shannon Estuary as a cruise destination, *Cruise Shannon Estuary* is an initiative led by Shannon Foynes Port Company and supported by Kerry County Council, Limerick City and County Council and Clare County Council. Shannon Foynes Port Company is committed to growing this industry and establishing the Port as one of the top destinations for cruise liners in Europe. Cruise Shannon Estuary will attract expedition cruise ships which will be provided with the opportunity to tender passengers to Cahiracon Pier offering a unique experience for its passengers to experience the Clare Coastline first-hand and to further explore the county from this unique landing point. A feasibility study is currently being prepared to establish the requirements of ensuring Cahiracon Pier is ready to accept tourists in 2022. Through ensuring strong connectivity from Shannon International Airport by road and rail there is an opportunity to offer Shannon Airport as a start and finishing point to the cruise sector linking by road to Cahiracon or Foynes.

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 five 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 to minimise waste going to landfill.
Cork County Council has been appointed Lead Authority for Waste Enforcement in the Southern Region in 2015. The Southern Region extends from Counties Kerry and Clare on the west coast to County Wexford on the east coast, and includes the Counties of Cork, Limerick, Tipperary, Waterford, Carlow, and Kilkenny and includes Cork City. Cork County Council will now take on the responsibility of co-ordinating and overseeing the enforcement of waste regulation on behalf of all ten local authorities in this large region thereby ensuring a consistent and equitable approach is taken to providing a “level playing field” for all stakeholders in the industry. Following the publication in 2012 of "Putting People First" government policy has been moving towards the delivery of certain public services on a regional basis. The Regional Framework recognises 3 no. regions, Southern Region, Connaught/Ulster Region, and the East/Midlands Region. Government waste policy as outlined in "A Resource Opportunity" 2012 recognises that to protect Ireland's environment and the health of its citizens, a consistent and effective approach to enforcement of the regulatory framework is required.

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 responsible for the provision of public water supply, wastewater collection and treatment services. It is an objective of Irish Water to provide both drinking water and wastewater capacity to support national, regional, and local economic and spatial planning policy (subject to the constraints of the Irish Water Capital Investment Plan). Clare County Council retains its role in facilitating the provision of adequate water services, in conjunction with Irish Water, at a local level, through Service Level Agreements (SLAs).

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 several 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 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 come under strain during more prolonged spells of dry weather, which are set to increase in years to come. The summer of 2018 was officially classed as a drought by Met Éireann. The prolonged dry warm spell caused significant issues with water supply and in the agricultural sector. The demand on the major water supply schemes increased significantly while schemes serviced by groundwater supplies had to be augmented by tankers as ground water levels across the region plummeted. Additional deeper wells were drilled to try and supplement supply. Landscape and Development planning will need to consider Climate Change predictions which will influence decision making around planning in the context of water. In Clare it is predicted that drought conditions will increase particularly in the summer months requiring more emphasis on the protection of landscape hydrology and important aquifers. Integration of Nature Based solutions including integrated catchment management incorporating land use sensitivity mapping and sustainable urban drainage systems will support good planning and mitigation measures where required.

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

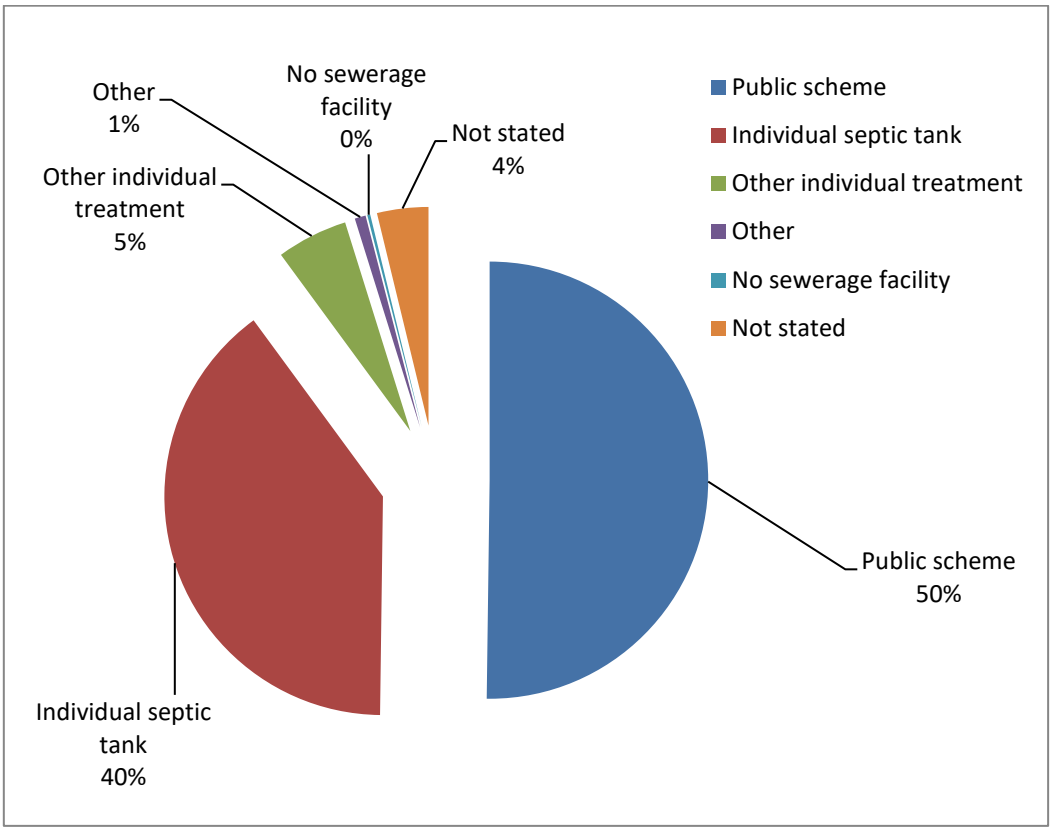
The Urban Wastewater Treatment Directive (91/271/EEC, amended by Directive 98/15/EEC) aims to protect the environment from the adverse effects of wastewater discharges by ensuring that wastewater is appropriately treated before it is discharged to the environment. Such treatment is essential to meet 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 may 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 5.10** summarises the percentage by 'Types of Wastewater Systems in County Clare'. **Figure 5.11.4** of the SEA ER provides the geographical location of Wastewater Treatment Plants across the county. According to the EPA Urban Wastewater Treatment Report, 2019 Kilkee, Kilrush and Ballyvaughan were all found to be discharging untreated wastewater to our seas. In addition, Shannon Town, Ennis South, and Lahinch failed to meet the European Union's treatment standards in 2019.

Figure 4.0 Types of Wastewater Systems County Clare 2016

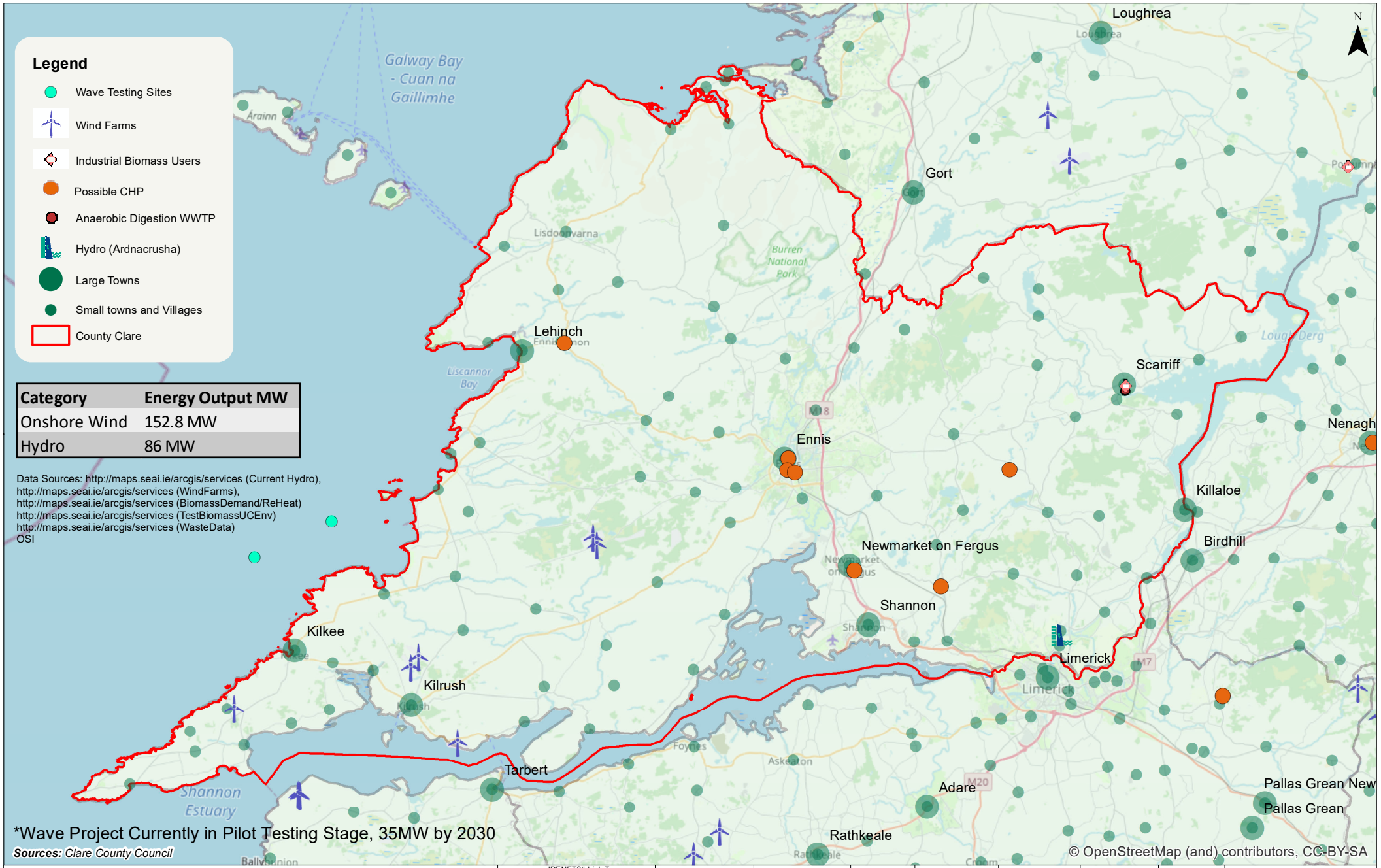


Outside of the larger towns and villages most developments in County Clare are treated by individual proprietary wastewater treatment plants and septic tanks. Developments in these un-serviced areas must demonstrate that the onsite on-site wastewater treatment system can safely and adequately dispose of effluent in accordance with the relevant EPA *Code of Practice*. Within County Clare the current settlement hierarchy identifies 85 settlements however, only 33 of these settlements have a public sewer. In line with the requirements of the National Planning Framework any settlements which are currently unsewered should be allocated new residential zoning or population allocation. Irish Waters, Investment Programme only runs to 2024 with the CDP running until 2028 providing a considerable time lag. The Investment Programme provides for limited investment in Clare in the short term. In the absence of a long-term investment plan, it is impossible to provide for growth in important service centres such as Ennistymon, Lahinch and Killaloe amongst others with no planned investment in un-serviced towns and villages. This could lead to the creation of undue pressure for septic tanks in rural towns and villages with potentially an increased demand for one off housing in County Clare.

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.

Error! Reference source not found., as taken from the draft RES shows the location and installed capacity (Mw/h) of renewable energy projects in Clare which include energy from wind, solar, hydro, wave, tidal. It does not show projects which were refused permission or projects which are deemed to be exempted development having regard to the Planning and Development Regulations 2007-2008.



SEA AA and RES of Clare Co Dev Plan	Projection: IRENET95 Irish Transverse Mercator	Scale: 1:450,000 (A4)	Date: 30/11/2021	Drawn: NR	Checked: IP	Approved: CB	Status: Final	Rev: F01	File Ref: CP20027Arc0003F01

Clare County Council

Map 4.1 Location and Operating Capacity (MW) of Renewable Energy Projects in County Clare

Table 5.0 Renewable Energy Generating Facilities in Clare in 2020

Renewable Energy Type	Name	Resource	Installed Capacity (MW)
Wind	Total	Wind	152.8
Hydro	Ardnacrusha	Water	86
Tidal	Total	Water	0
Wave	Total	Water	0
Solar	Total	Sun	0

In addition, there are renewable energy projects permitted but not constructed/not operational and proposed renewable energy development in Clare which include energy from wind, solar, wave, tidal, biomass and energy storage. The table below shows the permitted capacity for County Clare.

Table 6.0 Permitted Capacity in Clare

Renewable Energy Type	Permitted Capacity (MW)
On shore wind	347.17
Solar	110
Hydro	86
Wave	
Tidal	
Biomass	
Energy Conversion Systems/ Storage	60

Table 7.0 Permitted and Installed No. Facilities

Renewable Energy Type	Installed No. Facilities	Permitted Number Facilities
On shore wind	9	7 (note some are extensions of existing facilities)
Offshore wind	0	0
Solar	0	9
Hydro	1	0
Wave	0	0
Tidal	0	0
BioEnergy (large scale)	0	0

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 ingredients.
- 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 carbon emissions by 50% by 2030.
- For offshore wind developments which have a high potential for development off the County Clare coast while the approval of the National Marine Planning Framework provides a shared vision and strategy on which decisions on marine developments and activities can be more holistically and objectively assessed and reviewed. The passing of the legislation for the NMPF is a major milestone for planning in Ireland however in the absence of Marine Protected Areas together with detailed and site-specific Conservation Management Plans against which to assess and manage such developments there remains a significant gap in marine spatial planning.
- There is insufficient wastewater treatment to cater for existing and projected population growth within some settlements across the county. Therefore, there is a need to provide additional wastewater treatment infrastructure/ capacity by Irish Water across this and future planning cycles and/or for the Local Authority to establish innovative solutions to water treatment at a local level.
- Additional pressures on the environment come from poorly functioning septic tanks which place pressures on surface and groundwater.
- 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.
- 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 near 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 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 2023-2029

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 2023-2029 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.

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. 8387 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 the County.

The Bronze Age, 2500-500BC is represented by less dramatic visible structures, but no less important. They include wedge tombs, standing stones, stone circles and various types of burial mounds or barrows. By far the most common monuments in County Clare are ringfort enclosures existing in large numbers in rural areas (c. 3,000 examples). There are several different types: earthbank (rath or fairyfort), stone wall (caiseal) and combined earth and stone. Originally, it is thought they were farmsteads protecting people and livestock and some were reused more recently as cillíns or burial sites for strangers and unbaptised children. Common also from this early mediaeval period are Crannógs or small artificial islands in lakes. There are over 170 medieval stone churches in County Clare, as well as several larger ecclesiastical sites, such as Clare Augustinian Abbey, Corcomroe Cistercian Abbey and Ennis and Quin Franciscan Friaries. During the Medieval period, Norman castles were built at Bunratty (later demolished), Quin and Clarecastle, while over 230 Gaelic tower houses were built in the County during the 15th century.

The list of recorded monuments in Clare also includes field systems, log boats, souterains, watermills, fulachta fiadh (ancient cooking places), holy wells, medieval roads, bridges, promontory forts, round towers, and earthworks. This is a rich and varied record of past human activity, in the County.

Rivers have acted as focal points for both settlement and ritual activity through all periods of human settlement; this is borne out in County Clare by the number of recorded archaeological sites close to the river Fergus, for example Knockanoura Castle (CL033-087) and Skehanagh Castle (CL041-089). Under the National Monuments (Amendment) Act (2004) the archaeological heritage within County Clare is protected. The Record of Monuments and Places (RMP) for County Clare is an inventory of archaeological sites of significance and according to the CDP there are approximately 8,387 archaeological sites within County Clare.

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 shipwrecking 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 911 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 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.

Climate change is a significant threat to cultural heritage across our county given the impact storm surges, increased rainfall events and coastal erosion have on our exposed coastline.

The Clare Climate Change Adaptation Strategy identifies the potential for damage to cultural and heritage assets and cultural landscapes from increased storm and rainfall events due to climate change. The consequences of this can lead to a negative impact on tourism leading to economic consequences locally and regionally. The loss of assets of intrinsic historical importance is of particular concern. We need to foster meaningful approaches to protecting natural and key cultural assets through an appreciation for the adaptive capacity of the natural environment to absorb the impacts of climate change. Action No. 1 under Objective 2 *To protect heritage and cultural infrastructure* of the Clare Climate Change Adaptation Strategy seeks to undertake a risk assessment of the Heritage and Cultural Assets in the county to assess the vulnerability and the risk to the historical environment from the impacts of climate change and to help build resilience to these important assets.

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 2023-2029 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 based on 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, 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**.

Regional Seascape Character Areas

In 2020 the Marine Institute published a report outlining the Regional Seascape Character Areas for Ireland[6]. The report presents the seascape character assessment which will form a core component of the evidence base for Marine Spatial Planning and marine policy formulation. The aim of the study was to identify, classify and describe seascape character at a regional scale. It is important to recognise that seascape character is a dynamic and changing space which is particularly relevant for the Clare coastline which is highly subjected to coastal erosion and the influences of the Atlantic. In addition, as seascape is perceived by people, it therefore follows that there are many interpretations and understandings as to what contributes to and creates seascape character. The study undertaken by the Marine Institute fills an identified gap in baseline descriptions of seascape character; it also contributes to achieving commitments under the European Landscape Convention 1.2 (ELC) and Ireland's National Landscape Strategy (NLS) 2015 – 2025. Seascape Character Assessment (SCA) has emerged as a method for assessing, characterising, mapping, and describing seascape character. The process of SCA follows the well-established, and widely used, process of Landscape Character Assessment as outlined in (b) above. Seascape is defined as "an area of sea, coastline and land, as perceived by people, whose character results from the actions and interactions of land with sea, by natural and/or human factors".

The Regional SCA identifies three Regional Seascape Character Areas for Clare as follows and as shown in conjunction with the Seascape Character Areas in **Figure 5.13.2**;

- SCA6 – Atlantic Galway Bay & islands
- SAC7 – Atlantic Clare Cliffs
- SCA8 – Shannon Estuary and Tralee Bay

6 https://emff.marine.ie/sites/default/files/bluegrowth/PDFs/seascape_character_assessment_consultation_report_part_1_0.pdf

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 because 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 2023-2029 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 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

Environmental Sensitivity Mapping (ESM) Webtool

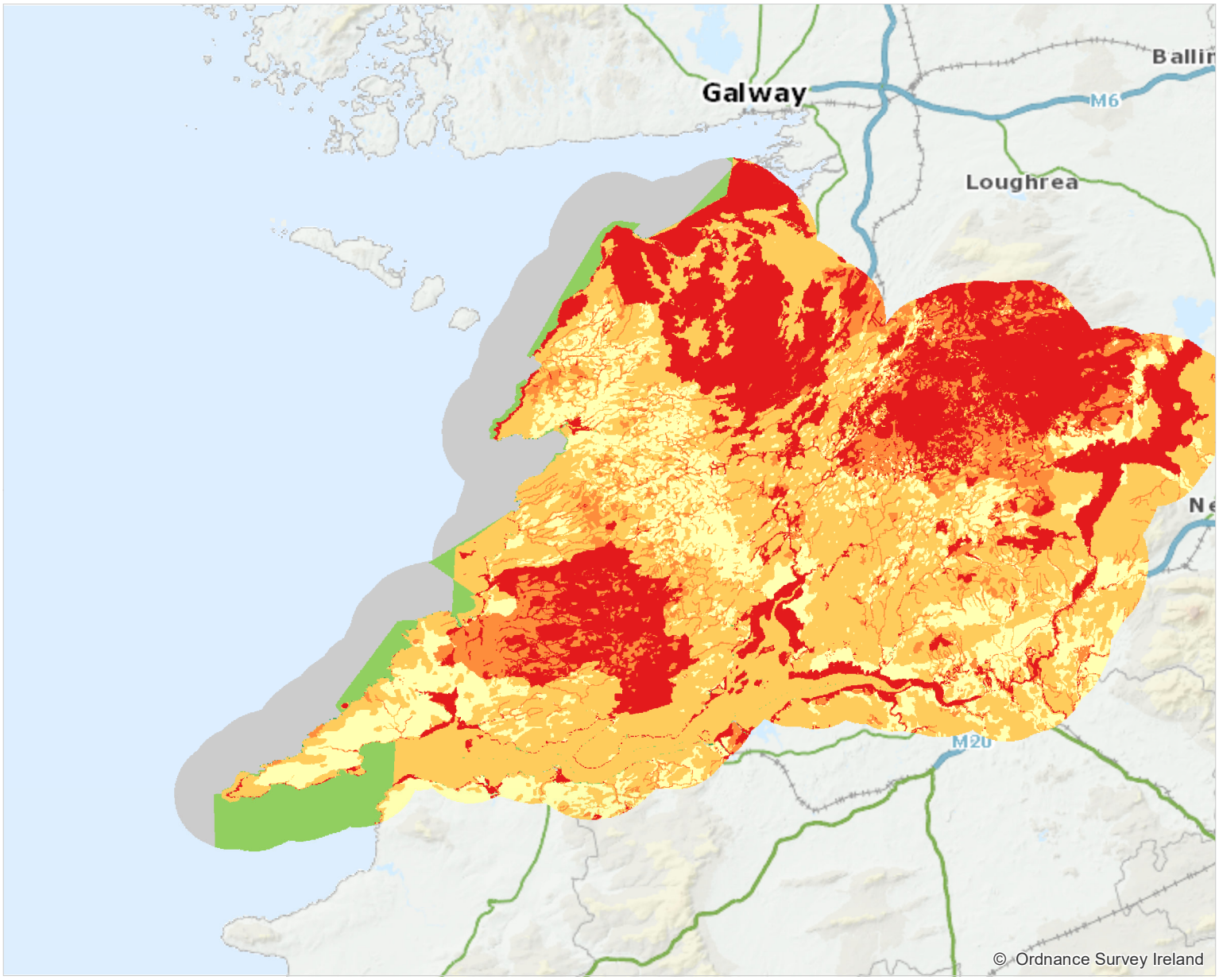
The ESM Webtool is a new decision support tool to assist SEA and planning processes in Ireland. The tool brings together over one hundred datasets and allows users to explore environmental considerations within a particular area and create plan-specific environmental sensitivity maps. These maps can help planners anticipate potential land-use conflicts and help identify suitable development locations, while also protecting the environment. The ESM Webtool is available at www.enviromap.ie

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 several 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 several 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 Northeast 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.

ESM Results



ESM Sensitivity Index

No Occurrence | Very Low (1 to 3) | Low (4 to 6) | Moderate (7 to 9) | High (10 to12) | Very High (13 to 15) | Extreme (>15)

Date: 11/29/2021 Time: 10:14:04 PM Author: Sheila Downes

*This map is an aggregate result based on the variables and user defined weights listed below.
Warning: Please note that weights are only to be used to emphasize the relative significance of an environmental aspect - applying weights to more than two themes would magnify, and possibly overstate, the overall sensitivity.

Air & Climactic	**Weight: 2**	**Variables:** *Flood Extents Current Scenarios (Coastal and fluvial) (High)*
Biodiversity, flora and fauna	**Weight: 2**	**Variables:** *Margaritifera Sensitive Areas,Natural Heritage Areas,Special Areas of Conservation,Special Protection Areas*
Cultural Heritage	**Weight:**	**Variables:**
Population and Human Health	**Weight: 1**	**Variables:** *WFD RPA Groundwater Drinking Water,WFD RPA Surface Water Drinking Water (Lakes),WFD RPA Surface Water Drinking Water (Rivers)*
Soils and Geology	**Weight: 1**	**Variables:** *Peat Bogs*
Water	**Weight: 2**	**Variables:** *Aquifer Vulnerability,Wetlands,WFD Groundwater Status,WFD Lake Status,WFD River Status*

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

- Ecological Designations (SAC, SPAs, NHAs)
- Freshwater pearl mussel
- Aquifer Vulnerability
- Source Protection Areas/Register of Protected Areas
- Flood Extents
- WFD River and Groundwater and TraC status
- Wetland Habitats
- Peat Bogs

Having set out the environmental baseline for the Plan area it highlighted the potential challenge for the plan makers in identifying the required quantum 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 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 2023-2029 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 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 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 land use 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 considering 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.

The alternatives available for the Plan are limited by the provisions of higher-level planning objectives, including those on the National Planning Framework (NPF) and the Regional Spatial and Economic Strategy (RSES) for the Southern Region. These documents set out various requirements for the content of the Plan including on topics such as land use zoning and the sustainable development of rural areas. The NPF and implementation Roadmap sets out projections to achieve accelerated urban growth. The NPF projects that the population of the Southern Region will grow from between 340,000 to 380,000 people by 2040.

The RSES vision for the Southern Region is led by the need for transformative change. By 2040, the population of the Region will most likely grow by 380,000 people to reach almost two million. The RSES for the Southern Region includes population projections for each Strategic Planning and Local Authority area in the region to 2031.

Developing combinations incorporating the key elements of the Development Plan, i.e., the plan framework, plan structure and settlement strategy to include zoning provide the foundation for the formulation of alternatives.

The identification of alternatives first commenced with an exercise in ***Mind Mapping*** to capture all the competing interests, constraints, opportunities and aspirations which play a part in developing the Clare County Development Plan. A **mind map** is a diagram used to visually organize information. A mind map is hierarchical and shows relationships among pieces of the whole. It is often created around a single concept, drawn as an image in the center of a blank page, to which associated representations of ideas such as images, words and parts of words are added. Major ideas are connected directly to the central concept, and other ideas branch out from those major ideas. The Mind Map used to inform the assessment of alternatives is shown in **Figure 7.0.**

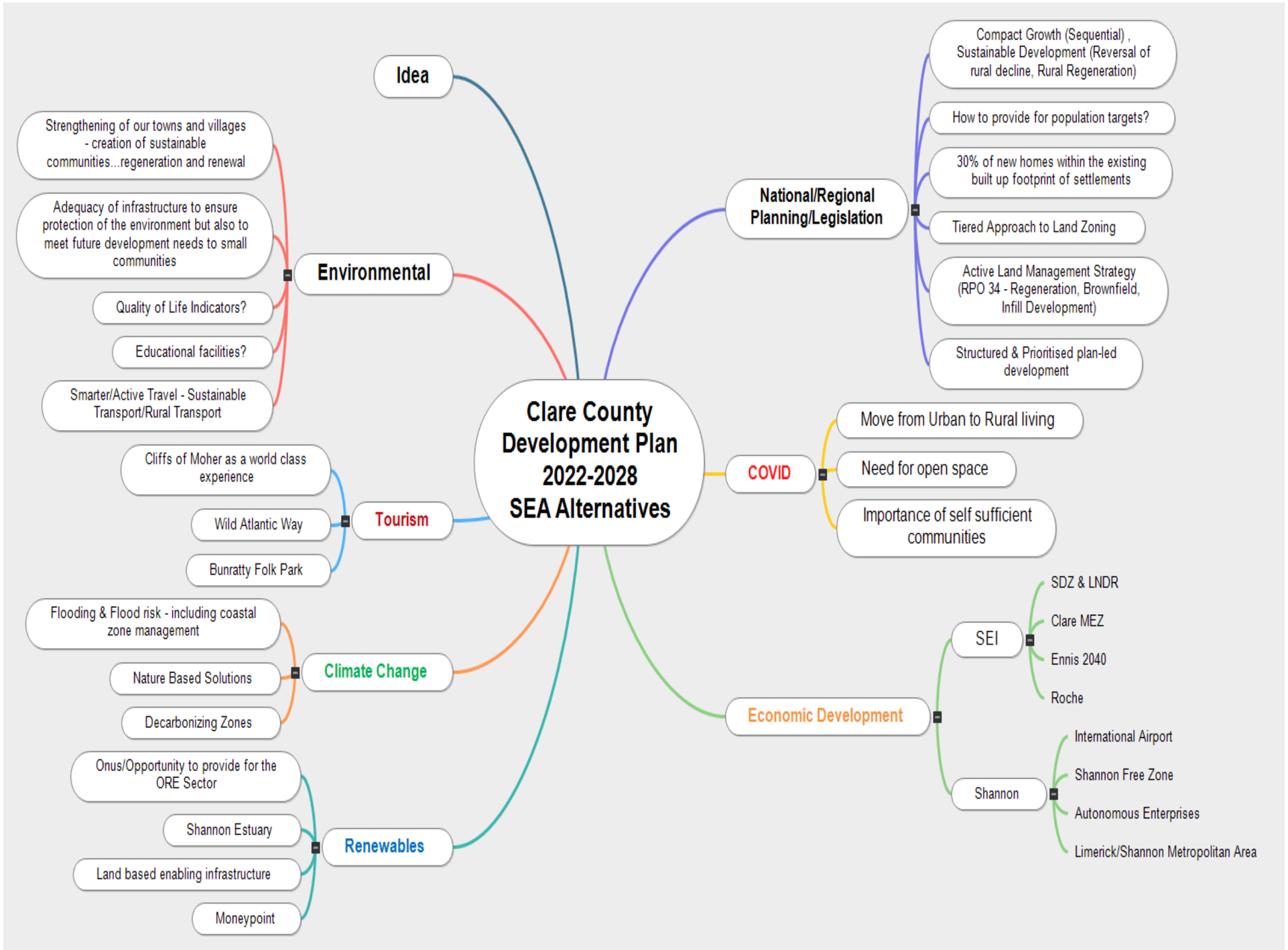


Figure 7.0 Mind Map

Considering the National & Regional policy requirements, coupled with the mandatory requirements in terms of preparing a CDP the key question is how can we come up with or develop realistic, reasonable, viable & implementable alternatives? We can no longer adopt a strategy of broadly equal apportionment of future growth based on historical patterns.

We need to respond to the new policy context for planning set by Government in the NPF which is centred around structured and prioritised plan-led development centred around the locations best equipped for sustainable long-term development.

If we don't do this, then we plan for car-dependent, energy intensive, rural development in locations which aren't serviced. The global COVID pandemic has also changed where people want to live, the amenities & facilities required, and therefore we need to consider the infrastructure to service this change. **Figure 7.1** of the SEA ER outlines the key policy drivers from a national level, the priorities for Clare County Council at a corporate level, the key Strategic Economic Initiatives and the difficulties in sustainably developing our county to become a world class tourist destination all in the knowledge that Climate Change is happening and now more than ever we need to mitigate and adapt our ways in order to build resilience to the impacts.

Option 1: 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 Alternative 1, rural development policies would support agriculture, forestry, renewable energy, and tourism in line with the NPF and RSES.

- This option is in effect an unrestricted option but overall, not in line with the requirements of the NPF or RSES.

Option Two: Led by the requirement to provide for Climate Adaptation

- It comes to the fore of the Plan's strategy; preface each Chapter with reference to the Climate Action and Low Carbon Development Bill October 2021 & the Climate Action Plan, 2023.
- In line with the National Marine Planning Framework which looks to move development away from our coasts and to prioritise Offshore Wind including enabling works and infrastructure together with policies to tackle Climate Change.
- Avoid flood prone areas; look at Nature Based Solutions as an alternative to hard engineering, Safeguard Natural Storage Areas.
- Identify decarbonisation zones which will serve multiple purposes to avoid further flooding or dealing with flood events.
- Greater protection for our wetlands and identification of additional key wetlands inland from the coast.
- Build a Low Carbon Climate Resilient County

Option Three: 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 differs from previous Plan strategies which spread growth based on the size and scale of the settlement in accordance with the core strategy.
- The scenario would focus on the Strategic Economic Initiatives (SEI) identified for the County.
- Key Economic Initiatives would form the focus of areas for growth within the County. This would see the population allocation and subsequent zoning focused solely within these areas.
- Key SEIs such as the South Clare/UL SDZ, Clare MEZ, the LNDR, Ennis 2040, Roche, the Shannon Estuary - Moneypoint which have all been identified as key employment and development opportunities would form the focus of the Plan and therefore growth.

Option Four: Strategic Planning for Sustainable Growth in line with the requirements of the NPF and RSES.

- NPF & RSES require Compact Growth (Sequential) & the reversal of rural decline in villages (NPO 3,6,7,16,18a & RPO 3,34,35)
- RPO 34 and RPO 35 specifically support the implementation of NPO 3, requiring that development plans and CORE strategies are supported by specific objectives for urban infill/brownfield development and to provide an evidence base for the availability & deliverability of lands to deliver 30% of new homes within the existing built-up footprint of settlements.
- Tiered Approach to Land Zoning, Active Land Management Strategy, Rural Regeneration

Option 5: Recognises the diverse range of natural, built, and cultural heritage assets that provide Clare with a strong tourism base.

- Tourism can be seen as a key economic driver for the future development of the county (WAW, CoM, Bunratty Folk Park, Loophead Lighthouse).
- It supports the national and regional policies including: NPO 22 (greenways, blueways), NPO 60 (natural and cultural heritage), RPO 53 (tourism), RPO 54 (tourism and environment) and RPO 173 (tourism corridors).
- This Tourism-led approach would see development focused in towns and villages where tourism uses, transport, retail, associated business etc. would be accommodated in line with the Active Land Management Strategy.

Option 6: Take Alternative 4 but in terms of Water Services put the onus to deliver development in a sustainable manner back on the Government.

- Irish Water presents their Investment Plan to Government which lists all the assets which require upgrade, new infrastructure etc. Government decides on spend for which IW need to prioritize the works.

- IW cannot simply provide adequate infrastructure in all locations without the required financial input.
- The CDP highlights the absence of the relevant infrastructure for a defined list of settlements within which we would like to zone and formulate objectives within the Plan which says once the finance is made available from central Government to provide for the infrastructure, we will zone the settlement appropriately.
- Select the most appropriate settlement within which an Integrated Constructed Wetland could be incorporated which would see an existing agglomeration with the appropriate ground conditions receive improved treatment which would subsequently allow for development and zoning of lands.

Option 7: Prioritize development within the Limerick Shannon Metropolitan Area

- The Limerick Shannon Metropolitan Area (LSMA) covers 387km^2, and has a population of over 132,400 (CSO, 2016). This is made up of approximately 96,800 residents within the Limerick City and Suburbs boundary as defined by the CSO. Limerick City is the largest urban centre in Ireland's.

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 **Alternative 2 (Led by the requirement to provide Climate Adaptation)** and **Alternative 4 (Strategic Planning for Sustainable Growth in line with the requirements of the NPF & RSES combined with Option 6 with respect to Waste Water Infrastructure).**

The Draft Plan is based on the principles of proper planning and sustainable development which means that development will be promoted in accordance with appropriate international, national, and regional policy and guidance and the NPF and RSES. The central focus of the Core Strategy **Chapter 3** is on residential development in ensuring that there is an acceptable equilibrium between the supply of zoned, serviced land for the projected demand for new housing over the lifetime of the Plan. It details the anticipated population growth for the County (i.e., 8,373), the expected housing supply target (i.e., 4,500), and the network of settlements for the County and the role and function of the settlements.

The Core Strategy considers all aspects of what is needed to deliver sustainable communities having regard also to the availability of infrastructure, the carrying capacity of the environment and the need to support economic development. The key areas considered in the preparation of the Core Strategy for County Clare include the overall Planning Strategy and Climate Change Strategy, population, housing, retail, town centres, transport, infrastructure, employment, economic growth, and the environment.

Alternative 2 - Alternative 2 represents a balanced recognition of established patterns of development in the county having regard to the requirements of the NPF and RSES and the key objectives, targets and approach to Climate Change, Adaptation and Mitigation. Following the publication of the Climate Action Charter in 2019 it was apparent that Local Government have a lead role to play in providing

robust leadership in advancing Irelands commitment to achieving a net zero carbon energy system objective for Irish society and in the process, create a climate resilient, vibrant, and sustainable country at the local and regional level. Clare County Council recognises this role and as such have developed a County Development Plan which provides for rural protection while allowing an appropriate level of growth within lower tier settlements. This approach works with existing and planned delivery of services infrastructure and presents the best option towards sustainable growth. It provides for an extremely high level of protection and resilience to climate change and flooding through the extensive inclusion of buffer spaces along rivers, streams and ecologically significant hedgerows and wildlife corridors. **Alternative 2** is a balanced sustainable approach to planned development for the county. As such Alternative 2 has been selected as the basis of the preparation of the Draft Development Plan.

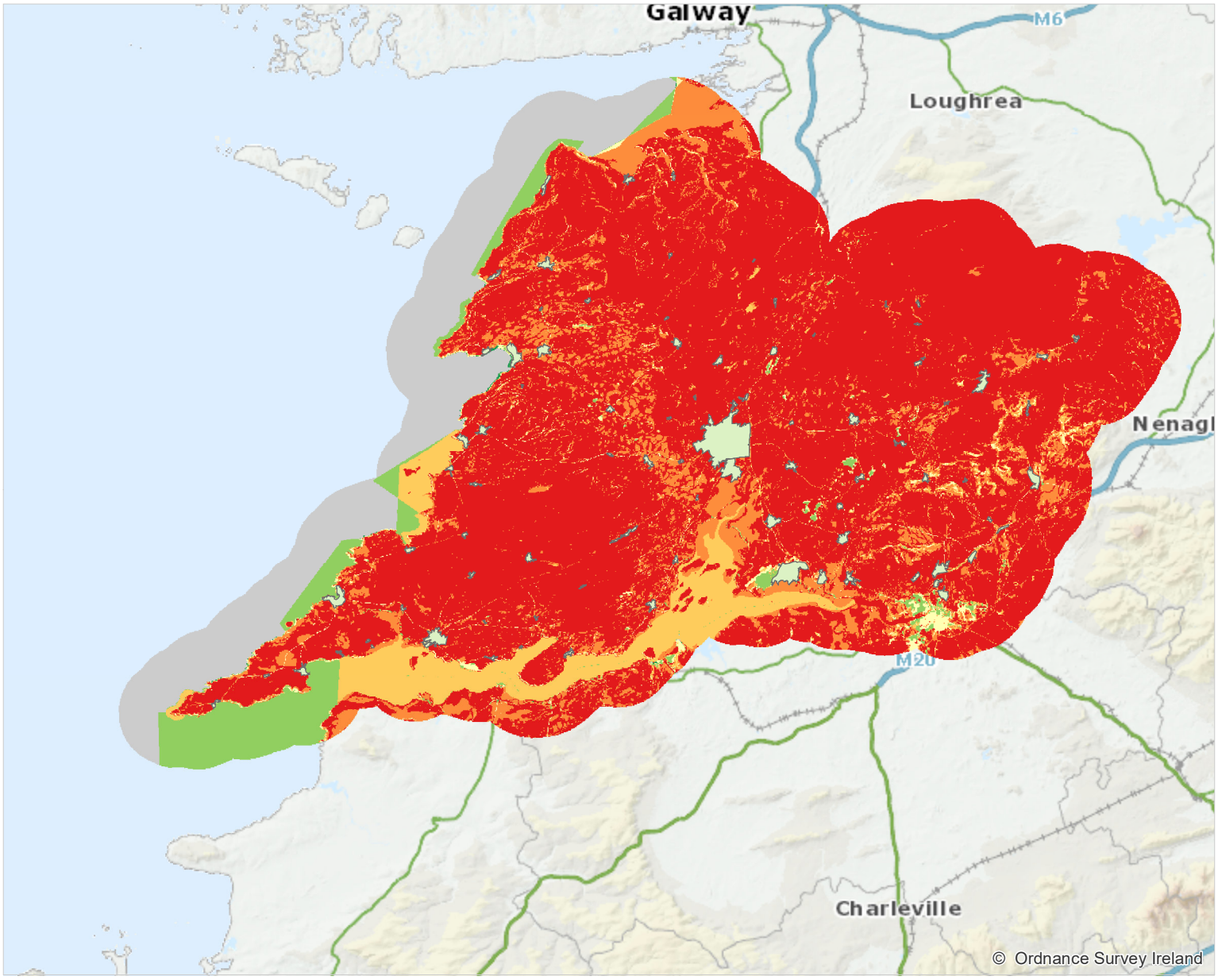
Alternative 4 in conjunction with 6 represents a balanced recognition of established patterns of development in the county having regard to the requirements of the NPF and the RSES. The approach provides for rural protection while allowing an appropriate level of growth within lower tier settlements. This approach broadly works with existing and planned delivery of services infrastructure and represents the best option towards sustainable growth. However, it also seeks to recognise the under investment by Government to allow Irish Water to implement sustainable wastewater treatment infrastructure across our county. It provides an innovative and alternative solution to the lack of wastewater infrastructure in some of our key settlements where growth is anticipated but for which it cannot currently be accommodated due to the lack of wastewater infrastructure.

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.

While the overall sensitivity map informed the assessment of alternatives, the ESM tool was also utilised further to inform the assessment of objectives in relation to the key issue pertaining to wastewater treatment across the county. Figure X.X. provides an overview of the strategic environmental sensitivity associated with the incorporation of Nature Based Solutions such as Integrated Constructed Wetlands. The following key datasets were used to assess the sensitivity of the county to these solutions;

- Landscape – karst formations
- Peat Bogs
- Wetlands
- European Sites
- National Heritage Areas
- Aquifer Vulnerability
- Flood prone areas

Environmental Sensitivity Mapping - Nature Based Solutions



ESM Sensitivity Index

No Occurrence | Very Low (1 to 3) | Low (4 to 6) | Moderate (7 to 9) | High (10 to12) | Very High (13 to 15) | Extreme (>15)

Date: 11/30/2021 Time: 11:02:06 AM Author: Sheila Downes

*This map is an aggregate result based on the variables and user defined weights listed below.
Warning: Please note that weights are only to be used to emphasize the relative significance of an environmental aspect - applying weights to more than two themes would magnify, and possibly overstate, the overall sensitivity.

Air & Climactic	**Weight: 2**	**Variables:** *Flood Extents Current Scenarios (Coastal and fluvial) (High),Soil Carbon,Water Retention*
Biodiversity, flora and fauna	**Weight: 2**	**Variables:** *Margaritifera Sensitive Areas,Natural Heritage Areas,Special Areas of Conservation,Special Protection Areas*
Cultural Heritage	**Weight:**	**Variables:**
Population and Human Health	**Weight: 1**	**Variables:** *WFD RPA Groundwater Drinking Water,WFD RPA Surface Water Drinking Water (Lakes),WFD RPA Surface Water Drinking Water (Rivers)*
Soils and Geology	**Weight: 1**	**Variables:** *Peat Bogs*
Water	**Weight: 1**	**Variables:** *Aquifer Vulnerability,Groundwater Source Protection Areas,Wetlands,WFD Groundwater Status,WFD Lake Status,WFD River Status*

6. Assessment of Effects of Implementing the Clare County Development Plan 2023-2029

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 2023-2029 list the objectives relating to the topic of that Chapter as outlined below:

List of Chapters

1	Introduction & Vision
2	Climate Action
3	Core Strategy
4	Urban & Rural Settlement Strategy
5	Housing
6	Economic Development
7	Retail
8	Rural Development & Natural Resources
9	Tourism
10	Sustainable Communities (Community Development & Social Infrastructure)
11	Transport, Service Infrastructure & Energy (Physical Infrastructure, Environment & Energy)
12	Shannon Estuary
13	Marine & Coastal Zone Management
14	Landscape
15	Biodiversity, Natural Heritage & Green Infrastructure
16	Architectural, Archaeological & Cultural Heritage
17	Towns & Villages
18	Design & Placemaking a (design and built environment)
19	Land Use & Zoning
20	Implementation & Monitoring

Each Chapter's objectives were evaluated against the criteria in **Table 6.0.** The criterion considers whether the objectives were likely to improve conflict or have a neutral interaction with the provisions of the Plan.

Table 9.0 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 are unclear

The assessment resulted in suggested changes or recommendations for 87 of the CDP Objectives. In total 54 of these recommendations were taken on board within the Plan.

6.3 Key issues which arose.

Buffer Zones

- Given we are currently in a Climate and Biodiversity crisis the importance of protecting riparian buffer spaces or zones is critical for this planning cycle. Clare County Council needed to ensure sufficient space was set aside for nature to combat the effects of climate change and to provide space for biodiversity. The space needs to be left clear of any type of

development including the type which is perhaps permitted in "Open Space" zoning such as play facilities. Through a co-ordinated effort between the SEA/AA Environmental team together with the Forward Planning team a total of 511.1 hectares has been zoned as Buffer space which will provide for Climate Change and Biodiversity in line with the Climate Change Action Plan and the National Biodiversity Action Plan. The identification of these buffer areas centered largely around the riparian zones of our many surface waters in line with the updated IFI guidance *Planning for watercourses in the urban environment – a guide to the protection of watercourses through the use of Buffer Zones, Sustainable Drainage Systems, Instream Rehabilitation, Climate/Flood risk and Recreational Planning*. The 2023 County Development Plan has truly integrated the protection of these invaluable riparian zones in line with the guidance.

Wastewater treatment

- Outside of the serviced towns and villages most developments in County Clare are treated by individual proprietary wastewater treatment plants and septic tanks. Developments in these un-serviced areas must demonstrate that the on-site wastewater treatment system can safely and adequately dispose of effluent in accordance with the relevant EPA Code of Practice. In un-serviced areas, assimilation of effluent from development is extremely difficult given the poor percolation which exists across the county. While Nature Based Solutions to combat the treatment of effluent in rural areas is an area which needs to be researched and explored in terms of providing a credible alternative it is perhaps difficult with our current knowledge of these systems in terms of the unique variables at play across county Clare to say that they can be implemented as an alternative. CDP Objective 11.32 (h) was incorporated into Volume 1 of the CDP as follows;

h) Where settlements have no public wastewater treatment infrastructure, alternative developer led/provided shared use wastewater treatment infrastructure, including those incorporating nature-based solutions, may be considered to serve development where it can be clearly demonstrated that the system is in compliance with relevant EPA Guidelines on design standards and which will allow connection to a public system when it is provided, subject to the following criteria:

- *Connection to an existing public wastewater treatment system is not currently available.*
- *Environmental and planning requirements are satisfied including plan adequacy, site suitability and a suitable means of sludge and treated effluent disposal.*
- *The land on which the treatment plant is located is transferred to Irish Water on their request if/when a public system is provided.*
- *The management and maintenance of the shared wastewater treatment and disposal infrastructure following its completion shall be the responsibility of a legally constituted management company. This management company will be responsible for the adequate maintenance, operation, and management of the shared infrastructure. It shall be a condition of sale of all elements of the permitted development that the purchaser become a shareholder in the management company and include a similar condition on any contract for subsequent disposal of the property.*
- *Adherence to the environmental assessment criteria set out in section 11.4.3.1 of this plan.*

In the absence of a national approach to deliver wastewater treatment in our smaller settlements this type of developer led/developer provided wastewater treatment infrastructure was seen by the elected members as a solution to ensure the future growth of our smaller settlements in County Clare.

Both environmental assessments identified significant issues with this objective for which a significant level of mitigation was required to conclude a finding of no significant or adverse effects, all of which were fully integrated into Volume 1 of the Plan.

It shall be demonstrated with scientific certainty that the construction, operation, maintenance, monitoring, and decommissioning of any such developer led/provided shared use wastewater treatment infrastructure will not give rise to adverse effects on the site integrity of any European sites in view of their conservation objectives and having regard to the characteristics of the species or habitat, including their structure, function, conservation status and sensitivity to change. Where this cannot be demonstrated with certainty, then ddeveloper led/provided shared use wastewater treatment infrastructure shall not be permitted. Nature-based solutions such as constructed wetlands (CWs) and integrated constructed wetlands (ICWs) will not be considered for.

- *Settlements within areas of karst landscape*
- *Areas deemed to be of high nature value or of high biodiversity value.*
- *Sites within 60m up-gradient of any well or spring used for potable water.*
- *Sites within the inner protection zone of a public groundwater supply source, where the vulnerability rating is classified as extreme.*
- *Sites within 300m up-gradient of a public supply (>10m3/day or >50 persons) borehole, where an inner protection zone has not been identified.*
- *Sites within 25m of a dwelling*
- *Sites where construction of the ICW may negatively impact a site of cultural heritage value.*
- *Sites where adequate land area is not available.*
- *Sites near a watercourse (no less than 10m from the initial and second ponds and no less than 5 m for subsequent ponds*
- *Sites that cannot be adequately protected from flood damage. A site-specific flood risk assessment will be required as part of any potential planning application for a Nature Based Solution.*
- *An early assessment of a site's overall suitability and the properties/nature of the influent are required to avoid siting such Nature Based Solutions in inappropriate settlements or areas within settlements.*
- *The assessment must determine whether the ICW discharges, either via surface or ground, to any SAC, SPA or NHA.*
- *In addition to the environmental function of an ICW, it is an essential requirement of the ICW concept to explicitly address the social, economic, and ecological considerations of the site, whereby the needs of all stakeholders in the management of the land and water resources that are linked to a site need to be given appropriate consideration. Regard must be given to all water quality discharges, achieving an appropriate landscape-fit and enhancing biological diversity.*
- *As the ICW concept is based on integration into the immediate and adjacent environment, site characterisation must investigate how this requirement can be achieved and optimised.*
- *The Management Company must ensure that the nature and properties of the influent are known that adequate land space is available, and that the system can operate with low or zero energy requirements.*
- *Given the novel nature of these systems in Ireland potential developers must provide the Planning Authority with sufficient baseline information to enable planning/discharge conditions to be set should the Nature Based Solution be deemed appropriate within the settlement for a specific site.*
- *The Management Company will be required to put in place an Emergency Response Plan for the system which will outline the procedures which must be put in place should monitoring indicate exceedances of emissions limit values, where a failure in the system occurs, where the system becomes inundated due to severe or adverse weather conditions or through inappropriate influent amongst other items.*

Climate Action

- One of the headline targets of the Climate Action Plan 2023 is to produce 80% of our electricity from renewable sources by 2030 while phasing out coal and peat-fired electricity generation. In addressing this target, the Clare RES needed to identify **realistic** and **implementable** options which would be achievable within 6 years. The SEA/AA needed to assess the Environmental

Impact- what will the environmental impact on other factors be i.e., for example by achieving maximum ambition how will it impact the landscape, tourism, water quality, land use and air quality. It also needed to consider how the plan will pave the way for the next 2 cycles of the RES and how will the RES facilitate RE in the short, medium, and long term. The additional capacity will be delivered by:

- Offshore Wind: the Clare RES includes policies to prepare for offshore wind but no numerical targets.
- Solar Onshore – Clare CoCo in the existing RES have ambitious targets for Clare (300MW in total) therefore no further increase was recommended.
- Given there was no increase in onshore wind capacity in the CAP 2023, coupled with the fact that the existing Clare WES was not updated as part of the new Clare County Development Plan 2023-2029 no new targets were set for this sector.

Monitoring

- A key issue raised during the consultation phase in relation to the issues paper and the SEA Scoping Report was in respect to Monitoring. This is a significant undertaking as part of any plan or programme and unless sufficient resources are assigned it can be difficult to achieve in any meaningful way.
- Key changes arising from the Regional Spatial and Economic Strategy whereby a report is required for the Regional Assembly setting out progress made in supporting objectives of the RSES (as required under Section 25A (1) of the Planning and Development Act, as amended) which will see monitoring require a greater focus by the Local Authority
- Chapter 20 of the Plan sets out the implementation and monitoring framework which will function as a formal feedback loop, and through ongoing evaluation and reporting will provide the evidence base for the formulation and refinement of future planning policy, including subsequent County Development Plans. The framework will assist the Planning Authority in meeting its statutory reporting requirements including:
    - The 2 Year Progress Report of the County Development Plan (as required under Section 15(2) of the Planning and Development Act 2000, as amended). This is a full report on the implementation of the objectives of the plan and will be prepared two years after the Plan comes into effect. This report will highlight any difficulties that may arise in the achievement of the objectives and give an opportunity to rectify any problems that may arise.
- In addition, the SEA has included greater clarity on the source/responsibility and frequency of monitoring within Table 10.1 of the SEA ER in addition to a column containing the Remedial Action where the targets and indicators are not being met in relation to the Strategic Environmental Objectives.

6.4 Land use Zoning

In considering land appropriate for development for 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[7]. The zoning classifications and definitions are set out in **Table 8.2** of the **SEA ER**.

The assessment of land-use zonings involved both desktop (GIS, aerial photography) and on-site assessment. This process resulted in an on-going flow of environmental information regarding 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 led to several 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.

6.5 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 2023-2029.

Cumulative effects are referred to in several 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 – as contained in the SEA Pack (Updated September 2020)). These effects can be insignificant individually but cumulatively over time and from several sources can result

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

in the degradation 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 DoECLG together with the Draft Guidelines for Regional Assemblies and Planning Authorities published by the DoHLGH in October 2021 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 Good Practice Guidance on Cumulative Effects Assessment in Strategic Environmental Assessment, 2020 was also utilised to inform the assessment.

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.

6.5.1 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 2023- 2029 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)

6.5.2 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 2023-2029 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 2023-2029.

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 10.0 Monitoring Table

Aim for Monitoring	What is being Monitored?	Target	Indicator	Data Source/Responsibility	Remedial Action
Monitoring Objective 1: Reduce the need to travel/increased use of public transportation and achieve modal shift in transport across the county.	An increase in the percentage of the population travelling to work, school or college by public transport or sustainable modes of transport (walking, cycling). Decrease in proportion of journeys made by private fossil fuel-based car compared to 2016 National Travel Survey levels	*Decrease in the current known levels of private fossil fuel-based transport and an overall increase in sustainable modes.*	• % Increase in the number of people reporting regular cycling/walking to school and work above 2022 CSO figures. • Consultations with Department of Communication Climate Action and Environment together with statistics produced by the Regional Assembly as part of the preparation of the Regional Spatial Economic Strategy for the Southern Region. • CSO data – review of statistics as published.	CCC Forward Planning section review of CSO figures in relation to car journeys and mode of transport. Results from National Travel Survey.	Consultation with the Department of Education, TII and local public transport providers to identify sustainable opportunities for a modal shift in transport. Investigate if awareness of new transport routes, timetables and services is the issue for a lack of progress towards achieving this objective.
Monitoring Objective 2: Decrease the usage of fossil fuels and increase both renewable resource usage with a move towards more low carbon energy sources.	• Progress on implementing CDP objectives to demonstrate successful implementation of climate reduction targets as provided for by Plan provisions including those provided for and referenced in Chapter 1 "*Climate Action*", as well as the objectives as set out in the Clare RES 2030. • Contribution to the transition to a competitive, low-carbon, climate-resilient and environmentally sustainable economy by 2050 • Reduced energy consumption and supporting the uptake of renewable options and a move away from solid fuels for residential heating.	Increasing trend in: 1) the numbers of renewable energy developments and 2) those granted permission and 3) connected to the grid. Increasing trend in energy efficiency for buildings. Decreasing trend in use of fossil-fuels across sectors. Decreasing trends in fossil-fuel based transport.	No. of: • Applications submitted for renewable energy projects, including no. of MW. • Connected projects (i.e., built-out), including no. of MW. • Successful applications for RESS to capture projects coming forward for power purchase agreements (includes wind, solar and a separate category for community projects). • Monitoring these metrics annually to track whether permissions granted are staying coupled to applications submitted then connected. No. of solar rooftop connections. Land cover change in hectares – GIS analysis of % land cover change from agricultural uses to others in comparison with 2018 Corine/ National Land Cover (NLC) 2018 figures. Tracking the BER rating average for County Clare, tracked annually for rate of change. No. of Government buildings in Clare meeting the 50% target for public sector bodies. Use EPA Air Quality Monitoring to find areas of high fossil fuel usage in terms of heating homes. No. of SEAI grants for CCC under the Support Scheme for Renewable Heat (SSRH). No. of:	CCC Forward Planning section in conjunction with the Climate Action Regional Office, Limerick Clare Energy Agency – annual. ESB and EirGrid – Published lists of projects connected to the grid by RES type. EirGrid – RESS applications, updated with every auction, typically annually. SEAI – Grant aid data by county for rooftop solar. EPA Corine database – updated every 6 years, and National Land Cover 2018 dataset (OSi/Tailte Eireann). SEAI – FOI request for BER database annually. SEAI Data, Limerick Clare Energy Agency Data, CARO office. EPA Air Quality Monitoring Maps and Air Quality Reports – checked quarterly to track trends. SEAI SSRH data – available online at aggregate level and	Review of the CDP/RES measures/ objectives if targets are not being achieved, as part of the next CDP and RES review. Where targets are not achieved, CCC will liaise with the Regional Assembly, the EPA, and the Climate Action Regional Office to establish reasons and develop solutions. Where the numbers of consented RES developments are decreasing relative to the number of applications submitted for planning (with a focus on solar projects), CCC Forward Planning will review the decoupling to identify any gaps/ bottlenecks in the planning and consenting and/or grid connection processes, in liaison with ESB/EirGrid and other stakeholders as relevant. Where EPA Air Quality Monitoring indicates

			• Electric vehicles registered for CCC as a proxy for gauging uptake. • Electric vehicle charging points installed in the county. • New EV car registrations • Other: hydrogen, biomethane, LNG refuelling points. CCC 'M&R' (monitoring and reporting) system – covers energy consumption and carbon emissions. Local Authority Climate Action Plan (CAP) Data – statutory requirement under the Planning and development Act, as amended, and the Climate Action Plan 2023.	by county level by request to SEAI. SIMI – EVs registered in Clare. ESB charging points map; GLPAutoGas hydrogen refuelling locations map – checked annually. CCC M&R mandatory reporting to SEAI – CCC to review own data annually on trends. FOI request to SEAI will provide data for other public bodies. CCC Forward Planning – review LA CAP for data and monitoring already being (or planned to be) collected to avoid duplication of effort on RES monitoring.	areas of consistently reduced air quality as a result of solid fuel burning, target with an awareness campaign in association with the implementation of the Climate Action Plan.
Monitoring Objective 3: In preparing the spatial plan for our county that we develop ecologically resilient and varied landscapes through the establishment and preservation of ecological networks and stepping-stones as part of our settlement zonings and objectives and foster adaptive management practices in the face of uncertainty, favouring flexible adaptation options and allowing for alterations of the Plan as monitoring and evaluation data become available during its implementation.	Usage of areas previously un-surveyed by the Local Authority in terms of their importance as ecological networks and stepping-stones with a particular focus on sites within our key settlements commencing with Ennis.	• *Establish the usage of sites identified within the environmental assessments as potentially having a biodiversity or ecological importance to protected species such as bats in the first instance.* • No loss of ecological networks or parts thereof which provide connectivity between areas of local biodiversity without remediation (i.e., planting of the same or greater length of compensatory native hedgerow to ensure no net loss of such features).	• Usage of selected sites by bat species as identified through targeted surveys within selected settlements. • The length and area of riparian buffer zones, open space and green infrastructure zoned as part of our County Development Plan. • The net length of hedgerow retained and supplemented as part of individual planning applications or strategic projects undertaken by the council.	Clare County Council Forward Planning and Development Management sections co-ordinated through the Environmental Assessment Officer.	Where, following survey and assessment by the Local Authority sites zoned for future development are found to provide important stepping-stones and ecological networks the Plan should be alter at the next available opportunity e.g., Variation to protect these sites. Where encroachment is occurring within these areas, ensure enforcement action is taken to reinstate habitat and associated zoning. Where the loss of ecological networks or stepping-stones is as a result of implementation of objectives contained in the Plan the 2-year review should ensure the associated policies are amended.

Monitoring Objective 4: Integrate Climate Change mitigation measures into every fabric of spatial planning through the restriction of inappropriate development/land-use zoning in flood risk zones, inclusion of green infrastructure as the status quo and the incorporation of suitable Sustainable Urban Drainage Systems (SuDs) into all developments	To ensure each zoning parcel across the county as identified through the CDP process has a Climate Action focus.	Ensure all future development is climate proof or incorporates climate adaptation and mitigation measures where appropriate.	• Incorporation of measures into Planning Applications and Clare County Council led Plans and Projects. • Implementation of measures on the ground as part of specific projects and developments. • To implement the targets as identified in the Renewable Energy Strategy and incorporated into the Clare County Council Climate Action Plan and County Development Plan with respect to achieving a reduction in greenhouse gas emissions and transitioning to a climate resilient county.	Clare County Council Forward Planning and Development Management together with all Departments and Sections as part of their work programme. Climate Action Section facilitated by the Climate Action Co-Ordinator.	Enforcement action where measures identified with specific zoning objectives are not incorporated on site. Where SuDs, Nature Based Solutions etc are not being incorporated at project level review consenting process and conditions associated with planning permission.
Monitoring Objective 5: Maintain and protect our natural carbon sinks (bogs/marshes/forests/fens/Peatland and Wetlands habitat) as decarbonising areas which can serve a dual purpose in terms of enhancement of biodiversity and mitigation against Climate Change.	No loss of wetlands, bogs, fens, marshes, or other carbon sinks across the county through reclamation, infilling, or development. Where pressure exists to develop out these areas monitoring should be prioritised to provide the scientific evidence to support the exclusions of these areas from future development.	• Undertake targeted assessments/surveys/monitoring of identified natural carbon sinks across the county to include groundwater and surface levels in know wetlands. • Avoid situations that limit adaptation to climate change such as zoning lands near a known flood risk area.	• Change in landuse across the county. • Protection of key areas of flood plains and associated wetland features • Reclamation/Infilling of bogs, fens, and other wetland habitats. • Monitoring change in land use through utilisation of the Clare County Council habitat mapping together with the Environmental Sensitivity Mapping (ESM) Web-Tool. • Where new areas become at risk from flooding due to climate change, further areas may be required for climate adaptation.	Forward Planning – SEA Officer to map flood events since the publication of the County Development Plan against planning permissions granted to assess if development has taken place within a flood plain, areas prone to flooding or as a result of climate change in areas which have now become prone to flood and therefore may merit a change to zoning within the County Development Plan as a result of monitoring. CCC – Records obtained as and when flood events occur. OPW – As updated on www.floodinfo.ie Where resources allow within these Departments (which won't always be available) spot checks of enforcement/mitigation arising from this Plan should be undertaken against the datasets identified (Clare Habitat Mapping/ESM Tool together with the data collated through the Environmental Database (Clare County Council Planning Department internal GIS data arising from Planning Applications, preparation of	Where loss of these important habitats occurs within these areas, ensure enforcement action is taken to reinstate habitat and associated zoning. Review CDP zoning and associated landuse in areas of land directly adjacent to flood prone areas and amend as new information arises.

				Plans and Programmes, ecological studies etc.)	
Monitoring Objective 6: Protect Human Health	Compliance with air quality legislation around the town of Ennis.	To see a marked improvement in the number of exceedance events recorded in the town of Ennis in terms of air quality. To see a reduction in the exceedance of WHO Air Quality standards in the town of Ennis. To see a reduction in the number of water supplies needing remedial action.	• Number of exceedances of air quality limits as recorded by the EPA. • Number of Enforcement Actions taken due to breaches by retailers/distributors and the public Under the Air Pollution Act (Marketing, Sale, Distribution and Burning of Specified Fuels) Regulations 2012. • A downward trend in the Ennis Air Quality Index which can be modelled based on freely available public data. • Number of water supplies on the EPA Water Supply Remedial Action List.	• IQAir Data • www.airquality.ie • EPA Ambient Air Quality Monitoring • EPA Water Supply RAL (updated twice per year)	Review awareness campaigns/ initiatives in relation to air quality issues to improve knowledge and awareness locally in terms of dangers of smoky fuels.
Monitoring Objective 7: To achieve the conservation objectives of European Sites (SACs and SPAs).	• 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.	• Maintain or restore the conservation status of the habitats and species associated with the designated European sites in County Clare.	% loss of habitats/displacement of species within European Sites. No negative impacts on sites through the Councils own works or through developments/licenses/permissions/permits granted by the Council. Percentage of Qualifying Interest Features which have achieved their specific objectives of maintain or restore.	Referrals and consultation with NPWS on planning applications and enforcement files. Using GIS query the European sites dataset as provided by the NPWS against planning applications received for the No./% applied for within these areas and the No./% refused/granted. Review the conservation status of the European Sites in Clare against the status as documented in the preparation of the CDP. Where permissions have been granted and/or developments have taken place within European sites are the Qualifying Interest Features achieving their specific objectives. Article 17 Reporting on the Status of Protected Habitats and Species Next report due in 2025. Responsibility; Forward Planning, Development Management, SEA Officer.	Where loss of habitats or species occurs within these areas, ensure enforcement action is taken. Review CDP zoning and associated landuse in areas of land directly adjacent to European Sites.
Monitoring Objective 8: Meet the requirements of the Water Framework Directive and the 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.	All waters (Surface, Groundwater, Transitional and Coastal) to achieve at least Good Status by 2027.	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 and Sustainable urban Drainage Systems	Forward Planning and Development Management. SEA Officer to compare WFD status results to the baseline as used in the preparation of the CDP 2023-2029.	Revise baseline and review CDP Objectives for waterbodies failing to achieve at least good status or waterbodies which have been

			(SuDS) where necessary and applicable (in both urban and rural settings).	Utilise EPA WFD Application and Catchments.ie for CCC-specific information on the significant threats and pressures impacting WFD status and Risk.	identified as Priority Areas for Action.
Monitoring Objective 9: To minimise and, where possible, eliminate threats to biodiversity including invasive species.	Prevent the introduction of new invasive or alien species. Control/manage new invasive species. Control/manage/eradicate invasive species throughout the county.	No increased distribution in the extent of mapped records of alien and invasive species across the county.	• No., type, and location of invasive species identified. • No. of actions achieved under the Biodiversity Action Plan. • Increase/decrease in coverage of invasive species identified through the Municipal Districts of Ennis, Killaloe, Shannon, and West Clare. Each MD have a programme of invasive species eradication underway in September and October with funding from the National Parks and Wildlife Service (Dept. Housing, Local Government & Heritage), National Biodiversity Action Plan Funding 2021. • Follow up work will involve further mapping of the problem species, Knotweed and Giant Hogweed in particular and proposed long term management and control measures. • No. of submissions/observations submitted through invasive species Ireland "Alien Watch". www.invasivespeciesireland.com/alien-watch • No of Planning Applications which are accompanied by an Alien/Invasive Species Report and/or requested through the Planning Department to prepare a Alien/Invasive Species Management Plan. • 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.	Environmental Assessment Officer in conjunction with the Heritage Officer in conjunction with the Municipal District Offices on a yearly basis.	Where there is no success in reducing stands of alien/invasive species re-assess treatment method and establish new methods if necessary.
Monitoring Objective 10: To maximise the sustainable re-use of the existing built environment, derelict, disused and infill sites (brownfield sites), rather than greenfield sites. (This is in line with the Active Land Management Strategy RPO34 – Regeneration, Brownfield, Infill Development)	• Preference for development on brownfield site over green field. • Specified % of new applications granted to be on brownfield sites. • Limited and controlled development of greenfield sites. • Re-use of soil from redeveloped sites where possible. • No incidences of soil contamination.	To see a reduction in the development of greenfield sites and the progressive and planned re-use of derelict and disused properties across the county.	• No/% of new developments on brownfield sites. • Area of brownfield land developed over the plan period. • % of total greenfield land developed. • % landcover in comparison with 2018 Corine figures. • Level of urbanization or construction within zoned lands as per the 2023-2029 County Development Plan. • Excessive landfilling of quality soil. • Incidences of soil contamination. • Volume of contaminated material generated in comparison with previous years' figures.	Forward Planning and Development Management co-ordinated by the Environmental Assessment Officer. Annual through a review of planning applications utilising GIS. Work with the derelict teams in Clare County Council to establish the % re-use of existing buildings.	Where the proportion of growth on infill and brownfield sites is not keeping pace with the targets set in the NPF and the RSES, the Council will liaise with the Regional Assembly to establish reasons and coordinate actions to address constraints to doing so. Review of local authority applications for legacy landfill remediation authorisation. Where progress is stalled, CCC to

				CCC Environmental Section in conjunction with the EPA	work with the EPA to identify any bottlenecks in the process.
Monitoring Objective 11: 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.	Upgrades to existing wastewater treatment plant infrastructure identified within the plan as being insufficient, based on existing and forecasted population demands to meet EU requirements.	To reduce the number of on-site systems across the county. Decreasing trends in the numbers of EPA Priority Urban Areas, number of facilities on the Irish Water Remedial Action List, numbers of areas discharging raw sewage and numbers of plants failing EU treatment standards.	No. of ~~U~~upgraded Wastewater Treatment Plants within the plan area. No. of EPA Priority Urban Areas. No. of plants discharging raw sewage. No. of plants failing to meet EU Sewage Treatment Standards. Number of plants exceeding the Emission Limit Values (ELVs) for Wastewater Treatment Discharge licence set by the EPA. No. of plants added/ removed from the Irish Water Remedial Action List to indicate trends.	Irish Water -Achievement of Water Services Strategic Plan objectives. Irish Water – Remedial Action List (RAL) updated quarterly. CCC Forward Planning Team to check at similar frequency. EPA – Sewage Treatment Maps for Priority Urban Areas, raw sewage discharges, and locations failing to meet treatment standards – CCC Forward Planning annual check. CCC Forward Planning Team – granting of permission conditioned based on a future WWTP upgrade. CCC Forward Planning Team – refusal of permission as no upgrade to WWTP due to take place or due to insufficient capacity in the WWWTP or failure of the WWTP to meet Emission Limit Values.	Where planning applications in the settlement strategy are rejected due to insufficient capacity in the Wastewater treatment Plant (WwTP) or failure of the WwTP to meet Emission Limit Values (ELV), CCC will work with the Regional Assembly, EPA, and Irish Water to coordinate a response to achieve the necessary capacity.
Monitoring Objective 12: Conserve, protect and enhance valued natural, cultural, and built landscapes, views of local value and features including those of geological and aesthetic value.	No significant visual impact from development. No damage to designated landscapes or seascapes as a result of the Renewable Energy Strategy. The important landscapes across the County as outlined in Volume 2 of the Clare County Development Plan 2023-2029.	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 extent of degradation of areas designated as Heritage Landscapes. No. of developments located within a designated scenic view or high landscape area in County Clare that disrupt views (based on the LCA). Development and application of framework in relation to the application of LCA and their contribution to SEA.	Forward Planning and Development Management sections of Clare County Council through the SEA Officer. Undertake a GIS analysis of the various landscape types across the county to establish the no. of developments permitted within these designations and whether they are since perceived to be causing an impact.	Where landscape is being impacted review CDP objectives for appropriateness and requirement for change.

8. Conclusion

The Clare County Development Plan sets out an overall Vision, goals, policies, and objectives for the period 2023-2029 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 2011-2021. Subject to the full and proper implementation of the mitigation measures outlined in this SEA Environmental Report (Volume 10b Chapter 9, Volume 10b Appendix A, B and D) which have been incorporated into the Clare County Development Plan 2023-2029 it is considered that significant adverse impacts on the environment will be avoided.

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