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1.0 Introduction

This is the Strategic Environmental Assessment (SEA) Statement of the Limerick Development Plan 2022-2028. This is the final part of the SEA process and summarises how environmental considerations were taken into account during the adoption of the Plan.

SEA is a systematic process of predicting and evaluating the likely environmental effects of implementing a plan, or other strategic action, in order to ensure that these effects are appropriately addressed at the earliest appropriate stage of decision-making, on a par with economic and social considerations. In this, the final part of the process, the Strategic Environmental Assessment Statement will summarise how environmental considerations were included in the Plan and outlines monitoring methodologies. A section on standard mitigation measures is also included.

2.0 Legislative Context

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, referred to hereafter as the SEA Directive, introduced the requirement that SEA be carried out on plans and programmes which are prepared for a number of sectors, including, in this case statutory land use plans. The SEA Directive was transposed into Irish Law through the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (Statutory Instrument Number (SI No. 435 of 2004) and the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (SI No. 436 of 2004). Both sets of Regulations became operational on 21 July 2004. The Regulations have been amended by the European Communities (Environmental Assessment of Certain Plans and Programmes) (Amendment) Regulations 2011 (SI No. 200 of 2011) and the Planning and Development (SEA) (Amendment) Regulations 2011 (SI No. 201 of 2011).

Article 7 of the Planning and Development (Strategic Environmental Assessment)
Regulations 2004 (SI No. 436 of 2004) as amended requires that Strategic Environmental
Assessment is undertaken for the preparation of certain Development Plans. Since the
population of the Limerick Development Plan area is over the 5,000-person threshold, which
is the statutory threshold for Strategic Environmental Assessment, the review of the
Limerick Development Plan was subjected to the SEA process. As part of this process, a
statement outlining how environmental considerations were taken into account in the
preparation of the Plan must be prepared. This is carried out as part of the final stages of
the SEA process. This Statement is referred to as an SEA Statement (DEHLG, 2022 pp. 61-62).

3.0 Content of the SEA Statement

The SEA statement explains how the plan, has been influenced by the SEA process and how it has led to certain choices being made. Article 9 requires that, when a plan is adopted, the

environmental authorities, the public and any transboundary States (where relevant) must be informed, and the following items made available to those so informed:

- The plan as adopted;
- An "SEA statement" summarising how environmental considerations have been integrated into the plan, how the Environmental Report and the outcome of consultations were taken into account, and the reasons for choosing the plan as adopted in the light of other reasonable alternatives considered; and
- Measures decided concerning monitoring measures.

4.0 Main Stages of Plan Making and SEA Process

This section documents the main stages of the plan-making and SEA processes on a joint timeline.

Table 4.1: Development Plan Process and SEA Process

Scoping Report 10 July 2020 – The purpose of this document was to provide preliminary information on the proposed Development Plan, with a view to establishing the scope, level of detail and approach equired for the SEA.
Authorities and other interested parties such as the Climate Action Regional Office (CARO) for the Atlantic Seaboard South region on the proposed Limerick Development Plan were consulted.
EEA and AA Screening prepared for the Chief Executive's Report to Members on Submissions and Observations received during the first issues stage — 26th November 2020.
The Environmental Report, assessing the likely environmental effects of implementation of the Draft Development Plan was published June 2021. Part of the Environmental Report consisted of a Strategic Flood Risk Assessment (SFRA). This examined the risks of flooding and its implications for land use planning and helped inform both the zoning and policy content of the Development Plan. In parallel with the SEA process, an Appropriate Assessment (AA) process was carried out for the plan.

	projects, on sites of European importance for nature conservation, such as Special Protection Areas and Special Areas of Conservation.				
	There was significant cross-referencing between the AA process and the Environmental Report.				
- Chief Executive's Report prepared on submissions to Draft Plan - 26 th November 2021	 SEA and AA considerations and responses were incorporated into the Chief Executive's Report and the various amendments were screened from an SEA and AA perspective. 				
Stage 3					
- Public display of Material Alterations to Draft Plan - 12 th March 2022 to 11 th April 2022	 SEA on proposed Material Alterations published and placed on public display 				
- 10 th May 2022 - Chief Executive's Report published on public consultation of material alterations	 SEA and AA considerations and responses were incorporated into the Chief Executive's Report and the various amendments were screened from an SEA and AA perspective. 				
Adoption of the Plan					
17 th June 2022	-Preparation of SEA Statement				

5.0 Environmental Commitments in the Plan

The SEA process informed and guided the Plan content on good environmental practice over the plan preparation period. Environmental considerations have informed all stages of preparation of the plan in order to appropriately identify and mitigate potential significant adverse effects arising from implementation of the plan. It was through the Environmental Report, the first published version of which accompanied the Draft Plan on public display, that the main commentary on the environmental aspects of the plan was presented. The Environmental Report and subsequent screening reports were prepared and updated in order to take account of submissions from the public and Statutory agencies during subsequent stages of preparation of the Draft Plan.

It is noted that it is the Plan considered as a whole, which contributes towards environmental protection and management, and towards sustainable development and that complies with the various legislative requirements. This is identified throughout the SEA documentation. The environmental assessment included recommendations for changes to policies and objectives for the mitigation of potential negative environment effects and for the inclusion of protective environmental policies and objectives within the plan. The SEA Environmental Report highlights how the policies and objectives of the Plan responds to a number of key environmental areas, including Climate, Air, Nature, Water, Waste and the Circular Economy.

During the preparation of the Limerick Development Plan, the opportunity was taken to update the policy content of the Plan from that adopted in the City and County Plans in 2010, taking into account the National Planning Framework and the Regional Spatial and Economic Strategy for the Southern Region. The opportunity was also taken to update the Plan content in relation to climate action and Chapter 9: Climate Action, Flood Risk and Transition to Low Carbon Economy relating to the topic was introduced. Climate considerations were not confined to a single chapter however, and this has been acknowledged throughout the Plan. References to new and emerging climate guidance are also present throughout the Plan, including the Limerick City and County Council Climate Change Adaptation Strategy 2019 – 2024, which had been adopted in July 2019. The Plan incorporates the policies and objectives set out in the NPF and RSES, which themselves take climate action into account, through standard planning methodologies such as reuse of brownfield sites and compact development. There is also a commitment to taking into account the content of forthcoming climate legislation and guidance. This is a rapidly evolving field where it will be necessary to ensure that future recommendations in relation to climate action are taken into account. It is here that the revised monitoring framework will prove to be particularly valuable, as it will enable trends to be identified more quickly than previous monitoring exercises. The approach to density, land use, design and movement is consistent with broader measures to address climate change in the areas of sustainable travel, which is addressed in Chapter 7: Sustainable Mobility and Transport.

Green infrastructure, is dealt with in Chapter 6: Environment, Heritage, Landscape and Green Infrastructure. The preparation of the Environmental Report and the Plan was informed by the EPA publication, Integrating Climatic Factors into the Strategic Environmental Assessment Process in Ireland (EPA, June 2019). This has played an important part in shaping the Plan contents from the preparation of the Position Papers on the Plan at the outset, over two years ago.

Protection of Limerick's natural, built and cultural heritage is also integrated into the plan. Proposals for new developments will need to be carefully balanced with the requirement to maintain access to sites and areas of cultural heritage values, facilitating their continued development and maintaining their cultural heritage value. A key challenge for the architectural heritage of the City and County is the sustainable and sympathetic reuse, regeneration and development of the built environment whilst retaining and protecting the distinctive character of the area.

A Natura Impact Statement (NIS) was prepared early in the Plan preparation process and subsequent changes to the Plan were screened following the public display periods. The capacity of infrastructure to deal with development was also assessed and found to be adequate for the Metropolitan Area, a critical part of this was ensuring that there would be no adverse effects on water quality on the Lower River Shannon SAC site. However, deficiencies exist in some settlements in the County and restrictions have been placed on development as a result.

One of the bigger conservation issues that arose during the Plan preparation, was the movement of an area, open for consideration for wind energy adjacent to the Shannon Estuary, to the south, away from the Estuary itself. This meant that potential areas for wind energy development were removed from possible wildfowl flightpaths close to the Estuary further inland, thereby diminishing possible collision and disturbance effects for wildfowl species. The River Shannon and Fergus Estuary Special Protection Area (004077) has been designated for wintering wildfowl. It also avoids possible interference with riparian habitats along the Lower River Shannon SAC site (002165).

6.0 How Submissions and Observations were taken into account

6.1 Introduction

This section details how both the SEA Environmental Report and submissions and observations, made to the planning authority on the Environmental Report and SEA process, have been taken into account during the preparation of the Limerick Development Plan 2022-2028. Throughout the Plan preparation process, the content has evolved in response to submissions received both from statutory agencies and from the general public, where appropriate changes have been made to the Plan.

6.2 SEA Scoping Consultation

Scoping ensures that the SEA process is focused on the relevant environmental issues and examines issues at the appropriate level of detail. Scoping also includes consultation with the Environmental Authorities and allows for the incorporation of their views within the Draft Plan and SEA Environmental Report.

In accordance with Article 13 of the Planning and Development Regulations 2001 (as amended), the SEA Environmental Authorities were notified on 10 July 2020, that a submission or observation in relation to the scope and level of detail to be included in the SEA Environmental Report could be made to Limerick City and County Council by the 10th of August 2020.

Two scoping submissions were received from the Environmental Authorities on the SEA Scoping Report. The submissions provided information on sources of guidance and useful resources and aspects for consideration in the Draft Plan and SEA Environmental Report. Scoping submissions were received from the following:

- Environmental Protection Agency (EPA);
- Geological Survey Ireland (GSI) under the Department of Communications, Climate Action and Environment (DCCAE).

A summary of the issues raised in the submissions is outlined below. These submissions were incorporated within the SEA Environmental Report and informed the preparation of the Draft Plan.

GSI main issues raised: Geoheritage, Culture and Tourism, Dimension Stone/Stone Built Ireland, Geological Mapping, Groundwater, Geohazards, Geothermal Energy, Natural Resources (Minerals/Aggregates), Marine and Coastal Unit.

EPA main issues raised: Recommended Guidance and Resources, SEA process guidance and checklists, Inventory of Spatial Datasets relevant to SEA, Topic specific SEA guidance (including 'Developing and Assessing Alternatives in SEA', 'Integrating Climate Change into SEA' and 'Integrated Biodiversity Impact Assessment'), EPA SEA Web GIS Tool, EPA WFD Application, EPA AA Geo Tool 'State of the Environment Report - Ireland's Environment 2016'. In addition, it was requested that the plan align with the national commitments on climate change mitigation and adaptation, as well as relevant sectoral, regional and local adaptation plans.

6.3 Pre-Draft Stage Consultations

The public consultation review process commenced on the 15th of August 2020, with the publication of the Issues Paper entitled 'Limerick Development Plan 2022 – 2028, What is your Vision for Limerick?' The Issues Paper provided the context of the preparation of the Daft Plan and identified how the proposed plan fits into the hierarchy of legalisation, which includes United Nations Sustainable Development Goals, the National Planning Framework (NPF), the Regional Spatial and Economic Strategy (RSES) for the Southern Region and Limerick Shannon Metropolitan Area Strategic Plan (MASP), which is contained in the RSES. This consultation ran until the 12th of October 2020.

The Covid-19 public health crisis and the related restrictions on public gatherings provided a significant and unprecedented challenge to the consultation process. Limerick City and County Council looked for new ways to consult with the public at a time when the 'traditional' drop in consultation evenings were not accessible, or appealing as previous consultations. Engagement in the process was actively encouraged through various measures, including:

- A new brand was developed for the Limerick Development Plan, which gave the Development Plan process its own distinctive identity to make it recognisable as a unique project;
- A dedicated webpage on <u>www.limerick.ie</u> and email address <u>devplan@limerick.ie</u> were developed;
- A social media campaign using Twitter, Facebook, Snapchat and Instagram, which included biteable video clips, updates on the public consultation events, details of the webinar etc.;
- A direct mailing campaign was undertaken and 62,000 residences received a postcard, outlining details of the plan review and public consultation events;
- Members of the Development Plan team participated on local radio interviews;
- A number of presentations were made to the Public Private Network (PPN).

Notwithstanding the restrictions placed on holding public events and meetings due to Covid 19, the level of engagement at this stage of the process was high with a total of 248 no. submissions received, 12 no. of these related to zoning requests and were therefore considered invalid and 7 no. were received after the closing date. These submissions were

summarised in the Chief Executive's Report and informed this scoping process. The issues raised during this stage informed the preparation of the Draft Plan and SEA Environmental Report. Following consideration of the Chief Executive's Report five Directions were submitted by the Elected Members regarding the preparation of the plan as follows:

- 1. That the Draft Development Plan considers future renewable energy technologies, such as hydrogen electrolysis, pumped storage and small scale anaerobic digestion and any other source of renewable energy technologies that are viable as a means of energy security, subject to the relevant level of necessary assessment.
- 2. That the Draft Development Plan shall include policies and objectives in relation to the development of leisure infrastructure and facilities, within Limerick City Centre in order to enhance the vitality of the area.
- 3. That the Draft Development Plan include policies and objectives aimed at ensuring that Limerick is inclusive and that there are equal opportunities for all citizens of Limerick with an emphasis on connectivity and cohesiveness.
- 4. To consider all modes of sustainable transport in the formation of transport policies.
- 5. That the Development Plan consider remote working in rural areas, in light of the implications of COVID-19, as this issue was not previously considered in the National Planning Framework.

The Draft Plan was prepared and considered over three council meetings throughout June 2021 where a number of amendments were proposed by the Elected Members.

6.4 Draft Plan Consultation

Under Section 12 of the Planning and Development Act 2000 (as amended) the Planning Authority published notice of the making of the Draft Plan on 26th of June 2021. The notice indicated that the Draft Plan would be available for inspection and invited submissions or observations until 6th of September 2021.

The Draft Plan was accompanied by the SEA Environmental Report, which assessed reasonable alternatives for the Plan; assessed the environmental impact of the Plan; and provided mitigation and a structure for proposed monitoring of the Plan. The Draft Plan was also accompanied by the Natura Impact Report (NIR) and Strategic Flood Risk Assessment (SFRA) Environmental Report.

Notwithstanding the restrictions placed on public events and meetings due to the Covid-19 pandemic and associated public health measures, the level of engagement was high with a total of 285 no. submissions received.

Following the consideration of the Chief Executive's Report on the Draft Plan consultation phase, 56 no. Notices of Motions were submitted by the Elected Member at a Council Meeting on the 18th of February 2022.

6.5 Proposed Material Alterations Consultations

Consultation on the Proposed Material Amendments to the Draft Limerick Development Plan 2022-2028, together with associated Strategic Environmental Assessment (SEA) and Appropriate Assessment (AA) Determinations and Reports, was carried out for a period of 4 weeks from 12th March 2022 to 11th April 2022, inclusive. A total of 39 no. submissions were received within this consultation period timeframe.

6.6 Adoption of the Plan

Further modifications on the proposed Material Amendments to the Draft Plan were proposed by the Elected Representatives and were screened for SEA. The Limerick Development Plan 2022-2028 was adopted by the Elected Members on 17th June 2022. The Plan, as adopted, includes six proposed material amendments, which the Office of the Planning Regulator (OPR) and the Chief Executive of Limerick City and County Council had recommended not be included in the Plan. These include the following:

- Make the plan with Material Alteration No. 149 zone lands for a data centre at Ballysimon, consisting of 33 hectares for the reasons submitted at the Council Meeting on the 18th February 2022.
- 2. Reject the recommendation of the Chief Executive dated 10th May 2022, in relation to Material Alteration No. 142 at Ballykeeffe that proposes to rezone lands from Enterprise and Employment to Agriculture. Make the plan with the inclusion of MA No. 142 for the reasons set out at the Council Meeting dated 18 February 2022.
- 3. Reject the recommendation of the Chief Executive dated 10th May 2022, in relation to Material Alteration No. 145 at Pa Healy Road that proposes to rezone lands from Mixed Use to Community and Education. Make the plan with MA No. 145.
- 4. Reject the recommendation of the Chief Executive dated 10 May 2022, in relation to Material Alteration No. 146 at Pa Healy Road that proposes to rezone lands from Mixed Use to Enterprise and Employment. Make the plan with MA No. 146.
- 5. Adopt the Plan incorporating Material Alteration MA No. 148, i.e. change the zoning of 30ha. from Semi-Natural Open Space to Enterprise and Employment at The Crescent, Dooradoyle with minor modifications to MA No. 13.
- 6. Make the Plan with Material Alteration No. 147 (Greenpark former racecourse lands) and zone portion of these lands as from A) Enterprise and Employment (c.12.98ha) and B) Open Space (1.73ha) to New Residential (14.71ha).

7.0 Reasons for Choosing the Plan in Light of Other Reasonable Alternatives Considered

Alternative Strategy Option 1: Plan as Adopted

An examination of the policy background indicated that the allocation of resources and zoning would be best served by a review of the Limerick City Development Plan 2010-2016 (as extended) and the Limerick County Development Plan 2010-2016 (as extended) and their merging into one document. The existing City and County Development Plans are now

twelve years old and required substantial updating to take into account changed administrative boundaries. The 2010 Plans also needed to be updated following adoption of the National Planning Framework and the Regional Spatial and Economic Strategy for the Southern Region and in order to take into account climate change issues. The new settlement hierarchy has been ordered to reflect population growth targets and the availability of employment and services.

The Plan also calls for the increased usage of nature-based solutions to flood management and sustainable drainage and subject to adequate ecological assessment and design, this could prove to be an effective way of both retaining existing habitats and perhaps adding to the habitat stock of the Plan area. The fact that the Plan, as presented, contains these measures is another reason for its selection.

The other alternatives considered but not pursued were as follows:

Alternative Strategy Option 2 - Continue with the existing City and County Development Plans without the review:

This was mooted by some of the Elected Members early in the Plan preparation process. Legally this would not be possible, as the Plans have been extended previously, and the Planning and Development Act 2000 (as amended) requires that the existing Plans be reviewed to align with National and Regional Planning Policy. Lacking this, the Limerick City Development Plan 2010-2016 (as extended) and the Limerick County Development Plan 2010-2016 (as extended) would not be considered an acceptable alternative.

Alternative Strategy Option 3 - Reliance on the Limerick Economic and Spatial Plan 2030 to help develop the City area:

The outcome of earlier plans such as the Limerick Economic and Spatial Plan 2030 indicated the potential of actions in selected parts of the City and Environs. While this has clearly articulated aims, it was considered that its focus on urban areas would not sufficiently contribute to the development of areas in the wider countryside. As the Local Authority takes in the areas of both City and County, individual project led initiatives would not be sufficient to ensure adequate direction of resources to areas outside of the specific locations where they operate. For this reason and the fact that these are not statutory land use plans, this alternative was not selected.

Alternative Strategy Option 4 - Reliance on non-planning led initiatives to secure the development of the Local Authority area:

While the initiatives of other Departments of the Council such as the Roads Section are welcomed, this would address only part of the issue of infrastructure and service provision in the area. It would also mean that any efforts to address such provision would be on a piecemeal basis and would not be plan-led. To ensure balanced provision of services with appropriate policy support, it was considered best to proceed with the plan as adopted. This ensured that the Plan was consistent with the contents of the National Development Plan, the NPF and the RSES, which is essential for seeking investment from central government.

Compliance and support of national policy objectives is a prerequisite for the allocation of resources.

8.0 Monitoring

As part of the SEA process, measures envisaged for monitoring the likely significant effects of implementing the review of the Plan must be included in the Environmental Report and the SEA statement. The measures listed below are not intended to be exhaustive and provide an indication of what means may be used. It should be noted, that fields such as climate change monitoring is evolving apace and the new Climate Action Regional Offices (CAROs), with which the Local Authority works closely, will have a role to play in this regard.

Monitoring is often based on indicators, which measure changes in the environment, especially changes which are critical in terms of environmental quality. The Department of Environment Heritage and Local Government SEA Guidelines state that indicators that can be easily and realistically be measured should be used: "Environmental indicators are key statistics, which describe an environmental issue. Their purpose is to communicate information on environmental issues in a simplified manner and over time, to create a benchmark against which future progress towards sustainable development can be measured. To be effective they should be representative of the issue and be based on scientifically valid information. In this manner they can support policy development and reflect the interrelationship between society, the economy and the environment."

The Planning Authority is fortunate in that it receives, often as a result of submitted planning applications, a number of environmental and ecological assessments which can be used to inform monitoring. In addition, studies commissioned by the Local Authority under measures such as the National Biodiversity Action Plan funding can also be useful tools in this regard.

Several kinds of indicators may be used to fulfil particular functions and measure the quality/quantity of environmental resources:

- 1 State of the environment indicators reflect environmental quality, or quantity of physical and biological or chemical phenomenon;
- 2 Stress indicators reflect development effects (see above regarding assessments received from planning applications);
- 3 Performance indicators may be used to evaluate long-term achievements in environmental management and protection, this may be baseline surveys that gather information on species presence and numbers such as bird surveys;
- 4 Sustainable development indicators introduce a new dimension to the provision of information, in that they seek to describe and measure key relationships between economic, social and environmental factors. In some situations, distinguishing between these factors can be difficult.

In all cases, indicators should both quantify and simplify information, thereby making it more accessible to policy makers and the public.

Where new or improved monitoring measures come to light during the course of the updating or addition of Section 28 Guidelines, they will inform monitoring for SEA, to ensure that monitoring of effects during the course of implementing the guidelines can be meaningful and effective.

As the current Plans were subject to SEA, there is an Environmental Report to inform the current SEA process. Following preparation of the Environmental Report, the subsequent changes to the Plan were screened for their environmental effects.

Table 8.1 provides a number of measures that are proposed as part of this SEA process, to monitor the effects on the environment of implementing the review presented, in terms of the achievement of the environmental protection objectives and the impact on the environmental factors that the SEA legislation requires to be considered. Measures include targets and thresholds that determine where remedial action may be required in order to achieve that target and fulfil the environmental protection objective.

Table 8.1: Monitoring Measures for the Limerick Development Plan 2022-2028

Biodiversity, Flora, Fauna						
Environmental Protection Objectives	Indicators	Responsible Authority	Frequency of Monitoring	Targets	Remedial Action	
B1: Protect, conserve and enhance habitats, species and areas of regional and local importance, including aquatic habitats and species and promote the sustainable management of ecological networks (See also W3 below). B2: Ensure the continued conservation of the Natura 2000 sites, Natural Heritage and Proposed Natural Heritage sites. These sites	Conservation status of habitats and species as assessed under Article 17 of the Habitats Directive. Retention of sufficient areas zoned for open space. Protection of NHAs and pNHAs under the LDP.	Authority NPWS Limerick City and County Council through planning applications and LAPs IFI	Monitoring Limerick Development Plan 2022-2028 - Two Year Review	Maintenance of favourable conservation status for all habitats and species protected under national and international legislation. Identification of sites of local biodiversity and ecological corridors.	Loss of favourable conservation status of protected habitats and species. Altered zoning objectives in place for the Natura 2000 sites has taken place in the Plan. Enforcement action may also be required.	
are important, both as an amenity and natural history resource. Objectives in the plan: Objectives EH O1 to EH O18, ECON O57, ECON O58, SCSI O30.						

Population and Human Health							
Environmental Objectives and Objectives in the Plan	Indicators	Responsible Authority	Frequency of Monitoring	Targets	Remedial Action		
P1: Facilitate a good standard of quality of life for the population through ensuring high quality residential, recreational and working environments. P2: Provide policy support for the provision of suitable infrastructure and facilities for the local population. Policies in Plan: CS P2, SCSI P1 - P3, SCSI P4 Objectives in Plan: SCSI 01-	Increase in educational opportunities, services within the area. Increase in the population.	LCCC	Quarterly review	Increase in employment opportunities, services and public services in the Plan area.	Consultation with Department of Education and interested parties in order to progress suitable development opportunities for the area.		
40	40 Water						
Environmental Objectives and Objectives in the Plan	Indicators	Responsible Authority	Frequency of Monitoring	Targets	Remedial Action		
W1: Ensure that wastewater infrastructure	Water quality monitoring results by the EPA and by LCCC	LCCC	Annual	Protect and restore areas identified in the River Basin District Management Plan	Upgrade of WWTPs		

keeps pace with				required to achieve "good"	Ongoing monitoring of
development proposals.	EPA data under <i>Urban</i>			status, i.e. 4+ for water	discharge licences by
	Waste Water			quality in line with the	staff from the
W2: Ensure that the	Discharges in Ireland			Water Framework Directive	Environment sections.
requirements of the Water	Population Equivalents			objectives.	
Framework Directive are	Greater than 500				
incorporated into the Plan.	persons - Reports for			No deterioration in levels of	
	the Years 2008 and			compliance with drinking	
W3: Ensure that wetland	2009 and 2010-2011.			water quality standards and	
and peatland sites are				maintenance of national	
preserved.	Performance of WWTP			average compliance rate.	
	in relation to conditions				
	of discharge licence.				
Policies in the Plan:					
EHP6					
Objectives in the Plan:					
EH O12, EH O14, IN O6,					
INO7, IN O8, IN O9, IN O11,					
EH O15-O18, CAF O39					
		Geology and	Soils		

Geology and Soils							
Environmental Objectives	Indicators	Responsible	Frequency	Targets	Remedial Action		
and Objectives in the Plan		Authority					
GS1: Place an emphasis on	Amount of greenfield	LCCC	Annual	Concentrate development	Enforcement, where		
the development of	development.			in the selected zoned areas	necessary.		
brownfield sites rather than				and encourage re-use of			
greenfield sites. By reducing				existing sites.			

the possible development	Promote reuse of		
the possible development			
of greenfield sites this	structures, which is the		
makes a positive	most basic tenet of soil		
contribution to soil	conservation in urban		
conservation.	areas.		
This can also be achieved			
through the sensitive reuse			
of existing buildings,			
reducing the need for new			
build (see C2 under Cultural			
Heritage below).			
The reage selection.			
GS2: Protect geological sites			
within the plan area.			
within the plan area.			
Policies in Plan:			
CGR P1, CGR P2			
Objectives in Plan:			
CGR O3, CGR O4, CGR O17,			
CGR O19, HO O2, ECON O9,			
ECON 020, ECON 035,			
EH09			

Air and Climate						
Environmental Objectives and Objectives in the Plan	Indicators	Responsible Authority	Frequency	Targets	Remedial Action	
AQC1: To increase energy efficiency and the proportion of energy generated from renewable sources and where necessary to ensure the sensitive application of energy saving measures to the historic built fabric. AQC2: To avoid deterioration of air quality in the plan area. AQC3: To include climate action concerns into the plan policies.	Numbers of buildings being upgraded and insulated. Adoption of renewable technologies.	LCCC	Ongoing	Increase in upgraded sources of energy production from renewable sources.	Establishment of dedicated section to consider climate change.	
Policies in the Plan: CAF P1-9, EH P3, EH P6, TR P7 Objectives in the Plan:						

[1		1	T	1
CAF O1-19, EH O10, EH					
O49, TR O1, IN O1					
Flooding: IN O1, EH O14, IN					
O12, CAF P5 and CAF 20-25					
012, 0, 11 13 4114 67 11 20 23					
Panawahla Enargy: ECON					
Renewable Energy: ECON					
O59, TR O21, IN O15, IN					
O16, CAF 26-41.					
See also Chapter 9, Table					
9.1					
Incorporation of climate					
consideration into each					
Chapter of the Plan					
Chapter of the Han					
		Cultural Her	ritage		
Environmental Objectives	Indicators	Responsible	Frequency	Targets	Remedial Action
and Objectives in the Plan		Authority			
C1: Protect and conserve	Number of Monuments	LCCC	Ongoing	To maintain and increase	Damage to or loss of
features of archaeological	in the Record of			the number of	recorded monuments,
heritage and their setting.	Monuments and Places	National		archaeological features	or their setting would
incritage and their setting.	1 Tribilatification and ridecs	1 144 101141		ar criacoroficar reatares	or their setting would

Monuments

Service

and areas of

archaeological

potential which have

subject to exploration

been recorded or

C2: Protect conserve and

promote the sustainable

reuse of architectural

heritage.

result in enforcement

actions being taken.

Cultural heritage can

also include oral

recorded and protected.

No damage occurring to

structures or monuments

				tun ditions and atoris-
	as a result of		and their settings due to	traditions and stories
C3: Conserve and record	development.		development.	about locations. LCCC is
those aspects of cultural				working with local
heritage that may be	Number of		To increase the number and	community groups in
affected by planning related	archaeological		maintain the conservation	relation to oral history
activities	monuments and their		status of Protected	(e.g. Pallasgrean
	settings damaged due		Structures.	Initiative).
Policies in the Plan: EH P2,	to development.			
EH P4, EH P5			Increase investment	Damage to or loss of
	Number and		through Built Heritage	Protected Structures,
Objectives in the Plan: See	conservation status of		Investment and funding	to be dealt with by
Section 6.5.2 and Objective	structures in RPS.		streams.	enforcement.
EH O34 and EH O35 re.				
Special Control Areas,	Number of buildings			Possible training
which will play an	conserved and re-used			courses, facilitated by
important part in	for new development.			bodies such as the
conserving archaeological	·			Heritage council and
heritage. In addition, EH	Number of protected			Irish Georgian Society.
O36- EH O49 and EH O50-	structures damaged			,
O54.	due to development.			Participation in
	'			initiatives such as the
				Town Centre First
				scheme.

	Landscape						
Environmental Objectives and Objectives in the Plan	Indicators	Responsible Authority	Frequency	Targets	Remedial Action		
L1: Protect and conserve the quality, character and distinctiveness of the Limerick landscape both urban and rural. L2: Retain the protected views in the Development Plan. Policies in the Plan: CAF P6, EH P2, EH P4, EH P8, EH P9 Objectives in the Plan: CAF O29, CAF O32, IN O13, EH O30 - EH O31, EH32, EH O50	Quality of urban environment and halt in dereliction. Building height and design.	LCCC	Ongoing	Increase in quality of individual applications.	Enforcement through planning legislation and Derelict Sites Act. Adequate input into DM applications from ACO, Archaeologist and HO.		

Material Assets					
Environmental Objectives and Objectives in the Plan	Indicators	Responsible Authority	Frequency	Targets	Remedial Action
MA1: Maintain sustainable access to assets such as open spaces, water resources and all other physical and social infrastructure.	Access to public amenities and facilities.	LCCC area offices	Ongoing	Increase in area of amenity space within the Plan area. Increased usage of open space and rivers as a public amenity.	Enforcement where necessary. Ensure that sufficient open space allocation is included in Plans.
MA2: Ensure that there is adequate policy support for infrastructural provision in the plan area.				Increased visitor numbers to cultural heritage sites.	
Policies in the Plan: INP1, SCSI P1, SCSI P2					
Objectives in the Plan: INO1-O23, SCSI O2, SCSI O19, SCSI O28					

9.0 Mitigation Measures

9.1 Introduction

Mitigation measures should be properly informed. The following provides a brief account of surveys that have been carried out to inform mitigation. The assistance of the National Biodiversity Action Plan Funding and the Heritage Council Heritage funding schemes are gratefully acknowledged. Included are measures that have been carried out and some that are planned:

- (i) A joint initiative with Clare County Council in 2018 resulted in the introduction of a methodology for controlling Giant Hogweed, which has since been employed by the then Physical Development Section of Limerick City and County Council on the Loobagh River in south east Limerick. The project with Clare County Council was along a tributary of the River Shannon, which was part of the Lower River Shannon SAC site. The intention of the joint initiative was to arrive at a methodology that could be used to control this species within Natura 2000 sites. This is reflected in the reference to invasive species in the DAU/NPWS submission.
- (ii) In 2016 and 2017, in association with Clare County Council, a twelve-month survey of the Bird populations of the Shannon Estuary was carried out. This was the first time that such a year-round survey was carried out and provides a valuable baseline for bird numbers within the River Shannon and Fergus Special Protection Area. It also provides a useful tool in informing planning decisions in relation to the estuary. In addition, it can also form a baseline for assessing possible climate change effects on these species. The impact of climate change was raised by the NPWS/DAU submission.

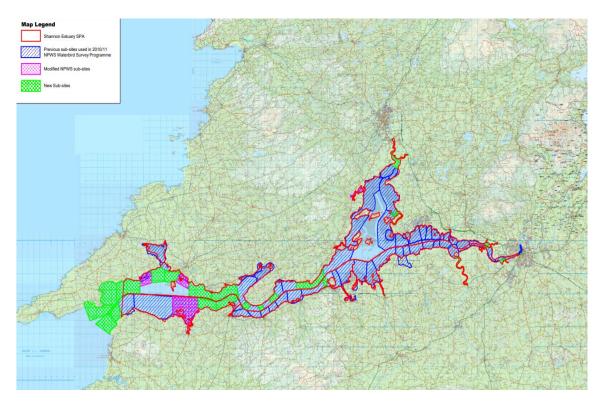


Image 9.1 Showing the extent of the bird survey within the Lower Shannon Estuary

- (iii) The Forward Planning section of Limerick City and County Council is represented on the steering group for the Climate Action Regional Office. This involvement has proven valuable as it has enabled the LCCC Planning Department to be informed of climate action activities as they emerge.
- (iv) In terms of mitigation measures for pollinators, over the last three years, it has been standard practice to request that landscaping plans take into account the measures of the All Ireland Pollinator Plan (AIPP). Over the last year in particular, it is encouraging to see that landscaping proposals, particularly for larger developments, including Strategic Housing Development proposals, now submit landscaping proposals guided by the AIPP and concentrate on native species. One useful and long-established publication in this regard is the Heritage Council's Conserving and Enhancing Wildlife in Towns and Villages (2005), which is recommended as a standard referral document for this purpose. This publication also contains a useful list of native species together with their suitability for differing surroundings, both urban and rural. This has been circulated to all Development Management Planners of Limerick City and County Council.
- (v) In 2020, a joint survey with Cork County Council sought to establish the presence of the Nightjar (an Annex 1 species of the Birds Directive) in the area of the Cork-Limerick border. This is a migratory species, which spends its breeding season in Ireland and is one, which has suffered from huge population declines. Unfortunately, none were present. Surveys of migratory birds may also help identify trends in movement of behaviour, which might be caused by climate change.
- (vi) In 2012, a survey of Grageen bog, within the <u>Slievefelim to Silvermines Mountains</u> <u>SPA</u> (004165) sought to establish the presence of both Hen Harriers and Grouse on site and the types and condition of habitats present. Also present on site, was the Grageen Bog and Fen Natural Heritage Area. The presence of both bird species was confirmed. The presence and an increased number of grouse on the site was confirmed by local NPWS staff last year (2021). This emphasises the need to avoid disturbance to this area.
- (vii) For the last two years in conjunction with Development Management Planners, planning conditions have been included on suitable developments for the establishment of swift nesting sites. This is prior to a survey for these birds being carried out next year. Birdwatch Ireland is working with the Council to provide information to support this initiative and are during Summer 2022 undertaking a survey of nest sites in the county.

9.2 Future Programme of Survey Works to Inform Future Mitigation Works and Plan Monitoring

(i) Swifts and Barn Owl Surveys:

These surveys are intended to complement a project that Limerick City and County Council's Environmental Awareness Officer has promoted, whereby swift boxes were installed on existing buildings. The purpose of this survey is to assist in the conservation of swifts by providing a baseline of population locations and numbers, with a view to integrating swift nest boxes into new buildings from the outset as part of the structure rather than an add on. Similarly, the Barn Owl survey is informed by the need to help the conservation of this bird, by providing similar baseline information so that barn owl conservation can be integrated into planning. These projects were prompted, in part, by the NPWS submission to the Plan, which stressed the need to integrate ecology into planning matters.

(ii) Wetland survey:

Following information received by the County Botanical Recorder, LCCC Forward Planning are rethinking the scope and format of the wetland survey. This is likely to be a multi-annual application as there are over 250 sites on an indicative list. Part of the change of approach by the Planning Authority is to focus on climate change, flooding and catchments and as such this means there is more preparation to carry out prior to commencement. This would feed into the Limerick Development Plan and other council plans in the future. This is likely to commence this year (2022). It will also help to set a monitoring baseline.

(iii) Geological Survey:

One of the information deficiencies highlighted in the Environmental Report as part of the SEA process, was the need to survey the Geological Heritage sites in the County. To this end, funding was obtained from the Heritage Council under their County Heritage Plan funding programme (CHP) and the survey was carried out in 2021. Limerick City and County Council are grateful to the Heritage Council and the National Bio-diversity Action Plan funding scheme for helping to support this survey programme.

9.3 Standard Mitigation Measures to be Employed

While all of the above informs mitigation measures, a number of standard mitigation measures should be employed in the Plan and subsidiary plans including Local Area Plans, in order to avoid effects on the Natura 2000 site network.

The Habitats Directive promotes a hierarchy of avoidance/protection, mitigation and compensatory measures. For the purposes of this statement, the term "mitigation measures" are considered to be measures which aim to minimise, or even offset entirely, the negative impacts on a site that are likely to arise as a result of the implementation of a plan or project. These measures are an integral part of the specifications of a plan or project.

The following measures should be adopted within the Limerick Development Plan area, in the development of all individual plans (including Local Area Plans) and projects, where there is potential for impacts on the Natura 2000 site network. These measures will apply to all areas of policy and development management including housing, transport, environment

and infrastructure, renewable energy, recreation and amenity. Where it cannot be clearly demonstrated that a development, or a group of developments, will not result in an adverse effect on a Natura 2000 site, or where there is scientific doubt in relation to a potential impact, the precautionary principal must be applied and mitigation is through avoidance. The precautionary principal is applied: (i) where there is potential for negative effects and; (ii) where due to inconclusive or insufficient data it is not impossible to determine with sufficient certainty the risk in question.

- (i) Mitigation measures in the form of specific objectives and policies designed to protect the Natura 2000 sites are often provided by the Development Management section to ensure compliance with the Habitats Directive Article 6. Where proposals might have an effect on a Natura 2000 site, these will require full assessment in line with Article 6 of the Habitats Directive the Plan identifies a number of individual plans and projects (road schemes, economic and housing development etc.) for development during the lifetime of the Plan. The Plan should emphasise that these are dependent upon clear demonstration that there will be no impacts on the integrity of a Natura 2000 site in accordance with Article 6 of the Habitats Directive. In addition, any review or amendment of the Plan and proposed projects being prepared by the Local Authority for the Plan area should be subject to AA screening, at a minimum, to ensure compliance with Article 6 of the Habitats Directive.
- (ii) The Plan identifies a number of specific transport objectives, such as the M20 road scheme, which will require an appropriate level of environmental and ecological assessment. This should be carried out at the earliest stages in development, beginning at the route selection stage and at subsequent stages of development, to determine if significant adverse impacts are likely. Assessments will become more detailed and specific at each level of the assessment as details of the location, extent, construction and operational impacts of the project emerge.
- (iii) Where the construction or extension of a water supply scheme or wastewater treatment plant has potential to impact on a Natura 2000 site, it will require Appropriate Assessment, using hydrogeological data, to clearly demonstrate that there will be no adverse impact on the groundwater supply, surface water or other aspects of Natura 2000 sites.
- (iv) Where the construction, extension or modification of a renewable energy project has potential to impact on a Natura 2000 site it will require Appropriate Assessment, using all necessary data, to clearly demonstrate that there will be no adverse impact on the specific Natura 2000 site or other aspects of the Natura 2000 site network.

- (v) Ensure that the WWTPs in the Plan area are maintained and upgraded as required to meet the requirements of the population. Ensure all works associated with the facility are assessed according to Article 6 of the Habitats Directive and adequate and appropriate wastewater treatment infrastructure is in place prior to further development in the Plan area.
- (vi) Where one-off housing is sought in un-serviced areas in the Plan area, it should be ensured that groundwater quality is maintained through appropriate implementation of the new EPA 2021 Code of Practice for Domestic Waste Water Treatment Systems. In the vicinity of river systems, including those within the Natura 2000 site network and its tributaries, the suitability of these lands for individual treatment systems will have to be determined; the need to prevent excessive proliferation of un-sewered dwelling units will have to be considered; and the design, capacity and suitability of wastewater treatment systems and the maintenance of such individual wastewater treatment systems will have to be taken into account. This is to ensure that adequate individual wastewater treatment systems are used which have sufficient capacity, safety mechanisms and maintenance to ensure the protection of local surface and groundwater resources.
- (vii) It is recommended that a buffer zone be established around existing vegetated riparian areas of the Lower River Shannon SAC within undeveloped zoned areas of the Plan area and subsidiary Local Area Plans, in order to protect the ecology on which the site depends. Buffer zones are used to protect the hydrological and ecological environment of the site and should be established with reference to hydrological and ecological data for the site, including flooding, and in consultation with the National Parks and Wildlife Service and Inland Fisheries Ireland. This is already an objective in the Plan and is being included in Local Area Plans currently being prepared.
- (viii) A minimum buffer zone of 20m is recommended, or as determined, following consultation with Inland Fisheries Ireland (IFI). Development proposals beyond this buffer area, with potential to negatively impact on a site will be required to clearly demonstrate that there will be no significant adverse impact on the integrity of the site.
- (ix) Facilities such as new greenways, trails and riverside walkways will require appropriate levels of environmental and ecological assessment at project stages in order to proceed. The inclusion of objectives for these facilities should carry the caveat that the facility can only be provided where a positive assessment is received. This has been the case with one amendment where it has been stated that a greenway proposal should be subject to adequate ecological design and assessment from the outset. In some situations, it would be true that greenways or blueways should not be developed in sensitive areas.

- (x) Ensure that flood defence works and responses to Flood Risk Assessment and CFRAMS proposals undergo Appropriate Assessment in accordance with Article 6 of the Habitats Directive. Ensure that any development that has the potential to impact on a Natura 2000 site is subject to Appropriate Assessment in accordance with Article 6 of the Habitats Directive.
- (xi) Where deficiencies in terms of wildlife surveys and background ecological reports have been identified in relation to policies in Chapter 6, these should be carried out to adequately inform design and mitigation measures prior to any development taking place.

10.0 Conclusion

The SEA/SFRA and AA processes carried out during the preparation of the Development Plan, have ensured that the potential significant environmental impacts associated with implementation of the Plan have been identified and that these impacts have been given appropriate consideration. Consultation on the Draft Plan, Environmental Report NIR and SFRA has further contributed to the development and finalisation of the adopted Limerick Development Plan.

It is envisaged that monitoring and reporting of environmental impacts, both positive and negative, resulting from implementation of the Development Plan will continue over the course of the lifetime of the Plan.



